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THE

DUTIES

OF A

REGIMENTAL SURGEON

CONSIDERED.
THE DUTIES OF A
REGIMENTAL SURGEON CONSIDERED:
WITH OBSERVATIONS ON HIS
GENERAL QUALIFICATIONS;
AND HINTS RELATIVE TO A
MORE RESPECTABLE PRACTICE,
AND Better Regulation of that Department.
Wherein are interpersed many Medical Anecdotes, and Subjects discussed, equally interesting to every Practitioner.

By R. HAMILTON, M. D.
Of the Royal College of Physicians, London; Member of the Medical and Physical Societies of Edinburgh; and of the Medical Society of London.

IN TWO VOLUMES.

ATTAMEN ERRORES NON SUNT ARTIS, SED ARTIFICUM.—Newton.

VOL. I.

LONDON:
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TO THE
OF
M I L B U R N,
IN THE
County of ANTRIM, IRELAND,
S I R,

SENSIBLE of the many benefits I have derived from the PATRONAGE you long so generously have granted, and still continue to afford me; and of the goodness of your heart in promoting, and encouraging, as far as in your power, whatever tends to the advantage of your fellow creatures, as well as to virtue in general, I am strongly induced, both by inclination, and gratitude, to make this public acknowledgement of them.

The connection in which you once stood to a gentleman* high in mili-

* His brother, the late Lieut. General Smith.
tary rank, and to another * equally distinguished in the practice of medicine, makes the DEDICATION of the following sheets to you, come with double propriety; which, while they have for their object the welfare of the Soldiery, in as far as the care of their health is concerned, have still kept in view another, not less important, the recommendation of the study of medical science, the true basis on which such care can be founded.

This treatise then, on the Duties of a Regimental Surgeon, which under the sanction of your name, is now sent into the world, I do not inscribe to you with the lips of Adulation, or thro' motives of self-inte-

* His brother-in-law, the late Dr. Smith, deservedly the first practical physician in the metropolis of Ireland.
DEDICATION.

ref, (the former, I am fully conscious you hold in contempt, and the latter, as can be attested by those who intimately know me, I have ever despised), but as the only tribute, small as it may seem, which, at present, I have in my power to offer to a kind BENEFACtor. As such it is given, and as such I hope you will accept it.

I remain, Sir,

With the warmest wishes for your prosperity,

And the highest sense of your goodness,

Your most obedient,

And very humble servant,

R. HAMILTON.

Ipswich, Suffolk, 1787.
PREFACE.

A Variety of useful, and interesting treatises have been written, especially within these last fifty years, on military medical practice, wherein most of the diseases incidental to troops have been minutely described and judicious plans laid down, both for their prevention and cure; but no author has hitherto pointed out, in a more particular manner, The Duties of the Regimental Surgeon, or taken up the subject in the light in which it is here set forth.

If novelty, therefore, be any recommendation, the following work has this to plead in its favour: but we hope it has more; its object is utility, while it inculcates humanity towards a class of men, whose situation, at
at best, is but uncomfortable, and yet to whom the community are under obligations. —I mean the *Soldiery.* —At the same time a review is taken of the general *Character* and *Conduct* of the regimental surgeon, as well with respect to the accomplishment of this, as to his own more comfortable situation.

If the author has sometimes in pursuing his subject, spoken freely, it is not with a design to cast obloquy on individuals, but thro' an ardent wish, that the regimental surgeon may become more respectable, and to attempt a reformation in several parts, where, perhaps, the military medical name has, in a general sense, been too justly exposed to censure.

**Altho'** several eminent men have been,* and are in the service in the station of regimental surgeon who previous to their engaging

* Among these we may mention Professor Home of Edinburgh, the late Dr. Steedman, and Dr. Warburton of ditto, and many others, whose names reflect credit on the station.
PREFACE.

gaging in the army practice, have with credit to themselves, and to the universities wherein they received their medical education, arrived at the highest rank in the science of medicine, which the schools can confer; yet it is a truth too well known to be denied, that many more have, and do daily find their way into it thro' interest and mis-applied recommendation, whose opportunities of qualifying themselves to undertake so important an office, have been almost none, or, at best, extremely limited.

It is not of the well-informed medical practitioner, such as are alluded to above; but of these, I am chiefly to be understood as applying my remarks in the following work, who, young and inexperienced in the profession in which they are engaged, and without that foundation to build on, which it behoved them to possess, may think too lightly of the duties of their station, and of medical practice, because they have not been taught how to estimate it justly, or take those advantages
IV. PREFACE.

advantages of disease, that a more liberal education would have put in their power.

To regulate health, and to attempt the removal of disease is, surely, a matter of the highest moment to society. The lives of his fellow creatures are unlimitedly placed in the hands of the medical practitioner, and a confidence reposed in him by the public, too often on his own word, and without sufficient testimonials of his qualifications from those capable of judging, which in the most trivial branch of employment in common concerns would be denied the pretender, till specimens of his abilities had been previously examined, and a proper estimate formed how far he was initiated in the principles of the branch he proposes to follow.

Does any man trust a person who calls himself a taylor, a shoemaker, a carpenter, &c. &c. to make him a coat, a pair of shoes, a door for his house, &c. without first having known something of his capacity in the business
business in which he means to employ him?—Before the carpenter can set up for himself in his business, custom ordains, and the laws give it countenance, that he shall be regularly bred to the trade, and a specified term of years, is for the most part, fixed to be allowed him for this end; short of which is not thought competent for obtaining a proper skill in the handy-craft, to give him pretensions to the name he would assume.

Is it not strange, that the same pains should not be equally exerted in a matter of such magnitude as the employment of medical practitioners?—The one at most can only spoil you a piece of labour, and cost you nothing but its price, which your purse may easily afford to repair, while the unqualified man, who usurps the medical character, and incautiously deals out his drugs, poisons when unskilfully applied, may, nay often, we fear, does, rob you of the life of your dearest concerns, your friend's, your child's, your wife's, or perhaps your own, for ever beyond
beyond the power of reparation.—Such is a melancholy picture of our credulity, in these nations; but such is truth!

The innumerable swarms of quacks, and medicaasters, which, to the disgrace of the laws of Great Britain and Ireland, beyond all other civilized and polished nations, that daily abound, clearly evince, the above reflection, severe as it may seem, is but too well founded.*—The nostrums sold in every shop, and puffed off in every newspaper; the empirics that daily stand in our streets, and infest the neighbourhood with the most barefaced assurance, deluding the incautious and credulous multitude, robbing them of that which should buy them food and clothes, and promising them health, which they cannot bestow; and which a little time proves, that their impudence, and their design to cheat, were the sole motives by which

* While I am writing this, one of these Imposters stands in our streets, raising large contributions on the credulous multitude.—Let truth, and his works speak his Eulogium.
which they were actuated.—Let these, I say, stand forth, and declare how far the remark is founded in justice!

It was the serious consideration of this subject; I mean, the importance of the trust reposed in the medical character, whether in a settled situation, or in the less stationary condition of a military practitioner, that first gave rise to the remarks contained in the following pages. Several of them, there is reason to fear, are not more applicable to the army practice, than to many settled practitioners, loaded with the misplaced confidence of the public, in various towns and villages throughout these kingdoms.

The observations I have ventured to make on that which is the chief purport of this publication, are drawn from minute attention to the subject. For my situation unavoidably afforded me many opportunities, notwithstanding my station was confined, and
and my services limited to a few years only during the late war.

Whether I have spent my time well, or otherwise, in collecting them, the public must judge. This I can with the utmost veracity declare, whatever may be their reception, that my aim was utility, and my principle motive, the good of those for whom I have taken up my pen.

It remains only now, that I return thanks to those who have generously encouraged the publication.* It was by their promise of support, tho' it must fall short of indemnification of my expenses, as the number of subscribers is confined, that determined me to publish. But emolument alone, on any occasion, has never been my chief motive; and was it even so here, it could not arise from a work, the sale of which, from the nature of the subject, and the class of men to

* Vide the list of subscribers, Vol. II.
to whom it is chiefly adapted, cannot be very extensive. Yet I have taken what care was in my power, in the course of my illustrations, to intersperse it with medical anecdotes, &c. as well to render it, in some degree, fit for the perusal of other practitioners besides those of the army, as to explain more fully the different subjects which offered themselves to my consideration.

It may appear to some, that I have often dwelt too long on minutiae; but they will please to observe, that what may seem trifling to the settled practitioner, may be matter of much importance to the regimental surgeon; there is no occasion to illustrate this at present; it will be evident to the reader when he considers the regimental surgeons situation, and if he can but for a moment suppose himself in it.

I have endeavoured to show, that the regimental practice partakes almost entirely of that which is allotted to the physician; hence
hence will appear the propriety of inculcating to him the necessity of a liberal education to discharge his duty with fidelity, nay, with innocence, and without criminality. I have treated pretty fully and freely on the subject of intoxication. For this I hope I cannot incur censure, when the daily conviviality of a military life is considered, and the danger then of administering medicines, should some unguarded hour of hilarity induce this condition.

My cautions on the careful dosing of medicines may in like manner be thought superfluous; but I would hope, that on reflection, it will not only escape condemnation, but be thought a proper subject to be handled in a work of this nature.

The utility of experiments when conducted with care and prudence, must be obvious to every one; and I flatter myself no apology will be thought necessary for inculcating an attention to this part of the practice
PREFACE.  xi.

practice of medicine. What I have said relative to the medicines to be kept in the medicine chest, may be considered as more exceptionable: I confess it is far from perfect; but I have given a sketch of such as I have, from time to time, used, or which I should have had recourse to if they had been in my possession; for it is not always we are well provided. But for this imperfection, I must rely on the medical reader's benevolence to excuse, and the army practitioner's ingenuity to supply.
WHEN the following work was proposed to the public, it was supposed it might be comprised in one volume of about 400 pages; on pursuing the subject, however, in the order then mentioned in the proposals, it insensibly stretched considerably beyond the limits of an ordinary volume. Without treating more concisely on each head than the author thought would place his subject in a clear light, it was impossible to stop here: he therefore deemed it more expedient to divide it into two smaller volumes, than to give it in one of a thicker and less convenient size. Tho' the expence incurred is hereby considerably greater, yet the price to subscribers shall not be augmented.
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CHAP. I.

Introduction.

It is an old remark, and, I fear, not the less true for its antiquity, that more men perish in the regimental practice from the want of proper medical care, than by the sword; or, in the words of an ingenious author, "More die there by the lancet, "than the lance."

If this be true, it is surely lamentable, and what concerns the state not a little, since the reformation, if any is ever to take place,
must, in a great measure, proceed from thence. New regulations must be made in the Surgical department, and better encouragement held out for the performance of this part of the public service to those who engage in it.

It is with some degree of diffidence I venture to throw together a few thoughts on the subject. I wished to have seen it undertaken by some other better qualified for the task; but, since none has as yet appeared to plead the poor soldier's cause in this respect, I shall make the attempt. Others, perhaps, may be induced to follow the path, and turn their attention this way, whose abilities in stating, as well as opportunities of knowing facts, may justly give them pretensions above me.

But it will still be a sufficient satisfaction, if I can become the agent, though in ever so humble a degree, or distant point of view, in removing a common evil, and pro-
producing some public good. The few years, however, I have served in a military medical capacity have furnished me with some opportunities for observation on this head.

I would not wish in these remarks designedly to drop any expression that could give offence to a single individual. Far be such a disposition from me! at the same time, I shall point out with fidelity, and without fear, whatever appears to me capable of improvement, as far as my knowledge of the subject reaches. The ingenious and liberal-minded surgeon will applaud, not blame me. The approbation of men of this disposition I shall always be ambitious to obtain.

Each regiment, as well militia as regulars, is allowed a surgeon, as he is termed, and surgeon's mate. Their business is to attend to the diseases of the men at all times whenever it is judged necessary. For this service
service the surgeon is allowed four shillings a day; the mate three and sixpence. But, out of this are levied from them considerable duties: to pay these, daily stoppages are made, for such is the custom of the army: from the surgeon a shilling, and from the mate sixpence a day. This makes their subsistence equal, so that each is limited to a guinea a week, and on this they must subsist as well as they can.

These stoppages, however, amount to more than the duties, but the overplus, or clearings as they are called, are never regularly returned at the end of the year. Instead of this, it most commonly happens, that the clearings of the first year’s service are not paid till after the third, and sometimes even later. When they are most regularly remitted, it is never sooner than after the second year. The stoppages subtracted from the surgeon’s pay amount to about five guineas a year, and those from the mate somewhat less. Some of these are for useful
ful and laudable purposes, and are not to be regretted: others less so, and should not exist.*

The surgeon and mate are exempted from all duty, as it is called, in the army; such as mounting guard, attending court-martials, and such like; their charge alone being confined to the sick. They rank as staff-officers, and are considered as an appendage to the corps. In the line of actual subordination the surgeon ranks not only below the youngest ensign, but the quarter-master and adjutant; and the mate again below the surgeon.

The surgeon receives a commission signed by the secretary at war, or, if abroad, by the commander in chief there, who has authority to grant it; the mate only a warrant signed by the colonel of the regiment into which he is about to enter. This subjects him

* I mean here the fees of clerks beyond their just poundage.
him to some inconveniencies from which the surgeon is exempted by having his commission from a superior power. But of this we shall speak hereafter.

The surgeon or the mate must be present at all regimental punishments, i.e. at all times when any of the privates are, for certain misdemeanors, sentenced to be flogged. Their business here is to watch the suffering delinquent attentively, and to order him from the halberts whenever he is thought in danger, whether the sentence of the court-martial be altogether executed on him or not. In this the commanding-officer has it not in his power to control him, if he thinks it expedient to assert this right of opinion and authority.

The surgeon and mate are obliged to attend field-days; their business in the field is to give assistance should any accident take place. For it sometimes happens that the men cut their hands with the flints on firing.
firing their muskets; sometimes with the bayonets, in the hurry of returning them in keeping their motions; and sometimes over fatigue renders them unable to finish the exercises of the day, and such like; when it becomes their business to see them taken care of.

Every regiment has an hospital for its sick, provided a house for that purpose can be procured in the place where they are quartered. To defray the expence of this, government allows about thirty pounds sterling per ann. in some regiments. I believe, indeed, this is the allowance in most. If there be any overplus, it is applied to the purchase of wine for the sick, utensils for the house, such as dishes, spoons, chamber-pots, &c. Out of this, sixpence a day is also paid to a nurse in some regiments, an indispensably necessary servant for an hospital.
To supply medicines, each private pays a penny a month; each non-commissioned officer a penny three farthings: the non-commissioned officers I call the drummers, corporals, and serjeants. At the late war establishment this amounted to about eighty pounds nine shillings and sixpence per annum in six hundred and thirty-six rank and file. The present peace establishment reduces it in several regiments about ten pounds.* The amount per man, however, is the same, though the mode of collecting it has lately been changed. In the regulations of the army, printed in 1783, we find this alteration is made, viz. that in a regiment now, whose companies are at fifty men or under, seventy pounds a year is

---

* I am uncertain whether the peace establishment of every regiment of foot be reduced to an equal standard. As the full complement in time of war was different in different regiments, the peace establishment may be likewise different. In a regiment of 636 rank and file, with the non-commissioned already mentioned, the peace establishment has reduced them to 400.
is given to the surgeon in place of pence-money, and in regiments of a greater complement a proportionably larger sum. Besides this, when the regiment is encamped, government sends him a chest of medicines as an addition to the medicine money.

The complement of many regiments in the late war among the regulars, was six hundred and thirty-six privates, forty-eight corporals, twenty-six drummers, and thirty-six serjeants; amounting in all to seven hundred and forty-six. With respect to the sea service I am entirely unacquainted; therefore, it is to be understood as exempted from any remarks in this essay.*

I shall now state the number in the sick report of a regiment of the above complement at one hundred men, one day with another. But we are to observe, it seldom happens that it is compleat. It is as frequently

* It is to the foot service I chiefly confine myself.
quently found with less than the half; and, perhaps, at an average, for twenty years, we might state it at this. We are to remember, however, that out of this hundred men returned to the surgeon, not one half, one week with another, actually require any medical assistance whatever. For it is the mode of proceeding to put all that are found unfit for duty, whether they are sick or not, into the surgeon's list. Such men being in the number of the regiment, and receiving pay, must be accounted for; and there is no other place to arrange them in daily returns to the commanding officer, or those to the War-office, so convenient as this.

If, then, it be allowed, that, at an average, the complement of the regiment being compleat, as already mentioned, a surgeon has never more than fifty men to visit daily, his fatigue cannot be so great, when at the same time we consider, that even out of this number, cut fingers, and trifling blotches on the legs, not to mention some that want shoes,
hoes, and others that want other necessaries, form, perhaps, one third of them. But should the regiment not be even half complete, following the same proportion, his patients are reduced still to one half less; so that, at an average, they are not above twenty-five.

It will hence appear, that he has leisure sufficient to pay proper attention to the really sick; to reflect on the nature of their diseases; to weigh the symptoms; to turn over authors who have treated on the subject; to compare it in his mind with similar cases he has met with in his practice; to observe the exact effects of the medicines exhibited; and to change or continue them as the cases may require.

Those who attend the sick in large hospitals, not only in general visit a much greater number of ordinary house-patients daily, but over and above attend, perhaps, an extensive private practice. It is the distance, for
for the most part, that our patients dwell from one another, that causes the fatigue of the profession, not their number when placed under one roof, as in an hospital. Hence the surgeon of a regiment can have very little cause to complain of great fatigue, whose number of patients, by our calculation, which is rather above than below par, are so few; and, if not in his hospital, are within the limits of a town, perhaps, comprized within the small compass of a mile; but should it be even three or four, to visit them can never be said to engross all his time; and, more especially, when the duty is divided between him and the mate, on whom the greater share of the business generally falls.

The reason why I have entered into this discussion, and pointed at the limited number of sick in a regiment, will appear in another part of these observations, where it shall be our business to shew, in as clear a light as possible, that the appointment of mates
mates is unnecessary; and that, by a different regulation, wherein they shall be altogether excluded, the regimental practice may be better attended to; and not only that, but the office of a regimental surgeon gain more respectability.
CHAP. II.

Of the Difficulties attending a Regimental Surgeon's Station.

After what has been premised, we shall now enquire a little into some difficulties which a regimental surgeon has to encounter in the right discharge of his duty. These indeed we shall find by no means few, and if he be a man of a humane and tender disposition, are such as will cause him many hours uneasiness and disturbance.

For surely it is matter of great concern, and must press not a little on our feelings as men, to see a poor unhappy patient destitute frequently of almost every thing fit for his situation; destitute of a proper bed to lie on; destitute of lodgings properly suited to his present distress; destitute of proper
proper food or cordials to support nature in its languishing state; and, in a word, destitute of almost every thing which he ought to have, which his present distress loudly calls for, and which are often absolutely and indispensably necessary for his recovery.

That this is no exaggerated description will appear evident, when we consider the houses the soldiers are billeted on; and the manner in which they are often used in towns where the regiment is quartered, when hospitals cannot be hired.

The billets in England, and, I may add, in Scotland, are always in public-houses; and the landlord never fails to look on the soldiery not only as a nuisance, but as a great drawback on the profits of his business. They are treated coldly, and frequently lodged poorly. The places allotted for them are generally some uninhabited garret or lumber-room, where the very air they
they are obliged to breathe is so vitiated, as, at first entrance, considerably to affect a person unaccustomed to it.

If the landlord has no garret, he has, perhaps, some backhouse, where he erects a few dirty beds. Such places are set apart for the soldiers, because fit for no other use. The clothes on their beds are frequently so scanty, and so much worn, as even in summer to be almost unfit to keep them warm, and should it happen to be cold winter weather, altogether insufficient. This often brings on catarrhal affections, and lays the foundation of other more violent diseases of the inflammatory kind, not unfrequently ending in death.

It must be obvious that this will affect the surgeon in his practice; for, we need not add, that while the cause exists, the disease must continue. The most judicious plans of practice may be laid down, but, under such circumstances, it will be next
next to impossible they can prove suc-
cessful.

THAT this is a true state of the fact
many a poor soldier can testify, and, on
my professional visits to them, what I have
too often had occasion to lament: the more
so, as it was not in my power, in this re-
spect, to afford them relief. The truth
is, that many a prisoner in his cell is better
lodged than we find many of the soldiery in
billets; yet will they seldom complain, if
their situation be at all tolerable. If com-
plaints, indeed, are made to their officers,
redress, as far as can be had, is given. A
message is sent to the billet-master to desire
him to change the billets of the soldiers
so treated; or oblige the publicans to fur-
nish them with better accommodations; but
this is seldom productive of much good:
for should the magistrate interpose, which
sometimes is the case, and the landlords be
reprimanded, perhaps fined, and thus com-
pelled to give them better usage, ill-nature
generally takes place on both sides; the landlord and his family still prove haughty; the soldier retorts it by behaving improperly, and taking every stolen opportunity of committing misdemeanors. Thus neither party is pleased. The landlord abuses the soldier—the soldier the landlord. Those necessaries with which he is obliged by law to furnish the soldier, are not only given with reluctance, but are often of the worst quality.

Their small beer is what I have chiefly now in view; for on these, as well as many occasions, it is generally vapid, and unfit to be drank. Hence it frequently becomes the cause of cholics, diarrhœas, and other complaints of the bowels, that prove not a little troublesome to remove; and cannot be completely cured till the cause ceases, and a change is made in this article, which is not always in the power of the surgeon to accomplish, and who can only attempt a remedy by a complaint to the officer, which
as often fails of the end in view, as it obtains it.

We must acknowledge, that the publicans are greatly oppressed, especially in time of war, by the military. It appears very unfair to burthen this class of his Majesty’s subjects with so heavy a tax, while all other descriptions of men are exempted, and while they at the same time pay their just proportion of the other taxes of the state. I speak here of Great Britain; it is different in Ireland; the distribution of billets there is more equal: private houses as well as public are subject to them.

With respect to the publican, he surely has no profit by a soldier’s custom. Such as hold this plea, have built their reasons on a wrong foundation. His pay, it is well known, is barely sufficient to purchase him necessary food. Let me suppose each soldier spends three-pence daily in his landlord’s house, which is half his full pay, even this
is no equivalent for the trouble and expense he proves to him. I believe, however, it will be readily granted, this is a sum no private soldier can afford to spend.

That soldiers frequently get drunk, I acknowledge; but this is not always at their own expense. They are often jobbing through the town, when not on duty; their wages for this is sometimes a pot of beer, or the like: this may or may not be at their billets, just as occasion serves, or as the landlord has a job for them.

I remember to have heard a publican declare, that his soldiers (I have forgot the number he had billeted on him) cost him no less than thirty pounds sterling a year in small beer alone.* Let us state it even at half,

* I have been in inns in the West of England where 52 soldiers, and some officers, were billeted on an innkeeper at once: not for a night, on a march, but for a continuance. If each of these was paid out, at 1s. a week, it would amount to 2l. 12s. weekly; but,
half, and it is still a heavy tax; and when we consider, that they are furnished with other necessaries likewise, it becomes a farther oppression. This man kept a large inn. Small public-houses are, however, proportionally burthened. In a country such as near London, where fire-wood and coals are dear, the article of fire itself is no small tax during the winter. This the soldier is allowed, and this he will have, if possible.

It has appeared to me ever since I knew any thing of the army and its customs, that there are other descriptions of men on whom justice would equally require soldiers to be billeted. The butcher and baker I have chiefly now in view. These receive more of the soldier's pay than the publican: for the soldier may drink, but he must eat. It will not be an over rate if I say, a soldier's bread

but, from 1s. 3d. to 1s. 6d. is a more common price in those parts, when soldiers provide themselves. This is an enormous tax: it is, however, in times of war that publicans are so burthened with them.
bread and butcher's meat stands him in two shillings and two-pence a week, *i.e.* half a pound of meat a day at two-pence, which amounts to one shilling and two-pence a week; and three halfpence a day for bread, which is ten-pence halfpenny. I might rate it at two shillings and four-pence a week. The price that the lower public-houses board their soldiers at (for some do board them) is four-pence a day. This is much more than a publican gains by a soldier. If this be true, it follows, that butchers and bakers, having equal, if not superior gains by the military, should be equally subjected to the tax of billets.

But there are inconveniences yet remaining that attend soldiers always billeted in public-houses, and obliged to live there: I mean the temptation to drink. We know, indeed, they will drink whether they dwell in public or private houses; but in the former the temptation is greater than in the latter; for, being so convenient, if they have
have a penny they will spend it in liquor, though they should not possess another to buy them bread.

In a butcher's or a baker's house these temptations would be less; and another advantage, I apprehend, would follow: they would be less liable to contract debts. For though the military laws be so strict as to oblige the commanding officer, on coming into new quarters, to send a drum round the town to cry down the men's credit, beyond a day's pay, and this on pain of being cashiered if he neglects it, yet many of them find means to get more credit than they can discharge. The consequence is, that on leaving the town they leave behind a bad name, and are the cause of bad usage to those that succeed them; but this is not all—this very thing is the cause of desertion.

For should their debts be discovered to the commanding officer, and they put on stoppages for the purpose of payment, the pittance
pittance they now receive being insufficient to purchase them meat, they are, I may say, forced to desert; they cannot starve; the cravings of nature must be satisfied.

But it is not the private alone that is the sufferer by constantly living in a billet; the officer is in like manner subject to the same. He experiences many inconveniences from it: he must buy his food at almost double the sum he would pay in a private family; for he must pay at the common rate of the traveller, who, it is well known, pays double the value of every article he needs, while on his journey. This is exactly the situation of the officer. If he is frugal, he will receive bad treatment; at least neglect will be his lot; and should he expend even double his subsistence, he will seldom receive from the master of an inn over civil treatment.*

* The publicans sometimes tell the officer, that by his custom they expect to be reimbursed for the expense and trouble of the soldiers billets: this I have myself been told.
In a private house he would, in a great measure, be exempted from this; his room or billet would, in all probability, be more commodious, and his board would stand him in considerably less, provided he chose to eat at his billet. To a subaltern this is no small consideration. But I have dwelt long enough upon this head. I shall now return to the farther consideration of the difficulties attending a surgeon's practice when the privates are in billets.

Let us suppose him to have several men ill of dangerous fevers, and no hospital to remove his patients to; for this really sometimes is the case, from the great dislike and aversion people in general have to let houses for such purposes.

When this happens, he must attend them at their billets. I have already pointed out the frequent inconvenience of these even to persons in health: What, then, must they be
in sickness?—bad beyond description. Perhaps the chief part of the cure consists, in these cases, in pure air. But the poor soldier is mounted up in a close, foul, dark, garret. At other times again the billet is pervious to every blast. Extremes are equally bad. What can the surgeon do in such a dilemma, with so powerful an opponent to his measures?—alas! but little. His prescriptions may be judicious; his attention great; and his attendance regular; yet he will only have the mortification of seeing his advice frustrated, and his patient every hour sinking, till death in a short time closes the scene.

Were examples necessary to prove what is here advanced, I might quote several; but I shall content myself with hinting at one case only: here the patient's life was lost from no other cause than the badness of his accommodations in his billet during a typhus, which at first did not put on a more than ordinary bad appearance; but every
every thing conspired to render recovery impossible in the progress of the disease. It was in the unfavourable spring of 1782, some time before the appearance of the influenza which in May and June spread over the kingdom. I think it was in the month of March. The season was extremely intemperate, and the billet among the worst I ever saw. It was perfect mortar around his bed, which stuck to the feet the same as if in the streets; and the room pervious both to wind and rain. In this sort of apartment were several beds, occupied by the other soldiers. No change of billet could be procured; for no publican would receive a sick man, for fear of contagion: neither, as yet, could any one be prevailed on to let a house for the accommodation of the regimental sick. After this poor man's death, and some other misfortunes of almost a similar nature, when the commanding officer determined to have a house for an hospital, if it was to be purchased for money, and one was with difficulty procured, it was not
not better than the billets: even worse than several of them. In all such cases the best medical treatment must ever be frustrated.

Another difficulty that the surgeon, perhaps, labours under, is the want of a good, careful, and tender nurse. A very great deal depends on this servant. It is altogether impossible for the surgeon to be present with his patient on all occasions, when he wants such assistance as a nurse-tender can give; and, was it even convenient, and he willing, he cannot be so useful in this respect as a nurse. She ought to be with the patient on all occasions, and almost constantly; since it is her duty to administer both drink and medicines with care and punctuality; the last, at the exact times the surgeon orders them; for should any neglect happen in the exhibition of the medicines, if not productive of worse effects, it may at least retard the patient's recovery. Suppose them neither given in the quantity prescribed, nor at proper intervals, the effects
effects which the prescriber expected may not follow; and should the neglect be kept a secret from him, it may produce an unnecessary change in the plan, to say no worse, and, in the end, perhaps, with no advantage, if not detrimental to the patient. Every one much conversant with the sick knows the inattention of the generality of nurses, for sometimes both his practice and reputation suffer by it.

Though I have mentioned here a female nurse, in the army this is not always easily procured. Indeed, a careful orderly, or man, appointed to this duty, will answer tolerably well; but he is to continue, not to be changed every week, or less, as is sometimes done, since it takes some time to qualify him for the office. What in the army is stiled a nurse, and has already in this work been so denominated, is more properly the housekeeper: she cooks and caters for all the patients in the hospital, makes drinks, and prepares other medicines that require culinary
culinary treatment. She should have a command, and be allowed an authority over the other orderlies, to keep them steady to their respective duties.

And, farther, with regard to the chamber-nurses or orderlies duty: great attention is to be paid to the patient's calls of nature; he is not to be left to his own feeble efforts to rise to the pot, &c. as I have too often seen the case; such exertions in certain acute diseases, not to mention the cold that he will catch, may be very detrimental to his recovery; or, through want of ability, he may wet, or otherwise dirty himself; all which, by the presence and assistance of the orderly, will be prevented. Attention is likewise to be had to the manner even he lies in bed, whether he lies in an easy position or otherwise; attention to the state of his tongue, I mean his mouth, lips, &c. to keep them moist, soft, and as clean as possible; if his teeth fur, or become encrustated, to wipe them frequently, and se-
veral other minutiae of this nature, which the surgeon may give him in charge, and ought by no means to be neglected. And if, at the same time, he has blisters open, or other sores, either accidental, or made as an assistance to his recovery, attention to keep them well dressed, and as easy to his feelings as possible; otherwise an irritation will be kept up, which may considerably disturb the system, not to be allayed till this cause is removed. For this is more the nurse's than the surgeon's province, since it may not be in his power to visit him above twice a day at most, while the nurse or orderly is, or ought to be, constantly present, and from habit, and practice in such sort of attendance, which, to some, may seem "trifles light as air," but, in reality, are of great moment in the recovery of health, she becomes far more expert in, and tender, than either the surgeon or others less accustomed to such things generally are. Attention must likewise be paid to the sleep which the patient gets, and its duration; whether
whether found and refreshing, or only a sort of coma-vigil; whether with the eyes properly shut, or half open; attention to the state of his intellects; whether his ideas be confused or clear, on his awaking from sleep; with many things of this nature, absolutely necessary for the surgeon to know, and for which he must entirely rely on the veracity and vigilant care of the nurse: for an error here may be called an error in the first concoction, and may lead him astray in his subsequent prescriptions. It is from the relation he receives in this respect that he will, in a great measure, be guided, and either continue, or change his mode of proceeding, or can form some prognostic of the future event.

Instead, however, of such nurses, or chamber attendants, the regulations of many regiments only allow what is termed an orderly man, i.e. a soldier from the same company with the patient. What attention can in general be expected from a clumsy, heed-
heedless soldier, ordered on a duty he greatly dislikes from its nature, as well as from the confinement to which it subjects him? For the most part, he is only anxious for the expiration of the time he is obliged to remain on this duty, which is twenty-four hours, for he is often changed daily.

But suppose him possessed of feelings enough, and ready to do as far as in his power for his sick comrade (I am ready to own I have found many deserving the highest commendation here) that he is not only willing to attend to the directions given him, but sedulously puts them in execution; and who, in a few days, might be tolerably well qualified to answer the place of a female; yet his attendance is only a day. Next comes another, perhaps as brutish as this man was gentle and tender; into whose head all the men on earth could not instil a single idea of the duty he is to discharge; or, at least, will pay no more regard, than if he did not comprehend it.
It is well, indeed, that the continuance of this man is only for a day. But, alas! in the doubtful period of a fever, what changes for the worse will a day produce, where bad attendance is given, or, perhaps, the patient altogether neglected! changes which the most judicious of the faculty may not afterwards be able to obviate!

Though the surgeon gives him charges, repeated charges, relative to what he is to do for the patient, and even with threats of punishment, if neglected, yet, as soon as he is gone, will this fellow either go about his own amusement, or, if he finds any one to give him liquor, or possesses any money himself to purchase it, hasten to get drunk in the house (I speak now of the sick in their billets) never once, perhaps, thinking more of the patient till the surgeon's next visit, or till he be relieved next day by a third man of the same company, and so on, till the unfortunate sufferer either dies, or nature gets the better of these obstacles, and recovers him.

Such
Such is the attendance given the sick in billets; the attendance in the regimental hospital, when under the same regulations, is oftentimes little better; and such are the difficulties that oppose the surgeon's successful practice!

Should he be detected in this neglect of duty, and sent to the black hole,* what purpose does it serve? The next that comes, perhaps, acts little better; or, suppose the contrary, more mischief has already been done the patient by the sottish idleness of this man, than can afterwards be retrieved. Here the surgeon's character may be at stake, and his patient lost; while he has not only this to lament, which every man of feeling and humanity will bewail, but the commanding officer, also, may blame him, when he little deserves it. This, should it happen, is heaping Pelion upon Ossa, grievance upon grievance: and this, surely,

* A place of confinement for lighter misdemeanors in the army.
furely, is no small misfortune under which a regimental practitioner labours. Nay, if he wishes to discharge the duties of his profession as an honest man, it is what must give him many hours of bitter regret, and sad mortification.

Though I have painted the situation of billets in this unfavourable light, as what most generally happens, yet here, likewise, we find exceptions. Some of the publicans pay much greater regard to the soldiers billeted on them; and should any of them fall sick, act towards them with much tenderness and humanity. It is in this walk of life as in others; there are to be found in it a variety of dispositions.

As far as my observations have yet reached in this way, the small public-house keepers prove the most civil, and are the most tender to their soldiers. One reason I would give for it is, that the soldier and the people he is billeted with are more on a level in
in point of rank, and hence more familiarity takes place between them. Familiarity here does not, as the proverb has it, breed contempt; on the contrary, it fosters friendship, and a strong attachment is frequently formed. Where this happens, the soldier lives as happily as the people's circumstances and the nature of the billet will afford; and he may be said to "fare sumptuously every day," when compared to many of his fellow soldiers. He eats out of the same dish, and drinks out of the same cup with his landlord and family, and, often, at little or no expense.

Another reason I would assign is, that many of these people have sons in the army; this again begets sympathy; they are kind to the soldier in hopes it may be repaid to their children, in like manner, living at the mercy of others in some different part of his Majesty's dominions. It is parental tenderness; it is piety; and may their wishes be fulfilled, and their sons placed among people
people equally disposed to hospitality and humanity!

How happy have I been on finding a sick soldier quartered on such a house, where the mistress was his nurse, and who cheerfully administered to his relief, as far as her little wealth would permit; nay, often, with an anxiety and affection similar to a mother. Here my orderly man gave me no concern. My directions were never given to him, but to this good woman, who would never fail to put them in execution, either herself or by some of her family; or, when family affairs prevented, was such a check on the orderly, by threatening a discovery if he neglected, as made him more steady in the performance of his duty.

Well compounded cordials, or some light food, properly prepared and fitted to the patient's condition, is frequently a great help to keep up his strength, and assist in forwarding his cure. Can such nurses as we
we have been describing under the name of orderlies, prepare any thing of this kind, suppose them furnished with the materials, which a stomach so disordered, so weak, can either relish or digest? A pudding of any kind they know not how to make; for there is but little variety of cookery used among the privates. Even panada, or water-gruel, which require the least skill in preparing of any food for the sick, is truely but ill managed when left to an orderly's cooking. In the greater number of billets, whatever of this sort is necessary, he must prepare, or the patient must want it.

The entire want of cordials is another difficulty which opposes the surgeon's endeavours. I must not say he has it not always in his power to compose them for his patient; but I may say, he too seldom does compose them. I hint now at the use of wine. To speak the truth, there is no fund for this purpose; and if cordials of any kind, attended with expence, are ordered,
dered, they must either be charged to the sick man's account, or the surgeon must furnish them out of the medicine-money. Out of this they undoubtedly should come, if it will afford it—but of this subject hereafter.

And with respect to wine, one of the best of all cordials, the fund out of which it is to be procured is so small, that little can be afforded. We said before, that in many regiments thirty pounds a year was the sole allowance for hospital hire, for a nurse, and for wine. The nurse's (housekeeper) wages, if a female, which should always be preferred, will absorb nine pounds two shillings and sixpence per annum of it; and the hospital,* with fire and utensils (the hire must depend always on the place and convenience of the house) will leave little of the remainder. Half a guinea a week I have

* In some towns the corporation furnishes it free, and with coals also. It is so in Newcastle upon Tyne. This is a very rare occurrence.
have known paid: it is true, we find it sometimes cheaper, but this must ever depend on circumstances.

A bottle or two of wine in some cases proves of little service. Many cases have occurred in practice, where a bottle or two a day, perhaps, for more than a week's continuance, is too little an allowance. A bottle or two of wine in a low nervous, or in a putrid fever, may prove of no effect, when, perhaps, if continued, it might be the chief means to stop the progress of the disease; or, at least, to enable the patient to bear up the better under it, by the support it affords to the failing vis vitae, and the tonic power and energy it conveys to the nervous system. Yet, if the surgeon goes beyond three or four bottles in the course of as many weeks, if the fever and the indication for wine continue so long, he will seldom fail of receiving a caution to be sparing in its use; and yet, as we have said, the patient's life is
frequently owing to the liberal, though judicious use of wine.

It is not, however, an uncommon thing, at least in a regiment wherein I served, for the captains to order wine, at their own expense, for the sick men of their respective companies. In this, the gentlemen of this corps have great merit. Perhaps there is not another in his Majesty's service, where humanity and attention to the welfare of the privates under their command are more conspicuous; nor is there scarcely to be found a man of greater humanity and tenderness towards them than their lieutenant-colonel. Where such a disposition is found in a superior officer, it has doubly happy effects, as the example is diffused among the inferior officers.* It is with great pleasure I can bear this testimony with regard to the present officers that compose this corps. Thus far for the inconveniencies arising from bad

* Tenth regiment of foot.—1782.
bad billets, both to the privates themselves and to the surgeon.

We shall now enquire whether the regimental hospital be altogether free from inconveniencies. That it is not, I know too well from experience. Were it always to continue in one place, the regulation of the hospital would be easy, and improvements might occasionally be made; but this neither is, nor can be the case in a marching regiment. Their short stay in one place subjects them to many inconveniencies besides this; but these shall be passed over, as foreign to our present purpose. Inconveniences, indeed, unless they become very great hardships, are the expected lot of a soldier, and to which it is his duty to submit.

But to return to our subject: let us now suppose a house is procured for an hospital, tolerably commodious. This, however, is what seldom happens. For though it has hap-
happened in the present, it will be a thousand to one, if it happens in the next quarters the regiment marches into. If it be small, our patients are crowded, and the half of our sick cannot be admitted. I have seen it consist only of two small rooms, one above another, with the kitchen, which made the ground floor; and in each of these no fewer than twelve men, though the room did not measure above twelve feet by fifteen,* the place being almost one continued bed, without spaces between, instead of distinct beds. Into this crowded spot the worst cases only were sent. Some chronic cases, some acute fevers, punished men with their backs suppurating, and emitting a smell intolerable even to people in health. For when an officer finds a man of the company unfit for his duty, whatever be the nature of his complaint, and takes it into his head to send him to the hospital, though

* It is seldom so many sick, however, are found at one time. The regiment was upwards of 600 strong.
though it may be the most improper place possible for him, under the present regulations of the army, the surgeon must admit him, if it be insisted on; and we cannot at all times find officers capable of reasoning medically. The reader may judge what comfort it must be to practice medicine here, and how prejudicial to the recovery of those in acute diseases, as well as dangerous to those under chronic complaints. In this house, also, the ceiling was so low, that a man little above six feet high could but just stand upright under it: this made it still worse, from the greater confinement of the air.

**Confined air itself is the cause not only of sickness, but death among troops.** The nature of confined air, and chiefly such as has been frequently breathed without changing, is at this day so well understood, that barely to mention it is sufficient. Thus says the judicious Pringle: "Among the causes of sickness and death in an army, " the
the reader will little expect that I should
rank what is intended for its health and
preservation, the hospitals themselves; and that on account of the bad air and
other inconveniences attending them."

On the other hand, if the house be penetrable to every shower, which regimental
practitioners also but too often experience, even in summer, it is poor accommodation,
and in winter intolerable; nay, sometimes as bad as the worst billet. The improve-
ments we can make for the short time we expect to occupy it, are either trifling, or
none at all; for since a few months is the longest date we can promise ourselves in
the same quarters, the commanding officer has little encouragement to expend money,
the good of which must be chiefly reaped by the proprietor.

* See also a paper on the bad effects of confined air, in Med. Trans. vol. 3. by Sir Geo. Baker.
I have seen the house sometimes so smoky, that a fire, even in the depth of winter, could not be kindled, without the patients being in danger of suffocation. On this account, it was even with some difficulty that victuals could be prepared for them. This was particularly the case at Tinmouth. When fevers were in the house, during the time of dressing meat, the sick felt an uncommon uneasiness from the smoke, which was so thick and gross, that it could almost be felt. Under these complicated evils I was obliged to practice in one of the worst fevers I have experienced in the army.

The want of a fire altogether to those under some particular complaints not requiring confinement to bed, is a very chilly and cheerless circumstance. It is scarcely tolerable to sit without a fire in such inclement weather as we often experience in the changeable climate of Great Britain. Here the
the nurse, or housekeeper, and the orderlies, are all discontented, and constantly murmuring, and laying their grievances before the surgeon. What can he do? He may regret the situation along with them, but he cannot change it; for, perhaps, there is not another house in the place that can be procured for the purpose.

In this situation, the house-patients whose complaints do not require them to be confined to bed, are under great temptations to drink, provided they have address enough to procure liquor, and have wherewith to purchase it, without any regard to the nature of their complaints or the medicines they are taking. It is not, however, always they have their pay at their own management, as when men are sent into the hospital, their pay is put into the hands of the hospital serjeant, who markets for them. This is a wise regulation. Most of them, however, have followers, who take stolen opportunities to supply them with drink; for
for though a centinel be constantly planted before the door, to prevent them from leaving the house without the surgeon's permission, and, at the same time, to keep improper persons from entering, yet they, not unfrequently, find means to bribe him, who, for his share of the spoil, will wink at what his duty strictly bids him repress. These evils are not, either by themselves or the centinel, considered as of much magnitude; yet, to many patients, they are matter of great moment.

It frequently happens again, that what are called *maligners* are obliged to be received into the house, *i.e.* such as are idle; who, in order to keep from duty, feign themselves sick. Such ought to be shewn no indulgence; but a strict watch should be held over all that are thus suspected, and, if found out, proper punishment inflicted. These, for the most part, are such as prove irregular, and create more trouble in the hospital than all the really sick. But
if the centinel permits them to wander out of the house, or liquor to be brought in, it is long before the imposition can be discovered, though the surgeon be ever so vigilant. For, so great will be the conspiracy among the patients, that they will not readily discover one another: like other conspirators, however, they sometimes quarrel among themselves, when revenge dictates discoveries, and the truth at last comes to light.

This is a grievance, though it may be looked on by some, as of less consequence than others we have mentioned: much of this arises from bad hospitals. Yet, after all, though the lazy and imposing should in this manner prove troublesome, a soldier should never be turned out on the inviduous tale of another, or from an hasty fit of passion, lest a man really unable to undergo the fatigues of his duty should thence be subjected to it; at the hazard of his life. To blame my brethren here, might in me...
seem invidious, and I am unwilling to do it. 'Tis true, I have been told of serious errors of this nature, but none ever came immediately within my own knowledge. The adjutant of a certain regiment, a man of strict veracity, and who has served most of his life in the army, related to me an instance of this kind, which happened some years previous to the late war. Two men came, it seems, into the hospital, one of whom the surgeon, after some slight examination, pronounced an imposter, and dismissed him to duty; the other was admitted. It is probable he had received a hint that one of them was afoconcer; but the consequence was not so trivial—he mistook the person—and received him whom he might have dismissed without danger! it would have been more for his credit had he admitted both; for, like giving charity to an imposter, left we should mistake, and injure a deserving object, it would have been better to have acted in a similar manner, till a more proper opportunity had presented to
to discover the cheat. The man rejected in this case, as it turned out, was then in a fever, of which he died. I would be far from saying, this was the cause of his death: he might have funk under the disease, even though admitted when he first desired; but the surgeon was censurable in as far as it appeared, how little pains he took to investigate his complaints. A man's behaviour on these occasions should be judged of from his general character: if he has been any time in the regiment this is easily known. Some of the privates of good character will make it their boast, that they never missed a guard when it came to their turn; others never mount one but with reluctance, and, if possible, will find excuses on their duty morning, and feign complaints to get themselves reported sick. A surgeon should take some pains to know the characters of the privates. He will find his account in it. Nor is it so difficult a task under the strict discipline of the army.
The nurse, or housekeeper, of the hospital in some regiments, is a woman; in others, a soldier, to whom this office is allotted as his duty. Since a great part of the business this servant undertakes is to dress the patient's meat, to prepare drinks for the sick, and to wash for them (for they should do this at a stipulated price) a woman is always to be preferred, where a choice can be made. Under her there must be one, if not more orderlies. I think, in general, there ought to be two: one to bring water, clean the house, and do other offices, more immediately about the nurse; and the other to keep the patients rooms clean, carry them drinks, empty their pots, run little messages for them, and such like. Besides, in acute diseases, when it may be thought expedient, to sit all night by the patient: one can relieve the other by their sitting up alternately. The nurse may have the care of the medicines prescribed, which are either to be administered
by herself, or, under her inspection, by the chamber-orderly.

It is supposed the hospital is furnished with a proper set of beds, sheets, and bolsters of coarse linen. With respect to its colour, it is a matter of little moment: therefore, whether they are brown or bleached linen is immaterial; but that they be strong, and close in the texture, is more so. I would prefer chopped clean straw to flocks, not only as being cheaper, but more wholesome, especially, as the beds are so apt to get wet. The straw can be easily changed for some other, fresh and dry, and almost without loss of time: it is not so if they should be filled with flocks. The reason is obvious why I advise the texture to be close—left the ends of the straw protruding through, might, by the sharpness of its points, irritate the patient, and disturb him. The bolsters should be considerably wider than those I have seen, and which, I believe, were of the common size. We know how advantageous
tageous if frequently proves, to have the patient’s head well raised. For a regiment of the complement already mentioned, we should not be provided with fewer than from twenty to twenty-five beds. Ten of these should be small beds for single patients, viz. for those in acute diseases, or under other complaints, where a bed-fellow cannot be admitted; the rest double, or so large as to allow room for two to sleep together. From the small and circumscribed bounds of a regimental hospital, it is impossible, if we have many sick, that all can have single beds; and since we have always several in the house that ail very little, or whose ailments do not prevent them from admitting a partner, we may safely, and it will be economy to lay them in the same bed. Besides, we should always have three or four spare beds, either for new patients, or to supply the place of those that may be wetted, or dirtied by the incapacity of the patient to manage himself, &c. I have sometimes used two in a day; for nothing is so prejudicial to reco-
recovery as a wet or damp bed. Some of these beds should be set apart for flogged men; and these should always be single. I say, set apart, because, from the blood, supurated matter of their backs, and the oil, unguents, &c. applied to the wounds, the beds are so stained, and sometimes hardened, as to be both unfit and unseemly, to lay under a man with different complaints; so that, I think, it would be better to keep them solely for this use, with their blankets, sheets, and pillows. Besides, I have found some men who had a great aversion to them, merely from the use to which they had been applied. We need not fear they will lie by as useless lumber, unoccupied; we shall find but too frequent occasion to use them, if the regiment be at all numerous. Every bed should have two good blankets, and a coverlet. We should guard those that do not ail much, against colds: if the patients under acute complaints feel the clothes too weighty, it is easier to diminish than add, provided we be not furnished with
with a supply for this purpose. These are conveniencies, however, we do not always find to this extent in an hospital; the want of which may be some obstacle to the surgeon in his successful practice.

When a patient is so ill that it becomes necessary for one of the orderlies to sit by him, he undertakes this duty under the nurse's inspection. She makes a report of his behaviour to the surgeon on his next visit. This part of the discipline is commendable; and, provided it be properly adhered to, is a good regulation. But, I am sorry to say, there are many abuses here, and when this happens, it is a real grievance to the surgeon, who must rely on the reports he receives. We find these too frequently a matter of form, and, indeed, often false: this they do to screen their inattention. They will answer yes, or no, to the questions asked, just as it suits them, or as they think may please the surgeon: but if more minutely questioned, can give no satis-
tisfactory answers. Their false reports are worse than none, since they may tend to mislead the practice. He should, therefore, trust as little as possible to them, but endeavour to see, and examine every thing himself.

Another grievance which regimental surgeons often labour under, I cannot pass over here; i.e. the murmurs of officers, if men are not so soon cured of their complaints as their anxiety would have them. The length of time men are kept in the hospital, is commonly their topic when in conversation with the surgeon.

It is undoubtedly a laudable thing in an officer to pay a due attention to the privates he commands; to redress their grievances as far as possible, and to see that they are properly taken care of by those whose province it is; but this, or rather a shew of it, may be carried to a degree very troublesome, and far from commendable, respecting their medically
medical treatment. I do not know what to term this:—it is not merit; yet something like it. I should be sorry to blame them for any thing which shews their care of the soldiers, but this may, and, I verily believe, is, over done by some; and, I fear, sometimes with little other view than to create the surgeon uneasiness. If he is found negligence, they surely cannot spur him too much; if diligent, and attentive to his duty in general, this is cruel, is reprehensible, and unjust. It is often more a mark of their want of judgement, than care of the soldiers. I have always found young officers, who knew but little of their own duty from their short service, most troublesome in this respect. It would seem, that vanity leads such to act so, as it shews their superiority to the medical department in point of military rank, which seldom takes into consideration either age, knowledge, or other qualifications. I am cautious, however, of blaming officers on this head; for, whether or not it proceeds from real tenderness, it is better
better than more culpable neglect. It is like negative virtue, or the shew of religion; if it be not real merit in the possessor, it is an example to others, and may produce good effects. Yet I must apologize to those gentlemen, and candidly acknowledge, that such, for the most part, are the regimental practitioners of physic, that too frequently fill this office, that it is not without cause this custom prevails among officers—for a spur, not a curb, is often wanted.

We cannot expect to find officers possessing medical knowledge: this belongs not to their profession; nor is a want of it in any ways derogatory from their merit as officers and good soldiers; yet I have often thought, that if commanding officers knew something of physic, it would render them better judges when the surgeon did, or did not, discharge his duty as he ought. But this is an impossibility, for many solid reasons. If it could be found practicable, it would be frequently of service both to the surgeon
surgeon and his patients. He could explain the reasons that retarded the cure, when the subject happened to be started, while the officer, on the other hand, would be the better qualified to guard against any imposition. For, as things stand, the surgeon has it in his power to deceive his commanding officer if he be so disposed, and thereby cover either his own ignorance, or neglect: and again, his commanding officer would not blame, where, perhaps, in place of censure, he deserved praise. These are also inconveniences attending a regimental surgeon; but this, in some sort, may be said to attend every medical man's practice, as well out, as in the army.

The commanding officer has much in his power, both in the medical and disciplinary walks. If the surgeon is a man of veracity, and otherwise diligent and informed in his duty, respecting the cure of diseases, he should allow him a great share of
of his confidence. According to the present footing on which surgeons in general stand, they cannot be of half the use they otherwise might prove. Their rank is too low to give them consequence; and, as was said above, rank alone is all in all in the army.

It is the opinion of a military author, and I heartily, in this case, concur with him, that if any regiment or corps has the fortune to have only one judicious, humane, and sufficiently able field-officer, it may always be wisely regulated, during his residence with it, and has the direction of the whole. More, he adds, is to be expected here from the lieutenant-colonel and major, than from the colonel, as it is but seldom he remains with the corps; but where all three concur to this end, and are desirous of every useful information from literary men, as well as from those of their own profession, we may easily pronounce, that the regiment will be fit for service on a very short
short notice, and able to undergo the severest hardships.*

A surgeon's education (for I suppose him always to be liberally educated) renders him a proper person for much of the confidence of his commanding officer. In all things respecting the soldiery (their manoeuvres excepted) he can communicate, from time to time, much useful information. From his instruction, aided by the orders of the commanding officer, much disease may be prevented in the regiment. Domestic discipline and the arts of prevention, as is well known, can do more oftentimes than physic; and, what is still better, may, for the most part, be applied with little or no inconvenience, either to the men themselves or to immediate service; and things tending to this end, it should be his business to point out and inculcate. This will consist of things little regarded but by the philosopher.

* Vid. Brocklesby on Military Diseases, &c.
Where the appointment of field-officers has been happy; and where the same regard has been paid to the medical appointment, almost every disease, except such as arise from contagion, may be obviated in the regiment. Wise regulations strictly enforced, will be found efficacious even against unwholesome diet, climate, and the other vicissitudes of a soldier’s life. In the navy, where more care has been taken than in the army, we find it so; and since there are on land less obstacles to encounter in putting such regulations in execution, we may reasonably expect equal good effects. This, it is to be apprehended, will never come to pass, till the surgeon has a superior rank, and till more care be taken in the choice of this important officer. It is little we are to expect in the walks of philosophic life from young and uninformed boys; yet much of regimental practice is committed to the care of such. We may as reasonably expect much military experience from bearde-
less colonels, as much medical knowledge from beardless doctors: and yet, a man is not always to be esteemed for his age.

To return: a very great complaint in the army is blotches over the body and extremities, often of a phlegmonic appearance, and to which some give the general name of scurvy. These are sometimes of a herpetic nature; at others a real psora, or itch; or it may be a conjunction of both: for, I think, I have seen it so. Among soldiers they all go by the general name of the itch; and by many, I apprehend, are mistaken for it, though the treatment should be different. Such complaints are by officers looked on as easily and speedily curable. It appears to them, who are unacquainted with the causes and seat of diseases, or with their distinction, a trivial affair: yet will it often be found quite the reverse. These cannot oftentimes be removed without a total change in the patient's manner of life. This will be easily understood, when we
confider, that a soldier's eating, drinking, and even clothes, are sometimes in fault; and till these be all changed, no radical cure can take place. Let us suppose it the itch alone, and that his bed infected him, a cure cannot be made till his bed-clothes are either washed, fumigated with sulphur, or changed. If he is in a billet, he may find it difficult to accomplish either. The innkeepers will scarcely be at this trouble with a guest they so much dislike.

When a soldier's food is of a thin, coarse, watery kind, i.e. of a quality that produces little chyle, and even this of a bad kind; or if the food be of too dry, or of an alkaline nature, such as living almost entirely on hard, tough, dry cheese, and coarse bread, with little or no vegetable food, is it to be expected that his juices are pure? and I have known them live on almost nothing else for weeks together, when they were not put into messes. As well might we expect to reap wheat from tares, or oats from
from rye as find wholesome juices here. If his frequent change of lodgings subjects him to dirty beds, will he not partake of the foulness of those that lay in them before him? People who are forced to afford beds gratis will be at little pains to wash them at each change of lodgers. From contagion, and from the causes now pointed out, the soldier may be at the same time affected with itch, and herpes; and though the surgeon may effect a removal of the one, as its cause and cure are well known, yet the other eruptions, which I shall call constitutional, cannot, by the best skill, the most rational treatment, be rooted out, till his food is changed for that of a more wholesome, and nutritious quality, as well as his whole mode of life.

In barracks, much of the inconveniences surgeons, as well as the men labour under, are avoided. But, I am sorry to say, the number of barracks in England is very trifling, when compared to the number of troops
troops in time of war; and several of the few we do possess, are either too small or otherwise ill contrived. The number, as well as conveniencies of barracks, are much greater in Ireland. The usefulness of a mess is obvious; but in billets, where the privates are scattered up and down through the town, to form a mess is next to impossible. Yet nothing conduces more to health; for then, whatever their inclinations may be, they are supplied with, and obliged to live on, wholesome food. Their pay is not given them at their own disposal; a certain portion of it is set apart for their diet. In billets it is far otherwise; each man receives his pay, and is at liberty to expend it as he pleases. Many will drink their whole week's subsistence in an hour or two after it is received, and must starve, or live on chance the six ensuing days; and those who do not behave so, generally make so bad a choice of their food, that their blood is impoverished, and they become subject
subject to inveterate cutaneous eruptions, as well as to other diseases.

Cleanliness, also, in billets, is much less attended to, than in barracks. When scattered through a town, the soldiers are less attentive to this, because less under the eyes of their officers. For although the rules of the army oblige them to appear twice a day on parade, this momentary, or partial cleanliness, is of little use in their general health. It extends to nothing farther than their shoes, cross-belts, and musquets, with the whitening of their hair with a little flour; the chief part is still neglected.

With regard to the removal of these eruptions, and foulnesses, it sometimes happens, that change of quarters does more towards it, than all the medicines the surgeon has exhibited, or can advise, i.e. if a route carries a regiment from a dear country to a place where the necessaries of life are cheaper.
cheaper. Clean, wholesome, nutritious food, comes now more within the privates reach. He can eat, because his pay better affords its purchase.

What makes the great difference between the officer and private with respect to these foulnesses of the skin?—their manner of living alone. Could the private eat out of the same dish, drink of the same liquors, sleep in the same sheets, and wear the same number of shirts, &c. in the week as his officer, his hands and legs would be as clean, and his skin as smooth. Officers, then, should not be discontented with their surgeon, if these foulnesses which the men are, from the circumstances mentioned, so liable to, be not as speedily removed as their wishes prompt them to expect, provided they find the surgeon attentive in applying remedies as far as in his power. In such cases, having a confidence with the commanding officer is a great consolation. Should an injudicious report be preferred
ferred against him, it will not act to his prejudice.

The venereal disease is another evil which is so prevalent among the soldiery, that it causes no small trouble and vexation to the surgeon, and is none of the least of the inconveniences we are pointing out, which he is obliged to encounter. It brings him many hours of anxiety; for the officer frequently murmurs if the men be not speedily cured of it; but it is oftentimes no sooner removed than it is again contracted.

Among soldiers it is so prevalent, that no reproach follows it, either from their comrades or from many of their officers. While this is the case, all hopes of reformation are shut out. Yet, I would venture to give it as my opinion, that some punishment should follow it; nay, every method practicable for its suppression, as far as possible, should be used. This has indeed been my language, when I have been answered,
"It is the common course of nature to desire women; if you can deprive men of passions, then you may of women, not otherwise.—And why attempt to deny soldiers a gratification which is so natural, and enjoyed at pleasure even by the brutes?" But I would beg leave to answer these gentlemen, that it is only the common course of vice, not the common course of nature, thus to contaminate themselves. It is true, that by nature we are all endowed with a strong propensity towards the female sex. This is proper, as well as natural, since by the union of the sexes the species is to be propagated. This is the method by which the Deity has thought fit to continue the human race, as well as other classes of animals. We find male and female among not only what is called the rational, but the irrational part of the creation; and even in the vegetable kingdom something similar.
Among the rational, with which it is our chief concern, though there be this natural propensity of the sexes for each other, yet the Deity has laid certain restraints on it. To have women in common, he well knew, would be the bane of society, and must lay the foundation of many evils; and even tend to the decrease, not the increase of the species. We see this experienced every day among that unfortunate class of females that live by prostitution. Sterility seems to be entailed on them as a curse. The irrational world, as I shall call them, live not in society, like men; at least live less in it; and this, perhaps, may be one reason for his allowing promiscuous cohabitation among them. Another reason is, they are almost universally more continent, more chaste, if I may be allowed the expression, than the rational kingdom.
Among these, the times of heat keep pace pretty much with the times of gestation in the female; or the returns of it in the female are according to those periods of propagation. In the rational world it is different. A greater latitude is allowed by nature to them. Perhaps, partly for the exercise of their rational faculties, which point out what is right, and what is wrong, and, among other things, points out the bad consequences of the too frequent and promiscuous use of women; but this latitude is restrained within certain bounds by a wise prohibition: for had it not been so, "to increase and multiply," at least in the same proportion, would not have been accomplished. But, granting that sterility would not follow, other evils, of no trivial nature, would spring from thence. Paternal affection, if not altogether destroyed, would be much blunted; for as none could then certify his own progeny, none would be par-
particularly interested in procuring it subsistence, or education. Besides, the irrational world do not stand so much in need of this assistance. They come sooner to maturity, to their acme; nay, almost as soon as they come into the world some of them can nearly provide for themselves. But man takes not only a long time to rear up, but much care; nor is it till after a long period he can provide for his own existence.

This seems another reason that renders it absolutely necessary for both parents to unite their endeavours to produce this great effect; and till then, as a farther stimulus, or spur, that love and anxiety for our children's welfare, which is known by the name of parental, always continues. As they grow to maturity, however, and can provide for themselves, it becomes more and more weakened; and, as old age, which produces feebleness and incapacity in the parents, approaches, duty teaches the children to give them their assistance in turn. Hence the
the constant and continued tie of family affection.

But though it was said, that the irrational world cohabited promiscuously, yet, among some classes of these, we find a like strict adherence of one male to one female, as long as it is necessary to effect the great purposes of nature. The winged creation court, and adhere to one mate, till their common progeny be capable of providing for themselves. Then, and not till then, does the attachment cease. After this, they forget one another: the purpose of nature being now answered, its longer existence would be useless. It seems now to be altogether, and for ever dissolved. As the parents stand not in need of the assistance of their progeny in old age, filial and parental affection have no longer existence. This link seems also broken; for as birds are the prey of one another, it is very probable, few of them live to old age, i. e. to such an age as renders them incapable of pro-
providing for their own support. And this may be a farther reason why it becomes so soon, and so totally dissolved. A remembrance of kindred could be productive of no good; on the contrary, it might subject them to anxiety and grief, should they see, or know, the fate that may often attend their kindred.

The laws of nature, therefore, as well as the regulations of society, have established it very differently among the rational world: hence marriage, and the care of families. In a word, where the female confines herself to one male, propagation follows, and the order of nature takes place; but when she rambles from day to day, loose in her desires, admitting every solicitor, barrenness is the consequence. If this method was followed universally, would not the human race, in a few ages, become extinct? But this is a question I shall leave to the farther discussion of the moralist, and proceed with my proper subject.

We
We said, that the venereal disease was an evil which created great trouble to the surgeon, notwithstanding its cure is so well known. Some method should be devised, either for the entire suppression of fornication, or at least of rendering the opportunities of contracting the disease less frequent. To assist in this scheme, no countenance should be given to such practices by the officers. It should always be followed with some punishment; and, on the other hand, every possible encouragement held out to marriage, of which the nature of the service will admit. We acknowledge, marriage is not prohibited in the army, yet I have long thought, that too little encouragement is held out for it; nay, I have seen a manuscript book of orders, wherein the men were entreated not to marry. We know, however, many families are brought up in the army, among the privates, most of whom, as soon as fit, enlist either in the regiment wherein they were born, or in some
some other. And from this source alone, a considerable body of troops, for the most part the best soldiers, are added to the army; and, I am confidently of opinion, it might be turned to much farther account for the public service, by giving greater encouragement to marriage with modest women. I know there are difficulties attending it, which, in some measure, might be removed. When a regiment, for instance, is ordered on foreign service, it is only a certain number of women that are permitted to go abroad. Prostitutes frequently find means to go, when married women are separated from their husbands. This should be prevented as far as possible. Perhaps, if a register was kept of the married men in each company, pointing out the time of the marriage, and the names of the parties, and this called over on embarkation, to ascertain the really married, in order to exclude prostitutes, and admit these, it might be some means of obviating this imposition, and some encouragement for marriage. Every woman
woman of bad fame found among the single men should be drummed away, while some reward should be offered for discovering such as on these occasions kept them secreted, and some stigma of reproach put on the offender.

I do not know whether something like the following might not answer to prevent fornication, at least it might be tried, viz. That a certain sum should be deducted from the pay of every soldier who had contracted this disease. When they have not to pay for it, they contract it with the less reluctance. And this is the case in many regiments. But in others, again, each man pays a crown for his amour, which the surgeon gets for his trouble. Respecting this, I have in another place ventured my opinion.* To pay this they should be put on stoppages of a penny, or two-pence a day, till discharged: hence the punishment would

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* Vid. Thoughts submitted to Officers, relative to a Regimental Fund for the sick Wives of the Privates.
would exist until the payment of the last penny. This would not too greatly distress them; but, at the same time, operate so far as to make them cautious in future. In the navy, a much severer tax on this pleasure exists. Each man pays no less than fifteen shillings for his cure. This also goes to the surgeon: perhaps it would be better if differently disposed of. In the army, this venereal money should be collected, and should make part of a fund for the relief of the modest married women of the regiment, when incapacitated from earning their food by sickness. And when a married man contracted the disease, the fine should be doubled, both from the double dire effects it may produce on his wife, and for his having less temptation than an unmarried man of going astray. Here he breaks the marriage vow, so solemnly sworn before God and the world; and, to add to his guilt, he makes the innocent a partaker of a loathsome disease, which not only may destroy her peace of mind, but her health ever
ever after. I have but too often seen this the case in military life.

This is a complaint of all others with regard to which an officer should be cautious of reflecting on the surgeon, if it be not so soon removed as he may suppose it ought. The truth of this will appear, if it be considered how liable the men are to impose here. The surgeon shall discharge a soldier to-day perfectly cured—that very night this man shall cohabit with some unclean prostitute, and, in a few days after, he will return ill of the same complaint, new contracted: first telling his officer, to screen himself, and obviate a reprimand, as well as to obtain leave to be again returned in the sick list, that the surgeon sent him to duty before he was properly cured; but will cautiously conceal his new illicit amour. Hence it is kept hid for some time, and the blame must fall on the surgeon, till his comrade, or some of the men that were privy to the affair, discover it. Till
Till this takes place, it goes current among the corps, that the surgeon turned him out too soon, as they call it. I have been frequently served so, but I have always been happy enough to have the commanding officer on my side, and able to clear myself to him. I had a remarkable instance of this in the summer of 1783, where an idle, ill-behaved private repeatedly served me so, and had address enough to make the lieutenant of his company give credit to his tale for a day or two, but the major, then the commanding officer, readily acquitted me.*

Another very strong argument in favour of our opinion, that officers should bestow all the pains in their power to suppress this promiscuous use of women in the army, is, the decay it soon produces in the soldiers constitutions. A man who has been frequently affected with this disease will never

* Vid. Thoughts to Officers, &c. where I have related this case at large.
never enjoy good health, nor be long fit for the duties of a soldier. If he contracts a confirmed pox, which he can hardly escape, how difficult it is to eradicate it out of the constitution! even in those that can afford every conveniency to favour a complete cure, it is sometimes not done without the utmost difficulty. It becomes much worse in a private soldier, who has frequently every thing that tends to retard and prevent his recovery against him. In cases, indeed, of this confirmed nature, it is seldom the officer will permit the patient to continue long enough under the surgeon's care to perform a radical cure. The great number of sick is his constant complaint. What can the surgeon do?—as soon as some of the worst symptoms are removed, he marks him out for duty, to avert the blame of his keeping a patient so long in the hospital. But the unfortunate man is soon obliged to return: he has a rheumatism; universal pains; nodes; inflamed eyes; impaired sight; impaired hearing; is asthmatic; has obstruc-
obstructions, perhaps, of the liver; obstructions in the urinary discharges, either in the bladder, or constrictions and caruncles in the course of the urethra; is affected with fistula in ano; is covered over with venereal ulcers; is totally cahectic; and though a young man, seems worn down with years and infirmities; a constant fanies discharges from his head; has glandular swellings; is hoarse, from an affection of the palate; and has lost great part of his nose; his head is giddy, so that when he stoops, he has scarce strength to raise himself; his lungs are affected, and he has a severe cough, and purulent expectoration; he trails out some months longer a life of misery, and then falls, at an untimely age, a martyr to his irregularities! From this it must appear, how detrimental to the service the venereal disease proves; and it appears also, how necessary it becomes to attempt, as much as can be done, its suppression in the army.
Sore legs are another frequent complaint among soldiers, and prove also a very troublesome affair on many occasions to the surgeon. A soldier with sores on his legs cannot properly do his duty, because he cannot wear his long gaiters, and he dare not appear on parade for duty without them. These may be of the herpetic kind already mentioned, or they may arise from a different taint; they may be venereal, and will only yield to mercury, and those remedies suited for expelling this poison from the blood. Although the sore may be trifling, and such as does not injure the general health, yet, if their constitutions are infected with the venereal disease, it may prove very troublesome in healing. In this case, the officer may think it neglect in the surgeon, and want of proper management, to keep a man in the sick reports for some weeks, with a small cut on the skin, as they will call it. It is in vain to attempt an explanation of the causes that retard the cure:
cure: his want of knowledge in the science prevents his comprehension of the case; and, perhaps, his belief in what he is told may be wanting, especially as the sore may be small, and as he forms his judgement totally from appearances.

In cases, however, of this nature, the officer ought to rely on the fidelity and probity of the surgeon, provided he knows, from the general tenor of his conduct, he possesses these virtues.

A fine young man had a small ulcer on one of his legs, for which he was sent to the regimental hospital. He continued there above a month, and no cure could be made; for, like many of his brother soldiers, he was irregular, and fond of spiritual liquors, which, from time to time, he found sufficient means to get brought into the hospital to him. The length of time he remained in it produced murmurs against the surgeon from the officers of his com-
company. They were of opinion (it must be confessed, there was apparent reason on their side) that so trifling a sore might have been more speedily healed. He was therefore taken out of the hospital, and delivered over, as the term is, to the regiment. The regiment then lay in barracks; and the poor fellow was confined, by one of the serjeants, to his barrack-room. The serjeant had, as a bravado against the surgeon, professed he would soon cure it, provided he was put under his care. When once a soldier is struck out of the sick list, the surgeon is no longer answerable for him: hence he took no more notice how the man fared; and the more particularly as his removal in this manner was intended as a reproach on him. Things went on for about two months, without farther enquiry on the surgeon's part, till one evening, the surgeon was sent for in all speed to visit him, being informed by the messenger he was just dying. He found this strong constitutioned man, for he was so when he left the
the house, sitting up in his bed, and panting for breath: his shoulders raised nearly as high as his head; a great palpitation of the heart; an oppression of the praecordia; with all the other symptoms of hydrothorax: the abdomen tumefied, and evident marks of ascites; the extremities swelled; and, indeed, the whole system in such a condition, that medical assistance was in vain: the sore on his leg looked worse, and was more enlarged. He was, without hesitation, pronounced near his end. He languished, however, a day or two longer before he died. Here, the disease he fell into from close confinement, and the serjeant's strict discipline, not the sore on his leg, were the cause of his death.

Whoever is acquainted with the human frame, and the nature and nicety of its component parts, will easily understand the consequences of want of exercise, nay, almost of motion, for such a length of time; the close air of the room, in which lay thirteen others every night, with the heat also from...
cooking daily for so many men, all conspired against him, together with the sudden change made in his diet, which was now very sparingly allowed; while, as an addition to the evil, he was in the vigour of life, and had previously been accustomed to take exercise to a great degree. It turned out, however, well for both the surgeon and regiment; for, had nature got the better of the serjeant's strict discipline, and the sore healed, though it should have left a broken constitution, it would have proved a constant bone of contention between the officers and surgeon; and since it ended, as might be reasonably expected, fatally, it will, in that regiment, at least, most certainly prevent such rash proceedings, and irrational, if not criminal quackery, for the future.

Thus have we pointed out some of the chief difficulties a regimental surgeon has to contend with in his practice; and, it must be confessed, some of them are not of a trivial nature. His own prudence, however, will teach
teach him to obviate some of them. If he cannot prevent them all, conscious of having discharged the duties of his station and profession, as far as in his power, he will console himself under any undeserved reflections that may be thrown on him in the course of his service. Did there exist no other reason to wish the rank of a surgeon in the practice of a regiment greater, and the place more honourable, this alone would be a sufficient one: I mean, that it might place him beyond the power of the ill-judged remonstrances of persons whose knowledge in his profession, give them no shadow of claim to such an authority, or ascendancy over him.

It is the surgeon's duty to pass recruits, i.e. to examine whether men enlisted be fit for the service. In performing this, he labours under some difficulties; for, if the man be rejected by him as improper, the officer who enlisted him is offended; indeed, in all probability, he is a great loser; for,
for, if a recruit be not approved of, all that was given him is lost to the officer. But if, to please the officer, the surgeon accepts; and signs his name to the found list, he is blamed afterwards by the regiment, as well as by the commanding officer, when it is discovered the man is always in the sick reports, and really unfit for a soldier. Here he must be discharged: the King loses by him, and the service is injured. We may place this, however, among the surgeon's difficulties; for he oftentimes finds himself in a dilemma; and, let him act as he will, on these occasions, he may be sure of giving offence to some party. It is wrong to cheat the King, and sign a falsehood: it is a pity to put an officer, who, perhaps, has only his pay to support him, and is now under the increased expense of the recruiting service, to the loss he must sustain, by rejecting his recruit.
CHAP. III.

Of the Surgeon's Qualifications, and of his Tenderness to the sick Soldiery.

I HAVE thus pointed out some obstacles that oppose the surgeon's endeavours, and sometimes frustrate his wisest attempts. I hope he will now allow of equal freedom, and excuse me, in placing some cautions in the opposite scale, which may more immediately concern his own behaviour. Though I shall do this with freedom, and without farther apology, yet it is only with a true wish for his welfare, and sincere regard to his interest; and that he may be the better enabled to preserve his good name, and, as far as possible, avoid deserved censure from the officers, from his patients, and from the world in general.
The situation of a medical man is of all others the most delicate; and as it is a public line of life, the world is ever ready to make free observations on the conduct of those engaged in the profession. If these were always the result of deliberation, it would be of less moment: but this is not, on all occasions, the case. A trifle may gain, as a trifle may often lose a practitioner a reputation, which, like a spot on white paper, can never be so clean wiped out as to render the stain imperceptible. It is as delicate as the character of a lady, where even suspicion of some wrong step, will ruin her fortune for ever. Hence the care we ought to observe, and the circumspection we should use in all our actions.

In entering into a regiment in a medical line, the first thing a surgeon should have in view is, his own qualifications for the office he is about to undertake. He should reflect on the nature of his charge, its great importance,
portance, and how culpable he must appear, both before God and man, in the neglect of any part of his duty.

The lives of upwards of seven hundred men are, I may say, put into his hands,* provided the regiment contains its full complement; and for the care he takes of them when sick, he is answerable to his country, his King, and his conscience. If he has found interest enough to fix him in a station which he knows himself ill qualified to fill, from his want of medical knowledge, or proper opportunities to receive it, he usurps the place of the more liberally educated, and deceives his patients. Besides, he imposes on the regiment that accepts him, who, perhaps, before his admission, were taught to believe far otherwise of his knowledge.

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* Vid. Introduction for the complement of a regiment. The complement of some is even 1000; though, it is true, they are seldom complete.
If good opportunities of information in the scientific parts of his profession have previously been held out to him, and, instead of embracing, he has neglected them; if he wasted that time and money his parents or friends allotted him for the laudable pursuits of philosophic investigation, and a knowledge of medicine, in criminal idleness, or ruinous debauchery, whereby his health of body and powers of mind have been impaired and enervated, his conduct is highly reprehensible, is culpable; and it is still heightened by his pushing himself into an office, where he may have it in his power, nay, cannot well avoid, to do much, though not intended mischief. But, we hope, this is what does not often happen.

If the best informed understandings in the medical walks of life too frequently find great difficulties in determining how to act for the best, what can the less informed do when difficulties surround them?
Can persons unacquainted, perhaps, with the most obvious parts of physiology; even with the circulation of the blood, and course of the chyle, not to mention the situation and functions of all the different parts of that intricate, but noble structure, the human body, pretend to remove the many diseases to which these are liable?—pretend, indeed, they may, but, in their fortuitous attempts, there is but little rational probability to expect success. Add to this, perhaps, their utter ignorance of the nature and properties of the substances they exhibit, and the effects they are likely to produce. This they have but little chance of knowing, should the above supposition be true, since it will depend partly on the state of the patient at the time, and partly on the nature of the medicine exhibited.

I am led to make these reflections from having observed numbers of young men pass their time very idly at the university, and other medical schools, where their friends
friends had placed them for improvement. Many there spend whole seasons without ever applying to any thing serious, or scientific, till not only the time allotted for their stay has elapsed, but their money exhausted. Several of such, however, find means, through the assistance of friends, to obtain appointments in the army, particularly in time of war, either of surgeons or surgeons mates. Here we would have some reason to conclude, did not charity forbid us, that they often commit essential mistakes; for, however upright may be their intentions, their incapacity of forming and following proper plans is a bar to their success. It is, indeed, frequently best for the patients, when persons of this description attempt least. It is to be hoped, however, there are now few such in the service.

Many, likewise, who enter into the army in this line, never were at all within the limits of an university, nor ever had an oppor-
opportunity of hearing, in any medical school, a single lecture on the subject. If such be qualified to assist the operations of nature, in removing disease and restoring health, the world may judge. Boys who have served in the shop of some country apothecary only a year or two, nay, it may be, only a few months, have been admitted, and that without any attempts towards an examination;* nay, we could point out cases

* A boy in a certain town in the North of England, as I am well informed, had served there in an apothecary's shop about a year. A certain gentleman of rank in the army, who had some connections with the town, was then in America (it was during the late war). The boy's father was a Freeman of the place. From this, and the gentleman's connection with it, the boy was sent over to be provided for by him; which, without any farther medical education, as my informer afferts, was speedily done, first by a mate's warrant, and soon after he was made full Surgeon to a regiment. Even while I am writing, a friend informs me of a young man under the same disadvantages of education, who, after spending some time in a shop, was, by the zeal (I shall call it the intemperate zeal) of a friend, advanced from behind the counter to be Surgeon, as well as an acting officer, in a militia corps. This may be relied on as a fact: my friend is acquainted with the party.
cases, where even a common soldier from the ranks, after assisting the surgeon of the regiment, in spreading plaisters, for some time, and in the capacity of orderly man, was appointed mate thereof, on a vacancy that soon happened; and, if he had out-lived the surgeon, or a vacancy happened from promotion, or other causes, would, no doubt, have succeeded him in the office.* 

Genius, diligence, and a mind turned to enquiry and observation, may, in a great measure, supply the place of education; but where both are wanting, the consequences are obvious. If proper proofs of such talents have been exhibited by such as receive these irregular appointments, it becomes some apology for the conduct of their friends in obtaining for them these stations. I hope, however, such cases as the above are not frequent. It is such examples as these that lay

* Were it necessary, to gain it further credit, I could point out the name of the soldier, and regiment wherein this happened.
lay the regimental practice under the dis-
grace we in general find it.

It may be said, the army is a good place for improvement in medical knowledge. In some respects this is true; but it is so to such only as have been previously accustomed to reflect, and capable of making observations. Sir William Temple very judiciously observes, that “though a man may grow learned by other men’s thoughts, yet it is from his own thoughts, as well as experience, that he will grow wise.”* It is little of this kind we are to expect from an apprentice boy, or even one who has spent some idle time at some medical school. Besides, the army is a bad place to begin reflection in. The customs there are too much adapted to the want of thought, and the giddy dissipation, which their youth, joined to their inexperience, renders them prone to follow. Dress, and show, are but ill suited for

* Vid. On Health and long Life.
for serious study. These make a constituent part of the life of a soldier; and, for a soldier, they may, and I believe are, necessary, in order to throw a lustre, and kind of dignity round the service. These, for aught I know, may be altogether proper, in a certain measure, for the very existence of the army; but they agree very ill with the scientific surgeon, or with him who wishes to become so. To use the words of an author we have already mentioned, and who has touched on the subject,* "All men of candour, who have ever felt, or known the force and happy effects of long and diligent studies, and continual application to any system of science beyond momentary impulses, will make no scruple to allow, that a want of early culture, almost a total deprivation in youth of intercourse with the most refined part of their profession, and, as it most commonly happens, an absolute neglect of a liberal education."
"education in the generality of surgeons, "are altogether apt among them to induce "quackery, or, at best, a narrowness of "thinking about medical subjects."

But I shall now suppose there is no farther need of these reflections, but that diligence has been united with the opportunities of improvement; and that the labours of those gentlemen have at length been crowned by the honourable testimony of those teachers of the different branches they have attended; that they have entered the army afterwards through a sincere desire of practising diligently, and conscientiously, as far as their abilities and knowledge permit and extend; that their sole wish is to be useful to those under their care, and ambitious, at the same time, of their own farther improvement; conversing always with medical men, on medical subjects, as often as opportunity serves; and collecting facts, either from their own observations, or the observations afforded them by the rela-
tion of others. It is men of these dispositions that can practice properly; it is such only that can reflect true honour on the military medical profession. Such was the late eminent Pringle; and such were many others we might mention in the service, men of distinguished merit, and well-earned fame.

The next caution I would beg leave to offer to the regimental surgeon is, tenderness to the sick soldiery. Yet it need not be told, men of the dispositions now pointed out, that tenderness and humanity ought strongly to mark the character of every one engaged in the practice of physic. They are already convinced it ought, from their acquaintance with the frailty, and miseries that inevitably await the life of man. Misery, of one kind or other, they are daily conversant with: nor am I apt to believe, as some have asserted, that this steels their hearts, and renders them more callous to the sufferings of others. Habit, indeed, makes
makes such scenes more familiar, but it does not follow, therefore, that the feelings of humanity are obliterated, nor even, the practitioner's sympathy lessened, because, occasionally they are obliged to give some pain, in order to restore health. A sympathizing disposition is amiable; nay, medically useful to the possessor, in as far as it impresses the patient with a good opinion of his doctor, which is always one step towards the cure; for his advice and prescriptions will now not only be more cheerfully and strictly complied with, as appearing to be those of a friend interested in his recovery, but a calmness, quietude of mind, and confidence will follow, very essential, it may be, to his future health. The contrary is brutal, nay, even impolitic, in the surgeon, would he rightly consult his own ease; for, while it wounds the patient, it fails not to destroy this confidence. Besides, it often makes the advice, admitting it to be good, either despised or neglected, unless it be such as exactly suits the
the patient's inclinations; and, consequently, it must create him more trouble by the protraction of the patient's illness.

What can add more to the distress of a poor sufferer under sickness, than roughness of behaviour in him from whom relief was expected? He is already weakened, and enervated by the affliction he is under. His situation, too, is generally less comfortable than he has experienced it in similar circumstances, before it was his lot to wear a cockade. He has now no friends near to sympathize with him; no parental, or fraternal anxiety to watch over him, or procure those little delicacies that the situation of a sick man often requires; none to perform those other little offices of attention which, if in reality they do no good, at least quiet the mind, and please the perverseness attendant on sickness, and may even have their effects in co-operating with the doctor's advice. These he may remember, and regret; while such roughness in his surgeon makes
makes the contrast more perceptible, and adds to his uneasiness. He feels now, with a double pang, every harsh expression used. Should any surgeon, or any man whatever, act in this way, I would not hesitate to call it both unmerciful, and unmanly. In a regimental practitioner more especially so, since the soldier has it not in his power to resent it, by calling in another. The noblest mind is always the most merciful, the most capable of tenderness and pity.

A behaviour of this kind in the army has this farther aggravating circumstance against it, that not only the surgeon, but the soldiers well know, that in any other situation but this, if practising even among the poor of an hospital, or dispensary, he durst not act so, since his interest, reputation, and livelihood, would rise up against him, and forcibly forbid it; powerful arguments, truely, to curb this irritable temper. Out of the army, it would immediately cause
cause his dismission; nor would he (and deservedly) ever after be employed, either by those, or their connections, whom he had thus so brutally abused.

There is, I know, an argument used by some army practitioners, to palliate the rough treatment soldiers sometimes receive from their surgeons. "If you speak tenderly," say they, "to soldiers, you may be sure never to be attended to. Disobedience and disrespect will be the consequence; and this will not only injure the medical treatment, which must be enforced when they refuse to submit to it, but will affect the subjection of the men, and the discipline of the regiment."

This objection, I am apt to believe, is ill founded. We may find many among the privates of as submissive a mind, and even humane, and tender feelings, as in any other walk of life, among people of the same rank; nay, some also, whose rational faculties
culties are not inferior to many who hold a high command over them. Such men will neither disobey, nor yet disregard the surgeon the more for giving his directions in a soft, and tender tone of voice; nor will their officers have the least cause to complain of more want of order among them from this source. Harsh, and ill-natured behaviour to men of these dispositions is cruel. They know its injustice, and feel it severely. They contrast it with what, in a different station, before they enlisted, they had been accustomed to:—the comparison is wide; the treatment fits heavy; they conclude they are become slaves, and are now unhappy.

"But to think, may it please your honour," continued Trim, a tear stealing into the corner of his eye as he spoke; "to think of two virtuous lads, with hearts as warm in their bodies, and as honest as God could make them—the children of honest people, going forth with
"with gallant spirits to seek their fortunes
in the world—and fall into such evils!"

TRIST. SHANDY.

Several, we know, enlist from misfortunes, who once kept decent houses, and lived reputedly among their neighbours. In the army there is no respect of persons; no distinction made. They must eat the same food, lie in the same apartments, do the same duty, and suffer all the hardships their station subjects them to, equally with their more hardened, and less deserving comrades, who, perhaps, never experienced a way of life superior to that they are now engaged in. These are the men on whose minds harshness of treatment dwells with more pungency. Nay, I freely confess, I never knew any good purpose answered by it, even among the ill-behaved; the privates of real bad character: for, every one knows, the army, in times of war, is a medley of all characters, from those we have been describing, to the common highwayman.
wayman. Though they dare not resent the surgeon's treatment, they hate him, and will take the first opportunity of doing him an injury, if they think a discovery may not follow, which would end in their own punishment. They swear at him when his back is turned; nor is he a whit nearer his purpose by it; on the contrary, I have seen the brutal, half-savage disposition softened down into humanity, by tender and kind usage, or even expressions, in his illness. Let the trial be only made, and I will answer for its success.

What purpose does it serve, I would ask, to threaten, and swear at a soldier for being reported sick? If he be really indisposed, he has a right to the indulgence of an hospital; if scolding, or maligning, as the term is, let his name be struck out of the lift without more words, as soon as the imposition is detected, and let the serjeants of his company take care of the rest. While the surgeon does not retain his name in the
the sick report, it becomes their duty to see him perform his. But let it never be forgot, that an accurate examination of his complaints, whether pretended or real, is to be made before this step be taken. We have touched, however, on this topic already. I am of opinion, this will do more to suppress sconcing, or shifting of duty, for the sake of a day or two's rest in the hospital, than hafty passion; and every one will agree with me, that it is more creditable. But this behaviour, we hope, in regimental surgeons, is little practised, and the less need, therefore, of cautions for its prevention. Yet, in a work of this kind, it was thought proper to point out not only its bad tendency but absurdity, since we have known it practised. In the army, whose laws are arbitrary, and absolute, and where every one holds a command over another, from the top link to the bottom of the chain, even mild dispositions will, in time, partake of this domineering infection, meerly from observing it constantly prac-
practised, and slide insensibly into the same. Surgeons should be doubly careful to guard against it, who, from the nature of their profession, should, as the poet beautifully expresses it, never be found to want 'a sufficient share of "the milk of human kindness."

Again, with regard to neglect when ill, nothing hurts a soldier more. He knows he pays for his medicines out of the small subsistence which falls to his lot; that government likewise pays for a doctor to attend him when he needs it; and that, therefore, it is the surgeon's duty to visit him regularly. It is well known, the service is liable to hardships enough in health; the bed of pain should be as well smoothed, and made as easy as possible. It is seldom a soldier who is well used, and has been for several years in the service, deserts his colours. As much lies almost in this department, as where the officers are concerned. Every department should conspire
to give him all the indulgence of which his situation can admit, and to act justly towards him. It is a pleasant thing, either for a surgeon or an officer, to hear "God bless him!" echo, in half whispers, through the ranks, as he passes along. It is the voice of applause—the plaudit of approbation—which publishes the performance of his duty, and which, if every officer, as well as surgeon, endeavours to deserve, he will as assuredly receive.

A soldier is far from ungrateful; he will oblige cheerfully when it is in his power. Retaliation, we confess, sometimes, also, marks his character. Unfeeling, severe, and inhuman officers, have often fallen in the day of battle, nay, on a review day, by the hand of some of those whom formerly they have unmeritely abused. On the other hand, officers deserving to live, have been brought off the field in triumph, by a grateful soldier, at the hazard of his own life, when their wounds have prevented their
their retreat, and exposed them to the danger of either being killed, or of falling prisoners into the hands of the enemy. The surgeon, like the rest of the corps, is liable to incur the dislike, or, by his prudent behaviour, obtain the approbation, and favour of the soldiery. His chief care should be to deserve the latter.

In different chronic complaints, where the patients, though kept in the hospital, are not confined to bed, the surgeon should grant them as much indulgence as possible, with safety. This may not only gratify them, but may really conduce to the cure, by keeping their spirits up; for confinement to a soldier is a great bondage. The surgeon's great fear is of their irregularity, and their eating, and drinking now what is improper for their situation; for a soldier will hardly deny himself an indulgence of this kind, if it falls in his way, whatever be the nature of his complaint. Desertion, also, we own, may sometimes follow too great a licence;
licence; but as he is always allowed a corporal's guard for his hospital, he will have the less to fear from desertion. The chronic patients often entreat permission to walk out an hour or two in the heat of the day. This should always be granted, when some material reasons do not forbid; men suspected of deserting should be refused; when it is granted, they should never be trusted without one of the men on guard to accompany them, lest some scheme of desertion be attempted. This is a proper caution on the surgeon's part, who must answer to the commanding officer for all the men under his care. When requests, however, of this nature must be refused them, let it be done with a seeming concern and reluctance; nor let the surgeon think it beneath him to add his reasons. By this means, the refusal will almost satisfy them as much as if he had complied with their wishes. In fair warm weather, they should always be permitted to walk out, for some time, when it does not interfere with the means of cure.
cure. The exercise will keep up the languid secretions, induce cheerfulness, and render their situation more happy.

To maintain the better order and regularity in the hospital, the chronic patients should be under the command of a non-commissioned officer. It is seldom the sick lift is without either a serjeant or corporal. The surgeon should take advantage of this, and give him the command in his absence. The soldier of the ranks always obeys a non-commissioned officer: the discipline of the army requires it. It is better to delegate this power to a serjeant or corporal than to the nurse, for they may then refuse obedience. By this means there will be a check on the disorderly, and turbulent; and the quiet of the hospital will be better preserved, a point sometimes very essential. I have been sent for, to considerable distances, merely to quell their disputes. It is on such occasions as this, that some severity, in order to preserve peace, must be shewn to
individuals. In order to restore tranquillity, and prevent future quarrels, the surgeon is indispensibley obliged, however reluctantly, to confine, *i.e.* to send them under a sentinel to the *black hole*, or commit them prisoners, with a written crime, to the officer on guard, who will return them to the commanding officer when he is relieved, with their crime stated in his reports; after which, the surgeon has it not in his power to release them, but which he may do in the interim between the time of commitment and this: they must then abide by the sentence of the field officer, or a court-martial; if the offence be of a nature to require it. As men in the hospital are never there without real complaints, the black hole, or returning them to the commanding officer, will subject them to a punishment too severe for their situation, this should never be done but in emergencies. The black hole, where, perhaps, they may lie for days on straw, without being undressed, and in a small, confined, nauseous spot, may not only
only tend to aggravate their complaints, but, from the cold they receive, aided by the medicines they were taking, may induce other diseases dangerous to life: this should be had in view, and, if possible, they ought not to be subjected to this severe punishment. To clog the offenders will do them less injury, and may be punishment sufficient. They may lie on their beds, or sit up in a corner, with the clog at their legs, without detriment to their health, till they solicit to have it removed, by a promise of good behaviour. But, on these occasions, a surgeon should judge cautiously, and never exercise his authority wantonly, or make the punishment severer than the offence deserves; nay, even overlook it, where the health of his patient might be affected thereby. There is even more severity than may, at first sight, appear from having a large clog of from fourteen to twenty pounds weight, locked on the leg for a day or more; besides, there is an
ignominy united to it, which is felt sometimes severely by those of spirit.

**Under** the head of tenderness, I may place a sort of deception *absolutely necessary*, sometimes, to be practised; a deception of all others the most pardonable, and innocent, since it has for its object the welfare of the person on whom it is practised. A deception of this nature, if it deserves the name, may occasionally be practised, with the happiest effects, to allay inordinate action of the mind, raise the drooping spirits, and remove inquietude, by confirming the patient’s hopes, and seconding his wishes, in promising something on which he may have riveted his affections, and placed his happiness. This, perhaps, may be the only means to remove his disease. Besides, sometimes it may be in his power to perform promises of this kind.

*A remarkable instance of this nature happened in my practice, in the summer of 1781,*
1781, while I lay in barracks at Tinmouth, in the North of England. A recruit, who had lately joined the regiment, named Edwards, was returned in the sick lift, with a message from his captain, requesting I would take him into the hospital. He had only been a few months a soldier; was young, handsome, and well made for the service; but a melancholy hung over his countenance, and waneness preyed on his cheeks. He complained of universal weakness, but no fixed pain. A noise in his ears, and giddiness of his head. Pulse rather slow than frequent; but small, and easily compressible. His appetite was much impaired; his tongue was sufficiently moist, and his belly regular; yet slept ill, and started suddenly out of it, with uneasy dreams. Had little or no thirst.

As there were little obvious symptoms of fever, I did not know well what to make of the case. I suspected he might be under an incipient typhus, and ordered what I judged
judged necessary to obviate it. Some weeks passed with little alteration, either for better or worse, except that he was evidently become more meagre. He scarcely took any nourishment, yet had hitherto sat up out of bed some hours every day. At length, he became indolent; seldom sat up at all; was constantly dozing, yet his sleep never so found but he could answer when spoke to; sighed deeply and frequently; nor could his attention be diverted to any external object. Something, it would seem, hung heavy on his mind. He never had any cough; yet, since he came into the house, had wasted away considerably. Exercise was recommended, and used as far as he could be roused to take it, which was never without reluctance. He was put on a course of strengthening medicines; wine was allowed him. All proved ineffectual. His pulse had changed with his appearance, and was now small and quick; an evident fever of the hectic kind, as it seemed, with an evening exacerbation, took place. He had now been
been in the hospital near three months, and was become quite emaciated, and like one in the last stage of a consumption.—Eyes were grown hollow; cheeks prominent; nails incurvated; adnata pellucid; and so weak in his limbs, that he could neither get in nor out of bed without help; of late, also, had night sweats: in short, I looked on him as lost. On making my morning visit, and enquiring, as usual, of his rest at the nurse, she happened to mention the strong notions he had got in his head, she said, of home, and of his friends. What he was able to speak was constantly on this topic. This I had never heard of before. The reason she gave for not mentioning it was, that it appeared to her to be the common ravings of sickness and delirium. He talked in the same style, it seems, less or more, ever since he came into the hospital. I went immediately up to him, and introduced the subject; and, from the alacrity with which he resumed it, yet with a deep sigh, when he mentioned his never more
more being able to see his friends, I found it a theme which much affected him. He asked me, with earnestness, if I would let him go home. I pointed out to him how unfit he was, from his weakness, to undertake such a journey (he was a Welshman) till once he was better; but promised him assuredly, without farther hesitation, that as soon as he was able, he should have six weeks to go home. He revived at the very thoughts of it. At this time, however, I made a promise which I knew was not in my power to perform, without the consent of the commanding officer, who alone can grant furlows; but, as my hopes of his recovery were very slender, my rash promise could give me the less uneasiness, and my scheme was, to animate his hopes, and endeavour thus to take advantage of the change that his mind might undergo by it, to co-operate with me in removing, if possible, the malady.
It seems, he had requested leave to visit his native place soon after he joined, but being only a recruit, and but a few months from thence, he was refused. This had hung on his spirits ever since; and from thence I now dated the origin of his illness. I entreated him to take food to strengthen him for his journey; and, as soon as able, to go out into the open air a little every forenoon, when the weather would permit, that he might be the sooner able to go home. He listened eagerly to every word I said. In short, his appetite soon mended; and I saw, in less than a week, evident signs of recovery. He was now lively, though so weak that he could not yet get in or out of bed without assistance; he strove to get up; two men took him between them in the heat of the day, and placed him on a seat they had erected for him on the beach, where he had a view of the shipping, for it was on the sea coast. In a little time he was able to walk. Every visit I paid him he re-
resumed the subject of the furlow, which I persisted in promising, seeing the good effects it had already produced; and in less than two months from the time he had received this promise, he was able to leave the hospital, and go to his barrack-room. I set myself about endeavouring, as far as in me lay, to accomplish his furlow; for he paid me almost daily visits, assuring me he was able to undertake his journey, if I would allow him; for he firmly relied on my word. I was in some dilemma now how to act. Yet his story was already known throughout the regiment, and the imminent escape he had from death. The deception, however, if I had dropped it here, was tenderness, and a regard for his recovery; but I went farther; I made public, to all the officers, the method I fell on to recover him, and told them, moreover, that if I did not succeed in obtaining him a furlow, I was sure he would relapse, as soon as he understood his expectations were to be frustrated. I won them over to my interest.
The story was publicly talked of; the commanding officer was likewise acquainted with it; and the request was now made to him, which he obligingly granted.

Nosologists mark out to us a certain disease, under the name of noflalgia, or a longing after our native country, or home. If the foregoing case comes not under that head, I know not under what genus to place it.*

Dr. Zimmerman, in a work of his (Experience in Physic) which I have perused since the above was written, says, the Swifs are

* In Dr. Cullen's Nofal. G. 106, this disease is characterized in the following words:—"Noftalgia.—In "absentibus a patria, vehemens eandem revifendi de- "viderium." This eminent professor has marked two species of the disease in the latest (4th) edition of his work.—"1. Noftalgia (Simplex) fine alio morbo.— "2. Noft. Complicata—aliis morbis comitata." Sau-
vages has done the same. Vogel considers the disease as a species of melancholy, and has given it a place in his Nofology as such.—Vid. G. 332. His words are, —"Melancholia—Insania longa cum maefitia ac ti- "more.—Noftalgia ejus species est."
are extremely subject to fall into this species of melancholy when in a foreign country. It sometimes, he tells us, proves fatal in a short time. Barrere has seen it in several Burgundy soldiers, who were forced into the service, or refused their dismission. Dr. Auenbrucker, has also frequently observed it in young people, who had been enlisted by force, and despaired of ever seeing their home and friends again. They were first silent, languid, pensive, emitted deep sighs, seemed exceedingly sorrowful, and gradually became insensible to every thing. Among the Austrian troops, the same author tells us, it was formerly very frequent, but it is now extremely rare, since a plan has been adopted for enlisting soldiers only for a certain number of years, and discharging them when this time is expired. “I believe,” adds Dr. Zimmerman, “it will be found among men of every nation, who, in foreign countries, feel the want of those delights and enjoyments they would meet with among their friends at home.—In short,”
"short," he goes on, "every Swiss feels, as
"I do, the nostalgia, under another name,
"though at home, whenever he thinks he
"should live better in any other country."

Dr. Auenbrucker observed, that in several
who died of this disease, the lungs adhered
to the diaphragm, and that some part of the
lungs was indurated, or was even become
more or less purulent; and I am happy to
find, the method of cure he relies on is
the same I adopted in the above instance.

When the disease has not degenerated into
phthisis, or madness, wonderful effects have
been produced in patients, by inspiring them
with the hope of soon seeing their friends
and their home again. Dr. Zimmerman
relates an instance of its good effects on a
Swiss of the canton of Berne, who studied
physic at Gottengen: he fancied that his
aorta was about to burst, and could not be
prevailed on to stir out of his chamber.
About this time his father sent for him
home; he then ran over all Gottengen,
with the greatest joy and alacrity, and took
leave
leave of all his acquaintances—yet, two days before this, he was hardly able to get up a little stair-case, without being in danger of suffocation! His father afterwards sent him to the university of Basil, and from thence to the French part of the canton of Berne, the finest country in Europe, situated along the lake of Geneva. Here he was again attacked with the nostalalgia: he is now, he adds, in perfect health.

I knew an instance myself this spring (1786) somewhat similar to this, in a young lady at a boarding-school. She was of a delicate make; and though the confinement in school was by no means such as could much injure her, had she liked her situation, which she did not; yet she became cachectic, had a cough, which forced up streaks of blood, her legs and ankles swelled, and she was on the brink of a phthisis pulmonalis. She was removed from school (where she never thought herself happy) to her great satisfaction, and soon perfectly reco-
recovered. This uneasiness to live at home preyed on her health, and, perhaps, at length, might have induced consumption, and death.

We every day hear of people dying of broken hearts, as it is expressed, i.e. of a depression of spirits, occasioned by disappointments of various sorts. Perhaps they may all be placed under the same head.

In the beginning of the same year, I assisted at the dissection of a soldier, in Newcastle upon Tyne, of the South Lincoln militia, who, the surgeon assured me, had died of love. Before his death, he was likewise greatly wafted; so that his case might be stiled atrophia. Like Edwards, whose case we have related above, he had no cough, but nightly sweats, and exacerbations of fever. He took little or no nourishment, and, in other respects, was very similar to our patient. That he died from the effects of this depressing passion, all the corps
corps to which he belonged agreed, some of whom knew his attachment before the regiment marched from their own country to this. Perhaps similar means, _i.e._ a deception, by raising his spirits, and cherishing his hopes, till time and new objects could have effected a change, might have saved his life.

I believe every one is agreed that this is to be placed among the melancholy passions. Sometimes it acts suddenly, and violently; at other times, like intense grief, it gradually undermines the constitution. The more general effects of this tender passion are, a tremulous pulse, deep sighs, an alternate glow and paleness of the cheeks, dejection, loss of appetite, a faultering speech, cold sweats, and watchfulness, which gradually terminate in consumption, or, perhaps, induce insanity, and sometimes suicide. Richardson, in his Clarissa, has well described the effects of this passion. Tulpius gives us a curious instance of its effects:
effects: the subject of the case was a young Englishman, who met with a refusal from a lady. He became perfectly rigid, and motionless, sitting in the same attitude with his eyes open, and appeared rather like a statue than a human being; he continued in this posture till night, and then, being told that his mistress yielded to his passion, he rose instantly, as if from a profound sleep, became more cheerful, and soon recovered.*

The above cases prove, the vast influence the passions have over the body, and how much it is incumbent on the practitioner to study the springs of the mind, as the source from which he is to deduce the causes of many diseases, and take every advantage for their removal, which an investigation of these may put in his power.

To conclude, the more our minds are disposed to do good to mankind in general, the

* Vid. Zimmerman ut supra.
the more will we be inclined to exercise the virtue of tenderness and care towards our patients in particular; and I am convinced our success, in many cases, will keep pace with so meritorious a conduct. Every practitioner, who has for any time been conversant with sick people, will soon see, that to his own behaviour, in this respect, he may attribute much. I am persuaded, he will find this observation applicable, whether his practice be in the confined circle of a regimental hospital, or in the more enlarged sphere of an extensive neighbourhood.

CHAP.
Surgeons cautioned from spending too much Time in Amusements with the Officers, lest they thereby neglect their Duty; and of the Impropriety of granting them double Commissions.

The manner of living in the army subjects to many temptations. Men here always in a society distinct in itself, and having little connections with the rest of mankind, though dwelling in the midst of them; at a distance from friends, and, therefore, the less check on their behaviour; among companions of various dispositions and tempers, with whom they are, in some measure, obliged to associate; and these, for the most part, young, and with their passions in their utmost vigour; together with the gaiety and levity with which they see themselves
felves every day surrounded, all which conspire to banish care, as well as serious reflection. Yet all this, though pleasing for the present, will depart, "like the baseless " fabric of a vision." It will, therefore, demand the surgeon's utmost prudence and fortitude, whose duty obliges him to reflect more than the rest of the corps, to observe a proper circumspection under these circumstances; nor will he find it an easy matter strictly to adhere to good resolutions, though entered into with earnestness, or resolved to be followed with the strictest punctuality.

I do not mean here, that the surgeon should avoid the company of the officers, or yet shun society at proper seasons, or seem morose, or affect a gravity unnatural for his years, and unmeaning in itself; this is equally as bad as too much levity, since it may induce a disagreeable severity of temper, by no means laudable, and point him out as an oddity, and a butt for the the younger men to exercise their wit on; but,
but, my meaning is, that he should ene-
vour to find the middle point between flun-
ning, and courting their company; between
the folly of too much levity, and an affected
stiffness. As their pursuits as well as duty,
and those incumbent on him, are so opposite,
the less time he spends with the officers, the
more will remain for the service of his pa-
tients. He will have the more leisure to
peruse authors who have written on the
diseases he may then have under his care;
or to commit to writing such observations
as the cases may have supplied him with,
for the improvement of his future practice.
This will be a sufficient apology for his
appearing seldom with them, either in
fauntering about the streets, and fields, or
in their other parties of pleasure.

Every officer will respect a surgeon of
good behaviour, and diligence in his pro-
fession. Every officer either does, or ought
to treat with contempt, the contrary con-
duct. I am of opinion, how harsh foever

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the expression may found, that a negligent surgeon should be considered among the corps in the same light as they hold a coward. He should be avoided as a disgrace, not only to them, but to the service; nay, to humanity. From whatever cause it proceeds, it should be marked with some stigma of reproach, some public token of disapprobation. When an officer behaves either in a cowardly, or otherwise ignoble manner, he is sent, as they call it, to Coventry, i.e. none of the corps will either speak to him, or suffer him to associate with them, till he makes a proper apology for his behaviour, if it be such as can admit of an apology. I could wish the same law was to extend to the surgeon, if ever he is detected in neglecting the sick, or other ill treatment. As to his not associating on all occasions with the officers, which we wish here to inculcate, the reflecting part of the corps will never blame him, nor treat him as of less consequence for being seldom of their parties. A greater cause
cause of complaint they will have, if he acts a contrary part.

Besides, to use the words of an eminent author,* "our attention becomes more perfect by the advantages we derive from a habit of observing. The mind satisfied with its former discoveries, becomes always more desirous of improvement, in proportion as it extends its knowledge." for it is certainly true, that "science is the clue by which the physician" (an army surgeon, as we shall endeavour to shew afterwards, should possess the knowledge of the physician) "is enabled to penetrate into the labyrinth of nature."

Is it to be supposed the surgeon who passes his mornings in walks of recreation, or the day in sports, and the evening, when the bottle does not intervene, at cards, billiards, or back-gammon, can have the complaints of

* Vid. Zimmerman on Experience in Physic.
of his sick soldiers much at heart? Without application he never can become tolerable, much less eminent, in his profession; for it, is a wide field, and requires much cultivation. But if time be mispent as above, what remains for study? When he ought to read, or be engaged in reflecting on, and investigating the causes of diseases, perhaps he is amusing himself in the fields, if the weather permits, with some of the corps; or, instead of cultivating the reciprocal and professional communications of his brother surgeons, or other medical friends, and receiving and giving instructions, the hazardous employs no small share of his time.

It is not meant by this, that recreations are entirely to be forbid—far otherwise: a proper share of relaxation, like sleep to the body, will render the faculties of the mind more vigorous. It is too serious a matter, however, to spend a whole life in pastime. Recreation, then, may be taken even daily to a moderate degree; but, surely,
Surely, reading and reflection ought not to be neglected. A mechanical routine of practice is of all others the most contemptible, whether in or out of the army. A man who has only one prescription for all diseases, is a quack to all intents and purposes; nor is he less one, whose head is stuffed only with prescriptions. A mechanical routine, also, it must be, unless a certain portion of our time be dedicated to the perusal of books, the examination of the progressive improvements made in the science, and the careful observation of phænomena at the patient's bedside.

"Without sound judgement," says a respectable author, "the possession of a multiplicity of prescriptions is not merely useless, but likely to be of dangerous consequence. If a man had a whole dispensary by heart, which contained the most excellent prescriptions for all diseases,

eases, but had not understanding sufficient
to discern the particulars of cases, and the
difference of constitutions, and to vary
his method accordingly, he would still
be as unfit to practice physic, as a man
who had learned the terms of art, and
the common rules of navigation, but had
never been at sea, would be to direct the
management of a ship in a storm, or
among rocks, or upon dangerous coasts."

It is a common adage, that a man will
soon partake of the manners and behaviour
of his company. Their pursuits, their
amusements, their inclinations, will become
similar, as well as their conversation. What-
ever be the leading passions of those we have
been long intimate with, we fall insensibly
into the same. This rule holds as well in
virtue as in vice. Hence the utility of good
examples in forming and directing this bias
of the mind into a proper path; and hence,
also, the pernicious effects of bad examples
in producing the opposite disposition.
It is from considering the power of habit on the mind I have ventured these reflections; but I should be sorry to have it understood as insinuating any thing to the prejudice of officers. The conclusion I wish to draw is only this, that the more we converse and associate, in our leisure hours, with those of our own profession, the more will our minds be attached to it, and vice versa.

And this leads me to the diffusion of granting surgeons double commissions, viz. that of both surgeon and officer. The same arguments we have already used against associating too much with the officers, to the prejudice of our patients, and diverting our attachment, and the alienating our mind from our profession, may be applied here, with this addition, that the surgeon has not only now a double duty to perform, but, instead of optional, as it was before, is now necessitated, from the nature
of this additional commission, to be more frequently with the officers.

Though an officer may be said to spend an idle life, when compared to some other professions requiring a greater exertion of the mental faculties, yet, the duties he must keep himself in readiness to perform; absorb a great share of his time. Parades must be attended; guards must be mounted; attention must be paid to dress; attention to the behaviour of the men; attention to their discipline; with many other things of this nature, known only to gentlemen of the army.* In the whole course of the day, there is very little time they can entirely call their own, i.e. they must never be far out of the way, and must be always in readiness. The surgeon, in common with the other subaltern officers, if he enjoys an officer's commission, must take his share of this duty; indeed they will insist

* I speak here always of the foot service.
insist on his taking it in turn. For, why should he not, since he enjoys the benefits arising from it? The duties of a surgeon, which, in general, we may call of far greater magnitude, he must also perform. But here we find the same danger and temptation of having the mind alienated. The application necessary for the former is small, when compared with what is absolutely necessary for the latter; and the unhappy patients, we fear, will likewise have reason to regret it.

I remember to have seen an instance of this in a militia corps, where the surgeon, who was also an acting officer, was detached from the regiment with the company to which he belonged, on a separate command, not in a medical, but a military capacity. A mate, in these corps, has likewise two commissions: both may be detached at the same time on different stations. When this happens, what becomes of the sick of the rest of the regiment? These commands may
may be longer or shorter, according to the nature of the service: it may be, a day; a week; a month, &c. Suppose, on this occasion, he could persuade a brother officer to go in his stead, the commanding officer may not on all occasions be inclined to allow such change of duty; he may insist that the roaster be regularly filled up, and every one take his turn. I have known a commanding officer refuse a change of duty. His word is absolute. Right or wrong, it must be complied with, without any attempt to reason on the subject.

In the regular service, double commissions, of late, have been forbid, perhaps for some such reasons as these I have given. In the militia it is universally practised. The reason given for it is, that as this service is of a limited duration, for the war only, and surgeons there not entitled to half pay on dismission, a second commission is granted as a kind of recompence; and properly, if it was understood as a perquisite; but, we appre-
apprehend, not for the good of the medical part of the service, in the manner things are at present conducted. No two professions whatever are more opposite in their natures, than that of a military and medical gentleman: the reason has already been pointed out. We all know, that the engagements of an officer require not much serious reflection; the medical man's duty requires it almost constantly.

If it is thought improper in the regular, may we not with propriety ask, why it is continued in the militia service? Have the surgeons there less to do in a medical capacity than the surgeons of the regulars?

In place thereof, we shall find, on enquiry, the contrary, since the militia regiments are, in general, stronger than the regulars, i.e. more numerous; and it must follow, that, in proportion, there will be more sick. The regular regiments are seldom compleat; the militia are, for the most
moft part, compleat; because they can oblige the county to procure the comple-
ment of men, while the regulars must re-
cruit by slow degrees, and chance, at various
distances and disadvantages. Although these
are confined to England alone, while the
regulars are obliged to march wherever the
service requires, yet England is as much
subject to disease as many other parts of
the British dominions. Intermittents, and
other febrile affections, rage in many parts
of it endemically, as much nearly as in
Holland. The militia are subjected both
to camp and garrison duty, equally with
the regulars, and, therefore, as liable to
camp diseases; and these have, we know,
often appeared among them, with all the
violence they are generally observed to pro-
duce.* The venereal disease, that great
plague of the army, is not found less fre-
quent in England than in most other parts
of Europe. Do not all these call for a

* Vid. Oeconom. Obs. on Mil. Dis.—1764.
steady and regular attention, which cannot be so well given by a surgeon whose mind and time are divided between two professions, so opposite as these to each other?

I would not be understood, by what I have said, as taking from the militia surgeons a perquisite, if this second commission is to be considered as such. If it be thought, that a surgeoncy of militia, on the same footing with the regulars, is not an equivalent to the other's chance of half-pay, let some other scheme be devised to make up the deficiencies; or, if this is still to be continued, let it be understood as a fine cure, and no duty required from the surgeon to call his attention from the sick. It may be easily so regulated, that the duty shall fall on the rest of the subalterns, in the same manner as we find it among the regulars, when any of the officers are on the recruiting service. In this way there can be no objection to the augmentation of his pay, by an ensign's or lieutenant's commission; for,
for, I have been of opinion, ever since it was my lot to be acquainted with the service, that the regulations, in this respect, of the regimental medical practice, I mean in as far as relates to pay, is neither adequate to the trouble of the office, the expences of a liberal medical education, or, what is of equal consequence, is not such as to encourage men of any professional abilities to enter into it. Till regimental practitioners are placed on a more honourable footing, and their rank promoted, as well as pay increased, few, who deserve the name of medical practitioners, will engage in it. According to the system now in use, it matters not what their abilities are. The literate and illiterate are equally rewarded, or, more properly speaking, not rewarded at all. Since merit here can seldom distinguish itself, some other aids should be called in; and these seem to be rank and pay, the only things in the army that can command respect, or attention; and without these, his usefulness can never be so great.
If a man, not only in this, but in any other walk of life, who truly from his merit deserves attention, instead thereof finds neglect, it is apt to induce in him a real negligence, "he may despise those "who are to be his judges, and slacken his "endeavours, equally indignant either of "their applause or reproach."

I do not conceive the following opinion of the late eminent Dr. Hunter can apply in our subject, though I am ready to allow it all due weight out of the army, and that chiefly from considering the nature of a regimental surgeon's situation, as already explained. He says, "An opinion, the "child of spleen and idleness, has been "propagated, which has done infinite pre-"judice to science, as well as virtue. They "would have us believe, that merit is ne-"glected, and that ignorance and knavery "triumph in this world. Now, in our "profession, it seems incontestible, that the "man
man of abilities, and diligence, always succeeds. Ability, indeed, is not the only requisite; and a man may fail, who has nothing besides to recommend him; or who has some great disqualification, either of head or heart. But sick people are so desirous of life and health, that they always look out for ability; and, surely, the man who is not really able in his profession, will have the least chance of being thought so. In my opinion, a young man cannot cultivate a more important truth than this, that merit is sure of its reward in the world.”

Encouragement, however, is most certainly the pabulum of genius; it keeps emulation alive. Just praise animates. There are few who have not felt this. To withhold it where due, is like frost to the tender bud, which blasts the hopes of spring, and proves untimely destructive.

C H A P. V.

Of Intoxication—of its greater Criminality in the Surgeon, than others of the Corps.

In the army, where so much conviviality reigns, it will be said, that to avoid intoxication, and even frequent intoxication, is no easy task. This, however, I would, in a great degree, deny. I know, from experience, it may be avoided, whether by the officer or others; and, I am confident, it ought, on every occasion, by the surgeon. We acknowledge, there is more temptation in the army to intoxication, than in some other situations of life, but it is not greater than what prudence and firm resolution may overcome.

There are few vices that bring their own punishment more speedily after them.
than drunkenness. Every man will, in general, be respected according to the respect he has for himself. A drunkard has none for himself, and, therefore, ought to be left by the world without any.—But, to proceed.

The surgeon generally messes with the corps: on this account, it will be said, he may be more liable to temptation, and frequently compelled to drink more freely than he might otherwise choose; but I am unwilling to admit even this. Every man in these societies, as far, at least, as my knowledge or experience goes, may drink (particular occasions excepted) either in quantity or quality, what he chooses. Every man may likewise retire when he judges it convenient; for no person seems to take any notice, though all the company observe it. This is true politeness, and strict good breeding. It must, however, be acknowledged, that all are not possessed of proper resolution, or government over their incli-
inclinations, to make this good use of the latitude the company grant.

Though I have spoken thus far in favour of the good breeding subsisting in the army, yet, I must own, there is, though not a direct, a strong indirect temptation to lead us into this vice, i.e. the hilarity that always subsists among a number of gentlemen, such as always meet together at a mess; the pleasantry that passes to and fro among them, where every one contributes his share to enliven the hour; good wine, which produces good spirits, even among the dull and phlegmatic; together with use, which improves the relish for liquor: these, I say, are temptations, which even the most guarded are not always able to resist—glasses after glasses pass, and one sally of wit after another flies round the table, which insensibly steals away our time, while the liquor itself never fails, in proportion, to steal away our senses!
"Of all vices," says the author of a short essay lately published in a morning paper, "take heed of drunkenness. Other vices are but fruits of disordered affections; this disorders, nay, banishes reason. Other vices but impair the soul; this demolishes her two chief faculties, the understanding and the will. Other vices make their own way; this makes way for all vices. He that is a drunkard is qualified for all vice.

"Many a soul, with great difficulty, lugs on a wretched and worn-out carcase to its daily rendezvous, who, perhaps, for many years, has been nothing else but the vintner's conveyancer, to carry his liquor between the tavern and the wall."

An officer may fit undeserving of reproach, and enjoy his company, provided he does not fit till intoxication overtakes him. His duty is at regular, stated periods;
he knows when his turn comes, and will be prepared accordingly for it: besides, it is of that nature which neither requires, nor enjoins much abstinence. But it is far otherwise with the surgeon: his duty is at no stated hour; he is liable to be called out on all occasions; it may be, for aught he knows, the next moment. Should he be found incapable to perform it from drunkenness, I know of no punishment in the catalogue of martial laws too severe for him. Or, suppose he should not be called out from company, but left to retire of his own accord, when he finds himself growing intoxicated, he may, at this very improper time, through a sort of half recollection of what he intended in the hour of sobriety, visit some of his patients; may attempt to compound them medicines; and, in this state of want of sound judgement, commit essential mistakes. I have known accidents arise from this source, though, I thank heaven! never any of a serious nature. Yet, from the probability that such
may take place, I am justifiable, in an essay of this nature, in mentioning it.

I remember once to have seen a brother of the profession, in a state of too much elevation from wine, unluckily apply so large a quantity of such. fat. as a repellent, to a person's groin, where a trifling excoriation, from too much walking and the heat of the weather, had happened, that the consequence was a gangrene, which could not be removed without considerable trouble, and even, for some time, rendered the patient's life doubtful.

In the beginning of 1783, I met with an account of a melancholy accident from intoxication, which, though it does not respect the faculty, I may be allowed to relate, as it is a farther proof of the pernicious effects of this vice, in those to whom any trust is committed. This accident happened in the hands of a nurse to a lying-in woman. About seven days after the lady had
had been brought to bed, the child grew somewhat indisposed. The physician was therefore consulted, who ordered it a dose of gentle physic. It was the nurse's business to administer it. Unhappily for the infant, she was intoxicated, and, in place of giving the medicine put into her care, in this state of infancy, she gave the child a dose of oil of thyme and laudanum, which had been prepared for an application to a bruise. The tender babe, as might reasonably be expected, could not long survive so fatal a potion. May we not ask, whether an intoxicated prescriber would not have been as apt to commit an oversight in compounding medicines, as an intoxicated nurse in administering them? In this state they are both equally deprived of sound judgement, and, therefore neither of them to be implicitly depended on; but, should they voluntarily bring themselves into this condition, it would seem but justice to the public, to make them answerable, when sober, for their errors.

A pro-
A proper degree of punishment might be followed with happy effects in preventing such to whom public trusts; of so material consequence to the happiness of individuals, are committed. With respect to it among army surgeons, not only individuals, in this way, may suffer, where these are found addicted to this vice, but the public service, and, therefore, the punishment would seem to demand even a higher degree of severity.

I have heard it urged in commendation of the abilities, as they expressed it, of certain persons of the profession, both in and out of the army, that they prescribed best when half drunk; nay, contended for the truth of it. Such commendation, however, is the effect of ignorance—it should be reprobated—it is misplaced praise, and may prove injurious occasionally to the welfare of society. Will any man be so hardy as to maintain, that a madman can per-
perform what requires the united force of reason and experience? Can a man dispossessed of his reason coolly sit down, and give rational judgement in matters of life and death? and are not the instruments of this sort immediately in the hands of a prescriber, by his prudent management of which, he may restore health, but by his imprudent use do much evil, if not even induce death? But the prescriber has not in this moment, when his assistance is called for, that share of reason left which the part he is about to act requires. No man, I am confident, would be so regardless of his own safety, as to trust his barber in the same condition. Is it because a surgeon knew sufficiently well how to administer medicines when sober, that he can do the same when drunk? If we were afraid of our throats in the above case, we have surely no less reason to tremble for the consequences in this. The similitude may be called coarse, but it is certainly apposite. Every one knows that several of our most valuable medi-
medicines are poisons, and some of them both active and fatal, in improper doses.*

Chance may, for a time, guide the one’s hand right; and also the other may, in one of those drunken moments, happen to make up a good composition. To suppose this, is just within the verge of possibilities. None, however, will undertake to assert, that the same will repeatedly take place under the same circumstances. If this mode of reasoning be convincing, which, I flatter myself, it is, at first view, I hope none will be found hereafter so imprudent as either to maintain, that an intoxicated physician or surgeon can perform the duties of his employment so well, much less better than when sober, or to trust themselves under his care at such a time, if they can avoid it.

To

* Most medicines, indeed, are poisons, though all poisons are not medicines, as an ingenious author has expressed it.
To praise a medical man for his sagacity, and discernment in his profession when drunk, is certainly the severest satire on him we can employ, and reprobates him in the most pointed and forcible terms. The opinion of the ingenious Armstrong, respecting people in this condition, is very far from such ill-placed praise—Hear him on the subject—Speaking of drunkenness, he says,

"Or in the rage of wine your hasty hand
Performs a deed to haunt you to your grave."

Here he points out, how likely a man in this condition is to commit what he may repent to the latest hour of his life. He continues—

"Add, that your means, your health, your parts decay;
Your friends avoid you; brutishly transformed,
They hardly know you; or if one remains,
To wish you well, he wishes you in heaven."

Art of preserving Health.

Caution and accuracy, essentials in the profession, we cannot in this condition expect.
A person lately talking on this subject with me, declared as a fact, that in a certain late practitioner, a man of considerable judgement, when not inebriated, this vice was so conspicuous, as frequently to give just alarm to the apothecary who compounded his prescriptions. So addicted to it did he become, that, in visiting patients, he would refuse to prescribe till they brought him liquor. The neighbourhood entertained an high opinion of his abilities, and scrupled not to make the same apology for him we have already mentioned—that he prescribed best when almost intoxicated. In part, we will here allow, this might be fact; for, perhaps, till he had drank a certain quantity, to give some stimulus to his cold and languid nerves, he was unfit for any thing, as most habitual drunkards are. Lo, the consequence! every day the cup must be encreased to produce the same effects. His apothecary, who, I am told, was a man of discernment, and who ente-
tained a friendship for him, has called on him after a fit of his intoxication, and shewn him, in confidence, the prescriptions he had written while inebriated.—He has started when he read them; and, my informer adds, has blessed God, and thanked the apothecary, that they had not been sent to the patient.—The example being thus held up, we hope, may deter others from an imitation, and prove as a beacon to prevent them from splitting on the same rock, or falling into this dangerous error beyond the bounds of moderation.

That persons in liquor, without hesitation, have done what would puzzle others as well as themselves, nay, what they would have refused to attempt when sober, I grant. Liquor gives an irregular flow to the spirits, which produces rashness; but this is the very thing against which we have been so bitterly inveighing. Something may be done now, and, by chance, even happily done, which sobriety would have been
been cautious in undertaking. Perhaps the following fact may apply as an example. The reader may rely on its truth.

A gentleman of the profession, an acquaintance, went, at my request, one evening, in autumn, 1781, to supply my place, in delivering a woman, particular business obliging me to leave her, though then in a critical situation. It so happened, that he had this day made somewhat free with the glass; yet not so much, in my opinion, as to incapacitate him for this or any professional duty. It happened to be a footling case. He set about it without hesitation, or once reflecting, that it was proper to bring down the arms into the birth before he proceeded to deliver. Notwithstanding this, the woman was safely brought to bed, without the least accident either to herself or child. In most cases, both arms of the infant might have been broken, or some accident happened to the mother; or, from neglecting to turn the
the child in a proper position to allow the head to pass the pelvis with the most ease, the consequence might have been other mischiefs. That some or all of these did not take place, seems to be owing to nature, who, in this woman, had fortunately formed the pelvis, &c. of a larger capacity, and the child smaller, than common. She knew nothing of the danger of her escape, but concluded the business done with the greatest judgement; and next day, on my visiting her, bestowed large encomiums on the accoucheur I sent.

So it fares with others. If a man, during the effects of the glass, should chance to succeed in any part of his profession he undertakes, his employers will call him again, whether drunk or sober. The gentleman I allude to in the above case, was ingenuous enough to tell me of it, and blame himself for the rashness of his attempt, and the danger he ran of doing mischief while so heated with wine; nor
will he be offended to see it held up here, as a *caveat* to others. Perhaps we conduct to the progressive improvement of our profession as much, if not more, in confessing our mistakes, as by publishing our success. The quack, to vend his nostrum, trumps in every newspaper those cases where accident has rendered it successful; but as cautiously avoids telling the world the many *hundred lives* it has destroyed.

As the colonel is the head of the corps, the father of the family, so to speak, or, in his absence, the lieutenant-colonel, or major, it were well if whoever of them possesses the command, would take this subject under their more immediate consideration. A soldier is severely punished for drunkenness; why not extend it to other departments, where its mischievous effects may prove even of more magnitude? The vice in this department, as we have endeavoured to shew, may be followed by more unhappy con-
consequences than may follow from the drunkenness of a private soldier.

Something of this nature might, perhaps deter them from it, viz, that for every offence of this sort, i.e. for every time they were intoxicated, they should forfeit a certain number of days pay, to be added to the fund for sick wives of the soldiery before mentioned. A fine should, in like manner, be exacted from every one of the corps, who should by any means, directly or indirectly, endeavour to render the surgeon intoxicated.* Fines, of a pecuniary nature, are exacted from students at several of the universities, for non-conformity to the rules of these literary institutions. Perhaps they

* It happens sometimes that in the army schemes are laid, by the more giddy and young part of the officers, to intoxicate one another for fun, as they call it. It is not to be expected all the officers of a regiment are endowed with strict abstinence. Inclinations are as various as faces; and where this coincides with temptation, it will frequently overcome the weaker restraints of virtuous principles.
might be found to answer in the army, and compel compliance with such a law as we have here hinted at; besides, they will be able to exercise more economy, if less be spent in liquor, a matter of no small importance to surgeons and subaltern officers.

I was told, some time ago, of a militia surgeon, during the late war, whom the colonel dismissed for this very vice. Nor could he have been cashiered on a more justifiable plea. If it was well founded, the colonel deserves the highest praise for depriving him of a station he so unworthily filled, and where he had it in his power to do so much mischief. It is remarkable, however, of the young man I am now hinting at, that only a few years before, when he entered the service, he was noted above others of the corps for his sobriety.* This will

* This I cannot absolutely assert as a fact; yet my informer was an officer formerly of the regiment, and now of the regulars, who had a good opportunity of knowing the fact.
will prove what the power of habit and example can effect.

Among the catalogue of bad habits, none, perhaps, is more easily contracted than drunkenness. A medical man cannot plead ignorance of the pernicious effects of spirituous liquors on the constitution, when used to excess; he knows well the great complication of evils they will produce on the different organs of the body; and he has this confirmed almost daily by the bad health, and many days of prolonged misery they have brought on many of his acquaintances.—Hear the opinion of a learned, and justly celebrated physician on the ill effects of wine on the health.—

"Wine," says he, "when immoderately used, is to young people, what manure is to vegetation, which hastens the progress of the fruit, but destroys the plant. "Wine used in early life is a poison. It undermines all the principles of man, exhausts his powers, destroys the faculty of
of his mind, and excites vomitings, fevers, phrenzy, madness, convulsions, apoplexy, and sometimes even death. It is the general effect of wine to enervate the system by slow degrees, if men habituate themselves to it in too great a quantity, and very often to terminate in dropsy, more commonly, however, it predisposes to inflammatory diseases, to gout, asthma, dropsy, and apoplexy.* He might have added a number of other complaints to his catalogue.—Not only hepatic complaints, loss of appetite, &c. from a thickening of the coats of the stomach, but even loss of virility. Bacon tells us, he has seen the antient opinions of the effects of wine on generation confirmed by experience. It is his opinion, that great drinkers lose their virility.—I have seen the stomach of a drunkard dissected in a public anatomical theatre, where the professor demonstrated the

the coats of this organ to be thickened a full inch. Among the heathens, we are told, he was accounted the best man, who spent more oil in his lamp than wine in the bottle.

I shall now lay before my reader the opinion and admonition of a senior officer on this very subject, who has published some of the most useful advices to officers in general that have hitherto fallen in my way. I fear his book is too little known, and too little read, among the military. It will apply to all ranks of men, and therefore cannot be improperly introduced in this place.

"How many men," says he, "have I seen so addicted to this vice, that, in the morning, they could not lift their trembling hands to their heads, write their own names, however necessary, or hardly give a rational answer, until they had made themselves half drunk again! It is
"is truly a miserable reflection, to think that men should reduce themselves to the necessity of repeating the crime by which they have drowned their senses, and destroyed their faculties, in order to be able, in a wretched degree, to make use of that little reason and strength they have left themselves.

"I know it may be objected, that several men have been great scots, and yet have preserved their senses and strength to a good old age. To this I answer, that one swallow does not make a summer; and that though there are a few that this happens to, yet are there infinitely greater numbers who have met with a contrary fate. But, allowing it should not be hurtful to the constitution of some, is that any reason it should be practised by all? Some men have taken poison, or picked a pocket with impunity: shall I therefore cut a purse, or swallow mercury? This argument is certainly inconclusive;"
"clusive; but, abstracted from all this, I have another reason to offer to military men, especially subalterns, who have no other income to help them but their pay. Drinking cannot be pursued without great expences. Now, where is the fund to enable them to do this? Their pay, with all the œconomy they are masters of, cannot. — They must, then, be guilty of practices I am a stranger to, or run into debt. If the first is discovered, they are dismissed the service with shame; if the last, they are unable to pay: they must sell their commissions, and so part with the only means they had of living; and all this rather than break off in time to beastly a vice."

He proceeds considerably farther in weighing against it, and particularly points out the pernicious effects of dram drinking in a morning; a vice he had nearly fallen into from the example, and even advice, of
two senior officers (he having lately before entered the army) who took him with them at their meridian hour, under a pretence of its getting him a stomach for his dinner; and then mentions his timely escape, which he relates at length, as a lesson to others.

We have said before, it is customary in the army for the surgeon to mess with the corps. I am rather inclined to think, it would be a better plan if he was not to mess with them, the better to escape this temptation. If he was excluded for this reason, or chose to exclude himself, unless occasionally, no officer would treat him with the less respect. On this head, however, I am cautious of speaking, lest my brethren of the military medical profession should think me too particular, and over rigid in my regulations. I am certain of one thing, they would live much cheaper, nor yet be less happy. When I first entered the service, I abstained, almost totally, for some time,
time, from the company, I mean the convivial company, of the officers. Some looked on it at first as abstemiousness, and parsimony; others did not hesitate to attribute it to pride. When it came to my knowledge, I related to them the cause that deprived me so frequently of their company, viz. that having then on the list a number of patients, it occupied most of my time to consult books, and prescribe for them; this was the footing I put it on, which, in a great measure, was the fact; though, to avoid temptation, was likewise a part, but a part which I thought it then imprudent to confess. They revoked now their former opinion; and, I am confident, that from this alone, I gained the esteem of several, who might have thought differently of me before. Though I never after this abstained from the company of officers, when occasion required, I never to this hour courted it; yet few of my standing, perhaps, ever received greater marks of A a civility
civility from a set of officers, during the few years I lived among them. I place not this to my deserts, but to the good dispositions of my fellow officers, and mention it as a farther illustration of the doctrine I have now delivered, and would wish to support.
Chapter VI.

Of the Medicines, and their Doses.

The medicines allotted for the privates, are not, we fear, always kept either in proper quantity, or well chosen. On this head the officers, for the most part, complain grievously. There is, at least in several regiments, if I mistake not, some reason for their murmurs. We have pointed out already* what each private pays towards a fund for a medicine chest. The sum is more than sufficient for the purchase of medicines of the best quality, as well as variety, for the number of sick of a regiment. The surgeon is always allowed medicine money for the full establishment of the regiment: when the actual number is small, which is often the case, the sick are in proportion fewer,

* Vid. Introduction.
fewer, which must save both medicines and money.

The money has never been found entirely exhausted, even in the most sickly seasons, when the regiment has been numerous, and the men well supplied with medicines; on the contrary, it will appear, that not a third of it is expended for this end, in regiments where most complaints called for it, and where the surgeon could not be accused of acting niggardly. At an average for four years, the money applied to this use, in a regiment where I had an opportunity of knowing, did not amount to much above twenty guineas a year, though, for a great part of this time, it was upwards of six hundred strong. The sum allowed for one year by the late establishment in this corps, was eighty pounds nine shillings, as we have shewn by a calculation already made.* Nay, I should be nearer the truth did

* Vid. Introduction.—The late regulation and peace establishment has reduced it to 70L a year.
did I state the medicines at an average much lower.* It is natural, then, to enquire, what becomes of the rest?—the answer is obvious—it goes as a perquisite to the surgeon. Is there not a perceptible error here? Does it not seem improper to rob the poor soldier of the pittance which government allots him, in order that it may become a perquisite of office to one who has his stipulated pay? When the soldier is ill, by this management, little or nothing is left for the purchase of medicines; and too often as little offered. This reflection I should be sorry to extend to all the army. I am convinced there are many in the service whose humanity and conscientious care of their patients are as exemplary, as their education and abilities in their profession are respectable; but I know assuredly, also, that there are many palpable abuses in this part.

* About sixteen guineas a year.
But the error lies partly in government, by allowing the surgeon to have the management of this money; and partly in his scanty pay. We have given it as our opinion already, that the nation has dealt very partially with the surgeon, not only in what respects his pay, but his rank. His subsistence is mean, and inadequate to his services. Let me not, therefore, throw indiscriminately any ungenerous reflections on my brethren of the profession. Their minds, I would hope, are far superior to any sordid views; but since they are placed in a station so expensive, and on a stipend so contracted, so greatly inadequate to their necessary expenses, to save for their own use what can be conveniently spared from the medicine money, is not culpable in them: it is only wrong when these bounds are exceeded. Poverty is one of the greatest temptations to the commission of frauds: and here, too, it is found to do evil. We know, that in regimental practice it often happens, that only
only some of the cheapest and coarsest articles of the materia medica are kept in the medicine chest. But another error, for which we cannot offer so good an apology, is, that even when it is proper to administer any of these, they are seldom prepared in a way that can secure their efficacy, or ensure their success.

It is well known, that as much art and knowledge is often necessary in preparing a medicine, and uniting it with proper vehicles to make it fit easy on the stomach, as in finding out what class of medicines to exhibit. We are obliged, very frequently, to struggle with delicate habits, and irritable stomachs, formed so by nature, and now doubly so by disease. How often, in such cases, do we find it expedient to vary our formula, without essentially changing our medicine? On other occasions, it must be altered almost in every respect. If, for instance, our patient cannot take it in a liquid, we must contrive it in a more solid form.
form.—One cannot take an electuary; another finds it difficult to swallow a pill: and thus are we obliged to comply with the various tastes and antipathies of our patients. When he nauseates one form, we must have recourse to another; and so on, till we find one that will sit easy, and otherwise answer our purpose. For, if a medicine be rejected as soon as taken, it can never prove of efficacy: thus will our intentions be frustrated. But, in the army, we cannot, for the most part, so readily adapt the medicine to the palate, because we have few varieties to make a selection from.

It may be still urged, notwithstanding what has already been said, that medicines here should be of the cheapest sort, as best agreeing with the fund for purchasing them; and they may be allowed of a coarse quality, since they are only for soldiers, men little accustomed to delicate living, or nice medicines; and that if the general tendency of opera-
operation be the same, the same effects, they will say, must unquestionably follow.

The first has already been answered, by shewing that the money is far from being all expended; therefore, better medicines may, and ought to be purchased, where they are wanted, and the surgeon's salary augmented from a different fund. With respect to the other, I apprehend, it is likewise sufficiently answered in a former chapter, by what was said relative to a soldier's nice feelings.* For though he lives low, and fares badly, yet nature has often formed him with organs as nice, and as mobile as his richer and more delicately faring neighbour. And though it will be found, that there are in the ranks, men of very robust constitutions, capable of swallowing and digesting any thing of the kind offered them, yet it will not apply to the generality. I have found men among the soldiery altogether

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* Vid. Chap. III.
gether as delicate, in regard to taking medicines, and those even apparently robust men, as any officer in the corps; nay, with stomachs much more irritable. To such persons, a coarse ill-prepared medicine is as bad as none, because it cannot be retained: in place of proving serviceable, it may create new disturbances, and, perhaps, occasion much sickness.

A practitioner may choose his medicines very judiciously, yet err greatly in the method of preparation or exhibition. Hence one man's success beyond that of another with the same medicine, by the difference alone of preparation or dosing. Suppose even both were to give the same quantity of the same medicine, the very time of exhibition will make a difference in many cases, and prove the superior sagacity of the one above that of the other. From hence we may draw the following conclusion—that the same remedy, in the hands of different persons, shall produce very opposite effects;
the one will be able to relieve, the other only aggravate the complaint thereby. This may be said also to belong to the penetration and genius of the prescriber; but medicines being the medium he uses to attain his purposes, if they be bad, he is defeated.

While, however, I contend for a better choice of medicines in regimental practice, I do not mean that the most expensive are always necessary: substitutes, answering the end with equal propriety, may be employed in place of several of the more expensive drugs, while, at the same time, they are not the less palatable or efficacious.

To form a dispensatory calculated for the use of regimental surgeons, might, probably, prove an useful work. In general, however, we may follow the plan laid down for paupers out of the army. We have several forms of pharmacopoeia pauperum, where though we find, that the absolutely rough and ill-prepared medicines are excluded, yet se-

eral
veral of a cheap sort are admitted. It would be preposterous for a regimental surgeon to keep so dear a drug as musk, or even castor, in his chest, when several cheaper of the antispasmodic class are to be found, by which his intentions may be altogether as speedily answered. At the same time, let no substitute be depended on when the patient's case may absolutely call for a better, or where a protraction of the cure, for the want of such, may be apprehended; for, in some cases, we know not what a day may bring forth: this rule should be laid down as fundamental—never to trifle with health for the sake of saving a shilling. To do so is unjustifiable; and, in the end, will seldom fail to injure the surgeon's character.

With respect to some of the substitutes, he will find strong decoctions of Lintseed answer, in many cases, among the soldiery, as well as Gum Arabic, which is far more expensive, at least mixed with a small proportion of the solution of this gum. Deco-
tions even of the common Malva, which he may gather almost every where, or of Marsh Mallow roots, when he can find them, will make drinks possessing all the qualities of more expensive mucilaginous medicines. An electuary formed of the leaves of Cicuta, will have the same effects as the powder made from them: this plant he can gather at almost all seasons, and everywhere, and thus save himself the expense of powder, and the trouble of preparing it.*

Those chymical and galenical medicines which he cannot prepare himself, but must purchase from druggists, he should be particularly careful in the choice of: these should constantly be of the best quality. Let him remember, that there is no economy in buying drugs at the cheapest rate, since they cannot be genuine: his patient may be the longer

* I have found the use of this article of the Mat. Med. very serviceable in a variety of cases, internally exhibited, and externally used as a fomentation; and in poultices with coarse flour or oatmeal.
longer on the sick list, and his trouble en-
terior. For instance, can he expect to buy Peruvian Bark at seven shillings and sixpence the pound as good as what he must purchase at a druggist’s, where genuine bark is kept, perhaps at as much more? A smaller quantity will not only answer the purpose better, but the medicine may be depended on, as far as bark can succeed in the case. Much of the disrepute this medicine has fallen into of late is entirely owing to the cheap and sophisticated bark practitioners use. We might make the same remark on some of the other medicines, among which is Rhu-
barb.

His unguents he should prepare always himself, and likewise in small quantities at a time; for, if long kept, they will prove rancid: besides, he will find it necessary to vary the proportions of several of these to answer his intentions. If he buys them, he will generally find them too hard, because, neither the college proportions are exactly kept,
kept, nor the ingredients themselves always used. For instance, in the different fats and oils, the cheapest will always be used, sometimes much to the detriment of the unguent. Where hog's lard is ordered, mutton fat must not be substituted. He will find lintseed oil (unless for internal use) no improper substitute for olive oil, which is considerably more expensive; but, for internal exhibition, the best salad oil should constantly be employed.

wives than among the men. In some stomachic ailments it may have its use even among the privates themselves.—Emplastr. Veficator. cannot be dispensed with.—He should keep of the powdered Cantharides in his chest, and make his Ung. Epispaft. occasionally as he wants it. He can make it with more accuracy from the flies than by mixing the Ung. Basil. Flav. and Emplaf. Veficat. together.

Among the pills he should keep the following: the Pil. Plumer. Pil. Pacific. Pil. Stomach.—This last may have its uses among the women of the regiment, more than among their husbands; for he should not neglect them: nay, though his duty does not oblige him either to give them advice or medicines, his humanity may call on him. We must not omit Pil. ex Hydrarg. or the common Mercurial Pill—one which he will find more use for than any other yet mentioned. The Pil. Scillit. should also be
be kept: dropfies often occur, and this may have its use in the disease.

Among the electuaries he must not omit the Elect. Cardiac. vulgo Confect. Card.—this is a very elegant and useful composition. Elect. Japonic. vulgo Confect. Japonic. In diarrhoeas, and the like, it is often administered with the happiest success.—Elect. Lenitiv.—Elect. Thebaic. is also an useful composition, and an elegant formula of administering opium, united with aromatics.

Among the powders, Pulv. Diaromaton, vulgo Species Aromatica: this is also a very elegant composition, and of great use.—Pulv. e Jallap. Comp. he may make occasionally as he wants it. As head purges may be found useful in removing some species of head-achs, the Pulv. Sternutat. may also be kept; nor must he neglect the Pulv. Stiptic. and, above all, let him be provided with the Pulv. Dover. Sive Sudorific.—Thus far of compound powders.
Among the *simple*, we must not neglect Rhubarb, and Jallap.—A few Syrups may suffice for army practice. Simple syrup will be most used; but, as it will spoil in keeping, a proper quantity of coarse sugar always at hand, for sweetening draughts, &c. will answer as well as a more expensive syrup of fine sugar. I would not have him omit the Syr. Scillit.—A Syrup of Lemon Juice may be added, but, perhaps, there is less occasion for it—it may, however, be compounded pro re nata, by dissolving brown sugar in water, and adding the lemon juice. I omit Syr. e Diacod. since other formulæ of opiates will answer as well.

Of the antimonial preparations the following will be sufficient.—First, as the chief, Tart. Antimon. vulgo T. Emet.—As Vitrum Cerat. Antimon. has been found useful in dysentery,* it may be kept; and

as James's Powders are sometimes an useful
medicine, and the composition now known,
they may likewise have a place.—If he
chooses, he may add the Vin. Antimoniale.
It is not expensive.

Among the mercurial preparations with
the acids, comes Corros. Sublim. or Merc.
of the Edinburgh Pharmacopoeia has given
a formula for the solution, which is, Corros.
Sublim. gr. vj. Sal. Ammon. gr. xij, solv. in aq. distill. libra una.—Mercurius
Dulcis, or Calomel, is an useful prepa-
ration.—Also, Merc. Calcinat. and Merc.
Precipitat. Alb.—This last will be found an
useful ingredient in ointments for cutaneous
eruptions.—Merc. Corros. Ruber: a most
useful escharotic.*—Of the preparations of
silver,

* Some think the common pill, made with crude
mercury, may supply the place of all other more ex-
penfive preparations for internal use. I have often
found it necessary to vary my formulæ, and hence I
have mentioned different preparations.
silver, the Lunar Cautic.—Among his venereal patients he will frequently have occasion to use this.—Of the dry preparations of lead, Sach. Sat.—Of the preparations of iron, Vitrol. Mart. or Green Copperas, as it is commonly called.—Among those of zinc, it will be as well to keep both the Flowers and Vitriol Alb. since neither are expensive. The last is so useful, I hold it among the indispensable medicines.—The Aq. Vitriolic. is also useful: this he can compound occasionally. And so may also the Aq. Stiptic. have a place when he finds it necessary, as well as the Aq. Sappharina, if he has opthalmias wherein he may judge its application proper. Ophthalmias are very common among the men, and I have often found them very troublesome: they proceed from various causes—not uncommonly from a venereal one.

Among the neutral salts, Sal Glauberi and Sal Cathart. Amar. are the most useful. Sal Polychrest. and Tart. Solubil. he may u
use occasionally, if he chooses. Neither the Vegetable fixed Alkal. nor the Volatile must be omitted. For the Fossil Alkali he may find but little use.—Sp. Volat. Fœtid. Spirit Volat. Aromat. will likewise be useful; Spir. Vitriol. Dulc.* Sp. Nitri. Dulc. also Vinegar, both common and distilled. The Spir. C. C. with oil, makes a good liniment in the army for pains, and even sprains. If made with coarse oil, it answers sufficiently well.—In place of spirituous waters, he will find it cheaper, and not less effectual, to use the essential Oil of Peppermint, or some such: a few drops of this will communicate the same flavour as if he had made use of a large quantity of common distilled water from the same herb.


* Sp. Vitr. Dulc. has lately been used with great success in fevers.
Fœtid. T. Jallap. T. Japonic. T. Myrrh. T. Rhei. T. Theb. T. Senn. Compos. T. Ipecacuan. Elix. Vitriol. Acid. Linim. vulgo Balf. Anodyn. and, if he pleases, he may add Linim. Sapon. as also Balf. Traum. Elix. Guiac. Volatil.—He may add to these as many others as he shall think proper.—Acet. Scillit. is very useful. If he keeps these tinctures, the wines may be dispensed with.

Of the decoctions, the DecoCT. Commun. and the DecoCT. Hordei.—perhaps this last is sufficient. I need not tell even the young and less experienced army practitioner, that these, and many others, are to be prepared as occasion requires; every one knows that several of them cannot be kept in a medicinal chest. As he must practice among the officers, the DecoCT. Lignor. can be prepared, if he judges it necessary, for any of them. Sarfa-parilla is dear, and, unless to officers, he may omit it in his pharmacopoeia. What medicines are ordered for them they generally
rally pay for. Both the Common and Arabic Emulsion may be sometimes necessary: neither of them is expensive.—He may keep Mag. Alb. because he will find use for it in the cases of children.

Among the infusions, that of Tamarinds and Senna may suffice. This he must also prepare pro re nata. The Mucilage of Gum Arabic will likewise be necessary both in forming pills, and mixing with other medicines, therefore he must never be without the Gum. I have found, in soldiers' coughs; Lac Ammon. and T. Theb. an excellent remedy, therefore, the G. Ammon must be one of the articles of the regimental materia medica. Of the conserves, that of roses may be enough. Crem. Tart. must not be omitted; neither Manna, Sperm. Ceti, nor Sal Nitri. Of the aromatics, we may likewise add Nutmeg and Ginger, in powder. Likewise, both the root of Liquorice, and the extract, i.e. what goes by the name of Spanish Juice. It will be proper to have Bals.
Balf. Copaib. Spanish Soap, Camphor; nor must we omit Fl. Sulph. Pulv. Heleb. Alb. and Crud. Sal Ammon. These I have often used with great success, in form of unguents, in cutaneous eruptions. I do not give these as a list of all the medicines he should keep in his chest; several of them he can purchase in every quarters where they march to, as genuine as in London. These, variously compounded, as his judgment leads, for which no rules can be laid down, will answer most cases he may meet with. If he wants more, he will find enough of formulae in pharmacopoeias. If he finds here some which he thinks he may never want, let them be omitted; but, the more of them he possessest, he will find his chest the richer.

—Besides these, Leather, old Cloth, Rollers, Tow, and Charpè, are to be added.

Every regimental surgeon should possesstwo chests—one for his tinctures, and nicer preparations; the other for those where less care in their keeping is necessary. The com-
common chests in use in the army seem very well adapted: perhaps their conveniences cannot be improved. They appear, however, to be too small. I could wish them at least six feet long, with a proportional width and depth. I know it is troublesome to transport from place to place, large and cumbersome baggage, such as this will be, but I look on it as necessary as their chests of arms; and the commanding officer should never find fault with a large medicine chest, though he may justly, sometimes, with the officers, for too much unnecessary baggage.

But now respecting the dosing of medicines in the regimental practice: this is a matter of the highest importance. In the army, however, I have observed far more negligence in this, than out of it. Want of convenience may, indeed, be pleaded. This I cannot, however, altogether allow. A carelessness in exactly measuring the quantity of the more active substances will admit of
of no apology, since a very small variation may prove hurtful. By a small mistake here, as the poet strongly expresses it, we "may do a deed to haunt us to the grave." We may instance it in Tart. Emetic. A quarter of a grain of an over dose may add so much to the violence of its action, as to endanger the rupture of blood vessels. Ruptures of this kind taking place in some parts of the body, as in the brain,* may produce immediate death. We can easily suppose, that the straining occasioned by the efforts to vomit, may detain the blood in the vessels of this organ in greater quantity; we know that the vessels there are extremely numerous; that the structure is delicate; that many of them lie loose, at least are enveloped in so tender parts, as easily to give way to an impulse. Apoplexy proves that. ruptures take place in the vessels of the

* Emetici actio violenta, ad capitis morbos gignendos apta nata est.—De Haen Rat, Med, pars prim, Contin, p. 185.
the brain.* Pains in the spleen may likewise follow from violent vomiting, since this organ admits, in a similar manner, a greater quantity of blood in proportion to the rest of the body. The splenetic artery is frequently found diseased, and, therefore, the more easily ruptured. Whether its tortuosity adds any thing to this, is difficult to say; it is, beyond question, the most convoluted vessel in the body, and is very subject to ossifications. We know that violent running, which hurries the circulation, not only produces pains in the spleen, but in the liver. Violent straining may exert a force on these productive of the evil we have mentioned; nay, I have heard a reader of anatomical lectures, of some experience, assert,

* Dr. Monro is of opinion, that not above a tenth part of the whole mass of blood is circulated within the head, but which is nearly four times more than is circulated in the rest of the aortic system, when the area of the internal carotid, and vertebral arteries, are compared with the area of the trunk of the descending aorta.—Vid. Observ. on the Nervous System. p. 3.
affert, in his lecture room, he knew a case of a rupture of the vessels of the spleen from the violence of emetics.* Violent efforts to vomit have caused even a rupture of the oesophagus, and opened a communication between it and the abdomen: it was this that killed the Baron Van Wassenaer, Admiral of Holland.†

Ruptures of the vessels of the stomach have likewise proved fatal from the same cause. The death of the famous Voltaire was induced by an hæmatemesis, and though not by a previous emetic, yet in a way somewhat similar.—In the act of declaiming, and in violent agitation, instructing the actors who were to perform his tragedy of Irene, he was seized with a fatal vomiting of blood.

The late lieutenant-colonel D. died from a similar cause. He was a man of gentle

* Mr. Cruikshank,
† Vid. Boerhaav. Opera,
manners, and remarkable in the corps where he served for good nature, so that he went by the name of Good-natured D. From various causes, and uneasinesses that befell him, his health was rendered precarious: he became valetudinary, and his temper changed with the weakened state of his body, to very irritable and irascible.—In the beginning of April, 1785, from some previous vexation, a vomitting of blood came suddenly on—he fainted—the vomitting stopped.—Some officious persons about him at the time, alarmed at this, and ignorant of the consequences, gave him a considerable quantity of Sp. C. C. which, the instant it got down, induced again such an effort to vomit, that, perhaps, more than a pound of blood came up at once.—He was now placed in an horizontal position, and, apparently, almost dead; but, by proper care, he recovered so well, in about ten days, as to be able to go abroad. I predicted that a dropsey would most likely ensue, from the loss already sustained, and made this my reason
reason for objecting to V. S. which was then proposed by one of the gentlemen who attended with me, and who had been present at the evacuation of the last quantity of blood occasioned by the injudicious exhibition of the Volat. Sp.—They yielded—no more was taken away—but, in a very short time after, the abdomen became evidently enlarged.—This daily increased—and, in the space of about two months, after being tapped, and a quantity of water drawn off, he died.—This case comes in as a nearer example; for, the effort of vomiting, wherein the last quantity of blood was lost, might be held as a principal cause of the fatal event. From the loss of the first, the patient might have died dropsical, or by some other lingering complaint, but, from so sudden, and so great a loss, added immediately to the first, it was impossible he could long survive.

In June last, I was called to a young lady in the neighbourhood where I reside, who
who had been long valetudinary, but, for three days before, had been almost constantly vomiting, from a morbid irritability of the stomach, which not only alarmed her friends, but the surgeon who attended and myself. She had not indeed vomited much blood—what came up was in streaks, but sufficient to make us apprehensive, if we could not allay the inordinate action, that a rupture of some of the larger vessels might ensue, and a fatal hæmorrhage take place—but our endeavours to appease it, thank Heaven! were crowned with success. In little more than a month after, she was restored to perfect health. These are examples to shew the alarming tendency of long-continued and violent efforts to vomit, in whatever manner induced.

But should such fatal accidents not happen as we have described in some of the above cases, troublesome hæmorrhages may follow, which, though not attended, with so much danger, may disturb and frighten
the patient. Should only some of the vessels running through the Sneideirean membrane be opened, it proves unpleasant, perhaps, sometimes, even hazardous. I have repeatedly seen violent haemorrhages at the nose during the operation of an emetic. Such accidents never fail to deter the patient, in future, from the use of emetics, be their administration ever so necessary.

I have sometimes seen this active preparation of antimony dealt out at random, being carried in a small phial in the pocket, and administered by guess, without the trouble of weighing. A very little pains might have prevented this unsafe method of using it, i.e. by having always a number of accurate doses previously weighed, wrapped up, and kept in the pocket, till occasion called for them in visits to the sick in quarters. These could as easily be carried about to save an immediate journey back to the surgery, as a phial, and much more safety in
in the exhibition. But, even in this way, it will be safest to direct it to be dissolved in a certain quantity of water, and taken *partitis vicibus*; for, according to the strength of the T. Emet. then in our possession, and the quantity of acid on the stomach, will its action be either greater or less. The same method may be used with Jallap, _i.e._ having the doses weighed; and the same still with some other active medicines, which I have seen, too often, in the army, administered in this vague and random way.

If, in this _guesstrust_method, through fear of giving too much, we give too little, the effects we intended cannot take place; and either time is lost, or worse mischief done: the patient, instead of being better, may be rendered much worse. T. Emet. will afford a good example here also. Let us suppose we intend full vomiting; that from the symptoms of the case it is thought necessary. We administer the emetic in the random way—the quantity is too small.
We call the next day to know how it operated—and, lo! instead of pukeing, it purged.—The patient is now much worse—his pulse is low and feeble—his strength is much exhausted!—Observe what is done!—Perhaps it may not be in our power to raise the pulse, or recover that strength which we lost by this misconduct. But the over-dosing is a thing that is more likely to happen, and will be what we have most to fear.

All these inconveniences may be avoided by the method already pointed out, i.e. by weighing, and, those of more violent operation, with the greatest nicety. If our scales, however, be bad, we had just as well be without them. The best are apt to contract rust, if not carefully prevented by keeping them dry and clean. The air itself contains enough of acid to corrode them, with moisture enough likewise to give it action. The smallest deviation from an even balance, will prevent them from serving nice purposes.
poses. The bad situations in which a regimental surgeon is often placed, with respect to his hospital and surgery room, will render this more liable to happen; but this is the chief reason he should be more careful to clean them and keep them from dampness or dirt. Some may look on this as a trivial matter; but, whoever considers what has already been said on the activity of medicines, and the great variety in the effects a small increase or decrease of the quantity makes, will be of a different opinion.

What has been said of T. Emet. is to be understood of Opium. The strained opium is what I have in view. It should no more be administered at random, than the other. The bulk of a grain, or a grain and half, the most common dose, is very small, and may easily be too much augmented without the eye perceiving it. The L. Laud. we shall allow him to carry in a small phial, the dose of it being ascertained
by drops. Pulv. Doveri is another I have seen exhibited, as also Pulv. Jallap. in this unwarrantable random way to soldiers.

More might still be mentioned; but we hope these will suffice, and point out, to such as are about to enter the army, the impropriety of imitating such careless practice: nor ever to listen to the common, but deceitful tale, that a soldier's constitution far exceeding others in strength, any thing in the way of medicine may do for him. Language of this sort can only proceed from ignorance; and to believe it, and practice accordingly, end in disgrace.
CHAP. VII.

Of Dissections.

WHEN we consider that many of the gentlemen in the regimental department of medicine entered the service before they were properly initiated in the principles of their profession, it will not appear strange, if dissections be but little prosecuted in many regiments, especially among young practitioners of this description. To inspect dead bodies, so as to reap advantage from it, is not only attended with labour, but requires an adequate proportion of skill. The want of sufficient anatomical knowledge may deter many, and, in some degree, account for the neglect of this branch.

No place, however, is better adapted for prosecuting dissections than the army, from the frequent deaths that must take place among
among such a number of men, I mean where more regiments than one (as is often the case in time of war) lie together. But though they cannot happen so often in single regiments,* yet many opportunities occur there also. Above all, the total disposal of the bodies at the commanding officer's pleasure, renders it extremely easy; for the surgeon, when a patient dies, need only ask, and he will obtain leave to inspect it.

"The more we know of our fabric," says the learned Dr. Hunter,† "the more reason we have to believe, that if our senses were more acute, and our judgment more enlarged, we should be able to trace many springs of life, which are now hidden from us; by the same faga-

* I have seen a year pass with but one death out of upwards of 600 men; but I have seen seven happen in the same space, in sickly seasons, and from other uniting causes.

† Vid. Introduc. Lect. p. 65.
"city, we should discover the true causes, and nature of diseases; and thereby be enabled to restore the health of many, who are now, from our more confined knowledge, said to labour under incurable disorders. By such an intimate acquaintance with the economy of our bodies, we should discover even the seeds of diseases; and destroy them before they had taken root in the constitution.

"This, indeed, is a pitch of knowledge which we must not expect to attain; but, surely, we may go some way; and, therefore, let us endeavour to go as far as we can. And if we consider that health and disease are the opposites of each other, there can be no doubt, that the study of the natural state of the body, which constitutes the one, must be the direct road to the knowledge of the other.

"What has been said of the usefulness of anatomy in physic, will only be called in
"in question by the more illiterate empyrics among physicians. They only discourage others from the pursuit of knowledge which they have not themselves, and which, therefore, they cannot know the value of; and tell us, that a little of anatomy is enough for a physician."

That dissections will prove of great utility, I am persuaded, need only be mentioned to gain it credit with most people of the medical profession; and even now with a great part of the world in general. When the surgeon, therefore, has a patient of whose disease he is doubtful where to rank in nosology, or how to treat in practice, from its uncommon and anomalous nature, according to his experience, every symptom ought to be attended to, and as carefully noted down: his observations should be made once, twice, or oftener in the day, if convenience will serve; and the effects of the medicines he prescribes accurately remarked. If, notwithstanding all the care he
he uses, the patient dies, and doubts still dwell on his mind respecting the nature and cause of the complaint, he ought, as a public-regimental concern, if he understands anatomy, to request leave to inspect the body: if he omits it he is certainly culpable.

We shall suppose him engaged in it: and here he should as carefully take notice of every appearance deviating from the healthy state. These are, to be compared with the symptoms already remarked, and from this he will be able to judge how far the symptoms are explained, or what remains still to be accounted for. The use of this is obvious; should some future period place a patient in his sick list with similar symptoms, he will now be better able to form a just notion of the disease. If he has every reason to suppose it is beyond the power of medicine, this even will prove a satisfaction not only to himself, but to the commanding officer, whose duty it is to enquire after the men's health, and the medical attendance given
given them. It will likewise relieve the surgeon from any future reflections.—For example: a patient comes into his hospital, whose chief symptoms are as follows:—an irregular intermitting pulse; great palpitation of the heart on the slightest motion; dyspnoea; the apex of the heart changed from its natural situation, and turned considerably more towards the sternum.—Another patient comes, where the beat of the heart itself is felt lower down towards the false fibs; he is also affected with palpitation, and great difficulty of breathing.—Both die.—On dissection, he finds in the former case, the pericardium greatly enlarged, and containing a considerable quantity of serum; and which, by its long and constant pressure on the left lobe of the lungs, prevented the blood from flowing into it, and the lobe itself from receiving its due nourishment, whereby it is almost totally consumed, and the heart pressed into its place:—in the latter, a preternatural dilatation of the heart itself; and, joined to this, an ossification of its
its valves.* On this discovery, he shall be perfectly satisfied, his care and medical knowledge were altogether unequal to the task of restoring the healthful functions of these organs, and saving his patient's life. Hence no future reflections can be thrown out, with the least shadow of justice, against him in the medical treatment of these cases; for, ocular demonstration proved them to be incurable.

Another example:—he is again called to a patient.—After proper enquiry, and mature deliberation, he is furnished with the following history, and is able to recount the symptoms here mentioned.—First, the patient has been long valetudinary—dates the cause to a severe fever, almost so far back as twenty years—which changed the constitution from robust to weak—the countenance from a florid to a pale and cahectic appear-

* These are two real cases; but neither of them happened in the army.
appearance.—Became thin—delicate—and subject to hysteria (the patient was a female) and this weakness and delicacy perhaps heightened by her becoming the mother of several children.—Complaints continued slowly advancing, till the latter end of 1782. —Medical advice was then had recourse to. —The symptoms that then presented were these:—an anxiety, and an uneasy sensation on inspiration.—Sense of a stricture about the breast; it gave the idea of a contraction of the parts.—Was attended with much pain; nay, so violent, on taking the exercise even of gentle walking, as to oblige her to stop short, to recover her departing breath, and keep herself from fainting.—On these occasions, pulse low, yet never intermitted.—Great depression of spirits.—Every night now, on going to bed, these painful spasms recurred with violence—would continue from one to two hours, or longer—then yielded for some time—but a night seldom passed without one or two of these painful paroxysms. —They were at the same time accompanied with
with a sense of weariness, and pains in the limbs.—Observe, however,—these painful paroxysms of difficult respiration gave her sometimes a respite for a month at a time.—In these intervals hysterical affections often appeared.—It must not be omitted, that, during the fits, there was great palpitation of the heart.—The intervals of ease which we have said were sometimes a month, became gradually shorter; and, as might be expected, she grew still more debilitated.—Was now extremely easily thrown into perspiration.—The admission of the gentlest stream of cold air gave great uneasiness—so much, that on going into the open air, she was obliged to guard against it with the strictest care, by warm flannel put round the breast, and up to the neck.—Appetite now failed.—Complaints still increased—recurred with aggravated—with reiterated severity—till at length, in the beginning of 1786, she was released by death from her misery.—On inspecting the contents of the thorax, from whence the chief of these painful symp-
symptoms seemed to originate, not only in the pericardium, but in both cavities of the breast, a considerable effusion of serum was found.—Here was an explanation of part of the symptoms.—The inspection was further prosecuted.—The heart itself was carefully examined—and, lo! the valves placed at the entrance of the right ventricle were found strongly ossified, and so united, that the passage for the blood to flow into the vessel was nearly shut up; the aperture left was little more than could admit a silver probe of the common size!—Here was enough to account for death; and to prove, likewise, the disease incurable!—Observe—in this case, no intermission of pulse was discernable, till towards the last period of the complaint; and it was no great while before death, when the symptom of painful spasm was attended with considerable intervals.—Let the physiologist, however, explain it.—The case is a proof of the utility of dissections, in as far as it clearly proved, that the event was irremediable—it satisfied rela-
tions and friends—it prevented reflections on the attending practitioners!*

Such cases of dissections should be carefully transcribed into a book kept for that purpose; and, joined to them, any remarks occurring on the occasion. These, no doubt, would be found extremely useful afterwards. Nor am I sure, whether they might not prove as serviceable to the regiment in time to come, to have a copy of them taken by the regimental clerk, for the instruction of succeeding surgeons, as any other register in their possession. Could they save one life only in the space of twenty years, they would compensate sufficiently for the labour of registering; while the instruction resulting from the case to the surgeon himself would be a farther compensation, and a sufficient motive for his pursuing dissections in future.

* This is also a true case, in the author's practice, but not in the army.
Another lesson, equally instructive, will result from dissections, i. e. when some case presents, the nature of which he is acquainted with, but cannot succeed in removing the disease. Suppose an ileus: this, he knows, consists in a stricture of the intestines, which prevents a deposition of the feces. He tries every method to remove it, which reason or experience suggests: oily and turpentine clysters; tobacco smoke; venesection; blisters laid on the abdomen; the dashing of cold water over the lower extremities,* with every other means in his power: all are in vain. He reads, as he turns over authors on the subject, in order to collect their different practices in similar cases, of a proposal to force the stricture by weight. He has recourse to it: several ounces of crude mercury are immediately swallowed by the patient, and repeated at a short interval. It will not succeed: the stricture remains

* Vid. case in the Med. Ess. cured by this.
remains fixed. A mortification quickly ensues, and death is the consequence. The body is opened to discover the stricture; and, lo! the boasted mercury, instead of descending in an uniform mass to the seat of the disease, is found divided into millions of globules, of great minuteness, by the mucus of the stomach and intestines over which it passed, there remaining, and adhering to their coats. This proves instructive to him; for though he could not remove the disease, yet, when a similar case presents, he can say, with great confidence, that this boasted and theoretical remedy is as useless as it is imaginary, while the dissection stands on record to corroborate his assertion.*

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* Vid. De Haen Rat. Med. where this is proposed and recommended.—This is likewise a real case.—When I was a student at Edinburgh, this practice was put to the test in the Clinical ward of the Royal Infirmary by Professor Home. The patient died; and the dissection, at which I assisted, proved what is now related.
But dissections are useful in other respects. In the manual operations of surgery it is from them we learn, what we may do with safety, and how we may avoid difficulties, and escape dangers.—"It is dissections alone that can teach us where we may cut the living body with freedom and dispatch; and where we may venture with great circumspection, and delicacy; and where we must not, on any account, attempt it. This informs the head, gives dexterity to the hand, and familiarizes the heart with a sort of necessary humanity, the use of cutting instruments upon our fellow-creatures."*
There may be many cases given as examples of the utility of dissections: among others, sudden and unexpected death; or where the patient complained, but his complaints so vague, that the physician could discover little or no symptoms by which he could guide his practice. I saw a case of this kind, in 1781, under the care of one of the ablest physicians of the age: the patient was a boy about twelve years old. Leave was not obtained to inspect the body; but, there is reason to believe, dissection would have thrown some light on the subject. Perhaps some disease might have been discovered in the brain. The boy complained of some head-ach; yet had no feverish symptoms; nor did any thing appear to indicate hydrocephalus internus (and yet I have some reason to think water was lodged in the head) except that he said his sight and hearing were both somewhat occasionally (not constantly) impaired.
But I find, from a case I had under my care at Ipswich in Suffolk, in March 1784, that the ventricles of the brain may be loaded with water, yet few of these symptoms appear which authors have laid down as almost invariable in such cases; nor yet the disease run through those regular stages they have related as its common course. The patient I mean here was a young man, twenty-three years of age. When he came to ask my advice, his chief complaint was a violent head-ache, returning irregularly; would sometimes continue for hours; at other times, cease in a few minutes; he had a tingling noise in his ears; and I found he had convulsive fits sometimes: these, likewise, his master said, attacked him irregularly—sometimes two or three times a day; sometimes not for so many weeks. He had been affected in this manner several years. He was of a very florid complexion; his skin thin and smooth; his hair fair; and he of a soft lax temperament, evidently
If languid. I was also informed, his father had died of a complaint somewhat similar, as it was described to me. I must not omit, that on taking nourishment of any kind, he informed me, his head-ach increased, and if the food was hot, still more; became violent; and he was now aptest to be seized with a fit. I observed, also, that he leaned his head to one side, and seemed to have a rigidity of the neck. His master confirmed this to me afterwards, and added, that he would hold it a few minutes on one side, then turn it on the other, as if to rest it. From the account I had received of the father's death, I looked on the complaint as hereditary, and owing to a mal-conformation of the parts, perhaps the bones; but, as his countenance appeared so florid, and his whole habit full of blood, I directed the surgeon to open the temporal artery, and take away ten ounces of blood; then to shave the head, and apply a blister. As he was of a costive habit, and, he said, always worse when he went two or
or three days without a stool, which was often the case, I ordered him some laxative pills. It is to be observed, he had no fever, nor ever had been affected with one since the head-ach began. The surgeon endeavoured to open the artery as directed, but could not succeed; he then opened a vein in the arm, with considerable difficulty, on account of the smallness of the vessels, and depth they were sunk; he took, however, the quantity mentioned, and got his head shaved; but, an uncle, to whose house he now repaired (for he was obliged to leave his service) would not permit the blister to be applied: a week, or more, intervened, and then it was laid on his back. It is remarkable of the blood, that it concreted speedily into a firm, solid mass, with the separation of little or no serum, and with a thick, tough pellicle of coagulate lymph on the surface. This seemed to indicate more evacuations. His pills were given, and they had the effect. He continued better for some time; but, as the uncle refused to com-
comply with my advice, in not applying the blister, I did not afterwards prescribe for him. Mr. Stebbin, of Ipswich, the surgeon that attended, visited him, however, once or twice after. He grew better; had no fits, and but little head-ach for a fortnight; on which, concluding himself well, he returned to Ipswich to resume his servitude. He called on me the same day, and thanked me for my care. There was no reason, from the trifle that had been done, to suppose him cured. On looking in his face, I perceived his eyes flare, and the pupils dilated rather more than in health; yet he did not complain of any defect in his vision. He had the same stiff appearance in his neck. He left me, and, in an hour or two after took a fit, which made him again return to the country that evening. In three days after, he was dead. The morning he died, he rose out of bed without help, which he had not done for a day or two, sat down in an armed chair, talked a little, as usual, with one of the family, and said he
he was better; then shut his eyes, as if falling into sleep, leaning his head against the back of the chair. He continued so for half an hour, and they concluded he was asleep, and would not disturb him; but, on going near, they found him dead.—Leave was given to open the head. I begged the surgeon to inspect it, but, being at that time confined to bed with a complaint in my leg, I could not attend him. On returning, he gave me the following relation:—that in place of vessels being burst, and an extravasation of blood on the brain, as we both suspected, he found the state of things very different. The cranium extremely thin; more so than he had seen it in any subject; and soft in all its parts; so that the saw ran through it with the greatest ease; and it separated from the brain without any difficulty whatever. While he was cutting the occipital bone, pretty low down towards the neck, the saw going through, and penetrating the dura mater, above the cerebellum, but nothing more, a stream of water issued out. Besides what
what was thus lost, he saved about six ounces. The young man's master, who went with the surgeon, and another man, being present, both declared there was in the whole full ten ounces. The whole substance of the brain was soft and flabby, rather whiter than usual, and no marks whatever, or 'red points, to be seen in the inside of the skull, which commonly happens in dissections, from the rupture of the vessels communicating from the external with the internal parts of the head. He examined the rest of the brain, but found no schirrocity either in the pituitory gland or other parts. From the sight being scarcely at all injured, it would seem that the water had been more in the third and fourth, than in the lateral ventricles; for, had these been full, the thalamus nervorum opticorum must have been compressed, and vision impeded. Those who contend, that no communication is to be found between the third and fourth ventricle, will say, the water was all contained in the fourth;
and would use this as a case in point to prove it. But it would be too rash to conclude this here, from the spongy state of the brain, which did not allow of an accurate examination of the other ventricles; and from the specific gravity of the fluid falling down to this, as the most depending part, and pushing its way there with more ease from the diseased state of the cerebellum.

It has been objected to me, in speaking in favour of regimental dissections, that it would deter men from entering into the service; for as it would be rumoured abroad, that men were always opened when they died in the army, as the vulgar in general express an abhorrence of the practice, it must follow, that none would choose to enlist into a regiment where this was customary. This, however, is an ill-grounded objection; nor do I think it can carry any weight with it. Is it not meritorious to endeavour to search out the causes of diseases? and must not this hold as well in the
the army as out of it? No regiment, I am confident, will bear a worse report on this account. Many examples might be quoted, where they have been prosecuted by the surgeon on every proper opportunity, and, no danger of this kind followed. But, I can pronounce the objection groundless from my own experience. I have been present at a dissection made in a regiment which, so far from being done in a clandestine manner, through any apprehension of this nature, it was done openly, and in the presence of several soldiers, who were called as attendants and assistants; and with the knowledge of the whole hospital besides; and, before it was finished, might be known to upwards of fourteen hundred soldiers then in the town. Nay, I have been informed, that, in some regiments, to the honour of the commanding officer and corps, when a private dies, the surgeon receives orders to inspect the body. Incapacity or idleness may invent apologies for neglecting anatomical researches; but, we would beg leave to
to suggest some hesitation in fixing such a stigma, as I would call it, on the army in general. The works of several eminent men who have practised in the army, and improved their profession there, remain lasting proofs of the futility of such objections.

Besides, this is not an age for such ignorance and superstition. We find few now, of any rank, that are not fully convinced of the utility of opening bodies for the benefit of survivors; particularly when the disease has been such as could not be ascertained; or when it is to prove by demonstration, for the satisfaction of friends, diseases that lay beyond the power of aid. Were we to multiply authorities to support us in our opinion of the great importance of dissections, many might be quoted. "The opening of morbid bodies after death," says Sir George Baker, "if it does not always assist a physician," (the regimental surgeon should have the knowledge of one) "in his future practice, has its singular use,"
in as much as it frequently exhibits the
"genuine effects of a fatal disease."*

I have attended patients (not soldiers)
particularly young subjects, under hydroce-
phalus internus; and, when they died, the
parents have insisted on my opening them;
and, in one case, the father stood by me all
the time. I will venture to say, that when
ever I wish to open a body, either in the
army or out of it, I shall be able to accom-
plish my designs; at least, this far I may
affirm, that I never yet met insuperable
difficulties here; neither have we any reason
to suppose, that others will be less success-
ful, if they make the attempt.

"The history of anatomy," says Dr.
Hunter, "should stimulate us all to culti-
ivate it with diligence; when we see, that
anatomists, in all ages, have made useful
discoveries; and, in consequence thereof,

“have enjoyed the advantages of reputation
in their profession; and when we see,
that the subject is still so far from being
exhausted, that it is to this day, and must
be to the end of time, new, entertaining,
useful, and inexhaustible.”*

When friends and relations observe, that
the request is not made from wanton and
idle curiosity, but for the sake of informa-
tion; when, besides, they observe all deli-
cacy used, as far as the nature of such
operations can admit; the reluctance they
at first might shew to the proposal, now
ceases. Use will even reconcile people
more to it; and, from its frequency, it will
become familiar.

“Were I to guess,” says the author
above quoted, “at the most probable future
improvements in physic, I should say,
that they would arise from a more general

"and more accurate examination of dis-
eases after death. And were I to place
a man of proper talents, in the most
direct road for becoming truly great in
his profession, I would choose a good
practical anatomist, and put him into a
large hospital to attend the sick, and dissect
the dead."

It will be farther objected, and we may, perhaps, be asked, how can young men prosecute them with success, who, according to our own supposition, never had proper opportunities of instruction? True; they cannot at first; but, if instruction be their wish, by the help of books on the subject, and the inspection of bodies, they may, in a great measure, overcome these obstacles. Diligence and perseverance have often supplied the want of better opportunities of information. I knew a gentleman (now dead) who, by such application in opening bodies, first inspecting dogs, sheep, &c. arrived to a tolerable proficiency in anatomical
know-
knowledge, before he ever entered the walls of an university, or ever saw a dissection but what he had made himself; and, at this time, I am confident, he knew more of the human body, could describe more of its parts, and their situation, than many who had spent several years there professedly at the study.

"If we look among the physicians of "the best character," says the learned author we have so often quoted on this part of our subject, "and observe those who "have the art itself, rather than the craft "of the profession at heart, we shall find "them constantly taking pains to procure "leave to examine the bodies of their pa-
"tients after death. Desirous that it may "be done by experienced anatomists (a cir-
"cumstance often of the highest import-
"ance) and unhappy when they cannot "procure this opportunity of improving "themselves and their art."*

* HUNTER's Introd. Lect.
On the whole, no doubt can remain but the regimental surgeon, who wishes to improve himself in this branch, will find opportunities enough in the army: and should it not be customary in the regiment before, he will not, I think, find it impracticable, by proper representation, to prevail on his commanding officer to allow it; and what he wishes to have done, it is well-known, must not in the regiment be refused. Some murmurs may at first be heard, but it will depend on the surgeon's own conduct and behaviour to quell them. They will cease by degrees, as the novelty of the custom abates, and the sooner, if he be careful to point out the use and real intention of his researches.

I cannot do better than finish this subject with the sentiments of the celebrated anatomist* above alluded to, in answer to another

other opinion that has been given against the prosecution of dissections: the opinion, that it is not worth the trouble; and even unnecessary, to drudge any length in it.—

"When we hear," says he, "of any men of the profession talking of all the knowledge of anatomy that is necessary for a physician, and of as much as a surgeon needs to know, we cannot but lament the singular hard fortune of his patients; first, in being sick or diseased, and then illing under the care of so ignorant a counsellor.—Who is the man of practice and integrity that can lay his hand upon his heart, and say, that he has not, in some case or other, had occasion for all his anatomical knowledge; and who has not wished, at times, that he had been possessed of more?—Who, then, are the men in the profession that would persuade students, that a little of anatomy is enough for a physician, and a little more too much for a surgeon? God help them! they have it not themselves, and are afraid that others should
"Should get it. The more clear and perfect our knowledge of every part of the body is, both in its sound and morbid state, the better we shall understand the nature, and strength, and tendency of its diseases. Thence we shall more readily and certainly learn to discover a disease in its beginning; to obstruct its progress; to put it under difficulties; to prevent its gaining strength by the acquisition of auxiliaries; to cut off its supplies; and, finally, to drive it out."

CHAP.
C H A P. VIII.

The necessity of good Instruments—of fixable Air—and of Electricity in Regimental practice.

Instruments proper for operations should always be in readiness. No regimental surgeon ought to be without them; for although operations seldom occur in a regiment, except on actual service, and after a battle, yet casualties may, and do sometimes happen. On such occasions, therefore, to be unprovided is unpardonable.

Compleat pocket cases, and sets of amputating instruments of the most approved form, with needles, thread, and sponge, should be procured. As a surgeon in the operative part of his profession improves greatly by practice, since dexterity of hand is as necessary as judgement, he ought fre-
frequently to operate. This will be a farther reason for his prosecuting dissections on every convenient opportunity.

We have already taken notice, that such opportunities will often present in his line of life, where, undisturbed, he may improve himself in operations, and in a knowledge of the structure of the human body. He that labours most in this branch, only knows how much still remains to be attained. What then shall we say of the surgeon, who never labours at all? Perhaps the most experienced in operative surgery never performs an operation, that, when it is over, he does not discover something omitted; and who has not reason to say to himself, 

"If this was to do again, I would perform it differently, by which, as I now perceive, I should avoid not only inconveniences to the patient, but to myself." I have heard experienced surgeons make similar declarations.

Cool,
Cool, steady, deliberate intrepidity, where neither the heart shall fail, nor the hand shake, is of all other things the most requisite in this art. But this can only be acquired by frequent repetitions of operating. It is this that gives confidence from our knowledge, steadiness from use, and prevents rashness, which is the effect of ignorance. Although the operation on the dead and living subject be different, yet it is on the dead we can best initiate ourselves in the practice. Here we first acquire a dexterity and readiness of hand; our knife becomes easy and familiar to us, and awkwardness is overcome by frequent repetition. When we come to execute the same on the living subject, it is true there are casualties and difficulties we must expect, and be prepared for; such as large hemorrhages, and other things, which in the dead subject do not disturb us. If we are altogether novices in our business, these may considerably disconcert us; and perhaps create such an alarm as to prevent our finishing
ing the operation, from the trepidation we are thrown into. Nor is this a new case: surgeons have been known to begin operations, and for want of sufficient courage, which a more frequency of operating would have given, have yielded the knife to another; yet who were not perhaps less informed in what was requisite to be done, than the person who finished them. Even after we are well accustomed to the use of the knife, accidents may happen which shall confuse us. If, for example, from too great an eagerness to extract the stone in lithotomy, the young operator should chance to grip it so hard as to break it in pieces, it might not only throw him into confusion, but really occasion mischief to the patient, by the admission of air into the wound during the time spent in scooping out the different fragments, and from the increased irritation given by the frequent introduction of an instrument for this purpose. Or if in an amputation the vessels should be found difficult to be secured from
a disease in their coats, it might in like manner disturb him, and perhaps confuse him so much, as to prevent the proper degree of reflection now necessary. The coats of arteries are also sometimes so indurated, and even brittle through disease, that when the limb is taken off, much difficulty attends making the ligatures on them properly secure. I have been present at cases where one of the most experienced surgeons in London found no small obstacles in this part of the operation. After taking off the limb, the arteries were so brittle, that no sooner was the ligature drawn tight, but the vessel broke through before its sides could be brought so close together as to prevent the hemorrhage; and this took place repeatedly, even to the third or fourth time. We may easily conceive into what a terror a young man, little accustomed to operations, would have been thrown in these cases. Arteries may be putrid, and the ligature from thence give way, and cause much confusion. We have a case of this sort in vol.
second of the Med. Comment, wherein this happened after an operation on the femoral artery, performed by Mr. Leslie of Cork. About an hour after the artery was taken up, the ligature cut through, and produced some inconvenience.

A surgeon knows the value of good instruments, and will therefore take care to be provided with the best, if he wishes for success in operating. Both himself and the patient will reap the advantage of them. This is not the case, however, with all regimental practitioners. It has been found necessary to spur several on to their duty in this respect. In cases where negligence is observed in keeping good instruments, it becomes the commanding officer's business to oblige them to be well provided. And I am well informed of a commanding officer, who, conscious of the surgeon's neglect here, and which is too frequent in the army, has himself sent an order to an instrument ma-
maker, and stopped the price out of his subsistence.

**Instances** have occurred, where a surgeon, even in England, (though almost every town where he quarters would afford them) has not been provided with any beyond a lancet, or two; and these also of a bad quality.* With regard to lancets, nothing is so dangerous as using bad ones. The force they require in piercing the integuments, pushes them generally too far into the vein, by which the phlebotomist is in danger of going through it on the other side; of pricking an artery if it be in the way; or, what is not less dangerous, of wounding a nerve.

**Dr.**

*This is properly ridiculed in a late publication, where the foibles of the officers of the British army, as well as the surgeons, are exposed. Among other things, the surgeon is here ironically admonished to keep two lancets; a sharp one for officers, and a blunt one for the privates: "for," adds the author, "this will " be making a proper distinction between them."—There is just foundation for the sarcasm. Vid, Advice to British Officers, published in 1783.
Dr. Monro mentions to his pupils annually some cases of this kind, one of which, I think, proved fatal; and the others were attended with no small danger. One, if I mistake not, was a lady, who only slightly pricked her finger with a needle. A second was a gentleman, who, fitting at table where a drinking glass happened to be broke, and by sweeping off the pieces with his hand, a small bit of the broken glass pierced it. Though this little scratch soon healed, it was several months before he was free from the danger it created. A gentleman in Middlesex* gives us three instances of it from bleeding; one of which had very nearly terminated in a locked jaw, and in death. Besides, the cavity of the vein itself might enflame, and produce very alarming symptoms. If these sometimes happen in the hands of skilful surgeons, with instruments of the best fort, are we not to suppose they will happen more frequently

quently from bleeding with such blunt lancets as we hinted at above?

I might give myself as an example of the dangerous effects of partial wounds in nerves.—In the autumn of 1782, while I was employed in examining the structure and the joints of a horse's leg, partly for my amusement, and partly to demonstrate the construction to some officers fond of horses, and who thought improvements might be made in shoeing them; while I was engaged with a saw in taking off the hoof, to bring into view the different parts of the coffin joint, and point out the thinness of the horny part, too much of which Smith's injudiciously scoop away, I ran the teeth of it obliquely over the second joint of my thumb; but so slight was the injury, that the cuticle was only raised, and torn a little; yet the pain and inflammation which succeeded in the part that evening, entirely deprived me of rest. This continued unremittingly for upwards of a week, during which
which I slept little. Every thing that seemed to bid fair to allay the inflammation and irritation, was applied. It spread up to my wrist; the part became numbed; I lost both the use of motion and feeling in it; while the joint of the phalanx above that which was wounded became so painful on the slightest motion, that it created me great uneasiness. It continued ill for upwards of four months, and it was much longer before I could grasp any substance with that thumb, so small as a pin. All this could not proceed from a wound so slight as scarcely to bring a drop of blood, had not some cutaneous nerve been partially wounded.

But to return. If the lancet be good, we have much less danger to apprehend. Almost the gentlest force makes it penetrate the skin, while it slips with ease into the vein, and with little or no pain to the patient, who always complains severely from a bad lancet. "All the other operations "in surgery," says the ingenious Mr. Bell,
Bell, speaking on the subject of V. Section,
"I have frequently seen well performed;
"but I can with freedom say, that I have
"frequently seen blood letting with the lan-
"cet done very correctly. When properly
"performed, it is really a neat operation;
"but when not done with much exactness,
"it is the reverse."* The same author
goes on to show, that bleeding in other
parts of the body may be attended with less
danger, particularly in wounding an artery,
than the arm, at the common place near the
cubit, where blood is generally let. He
mentions the feet, or the arm lower down
than the cubit; or the jugular vein. A
full stream of blood, he takes notice, may
be obtained from the feet near the ankles,
as well as from the arm. His advice is
worth attending to. It certainly would
render aneurisms less frequent.

I hope, after what I have said respecting
the constitutions of soldiers, no argument
need

* Bell's Surg. p. 64. vol. i.
need be offered to obviate the common apology, that "any thing may do for a fol-
dier." The supposition that they can bear surgical operations better than others, from a hardness and calo- sity of feeling, is a false one; and to take it for granted without proof, and to act accordingly, is improper. I have on many occasions seen an apparently strong and robust man tremble at the sight of a lancet, and faint away in the course of the operation, who, I dare say, would have undauntedly charged the enemy with fixed bayonet, or mounted a breach without fear. There is something abhorrent in our nature at the deliberately wounding our flesh. Some feel, we allow, more acutely and sensibly than others; but if I have found one who could hold the cup to receive the blood without being moved, or starting in the least at the prick of the lancet, I have found six of as delicate a mobility. And why should it not be so? What could give rise to the contrary suppo-
sition so injurious, as it occasionally proves to
to the soldier in his medical treatment? Have not many of them been as tenderly bred up, and accustomed, till lately, to as decent treatment, as the rank of mechanics and labourers allow? In their own houses, we all know mechanics meet with no such hard treatment in their sickness from the faculty. Can a few months, perhaps a few days, so change their natures? We know the contrary. This can never take place, but by length of time and habit. Many of the soldiery suffer most in their health when they are least able to bear it, i. e. soon after their entrance into the service, before they become inured to the musquet, or the duties it requires. We do not always find the lowest orders of mankind in the ranks. If we enquire, we will often discover youths who have been tenderly bred up; and men long accustomed to better days. The son, perhaps, of some worthy clergyman, that the giddiness of youth hurried thoughtless into this way of life. The once flourishing farmer; or the reputable tradesman. I knew
knew instances of all these; of many whom 
misfortunes drove into the service. Some 
indeed entered into it through folly. But 
we have spoken of this already.

While I am on the subject of V. Sec-
tion, let me mention a caution, which I 
think necessary to lay before the young re-
gimental surgeon. It is this: never to 
allow a soldier, on being bled, to use his 
firelock till at least after two days, that the 
vein may have time to close, and the cica-
trix begin to form. As a soldier is never 
to be bled merely from his own desire, but 
when the surgeon is convinced there is rea-
son for it, this delay can be of no detriment 
to the discipline; for it is better his name 
should remain two days in the sick list 
than twenty.

In the autumn of 1781, I bled two pri-
vates for some trifling complaint, which 
did not require them to be continued in the 
hospital list. They were dismissed accord-
ingly,
ingly, and the serjeant, as usual, took them out to duty. The consequence was, that about a week after they both returned to the hospital with their arms not only enflamed, as if a nerve had been pricked, but with a pretty large tumor on each, somewhat resembling an aneurism. It was hard, and did not, like the aneurism, yield or disappear on pressure. I mean the encysted aneurism; the diffused aneurism does not yield, or disappear on pressure. I was, however, somewhat alarmed, left one or other of these accidents had taken place, of the bad consequences of which I was well aware; but on examining the vein that had been opened, which in both was the median basilic, near which no artery lies in the most common structure of the arms, and distribution of the blood vessels, I was satisfied that my fears were groundless; nor did I think a nerve had been pricked, because the inflammation had not spread far up the arm, nor was any numbness in it, or other symptoms most generally accompanying that accident. I di-
I dilated the integuments above the orifice in the vein; applied the common digestive, with bread and milk poultice, over all; and as the inflammation stretched round the orifice a little way, I ordered warm fupes, in which wormwood and chamomile flowers were boiled, to be applied twice a day, as hot as convenient, an hour at a time. These were continued more than a week. By this method they were both cured; but not till after the formation and discharge of a considerable quantity of pus. It was, however, six weeks before they could do their duty. My colleague happened that morning to bleed another soldier, who in like manner went to drill; and the same accident happened to him. The regiment was young, and the drill duty severe at this season, to prepare for a review.

Had any error happened either on his or my part, I should have considered it incumbent on me to mention it here, as a caution to others. The accident, however, proceeded
ceeding from the violent exertions of the arm in exercising with the musket. All this would have been avoided by giving charge to the serjeant not to take them to drill, or other duty that required the use of the arms, till the orifice had closed a little. Experience taught me my mistake, in allowing them to go from the hospital that day; and it is mentioned now that others may not fall into the same. Mr. Bell's directions, not to bleed in the arm if other parts, as already mentioned, can be had recourse to, will apply nowhere with more propriety than in the army. Had a vein been opened in the foot, or some where about the neck, the violence of exercise, which falls most on a soldier's arms, would not have affected them near so much, and these troublesome tumors been avoided. And it may be added here, that the less danger will follow if the lancets be sharp. The author above quoted assures us, he never uses the same lancet twice, without sending it to his cutler. The form of the lancet, the position of the arm,
arm, (if we still prefer the arm) after the vein is opened, the manner of applying the ligature, are all material considerations, though too little attended to.*

Among the surgeon's instruments, I must place an Inhaler, to be used in cases of Cynanche tonsillaris, or inflammation of the throat. From the nature of a soldier's life, it is reasonable to expect this will often happen. I have found it a very common disease. Mudge has given us an useful machine for this purpose.† But for regimental practice, it is not only too expensive,

* Vid. Bell's Surg. vol. i.

† The merit of the invention of this instrument has been generally given to this gentleman, but improperly.—The ingenious Mr. Arden, Lecturer in Experimental Philosophy, is the inventor.—It was with him Mudge first saw it, and, as he declares, upwards of twenty years ago. Mr. A. so long ago, had applied it with success in several cases. There is a clergyman in this place, who saw it with Mr. A. so long ago, as I have mentioned, which is many years before Mr. M.'s Essay on the Catarrh appeared. Mr. M. is said to have improved it.
five, but likewise too liable to need repairs, which every mechanic is not capable of doing. As a convenient substitute, I have used a tube made of tin, for some years, which I find answers extremely well; and it is not only cheap, but strong, and can be conveniently carried in the medicine chest. It is in form of a retort funnel; the mouth so wide, as to cover the mouth of a common tea-kettle; is about a yard long; and the narrow end bent a little for the convenience of holding it in the mouth. Through this the patient inhales the steam of warm water, either alone, or impregnated with the effluvia of herbs, i. e. medicated as the prescriber judges best; the wide end being placed over the tea-kettle, filled with the boiling decoction. Three or four of these should be provided, as they will cost little above a shilling a-piece.

I must not omit here another instrument, as useful as any I have yet mentioned. This is a Tourniquet. It may seem strange I should
A. The inhaling Tube

B. The part to be applied to the Mouth

C. The part to be placed over a Tea-Kettle full of hot Water, &c

The part B to be wrapped round with a little Tow, to keep the Metal from scalding the Patient's Mouth.
I should mention what is so common; but though it be one of the instruments now in almost every body’s hands, that pretends to surgery, it is not always found in regimental practice. I have seen repeated instances here where its use was indispensable, and where very clumsy, and indeed inadequate substitutes were had recourse to in its stead. Abroad, and in the field of battle, substitutes of any kind may be pardonable, as any endeavour, however rough or insufficient to stop an hemorrhage, may be better than nothing, and occasionally save the patient’s life; but in Britain or Ireland, to be so ill provided against accidents, will admit less of an apology; and since they are both cheap and portable, the surgeon who does not provide himself with them is blameable.

A stick twisted in a noose may answer tolerably well in amputations in hospitals, and the like, where skilful assistants are always employed to make the pressure less or more, as it is necessary. I know such are used
used in very respectable hospitals in London; but still this is different from the army. Besides, there are occasions when pressure of this kind is to be applied for a length of time—for many hours together. Here a noose is almost inadmissible, for more reasons than one. If a person is set over it, to hold it, as is sometimes the case, it becomes a tiresome duty, and some neglect may happen detrimental to the patient. A single twist more may make it too tight, and create uneasiness; one less may leave it too loose, and allow the hemorrhage to continue. With a tourniquet this is not the case; it can be adjusted to the greatest nicety by the screw; nor is there any fear of its giving way. In large wounds, where one or more arteries have been injured, and cannot be secured by the needle, it becomes necessary to apply a pressure. Here the tourniquet is found much more convenient than those methods hinted at above.
The advocates for preferring a noose, will say, the screw or the garters may break in the time of being applied, and a fatal hemorrhage follow before the tourniquet can be mended. But we have shown that a hemorrhage is much more likely to take place in the other. If the buckle and garters of a tourniquet be well made, which it is the surgeon's business to inspect, their giving way during application will very seldom happen.

Bed-pans are never used in regimental practice, as far as I know, till I formed a contrivance of this sort. Observing the great inconveniences the patients were often put to in getting out of bed, when nature's calls required; that in states of great debility in fevers, the toiling and irritation they suffered from being lifted was hurtful, I contrived a cheap bed-pan of tin. In form it resembles very nearly the common pewter ones. It is smaller, and the tin folded down towards the inside, by which it is so rounded
as to prevent inconvenience from the edges, while the patient has it applied under him. A few of these should be kept; three or four are enough. They should be procured at the expense of the regiment, not at the surgeon's, and may be reckoned among the hospital utensils. They will only cost about 1s. 6d. each, and will be found of very great service in acute diseases.

Under the head of instruments, I must place bleeding cups, with tape bandages to bind up the arm before V. Section. Though cups might likewise be procured for a trifle, yet I believe they are seldom found in regimental practice. I mean cups containing specified measures, such as are used by surgeons out of the army. Human blood is not to be sported with. We should never at one venesection take more than is judged sufficient to answer the end; nor are we to take less. But how can this just medium be struck, when the blood is either received in a large vessel, the measure of which we are
are unacquainted with, or, which is the same as to effect, unable to ascertain when the proper quantity has flowed into it; or it may be, the blood flows on the ground. This last I believe seldom happens; or when it does, it is in emergencies only.

A greater mischief will happen from taking too much, than too little blood. We can easily repeat our operation, if we find, by the appearance of the blood, and other symptoms of the patient, too little has been drawn off. But we may never be able to repair the mischief done by too large a V. S.

When large V. S. are instituted even with propriety, they never fail to induce debility. The system is always left in a state of weakness proportioned to the quantity lost. In pleurisies, where it becomes indispensably necessary to draw off large quantities to preserve life, or obviate chronic diseases that may induce certain, though slow death, we find the patient long convalescent, and health
health tardily established. In other fevers, where the energy of the brain is more affected, and where the nervous system chiefly suffers, if incautiously had recourse to, it renders those functions weaker, and more languid, whose powers were already too much sunk. Common observation has established the truth of this remark.

When the ingenious writer of a pretty little novel*, lately published, makes Lindorf, one of the characters of the piece, give a narrative to his friend, the Count de Walstein, of what had happened to him from their last separation, he says, “Quelques heures après mon arrivée,” (à Hamboure) “je fus saisì d’une fièvre ardente, qui dura plusieurs jours; un médecin que l’hôte fit appeler, me fit faire un abondamment, qu’une foibleßé excessive succéda à la fièvre, et retarda mon départ.”—It was necessary to detain this young nobleman here.

here some time; he is therefore thrown into an inflammatory fever. The landlord of the inn where he lay calls an ignorant practitioner to his aid; who bled him so largely, and weakened him thereby so much, that it was long before he recovered its debilitating effects to be able to pursue his journey; as probable a means surely for the purpose, as any the writer could have devised.

Perkins, a young man about 22, of the light company, was admitted on the sick list in the beginning of the spring 1781. His complaints were chiefly pains across his loins, with some, though little pyrexia; the pains were what he complained most of; they were looked on as rheumatic; the weather had been cold, and the drill duty, for some time, severe, especially to recruits, and he was but a few months in the regiment. He was blooded immediately; a pound at least was drawn off, and some febrifuge medicines administered; he was put to bed; but
but by next morning a total paralyis from the middle downwards had taken place.

Coagulable lymph appeared indeed separated on the surface of the blood; but it was plain V. S. had been prosecuted too far. The deed was done: it could not now be remedied. Eight ounces might have proved serviceable, but double this—for he must have lost double—was beyond what his habit could bear with impunity. The blood flowed into a large tin vessel, used for culinary purposes; the exact measure unknown, and the quantity therefore taken away by guess. Every means was used now to restore strength to the habit, and recover the lost tone of the extremities: all in vain: he grew daily worse. The intestinal tube, with the urinary organs, partook soon of the affection; both faeces and urine passed involuntarily; he became emaciated; and, to add to this, by constantly lying in one posture, except when turned by the orderlies, both the bones of the ilia and hip
hip burst at length through the skin. In some time, notwithstanding every care, these and some other sores produced, in the neighbouring parts by the same means, mortified. He lingered two or three months from the first in this miserable condition, when death at last put an end to his sufferings.—It appeared to me, the whole train of these evils were to be attributed to the too great loss of blood; and that a more sparing use of the lancet, with the exhibition of such medicines as were afterwards administered, would have soon restored him to his health and his duty.

To obviate the inconveniency that may arise from such guessed work, it is very easy to procure cups of tin, or pewter. These may be as conveniently carried about with the regiment as the skillet, or kettle; even much easier, as they are of a less size. We should, I think, have the following, i.e. one of eight ounces; one of four; and one of two. These three will answer every purpose.
pose. Suppose we intended to draw off a pound of blood, our eight and four ounce cups make just the quantity; if six ounces, our four and two amount to it; if ten, our eight and two; if twenty, (for such large bleedings may sometimes be necessary in great degrees of active inflammation, and in phlethoric subjects) our eight, four and two, are fourteen. The two last may be emptied and again filled, which amount to the quantity required. If we wish to let blood to fourteen, or sixteen, we can compute it in like manner, and thus exactly fulfil the intention.

A few yards of tape are equally as necessary to bind up the arm before V. Section; for the soldiers seldom have garters soft enough for this purpose. They are either lifting of cloth, or other coarse strings, very inconvenient for this end, as not sufficiently compressing the artery. Their garters may answer well enough to bind the orifice after bleeding; for we should not give our bandage
bandage for this use, as it would be twenty to one if ever they were returned; and to buy on every occasion when V. S. was to be performed, would at length become expensive. As to directions in the operation itself, this is not my business to point out. I refer him to books professedly on the subject.

Among the instruments, I must mention a contrivance, which will be of great utility to the surgeon; and though, strictly speaking, it does not belong to the head of instruments, yet this seems the properest place to insert it. This is a bathing tub. The use of baths, both hot and cold, will as often be found necessary in regimental, as in other practice. A tub may be made at very little expense, which will answer every purpose of this kind; but it should be at the regiment's, not the surgeon's expense. It may be made from a couple of old arm chests, and of the same shape, about four feet deep, and of such a length, that...
the tallest man of the regiment can stretch himself in it. Nor should it be any wider than just to allow a man to turn easily. To make it water tight, it must be caulked. Made in this manner, a small quantity of water will suffice. When the hot bath is wanted, the water can be heated with little inconvenience. On marches, it will serve to pack some of the baggage in, and thus answer a double purpose. When soldiers are convenient to the sea, they should bathe in it; but this is not always the case; then it may be necessary for cold bathing.

I shall pass over cupping glasses, and scarificator, as they naturally make part of a surgeon's instruments. I am sure they should be always included. Very great advantage is derived from them in cases of local pains, where topical congestion and inflammation have taken place, perhaps more than from any other means whatever.
Leeches cannot be conveniently carried on marches: but every town will supply them when wanted. I consider them likewise as a part of a surgeon's instruments. It is enough here only to hint their utility; every medical practitioner is convinced of it. I have purposely omitted an enumeration of every instrument which a regimental surgeon should possess, because I have comprehended the whole under the words proper sets, which every instrument-maker knows, and which are generally fold together. The particulars I have pointed out are seldom attended to, though not less necessary: indeed they are almost daily called for; and at least nine times out of ten, where we employ the amputating knife, will we have occasion to use these.

Among his instruments, I shall place likewise bandages. The chief complaints where these are used, are for fore legs: and I would prefer such forms of them as are recommended by Rowley, Underwood, and others,
others, who have written on the subject of ulcers of the lower extremities. A regimental surgeon should be provided with a proper number. When the frequency of this disease is considered, a dozen is the least he should have in his chest. As authors have given proper directions for making them, I must refer my readers to the writings of those gentlemen. I have hitherto neither specified Catheters, male nor female, though both should be in his possession. He will find frequent use for the male catheter among the soldiers; and since the women of the regiment will often call him in their sicknesses, he will as often stand in need of his female catheter. The small expence that the female catheter will stand him, will be amply compensated by the good name he will obtain among this part of the army. Officers are always well pleased to see their surgeon attentive to the poor sick women; as they know he is not obliged to attend them, it impresses their minds with the greater opinion of his humanity.
He should always be provided with a good accurate thermometer. This will be useful on many occasions. He can by this not only ascertain the patient's heat in fevers, but the temperature of the air, room, &c. the temperature of the water applied in the hot bath, which is absolutely necessary, and many things of this sort.

I have taken no notice of syringes; but I am of opinion they are not less useful than some other things enumerated under the head of instruments. Injections are much in use for the cure of gonorrhoea, and very properly, when not depended on entirely as a cure in virulent cases of it; or where there is a true venereal infection. In relaxations, &c. they answer happily. He should have at least a dozen always ready to lend out to the men, but under a penalty, if lost. Pewter ones are cheapest, and answer very well. He will find occasion for them in other cases, besides this, viz. in syringing the ears, in squirting medicines into, or washing out sinuses, &c.
Fixable air has for some years past been much recommended in physic in febrile affections; and it proves to be no inconsiderable medicine not only here, but in many other affections. Some convenient apparatus, better adapted for the army, than those in common use, should be invented; where they would not only be cheaper, but could be transported with more facility, and less danger of breaking. It matters not whether they be of glass, provided they are of such materials as the vitriolic acid cannot corrode, or at least corrode without imparting a quality or impregnation to the water, injurious to health. As we use iron to give the water a chalybeate quality, which adds considerably to its virtue, perhaps our apparatus might be made of this metal.—That invented by Dr. Priestly, in the rude days of the discovery, may, however, answer; and it can be easily procured anywhere, or almost in any situation. In the army, elegance must give way to convenience in many things. This may be found described,
described, and a draught of it preserved, in Elliot's treatise on Mineral Waters, where both Dr. Priestly's pamphlet on the subject, and the apparatus, are transcribed, and to it I refer. But in the administration of fixable air in putrid fevers, and such like, perhaps the method mentioned in the Commentary on the subject by Dr. Dobson, may still be preferable. It seems at least to take place of the common neutral draughts, made by mixing the acid and alkali previous to exhibition, where so much of this valuable gas, on which so much of this good effects of the medicine depends, evaporates by the act of effervescence.

The manner directed in this commentary is extremely simple. A certain quantity of alkali is first dissolved in some water, then drunk, and as much acid, either of lemons or distilled vinegar, as we know a priore, capable of saturating the alkali, is immediately to be swallowed. The extrication of the fixable air must take place in the stomach,
from the stomach, and unite with the contents of it, and otherwise be absorbed in greater quantity, and more effectually, in the same space of time.

Since the electrical fluid bears so large a share in the operations of animal and vegetable life, as our late discoveries with regard to it evidently show, it is but reasonable to suppose that health is greatly influenced by it; and indeed experiments incontestably prove the fact. Its permeability, which is perhaps beyond all other fluids in nature, would seem to render it almost the only effectual remedy in several diseases. In ophthalmies its utility is attested by many well authenticated cures.* In chronic rheumatism, we are told, it has proved a cure after all the articles of the Materia Medica ever prescribed for this complaint have failed. It has also been found no less useful in hemiplegia. In the form of lightning,

* Vid, Cavallo, on Med. Elec.
ning, it has discouraged tumors on the breast.* This happening accidentally, perhaps gave rise to its application to indolent tumors of a fibrous nature, which we often find it successfully remove. We know also its beneficial effects in paralysis, as well as other diseases where the nervous system seems chiefly to be the seat of the complaint. It has also removed deafness, a case of which we find related in the Med. Comment. vol. 1. p. 370.

Since all these often occur among soldiers, regimental surgeons should undoubtedly have contrivances for its application. The many portable machines for electrical purposes, now in common use amongst all classes, and made by common mechanics, render its application in the army not only practicable, but easy and convenient, while the cheapness is no small inducement to their purchase. I have seen very neat ones, * Vid. Bohadch de util. Electric. in Art. Med.
the glass cylinder, from a foot to fifteen inches in circumference, sold for little more than a guinea, with conductors, knobs to draw the sparks, chain, Leyden phial, &c. These are made so portable, that they may be packed up in a box about a foot and half long, and so commodiously at the same time, that little is to be feared from the jolting of the waggons in marches, with respect to their breaking. To these should always be added an Electrometer, as it is absolutely necessary to know the strength of the electricity, lest a neglect in this point should be followed with disagreeable accidents, and bring its farther application unmeritedly into disrepute.

**Fomentations, shocks, and sparks,** are the three ways commonly now had recourse to in its application to the human body. The operator should be properly acquainted with the nature of conducting these, in order to render the electricity as effectual as possible; and for this reason it will
will be expedient that he apply himself a little to the study of electricity. What is necessary for his purpose, i.e. its general stimulant effects, he may in a short time comprehend, and practice will render him sufficiently expert in its application. It is not absolutely necessary that he should be a deep Electrician, though the more he knows of this branch of natural philosophy, the more he will know of nature; and will the better understand how to vary the application to accomplish his intention.

That it is a powerful stimulus is proved from the perspiration it induces on the part to which it is applied; and that it constantly, as well as intimately pervades the body, is likewise demonstrated from applying it to a person during V. Section. If the blood only falls in drops from the vein, let the person be electrified, and it will now run in a full stream. If a capillary syphon be filled with water, which from the smallness of the tube can only fall from it in drops,
drops, let it be electrified, and the water will issue from it in a number of separate fine streams.

It renders bodies lighter, whether solid or fluid. To prove this, we have a number of experiments by Bohadch. I shall not take up the reader's time by a detail of them, but only present him with some of the author's conclusions, which are, "that electricity encreases the natural evaporation of fluids, unless such liquids are possessed of a great degree of vicidity, as is the case with olive oil:

"That this encrease in the evaporation of liquids, produced by electricity, is in proportion to their degree of volatility.

"That this encrease of evaporation, so produced on liquids, is in proportion to the extent of their surfaces, exposed to the atmosphere; and that electricity has an evident effect in diminishing the weight even
even of solid bodies, when such a quantity of moisture is contained in them as is necessary for the purpose of evaporation."

He produces an experiment to prove, that electricity being applied for some time to vessels replete with fluids, an increased discharge of their contents is thereby always produced. This is similar to what we have already ventured to assert; but as an illustration, I shall relate his experiment.—

"Let a common egg," says he, "be perforated at one end, so as to discharge all its contents, both the white and yolk; and a syphon being introduced so as not to touch the bottom of the egg, let it be completely filled with water, and then weighed: the egg is then to be emptied by making the water pass through the syphon, and by weighing again it may be known exactly what quantity of water is discharged in a given time. The egg is now to be filled again, and on being electrified
"electrified for some hours, the water contained in it will be found to flow with much greater rapidity than when no electricity was applied."

The same author has taken some pains to show its effects in promoting vegetation; but this being foreign to the present purpose, shall be passed over. Afterwards, he goes on to prove, by various experiments, the power of electricity in promoting the natural perspiration of animals. These were made on whelps, pigeons, and other animals, all which demonstrate the great activity of this fluid, and its power over the body.*

Some contend that electricity possesses a sedative, as well as a stimulant power. This they affirm is proved from its effects in easing pains. Shocks and sparks, say they, act by a stimulant power, while the aura, or

or electrical fomentation, gradually received into the body, acts sedatively. Whether this be fact or not, we shall not stop here to enquire. From the power, however, it possesses, of intimately pervading the finest tubes, it has been successfully applied to dismiss obstructions of the glands. We hinted at this before. Hence it has been found, that venereal bubos have been more speedily removed by it, than by any thing hitherto known. In the summer of 1782, an ingenious* physician told me of a very obstinate case of this kind completely dismissed by electricity in about three days.—

Some have little faith in it; but because it does not cure all cases to which it is applied, is that a reason for altogether rejecting it?

If there was no other disease in which it was successful, but in bubos, this one alone, so frequent and so troublesome in the army, should

* Dr. Macqueen.
should induce us to try it. Every practitioner in the army knows too well the many inconveniences that daily arise from bubos both to himself and the patient. For my part, they have proved in my practice, far more troublesome than any other venereal ulcer I meet with.

Whatever some may advance to the contrary, I am persuaded, no advantage is obtained by encouraging suppuration by the application of poultices. As it is never safe to trust to the discharge of a bubo, for the compleat expulsion of the venereal virus, but highly necessary to administer its well-known antidote, mercury, we need not be anxious whether absorption from the enflamed glands should take place. The mercury meets the poison, and will destroy it. On the contrary, let us suppose the bubo opened, and a collection of matter discharged; are we sure no absorption takes place to infect the system? Can we boldly venture to affirm, that the virus is all
all expelled at the opening? What hinders absorption now? Nay, I am apt to think this the readiest time for it to be performed. We know that in the inoculation for the small-pox, absorption of the virus does not take place till after suppuration, and a multiplication of the matter inserted. This is proved by the infected piece having been cut out after the inflammation had begun, and by this means the small-pox prevented.—Now, as a multiplication of the matter happens in the bubo, and as we must allow that every particle of it is tainted, the lymphatics must take some of it up, and convey it to the blood. Besides, there is reason to suppose the absorption will go on in proportion to the surface laid open. Hence this operation of the animal economy must be even greater after the bubo is opened.

If this be true, it follows, that we should never trust the cure to a ripened bubo, but always give mercury. If the bubo be so far advanced, before we see the patient, that
a fluctuation of matter is perceptible, and discussion impracticable, it appears to me a safer way to allow it to burst, than to open it either with the knife, or with caustic. Although I never saw an accident from this which ended in death, yet such have been said to happen. A large and principal artery lies in the course of the gland, where the matter generally forms. If we should inadvertently run the knife too deep, and wound it, death must be the consequence, as I see no way by which the hemorrhage could be stopped; and in different subjects this vessel is differently situated. In one it lies deep, and out of the way; in another not only more superficial, but may otherwise vary in its course. But supposing the wounding of this vessel easily avoided; to heal up the part is often found impracticable. I have seen bubos for many months continue to discharge. I have seen sinuses form, and the sore often put on very alarming appearances. In the autumn of 1781, I had a female patient, who died from a mortified bubo.
bubo. She was a girl of easy virtue, and had been neglected till the mortification had actually taken place. When I saw her first, she was in a high fever, and not knowing either her way of life, or that she laboured under a venereal disease, I prescribed for her fever only. The disagreeable odor in the room, I attributed to faces left in the pot, and ordered the room to be cleaned out, and these removed. She lived alone, but had a father in the neighbourhood, who now came to see her. As she was considered by several, equally ignorant of her way of life as myself, in the light of a poor unfortunate girl, that had got a fever, some well-disposed persons, hearing of her distress, sent her nourishment; and a small collection of money was made for her. On my next visit, her father took me aside, on complaining that the smell still continued, and informed me of a sore she had on her thigh; on examining I found one of the most disagreeable sores in her groin I had ever seen.
She confessed the nature of it; that she had been ill of it several months, and that nothing applied could heal it. I dressed it, though a most disagreeable task; but the fever ran high, and the mortification had proceeded too far, having penetrated quite through the abdominal muscles, and her strength sinking, she died in a short time after.

I was informed by a physician of veracity, in December 1783, of a friend of his in Edinburgh, who has suffered in a most severe manner from the same cause. It is upwards of two years, he says, since the bubo was opened, but no medical treatment has succeeded in healing it, though the most eminent of the faculty have given their advice. The motion of the thigh is now greatly impeded, and it will be well, my informer adds, if the limb, in some time, will admit of any motion.

A surgeon of a militia corps informed me, in 1782, of a soldier that died from the same
same cause. The gentleman already mentioned told me, while he attended lectures in Edinburgh, he saw a case of the same kind, of a very obstinate nature, under the care of Dr. Hope, that had very nearly proved fatal to the patient. And I may add one in my own practice. In autumn 1782, Wright, a grenadier, affected in a similar manner, was put under my care. The part mortified, and with great difficulty the progress was stopped by the use of hemlock in poultice, applied over the sore, and stupes of the warm decoction of the plant. He had been ill, it seems, near two months before I saw him, and he was after this near four months in the hospital before he could leave it to do his duty.—

The case is as follows:

In the month of August 1782, Matthew Wright, a grenadier, was sent under my care for the cure of a venereal bubo. His general

* Dr. Macqueen.
ral health was, when he came in, pretty good, and there were no other marks of the venereal disease about him. On further enquiry into his case, I found he had been ill at St. Alban's, where he contracted this bubo, and where about two months before it had been opened by the surgeon then attending the regiment.

He had been somehow neglected after the opening was made; the surgeon perhaps supposing that nature would perform the rest of the cure, without any farther interposition of art.

In the mean time, the regiment to which he belonged was ordered to encamp on the Suffolk coast. This was a long march for a person in his situation; they halted, however, at Newmarket for ten days; yet nothing was done till he was sent to the hospital in camp.
On examining into the state of the sore, I found that part of the opening made had closed up; but a sinus was formed upwards of two inches and a half long, stretching upwards towards the abdomen, running between the skin and the muscles. I tried for some weeks to dry up the discharge, which was pretty copious, and heal up the part; but my endeavours were in vain, and his general health, probably from confinement, as well as from the discharge, was diminishing apace, and he grew considerably emaciated.

I resolved at length to lay the sinus open, which being done, I found both a callosity and blackness in the course of it. This I endeavoured to remove, by Tinct. of Myrrh, and the Green Digestive; and at last red precipitate was sprinkled over it. All would not do. He was carefully dressed twice a day by myself, for I would trust him to no other; and over the dressings were applied poultices of bread and milk, to bring
bring down the inflammation that surrounded the fore. All this was still to no purpose. The discharge encreased, was fetid and ill coloured, and I feared a gangrene and mortification, not only from the ichor and general appearance of the fore, but from the inflammation that spread to a great distant round it over the integuments. He had till this taken a mercurial pill of two grains, night and morning, since he came into the hospital, but it was now left off. He suffered much; neither could he enjoy any refreshing sleep, or mitigation of his pain, though he had got opium from one grain to four at a dose. I put him upon a course of bark and wine, and encreased each till he drank a bottle of the one, and took an ounce and half of the other daily. The fore not only now spread, but sunk deeper into the muscular substance.

The integuments separated entirely from them up to the os ilium, and forwards on the abdomen, towards the umbilicus, so that
by lifting up the edge of the skin, a great part of the abdomen on this side could be seen under it. The cellular substance connecting them together, melted down, while the gangrenous purpureo-scarlet colour still advanced externally.

I applied now every means in my power to obviate mortification. The medicines already mentioned were administered with punctuality, and fupes, composed of decoction of camomile flowers and wormwood, were applied as warm as he could bear them, an hour at a time, three times a day.

Hot flannels wrung out of them were clapped over the sore, and as soon as one grew cold, another was applied, which, from the penetrating nature of the vapour, I judged would infuse their antiseptic qualities better than if the decoction itself had been used. When this was finished, warm digestives were laid on, and over all a large poultice
poultece of bread and stale beer, renewed likewise three times a day. To this was added a generous diet, for his appetite did not fail so far as to prevent him from eating pretty strong food.

Want of sleep, and apprehension perhaps of his own danger, had rendered his pulse quick and weak, though he had nothing that he called sickness, save the uneasiness from his constant pain.

I still continued to flatter him with hopes of a cure, to prevent depression of spirits as much as possible, which is always an enemy to recovery from any illness whatever.

While things were in this desperate condition, I called at Yarmouth on the ingenious physician, then of that town, already mentioned. I related the case to him, while he in return related to me one of a similar kind from the same cause, (and a soldier
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foldier also) which he had seen in the Royal Infirmary of Edinburgh, and which was cured by hemlock poultice.

I procured a quantity of the stalks, made a strong decoction of them, with which I stupefied his fore, as warm as he could bear, for about half an hour; then took a syringe, and threw it underneath the separated skin, where the stupe could not reach, applying the warm hemlock poultice, boiled up with some crumbs of bread over all, making it so large as to cover the whole enflamed part.

This was about 11 A.M. and about 3 P.M. these were removed, and the same treatment repeated. About eight the same evening this practice was again had recourse to, and he got only a pint of wine this day. Next morning, when the dressings were removed, I found almost all the inflammation gone from the integuments, the fore emitting a less disagreeable smell, though I could
could not say, the discharge of sanies was lessened, nor the colour of the fore more favourable. The same treatment was continued this day, with the addition of a scruple of pulvis Cicutæ, made into a bolus, with honey. I lessened the quantity of bark to six drams; and from this to three in a short time after.

He slept some this night, which he had not done from the intense pain for many nights previous to this; and the succeeding night still more, till his rest gradually became as refreshing as in his former health. The wine was gradually left off also. In short, by pursuing this treatment, in three days the inflammation was not only entirely gone, but the wound sweetened, and altogether cleansed from the blackness that had all this time adhered to it, for the sloughs fell off, leaving the recti, and oblique muscles, red and well looking, though the mortification had penetrated quite through them. From this time he continued every
day to mend. Had not this plan been happily hit on, I am confident he must have funk in the space of 48 hours, at most, from the time this application was first made.

Since this I have experienced the good effects of hemlock water and poultice in two cases of ulcerated legs, both of which were in a very bad condition, being extremely foul.

I doubted for some time whether I was to attribute the cure to the hemlock poultice and powder, given internally, or to the water with which the ulcer was syringed. A fourth case of venereal ulcer, however, soon came under my care, which happened very fortunately to put this to the test.

The ulcers were extraordinarily foul on each side above the os mali, or about the temples. Neither powder or poultice was applied, but they were carefully syranged twice
twice a day with the decoction of hemlock, and in a short time they began to mend: from whence I conclude, that the hemlock water applied to foul ulcers, not only cleanses and disposes them to heal, but mitigates the pain, proving beneficially sedative.

The syphilitic patient, I now mentioned, suffered for a long time much pain from these ulcers, which were under the care of a regimental surgeon, and only dressed with common digestives, till he was sent into the hospital.

Thus far of the dangerous effects of opening bubos. Was it necessary to give more authorities, of their bad effects, I might quote Plenck. These, however, may suffice.

But if the opening of bubos still be insisted on, a question arises which has been much agitated, whether caustic or the knife be preferable. Mr. Pott, whose authority is great in all cases of surgery, prefers caustic.
He affirms from his own experience, that callosities round the edge of the sore always follow the use of the knife, which never happen from caustic. Mr. Sheldon and others I have heard confirm the same. Yet notwithstanding these authorities, I would venture to say, if the bubo be properly suppurated, and the integuments rendered sufficiently thin, it will be of little consequence whether a knife, the caustic, or a puncture made by a lancet, gives vent to the suppura
ted matter.

From the unfortunate cases I have seen, I shall on all occasions endeavour in my future practice in this disease, to discuss bubos; and for this purpose in obstinate cases I confess I entertain considerable expectations from electricity. A regimental surgeon can never make the labour, requisite in applying electricity, any objection, since he has always men enough at his command capable of giving their assistance. One or more orderly men are constantly in the hos-
pital,
pital, and with very little trouble they may be taught to apply it sufficiently well, at least with his inspecting the whole.

This, which I would place among a regimental surgeon's instruments, is, as far as I know, little used in army practice; but from the success that has followed its application in many diseases, besides what has been mentioned, it is to be regretted its use is not more universal. Perhaps there may be still diseases for which it has never yet been tried, that might yield to its influence. Time, however, and opportunities of making such experiments, will determine this point. It becomes our duty in the meantime to apply it where we have the testimony of experience, and the assistance of rational argument to determine in its favour. I know some eminent physicians who are not very sanguine in their hopes from electricity; and who contend they speak from being repeatedly disappointed by.
by it in their expectations. But others, and these not a few, speak as confidently on the other side; and I am inclined, from what we know of the nature of this subtile fluid, to join them in its favour.

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CHAP.
Of the perusal of Books, and of some which should form part of his Library.

Books, without doubt, the regimental surgeon ought to peruse. Without an almost daily application to them, his practice must be mere quackery, and his views confined. We have here the advice of the immortal Bacon to instigate us, whose opinion, as well as example, we need not blush to follow. "Books," says he, "will speak, when counsellors blanch; therefore it is good to be conversant with them."*

One principal use of reading will be, to know what the medical world are doing; or what they have done; and to repeat their practice, or condemn it, as he sees fit, and

* Bacon, of Counsel.
and as his own judgement directs him. By reading, he will become acquainted with the opinions of the most eminent of the profession; and he may be stimulated to excel, as many of the authors, whose works he peruses, have done. By reading, united with opportunities of practice, he will be able to make useful observations. A correspondence also with respectable and learned men of the profession, will enable him still farther to practice successfully. He will know all the discoveries made in philosophy, and chiefly distinguish what more immediately belongs to his own profession. He will observe the fallacies of theoretical opinion detected by fortunate facts; for medicine, like other branches of science, is progressive; and thence he will be early enabled to form his practice, and rectify it accordingly: while he that reads little, and converses less with men of the profession, must go on in a common, though erroneous tract. Thus information will enable him to reject hasty and ill-grounded conclu-
conclusions, or confirm his doubtful conjectures, which he now fees were founded on rational induction.

I do not mean here a too exultory plan, without any regular method. Some object should always be held in view, to which his researches should ultimately tend. The learned Zimmerman says, "it is not too extensive a reading that renders a man learned. Reading in general impairs ordinary minds. They soon become like a sieve, and retain nothing that is thrown into them. It seems right to adopt a middle way between the two extremes."*

In another place he tells us, what we must acknowledge, that "erudition may be distinguished from true learning. Erudition, considered by itself, is a mixture of good and bad things, often contradictory to each other, and badly digested; which

* Experience in Phyıs.
"which burthen the memory at the ex-
"pence of common sense, and render the
"simply lettered man rich in provisions,
"that are useless, and poor in ideas; great
"in minute things, and very little in great
"ones.

"The most learned physician is there-
"fore a very useless man, if he has not read
"rather with a view to improve his genius,
"than to burthen his memory; and to
"collect together interesting truths, rather
"than to accumulate words."

"True science," said Plato and Ari-
"totle, "consists not so much in knowing
"and adopting what others have known,
"as in judging within ourselves on what
"we read or see. It consists in seizing the
"true spirit of a thing; in seeing it in its
"true light; in distinguishing what men
"have added to it; in strengthening our
"judgement, and ornamenting our me-
mory; in extending our knowledge;
"and, in short, in being the dupes neither " of men, time, place, nor authority. This " is true science." Erudition and true learning may be contrasted, as a modern poet has done knowledge and wisdom.—

Knowledge and wisdom far from being one
Have oftimes no connection. Knowledge dwells
In heads replete with thoughts of other men,
Wisdom in minds attentive to their own.
Knowledge a rude unprofitable mass,
The mere materials with which wisdom builds,
Till smooth'd, and squared, and fitted to its place,
Does but incumber whom it seems to enrich.
Knowledge is proud that he has learn'd so much,
Wisdom is humble that he knows no more.*

I must not take on me to point out all the different authors the regimental surgeon ought to read. His own judgement must in a great measure guide him here. But if he possesses a real desire for improvement, he will not be sparing in this point. It has been often said, that to read little, and re-

flečt much, is the surest way to improvement. The rule, I believe, in a general sense, is good. For to read over a certain number of pages, without digesting them, without making ourselves master of the author's arguments, and entering into his views, is as bad, with respect to the improvement we receive, as reading none; for the memory retains nothing of such superficial perusal, since neither the attention nor the judgement were engaged. This may be called reading to kill time; and we might as well peruse a novel, as a medical author, hurried over in this way. If to kill time be the sole purpose of our reading, it matters not what the subject be. Some are constant readers, and greedily catch at every thing they meet, yet never learn any thing. There is a middle point, if we can find it, between these extremes; and this it is our business to search after; but proper attention to what we read is undoubtedly necessary.

"Attenu-"
"Attention," says the author lately quoted, "may be considered as contributing much to the genius of observation. It is a lens, which being applied to the different parts of an object, enables us to remark other parts, which we should not distinguish without its assistance. The more we exercise our attention, the more shall we discover of every object. A botanist sees in a plant more than other men do. He observes in it what ought to be seen; whereas they (i.e. the inattentive) know nothing even of what they do see. Our attention becomes more perfect by the advantages we derive from a habit of observing." And this is as applicable in reading, as in observing the phenomena in nature.

But another caution will be equally necessary, not to take every thing for fact of which books inform us; nor ever to suffer ourselves to be led away by great names. The greatest men have committed oversights—
fights—errors. Let us call to our aid both
our judgement, our experience; and as of-
ten as in our power, the judgement and ex-
perience of those friends, from whom we
may expect assistance. If we follow not
this plan, books may prove to us as the poet
has described them, when he tells us they

Are not seldom talisman’s, and spells,
By which the magic art of shrewder wits
Holds an unthinking multitude enthralld.
Some to the fascination of a name
Surrender judgement, hood-wink’d. Some the stile
Infatuates, and thro’ labyrinths and wilds
Of error leads them by a tune entranc’d.
While sloth seduces more, too weak to bear
The insupportable fatigue of thought,
And swallow, therefore, without pause or choice,
The total grist unsifted, husks and all.*

The choice of authors is a material cir-
cumstance. Time is precious; is short;
and should not be wasted wantonly. Durst
I pretend to offer advice in an affair of such
importance, it would be to caution those

*S s young

* Cooper ut supra.
young in the profession against engaging with too great a variety of books at once. A few systematic authors should be first well understood, as they give a general view of the science. After this, they may with less danger of being led astray, descend to those who have treated on particular diseases.—This may perhaps be said to apply to a college plan of education, more than to a regimental surgeon's. We still hope he has received the elements of his medical education in some established seminary of this kind.

Opportunities of this nature will furnish him with a foundation to proceed on. It will likewise enable him to select what is useful from what is trifling; and assist him in separating what may more properly belong to him in his situation of an army surgeon, from what is foreign to his way of life. He will then be in much less danger of swallowing

——“Without pause, or choice,
   "The total grist unfished, hulks, and all.”——
"In order to make observations himself, it will be necessary for him to have fixed principles to build upon. He will be capable of distinguishing diseases only in proportion as he is previously acquainted with their history. Hence the utility and necessity of reading."

"A physician, who ventures to approach the bedside of a patient," (and we may apply the observation to an army surgeon, who fills the place of a physician) "without this previous historical knowledge, can be considered only as an useless and idle spectator.

"Happy is the patient whose physician, with such limited knowledge, is sufficiently timid, and diffident to remain altogether inactive.

"May it not be asked, whether Sydenham himself did not lose many patients, from not having derived from the writings of
of others, by an extensive reading, many parts of knowledge, which he could acquire only by infinite care and industry."

"A physician who has not read will be exposed constantly to fear and uncertainty. His observations will be confined within a very narrow circle."

"It is well known how much time is necessary for the perfection of any art; whereas reading furnishes us in a very short time with the discoveries of all ages. A single moment is sufficient to inform us of a great many truths, which were purchased by the care and trouble of years."

"A thousand physicians, said Rhazes, have laboured for a thousand years past for the improvement of physic, and it is by carefully reading their works, that a man will inform himself of more things during a very short life, than he would by running from patient to patient, during a thousand years."
Reading makes us familiar with the methods of every time, and every country."

"A man of genius soon perceives the modification he is to adopt, when he is about to put the precepts of others in practice."

A regimental practitioner cannot carry a large library about with him, from place to place, from country to country, where his unsettled life leads him. The few books therefore he should peruse, ought to be principal ones, i.e. partly systematic, and partly such as treat on separate diseases. Every one should possess an outline, a general notion of all the diseases incident to the human body. Here Cullen's outlines, now perhaps the best as well as most fashionable, may be recommended. — After this, such authors should be had, as have treated of the diseases most incident to troops.
THE scurvy is chiefly observed at sea, and in long voyages; but it is by no means always confined to mariners. We meet with many instances of it among soldiers. In garrisons, army surgeons will meet it. It raged violently in Minorca, during the late war, and was one of the means of enabling our enemies to subdue the island. And in the war previous to this it raged with considerable violence likewise among the prisoners at Winchester in England.

Lynd has written successfully on this disease. His opportunities of seeing it were great, his judgement clear, and his observations are always important.* His treatise likewise on Hot Climates is an useful work. Pringle, who spent many years of his life in camps, and among soldiers, has likewise left practitioners in the same line a most valuable

* We acknowledge others have treated of it since him, but perhaps not with more success.
valuable book. Here the surgeon will find information on almost every disease that will occur to him in the army. Monro also had good opportunities, and did not let them pass unnoticed. His book on the diseases of the army is an useful performance. The same author wrote on Dropfy, another disease that regimental surgeons will occasionally meet.

Dysentery has been long noted for raging in camps. Many things indeed concur in the army to give rise to it; particularly if troops be placed for any length of time in a moist, damp situation. The celebrated Zimmerman has treated this disease with much perspicuity and judgement. These, and some others, proffessedly on such diseases as he has reason to expect among the privates, must form part of his library.

Cullen's Nosology, notwithstanding what some may have thrown out against works of this nature, in my opinion, he will
will find much assistance from. Here is not only an arrangement, but, what is of more material consequence, the principal symptoms of all diseases. I must not omit Le Roy on Prognostics in acute diseases. It seems to be an useful performance.

The venereal disease is so universal in the army, that it would be unpardonable not to have some of the best treatises on it. But the authors that have written here are so numerous, that it becomes no easy task to make a choice. Almost all of them differ; and almost all of them profess to differ from their experience of the futility of the methods of their predecessors. Such as have written within the last twenty years on it, have, however, treated it most rationally. Among these are Simmons, Andree, Sweidiar, and some others; but I shall leave the choice to his own judgement.

The ingenious and indefatigable Mr. Hunter has lately given us a large and systematic
tematic work on it, from which, notwithstanding the criticisms it has underwent, he may perhaps find more assistance than from most authors on the subject.

Some legs will often be met with in the army. He must therefore possess some books that treat professedly on ulcers of these. Bell, Rowley, and Underwood, are the latest, and I believe the best on the subject. From the frequent colds to which soldiers are exposed, it is no wonder we find catarrhal affections so numerous among them. Mudge has written the best on the subject. Not only from the nature of a soldier's life, but from ill treated catarrhs, we as often meet with phthisis pulmonalis. To soldiers in Britain, the changeable nature of the climate makes this complaint still more frequent. We must not omit some treatises then on this malady. Among many others, Reid and Foart-Simmons have written on the subject, and both with success. Both Small-pox and Measles are to be met with in
in regimental practice, and treatises on these he likewise should possess.

He must not omit a treatise on Anatomy, particularly as dissections have been recommended, to brighten up his memory, or to refer to occasionally. Some anatomical plates will likewise be necessary. Cheselden's Anatomy, as he is not to enter into the minutiae, may perhaps answer. It has some useful plates; and to these may be added, Innes's Tables, or Albinus's, reduced by Bell, an engraver in Edinburgh. Winslow's Anatomy is the most correct, and if he has room he may provide himself with it.

The discovery of the absorbent system, one of the greatest since that of the circulation of the blood, and not less important, or less general, in the animal economy, has opened a field which the medical practitioner ought not to omit cultivating. By understanding the situation of these vessels, in the human body, as far as they are yet demon-
demonstrated, he will be the better enabled on many occasions, to obviate disease, or remove it when present. The best work on this subject is that lately published by Mr. Crookshanks.

He should next provide a few books on Chymistry: Beaume’s Manual, or some such. If he can find conveniency to carry the Chymical Dictionary of Maquier, so much the better, as also his Elements. A great variety of celebrated works might be recommended on this useful, as well as beautiful study; but he must content himself with a few, from the nature of his situation, which forbids a large collection. Nor must he omit some on the Materia Medica. Alston’s and Cullen’s are good performances. Among the Dispensaries, he may purchase Lewes’s, the Edinburgh last edition, Berkenhaut’s, and the London, a new edition of which is daily expected.

To refresh his memory, he should have some author on general physiology. Per-
haps Hallers, I mean the small edition by Cullen, will suffice; and to this, if possible, let him add Morgagni on the Causes and Seats of Diseases; it is a most useful collection. In Dr. Cullen's first lines, he will find an excellent account of fevers; but for more particulars, he must have recourse to authors, who have made this their sole subject.

Clarke's Treatise on Fevers, among many others that might be mentioned, is, I think, a good performance. Could he find room to carry Van Swieten's Commentaries on Boerhave's Aphorisms with him, he may occasionally reap much advantage from perusing it on almost every disease to which the human body is subject. Here again I must leave his own judgement to decide.

Warner has written on the Eye. Ware on Ophthalmia; both which are good performances.
It will be said, why such a number of books, that comprehend more a course of study adapted for a physician than a surgeon? This is the very reason I recommend them: we all know regimental practice partakes more of the physician’s than the surgeon’s province. It is on this very idea I have all along proceeded. We oftener meet with fevers, and other contagious and epidemic diseases among soldiers, than such only as need external treatment, and the hand of the operative surgeon.

Besides these, which I call more necessary, he may purchase others as he sees occasion. This will form a little, but useful library, which it should be the care of the Colonel to order to be carried with the baggage, as punctually as he would the colours of the regiment.

With regard to books on operative surgery, perhaps Heister’s and Bell’s are the best systematical works as well as enough. Sharp’s
Sharp's Operations as far as they go, are allowed to be accurate: Wiseman's Surgery is a good book: the most useful of Pott's works should not be omitted: the whole would make a good addition to his military library, if he finds he can remove them easily with him on marches. Alanson has lately written a treatise on Amputation; but to take notice of all the authors that may deserve his attention would lead us too far.

Since ruptures are a disease which will not admit of those afflicted with it to be continued in the army, as the constant exercise their duty calls on them to perform, must inevitably obviate their cure, and render them always liable to insurmountable difficulties, I need not recommend books on the subject. Both Bell in his system, and Pott have however, treated fully on them which may be consulted as convenience serves. It is undoubtedly proper that a regimental surgeon should be acquainted with the treatment of every disease which surgery comprehends;
comprehends; but it may not be practicable for him to convey from place to place all the books he might otherwise think necessary on these subjects. He must therefore content himself with a few, but these few, as we have said, should be well chosen; and the choice in a great measure must be left to himself.

There are many treatises on particular subjects in surgery, some of which he may add to his collection, if it be convenient, and his portable library be not already too much swelled. Among these I may mention O'Halleron on Gangrene; Dease on Wounds of the Head; and Ranby on Gun-shot Wounds; tho' it will be seldom in all probability, that cases of this last mentioned kind will occur, notwithstanding he practises in the army; because battles very rarely happen. Yet this will be no reason for his entire neglect of the subject; for should only one gun-shot wound occur in twenty years, he ought not to be ignorant of the method of treatment. Since
Since the soldiers will frequently call him to visit their wives, which charity, we hope, will induce him to do: and since much of his attendance among them will be with child-bed women, he must not omit some practical treatises on midwifery. Sme³lie's Treatise in the octavo edition, may be conveniently carried, to which should be added his plates reduced, to answer this edition, and sold by Elliot of Edinburgh.

He may likewise provide himself with Hamilton's Treatise on the same subject. Mr. White of Manchester, has written an useful treatise on the diseases incident to lying-in women, which he should not omit. And lately the same author has obliged the world with a small tract on the swelling of the legs, so often the consequence of child-bearing. Tho' the women of a regiment are not often subject to complaints after child-birth, yet not only this complaint happens among them, but one of a much more dreadful nature; I mean the puerperal fever.
fever. Cases of difficult labour take place sometimes even here, which reduce their strength, and render them more obnoxious to those diseases that are the consequences of weaknesses.

On the puerperal fever, Leak, Hulme, Fothergill, and others have written; he may choose which he thinks best: the last mentioned author is the latest, and he asserts, that a cure is at last found out for this fatal disease, from which hitherto scarcely ever a woman recovered. It seems M. Doulcet, from much practice in the Hotel Dieu in Paris, found that it yielded to gentle vomits often repeated. With respect to the seat of this disease, authors are greatly divided: some assert that the intestines and Omentum are the seat of the affection, which they say arises from an inflammation induced on these parts from the pressure of the womb in the last months of gestation. But I have heard a celebrated anatomist in London declare that he has dissected many who died of it, yet
yet never found an instance of inflammation in the Omentum, while he as constantly observed it to a great degree in every part of the pelvis.

All possible care should be taken to avoid the attack of so formidable an enemy to the fair sex. More can be done as a prophylactic than as a cure when once the disease is fully formed. For tho' the above medicine seems to be held out to the public on good authority and much experience, yet it were still better if the patient was prevented from the danger of an attack. All the expense these few authors on the obstetric art will stand the surgeon, will be repaid by the pleasing reflection that he has contributed in every situation in which he has been placed, as far as in his power, to the general good of his fellow creatures. For with Seneca we should say, "Non ut diu vivas curandum est, sed ut fatis.—Quid illum octoginta anni juvant per inertiam exacti? Non vixit iste, sed in vita moratus est."

Soldiers
Soldiers wives should be looked on as the useful poor of the regiment, and ought to be considered in this society as other poor are in other societies. They should be assisted, and their usefulness promoted; for they are equally allied to the army, as other poor are to their respective societies, and therefore ought equally to be taken care of. They bring up many useful soldiers for his Majesty's service, which is still a farther reason not to allow them to be neglected. If the surgeon gives them his assistance in their sickness, it is as much as can be expected on his part. Any other charitable donations they may from time to time stand in need of, should come from a voluntary contribution among the corps. I can by no means consider them as the least useful part of the army; and surely our care of them ought to be in proportion: but this subject I have treated of elsewhere.*

* Vid. Thoughts submitted to Officers, relative to a regimental fund for the sick wives of the soldiery.
I am persuaded that some attention of this kind would be the means of more marriages, and less uncleanness in the ranks. It appears somewhat strange that soldiers' wives and widows (I do not mean officers) have never been thought worthy the notice of government. Might not some scheme useful to his Majesty's service as well as clementinary be formed in favour of the women of the different regiments? Premiums might be granted to the mothers of legitimate children, whose sons were born in the army and entered into the service, over and above the common bounty. I offer this only as a hint to be improved on by such as may have it more in their power. I believe it would encourage population; which in the army, in proportion to numbers, comes far short of what it is in other situations, and among other classes of men. For promiscuous commerce with prostitutes, so frequent among soldiers, prevents it.

Denman
Denman has written on difficult Labours, and uterine Hæmorrhages; on the last we have also a good treatise by Rigby. They are both books of small price, and contain useful information.

Since electricity has been recommended, some books on this subject must also be added to the surgeon's collection. Among so many treatises on it, we are at a loss what to select. The plainest and most easily comprehended is however the fittest for regimential use. Tho' if the surgeon has been liberally educated, this subject will be familiar to him. Among the many books of this kind extant, perhaps that by Cavallo is as plain and simple as any. I believe Adams is however the latest on the subject. This then, with the same author's Medical Electricity, and Priestly's history of the subject, may suffice. Perhaps the last may be dispensed with; but if he wishes to see the progress of the subject from its first discovery, this will afford him ample information and satisfaction.

To
To his medical library he will still find advantage in adding periodical publications. Dr. Duncan's Commentaries, and the London Medical Journal stand at the head of these in Britain. If it was only for the account of new books, they would afford him satisfaction: but they go farther, and admit many useful papers, and hints not to be met with elsewhere. In a word, they are an useful medical and philosophical newspaper, communicating the earliest information of the labours of the learned in all parts of the world.

With respect to books on mineral waters, these may be the less useful, as soldiers can never have the advantage of this medicine, except in the form of fixable air, as already mentioned. But tho' mineral waters be never prescribed by regimental surgeons to the privates, they sometimes are to the officers: and since his advice may be asked concerning their use, it is altogether proper he should make himself acquainted with the
the nature of the most noted mineral springs. Officers are often afflicted with chronic diseases from the changes of climate and other vicissitudes their way of life has subjected them to. His knowledge in chemistry will apply usefully here, and enable him to solve such questions relative to their nature, and probable utility in these respective cases of the officers; and he will besides be able to advise which of the watering places to prefer; but the quantity to be taken, and other minutiae must be left to some doctor on the spot. Williams has written on the waters of the German Spa; Home on the Dunze; Falconer on the waters of Bath; and several other authors on the other most noted waters; but as a vade mecum, wherein will be found a summary account of most of the best mineral waters of this fort in Europe, Elliot's treatise on them may deserve a place in his military library.

From an acquaintance with botany, the regimental surgeon will find more amusement
ment than use; but in this light it deserves to be cultivated:—Suppose this was the sole advantage to be derived from it, the amusement is rational, and one of those that will impress his mind with a still higher idea of the wisdom of the Creator. This will appear to him from the great link the vegetable kingdom forms in the chain of created things; the variety and wonderful structure of each individual plant; the various uses it serves, whether in the different arts, or in food and medicine; or whether as a purifier of the atmosphere that surrounds us, which is so necessary for the maintenance of life. This is every moment rendered more impure by animated nature; and without being strained and differently modified in the minute vessels of vegetables, it must in a short time destroy "whatever breathes the breath of life." It is surely more rational for a man of science thus to amuse himself in his hours of vacation, in his walks of pleasure, than either angling, fowling, or hunting; tho' exercises that are not only pardonable, but per-
haps praiseworthy in the officer, since they brace his nerves, and keep him from idleness and criminal dissipation: but the surgeon's duty ranges in a very different sphere, and in him therefore such amusements are less allowable. "Whatever busies the mind" says the Rambler, "without corrupting it, has at least this use, that it rescues the day from idleness; and he that is never idle will not often be vicious."

While I remained in the service this study was one of my chief amusements, and one also from which I found much pleasure, and some advantage. By this means I never regretted the want of acquaintances, tho' often among strangers. Had I been incapable of finding entertainment from this source, I must either have often remained alone, or constantly sought the society of officers; the bad effects of a regimental practitioner's spending too much of his time among them, lest it should alienate his mind from
from his proper employment, I have already pointed out.

A few books, with a very simple apparatus, are sufficient here. Linnaeus's Systema Vegetabilium, and if convenient his Spec. Plantar. with some easy author on the elements of the science, such as Rose, or Lee's Introduction, will almost be sufficient. He may add a Translation of Linn. System. &c. by the Botanical Society at Litchfield, if he chooses; as also Lightfoot's Performance, and Hudson's Flor. Anglica, both describing the plants of Great Britain. The sole apparatus that is necessary is a small knife, a single lens, and a glover's needle for the purpose of dissection, and examining the structure of the fructification.

During the time he remains in Great Britain or Ireland, as he is the more immediately concerned in the plants of those islands, he will find the two books that have particularly treated of them most useful. I omit
omit mentioning others on botany for the same reason I omitted many in the other sciences.

The opportunities a regimental surgeon possesses of visiting, and remaining for some length of time in a variety of places and climates, renders it still a fund of greater entertainment and pleasure to him. We find few places situated at any great distance from one another, that will not afford some plant not common to both. The pleasure of making any such discoveries, will compensate for the trouble (if it may be called such) in searching for them; and since botany is now become so fashionable a study, that the regimental surgeon can scarcely enter a town of any note, where he may not find some adept in it; in this way alone he will make respectable acquaintances, from which may result mutual improvement and entertainment to both parties.

It is altogether impossible he can make a Hortus ficcus, he cannot convey a large bulk of
of dried plants from place to place; but he can make memorandums of the places where he has seen the more rare plants, or dry particular specimens for his botanic friends in other parts of the kingdom, &c. which they will thankfully acknowledge.

It is unfortunate for the soldiery, that the regimental surgeons apply in general so little to books. I am sensible this reflection is unjust if applied indiscriminately. Several eminent and industrious men are now in this situation,* and more have been during the late war whose services are now superceded by the peace.

In pointing out the foregoing authors, I do not mean to set up my judgement as a standard for others; every one will in a great measure

* Among this number I must beg leave to mention Mr. McCauland, of the 74th regiment; the gentleman I have no personal acquaintance with, but his ingenious paper in the 8th vol. of the Med. Comm. speaks his merit.
measure be guided by his own taste. I have omitted many, and those perhaps superior, and more pertinent to the situation of army surgeons than those referred to; yet I am persuaded he will find his account in possessing several of those pointed out. But of whatever books his library consists, they ought to be on useful subjects: and since he is limited in their number, the greater regard should be had to their quality.
C H A P. X.

The Utility of cultivating the Acquaintance of Medical Men in the different Quarters; and the Study of the Nature of the Soil, and Qualities of the Water in each, recommended.

The more we converse on subjects of our profession, the better, as we may reasonably conclude, will we be instructed therein. It is so in every mechanical branch; and it must also be the same in a scientific profession. A mechanic keeps company with men of the same craft, they talk on subjects relative to their business; of different mechanical movements, &c. and new thoughts may occasionally occur, and improvements be reciprocally suggested. The merchant attends 'Change, and converses with
with his brother merchant on the prices of the different commodities they wish either to purchase or to vend, and thus information circulates: for according to Ovid,

Congenial passions, souls together bind,
And every calling mingles with its kind;
Soldier unites with soldier, swain with swain;
The mariner with him that roves the main*.

F. Lewis.

As far however as my knowledge reaches this is far from the case in regimental practice. 'Tis true that in the society to which the regimental surgeons more immediately belong, there are not persons of their own profession among whom they might associate. It is not always they meet other regimental surgeons. This confines their conversation almost constantly to the officers of the

* Scilicet ingeniiis aliquas est concordia junctis,
Et servat studii fædera quiaque sui
Rusticus Agricolam, miles fera bella gerentem,
Rectorem dubiae navita puppis amat.

Ovid.
the corps to which they belong. But they should consider that this is not a place where they can introduce medical subjects. If at a time an officer turns the discourse to physic, the surgeon must give the simplest, and most obvious answer to his questions; nor will the subject for the most part be ever introduced except on their own complaints. Officers would neither listen to, nor indeed understand a more scientific detail; and to intrude such conversation on the company at other times might be deemed, and I really believe would deserve to be considered, not only as impolite, but pedantic. They are not interested in such subjects, and therefore have no desire to listen to medical discussions. What is it to a man whose profession is the sword, to be told, that such a complaint had such an appearance; and that such a medicine in a specified quantity produce certain effects; and that particular improvements may result from it; and the like? If instead of this conversation he relates to the officer the different manoeuvres
a body of men went thro' on any particular occasion; how they behaved; in what form drawn up; whether they looked well, and were well clothed; whether they were well disciplined; and other things of this nature with which they are more immediately acquainted, and connected, they will listen to him with pleasure, and thank him for his entertainment. This is natural; they are now acting in the way of their duty, enquiring after useful and entertaining anecdotes relative to it. Should not this be an example to the surgeon to pursue a similar mode, and seek the conversation of those of his own profession? "With what satisfaction," says a learned author, "could the politician lay his schemes for the reformation of laws, or his comparisons of different forms of government before the chymist, who has never accustomed his thoughts to any other object than salt and sulphur?"—

"The highest and noblest enjoyment of familiar life, the communication of knowledge, and reciprocation of sentiments must always
always pre-suppose a disposition to the same enquiry, and delight in the same discoveries."

If the surgeon is ambitious of no other company than of officers, he must undoubtedly lose any taste he possessed for medical subjects and conversation. When once this inclination, this propensity for the company of men in the same line with himself is blunted, it will seldom be renewed: nay, in time the degeneracy may be so great, that he will feel as awkwardly in the company of medical people, when chance brings him into it, as at first he did among the military; and for the same reason; their conversation will be different from that which he has now been long accustomed to. In this case we may apply the words of an eminent author on the subject of proper associates for medical men. "It will be right," says he, "To avoid the being too often with men of weak heads," (it is not meant to apply this to officers) "the too frequent conversation of these
these people sometimes brings us down to a level with them, when we are the least aware of it. By thinking with them we insensibly accustom ourselves to think as they do.—A bad taste once become familiar, soon becomes the only one we have.”

Retirement then on many occasions is a thousand times preferable to company where he is so liable to alienate his mind from subjects wherein he is so intimately concerned. Retirement in preference he ought undoubtedly to chuse. Retirement is no bondage to a man of a contemplative turn of mind: on the contrary, it is agreeable. Most men at particular times seek retirement, and are happiest when alone. A man really enjoys society the better for being sometimes absent from it. He is surely to be pitied who must depend always on others for his happiness, or entertainment. Happiness is enjoyed to the greatest perfection, where the chief source of it centres in a man's own breast. I have already pointed out a way in which he may occupy part of his leisure hours; yet
there is no need of continually flying from the company of the corps: it is enough if it be only moderately fought; if he divides his time properly between their company, and the company of himself. It was on this plea I ventured it as my opinion in a former part of these remarks, that the surgeon ought not to dine constantly at the MeFs.

How many young men have made early shipwreck of their understandings on this very point? An early introduction into company, where the passions find no control and the bias to dissipation, instead of being restrained is encouraged, has soon blunted the edge of acuteness, and left either a rake, a fot, or a glutton, where nature had planted genius and education; and fostered wisdom and penetration. For as an eminent author justly says, "Long intervals of pleasure dissipate attention, and weaken constancy: nor is it easy for him that has sunk from diligence into sloth to rouse
rouse out of his lethargy, to recollect his notions, rekindle his curiosity, and engage with his former ardour in the toils of study.”

This leads me to the recommendation of the company of medical gentlemen to regimental surgeons in the different towns where they are quartered. Here they may be both entertained and improved; at least their conversation will lean towards topics, which in a great measure relate to their proper line of life. Cases of patients will be related, questions in medicine started, from the discussion of which, both parties may be gainers, and some little addition made to the stock of their knowledge. This strengthens the mind, and confirms, (if I may be allowed the expression) the habit of well doing. “It is, says an ingenious author, "By right and regular exercise, that our intellectual, as well as corporeal endowments, in general, acquire any sort of readi-

* Letters concerning Education to a Gentleman entering the University. p. 146.
ness and activity.—Or, as Lord Verulam expresses it, [speaking of logic] "Non fo-
lum dirigunt, eam (Scil. mentem) sed et ro-
borant; sic ut Sagittandi usus et habitus non
tantum facit, ut melius quis collimet, sed
ut arcum tendat fortiorum*.

Experience has taught me the utility
of what I here recommend. During the
time I served in the army, my first care on
coming into new quarters always was, to
enquire into the characters of the medical
gentlemen of the place, and in what estima-
tion their professional abilities were held. I
soon after found means of introduction to
such as I understood to be most eminent in
their business, and most esteemed in the
town. This indeed proved one of my greatest
sources of happiness during my service. In
this way I formed several connections that I
shall ever reflect on with pleasure, and whose
acquaintance will ever do me honour. Here
I had a farther advantage; a comparison of

* De Augment. Scient. v. i.
the situation, diseases, and healthiness of a variety of places with one another.

And since I have touched on this subject, allow me to add, that a regimental surgeon should make this his first and peculiar care on change of quarters. This is a matter of no little moment to him, as he will not now be taken by surprise, when the diseases incident to the place, or then epidemic in it, appear among the soldiers. He has received, we shall suppose, such information from the practitioners settled there, as may in some measure enable him to obviate part of the evil impending; while he adopts those remedies, when it does appear, which their experience have taught them to be most successful in similar circumstances, or he improves them by his own sagacity. This is material information, and perhaps may save the lives of some of his patients.

Here he must also remember that places at no great distance from one another may differ greatly in respect to healthiness. One may
may not only be subject to more frequent disease than the other, but also to some particular one, which may properly be called the endemic of the place. I have known this fact in places at no greater distance than two miles and a half; nay half a mile, and it may be even less; however incredible it may appear to persons unacquainted with such situations.

The distance between the villages of Wheathamstead*, and Harpenden is only two miles and a half. The latter is on a much drier foundation, as well as a more elevated situation than the former; and as experience shows, much less subject to intermittents, the fever of the soil. Wheathamstead is built on a very low ground, in a sort of dell; and thro' it runs a small river whose banks, for many miles, are so flat that the water overflows them, and in wet weather forms a marsh spreading considerably

* Bedfordshire, and the borders of Hertfordshire.
fiderably on both sides. It is thick sur-
rounded with wood to a great distance round,
as is the whole country. Not only inter-
mittents are more frequent here than at Har-
penden, tho' so contiguous, but likewise
putrid diseases; and when they appear they
rage with severity. There is indeed scarcely
a town of any extent to which the same re-
mark will not apply; and in the space of
less than half a mile we will often find one
part of a town, or even street more subject
to sickness and certain diseases than another.
Soldiers are very much confined to a particu-
lar spot: if they be found more than a
mile from their billets, without a pass, they
are liable to be taken up for deserters. Their
confinement may render them more subject
to the endemic, as well as epidemic of
the place.

During the spring 1782, I had an oppor-
tunity of seeing this remark concerning
the different degrees of healthfulness of
contiguous places verified. A putrid fever
and sore throat took place in Wheathamstead, and exerted its violence chiefly among puerile and infantile subjects; tho' some few adults were likewise sufferers. When it proved fatal, it was generally in a few days. The uncommon wetness of the season joined to the natural moisture that is retained in the soil here, where copious miasmata are always exhaling, laid the foundation of the disease.

No complaint of this kind appeared at Harpenden tho' the distance be only what we have mentioned; and from this known difference in the two places, there was little reason to apprehend it. A surgeon at Luton, which is about seven miles from it, who attended a patient ill of it there of about six years of age, whom I visited with him, and who soon after died, agreed with me in opinion, that the rest of the children of the family* should be instantly removed to

* Son of the Rev. Mr. Wheldon, Rector of the parish, &c.
to this village, not doubting from the nature of the soil, but they would escape there. The event verified our opinion.

In like manner St. Albans and Luton are but ten miles asunder; yet the latter is far more subject to intermittents than the former, because it is also much shaded with wood, lies very low, and has the river above-mentioned running thro' it, causing much stagnating water near its banks. The same may be said of Redburn and St. Albans, which are only four miles and a half distant from each other.

Great Yarmouth in Norfolk, and the village of Gorleston in Suffolk, are only two miles distant, and in a straight line across the river scarcely one; yet there is considerable difference in the healthiness of the two places. Yarmouth lies lower by many feet, and on a flat, once a sand bank, still preserving its level form; and tho' the foundation is sandy, and the swarth loose and
and light, the water lies at no great distance from the surface. This was proved from a well dug on the same level, on the opposite side of the river, below the beach on which Gorlestone stands; and is farther proved from the several pieces of water that constantly stagnate round Yarmouth.

Besides, Gorlestone is almost entirely free from those fogs in which Yarmouth is so frequently enveloped. I have seen a fog so thick cover the town from the sea in a few minutes, as well as from the meshes* on the west of it, that an object at twenty yards distance could scarcely be distinguished; while a very great alteration at the same time took place in the heat of the atmosphere. In an hour or two these would again disappear, and the sun shine forth. This vicissitude of weather would perhaps be repeated once, twice, or oftener in the course of a day. The elevated situation of Gorlestone

* On the west at some distance, are much swampy ground, called meshes by the inhabitants; which I suppose is a corruption of Marshes.
lestone preserves it from such sudden changes of atmosphere. Gorleston is situate west of both sea and river; Yarmouth between them. The piece of ground on which Yarmouth stands being by this means almost a peninsula. The river running parallel with the sea for between two and three miles before it falls into it, forming a tongue of land not more than from a quarter to half a mile in its broadest part.

Two miles farther south than Gorleston, on the common of Hopton, the soil is even more dry and light, with much Heath; the situation is also still more elevated above the sea, and the water at a considerable distance from the surface. This was proved by wells dug for the use of the camps formed there in 1781 and 1782. They were obliged to penetrate deep before they found water. The summer of 1782 was remarkably wet; yet no diseases proceeding from moisture or miasmata took place among the troops. There was not a fever of any kind
kind during the encampment; nay even some affected with chronic complaints now recovered from them in a great measure. This was the case with an officer long labouring under an affection of the lungs.

The same observation may be made respecting Lowestoft, which is six miles south from Hopton common, and along the same coast. It is likewise elevated considerably above the level of the sea, and is not immediately surrounded with wood. There is a large lake south west of the town, about two miles; but I have not found its exhalations produce any sensible effects on the health of the inhabitants. I spent eleven months along this coast from Lowestoft to Yarmouth; and had time in this period to form some observations. The difference of these elevated situations, and the low situation of Yarmouth appeared still farther by the greater number of sick while the soldiers lay in it, than what was experienced on Hopton common the preceding summer.
These examples might suffice to show, that places at small distances may differ greatly in respect to healthiness; but we shall add one more as a farther illustration. The city of Lincoln is partly built on a high hill, and partly in a low vale. This produces very great difference with respect to the soil and health of the inhabitants. Close on the town is a large lake; and a little west, at the distance of a field resembling meadow, marshy and scarcely to be travelled unless in dry weather, is another still larger, called Swan Pool. But in winter and in wet weather, the whole country round, almost as far as the eye can reach, is almost an universal lake. From the high to the low town it is little more than a quarter of a mile; for the mountain on which part of the town stands rises abruptly. Yet the difference is so great, that it is customary for the medical gentlemen there to send their patients from the low to the high part for their recovery. The endemics of the place, i.e. intermittents, and remittents, are both more
more frequent, and more obstinate in the low than in the high town. This has been long observed by the faculty there. And on this observation being made to the commanding officer when I lay in it, he very prudently improved by the hint, and ordered a frequent change of quarters among the privates, from the high to the low town, and vice versa, to prevent any disease that by a longer continuance in the marshy part of the town the soldiers might be liable to contract.

I have dwelt perhaps too long on this subject, and needlessly multiplied my illustrations; but it was with the design of more strongly enforcing the necessity of regimental surgeons application to the study of the soil in their different quarters; a species of knowledge more peculiarly proper for them, as the soldiers from their frequent change of quarters are more particularly subject to suffer from the effect of unhealthy situations. This knowledge, it is superfluous to tell them
them, they will obtain speedily from acquaintance with the medical gentlemen of
the place; tho' their own observation must unite, for the better conviction of the truth
they receive; as a man can always rely more on the fidelity of his own observations
than on others.

Before I quit the subject, I shall just hint at another example, and yet perhaps
one that is not so forcible as some of those we have given. In Ipswich, the capital of
Suffolk, there is likewise a variety in the situation, tho' less than some of those places
already mentioned, which produces some variety in the healthiness of its different
parts. Corn-hill, St. Matthew's Street, and a few others in the vicinity of the mar-
ket-place, being considerably more elevated than the east and south-east parts of the
town, have a freer circulation of air, and are less subject to intermittents and other
fevers; which, tho' this is by no means a sickly town, but rather the reverse, fre-
quent
quenty attack the poor in the lower parts, namely in St. Clement's Street, the Common Quay Street, the Upper and Lower Washes, as they are called, those parts of St. Helen's contiguous, and the close narrow streets or lanes in several other parts of the town, of which there are a considerable number.

The water is remarkably pure in the higher parts, which may among other things, contribute somewhat to the less frequent appearance of disease there. From some late trials, and a comparison made between it, and that which serves the lower parts, it is found remarkably purer.

St. Clement's Street runs also parallel to, and close by the river Orwell, the ooze of which appears above the surface, and indeed the whole bed of the river, which is of considerable breadth, is left nearly dry for almost two miles in its extent, on every ebbing of the tide, except in its channel, consisting
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Lifting only of a small winding stream in the middle, the shipping being left fast in the mud till the return of the tide.

From this copious miasmata must be exhaled, which cannot fail to debilitate, and predispose the inhabitants near it to fevers of different types, more frequently than in the higher parts of the town, where these noxious effluvia arising from the ooze do not reach. Let any person walk along the banks of the river for some way during the absence of the water, and the disagreeable putrid smell from the mud will sufficiently convince him, that the air around must be greatly tainted; yet the distance of the low part of the town from the higher, does not exceed half a mile.

The next thing a regimental surgeon should have in view is the nature of the water in his new quarters: a great deal may depend in preserving health, on the quality of this necessary article of life. Changes in the
the water may produce diseases independent of other auxiliaries; and if he be not watchful in this respect, he may be considerably puzzled to find the cause, and to apply a cure.

When a regiment in which I served some years, marched from Newcastle on Tyne to the barracks at Tynemouth, in June 1781, only nine miles distant, a diarrhoea appeared among the soldiers a few days after, which proved both troublesome and obstinate for some weeks. I attributed the cause, after some reflection, to the water of the place; and on advising them to be as sparing as possible of its use in drinking, the complaint soon disappeared. The water there is hard, and will not curdle soap, owing to the different mineral substances with which the neighbourhood abounds. The whole country for many miles round may be said to consist of pit-coal, and other minerals, such as pyrites, wherein the vitriolic acid prevails much. While the regiment
ment remained in Newcastle, no complaint of this sort appeared, tho' the water there is equally, if not more loaded with mineral particles. The reason seemed to be the use of small beer, which the men received from the publicans on whom they were billeted. On going into barracks this allowance ceased, and they now were obliged to drink water where they drank beer before. This affected their bowels, partly from want of use in drinking it, and partly from the nature of the water itself.

On the succeeding February I was still farther confirmed in the truth of this observation; for on the 26th regiment going into the barracks and relieving ours, the very same malady befell them. Mr. Millar, their surgeon, consulted me on the occasion, having been left behind in sick quarters, and I gave it as my opinion, that the fault was in the water, and gave him at the same time, a relation of what had happened to my patients the preceding summer. Of course, he
he very judiciously ordered his hospital to be supplied with milk; and cautioned the men to be sparing in their use of water; but in so small a village, it was impossible to procure milk for the whole regiment, tho' they were not above one third so strong as ours.

There remains still another reason why the regimental surgeon should cultivate the acquaintance of medical people where he is quartered. From the great trouble and inconvenience there is in transporting a large library from place to place, he cannot be supplied with many books that would otherwise be necessary for him. His library must therefore be very circumscribed, as already pointed out. For tho' he should possess all the books we have mentioned as proper for his perusal, yet they will form but a very contracted library, particularly for a man who wishes to pass several of his hours daily in reading.

The acquaintance and friendship of the settled practitioners will supply this defect.
He will have the use of their libraries if his behaviour be such as command civility, or deserves their friendship: and they will be the readier to oblige him, as he does not come among them a rival in the profession. He will find this of no small advantage. The defect of his own scanty collection will in this manner be well supplied. There are few surgeons or physicians who are any time established in a place that have not a considerable variety of books. Besides, if there are any extensive booksellers in the place where he lies, he should agree with them for leave to read, provided they have a good assortment of those medical, philosophical, and other works which he wishes to peruse.

And moreover, as difficult cases in practice will occasionally occur, he can now have the advice and assistance of some of the medical gentlemen whose friendship he has procured. It is seldom a regimental surgeon is placed near other regimental surgeons to take their advice, supposing them well qualified
qualified to give it. He is always almost among settled practitioners: nor is this one of the least reasons why he should form connections among the medical brethren of the place he resides in.

To conclude, the more a medical man converses with medical men, or men of science, the more will be his opportunities of receiving information, and his emulation will be thereby kept alive. A regimental surgeon may have many such opportunities, from the variety of places he goes to, which must always afford him a greater variety of such associates, provided he takes a proper method to be introduced, and is inquisitive on such subjects.

END OF THE FIRST VOLUME.
THE DUTIES OF A REGIMENTAL SURGEON CONSIDERED:

WITH OBSERVATIONS ON HIS GENERAL QUALIFICATIONS;

AND HINTS RELATIVE TO A MORE RESPECTABLE PRACTICE, AND Better Regulation of that Department.

Wherein are interspersed many Medical Anecdotes, and Subjects discussed, equally interesting to every Practitioner.

By R. HAMILTON, M. D.

Of the Royal College of Physicians, London; Member of the Medical and Physical Societies of Edinburgh; and of the Medical Society of London.

IN TWO VOLUMES.

ATTAMEN ERRORES NON SUNT ARTIS, SED ARTIFICUM.—Newton.

VOL. II.

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IN a short prospectus of this work published before it went to the press, to explain the Author's design, and his motive for publication to those inclined to countenance it, he there mentioned his intention of comprising it in One Volume Octavo, consisting of Seventeen Chapters, the contents of which were then laid before them. In the execution, however, of this plan, it was found necessary, as already set forth *, to divide it into Two, not only for the greater convenience of the reader, but the more perfect consideration of the different subjects of which he was to treat; yet neither the number of Chapters nor their arrangement has been altered; this Volume, therefore, commences with Chapter Eleventh. The short sketch of the Influenza of 1782, which is added, it is hoped, will not be displeasing to the young Military Medical Practitioner.

*= Vid. Advertisement to Vol. I.
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Chapter XI.

Surgeons dissuaded from using Billets, and of the Propriety of keeping a Medical Register.

Though we took notice in a former Chapter of the danger of having the mind alienated from Medical Subjects by associating with the Officers, nothing was said relative to Billets, notwithstanding they conduce in like manner to this end. In quarters these are allowed to the officers in common with the privates. To dwell always in public houses is to dwell almost constantly in the midst of noise, bustle, and revelling. In such places a man can never be alone, he is liable to interruption on every occasion. It is true, this may happen, not only
only oftener in one place than another; but the company he is exposed to, in this manner, will be in some places more disagreeable than in others, and more unfit for a person of genteel education to mingle with, if he could well avoid it.

In some towns it is customary for every guest of whatever rank, to meet in the same room. In a place where this custom prevails he will soon find himself surrounded with a crowd, drinking, smoking, (for this is the custom in many such inns in England) and conversing promiscuously together; no person concerns himself with the employment of another, or refrains the more from indulging his own inclinations, the custom of the place giving them this sanction. Here the reader is not to suppose I am speaking of a London Coffee-House, where every guest may if he chooses have a separate box, and may either write or read at his ease, one person giving little disturbance to another. It is a very different place I am describing; it
it may be a small room in a mean inn, where all sit round the same table, nay the Cobler, and the Mayor of the Town together: * and where there may not be a place in the house proper to retire to on such occasions.

In this dilemma, to study, is impossible. It is, we shall suppose, the coldest season of the year, and the weather even inclement for the season. There is not a second fire in the inn save in the kitchen, for it is a part of the kingdom, where fire becomes a material article in house-keeping. The Surgeon may indeed retire to his bed-chamber, but he will not be allowed a separate fire, without paying sixpence for what will be consumed in two or three hours; or what is more common, there is no fire place in the bed-chamber. What then must he do? The alternatives are few; he must lay aside his studies; and, perhaps, for self-defence, he is compelled to call for liquor, and join in the

* I speak from experience.
the noise to avoid singularity. To betake himself to head quarters, and the mess-room will be as inconvenient with respect to study; there he will not be surrounded with less noise, though his company will now be more select; if he chooses neither of these, he has no where to fly, but to the kitchen. Sad alternative for a mind accustomed to different companions! Suppose he retires to his bed-chamber, and that there is a fire place in it; his small pay cannot afford a fire at so enormous a rate. Suppose again he wishes to walk out, rather than remain among companions such as we have mentioned: the weather is even too inclement to allow of this amusemeut, and too cold to permit him to remain long in his chamber without a fire; nor will they suffer him to stay in the kitchen, were he even willing for a time to intermix with servants, but remind him, though politely indeed, that there is a fire in the parlour. In this a double purpose is served. First, they get rid of his incumbrance about the fire; secondly, by dismissing
miffing him to the parlour, there is the greater chance of his spending sixpence in liquor. Besides, as he is furnished by the house with a bed, which the law obliges them to give him, they always look on him as a nuisance; did he expend all his subsistence in the house, it would not satisfy them; such is the general dislike inn-keepers shew to the military; indeed, it must be confessed they have some cause; for it is a severe tax on them: the subaltern officer suffers by it also, because he is often poorly accommodated; and his pay will not afford him to hire lodgings: however, some may think this account exaggerated, I mention not only what I have experienced, but have also omitted circumstances, that would make the account even less credible to persons that have not felt the various inconveniences attending the life of a soldier. An officer of rank is both allowed better accommodations, and is likewise better enabled from his pay to make his situation comfortable; but one below the rank of a Captain, with only his pay
pay to subsist him, must suffer many and great inconveniences.

The Inns, it is acknowledged, are not however all of this description. Sometimes we find them extremely commodious. In some he will be allowed a room, fire and candle, but never with a good grace, or true good will; for the magistrate is frequently obliged to interfere in the officers behalf, who is compelled often to spend money in the house for no reason whatever, but to court the countenance of his host. Nay, supposing the best; he is liable to many inconveniencies and interruptions. If a friend calls he treats him perhaps, or is treated; or if he endeavours to apologize, that he cannot drink; that liquor does not suit his present state of health; still his friend may persist, alleging it may be of service; perhaps, he will hint the refusal proceeds from parsimony, an accusation which his pride revolts at; and hence his compliance merely to weaken the force of the insinuation. In this manner
manner his money is expended, his time wasted, and his mind vitiated. Again, suppose the weather mild and favourable, so that the surgeon can retire to his chamber; his bedchamber is not entirely his own; if possible he will be put into a double bedded room; here either one of the officers shares it with him, or what is much worse, it is every casual passenger that pays for it. In both these situations his inconveniencies are great; his comrade will spend perhaps several hours a day in the room, during which it may be almost impracticable to pursue his studies; for as his comrade's mind is engaged in different pursuits, he will think himself little interested in favouring the Doctor's designs.

Private lodgings then is by far preferable, but it is not in every town, where he can afford to engage them. The places they are most wanted in, are where a subaltern can least afford them on his pay. Suppose, such a place near London, as described above,
where fire is so expensive, every necessary is dear in proportion. A very incommo-
dious room may cost him above six shillings a week, he has fire and candle to provide besides, if he eats at a public house, a dinner of the most common food, and even then but scanty, stands him a shilling; which is denominated by them a parliament dinner; for there is a law, by which the landlord is obliged to give an officer his dinner for a shilling; but in these places one shilling and sixpence is the common price; for the parl-
liament dinner is held in a contemptuous light, and the consequence often is, disagree-
able insinuations from the landlord, and in-
civil sneers from the attendants. Small beer at the least is two pence. All this is to come from a guinea a week subsistence, besides breakfast, clothes, shoes, and many other things which must occasionally be pur-
chased; can a subaltern, i. e. the Surgeon afford to hire a room? In the present state of his pay, he cannot.
It were to be wished therefore, that the regulations were such, that the Surgeon should be provided with private lodgings, in order to give him the better opportunity of pursuing his business, which is of so much importance to the corps. If he keeps a journal of every patient's case as he ought to do, it will oblige him to spend a considerable part of the day in writing, and it has already been shown how inconvenient, nay almost impossible this becomes in billets. Some may say, he ought to spend his time in his hospital; let this be his place of study; and then much of his complaints against bad billets, and inconvenient lodgings will cease; but it should be first enquired, whether he has an hospital; and what are its accommodations? It is probable he has none; for it is generally found also that in those places where they are most needed, houses for the accommodation of sick Soldiers cannot be procured. But allowing there be an hospital; we have pointed out in a former part how incommodious they generally are.
To procure the Surgeon a room when the regiment is in quarters seems to be necessary; but how the expence is to be defrayed may not seem so obvious; the stock purse we dare hardly mention; it would be hard to rob one officer to serve another; yet since government has made no provision here, some regimental scheme, we think, should be thought of. The only one that seems practicable is to take the allowance of a shilling a day from the non-effective men; or in other words, let him be allowed to pay one of the companies, such as can be agreed on among the corps. Each company has the pay of three privates allotted for the repair of arms and accoutrements; this is one shilling and sixpence a-day. Let him have this for paying the company. This will give him little interruption; for one of the Serjeants will do the duty for a shilling, or even sixpence a-week. He has only to settle his accounts with him once a-week, which will not occupy above half an hour: here will be nine shillings and sixpence a-week at least,
least. It is true he runs a hazard; if a man deserts in debt, he will be obliged to answer it to the Pay-master; also to repair what may be wanted in the arms of the company, since it is for this purpose the money is granted by Government; but, on an average, he may still clear a crown, or six shillings a-week: this will afford him a room, fire, and candles. What is said here is likewise meant of the Surgeon's-mate. The non-effective men of another company should be allowed him. The good effects of such a regulation, and encouragement, I am persuaded, would soon appear, by his better attendance on his professional duty. The satisfaction this must afford a Commanding Officer, of a humane disposition, and the corps in general, will be a sufficient recompence for the small indulgence allowed him.

* Since the peace was concluded, an alteration is made in the non-effective men; only two are allowed now to a regiment of eight companies, in place of three. This comes only to 18l. 5s. per annum: half
It will be said, the Surgeon's perquisite, and saving from the medicine-money, puts it easily in his power to furnish a private room; but we suppose the Commanding Officer has taken this out of his hands, and that he must subsist on his pay; for we shall afterwards endeavour to shew, that some regulation is necessary respecting the medicine-money. This, or some such method, should be put in practice, if the pay is to remain as it is at present. But another scheme shall afterwards be submitted to the opinion of the public, which appears preferable.

When we consider the value of a man to Government, a political and patriotic principle, at least it will take to keep the arms and accoutrements in repair; the saving then cannot be above six-pence a-day. As he may sometimes be in barracks, this may almost be sufficient at an average; but each Captain ought, for the sake of their men, to add six-pence a-week more: the same to the mate, if mates are to be continued.
principle, as well as humanity, should influence our minds to procure every thing the army can afford for his welfare. The death of a private is a loss to the nation, since he costs considerably before he is fit to act as a soldier in the defence of his King and country: for, suppose, at the death of one man, another recruit could be immediately procured, he demands his bounty, which must come from the national purse, independent of his pay, necessaries, and accoutrements. In times of war he is a double expense from an augmented bounty, and a double loss, as men are then doubly necessary, and obtained with much difficulty. Every death must affect the service, as it is a diminution of the national defence, and strength; and surely it must so far affect the national purse, as the expense thereby incurred amounts to. If this be allowed, and it appears undeniable, it points out the attention the soldiery deserve in a political view; and, we hope, humanity will be sufficient to enforce what politics demonstrate as
as necessary. Hence every degree of encouragement should be given to the medical department, where so large a share of the soldiers' welfare is placed.

"Success in war," says Dr. Millar, "depends on preserving military forces in health and vigour: disarmed by sickness, the most intrepid warriors become a prey to the most pusillanimous adversary; the wealthiest nations to those of the fewest resources, and the stronger to the weaker power. Fleets and armies moulder away by disease: new levies do not supply the place of veterans trained to arms, and inured to martial achievements.

Yet this fundamental branch of the art of war hath not been cultivated: physicians only, it hath been supposed, can best judge of it; the most unsuccessful hath been consulted. The simple mathematics of shop arithmetic, as it is happily expressed by a celebrated political writer, might have corrected these ill-founded opinions, Statemen
men might have judged without professional skill, and ascertained the truth by numerical calculation.*”

Suppose the medical department of a regiment is placed on the liberal plan we have proved to be necessary, the physician, or surgeon, that has the appointment, should, on his part, enter into obligations, which the military laws should take care were performed, and this under the penalty of severe punishment.

This leads me to mention a medical journal. It should be considered as a necessary part of his duty, to keep a regular journal of every sick man’s case that enters his lift; whose complaints are deemed of the least serious nature; with a history of the symptoms, and the prescriptions used. A copy of this might be given to the Colonel at stated regular periods, and by him, if

* Vid. Introd. to Dis. of the Army in the late war.
if he thought proper, transmitted to the
Physician and Surgeon-general for their
inspection, particularly such cases as ter-
minated fatally, in order that they might
judge, as far as the case stated allowed
them, whether the Doctor had discharged
his duty faithfully or otherwise: the me-
dical and surgical cases being transcribed
into separate books, should each be sent to
the respective inspectors; the medical to
the Physician, the surgical to the Surgeon.
The examination of these will, no doubt, be
some additional trouble to the Physician
and Surgeon-general; but we suppose their
salaries are sufficient to recompense them.
There is no doubt, however, of their ready
compliance with any scheme that has for
its object the prosperity of the service, and
the health of so numerous a body of his
Majesty's servants. This would be some-
what similar to the log-book of a ship, by
which the Commander's conduct is check-
ed under any suspicions of misbehaviour.
It would certainly be a powerful restraint
on inattention and indolence; and perhaps would be as great a means of restraining unqualified persons from regimental practice, as any yet used. They would be now careful to avoid falling under the disgrace, and censure of men of professional abilities placed above them.

In carrying on this register, the same plan should be pursued as is adopted in other Hospitals. First, the symptoms described; then the daily prescriptions mentioned; and lastly, an account of the operation of the medicine, with the changes the patient daily undergoes, whether for better or worse, taking care to separate the disturbances created by the medicines themselves*, which are exhibited, from such

* "It seems certain, that medicines which do not produce some good effect, are, if they are of any activity, constantly more or less pernicious. We must therefore learn how to estimate the effects of remedies, if we wish to avoid an erroneous application of them, and to distinguish what share they may have in the essential or accidental symptoms of a disease." Vid. Zimmerm. on Experience in Physic.

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symptoms as truly arise from the nature of the disease (for a careful distinction should be made here in giving an accurate history of what is going forward), and this continued till the case either ends fatally or favourably. The experience reaped from such strict observations, would add to the stock of the Surgeon's knowledge, while a desire for honest reputation would quicken his diligence; and this, perhaps, equally as much as if his support and continuance in the appointment depended solely on his success.

If some plan of this nature be not entered into among regimental Surgeons themselves, for their own improvement, or by an order from superiors in the service, they may go on in the same thoughtless routine, tread in the same beaten tract of bleeding, blistering, vomiting, and purging indiscriminately from habit, more than reason, as we have sometimes had occasion to observe, without the trouble of reflection, whether it is likely to do good or harm, or may be proper or mischievous.
To persons of this thoughtless turn, no time is so tiresome as that spent in an examination of the sick list; the patients' names are called over, some insignificant advice given; perhaps ordering the patients to procure something, which the Surgeon ought not only to consider they cannot afford from the small pittance of their subsistence, but which, if its application be necessary, he ought to furnish them with; then return to his amusements, whether walking, fowling, fishing, hunting, or the like, till the hour of dinner approaches; while this and the jovial glass engages, perhaps, the greater part of the evening; morning comes, and the same scene is again acted; while the patients are but too often left to the strength of their constitutions, and the operations of nature for a cure.

What I mean they should furnish, if it be necessary to prescribe them, are, milk, vinegar, bread for poultices, oatmeal,
meal, and oil. These articles are often used in the regimental practice, and often with the greatest propriety; yet seldom have I observed it to be at the Surgeon's expence. If a soldier, by some accident, meets with a bruise or sprain on any part of his body, he is probably sent away, with an advice to bathe it with vinegar. This treatment may be extremely proper; but as it may happen that none is given him, and he cannot afford to buy it, the advice is as seldom put in practice; thus the cure is frequently left to nature.

**Bread** and milk poultices are as often applied, with advantage, to various complaints. When this is the case, the patients in some regiments are obliged to furnish both bread and milk. I have known this become a very heavy and oppressive tax on the soldier, in cases where their application was necessary for any length of time; it may be two months and upwards. I have known them cost him no less than three half-
halfpence a-day during the time they were used; and his remaining subsistence did not greatly exceed as much more: at the utmost, the remainder left was only about twopence halfpenny. For when a patient is sent to the regimental hospital, half a crown a week is generally his allowance while he continues in it. This is put into the hands of the hospital serjeant, and expended in the mess, or as the Surgeon points out.

The men justly complain of this heavy tax; and it is for their sakes alone I mention it here, in hopes, if these pages fall into the hands of any who still pursue the same custom, they may reform this abuse, and act differently. They must know, that the privates pay for their medicines independent of this, which the Surgeon of the respective regiments receives for the purpose of furnishing medicines, and things that may be comprehended under this head: for though they urge, that bread and milk
milk forms no part of the Materia Medica; in a soldier's case, I would insist that it does, and that not only these, but every thing besides ordered by the way of cure, should be held in this light, and procured from the medicine fund: and here let me take notice of another auxiliary of the same nature, flannels for wrapping round limbs, shoulders, arms, &c. affected with rheumatic pains: These, like the others, are often prescribed, and often with as much propriety. But can a soldier afford to buy a yard, or half a yard of flannel, when he needs it for such complaints? A dozen or more of proper sizes, should be kept in the hospital, and lent to them occasionally; the medicine money can afford all, and ought to afford them.

What I have said on this head will apply to oat-meal: this is used likewise in cases of various kinds in the form of poultice mixed with some other medicines, and with much success, in swellings of different kinds;
kinds; it is used as a proper vehicle for applying lead either in form of Sach: Saturn: dissolved in water; or in that preparation known by the name of Goulard's Vegeto-Mineral Water. When Beer is ordered in poultice, the same will apply to it. Some Surgeons apply oat-meal, and stale beer to ill-conditioned sores; and they say with good effects: when this is the case the Surgeon, not the patient, ought to bear the expense; he is paid for all; therefore he ought to afford every thing he finds it expedient to prescribe, that part of regimen comprehending diet and culinary articles excepted.

Where such exactions are made, I mean when every thing proper, such as is now mentioned, are withheld from the soldier, when the medicine money can afford them, the military laws should interpose. And if Surgeons were compelled to return threesfold, or something of this sort, to the man from whom they had made this exaction, with a public reprimand from the Commanding
Commanding Officer, it might be the means of reformation; but it is not for me to presume pointing at the mode: I must content myself with pointing out those abuses that seem to call for reform.

An orderly officer, it is true, visits the hospital in camp daily; in quarters, generally weekly; but I fear it is too much a matter of form with many. The report he returns to the Commanding Officer is as often taken from the Surgeon as from the patients. Indeed, he comes rather to enquire if any thing be wanted, such as firewood, straw, &c. than to hear complaints. He ought to visit the medicine-chest, and see that it be well furnished; but of this in general he is a very incompetent judge; Besides, the Surgeon will seldom complain that medicines are wanting, when he knows he must himself procure them; or, in other respects, lodge an information against himself: But with these remarks I must leave this subject, and hasten to another of no less importance.

CHAPTER
Of the Punishments of the Soldiery, as far as the Surgeon is concerned.

The military laws are strict, and it is absolutely necessary, for the proper behaviour, and subordination of the privates it should be so. For this purpose Court-Martials are often constituted to take into consideration the offences of those against whom accusations have been lodged, and punishments are frequently the consequence.

The British discipline may be called severe, yet it is in many respects more lenient than what the soldiery of some other nations experience. It is often indeed found necessary to punish faults not only proceeding from design, but those from negligence. If this was not done, negligence might prove
of the worst consequence to an army. Among the Prussian soldiery this is carried to a degree far beyond any thing we are acquainted with in the British service. Dr. Moore informs us, that if even a soldier's hat is blown off by the wind, he is severely punished for it; although it cannot be supposed he made an agreement with the winds for that purpose. If, in the shock of a charge, a dragoon, by a dangerous accident, falls from his horse, and is thereby liable to be trampled to death by those that come after him; yet if he survives the accident, he is brought to the Halbards; "by this means," says one of his Prussian Majesty's Generals, "we teach them the double danger of negligence, and force them to be constantly attentive to their duty."

In his Britannic Majesty's service we find them however occasionally severe. Anthony Gregory of the tenth regiment of foot, in the year 1759; was punished with a hundred lashes for suffering the queue of his hair to
to drop off when on duty; his hair was short, which obliged him to wear a queue, which perhaps he had that morning carelessly tied on.

When court martials meet, and punishments are decreed, a disagreeable duty devolves on the surgeon; for no man by the military laws, can be flogged without his attendance. It becomes his business diligently to watch over the sufferers; for should the punishment adjudged prove greater than it is his opinion the delinquent can bear without hazard of his life, he has authority to stop the Drummers (the executioners) at any period of it, and order him to be taken down.

This duty is, truly, one of the most disagreeable he is called on to perform; and one, likewise, that requires no small share of penetration to discharge conscientiously; for imposition though somewhat a justifiable one, is nowhere apter to be practised than here.

Where
Where is the man that will not endeavour to avoid punishment, if he thinks stratagem can accomplish it? with this view, the surgeon will sometimes find the sufferer fall into a seeming deliquum animi, before receiving his first twenty-five lashes*; perhaps before he is much hurt, or almost any of the cuticle of his shoulders lacerated; if the court martial has adjudged him much punishment, he should not be taken down at this period; there are few that cannot, with the utmost safety, bear double, or treble this number; if it be feigned, which may be discovered by the state of his eyes, for this very reason he should not be ordered down.

It is no uncommon thing, indeed, to see feigned fainting fits on these occasions, in order to excite the commiseration of the spectator.

* At the end of every 25 strokes, a fresh Drummer takes the cats; and this rotation is continued till the punishment is finished.
spectators, particularly the commanding officer, in hopes of pardon; but we acknowledge it may at the same time be real; for the first few strokes in lacerating the skin, give more pain than a great number afterwards, when once it becomes so bruised and destroyed in its texture by the cats, as to deaden and blunt its sensation. To an anatomist this, I apprehend, will appear rational and evident; he knows the sensibility of the cutis from the great number of nerves that enter it; nay, even the cuticle which many held as altogether void of sensation, and to be composed of lamellae, without nerves, has been supposed of late by some distinguished anatomists to be almost entirely a congeries of them,* but this is a subject we shall not at present enter into; it will require much more investigation than it has hitherto underwent, to elucidate it satisfactorily.

* Vid. an account of the nerves as seen by Prof. Monro, in the Med. Comment.
The trapezius, and head of the deltoid muscles, which lie most in the way of the instrument of punishment, and have but few nerves, comparatively, entering their substance, do not feel so acutely as many other parts of the body. All parts deeply covered with flesh, if they have not less sensibility, are at least less liable to danger from wounds. This is sufficiently proved by the common method of punishing disobedient children. The posteriors, on which they generally receive it, are composed of three large muscles, called glutæi, and which as it would seem, are endowed with less sensibility from the small number of nerves that enter them, than many other parts of the body, bulk for bulk considered; it does not require the skill of an anatomist to point out this to the offended parent. Common sense, and experience both show that little injury will be done the child, from considerable punishment on this part of his body.

Another
Another reason is, the part yields to the stroke, and its force is thereby broken; the same degree of punishment, that is, strokes of equal force, on the tibia, the ankle, or other parts little defended with flesh, would receive injury much longer felt, and not so easily removed; the hard bone below acting as a fulcrum, would give the stroke its fullest power; while the vessels, nerves, and membranes of great sensibility lying between, must be bruised in proportion.

That part of the Deltoid muscle covering the shoulder, is likewise composed of a large quantity of muscular fibres. Hence in the most common method of punishing soldiers, it is not only prudent but rational to teach those whose duty it is to execute it, carefully to avoid the ribs, and inflict it on this part. The pain also becomes less from the numbness that takes place by constant flagellation, for perhaps half an hour at a time. Should the sufferer really fall into a deliquum
deliquum, some of his punishment passing during some seconds of insensibility, is, I think, in his favour, since he feels not, or at least obscurely, what he now receives.

We find this a wise provision of nature on all occasions, where pain becomes excessive, and irritates the system too much; here the powers of life, as it were, are at once suspended, and an interval of insensibility follows, whereby, like sleep, perhaps, to the wearied system, it is in some measure recruited, and rendered capable of withstanding the threatening danger. In this sense a slight deliquum is far from being alarming: it only becomes so by its duration; besides, the continuance of the stimulus of flagellation is one of the best means of recalling the patient back to sensibility. In lighter cases, then, of deliquum the punishment need not be interrupted; a few more stripes will bring the sufferer again to himself, and prove that all our fears of danger were groundless.
Yet censure me not for want of humanity when I say so; it will appear by and by, that my motive is very different. If, on the other hand, the deliquum continues, and he cannot be roused in the space of a few seconds, or if he turns cold, I always look on it as attended with danger. When I observe him sweat profusely on the face, as I have sometimes seen, I likewise look on his sufferings as severe; and here I think it incumbent on me to attend well to the consequences.

Soldiers during their punishment never fail to call frequently for drink; and they should always be indulged in this to the utmost of their wishes; for it is the same now, as we find it in some kinds of fevers, the great waste of liquids from an increased action of the heart, and from irritation, together with the violent efforts used by vociferation, as long as they are able, and toting to get loose, demand a supply, which in some measure refreshes them, and mitigates their pain. If refused this, which the wants
of nature now loudly call for, they must bear a double load; the pain of the whip, and the added uneasiness of thirst; indeed, we should look on the punishment as a severe paroxysm, or temporary fever; with regard to the pulse, I never could depend on it in such cases; this will appear evident when we consider the ligatures upon the extremities, which if they do not alter, at least impede free circulation.

If the deliquum continues beyond the time specified above, the punishment should be suspended a little, and drink administered, which should always be in readiness, with the use of some other stimuli, such as throwing cold water on the face, holding strong volatile salts to the nose, rubbing some volatile alkaline spirits on the temples, &c. and at the same time carefully observing the state of the eyes. In a true fainting, these are insensible to the stimulus of light; nor are they affected by threatening danger, such as making an attempt to rush the finger into them, and the like; the same
same may be said respecting convulsions. The eyes will remain motionless, nor will the pupil contract and dilate by stimuli that were wont to affect them. For instance, if the head be now turned up towards the sun, the light, though too great for a healthy eye, will not induce any contraction in the pupil. I have, however, sometimes seen convulsions feigned as well as faintings: it is necessary therefore to be on our guard. But this will, in general, guide us in forming our opinion of the degree of the delinquent's sufferings, and assist us in knowing when the case is attended with danger, or when little or none is to be apprehended.

Should the offence be such that the commanding officer thinks it his duty for the good of the service *, and the disce-

* The following anecdote is told as true, and will show how beneficial to the service, and safety, perhaps, of the army, occasional severity to individuals may prove.
pline, and character of the regiment, perhaps safety of the inhabitants of the place, as well as for an example to deter others from the commission of such offences, to have the whole inflicted, that the court-martial had adjudged him to undergo, whether at twice or thrice; if the surgeon is of opinion he can bear it without risque of danger to his life, let him, by all means, receive the whole at once. I advise this from principles of humanity: for it will save the unhappy man a great deal of additional suffering.

During the late war in America—a grenadier struck Captain Boscawen;—a court-martial adjudged him a thousand lashes; which sentence was so perfectly disapproved of, that General Howe ordered it to be torn, and the man to be sent back to England.

In a few days another officer was struck, from an idea the thing would be passed over.—But mark the difference—in three hours, (fays the anecdote) the man was hanged—there was no more striking.
Let us suppose him taken down at the end of two hundred and fifty, or three hundred lashes; and that his sentence was a thousand; all which he must receive, whether at two, three, or more times, before he is released from confinement. This, absolutely speaking, is giving him far more pain, than the court-martial intended, unless they had particularly specified in their minutes, that he was to receive them in this divided manner. This we shall be easily able to prove.

Let us suppose the Surgeon orders him down; that he is conveyed either to the Guard-house or Hospital; is daily dressed till the wounds are healed, and a new cuticle formed, which may be in a month or five weeks. He is now become able to wear his clothes; yet, perhaps, scarcely able to suffer the weight and friction of his cross-belts, or the pressure of his hammersack; the parts are as yet red and tender, notwithstanding, he is ordered a second time to the halbards; and
at the end of two or three hundred more, is a second time taken down, cured as before; a third time brought there, and so on, till the whole punishment be inflicted.

Those who consider the nature of the human body, will readily allow, that the second part of his punishment, must cost him at least, double the pain of the first. To illustrate this to such as are less acquainted with medical subjects, we desire them only to reflect on the pain they felt from a cut finger, or leg, after the wound is newly cicatrised, and the dressings are laid aside. They will agree with me, that they felt a tenfold sensibility in the part to what it used to possess. The very air affects it; and a small injury at this time, before the cuticle thickens, and the part strengthens, such as a trifling blow, which on other occasions would not give uneasiness, gives now exquisite pain. Even more blood vessels, as well as nerves, seem now to be formed in the part than it was endowed with before, which age will obliterate as the cuticle
cuticle condenses. We observe this take place in the infant state. Youth possesses many blood vessels, as well as nerves, which in riper years collapse and disappear. This is evident from the florid countenance of youth, compared with the wrinkles and pallid appearance of age.

Some will probably explain this from the ballance falling on the venous system. Anatomical injections, however, demonstrate innumerable vessels in the infant, that cannot be shewn at a late period of life. As nerves are always found to accompany arteries, the better to communicate that reciprocal action which they exert on each other, and by which their functions are more completely performed, it is reasonable to suppose many of these are obliterated also, as being no longer necessary. This at least we are certain of, that age is very far from being so mobile as youth. The blunted passions, the stiffened motions of the body, and hardness of each fibre;
fibre; nay, a thousand things unite to confirm it.

Can a young animal of any species bear the same fatigue, pain, or cold, as one that is arrived to maturity? We see children suffer considerably in a degree of cold from which a grown person would feel no inconvenience. In like manner we observe them suffer greatly from a chastisement, inflicted for some fault, which would scarcely be felt, much less complained of by an adult. It is exactly the same with the soldier carried a second time to the halbards before his late wounds have been properly united, or the new cuticle properly condensed by age. This part is just in the state of a child’s body; i.e. it is endowed with far greater sensibility from its recent growth, than it will be some months afterwards: it is no wonder then if he now suffers in proportion.
We know, that if a part of the body in health be covered some time, it becomes more delicate and sensible: for instance, the hands. Suppose on one hand a glove be daily and nightly worn for only a few months, and the other allowed to remain bare; take off the glove, and expose the hand to the air, it will feel the cold much more severely than the other that remained uncovered. It is the same, then, in the case above. The parts punished have been long defended by double coverings, and softening and lubricating dressings to favour the re-union; all this must surely add to its sensibility; but it seems obvious, and needs no farther illustration.

Yet as this train of reasoning may be refused by some, however clear it may appear, we shall prove the fact, that more vessels do exist in parts newly cicatrized, than in others where no injury has been lately received. Dr. Monro has made experiments with this very view, one of which
which was on a pig, the part was cut out after it healed, and injected; an account of which the reader will find in his observations on the nervous system. After relating the experiment, the learned author concludes, "I will now add, that in calli, "cicatrices, or acretions, there are num-
"berles new formed vessels, filled in the 
"living animal with red blood; and which 
"can readily be injected *.

Now it must appear from all this, that if the delinquent be taken down, cured of his wounds, and immediately after tied up again, he suffers a punishment equal to the whole each time, should he be tied up ever so often. Surely this is what the court-martial never intended; and is a cruelty the Surgeon ought to point out, and endeavour to guard against; by explaining the reason, if the officers be unacquainted with it.

Vid. obs. on nerv. system, p. 86.
The danger of recovery after a thousand lashes is, I own, vastly greater than that from two or three hundred; but I am still of opinion, there is little difference in the sum of the absolute pain, if given at once.

Hall, was sentenced to receive five hundred lashes for house-breaking. He got four hundred of them before he was taken down; and in the space of six weeks was judged able to sustain the remainder of his punishment, as his back was entirely skinned over. The first twenty-five of this second part tore the young flesh more than the former four hundred, the blood pouring at the same time in streams, as if a number of veins had been opened; by the time he got seventy-five, his back was ten times more cut by the Cats than with his former four hundred, so that it was thought prudent to remit the remaining twenty-five, and take him down.

For some nights afterwards he complained grievously, and declared that his former
former pain was trifling to what he suffered now. Other examples might be added, but to multiply such is disagreeable. This case, however, was so evident, that all the officers present at this part of the punishment remarked it, while the Lieutenant Colonel, a man of great humanity, whispered in my ear, to order him down at the above number. In this instance, the copious flow of blood issuing forth at every lash, evidently proved an increase of blood vessels in the new cicatrizd parts.

When the Surgeon finds it incumbent on himself to take a man down, because it is his opinion he is in danger, he ought as carefully to represent the severity of a second or third punishment, and endeavour, if possible, for the man's release. This he may do privately, without its being known to the delinquent from what source his pardon comes; for it is better that mercy should seem to proceed always from the commanding officer, whose duty it is to keep
keep the privates in due subjection, and from villainous actions, than from any other. This clemency may have a proper effect on some, and from a sense of gratitude make them behave well, while it will, at the same time, gain him a good name in the regiment. Yet, we confess, the evil-disposed may take advantage of such mild treatment, and commit bad actions through hopes of experiencing similar mercy *.

From the reason adduced in support of my opinion, that a soldier should not be taken down till all his punishment be given, except when the case is urgent, or when he has reason to hope the delinquent will be forgiven what remains, which will be known from his general character, and the nature of the crime; none, I am persuaded, will accuse me of inhumanity.

* An instance of which we have already related in the anecdote relative to General Howe and the grenadier.
My advice is surely calculated to obviate, as much as possible, both inhumanity and cruelty. For though the populace, who are often present at punishments, and as often, on these occasions, troublesome, may not see this, nor comprehend the reason, yet he that reflects must acknowledge its truth, and its salutary tendency.

Another thing which the Surgeon should keep in view, in performing this disagreeable duty, is, the form of the sufferer's body; the make of his fibre, and strength of his constitution. This is a very material thing, and without such attention, he may be guilty of great errors. I need not tell him how much this varies in individuals; nay, so much, that perhaps, no two on earth are in this respect exactly similar.

Some are of a more robust, some of a more delicate make; some from this endowed with great sensibility, others again, far
far less sensible; he must never let this escape his penetration. Experience in making observations, and comparing the difference of the form of body in different men, will enable him to judge in this necessary part. Men of red or fair hair, with ruddy complexions, and of a small, or tall and genteel shape, or that are plethoric; men of a scrophulous habit, or such as have a tendency to diseases in the chest, or are constitutionally weak; will be more affected by a given number of lashes, than a man of a hard dense fibre, with three times the number.

The way of life, i.e. the trade they have been bred to, unless they have long left it off, may add to this. Taylors, for instance, who are much confined within doors at their employment in the army, are more delicate and tender than those who are always in the open air.

Edwards, in the end of 1781, was sentenced to receive fifty lashes; he had got
got drunk, and otherwise misbehaved. In the army this number is accounted next to nothing. So much, however, did this small punishment affect him, that notwithstanding every degree of attention to his cure, it was upwards of three months before he could bear his cross-belts, or even move his arms to work. Perhaps 50 more would have rendered his life in most eminent danger; he was of a thin, tall, genteel shape; his hair black, but soft, woolly, and thin on his head, with a skin remarkably white and smooth; he was a taylor.

Those, on the contrary, of a dark, or brown complexion, of black hard hair, or hair of a reddish brown, and curled, are generally of a robust constitution. I mean here, persons of adult age; tho' we can observe the same difference almost in infancy by comparing similar ages, but not so fully marked. Men who have much hair on their bodies, are stronger than those who have little or none. In a word, those of, or
or tending to the melancholic temperament, are always stronger and able to bear punishment than the sanguine, or choleric; as also men of large bones, and their muscular parts equally furnished. I should be afraid to punish a person of a leucophlegmatic habit, so much as the melancholic. Though the shades of temperament gradually slide into each other, yet enough may be observed to assist us in forming our opinion with regard to the sum of punishment men in the army can sustain without danger.

Burch, a grenadier, received three hundred lashes for desertion, in August, 1782. He bore this punishment without the smallest groan, or ever moving from the moment he was tied up till he was taken down.*

* Some, however, do not complain, thro' what may, perhaps, be called something like fortitude.—In a public paper I lately found the following anecdote; whether it will apply here, I cannot tell. "It is not long since,
nor was he so much cut as I have seen others with much less; for instance, in the last example. He was about forty years of age, five feet ten inches and an half high, with a proportionable thickness; not corpulent, but had large bones, and of an athletic make; his skin of a hard firm texture; and on the whole, what may be properly called, a robust man. He had also been in the army eleven years, part of which he served in the West Indies.

since, "says this account," in France, a soldier received two hundred lashes without flinching; the officer, therefore, ordered the fusilier to stop, and stabbed him with his sword—the soldier dropped, and in the moment of dying, said—"thank God."

Lately, in England, not far from the Metropolis, says the same account, a soldier received four hundred lashes, he too, scorned to flinch for some time, till by a most dreadful repetition of stripes, he groaned, and dyed.—What a pity there should be (if there really is) a necessity for such horrid punishment!
Serjeant, a grenadier, in the latter end of the following October, received two hundred lashes for theft, yet he was not as much as cut by this punishment. He was tall, appeared even lean, fibres hard, and skin brown. His back was only blackened, and the vessels beneath the skin a little lacerated, as appeared from this colour, which proceeded from extravasated blood; but the thickness and density of the cuticle prevented it from being cut; yet the lashes were given with as much force as the drummers, who were strong men, could apply. The Adjutant of the regiment, on my mentioning how little effect the punishment had on the man, declared to me, that though he had served most of his life in the army, he never saw lashes, as he phrased it, better laid on. This man was of a strong fibre, dark black hair, hard and crisped; six feet an inch and a half high, and twenty seven years of age, had been seven years in the army. I mention the length of service, because when inured to the
the life of a soldier, they bear its vicissitudes much better; and punishments I term one of them.

Sheppard, received five hundred lashes for house-breaking, and was entirely well in three weeks. Hall, who was his companion in this action, and suffered at the same time, was six weeks before he recovered from his four hundred, and his seventy five given afterwards, made him an object of great distress. The difference of these two in constitution was remarkable, and easily discerned, even by those of no medical judgment. Had Sheppard received one thousand, his punishment would not have been equal to the others at four hundred; he was fit for duty, we find, after his five hundred, in half the time.

Henley, for desertion, received only two hundred, but this was more to him than fifteen hundred would have been to this man. The head of the deltoid, the longissimus
longissimus dorfi, the trapezius, and other muscles in the way of the cats were greatly injured. When the wounds were cleaned, and the skin and bruised parts had suppurated off, the spine below the trapezius, and part of the scapula were laid bare. I never had seen so much of the muscular parts destroyed, in any case from punishment, before. His stature was small, about five feet two inches; his shape proportionably delicate and slender; his bones very small; his body lean; his hair a fair brown, thinly covering his head, soft, lank, and without the smallest curl. He was twenty-three years of age, and had only been three months in the service.

A few days after he received his punishment, he was seized with an inflammation in his throat, which soon went off, but was succeeded by loss of motion in the lower extremities, which was upwards of a fortnight before it could be removed. A large abscess formed below his left shoulder.
shoulder, and considerably lower than where the cats had cut him; viz. about the sixth rib, and towards their insertion into the spine.

On the fourteenth day, after his punishment, I opened it, from which issued more than two pounds of pus, mixed with blood; before it was opened, its bulk was as large as the crown of a hat. I attributed the want of motion in his limbs to the inflammation of the abscess, and I may likewise place his recovery to the removal of the pus. Had it made its way through the intercostals, and thence into the cavity of the thorax; or had the inflammation reached the lungs, the case might have ended in a hectic fever, and death. It was upwards of seven months before he was so far recovered as to be able to do his duty.

This case alone, is sufficient to point out the necessity of paying due attention to the strength and constitution in soldiers punishments.
nishments. To contend that all can bear five hundred, or a thousand stripes, because some are found to sustain them without much danger, would be as absurd, as to contend, that because one man has escaped death in the midst of an engagement, all will do the same.

During the time of punishment, we sometimes observe the back tumify considerably; in the more delicate, it puffs up under the cats, in a very short time, and to a great degree. I have frequently noted this, and it is one of my characteristic marks of a tender habit; it is a sure sign of a laxity of fibre. This should not be overlooked in the quantum of the punishment, even should some of those marks, already mentioned, be absent, or at least doubtful. The robust seldom swell, with a moderate punishment. In such delicate habits, inflammations, and large suppurations ensue.

Jones,
Jones, a grenadier, was punished in December 1782: The tumefaction took place to a high degree, and it was with no small difficulty it could be discussed. Dale, who was punished in the beginning of the following month, was, in this respect, still worse. For upwards of a fortnight he lost the use of his limbs.

In discussing these inflammations, when it is practicable, I have succeeded best by the liniment: saponac. The inflammation generally takes place below the lacerations; sometimes as low down as the last vertebrae of the back; and in one case the gluteus was slightly affected. It is produced by the great quantity of extravasated blood, which falls from the wounds above, and from the great degree of excitement in the neighbouring vessels, communicated by the injury which the contiguous parts sustain.

When this tumefaction, during punishment, is observed to take place to any great degree, the soldier should be taken down;
it portends danger in proceeding farther. Such was the case with this unfortunate man. I had never observed the tumefaction so great with the same number of stripes. He was of low stature; skin white and soft; indeed he had very nearly fallen a martyr to the punishment. An abscess, such as already described, formed in the small of the back, by the falling down of the extravasated blood, between the muscles, and dorsal vertebrae, after it was opened, and almost cured, a second, still lower down took place, viz. about the last of the dorsal vertebrae; these produced a severe fever of several weeks duration, and the copious discharge, which continued long, reduced him to a mere skeleton.

We must not omit giving some hints here relative to tying the delinquent to the halbards. This is generally performed by the Drum-major, and the Punishers, over whom he presides. But I am of opinion
the Surgeon should inspect the whole. He should see that the arms, which are generally stretched above the head, and tied about the wrists to the halbards, be neither too tight bound, nor over stretched. The same should be observed of the cords that fasten his thighs. I have seen inconveniences arise from want of attention to this article, where the hands above the ligatures, from the stoppage of circulation, have turned black, and remained numb, and cold, for upwards of a week afterwards; this accident will follow, when a man is injudiciously bound, so that he hangs, as it were, by the hands. The thighs ought to be considerably tighter bound than the hands, because it more effectually prevents swinging, which is always prejudicial, and renders the punishment both more severe, and attended with greater hazard.

But if the cords be too loose, it is as bad; for room is now allowed for swinging, and leaping about, to avoid, if possible,
sible, the strokes, whereby it is out of the power of the Punisher to give them on the parts where he is directed, and is often the cause to the Drummer himself of some stripes for not doing his duty with more exactness. By this means, the Cats falling on improper parts of the body, may prove dangerous; if too low, affecting the ribs, it is bad; it is too near the vital parts; if too high, on the neck, or even twisting round on the breast, it is not less inconvenient; nay, what is worse, by their swinging, I have seen the cheeks cut, and the eyes in danger. The possibility of losing an eye in this manner is very clear; for it would be a thousand to one if the sight could be preserved after an accidental stroke from the Cats. They should then be admonished before the punishment commences, to stand as firm as possible; for, as they cannot avoid the sentence of the court-martial, the more they toss, the greater is their punishment. To stand fair, as they term it, saves pain, not only to themselves, but several
several stripes to the poor fellows, who are obliged to execute the sentence.

Anderson, was punished in April 1783. He behaved stubbornly, and would not permit himself to be so well bound as it was necessary; the cords that bound him were too loose; he had too much room to swing; and all the accidents I have mentioned, except the injury to his eyes, took place; the Cats plaited round his neck, and even cut his cheeks. The Punishers were obliged to stop, and bind him firmer. We see then, a medium is to be observed in this affair.

The Surgeon's attention should likewise be turned to the parts on which the cats...

* The Adjutant charges the Drum-major, and often enforces it by a stroke of his ratan, to make the Drummers do their duty; he in return, strikes the Punisher, who, if he is able, is compelled to add force to his next stroke on the delinquent.
fall. The mode of punishing, in general, is, for each Drummer, appointed on this duty, to give twenty-five strokes in turn, till the sufferer be ordered down. Some of them strike with more judgment than others; the surgeon should attend to this, and caution them to let their strokes fall on the shoulders, yet not on the neck. To punish so low down as the ribs should be religiously avoided; it is not a little dangerous; the heart, lungs, and other noble viscera are too contiguous, and will be affected in proportion.

Let as little new skin as possible be wounded, for the reason already given, that the cutis, cuticle, &c. are endowed with great sensibility. I trembled always for the unhappy sufferer, when a left handed Drummer, punished in turn, with those using the right. His strokes cut exactly across those given before him, and by this means, both more muscular substance, and new skin was torn. The sloughs,
floughs, that suppurate off in the course of the cure, are always deeper, and the patient, of course, longer of recovery. I could wish to exclude such men, for the sake of the sufferer; at least, I would estimate twenty-five such strokes at fifty of those given by right-handed Punishers; for I am confident they do him more injury than fifty, where the cuts lie all one way.

Since, from the nature of the Surgeon's duty, and the military laws, he has so great a share in punishments, I must not omit another caution he is to observe; that is, the size and weight of the cats. The cords should be small, by which means they will cut cleaner, and bruise less; nor should the same cat be long used at one punishment; for by the additional weight of blood, with which they are loaded, the severity of each stroke is greatly augmented; they fall now on the sufferer's back, like so many flails, to use the poor men's own expression. They have often, afterwards,
afterwards, on my dressing them, declared, that one stroke from a cat loaded with blood, gave them more pain than four from a dry one; it is evident it must be so.

It is often, from thence, that large and dangerous inflammations take place, and those dreadful suppurations already mentioned. In two cases, where these suppurations were large, from the long continuance of the discharge, I not only dreaded a hectic, but a corrosion of the ends of the ribs, connected with the spine, even from the top of the trapezius, to the extremity of the latissimus dorsi.

Sinuses always form here, and extend on every side, running far beyond where the cutis is wounded; the cellular substance is always corroded, and melted down, and the cutis with its cuticle left detached; so that by lifting it up with the forceps, to syringe the parts below, we can see down from the trapezius,
trapezius, between the cutis and the muscular parts, to the last vertebrae of the loins, where it is always necessary to make a counter opening, to allow the discharge a free exit.

In many regiments, it is likewise customary, never to wash the cats after punishment, but to allow the blood to dry on them, to render them more severe; but I cannot avoid expressing my disapprobation of this method. It is adding greatly to a punishment, which is already, from its very nature, accompanied with too much severity. I am firmly of opinion, that the cats should not only be washed clean, after every punishment, but that the same cat should not be used in more than fifty lashes in the same punishment, to avoid the bruises that constantly enlue from their augmented weight. The Drum-major should, therefore, be provided with at least ten or twelve cats, which at fifty lashes a piece, will be sufficient,
sufficient, in general, to finish the severest punishment.

These regulations are entirely in the power of the commanding officer; the military law leaves him altogether at liberty on this head. Perhaps it would have been better, had it been more definite than it is, on a matter that appears to me of some moment to the service. Men having a command over others in this respect, would not then dare to abuse it, as some instances prove to us they have done *. Men would not then, at the caprice of a superior, or their Governor, be whipped to death, as some recent accounts tell us, has lately been the case abroad, in one of the English stations; but the cruel perpetrator of such a deed, though he may fly from the justice of his country, cannot fly from his own

* Alluding here to the conduct of a late Governor of one of the British Settlements.
conscience*; a wound must rankle there, and poison all his future happiness.

But allowing, that few, or none die, which I believe to be the fact; immediately from punishments moderately inflicted, I know from experience in the service, that constitutions have been considerably impaired by them. We sometimes find the body melt away into a spectre of skin and bone, from the large suppurations that have followed; nor were they ever able af-

* One account says, the person alluded to above, ordered five soldiers to be tried, and condemned to receive no less than fifteen hundred lashes each; another account says, eight hundred with a rope’s end; this, if it be true, must still be worse; while it must shock humanity to reflect on the consequences. Three, it is said, died of their wounds; and the other two must spin out the rest of their existence in misery, from broken constitutions and bad health, which must ensue from this barbarous treatment. Vid. the public papers, about the end of 1783, for this account.
terwards, as long as I knew them, to bear
the same hardships, as before; and they
must, from thence, also be more incident,
not only to contagious diseases, if they be
in the way of them, but to other com-
plaints, to which fatigue, or hardships of
duty may expose them.

The true design of punishment, is to
prevent the commission of crimes, not as
a sacrifice for that already committed; if
this can be obtained, the utmost end
of the law is accomplished. And may not
this be as well done by moderate, as im-
moderate severity? That such punish-
ments are meant as an example, to deter
others from the commission of crimes, is
proved from their being always executed in
the presence of all the private soldiers in
the place. They are constantly obliged to
form a circle round, and be spectators:
for this purpose, the ceremony of strip-
ning, and tying up the offender to the hal-
bards, should be rendered as solemn and
awful.
awful as possible, to impress their minds the more deeply; but the punishment itself, should be as moderate as the nature of the crime, and the military law will permit.

The next thing the surgeon is to attend to in punishments, is the season of the year, and state of the weather. In winter, and in cold weather, a man will bear a considerable larger punishment with less danger, than in summer, especially if the weather be warm, and has continued so for some time before; or if autumn be approaching. In cold winter weather, the fibres are tense, and rigid, comparatively to what they are in hot weather; and much less danger is to be apprehended from fever, which when it has appeared, I have always found more of the Typhus, than the inflammatory Type; I never durst bleed in it; for it seldom takes place till suppuration comes on, and the smell from the back is considerably offensive;
offensive; and to these putrid fteams, I always attribute a great share of it.

If the prisoner has been long confined before the court-martial sat on him, or afterwards, before its sentence is executed, and the weather all this time continues warm, it is reasonable to suppose, that the body will be proportionally relaxed and weakened. Even the dread and apprehension of the evil hour, must have its share in adding to this state of body. It is needless here to enter into a disquisition concerning the sedative effects of fear, and the other depressing passions; for if they be not the ultimate cause, they are allowed by all to be powerful occasional causes of nervous fevers.

Every soldier, under confinement, has something to fear; all are not callous. I have seen some suffer more from this than from the punishment; we may add, that their situation is less comfortable in confinement;
finement; they are neither allowed a bed to sleep on, nor are their food so full; if they are placed in the Guard-house, they must lie on the guard bed, which is always a broad bench, without any thing spread over it; if in the Black Hole, they have only straw to lie on, and are otherwise worse off, as it is generally a small, damp, dark, confined place. Suppose a man kept in this condition for some weeks, never having his clothes off, nor ever out of it, except to the necessary, &c. under the care of a sentinel; must he not be debilitated? The Surgeon should keep all these things strictly in view.

Autumn is the most sickly season; flagellation will now be more liable to produce fevers. At this time, then, let him caution the commanding officer, to recommend to the court-martial, that punishments may be moderate. The smell emitted, in a few days after, from so large an excoriated surface, is of itself, independent of any
any auxiliary cause, sufficient to produce fever; if contagious fevers be in the place, this must greatly predispose the body for their reception. I have often found the smell highly offensive, both to the patient himself, and all those in the room with him.

Burch, had so great a discharge from his back, accompanied with a smell so great, that though a more than ordinary robust man, it made him extremely faint and uneasy; he complained more of this than of the pain he suffered, yet he was carefully dressed, and washed twice a day, and for some time shivered once every day; the weather was warm; it was now the end of August.

Dale, who in January following, was punished for stealing, smelled so offensively, though the greatest attention was paid to dressing, and washing his back, as well as to changing his linen, and so great effect did
did it produce on his health, that he fell into a fever, and narrowly escaped with life. Though this was at the coldest season of the year, yet so disagreeable was the room where he lay, to the other patients, that they entreated me, to have him taken out of it, with which I complied, lest their health should suffer, and a contagious fever be induced among them. A separate room was, therefore, fitted up for him, to which he was removed; the hospital, happening at this time, fortunately, to be more than commonly large and commodious. From the putrid smell of his sores, it was no easy task to dress him; and such was the precarious state of his health, that I durst trust it to no one but myself.

**Before I finish this subject, I must beg the Surgeon's indulgence, while I give him another caution, which is, never to suffer a prisoner to receive his punishment under cover; let it be done invariably in the open air; this, as far as I know, is mostly practised.**
tised. I remember once a proposal to punish a man in the Guard-room of a Fort, the better to avoid the populace, but I strongly objected. I need hardly add my reasons; it was to allow the man the benefit of the free air, a matter now of some moment. Sometimes, to avoid the mob, it may be thought prudent to propose punishing in the Guard-room, or under some other cover; but if possible it should be avoided.

Punishments should not be inflicted on; or immediately after a march, even should it be so short as ten miles; for the sanguiferous system, by fatigue, must be accelerated, the body debilitated, and rendered more susceptible of injury. For the same reason, it should not succeed the exercises of a field morning, nor yet the morning after a drunken debauch.

From what has been said, it will occur, that in warm weather, the morning is the
most proper time for punishments, as well on account of the coolness, as from the refreshment of the night, if the prisoner has had any place to sleep in. Should the punishment happen in a Cantoonment, at a considerable distance from Head-quarters, and it be found necessary to send the prisoner there to the regimental hospital, do not oblige him to walk; it is cruel. Let a cart be provided, even if the hire should be stopped from his pay; a mile, or a mile and half I do not consider as of consequence, nor a cart, in this case, necessary; but if much more, he should be indulged with one; for though his sores may not yet render the body stiff, or feel so painful, as they will some hours after, yet his spirits and strength must be so exhausted, that his limbs may be very unequal to the task of supporting his body in walking.

Anderson, was punished at Lowestoffe, nine miles from head quarters; it was found necessary to send him to the regimental hospital.
tal, at Yarmouth. A guard was ordered to escort him there; he declared he could not walk, which I very readily believed, and prevailed on the commanding officer, of the party, stationed there, to indulge him with a cart: he had walked from head quarters, that morning, under a guard, and to oblige him, after a severe punishment, to return back on foot, might have proved dangerous.

Surgeons, are apt to use too much delicacy, and do not always contend for their opinion and authority, as behoves them, respecting punishments. An ill placed delicacy, in this point, may prove serious, sometimes, to the sufferer. The Surgeon's business, at punishments, is to prevent any danger to the life of the patient, and to take off any blame that otherwise might fall on the officers; he should, therefore, exert his authority, and take the sufferer down, though contrary to the opinion of the whole corps, when he sees proper reason
for it. It is he alone, not they, who is supposed to be acquainted with the strength of the body, and the human constitution. An apology is offered often, by Surgeons, that officers may be offended, if they officiously step in to prevent the farther execution of the sentence, when it may appear to them, that scarcely half enough has been inflicted; but he may depend on it, this will not screen him, if he proves too passive and obedient, when duty, and well timed tenderness, urge him to act differently.

It is true, some officers may be rash enough to censure him, if he orders down a delinquent, before receiving, what they may think his desert; but here, it is not the magnitude of the crime, but the sufferer’s ability, and the danger the Surgeon sees before him, by which he is to act; nevertheless, I am apt to believe, there are very few officers of a disposition
so cruel as to enforce more than the Surgeon thinks enough.

I have seen repeated instances of the humanity of officers; they have often whispered in my ear, on these occasions, and with expressive countenances, asked, whether I did not think enough had been inflicted? and this too, when both the offender's crime, and his strength, appeared to me to deserve more; instances of which, I have often experienced in a Lieutenant-colonel, under whom I served some years, who for humanity has, perhaps, scarcely his equal in the service.

They were always great offenders whom he ever allowed to suffer, even till I ordered the punishment to be suspended. Robbery, house-breaking, shop-lifting, theft, are crimes that always call for vigorous punishment, as they affect not only the property, but the safety of the subject; not to mention the honour of the regiment, which every officer
officer should maintain as far as in his power.

**Should** the Surgeon find many of the officers disposed to blame him for too great lenity, alleging that the subjection of the regiment will be injured, and the commission of crimes thereby encouraged, he should take pains to point out his reasons for his conduct; and endeavour to convince them of worse consequences to the character and good name of the regiment, should any die from over-punishment. They should be informed, that it is the opinion of many eminent men, that the military laws are already too strict; nor should it be without much reluctance that they are put in force in their utmost rigour.

Besides, as this is a duty for which he, in a particular manner, must answer, he is therefore, with reason, more concerned for the consequences. It becomes more incumbent
cumbent on him to guard against danger, both for his own, and their reputation. Should a man die, in consequence of over-punishment, I am not certain but he could be tried by the laws of his country for his life; at least, such an accident would fix, and justly, an eternal blot on his character, both as a man void of professional knowledge, and of the feelings of humanity.

When a court-martial sits, it is not the strength of the offender's constitution, but the accusation brought against him, that the members composing it consider. Nor do they wish to whip any man to death; if he can bear their sentence, it is well; if not, they are no longer judges, nor are they responsible; this is placed in the Surgeon's hands; he is set as a counter-balance, and check over the severity of the law, in this respect: does he abuse this great charge committed to his trust, then is he, indeed, justly blameable; nor ought such false delicacy,
licacy, or this ill placed deference to officers, in matters of such moment, to screen him, if he be guilty, or lessen his accusation. He cannot restore life; he ought not, on any account, whatever, to stand unconcerned, and see it taken away, when he is to be its protector.

And should any military gentleman, whose duty calls him to sit on court-martials, ever chance to look into these pages, let me beseech, let me entreat him, to weigh the matter of offence well; let the accusation be fully considered, and let the unfortunate prisoner be well attended to in his story.

Remember, he has generally few to stand his friends; let no prejudice affect him.---But, in doubtful cases, let them lean always to the side of mercy,---for doubtful cases will occur; where innocence, notwithstanding the greatest care to arrive at truth, will sometimes suffer the punishment due to the guilty.
"Was it Mackey's regiment, quoth my uncle Toby, where the poor grenadier was so unmercifully whipped, at Bruges, about the ducats?—O, Christ! he was innocent, cried Trim, with a deep sigh—and he was whipped, may it please your honour, almost to death's door—they had better have shot him out right, as he begged, and he had gone directly to Heaven, for he was as innocent as your honour,"—"Honest Dick Johnston's soul to be scourged out of his body, for the ducats another man put into his knapsack!—O, these are misfortunes, cried Trim, pulling out his handkerchief—these are misfortunes, may it please your honour, worth laying down and crying over.*"

Misfortunes, indeed!—yet such as will, in the course of things, sometimes unavoidably happen. We see men occasionally suffer death, for crimes they never committed, by the force of false witnesses, though the Judges take all possible care to sift the matter; and we have the same reason to expect that the witnesses examined on court-martials, by Military Judges, may

* Trist. Shandy.

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not always be influenced by truth; here, there is no room to accuse the court; it must act by the witnesses brought before it: it is all we have a right to expect, when they candidly, and impartially weigh the force of the accusation with the prisoner's defence, and give judgment accordingly.

I never knew an instance, save one, of unmerited punishment, nor could the blame in any degree be laid to the court; as it happened, the punishment was trifling, I think, only fifty lashes. A soldier was found by the patrole, out of quarters, beyond the hour limited by orders; he was likewise without his hat, and standing up by the wall; he was carried to the officer of the guard, who confined him, as it was his duty. At this time orders were strict, on account of several depredations on the property of the inhabitants, that had lately been committed, as was alleged by the soldiery, which produced complaints from the magistrates to the commanding officer:

his
his being found in this manner, and without a hat, weighed considerably against him; it was in vain that he urged he was standing at the door of his billet, and that the door had been shut against him. The truth was, the landlord had thrust the poor man out of doors, nor would he give him time to seek for his hat; it was a market day; the landlord had company in his house, and would not allow him to sit by the fire, as he took up the room of a guest; to retire to his bed, he could not, for the room he was to sleep in was likewise occupied in this way: it was probable some angry words had passed between them; but however this be, the soldier was shut out, and found as already related. In the first place, orders were disobeyed; and in the second, the inn-keeper, when examined, insisted, that the soldier behaved ill: what could the court do? they were obliged to condemn. The poor man assured me, during the course of his cure, of his innocence. Punished men seldom refused to confess to me, while I dressed
dressed their fores, whether they were guilty or innocent of the crime alleged; but it was too late here, before I arrived at the truth, to prove of any service; the deed was done; the punishment was inflicted.

Different regiments use different methods of punishing: in some to run the gauntlet, as they call it, is customary. This would appear a cruel method of treatment, even more so than flogging at the halbards. Here, instead of Cats rods of willow are made use of; the whole regiment are drawn up in a line, two deep, face to face: every man is furnished with a willow; the prisoner runs naked, the whole length of the line, and every man strikes as he passes; no regard can be paid in this way to the part they strike; hence the ribs as well as the shoulders are wounded. I conceive, there can scarcely be a part from his neck to his heels, that has not received its share. Hence
Hence appears its cruelty; I am, however, very little acquainted with it, and can speak the less positively on the subject.

In others, again, a different method is in use; here they flog alternately on the back and posteriors; I would object less to this than the former. The posteriors, as well as the shoulders, can without much risque of danger, bear a moderate punishment.

The mode is again varied in other regiments by the manner in which the lashes are inflicted. In some regiments of the horse, I am informed, it is always customary to count ten between each stroke; I deem this tardy method of proceeding, likewise, an addition to the punishment; when they are given more quickly, the patient has less time to reflect, and feels the less. I hope where this method of prolonging pain, is customary, an allowance is made by a fewer number. I should suppose,
pose, that two hundred lashes, trailed out in this way, would be felt with more pain than six or eight hundred, such as I have seen commonly inflicted.

Of the other punishments, viz. piqutering, and riding the wooden horse, I cannot speak much, having had few opportunities of seeing soldiers punished in either of these ways. I am of opinion, they are not so frequently used as that of which we have chiefly treated here; nor am I certain whether the Surgeon has any concern with them. This is another reason why I may pass them over.

Although I have, several times, in the course of this chapter, inveighed against the severity of flogging, yet, when the nature of the crimes soldiers are often guilty of are considered, it will not seem altogether so cruel. Their offences, for the most part, would bring them to the gallows, were they to be delivered over to the civil
civil law; hence, instead of cruelty, it often becomes mercy, and lenity; for when compared to this ignominious death, the idea of severity vanishes to nothing.

I thought it necessary to throw out these few hints relative to punishments, since part of a regimental Surgeon's duty is to see them inflicted. I wish, after all, the military laws knew no such thing as flogging; and that in place thereof, some other mode of punishment could be devised, less ignominious; on this head, however, I dare say nothing; it is out of my line of life. Though I wish it with all my soul, abolished, as an inhuman thing, more suiting the nature of savages, than civilized and polished nations; yet, as I have nothing better at present, to offer in its place, I must leave it as it rests, and refer it to the wisdom of a wiser Legislature.
The Utility of Experiments.—Danger of over-hasty Prognostics.

The Surgeon should institute, whenever an opportunity presents, experiments tending to advance the science he is engaged in; none can enjoy better opportunities for the application of new and unusual remedies than army Surgeons. The soldier is entirely at his disposal, as soon as his name is entered in the sick list; by this means he can repeat trials made by others, and put them to the test; or institute new ones, such as may seem to him to promise instruction, and be advantageous to practice.

"An experiment," says a learned author, "differs from a simple observation,
in as much as the knowledge that an observation affords, seems to present itself spontaneously to us; whereas, the knowledge we derive from experience, is the result of some attempt we have made, with a view to see whether a thing is, or is not."

"A Physician, therefore," (we always place the army Surgeon in this light) "who carefully considers the whole of the phenomena of a disease, may be said to make observations; and he, who in the course of it exhibits any remedy, and notes its effects, may be said to make an experiment."

That to make experiments, may require more than the medicines commonly in use, we grant; but if the Surgeon has improvement in view, he will not stop here for the sake of saving a trifling expense. A little money expended in such laudable pursuits, will be considered as nothing, when compared to the satisfaction.
tion he may receive, or the good he may do, both to himself and others.

By trials of this kind, it may be in his power to confute too hasty, or confirm still farther, well grounded conclusions. In his experiments, I would not confine him to articles alone now in use in the materia medica: others not yet received, may, occasionally, be had recourse to, and their virtues investigated; but all trials on the human subject, hazardous to safety, are ever to be avoided.

It is not meant here to exclude chymical experiments, if he has an opportunity of exercising his genius in this way; these may be prosecuted in the army, though not, indeed, very extensively. It will require no very expensive apparatus to repeat many ingenious experiments on the different Gases; if no use to practice should result from them, they may prove, at least, a virtuous amusement, and fill up a leisure hour.
hour more laudably than in dissipation, idleness, or the pursuit of folly. He may try the different strengths of the different articles of the materia medica in decoction, and infusion; and perhaps, sometimes, to take advantage of the knowledge he gains by this in his future practice. He may be more fully enabled to tell in what parts of the substances the chief virtues lie; whether in the gummy or resinous parts, (I speak of vegetables) and in what proportion they are to each other.

He may try the different antiseptic powers of different articles, in like manner, without much trouble, and thereby satisfy himself of the truth of what authors have advanced on the subject; and in these kinds of trials, who knows, but he may be happy enough to discover something which was over-looked by those whose experiments he is now imitating, and be led from thence to furnish us with a better explanation of the modus operandi of these articles.
articles, that may point to a better, or more efficacious method of applying them to the human body.

To conduct experiments, requires, however, no uncommon share of sagacity, when it is considered how small a deviation, in many cases, may occasion a very essential difference in the result. Any mistake, or neglect, however trivial it appears to the less attentive, may form the grounds of very erroneous conclusions; but notwithstanding, we may agree with the learned Zimmerman, that "A man of genius will soon perceive the modification he is to adopt, when he is about to put the precepts of others in practice."

It must undoubtedly be from some mistakes of this sort, that cause the great variation, which we find in the results from the same experiments, made by different persons; innumerable instances of this might be adduced from the writings of medical
medical and philosophical men. There are few who have made any progress in these sciences, that have not, in the course of their researches, had reason to lament it; much ingenuity has been thrown away, to no purpose; perplexity has been created, and truth, instead of appearing obvious, been involved in tenfold more obscurity *, to the fatigue and mortification of the student, who from this alone, often becomes disgusted at the uncertainty which surrounds him, and laments the mazes in which he finds himself entangled.

In our observations, previous to an experiment in practice on the human body, many things are to be considered; the patient's age, constitution; the former diseases under which he laboured, and their sequelæ in changing, or weakening the ha-

* Examples in those made on the Nervous System, also on those more recently made on Heat.
bit it may likewise be expedient to know, as well as the present complaint, and its duration; the state of his urine, pulse, respiration; whether he breathes freely, or otherwise, and to what it may be attributed, should his respiration be impeded; nay, even the position he lies in bed should not be overlooked; an uneasy position in bed may effect respiration, and create a change in the pulse, which a less attentive observer may be ready, rashly, and erroneously to attribute to the medicine last given, and mark it down as such; or, perhaps, to a cause more dangerous in its nature, an affection of the organs of respiration themselves, &c.

These, and many other minute, are attentively to be observed, and referred to their proper sources, in calculating the effects of a medicine, and forming a just estimate of the result of the experiment; effects from some, or all of these causes may take place, and mislead us in the conclusion,
clusion. It must be from something of this kind that obtains certain medicines credit, which better information shows they did not deserve; or make others be rejected, when they should have been held in esteem. The many trifling compositions, which have from time to time been in great esteem for the bite of rabid animals, is a strong proof of the one, and the no less bitter invectives that were once thrown out against the use of the Peruvian Bark, is a glaring instance of the other.

A faithful register from the time our experiment commences, of every change in the patient, should be kept, and our observations, now especially, made with care and circumspection.——“Observations,” says an eminent author, “should be exact, clear, and faithful.”——If this be necessary at all times, it is surely punctually to be attended to in making an experiment. In practising medicine, nothing, truly, is more necessary; yet observation, as it is here
here meant, most certainly requires a particular genius, a turn of mind, that cannot be supplied by the most labour'd industry. Some, we know, contend, that more is attributed to genius than it deserves, and even go so far as to deny that there is any such thing; yet while so many proofs to the contrary daily appear, we must beg leave to dissent from them.

With respect to a genius for observation, "it is easy," says Zimmerman, "to discover it in each individual, by observing how he is affected at the theatre; or at the sight of a picture, or a piece of mechanism, &c. One person will see only the dresses of the actors; another notice the decorations of the theatre; others attach themselves to the attitudes, and gestures of the performers; all these spectators," he continues, "are directed in their taste by some particular passion, and go to the theatre to flatter that passion, &c."
In the line of philosophical knowledge, we see likewise this variety of inclination; this varied taste. Whoever refused to admit that Sir Isaac Newton had a greater taste, a bent of inclination, or genius for mathematics than for poetry, or perhaps any branch of the fine arts? All the industry it was possible for him to apply, could never, in my opinion, have given him abilities to write Paradise Lost, the Iliad, or the Æneid; and vice versa, the authors of these three great epic poems, could never have unfolded to us the laws of attraction and gravitation, or untwisted, if I may be allowed the expression, a sunbeam into seven distinct and perfect colours.

In the pursuit of the different parts of medical science, one shows a predilection for anatomy; a second soon discovers a bias towards chymistry; while a third, contented with a more superficial knowledge of these, is led to excell in the operative parts
parts of surgery, and the dextrous use of the knife; while another, still, is more especially led to consider the pathology, and phisiology of the body, the phænomena of diseases, the exhibition of medicines, and possess a talent for observation, tracing their action on the solids and fluids of the living animal, and forming useful conclusions from thence. Nay, perhaps, there is no person, whatever, that does not possess a particular bias to one pursuit, in preference to another, independent of example, imitation, or habit; and this I would denominate genius for these several studies; and to me it appears a full proof that such a thing as genius exists.

Helvetius, Johnston, and Smith have denied that genius presides in so great a degree; and maintain that a man may be what he pleases, if he applies himself. This, in its full extent, will hardly be found to hold; most certainly not, in poetry, and the fine arts. If genius be a strong bent of
of inclination, with capacity for a particular pursuit, that pushes a person forwards, and gives him fortitude, and perseverance, to surmount all difficulties that present in it; where this is not to be found, the mind surely must flag, and excellence never be obtained. More, I am ready to allow, may be attributed to genius, than it deserves; but to deny its force entirely, would be rash, and contradictory to the evidence which every day's experience affords.

But to return; we shall now suppose, this inclination, this genius, if you please, present, and that the Surgeon has a natural turn for the cultivation of the different parts of his profession; for if this be not the case, he is wrong in joining in it, and has thereby deprived some other branch of business, for which nature had designed him, of a member;—he reads of experiments, as he peruses authors; he is desirous of knowing the truth, and of repeating
peating them; or, perhaps, he doubts of the truth of the results, from what seems to him the want of probability; or, he is led to make new ones from suggestions of his own. I say, doubts from want of probability; for, perhaps, to doubt, may be considered as a mark of his sagacity and discernment. Persons of little genius or discernment, are seldom troubled with doubts, but take things as they are told them.

When I advance this, I am not singular in my opinion;—Zimmerman, who was a man of much observation, has told us the same thing.—"The man of genius, alone, is able," he says, "to determine within himself the degrees of probability; and hence it is, that he alone can become a great minister, a great warrior, or a great physician. Such a man knows how to doubt, when he perceives, that the reasons why any particular thing ought to be believed, are of little value; and, on the other hand, he knows how
how to act, when there is greater reason for certainty, than for doubt.---Men of little minds are not susceptible of doubts of this sort."---But he very justly adds---"and they who do nothing but doubt, are incapable of acting like men of genius."---So, that we find, both not to doubt, and to doubt too much extremes, which the man of genius and discernment equally shuns.

If the Surgeon, then, is to repeat the experiments of others, made on the human subject, that which he is to imitate, is carefully to be perused, and every circumstance strictly kept in view. From the time he has come to a resolution, a proper opportunity is to be fought for his purpose; every justice ought to be done the experiment, both on the experimenter's account, whom he has thus under judg-

* Vid. Experience in Phys.
ment, and for the sake of medical improvement, and truth. The subjects of the trial should be as similar to one another, as the nature of the thing can admit, or the subject requires; otherwise he has no right to call this a test, or regard it, in any measure, either as a confirmation, or refutation of the experiment under consideration. But we must repeat here again, that no trial, dangerous to the patient's life, is ever to be risked: this would not only be wantonness, but wickedness; nay criminal, if done knowingly.

Medicines that have been long in the hands of quacks, and that have kept their credit for some time with the public, may be analysed, if convenient, and their virtues investigated; if on this, they are found to possess activity, trials, in certain determined doses, should be cautiously made, in diseases such as they have been famed for curing.---For, although, most quack medicines and nostrums, are some common
common substances, and often even *formula* of them, either now, or heretofore, in daily use, triflingly changed for the sake of disguise; yet we now and then find one among them of great activity, which from causes, such as we have formerly mentioned, has fallen into disuse with the regular practitioners; but which, i. e. its activity, it should have still held its place in the materia medica. These, by his cautious trials, he may be able to rescue from empiricism, and restore again to their deserved consequence.

The use of arsenic, though formerly employed by physicians, has long been almost banished regular practice, till lately. Perhaps, the discovery of the Puruvian Bark, might have been one cause of this; whether this be so or not, the success that followed its use, in the cure of intermit-tents, disguised in a nostrum, prepared by one Edwards, under the name of his taste-less ague drops, could not escape the notice of
of the regular faculty. None, however, took up the subject, till Dr. Fowler of Stafford lately turned his attention that way. He analysed it, ascertained its nature, and performed many speedy cures, not only on agues, but in some other diseases, by a solution of this mineral, in imitation of these noted drops.

Similar experiments have been since repeated by different practitioners, both in the metropolis, and in the country, in varied doses, but still with equal success. The number of cures, given us by Dr. Fowler, are many*; and Dr. Willan, amongst others, has published seven cases of its success in agues;---at the end of which, he adds,---"the above cases I have given in detail, as being the first which occurred, and thence soliciting more particular attention; it seems only necessary farther to add a ge-

neral report from the sum total of patients treated in this manner. The solution was prescribed for about forty others, in different species of intermittents, and succeeded almost instantaneously, in every case *. In the solution, he used, was made according to the formula, published in Dr. Fowler's work on the subject.

In like manner, I thought it incumbent on me to make trial of it. In the course of these last ten months several opportunities presented, in every one of which, it succeeded to my wish, and without the smallest accident, or inconvenience whatever, during its use. My formula differs, however, something from Dr. Fowler's, in its being more simple.---I found it unnecessary to add either nitre or alkali, nor do I even distill the water in which I dif-

solve it. I take six ounces, by weight of the common culinary water, used in this place, and add to it twelve grains of the white arsenic, of the shops, reduced to powder; this I place in the heat of 212 degrees, or that of boiling water, the phial being only slightly corked, to allow any air which may be extricated, to escape. During the time of solution, the phial may be briskly shook now and then, though I do not know whether this be absolutely necessary; in less than three quarters of an hour the solution is compleat. When it cools, the bottle containing it, is again weighed, and as much of common water, or for the sake of giving it colour, of sp. lavend. is added, as was found to have evaporated during the process to make up exactly the six ounces. By this means the dose is more accurately calculated, a convenience which I consider of some consequence.

I have
I have distributed this solution to several practitioners in this neighbourhood, with directions for its use, in order to collect their practice, and form a conclusion from as large a number of trials as possible; in every instance, that have come to my knowledge since, it has proved successful. The following I shall detail from the first of my own trials; and exactly as I find them in my notes.

CASE I.

Green, a soldier in the Queen's 2d regiment of Dragoon Guards, quartered in Ipswich, aged 30, put himself under my care, August 7th. 1786, by the desire of Mr. Hamilton, Surgeon to the regiment. His complaint was a quartan, under which he had laboured many months; the fits are long and severe; has taken pounds of bark; and often upwards of an ounce a day. By this means his fits were generally suspended for a short time; sometimes he has
has remained free from them for two or three weeks, but the disease always recurred. It occurred to me, to try arsenic, having lately, before, perused Dr. Fowler's reports, relative to this mineral.

As this was my first experiment, I made use of only one grain to the ounce of water, which I had distilled as directed by Dr. Fowler for the purpose; the bottle into which it was put was suspended in a vessel full of water, (as already described) and set on the fire to boil.---When the arsenic was dissolved, the solution, when cold, was weighed, and fix ounce, the quantity I prepared, was found to have lost three drams by evaporation; to supply this, 210 gutts of common water were added; I calculated this to be the quantity lost, allowing 70 gutts to the dram; no allowance was made for any loss the arsenic might have sustained, judging it to be trifling. Aug. 8th. hor. 10. A. M. gave of this gutt. xxxv.---in a little common
common water—ordered it to be repeated at four, and at ten P. M.

Aug. 9th.—No inconvenience from the medicine; at nine this morning the same dose, as yesterday, repeated—at seven P. M. took a second—the fit returned this day, and prevented his being regular in the time of taking his medicine:—two doses, therefore, were only given this day: medicine caused no sickness—his appetite, he thinks, rather impaired; the fit was shortened this time a full hour.

Aug. 10th.—This morning took forty gutts—and repeated it, to the third time, at the distance of six hours from each—no other inconvenience than a slight degree of impaired appetite.

Aug. 11th.—Took the medicine, as yesterday—without inconvenience—two hard stools to-day; to-morrow expects his fit about two P. M.

Aug. 12th.—Took gutt. 50—thrice to-day, and at six hours distance each—fit commenced an hour later—was not less severe
vere than formerly.—The last dose puked him a little, and he had seven stools.

Aug. 13th.—Omit the drops—let him have an emetic.

Aug. 15th.—This day had recourse to the drops—took gutt. 50, thrice as before—did not make him sick—fit returns to-day.

Aug. 16th.—Had little or no fit yesterday—medicine did not make him sick.

Aug. 17th.—Yesterday no inconvenience from the drops—had four stools—appetite not impaired—to-day took gutt. 60—thrice.

Aug. 18th.—Yesterday had only one stool—drops did not give uneasiness—this morning is a little indisposed—or faintish—as he calls it—expects his fit to-day.

Aug. 19th.—Had no fit yesterday—took his medicines—had only one stool—complains to-day of a slight pain across the abdomen;—yet, augmented his medicine to-day to gutt. 65—with orders, that if the pain increased, he should take only two doses.
Aug. 21st.—Yesterday had no fit—medicine gave him three stools—no sickness.

Sepr. 3d.—Is compleatly cured.

I may add, he remained so for upwards of six months after, i.e. till the regiment marched to other quarters.

The reader will perceive, this cure took up twelve days, i.e. from 8th. to 20th. inclusive; for on the 21st. no medicine was given—and he began it on the 8th—the reason, perhaps, it did not yield sooner, was owing to my cautious dose; I thought it safer, as it was my first trial, to be rather under, than over in my dose.

CASE II.

Samuel Thompson, aged 21.—A soldier in the same regiment—was soon after put under my care by Mr. Hamilton, seeing the success I had with Green.—This was a quotidian of six weeks duration;—fits return daily between eleven and twelve.
—I began with gutt. 35, of the same solution, of one grain to the ounce, and repeated it at the distance of six hours, to the third time. The day before I began with him he had an emetic, which operated well—report—yesterday had his fit as usual—medicine has had no sensible effect—this day to be repeated as yesterday.

Finding it tedious to measure out so many gutts, I thought of preparing the medicine of double strength, but was uncertain at this time whether I could dissolve twograins in an ounce—on trial, however, I found no difficulty*;—of this I began with gutt. xx. ter de die.

Morning report.—Had his fit yesterday as usual; no stools from the medicine—today the medicine to be repeated to gutt. xxxv. ter.—each dose, at the distance of six hours exactly.

* I have dissolved three grains to the ounce since this.

Morning
Morning report.—Yesterday had three stools—fit returned an hour later—less severe—medicine griped him a little—but no other inconvenience—ordered the same to-day as yesterday.

Morning report.—Had three stools yesterday—missed his fit entirely—only about the hour of its former occurrence, felt a little anxiety—medicine griped him considerably—appetite impaired—ordered to intermit the medicine—two days now intervened without any—at the end of which report—no fits since.—Repeated the medicine two days more—quantity as before—no fits—report two days afterwards—continues well—dismissed cured.—In like manner he remained well till the regiment marched into different quarters.

I gave Mr. Hamilton some of the solution, requesting him to try it, when opportunities offered.—Sometime afterwards he reported to me several cases of its speedy success, both on the soldiers, and on a few paupers.
patapersons in the town, whom he found labouring under intermittent.

**CASE III.**

**John Gould, Esq.** near this town; requested me a few weeks ago, to give advice to a poor man, called Hynd, at that time one of his labourers, at haymaking, whom he found one day in the meadow ill.—He had been afflicted with a quartan for several months—I gave him the solution; beginning with gutt. xxv—ter de die—two days after he had his fit—but not less severe—the medicine neither griped, nor gave him any uneasiness.—I increased it now to gutt. xxx—ter de die:—The second fit was considerably shortened—no looseness, nor gripes.

Continued it at this dose some days longer—he escaped the third fit altogether—had two or three loose stools, and a slight pain across the abdomen—discontinued the drops for three days—at the end of which, repeated
repeated them three days more—no return of the fits—dismissed cured—with orders to return in a week, to report how he had been in the intervals—continues well *—Quartans are allowed to be the most obstinate of all the kinds of intermittents—but this last yielded, in a short time, to the medicine—perhaps, had I ventured on a larger dose it would have yielded sooner; but I think it safer, with so active a medicine, not to be too bold.

The medicine sold under the name of Edwards's Taftelefs Ague Drops—has certainly a much larger proportion of the arsenic, in a given quantity, than what I ventured to prescribe.—As the dose is only seven gutts—and yet the effects are sometimes, it is said, violent. The doses are ordered to be repeated at the distance of nine hours.—It is but justice, to add, however, that a practitioner here, assures me, he has ad-

* Some weeks have now elapsed, without any return of his complaint.
ministered those very drops, and he adds, used many a bottle of them,—for several years, in cases of the intermittent kind, with perfect safety, and speedy success.—This surely speaks greatly in favour of arsenic—for it is not now doubted that this is the mineral which gives activity to this nostrum.

In the winter of 1781—and spring 1782—I had a soldier whose ague I was not able to overcome,—he had got bark, and other medicines, in use for the disease, till he was tired taking them.—He seldom was free more than a week.—Marching into Royston, in the beginning of July, where the men were to remain a week or two; he was again taken ill.—I was advised to try the Tasteless Drops.—I had some reluctance to exhibit a medicine, the composition of which I was ignorant, but by the persuasion, chiefly, of his Captain, I complied. He took them only a few days, when his ague left him, and never returned afterwards, during the time I knew him, which
was more than a year:—Yet, I confess, this did not induce me to try the medicine, again, till I saw Doctor Fowler's reports.

It is needless to tire the reader with more cases; the medicine, I am persuaded, will be found on most occasions, especially in intermittents, a safe and efficacious cure, if administered with that care and circumspection, which the regular practitioner is bound in duty to use with every active article of the materia medica;—nor should it be the least objection, that it is one of the most powerful poisons with which we are acquainted; several other articles in daily practice are not less so; for instance, corrosive sublimate.—Nay, it is substances of such activity, that form the most useful part, of what are denominated articles of the materia medica, and by which we may hope for most success in the cure of diseases. This ought to be one strong reason, however, for the employing of the regular faculty, and the supression of quackery.
With respect to arsenic, it has been tried in other diseases, besides intermittents, not without success.—Mr. Hamilton, already mentioned, says, he cured a soldier of an epilepsy thereby, since the time I taught him to prepare it.—I tried it in a case of this kind, this spring (1787), for some weeks, but it was without success.—It was, however, a case of long standing, in which numberless medicines, by a variety of practitioners had been employed, at different times, for several years past.—A Surgeon, at Bury St. Edmund’s, in this county, informed me, sometime ago, he was trying it on an epileptic patient, and he had some reason to think, from what he had observed during the time he had administered it, that he would be successful,—but I have not had an opportunity since of knowing the result of this trial; on the whole, it is the duty of every practitioner to repeat trials made by others, or make new ones himself, as he sees opportunities, and as suggestions of this sort occur.
occur to him, and among these, it is no less the duty of the regimental Surgeon.

In the months of September and October, 1781, many of the soldiers were seized with the Typhus, as described by Professor Cullen. The usual symptoms, with depression of spirits, and sudden loss of strength, formed the disease. In some cases the head was violently affected, in others, only a giddiness, with but little pain, and alternate hot and cold fits of short duration; but these were often so violent, at night especially, that when the patients came to report themselves sick, and be put under my care, they described their complaints as a quotidian, or one-day fever, as they termed it; the state of the pulse was generally, somewhat, though for the most part, but little accelerated, and the constant thirst and parched tongue that accompanied it, assisted to point out the nature of the disease, and easily distinguished it from an ague, where all the symptoms
Symptoms, in the intermission, for the most part, vanish, and the patient appears as in health.

The season proved very variable; one day rain, another clear and warm, but a hoar-frost, which covered the ground frequently in the morning, rendered the air, as it dissolved, cold and chilly, for a considerable part of the day. The regiment was but thinly clothed, the men not being permitted (for some reasons, best known to the commanding officer) to wear their new clothes, before the beginning of December; these were the evident external causes of the fever; the irregularities of the men's way of living may be mentioned as occasional and exciting causes. In these fevers, however, I always suspect contagion, though I may not be able to trace it.

I found very few of these fevers that required the free use of the lancet; of this I am always sparing, when there does not appear
appear to me an absolute need of it. For I have often found, where it is improperly used, that recovery is not only more doubtful, but the disease seems thereby protracted to a later period, by an increase of debility. Some died, after lingering to the twenty-seventh day; but most of them recovered.

About this time a correspondent sent me from Edinburgh, a book intitled, a Physiological Disquisition, and Enquiry into the Principles and Common Practice in Fevers, in that city, wherein was recommended a practice founded on different principles from the common, taught by Dr. Brown. To confirm these new opinions, a numerous train of cases were advanced, which had terminated happily by it; and contrasted with these, were several that had ended fatally by the old practice, in the Royal Infirmary of Edinburgh.
In this enquiry, published by Dr. Jones, much ingenuity of argument is used to induce the reader to disbelieve all the distinctions of Nosologists, and to inculcate the opinion that all the genera, and species, &c. into which diseases are divided, may be reduced to two alone, namely, those from debility, or asthenia, and those arising from too high a degree of health, or phlogosis. We are told, also, that the doctrine gained ground among the unprejudiced, and many of such as were heretofore adherents to the Cullenian system, which this opposed.

In the class of asthenic diseases, the cure consists in strengthening, and stimulating medicines, and the quickest of operation, and most diffusible, to use the author’s term, are to be preferred. Hence wine, brandy, opiates, and volatile alkali were given to a degree, never ventured on before, especially opiates; and the change for the better, that almost instantly followed, were spoke of as incontestible facts,
facts, to prove the superiority of the doctrine.

Willing to find the truth as far as I was able, and not slavishly bound down to any man's opinion, or system, as such, I watched from this time, the first favourable opportunity to make trial of this doctrine, which promised such advantages: out of six men, therefore, ill of the fever, already mentioned, I chose one for the subject of the experiment, which appeared to me the best adapted for giving it the fairest trial. It was one, where all the symptoms of debility were evidently marked, so that I could in no wise mistake its asthenic nature. It was, as near as I could find, the eleventh day of the fever; for soldiers are generally several days ill before they report themselves in the sick list, if they think they will be confined to the hospital, to which many of them have an aversion.
BATES—of the General's company, with all the symptoms common in Typhus, head-ach, parched tongue, prostration of strength, restless nights, flushed cheeks, delirium, pulse about 74 beats in a minute.

At eleven—A. M. a dram of sp. C. C. to which were added gutt. xl. of Tinct. Theb.—in an hour after, pulse rose to 80. —The opiate did not induce sleep. He roved violently as before.—The room was darkened, and all noise kept from him, as much as possible.

Visited at four P. M. same day.—Pulse now 76—and small—delirium as before.—I should mention, that he had slept little or none for several nights before this plan commenced, but was all this time delirious. The same repeated as at last visit.—Here then were no less than sp. C. C. dr. ij. —with T. Theb. gutt. lxxx. administered in
in the space of five hours.—But as this was trifling to the quantity recommended by Dr. Brown *, I could not call it a fair trial, if I stopped here, without pursuing his stimulating plan farther.

At half past seven—returned—this was three hours and an half from my last visit—found him quiet, and was informed by the nurse, he had been so for some time. On entering the room, however, he lifted up his eyes, which were heavy and red, and he began to talk wildly,—yet named me as soon as I came near.—Gave him now a teacup full of red port—pulse 80.—At half past eight visited again—gave another teacup of port—at ten, another cup of port, to which T. Theb. g. xxv. were added—at twelve the same night visited—another cup of wine was given—Here were no less than 105 gutts of T. Theb. in the space of eleven hours.

* Vid. Jones's Enquiry, already mentioned.
From this till eight next morning (Monday) he drank about ten ounces of beef tea—this was always given warm—his pulse 84—tongue moist.—I began now to form some hopes of his recovery—yet he roved almost as much as formerly.—I went on further with the plan, and gave him gutt. Ix. of T. Theb. in a cup of wine—took no more of the medicine this day—continued much the same.—Next morning at ten, A. M.—found his breast and shoulders full of maculae—his pulse 76—and seemed silly—turned up the white of his eyes a little—was, nevertheless, sensible when spoke to—called me by my name—complains of great sickness—attempted while I stayed to make water, but could not—drank, since last night, a pint of beef tea—at one P. M. got a cup of wine.

Visited an hour after, viz. at two, and found him quiet—at four, and gave him another cup of wine—at nine, and found him singing, when I entered, and talking foolishly—his teeth and lips furred over, and
and black, with pulse at 88—this was ten beats more frequent than in the morning.

As the delirium, which never abated, was now increased, and he had got no opiate this day, I ventured on a larger dose than I ever gave before, viz. T. Theb. gutt. lxxxviii.—Next morning visited him at nine, and found him dosing—was informed by the nurse, that he lay very quiet through the night. Pulse now flow and equable—I thought him better on the whole—at eleven A. M. got another cup of wine.

I was willing now to intermit a while, and observe what the effects of this last dose might be, so gave nothing more till next day at eleven, A. M. when I found him not only roving as usual, but with subsultus tendinum—frequently convulsed, and pulse very feeble and up to 108.—His death now appeared inevitable—got a cup of wine—ordered his head to be again shaved—for it had been shaved before—and a large blister to be applied over it. A blister was administered before the application
application of the blister—this gave him a stool—made water also.

While I was present he suddenly started out of bed, and I ordered him to be supported some minutes on his legs—delirium more encreased—eyes wild.—At eight P. M.—his pulse 120—and weak—passed two large lumbrici—next morning found him more composed—gave him a cup of wine, and ordered him another at one o'clock.

The opiate was intermitted this night, and till next evening, when he got 105 gutts.—This was coming something nearer to the new practice of Dr. Brown, though still much short of it.—For from the little success it had hitherto afforded, I was afraid to proceed as far as this publication set forth.—The delirium had never abated.—From this till next evening he got no more, when 110 gutts were administered—with no better success than before.—The day following I thought him better, though his pulse was weak, and frequent.—Sometime after it was no less than 130.—He was or-
dered wine and beef tea this day—but in the evening he died without a struggle.

This, I am led to believe, will be allowed a pretty fair trial of the diffusible stimuli applied in case of Tiphus. But whoever will take the trouble to examine it, will find no great encouragement to repeat the experiment. For my own part, I am inclined to think, I never shall make another on the same principles. Here, evidently, no advantage was obtained; nay, I am led to believe it was hurtful, though I dare not say the case would have proved more successful, if it had been treated on a different plan.

Perhaps, it will be said, I was too timorous, and did not venture on large enough doses; it may also be objected, that I omitted the use of Tonics.—Such as the Certex Peruv. &c. The reason was, I wished to tread as near as I durst in the footsteps of the father of this new doc-

Vol. II. S trine,
trine, as set forth in some of the cases, in the publication already quoted, by which it is endeavoured to be proved the best practice yet found. But I shall not take on me either to condemn, or approve,—here is a case, I lay before the public, pretty exactly narrated.—It may, no doubt, take many more trials by different practitioners, to settle the merits or demerits of this system.

Stork extolled Cicuta to a degree, not yet deserved, according to experience in these countries.—But the many trials made after him, though it could not be concluded that the medicine deserved all the praise he bestowed, have confirmed it to be an useful article of the mat. med. and one, from which we may promise ourselves advantage in various diseases. The same conclusion, perhaps, may be drawn from this medicine in fevers; it may teach us a more liberal use of opiates, without going so far as this new doctrine points out.

Graham,
GRAHAM, the noted Quack taught us, that with safety, we might administer Æther in much larger quantities than had ever been ventured on before; and the Suttons, by an extensive practice, first brought the cool regimen in the inoculated small pox into almost universal use. Though few of the Regulars ever administered the former in such quantities as Graham sets forth he did; or pursue the starving plan in the inoculation of the small pox to the degree practised by the Suttons, several diseases, no less fatal, having been the consequence of it, yet both have been useful, especially the latter; and with respect to the Brunonian system, perhaps the same inference may be drawn.

Let us, however, keep in mind the pilot's advice, and endeavour, by a middle course, to gain the wished for harbour, since death may be as equally certain from the Rocks of Scilly, as from the Gulph of Charybdis.
Nē incidamus in Scillam cupientes vi-
tare Charybdin.

In cases of extreme debility and dan-
ger, we find Dr. Heysham administering
large doses of opium from gutt. xl. to gutt.
1. united with vol. alk*. as a more instan-
taneous, and diffusible stimulant, he says,
than either brandy or wine, the former of
which he gave in larger doses than com-
mon, and the latter often to two bottles
and an half in twenty-four hours, with
the best effects. Many authors, from
Sydenham to the present day, extoll its
use in fevers, but none that I have perused,
ever carried it to the length recommended

• His formula is as follows.
R. Conf. Cardiac. gr. xv._
Aq. Cinnam. ten. Semunc._
—spirit dr. ij.
Sp. Lavend. compos. dr. j._
T. Theb gutt. xl. vel._gutt. l._
Vol. alk. gutt. xxv.—M. f. hauft. h. S. Sumendus.
by the author already mentioned, whose practice I attempted to repeat in the above case.

Professor Cullen, speaks favourably of opium as a stimulus*, in fevers of the nervous kind, where the vis vitæ is apt to sink.—He believes, wine and opium, act in some measure analogous to each other;—and he thinks it useful, particularly in every case of delirium from irritation; but that in an inflammatory state of the brain it is hurtful.

Doctor Campbell, thinks it chiefly useful in the beginning of fevers.—But he says, "I have been informed, from authority on which I repose the greatest confidence, that the exhibition of opium in larger doses in the more advanced periods, and more dangerous states of the disease,

* Vid. Lect. on Mat. Med.

has
has also been attended with happy effects. —To the amount of 120 drops at a dose *. But having myself had no opportunity of seeing it successfully given, under such circumstances, I shall decline speaking upon that point.”—As to its being a poison, he very properly adds, “I do not know that the smallest quantity capable of inducing death, has been ascertained by experiment, or the largest that may be taken with impunity.—Much will depend on original idiosyncrasy, or peculiarity of constitution, which cannot always be known a priori; and upon the degree and nature of the morbid affection, at the period the opium is administered.”—As one person will bear of spirituous liquors, or wine, without being affected, twice as much as others, so it is allowed to be the same with opium.—In cases of mortification, in severe pain, locked jaw, or

* Vid. Treat. on Typhus.—p. 86.

Tetanus,
Tetanus, it may be given in such large doses, with advantage, as might poison a person in health.

Doleus tells us of a case, where only a scrupule of Op. given in clyster for a complaint in the bowels, brought on appoplexy, and death*;—and a poor woman, Dr. Campbell tells us, in his neighbourhood, in a consumption, took two drams of T. Theb. by mistake, at once, when comatose symptoms ensued, which terminated fatally in twenty-four hours.—The same author says;—"but even in states of disease, where Op. is manifestly proper, an over dose may be attended with the same bad consequence as in other situations.—I have an unfortunate case in my eye, where an attempt was made to cure a violent convulsive disorder by means of opium."

* Vid, Encyclopaedia. p. 322.
The patient was a robust man, who was affected with severe and frequent twitchings: one day he took two grains of solid Op. which was repeated at the interval of two hours, and again at the end of other two hours, without any sensible effects. Six grains having produced no alteration when taken in this way, he took three grains the day following, at a dose, and three more at the distance of an hour, without any perceptible consequences. The succeeding day, the spasms being more violent than ever, he took thirteen grains of the same medicine in the course of five hours, without the least effect on his convulsions; nor did this quantity produce either sleep, delirium, or thirst.

He was then ordered to take gutt. Ix. of liquid laud. which was repeated four times at the interval of an hour between each dose. This had no sensible effect in diminishing the spasms, or affecting him in any other manner. The next day the dose was
was augmented to gutt. Ixxx.—and repeated four times at the same intervals. He slept about an hour after taking the four doses of laudanum, and then awoke, seemingly, in his usual state of health, the Op. having had no effect on his convulsions; he went to bed about ten o'clock; at twelve, the nurse observed he was in a very profound sleep, but did not attempt to awaken him; at six in the morning, she found him still in the same state as before; and endeavouring to rouse him found it impossible; every method was used for that purpose, that could be thought of, but in vain; he died about eight o'clock that morning.

On dissection, an Echymosis was found in his stomach; no other morbid appearance in the alimentary canal, nor in the brain.

"Here," he goes on, "Thirteen grains of Op. were given in the course of a few hours, without any bad consequences. At another time 240 drops of Laud. which are
equal to about nine grains and an half of Op. also without any sensible effects; but, when on the succeeding day, the dose was increased to 320 drops of Laud, which is equal to thirteen grains of Op. (a quantity that he had taken before in a solid form, with impunity) fatal consequences seemed to follow the exhibition of the medicine; it must not, however, be suppressed, that a pint bottle was found in his bed, which contained some whisky, and of which it is supposed he had drank."

The most that I find Dr. Campbeell administer, was gutt. lx.—on some occasions, he found it necessary to add 20 or 30 gutts. in two hours after—before he found it followed with rest.

Doctor Martin Wall speaks much in praise of opium also—yet I do not find he ever ventured to pursue it to any thing like the length the new doctrine sets forth. A medical practitioner, about twelve miles from
from this place*, conversing lately with me on the subject, told me very freely, he had tried opium in this way, and was inclined to think he did hurt by it;—the quantity given, he did not mention; and from my own experience, in many trials, in smaller doses; such as from half a grain to a grain and half, in fevers, though it was often beneficial, and highly necessary, yet it was by no means universally followed with good effects in all cases.—I have found several that it rendered restless, instead of producing sleep,—and thirsty, and vapoured, who had better nights on leaving it off, than when they used it.

A much simpler method of proceeding was successful, lately in Edinburgh.—Out of one hundred and thirty children, in one of the charity hospitals in that city, eighty-five were seized with this fever; they

* Ipswich.
were under the medical care of Mr. Kerr,—the first thing given was an emetic, and as soon as possible after been seized—the succeeding treatment consisted in cleanliness— the greatest attention being paid to it in all its varieties;—fresh air, the apartments being almost constantly ventilated—belly kept open by simple laxative injections—diluents copiously employed, and sometimes acidulated.—By this simple method, not one of the whole died; yet several had alarming symptoms—petechiae, vibices,—and haemorrhages.—The Matron of the hospital was seized with the fever; she took an emetic as soon as she found herself ill,—and without any thing more, that may be called medicine, she also recovered in a short time. From whence it would appear, as the Editor says, and to which I am inclined to subscribe*,” that in the treatment of fevers,

practitioners are as often apt to err by doing too much, as by doing too little."

That the pulse was very slow, in the case, on which I made my experiment, is no uncommon thing in these fevers.—Dr. Campbell had one case where the patient died, covered with petechiae, whose pulse never rose above sixty-six strokes in a minute.—A second, who also died, where, till the day preceding her death, it never exceeded seventy-seven strokes in the same space,—and a third, whose pulse beat no more than sixty-eight in a minute—but in others, again, it is very greatly accelerated. —Pulsus, parvus, debilis, plerumque frequens are the words of Dr. Cullen, in his Definition of the Disease.—Nor is the heat of the skin always increased.—Calor parum auctus—as the same Nosologist expresses it,—but the sensorii functiones plurimum turbatae; and the vires multum imminutae, are seldom found wanting.
To sum up the whole; though I dare not subscribe implicitly to the doctrine laid down, by such as extoll very large doses of this medicine, in febrile complaints; yet, if used with caution and proper circumspection, a due regard being had to the particular constitution of the patient in bearing its use, much advantage may reasonably be gained by opium; and we may likewise justly say of it, as the great Sydenham did, that, fine illo, manca fit, & claudicet medicina."

With respect to making experiments on the living subject, it may not, at all times, be expedient to discover our intention. There are few, who have not an aversion to become the subject of experiment, even though attended with the utmost safety and innocence; nor are we to satisfy, at the expense of much uneasiness, perhaps pain, and danger, foolish curiosity, where no inferences useful to science can be drawn from it.
I REMEMBER, many years ago, a practitioner, who administered to a patient, no less than twelve grains of T. Emetic, merely to see what effect this double dose, as he termed it, would have. The consequence, as may be expected, proved very nearly fatal; for the patient was thereby thrown into violent convulsions; his hams drawn up with violent spasms; and his life for several days, rendered extremely doubtful. The story made some noise in the neighbourhood, and the blame was laid on a young man, then his assistant in the shop; but it must not be hid, that he was generous enough, afterwards, to remove the stigma from the innocent, where he saw it so unjustly placed, by avowing the fact.

We come now to hazard our opinion, with regard to the exhibition of doubtful medicines. It has been long laid down as a medical maxim,—Melius dubium, quam nullum uti remedium,—or, that it is better to
to have recourse to a *doubtful remedy*, than to none.—But, perhaps, objections may be raised to the application of this precept in its utmost extent; because to adhere to it, and act innocently, in our practice, on all occasions, will require no small share of sagacity.

If we are determined, however, to apply this *dubium remedium*, it should, in my opinion, certainly be such, as is calculated, if it does *no good*, to do *no harm*; and yet, if we have any hopes from its use, they must be founded on *certain qualities*, perhaps *active qualities*, we know it to possess; and a comparison of these, with some *probable* or *certain* state of the organs of the body, on which it is to have salutary effects.

In *doubtful cases*, without acting in this *circumspect* manner, we act * rashly*; yet to reason thus by induction, though it be useful, can only lead to a degree of knowledge, and not to certainty, but it is a clue notwith-
notwithstanding, that may be allowed occasionally to guide us; a taper that may lead from a doubtful into a more direct, and certain path.—"Probabilities," says an author lately quoted, "are not to be despised, if they are drawn from experienced facts, to which we are led by the senses; because they are then to be established as so many fundamental propositions. A medicine which has often been useful in a case, and in circumstances similar to these of the case before us, will probably be useful in this, but if I have not seen it tried in these cases, my conjecture, will be mere chimera. We ought, therefore, on such occasions, to reason only from experience."

If we have recourse to dangerous remedies, merely to learn their effects in cases, where the patient, in our opinion, is past hopes of recovery, so that should the worst happen, we shall think ourselves free from blame, we may err; for this must be founded in the truth of our prognostic.
That the wisest are frequently deceived in these; is well known. This has, and may happen agreeably, sometimes, contrary to our *prognostic*; and this incertitude, should ever make us cautious in the exhibition of dangerous medicines, from an idea, that death appears inevitably approaching, and must take place.

We commune with ourselves, perhaps, in this manner.—"It is in vain to be any longer solicitous respecting the fate of the patient; my skill, in medical science, can prove of no use in his case; yet I have heard of certain complaints, seemingly similar, where a certain medicine, when everything else had failed, was successfully exhibited. As all hopes are here at an end, I can have little hesitation of trying it; yet I am perfectly convinced of its doubtful, as well as dangerous effects. I know it may do mischief; yet it may *chance* to do good here as in other cases where it proved salutary; let things fall out as they may, since
since every other medicine I can think of has failed, where can be the harm in risking a trial? No one can blame me for killing a dying man." Such reasoning, it is to be supposed, as this, before the qualities of James’s powders, and their effects were fully discovered, was often used. They were often given as the last refuge in cases of fever; and as often, not only at improper periods, in the exhausted state of the patient’s strength, when the disease had spun-out to several weeks, but in improper doses; the consequence was, they killed many, though they cured some. The cases that terminated happily were publicly mentioned, while those that ended fatally, were looked on to be occasioned not by the medicine, but by the disease. These abuses, since the composition, and qualities of this medicine have been better understood, are now corrected; perhaps much more good, and certainly less mischief results at present from their exhibition in the hands of judicious men than formerly.
With respect to the above reasoning it is specious; but I think it in some measure wrong; first, the prognostic we have made, may be ill-founded; for while life remains, there always remains some room for hopes, because many of the operations of nature lie so far beyond our reach, that even the greatest penetration cannot fathom them. What then can common abilities, and superficial observation avail? We know from the experience of ages, that the efforts of nature, which in the end turn out salutary, appear dangerous in the eyes, even, of the wise; and in reality they are so; since it is frequently found necessary to attempt to moderate them.

If on occasions of this kind, a less attentive observer, or a practitioner of less experience, from too hasty conclusions, gives up his patient, he acts worse than a coward; at least he discovers a degree of timidity allied to ignorance. And should he now rashly, and without the advice of other
other medical men, and the concurrence of the patient's friends, if they be convenient, administer a medicine of the nature of which he is altogether unacquainted, or, of which, from probable reasoning, he cannot conclude favourably, he is wrong, and should beware of the consequences.

In situations of this sort, I should esteem it both more safe, and not less conscientious, to trust the case, in a great measure, to nature alone, than make hazardous attempts. Let our care now be directed to what are called the non-naturals; to sleep; urine; stools; food; drink; perspiration, &c. and suffer nature to perform the rest. I can easily conceive more danger from being too busy with medicines of the more active kind, than from none at all; and, as has been said on another occasion, it is safer to do too little, than too much.
The particular nature of diseases is frequently so obscure, that the utmost sagacity cannot discover it; and, in such cases, it is evident, that it is at least an even chance that medicines of any power may injure rather than benefit the patient; in such a state of uncertainty, it will certainly be prudent to give, in the form of medicine, what cannot produce any essential change; and in the mean time remark very accurately, the effects of diet, which will often afford the safest clue to the general nature of the disease; and which being ascertained, we shall have advanced one step nearer to a knowledge of its particular nature *

But while we advance this opinion, it is not meant to inculcate indolence, or inactivity, or to deter from rational experiment; the last I would encourage.

We have the example of eminent men, both in and out of the army to follow here. It was in the army Sir John Pringle, Professor Home, Dr. Brocklesby, with many others, made useful experiments, and laid the foundation of a practice which still continues.

It is, however, in such states of uncertainty, as already described, that it becometh us to call others to our aid. Some others of the faculty should be now consulted; it will be for the attending practitioner's credit to do this: it is preferable to the precipitate use of this doubtful and dangerous remedy. Our prognostic, though formed with every possible care on our part, may be erroneous, and we should act with caution.

"It is a curious fact," says Dr. Adair*, "that though it might be reasonably ex-

pected, that considerable injuries of the brain must always be followed by great weakness, or total abolition of sense or motion; yet in some cases neither has been affected, and the patients have survived after wounds and imposthumations of this delicate organ, and in one instance after half of the brain was destroyed.—A caution against precipitate prognostic even in the worst possible cases.”

As an instance of the little reliance, sometimes to be placed in prognostic, and to point out their fallacy, we may mention one in the case of the once celebrated Mr. Pultney, as related by Bishop Newton. “This gentleman,” the Rev. Bishop tells us, “lay ill of a pleuritic fever, once at Lord Chetwynd’s, in Ingestree, in Staffordshire. He was attended by Drs. Hope, Swynden, and other physicians, from Staffordshire, Litchfield, and Derby; by Dr. Friend, from London, and Dr. Broxholme, from Oxford.

These
These two last mentioned gave him over on their arrival, finding, as they thought, the case desperate; he was still alive, and was heard to mutter in a low voice, *small beer! small beer!* They desired that this or any thing else might be given him. Accordingly, a great silver cup was brought, which contained two quarts of small beer; they ordered an orange to be squeezed into it, and gave it to him; he drank the whole at a draught, and called for another; another was given him; and soon after drinking that, he fell into a sleep, and a most profuse sweat, for near twenty-four hours. From that time he recovered, and so speedy was his recovery, that in a few days his physician thought it unnecessary to attend him longer."

I shall now venture to relate a case wherein I was agreeably disappointed in my prog-

* Bishop Newton's Works.

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nositic, in the spring of 1782; though I thought myself sufficiently warranted, from the symptoms, to pronounce then as I did. The patient was in the seventeenth or eighteenth day of a Typhus, as far as I could learn, for it is difficult to find the exact commencement of these fevers, as we are neither called early, nor can the patient be distinct in his account; every attention in my power was paid from my first visit; all the symptoms carefully noted, and the changes that took place as diligently watched; the bark had been administered, and likewise wine in good quantity, more than commonly falls to the share of regimental patients. I had likewise tried calomel joined with camphor, in the manner prescribed by Lyson in fevers; with many other remedies, all with a view to raise the vis vitae. My patient's strength was hourly sinking, and for two days his life appeared doubtful; but I had as yet been cautious in publicly giving my opinion of the event, though often interrogated.
rogated on this point, a precaution which every medical man should take. In the evening I visited him, and things appeared much against him; yet I still hesitated in declaring my opinion. Next morning I visited again, but on entering his room, there was so evident a change for the worse, that my hesitation was now at an end; the event appeared too plain, I thought, to be concealed even from the by-standers. The report I received of his night's rest, and above all, the appearance of his look prognosticated a speedy dissolution; his countenance was sunk, and death already seemed to sit on each eye-lid; the corners of his mouth were fallen, a symptom I had often noted to portend speedy death; his urine and excrement passed involuntarily; he had a subsultus tendinum; his pulse so feeble and weak as scarcely to be felt, and a constant picking at the bed-clothes. I forbore now to prescribe, and only admonished the orderly (this happened in a billet) to give him now and then a little drink; I left the house, therefore, with orders
orders to let me know the time of his death, for I had no doubt remaining respecting it. Having heard nothing more of him, I visited next morning, and, to my agreeable surprise, found every deadly symptom changed for the contrary; he was sitting up in bed, and the orderly feeding him with panada.

The unfavourable appearances continued, they told me, for some hours; while they expected every deep sigh he fetched would be his last; but he sunk, after this great struggle, into a profound sleep of seven hours, and awoke, refreshed, sensible, and changed in the manner I saw him. He soon recovered, so well, as to render my attention needless; but I freely confess, I was more obliged to nature for her timely interference, than to any thing I was able to do for the patient. I doubt not but many others have been similarly circumstanced; and hence it is, that prognostics, in my opinion, should be made
made with caution, and relied on with doubt.

"A Physician," says Zimmerman, "who goes so far as to predict what is to happen, can, on many occasions, say only, that it is probable such an event will take place; sometimes, however, it is impossible to foresee this probability. The probability of a prediction is founded on the effects that have been observed in similar cases; these effects are, therefore to regulate the conduct of the observer."

Hypocrates himself was aware of the great difficulty of forming a probable prognostic; and though he had all the observations made by the family of Esculapius to assist him, he readily acknowledged it, and does not hesitate to declare, that it is very easy to be deceived. "The "prognostic, in acute diseases," says he, "is uncertain, and it is impossible to say "infallibly, whether the disorder will terminate in death or in recovery."
CHAP. XIV.

Of the Mate's Qualifications.

E V E R Y regiment has a Surgeon's Mate, or an Assistant Surgeon, whose duty is equally the same with that of the Surgeon. It frequently happens that the whole business devolves on him, the Surgeon making only occasional visits to the sick; it would appear from this, that his qualifications in medicine ought to be equal. The military laws, however, place him in subordination to the Surgeon.

If the regiment be separated into different divisions, and placed in scattered quarters; the mate is set over some of these, while the Surgeon remains at head-quarters, a compliment paid to him, and superintends the
the party that remains there, and near it. As the Surgeon receives the medicine-money, he is to supply the Mate with every article he stands in need of in this way.

It is clear, from this, that if he is not regularly supplied with medicines, his visits and prescriptions can answer little purpose to the afflicted whom he is to attend. Deficiencies have been observed in this point; it is then the Mate will find his situation awkward, if he has any regard for the welfare of the men; for the general rule with many regimental Surgeons is, to save as much from the money allotted for medicines as they can, since their perquisites must be in proportion. Yet, as we have already said, the fault is not altogether to be placed to their account, but to the bad establishment that limits their pay to a sum inadequate to their necessary expenses.

This,
This, however, not only injures the men, but often gives rise to discontent and animosity between the Surgeon and the Mate. For if the latter is active in discharging his duty, the former never fails to admonish him to beware of expence in medicines. If the Mate be possessed of any medical discernment, this cuts off all opportunities of displaying it. Though we said above, that the qualifications of both ought to be equal, yet under this restraint, it becomes a matter of little moment how he is qualified; for should the first professor, in the most celebrated university, be placed in such a situation, surely his knowledge would be of little avail; since, under these circumstances, it is out of his power to execute what his discernment dictates.

An architect may plan a building with every degree of judgment and taste, but if he is deprived of workmen to execute his design, the structure can never be raised.
It is altogether the fame in medicine, should the prescriber be withheld from the means of composing his prescriptions; if Mates, under these circumstances, possess any medical knowledge, they become disgusted, and lament the unfortunate and ignoble station they hold, which prevents them from being of that use to their patients, which they otherwise might prove; if this, with other things, does not determine many to quit a service they cannot remain in with honour or satisfaction, they become careless and indolent; and observing that their greatest efforts to merit attention, and their most diligent application to their profession, can neither attract respect nor notice, they no longer take pains to obtain it; their ardor by this behaviour cools, and they now become as indifferent to what happens in the line of regimental practice, as they observe their predecessors have been, till by degrees this indifference settles into a habit; and they lose all relish whatever for the profession,

Vol. II. Y profession,
profession, finding the labours requisite for it so ill rewarded.

Although it would appear from the foregoing, that almost any person may be a Surgeon's Mate, yet it were better, that care was paid to their choice, since every one, who is Mate, may in time, by interest; or some lucky chance, be Surgeon; for admitting, little now be in their power, yet when they commence Surgeons, their authority commences with the station. But will they be fit for the duty they must now undertake? It is not to be expected, that the improvements they have gained under such restrictions as we have pointed out, can have added much to their experience; should they have been Mates even for twenty years; and if they entered novices, insignificant visits to the sick, where they neither did, nor observed any thing material, and the wearing a cockade a number of years, can surely add but little to the general stock of their knowledge; for it is
is not to be supposed that knowledge will come intuitively, or be like their pay, the consequence of their promotion. How far the poet's opinion may be just in many things, when he says,

"A business with an income at its heels,
"Furnishes always oil for its own wheels*."}

cannot surely be admitted in cases of this nature, if by oil, he means capacity for business. The parchment on which their commissions are written, cannot convey medical skill, or teach them how to make observations. Accurate observations so necessary to be made in physick, are not to be expected from such men.

The learned Zimmerman says, "to see, is not to observe; and the hoary veteran, who has looked for ages on the complicated

ills to which human nature is subject, may at last be uninformed, and unworthy of confidence. But the world thinks differently. With it, to be young, is to be ignorant; and to be old, sagacious.

"Judgement is still more rare; it unfortunately requires erudition, reflection, and attention; it is not attained in the splendid circles of gaiety and dissipation; it is not the attendant of the coffee-house, or tea-table;"—But such is the life too often of Surgeons and Mates, because such is the life of the army. The manners and customs in use there, rendering it almost unavoidable;—nay, such is the conduct, too often, of medical men out of the army. He proceeds farther in his observations on this subject, which though they be applied to Physicians in general, will, we think, equally apply here—"these, however, are the schools of modern improvement; and while the young Physician aims at being agreeable, he loses the opportunity of becoming
coming useful. In this case, mankind combine against themselves; the Physician acts only on the defensive."

Galen complains feelingly of many practitioners of his day, who were not ashamed to attend in the morning at the toilet, and make their court to the ladies, and at night to be of the most sumptuous parties; in this manner, by modelling themselves to every fashion, they aimed at establishing a reputation; and this is the reason, says this respectable man, why the fine arts, and philosophy, are considered as very useless branches of a Physician's knowledge. "Ought we then to be surprized," to use the words of Zimmerman, "that ignorant mechanics should quit their trades for the sake of practicing physic; or that persons, who have learned only the art of preparing medicines, should have the boldness to consider themselves as physicians, and undertake the treatment of diseases?"

—Pliny has very well observed, that he who
has impudence may very well pass for a Physician—and the observation, though some centuries old, is sufficiently applicable at the present day; the conduct of our modern Empyrics will confirm it; and since I have touched on the subject, give me leave, though it may seem a little out of place, just to add the sentiments of this author, relative to the tolerating quacks. —After inveighing against them in pointed terms, he adds, "Is it not strange that the State should suffer this destructive breed;—surely the people, blind and ignorant as they are, ought not to be abandoned to the prey of these impudent and dangerous men. If society claims a right to oppose the designs of any individual, who wishes to render himself unhappy, why should not he preserve the same privilege, when the safety of a great number of her members becomes concerned? If society has such a right, she is surely blameable for not exercising it. The Sovereign will always be disposed to encline a favourable ear to repre-
representations which may be made to him on the subject. The Colleges of Physicians ought therefore to unite in the reformation of these abuses."

With respect to want of erudition, he delivers his opinion in the following words:—"The views of the inattentive practitioner are vague and uncertain, but the results of attentive observation, founded on a knowledge of human nature, with a just degree of erudition, are very different. These lead to useful conclusions: the others are like castles in the air, they vanish into nothing.*"

Many, likewise, of the regimental practitioners, both Surgeons and Mates, remain almost totally ignorant of what is passing in the medical world; their acquaintance and connections in it being

* Vid. Treatise on Experience in Medicine.
either none, or very little. Their want of books contributes to this; for granting they have a taste for perusing them, they seldom possess any. "He who never reads," says the same author already quoted, "sees in the world only himself; he has no idea of what has been thought by others; he considers all his own reflections, as of the greatest importance."—All these things conspire to withhold them from improvement, and cut off their communication with men of letters; but we have touched on this subject in a former chapter.

Though this complaint against regimental practice, may have, in some degree, ceased within these last twenty years; and though many may be now found in both capacities of Surgeon and Mate, whose abilities ought to command them respect; yet we may venture to say, without overstepping truth, that several have found their way into it who deserve all the severity of this
this remark. Nor can much amendment be expected, till better regulations take place here, which I apprehend is not to be done without holding forth proper encourage-
ment to men of regular education, to induce them first to enter into, and then to continue in the service.

Durst I venture to propose any plan, it would be something to the following pur-
pose; that Surgeons Mates, if they con-
tinued in the army, ought, previous to ad-
mision, to be strictly examined at Surge-
on's Hall, respecting their knowledge in sur-
gery; and afterwards by a Committee of Physicians, appointed for that purpose, rela-
tive to their abilities in what is more properly called Practical Medicine; and to the privi-
leges of undergoing these trials they ought not to be admitted, till after a certain num-
ber of years spent at a Medical University, or some other reputable Medical School, from which they are to produce certificates of their attendance, in the same manner as a
Candidate for a degree in medicine, before his admission to examinations.

Brocklesby, who is well acquainted with army practice, is confident, "That all future examinations of persons employed as Mates, or practitioners, in the army, should be solely submitted to some one of the Censors of the College of Physicians, together with any one of the army Physicians, conjointly, who know the requisites for the post, for which they stand candidates."

To alter the mode of examination at Surgeon's-Hall, he thinks, is indispensably necessary for the benefit of the public service. Though he has laid this before the public, so long ago as upwards of twenty years, in which time we have struggled with another long war, things remain in this department just as they were, without one step of improvement attained. It is not to be expected that regulations of this nature can be
be attended to in time of war, when the public attention is drawn forcibly to different points. In such times even the progress of the arts is stopped; in times of peace we may be led to expect more; errors might then be rectified, and regulations formed to prevent them in future. There are few departments in the state where they are more wanted than in the medical; and in time of war few departments on which the success of our armies may more depend.

Something like the plan proposed above is followed in passing medical practitioners for the navy; after they pass an examination at Surgeon's Hall, they are sent to a Physician appointed for this end, to be examined in medicine. When it is considered how much regimental practice partakes of the Physician's province, the propriety of this will appear evident. Brockielfby says, touching on this subject, in his economical observations, "I can-
not admit that any one of the best of them, (Surgeons) although their knowledge may be sufficient in their own profession, or even any Court of examining Surgeons, at the Hall, are competent judges of medical subjects, sufficient to ascertained what are the requisite physical qualifications of men who presume to superintend the lives and health of nine hundred soldiers*.—This, it seems, was the compliment of a regiment when he practised in the army.

In giving such certificates, private teachers for their own sakes should be cautious; they ought not to be allowed where the requisites are wanting: some grant these with too great facility; they have been given where the bearer's attendance was neither regular nor constant, and without any examination whatever. They have been found, however, to answer the purpose equally as

* Vid. O Econ. Obs. &c. 1764.
well as an university diploma, or certificates from Surgeon's Hall.

For the better encouragement of men liberally educated, more pay should be allowed. May we not, with propriety ask, who would give himself the trouble, and run into the expence necessary for such an education, for the poor pittance of three shillings a day? To live on this small stipend, when their necessary expences are considered, is barely to exist.

Mate's full pay, at 5s. 6d. a day*, for 365 days, is £63 17s. 6d.

Subsistence issued at 3s. per day, is £54 15s. 0d.

Poundage stopped by government, 1s. per £, is 3s. 3½d.

Chelsea Hospital, one day's full pay, is £0 3s. 6d.

Warrants and contingencies, two days pay is £0 7s. 0d.

Agency, 2d. per £, is £0 10s. 7½d.

Remains of 365 days, or one year's arrears at 6d. per day, is £59 0s. 0d.

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* A Surgeon's pay is 4s.
Or, he looses of his full pay, every year, no less than 4s. 5s. 6d.—while the annual arrears, or neat clearings, viz. 4s. 17s. 6d. are so irregularly paid, that it may be said, likewise, to be almost lost. The warrant and contingencies are an imposition of the agents, or their clerks; government never consented to them—an order has been lately made to prevent their being exacted, but it has not yet been enforced.

Another part of the regulations that might be found necessary is, that no subordination should exist between the Surgeon and Mate. Subordination, here, is found to be productive of jealousy, which if it does not injure the practice, at least makes the parties unhappy. What could first induce government to institute subordination between the Surgeon and his Mate, unless the latter was to be held in the light of an Apprentice to the former? but we shall suppose him of equal qualifications; for if he is what he ought to be, he must possess equal
equal medical knowledge. Is such a person to be treated as an apprentice boy; and as it were implicitly obliged to obey the dictates of one only his equal in point of medical erudition? nay, he may be far his superior in this respect; for, though it has been mentioned as a doubt, whether many regularly educated, enter the regimental service in the station of either Surgeon or Mate; yet, there are, most certainly, some in both; but it does not always happen that two such are appointed to the same regiment. Where the weaker, the less qualified, chances to command, it is always an injury to the service, and a reproach on the ill-formed regulation.

Several young men, of good education, have entered as Mates, in the late war especially, both in the militia and marching regiments, through the laudable desire of falling into immediate practice, and obtaining speedy experience; most of them soon found, however, they were disappointed in a great measure,
sure, by means of this subordination. But it is the fault of the military laws that permit this, not the fault of the officers*.

Ought subordination to take place in the medical, because it was found necessary in the other orders of the military? Is it not to be regretted then, that there are in the army men of education, yet the service so little the better for them, and which always

* I could mention several of promising abilities, that went into the army, in the late war, both regularly educated Physicians, and Surgeons. Of these, two Surgeons have been fortunate enough to get appointments as regimental Surgeons. Of four others, all Physicians from the first Medical School in Europe, one only has the appointment of Surgeon. The others were, and are Mates, (1783.) It is not our business to say what are the abilities of those under whom they act. Some of the above, finding themselves mistaken in the choice they made, soon retired from a service they could not remain in with credit to themselves, or usefulness to their fellow creatures.
must be the case, as long as they have not the regulation of affairs. If regimental Surgeons set up for teachers, subordination is allowable. Boys may then be put under their tuition, as they are under that of other masters, for a certain term, till they be supposed properly instructed in regimental practice.

But where they have already received a good education, is it treating them fair to set a master over them, for no purpose whatever, but that of humiliation? Surely it is humiliating enough, that their pay is less than the Surgeon's, who has been more fortunate, without, perhaps, possessing more merit.

In hospitals, out of the army, where two or more medical practitioners are appointed conjointly, it is not with this invidious distinction. They are denominated "Colleagues," and no subordination subsists between...
tween them*. They consult together; they deliver their opinions freely, supported by reasoning; and by this each is actuated. It is very different in the army, where a Mate often receives his Orders, as a servant does from his master, or as a serjeant from his officer. There is no room for remonstrance, if the Surgeon chooses to insist on it; he may even be compelled to do what his judgment points out to be wrong. Under these circumstances, observation and judgment must yield to stupidity or rashness. For it does not always happen that the other may be inclined to listen to the reasoning of his Mate, in matters wherein they differ in judgment.

There is a sort of pride, but it is of a very cenurable kind, in insisting on our

* The term senior and junior Physicians, &c. to an hospital, does not imply that the one is obliged to obey the orders of the other, nor gives any other than mere nominal distinctions.

opinion,
opinion, because it is such, when there are evident reasons why it should be yielded; but this is a fault too often found among all orders; and we may pretty nearly coincide with Pope, when he says, that,

"'Tis with our judgments as our watches, none
"Go just alike, yet each believes his own."

but instead of this obstinacy of opinion, where it unluckily happens, they ought to meet, consult together, and reason on doubtful points, as is practised out of the army; this, however, can never happen with the same cheerfulness, where an equality does not exist. If complaisance in a Surgeon, or perhaps sense of his inferiority, bids him act towards the Mate otherwise, it is to be placed to his own benevolence of disposition, and a wish for the welfare of the patients; but the laws of the army give him power to act very differently.

Mates labour under other hardships as well as these, which must ever prevent

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men of much knowledge from holding the office; i.e. the length of time they may remain in this situation without farther promotion. Instances have occurred, where a man has been Surgeon's Mate in a marching regiment fifteen years; others ten; others eleven; and even then, when vacancies happened, they have found novices both in years and knowledge, set over their heads. This is bad, but it will still appear worse, when it is considered, that they may spend twice the number in it, and be at last dismissed without anything to support them in their old age.

The case is different with the Surgeon; if his service was even less than a year, nay, perhaps less than a week, provided the regiment he served in be reduced, he is entitled to half pay*; the Mate is

* I speak of the Regulars. Militia Surgeons receive no half pay—several instances of this kind occurred at
left to provide for himself or starve. Would it not appear more equitable to place him on the same footing with the Surgeon, allowing him also half pay? When a private soldier serves twenty-three years he is entitled to his discharge, and is allowed a small pension. It seems but reasonable that some provision should be made for Surgeons Mates.

But though these inconveniences are great, they are not all they lie under; they are still subject to a farther humiliating circumstance; i.e. being liable to confinement, on the close of the war. I am happy to find an acquaintance, and worthy young man, among this fortunate number: though I have the mortification to find more than one, no less deserving; nay, even Physicians, who served most of the war, as Mates, dismissed like a private soldier, without a penny; and the same would have been the case, had they served in this station the greater part of their lives. He is the only officer in the corps that is thus ill rewarded for his labours.
ment in the same ignominious manner as a private, and this even at the pleasure and caprice of the youngest Ensign of the corps. Let us now suppose an example, and observe how it appears: suppose then a man, such as described above, respectable for his knowledge, perhaps venerable for his age, serving as Mate in the army: let us likewise suppose a boy, as frivolous as he is young, and as ignorant as he is frivolous, just taken from a writing school, and entered into the service; a trifling dispute may arise between them; the Mate, without more ceremony, if he seems to resent, is threatened with the Black-Hole; nay, he is in reality by the military laws, liable to be tried by a Court-martial, and flogged like one of the soldiers, under the idea of insolence to an officer; and this merely, because his warrant, instead of being signed by a Commander in Chief, or Secretary at War, &c. like the Officers and Surgeons, is only granted him, and signed by the Colonel of the regiment.
'Tis true, this law is seldom put in execution; the gentlemen of the army are ashamed of it; and I doubt not but he must be a great delinquent, whom they would suffer to be treated with such ignominy; yet as the minds of men are variable, and as disputes may take place, there is a possibility of its happening some time or other. I have heard it often mentioned in jest, which was still reminding the Mate, of the law that hung in terrorem over him; and once I knew it threatened (not indeed executed) in good earnest. A repeal of a law so unjust, so absurd, ought surely without loss of time, to take place.

It may be objected, that if the Mate's warrant was signed in like manner as the officers, it would infringe the privileges of the Colonel. I deny this; for the Colonel, as now, may have the nomination, (proper certificates of the candidates qualifications being produced) and may signify it to the War-
War-office, or Commander in Chief. We have a similar example in the appointment of the Adjutant: the Colonel has authority to appoint his Adjutant; but the commission is signed by a superior power.

By some such means as these, regimental practice would become more respectable; and men of reputation would not, as now, think it beneath them to accept the office, either of Surgeon or Mate; nor would they leave it as soon as they understood the nature of such ill contrived laws. The sick soldier would be more advantageously attended, and the service in general better conducted.
Surgeons Mates unnecessary; and the propriety of augmenting the Surgeons Pay.

Though I have taken some notice of the qualifications necessary for Mates, and such as they undoubtedly ought to possess, if they are continued in the army, yet I am persuaded the office is superfluous. It has already been shown, that a regiment of foot, of the late establishment, when compleat, was only 746, non-commissioned officers included; and of these two companies, called additionals, are always on the recruiting service; and never with the regiment either at home or abroad, and of course never in the number of the sick. We have, likewise,
pointed out the number of sick that, at an average, may be expected to require daily assistance. We know that it is not the number, but the distance our patients are placed one from another, that constitutes the fatigue of the profession.

Among the number of the sick we always find men that, properly speaking, have no right to be returned to the Surgeon. Parties are frequently sent out on different Commands; some after deserters, and some on other duty. On returning, they are generally put into the sick lift on account of blistered feet, or, perhaps, for the sake of resting a day or two; sometimes they want shoes, or some other of their necessaries, and cannot appear on parade, nor be put on duty, and are always placed in the Surgeon's lift; for they must be accounted for; and this seems the most convenient place for them in the daily returns made to the commanding officer.

Many
Many also, of these called sick, ail little or nothing; at least, need very little medical attendance. Some are affected with chronic complaints, that only require occasional visits, and occasional assistance; some with cut fingers, and others with blotches on their legs, preventing them from wearing their Long Gaters; nay, I have frequently seen the whole list not exceed twenty-six, and continue about this number for weeks, the above included, and this when the regiment was near 600 strong*. During this time there was little need of any medical advice.

We know that practitioners, who have the care of hospitals, out of the army, visit daily far more than the number we have mentioned, besides their attendance

*In the years 1782-3—it continued so for some months.
on a large private practice. Most of their patients require much attention; for few either come to hospitals, or employ Doctors out of the army, that do not really stand in need of their assistance. Why then is the regimental practitioner to labour less than the practitioner in common life? Let him only enjoy a proportionate compensation, and he will seldom complain of any fatigue he may sustain in the medical practice of a regiment. Let his life be only made comfortable, and the office he is engaged in more respectable, and he will seldom think the medical care of a regiment of six or seven hundred, nay of a thousand men, too laborious.

It may be objected, that the regiment is often cantoned, and separated into dif-

* In the spring of 1782, most of the regiment were ill, at once, of the Influenza; but epidemics of this kind rarely happen.
different divisions, which may make it not only very troublesome, but even impossible for one person, daily, to visit all the quarters. This is true, it will be next to impossible to visit them separated in this manner, but an easy method can be found; let some Surgeon in each town, where a division or party is stationed, be applied to, and for the medicine money he will attend them during their residence. This is often done, as things now stand; why may it not be done, if the reformation hinted at here, should ever be thought worthy of the notice of Government? It could be easily proved, that the soldiers, under such medical people's care, would receive better attention when sick; and more efficacious, at least, more palatable medicines would be administered to them, than if under the care of a Mate, limited in his practice as already described.

A settled Surgeon deals largely in medicines; his practice obliges him to pro-
cure them both in abundance and variety; and his own reputation admonishes that they should be of the best quality. He purchases them, likewise, at a cheaper market; hence he can afford a neat medicine to a soldier, perhaps cheaper than the regimental Surgeon can his coarse ill-chosen drugs, bought from retailing druggists, or country apothecaries: it has already been mentioned how far a good medicine, well prepared, exceeds in efficacy those ill prepared; how much more palatable, on this account, their medicines can likewise be made; and it is well known, how necessary even an agreeable vehicle oftentimes is, in the exhibition of medicines, to ensure their success.

Many of the soldiers buy medicines out of their small pittance of pay, from the Surgeons of the towns wherein they are quartered, rather than be subjected to swallow the medicines which their own Doctor prescribes for them. In this way they are often
often great sufferers, and it would seem that there must be some fault on the Surgeon's part that thus compels them to it. For when this is the case, they must do their duty, as well as buy their medicines; since no man is supposed sick without he be reported to the Surgeon. I am convinced one reason is, the neglect of proper vehicles to administer medicines in. This, I know, is too little considered by several of the regimental practitioners: yet it would add little to their expence in the purchase or preparation of medicines.

SETTLED Surgeons, who take the care of a division, should daily receive from one of the corporals, a lift of the sick, for the sake of order, in the same manner as is customary to be given to the Surgeon of the regiment; this might be weekly transmitted to the Surgeon at Head-quarters; nor would this consume more than a few minutes of his time daily, and could not on that account be objected to.
We shall suppose, from the encouragement given the Surgeon now acting without a Mate, that he is enabled to keep a horse. It will, therefore, be no great trouble for him to visit these different cantonments, if within a moderate distance, once, if not oftener, a week, converse with the Surgeons under whose immediate care the men are placed, respecting their complaints; but he should never interfere, or order any medicine whatever, without their concurrence; without some previous conversation with them on the subject. If the case be either tedious, or doubtful in its event, they may consult together. These gentlemen should have an order to procure what wine may be thought necessary for the patients recovery, in cases where its use is indispensably.

When a camp is formed, if it be large, consisting of several regiments, a physician is appointed, and a general hospital established; it is obvious, that a regimental Mate
Mate will be unnecessary now, since all difficult cases may be sent there. But supposing no general hospital, the Surgeon's fatigue cannot be greater than in quarters or barracks; since the men are placed equally near him, in the small circumference of a camp.

Suppose again, his hospital be at some distance from camp, even two miles; the toil of visiting it daily, nay, twice a day, if necessary, is nothing; should it be at a greater distance, it would be better if he lodged at it, or as near as he can find convenience. If he can hire no private lodgings near, which I think can hardly be the case in England, let him pitch his tent there, instead of sleeping in camp. He may visit camp once a day at his leisure hours, and even dine there; but let the greater part of his time be spent near his hospital.

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The Surgeon should have the choice of the house for an hospital, where a choice can be made; this, though an affair of the first magnitude to his patients, is too often left to the judgement of a Quarter-master. He should take care to provide one sufficiently large; and if one house may not appear large enough to contain all the sick his experience leads him to expect, two or even three should be rented for the duration of the campaign; two moderate houses will certainly be enough: this will require not only more nurses, but more firewood, and Orderlies, as well as an additional centinel. But some trifle in the augmentation of the duty, or the expences, is not to be put in competition with the health of the soldiers*. Much of his care

* Government has very wisely made an extra allowance here, during the campaign. The hospital money which we mentioned to be generally 30l. per ann. now ceases, and in place thereof, the sum of 7½ 10s. a month
should be directed to the prevention of acute and epidemic diseases. If the hospital be crowded, and the infectious, and non-infectious be compelled to mingle together, diseases may arise, which in a short time must thin the regiment, notwithstanding every medical care to suppress them.

When the hospital is bad, and the sick numerous, if the weather be at all moderate, I would advise a few tents, to be erected, and part of the sick lodged in them. For infectious diseases these may be preferable to the hospital, in as far as they can be more easily kept clean, and a free circulation of air obtained, a thing of the highest consequence. This was practised at Mahon. When the hospital fever, in the late war, Dr. Lind tells us,

a month is given. In five months this amounts to 37s. 10s. which will defray the expense of sufficient accommodations.

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was brought from England into the hospital at Mahon, the house being found insufficient for so great a number of sick, tents were reared up in the fields for many of the men. These poor fellows were thought to be badly accommodated, but it was very observably, that most of these who lay in the cold tents, recovered; when the mortality in the house was so great, that in some wards not one in three escaped.*

The custom at present is, when the regiment is encamped, to keep the Surgeon always in the camp, lest accidents should happen there. But this appears a very unnecessary rule, and is frequently a disagreeable thing to the Surgeon. If accidents should happen, are not the men easily and conveniently carried to the hospital? Should

* Vid. Lind, on the Health of Seamen.
this not be the case, a very short time will bring him to them.

It may farther be said, are not Mates necessary abroad, on actual service? Encampments at home may be considered as actual service; and if we have shown that they may easily be dispensed with in the one case, the same will follow in the other. Soldiers abroad are either in garrisons, or in camps; in both cases the men are never so far scattered but the Surgeon may conveniently give his attendance. There are abroad, however, always general hospitals established, which must subtract greatly from his labour. Besides, the regiment is almost daily on the decline by deaths, desertion, &c. and cannot abroad be easily recruited. The fewer the number of the regiment, the less must be his toil. Should a battle be fought, much assistance, indeed, may be necessary; but even then the wounded are sent, as fast as convenience will allow, to the hospital.

A ge-
A general battle is, nevertheless, what seldom happens; skirmishes more frequently take place; here a few men out of a party detached on some service, may be wounded; but this can never create so much fatigue to the Surgeon, as to require a mate constantly in the pay of government.

It may be farther urged, that the Surgeon may fall sick, therefore be unfit for duty: this may take place; but he will always find some of the faculty, where he is quartered, ready to give assistance, provided he has formed any acquaintance among them, as we have elsewhere shown, he ought to do; at least, they will readily undertake his duty, for the medicine-money, till his recovery. Should the same happen on foreign service, he may have the assistance of some brother Surgeon, since one regiment is seldom stationed alone for any length of time on these services. A neighbouring Clergyman will officiate for his sick brother, and a neighbouring Surgeon ought to
to do the same for his sick friend. I mean here only regimental Mates; I meddle not with the hospital Mates, nor the regulations and economy observed there; this would be stepping beyond the bounds of my subject.

Instead of the medicine-money which we think should never be placed in the hands of the Surgeon, and for any fatigue more than usual, he may be liable to undergo from the want of a Mate, he ought to be allowed the Mate's pay in addition to his own: and from neither should any deduction be made. Besides this, a gratuity should be given by each officer to purchase medicines for themselves: he is obliged to give them advice, but not medicines.

In some regiments, as matters now stand, the Surgeon is allowed a guinea a year from every Subaltern; two from each Captain; three from the Major; five from the Lieutenant Colonel; and ten from the Colonel. For
For each soldier whom he inoculates for the small-pox, government allows a guinea. This might enable him to live tolerably well, at least in a cheap country; and yet I am still of opinion, that even this is too small for the encouragement of men of science to continue in the service. This should be equal to what they may expect out of the army; indeed, if we consider the many hardships which they undoubtedly must suffer, who are engaged in the army, to which persons out of the service are not exposed, it ought to be more than equal.

It is not to be supposed that a man whose fortune is his profession, and who has wafted not only much time but money, in acquiring a proper knowledge in it, will ever enter into the army for one hundred a year, (his pay is only 80/.) when he has the prospect of making more than four times this sum in common life, with equal ease, and a better reputation. Why then not allow him
him the same hire? When this is done, he is not on an equality with the other officers in many respects.

Let us suppose him twenty-five years of age before he be qualified for his office; I would think it almost improper, that any person should enter into the army as a Physician, or qualified Surgeon, till he be nearly this age; neither his understanding is properly ripened, nor can a liberal education be finished much earlier; and till both take place, he is unfit for so important a charge. Let us suppose, also, that he has received an expensive school education, and afterwards resided several years at an university, (the leaf is four) and at no small expence. All this is to be done before he can begin, as I shall call it, the world; or is in a situation to recover an equivalent for his time, money, and trouble. Here is upwards of one third of life wasted, which ought surely to be considered of material weight,

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weight, since we find the period of man's days so limited.

On the other hand, a youth at the age of sixteen, (and many have been admitted much younger) may rank an Ensign in the army. He may, or he may not have received a classical education; (at this age it must be a very imperfect one;) this is not thought a requisite in the military profession. Let us suppose that he has not received one, which I am apt to believe will most commonly be found the case; at the age of twenty-five, if he be fortunate, he may rank a Major, nay, a Colonel; for to use the words in a theatrical piece, represented some time ago, "Colonels are all young men now." Here are two advantages he has above the Surgeon; not to mention others; first, he receives pay from the age of sixteen, and without much previous expenses for education; and secondly, at the age when the other is only qualified to be admitted,
admitted, he has not only an equivalent for his time, money, &c., but is far superior to what the Surgeon can ever expect in his station. Moreover, the officer has the farther advantage of having, in view several other honourable, as well as lucrative steps before he arrives at the top of his profession*. The Surgeon has few or none.

It may be said, the officer often purchases, and thus pays both for his rank, and the emoluments arising from it; this, however, will make very little difference in

* The steps of preferment are few in the Surgical line: the vacancies happen still more rarely. We have but few general hospitals belonging to the British army; few, therefore, can at all hope for preferment above that of a regimental Surgeon. Nay, we have heard, but shall not positively assert it for truth, that the Surgeon General, some time ago, gave it as his opinion, that regimental Surgeons were unfit to be Surgeons of Army Hospitals. If they deserved this reflection, is it not strange, that they should have been appointed Surgeons to regiments?
the case, because they have permission to fell when they wish to retire from the service. A Surgeon is often placed in similar circumstances; he often, in like manner, purchases, and it is only then he has permission to fell, if he chooses to quit the army; nay, of late, he is forbid to fell, notwithstanding he may have purchased; and what is still worse, when he is superannuated and so infirm as no longer to be capable of doing the duty of his station, there is no provision for him. He may retire, but if he has no private fortune, which for the most part is the case, he retires to starve. Was he allowed, in his old age, to fell, he might be able to subsist on it the rest of his life. On the whole, it would appear but a moderate allowance, if government would settle two hundred per annum free of all deductions, on the regimental medical practitioner, with the addition of Rations, when on services where these are allowed, of the same value as received by a Captain.
This regulation would not stand government more than the service already costs. When the Surgeon’s and Mates pay are added, it amounts to 7s. 6d. a day; three and sixpence a day more is all the addition required. Ten pounds per ann. may lawfully be subtracted from the medicine money, which will reduce it to 60l. per ann. in regiments where 70l. is now allowed; a very great quantity of genuine medicines may be purchased for this sum; even more than sufficient for the sick, not only of 400, the present, but 636, the late war establishment of several regiments. A guinea is the allowance for every man the Surgeon inoculates for the small-pox; this should be stopped, and in place thereof 10l. per ann. added to the pay. Inoculation is now well understood, and needs little addition of medicine or trouble. Besides, he ought to perform every medical duty, as it occurs, without a bribe.
We may venture to say, by this regulation government will be a favour; for one year with another every regiment must cost upwards of ten guineas in this article. In place of the medicine chest of addition, which each regiment receives when in camp, let 6/. a year be allowed. We shall endeavour to prove in another place, that it is superfluous, and is not in reality needed for the intention it is given; at an average it must be worth more than 6/. a year. — We have now found no less than 26/. of the sum required; there remains only the small deficiency of about 30/. a year to compleat the augmentation proposed. This small sum must surely be looked on as a trifle, when put in competition with the good that must result from it, both to the soldiery and the Surgeon, but chiefly in what relates to the health of the former. The scheme to be adopted to raise this small augmentation I must leave, however, to the wisdom of the Legislature.
An author, who upwards of twenty years ago treated on this subject, says, "Gentlemen filling the medical character, should be sought out more respectable, better qualified, and every way more truly honourable; and then they should also be better rewarded than the generality of the present deserve to be."—He is of opinion, a regimental practitioner, qualified properly by a liberal education, should not have less than 250l. per ann.—"This competency," he adds, "in time of peace would be an inducement to abundance of learned and ingenious men, of sufficient science, to divest themselves of ambition, and to quit the farther battle of a busy world, for the means of a genteel employment in those paths, into which from their first outsetting in life they had early entered*." The Surgeon, however, I am

* Vid. Brocklesby on Ecconom. and Mil. Dir. &c. persuaded
persuaded would think the augmentation we have proposed sufficient. And, indeed, it would be sufficient, provided no stop-pages; I mean no arrears be allowed. To the charities they ought to contribute as they do now. The scheme the above author devises for his augmentation is from the stock purfe, but this appears to me exceptionable. It is a pity to rob one officer to serve another.

I am apt to believe the reader, who understands the army customs, and regulations, will readily agree with me, the pay of subaltern officers in the army, is far too small, and greatly inadequate to their necessary expences. Three shillings, or three and sixpence a day to a man, obliged to live as the rank of an officer requires, is less than ten-pence a day to a labouring man, or even six-pence to a soldier: I could prove that the soldier on his six-pence, is at the end of the week; unless he be a spendthrift, the richer man of the two; i. e. can
can save more money from eating, &c. than the subaltern; but this is a subject which does not so much fall under our consideration here; yet it is not unworthy of a more accurate investigation; nor ought it to be beneath the notice of government: this likewise I have touched on in another place *.

With respect to Surgeons, the difference between a wandering life, like that of a soldier, and a settled life, like a private Physician or Surgeon, is surely very great. By an allowance of 200/. per ann. we shall not find that the regimental Surgeon enjoys anything above a moderate competency. If he wishes to marry, which it is hoped is a state that will rather gain, than lose credit in the army, he must, even on this

* Vid. Treatise on the insufficiency of Subaltern's pay.

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sum, exercise all possible economy to educate his family decently, and settle them reputably. Will any one venture to assert that there is any thing like superfluity in a salary of 200£ a year, as times go, allowing for an officer's expences, and as the value of money now stands?

In almost any other way of life a man may obtain this, and that without either the toil or anxiety of study, or the expence at which medical honours must be obtained. In most of the genteel mechanical branches, a sum as large can be yearly cleared. If this be true, who would enter the army, where he must starve on much less than the half? A soldier (we comprehend the Surgeon in this title) purchases every article of life at a far greater price than others. He must dine at a common tavern expence, almost wherever he goes; in every town he finds himself a stranger, and most people he deals with ready to make what advantage of his situation they can. He is seldom above
above a few months in one place; besides, the custom of the army renders it almost necessary for him to frequent public places: at least, he must often appear there, if he wishes to get into genteel company; this is a considerable additional expense.

I would now hazard an opinion with respect to another regulation; i. e. when a Surgeon is desirous of retiring from the service; he should let his intentions be known to the Colonel, six months previous to his resignation. And if the place is to be purchased, that no candidate should be allowed to make proposals, who was not qualified in the manner already set forth; and till he produces his diploma before a committee of medical gentlemen appointed for this purpose, who are to judge, whether the claim to the privilege be valid or not.

It would be better still for the practice, if the place was not to be purchased, left
corruption should sometimes slide in; for he that can procure a sum so large as to purchase 200l. a year, will never want for interest. It would fell for little less than a Captaincy: now, it is well known, that few who can raise this sum, will ever undergo the fatigue of so much study, as is requisite to the right discharge of the office; when they may procure a place equally, if not more lucrative, as well as honourable, without much literature, or the expense that attends a liberal education. The regulation of the price, when it is to be sold, should, however, be settled by government.

I say less honourable; for the Surgeon is held in an inferior light to the youngest Ensign; and the King himself considers him so. In the year 1778, when his Majesty reviewed the camps, no Surgeon was allowed to kiss his hand, a permission granted on that day, to every officer down to the Chaplain, except the Surgeons of the Militia.
litia, who were present, who bore commissions as officers, and did it in virtue thereof. This distinction was not given to any lower than the Chaplain, and the Surgeon ranks after him. This proves that it is considered as less honourable to be a Surgeon than an officer. Why it should be so, I leave to others to investigate.

Since this appointment is a matter of great consequence to the regiment, interest should, as far as possible, be excluded; merit only should meet with encouragement; neither rich friends, nor high birth, can supply medical knowledge; therefore both should be excluded where this is wanting. But it is always to be presumed, that where an university has granted its licence, this, for the most part, is to be found. Yet even here there is a choice, for the talents of one may far exceed those of another, though both have acquitted themselves to the satisfaction of their Examiners.

I have
I have ventured, in a former chapter, my opinion relative to genius; and presume, observations will confirm that such exists, if care be taken to compare the different progress of different persons following the same pursuits, and who have enjoyed the very same opportunities of improvement. It was this (genius) that Celsus meant, when he said there ought to be in a Physician, or Medical Man, a certain quality, which can neither be named, nor easily understood.—"It is this undefinable something of this great man, that constitutes the difference between two Physicians, who have had the same education, have seen the same cases; have, in short, had the same opportunities of acquiring knowledge, and yet the one shall infinitely excel the other. It was this same thing which made the difference, Martianus perceived between himself and Galen, and which induced him to say, one day, when he met him at Rome.—I have read the prognostic of
of *Hypocrates* as thou hast, why then cannot I prognosticate as well as thou?"

There is nothing, perhaps, that has contributed more to the present contempt in which regimental practice is generally held, than the busy interference of interest. A young man has, perhaps, never been in any medical school, or very little; he goes out to some of our colonies, in character of a mate, with as little medical foundation; he is, perhaps, a good companion; a jolly fellow, as the term is; and, on the whole, an agreeable young man. By his officiousness, and attention to persons of superior rank in the army, he still strengthens his interest; he is soon recommended for preferment in his profession, and as soon obtains it. Though, in many respects, he may be very deserving, yet such must be an improper person for the trust now committed to his charge.
They do not consider, that neither his jokes over the bottle, his smart repartees, or the studied politeness of his address, can assist him in removing the gout from the stomach, should any of his company need his assistance in this way, nor yet give him abilities to remove diseases, when his duty calls him among his patients. A French lady was told, her Physician had not common sense; she replied—*tant mieux—Un homme qui passe son temps à étudier le sens commun, comment peut-il apprendre la medicine?* She thought, if he had consumed his time in studying *common sense*, he would have had none for the study of physick.—Not reflecting, that if he wanted common sense, he must be but a poor prescriber. —But from recommendations, and promotion obtained by the means we have suggested, it would lead one to think, they too frequently considered medical science as the attendant of *jollity* and *good-fellowship*.—But we may answer with the same lady, though she applied it differently.—*Qui parle grec*
grec comme Homere, ne fait pas danser.—He that spends much time in one pursuit, must have the less left for others.

Again, young men may be employed as Mates in General Hospitals, be expert enough at dressing a wound or ulcer, yet be altogether unqualified to prescribe in diseases of the general system; nay, even in many topical complaints. To cure a fever, and spread and apply a plaster, are truly different, requiring very different abilities; the one is obvious, and a knowledge of it more easily acquired; the other complicated, and difficult of investigation, and requires much knowledge, even in collateral branches of science.

It will be said, ought not such as have served in the capacity of Mates, in regiments, for upwards of twelve, fifteen, nay, seventeen years, to be promoted to Surgencies, when vacancies happen? Un-
doubtlessly, provided they be found qualified for the office: but length of service, though it ought to be rewarded in some way, should not entitle a man to an office, the principal duties of which he is ignorant how to perform, and likely ever to remain so*; there is an absurdity in the very supposition. If any such be found in the army, by all means let some reward be given them; but suffer them not to be advanced to an office where they may have an opportunity of doing mischief; nor, like unwholesome leaven, let them be incorporated

* Mr. G—served as Mate seventeen years and more, in —— regiment of foot; the Surgency at last became vacant; he offered himself at Surgeon's Hall for examination, and was rejected, as not qualified; and yet my informer assures me he had the sole medical care of the regiment, for near eight years of the time he served as Mate. If unqualified, why so long trusted? The fault lay in admitting him at first, without qualification.

with
with the new mass, lest the whole be contaminated.

It will be said, is no assistant necessary? Is the Physician or Surgeon to do all the drudgery himself? It has already been proved, that no great degree of drudgery can attend it; at least, not more than one person, by the assistance of an Hospital Nurse, and one or two Orderlies, can perform. We shall, however, allow an assistant, but one which shall be no additional cost to the state.

In every regiment there are one or more old worn out men, who are disabled either by some disease, or perhaps by age from doing duty, and are always allowed the privilege of remaining on the sick list. Let one or two, if necessary, of the most expert of these, be chosen for the purpose. And with a very little care, nay, with a few day's instruction, they will be qualified for most of the ordinary business of a Mate.

They
They will spread plaisters, dress small sores, and punish'd mens backs *, make unguents, boil poultices, and many things of this nature that are necessary, and will be done by

* Since I have occasion to mention punish'd men, give me leave to relate what I was lately told to be facts, that fell within the knowledge of my informers. - A medical gentleman in this neighbourhood affirms, that a soldier died, after receiving 700 lashes, and that in a very short time after.—Another professional gentleman likewise declares, he knew one to die in Dublin, after 500.—I had mentioned, when on the subject, that I believed few, if any, ever fell martyrs, immediately, to flogging.—I am sorry to have it in my power to record these two cases—but it is hoped they may serve to put the Surgeon on his guard, when his duty demands his presence at punishments.—It has lately been hinted to me, that if it was recommended to the Surgeon, to advise that the culprits be bound down to a flat board, or a table; that in this situation they could bear more punishment with less danger, than if they were tied up in the common way, with their hands stretched above their heads, to the halbards—the experiment is certainly worth trying—at any rate, things cannot be worse,
them with pleasure, though if left to a man of education, such as the Surgeon, would be troublesome, and even beneath him to perform; if any thing in the way of his duty ought to be held in this light.

Such an assistant is analogous to a porter in a druggist's shop. I know from experience this is practicable; I have taught no fewer than five such persons with very little trouble, and who, in a very short time, have afterwards saved me many disagreeable jobs, that without them I must have undertaken. I have been, sometimes, almost tempted to trust them to bleed, only that this is an operation, that should never be trusted to men ignorant of the structure of the parts concerned in it.

Further, respecting the inutility of Mates; we know that in time of war, almost any thing, having the appearance of a man, is acceptable; hence the sickly and healthy, the strong and the weak mingle together,
together, and all must do the same duty. In times of peace, none but the young, strong, and healthy are enlisted. It is reasonable, then, to suppose, that number for number, fewer will be sick in time of peace than in time of war; the duty in time of peace is likewise less than in war; and since we have already shown, they may be dispensed with in time even of war; it is obvious, they may be dispensed with in peace. An epidemic may arise at any time, whether in peace or war; but it is no objection to our proposed plan.

I have spoken all along of the full complement in time of war; but it is evident there must be much fewer in time of peace, consequently, less business to employ the Surgeon. Sometimes, the peace establishment is so low as twenty-seven a company, especially in Ireland. The peace establishment before the present, I think, was at this number; the present, however, is forty a company, which supposing the regiment
giment compleat, amounts in ten compa-

nies; only to 400 men. Surely one person
is sufficient to take care of the sick of this
number, which at an average, can hardly
exceed twenty; and more than half of
these, such cases as may require very little
medical aid. When the labour is so small,
where is the utility of a Mate? A period
of seven years we consider as a long war;
but we are often blessed with a peace of
three times this period. This I would
consider as a farther argument for the re-
duction of Mates. According to our cal-
culation, it is plain, in time of peace,
they may be dispensed with; and we have
already advanced reasons to show the office
may be even struck off in time of war,
supposing the regiment at its full com-
plement.

Some may still farther object, that if
a Mate be not allowed, the Surgeon's at-
tendance in the field on field days, must
be interrupted, for some person must re-

main
main convenient to the sick. To this I answer, that his attendance on common field days may very readily be dispensed with; there is no absolute necessity for it. Indeed, it is considered more as a compliment to the officers, than as of any utility expected from it. The Surgeon, or Mate, for they generally attend alternately, are never expected in the field, unless the officers also be ordered out. When the Adjutant and only an orderly officer march out the regiment for exercise, neither he nor the Mate goes.

The reason given for their going at all, is, lest accidents should happen. We might give the same answer to this, which has already been offered to obviate the custom of sleeping in camp; the accidents which take place are of so trivial a nature, in general, that they very rarely require the presence of a Surgeon; they are seldom more than a scratch with a flint, or a slight cut in the hand, in the hurry of fixing and
and returning the bayonet. During several years, I never knew nor heard of any, save the following: first, in very uneven ground, a man at one of the great guns fell, in the hurry of changing the position of the line, whereby the wheel of the carriage on which a six-pounder was placed, ran over his legs, and fractured the fibula; but when this did happen, of what use was the Surgeon's presence there? He neither could, nor did he attempt to do anything till the man was carried to the hospital; when this took place, the regiment were at exercise near seven miles distant from it. Might he not have been at his hospital, or near it, all the time? A second case happened, during my being out with the men one morning, when by over fatigue, one of the privates fell ill; the commanding officer ordered him off the field, with two drummers to assist him to the hospital, while I followed at my leisure, just time enough to be there when he was laid in bed. Might I not have remained at...
the hospital? A third, and it completes the catalogue of accidents, happened on another field morning, in cold weather, when in the hurry of manoeuvring, a ramrod was shot through a man's hand; here the patient was taken to the hospital to be dressed. Where then, in these cases, was the necessity of the Surgeon's presence in the field?

A Surgeon may be as usefully employed at home as in the field; it is enough if he be ordered to keep himself always in readiness on days of exercise, lest accidents should take place. Suppose him in the field, his presence can be of little use; he cannot carry a medicine chest with him; when his assistance is wanted, it is not always in the way of bandage and plaster; yet, if they will insist on it, because it has long been a custom, I shall not contend much against them. The orderly men, with proper directions given them, will sufficiently supply the place of Mate
in the hospital, till the Surgeon's return, which is generally in the space of a few hours.

These will be considered, I apprehend, as unwarrantable innovations, an appellation which all reformation receives; and the proposer be also held as self-interested. But we hope this will not be found true. There are some superior to such fordid motives; such may propose schemes, that may be denominated innovations; they disinterestedly propose them, and only because they appear preferable to customs in use. The public must judge from the arguments adduced in their favour, and the inconveniencies of the others compared together. On such evidence their merit should rest; and they ought to stand or fall in the public opinion accordingly.

There is no great fear, however, from innovation, where use and custom have long swayed. It has always been found difficult to remove what has been long established,
blished, though ever to absurd. Such is the force of habit, even among the intelligent.

To give an example from our own profession, though they may be drawn from every part of life. I knew a Surgeon who used a tooth drawer, invented almost in the infancy of the improvement of surgical instruments, though well acquainted with its inconveniences, and who had seen many of the best form. It had been in the family, I believe, some generations; he preferred it to all others, though he had not a single argument, but habit and custom, to urge in its favour.

This may not be a case exactly in point, yet it will serve to show us the power of prejudice; the prejudices of our forefathers, even in what relates to education, lie deeply rooted in us. Innovators appear like the approach of an enemy; we are roused, and unite our force against them.
Innovations then, or improvements of any kind, in any department, will ever meet with warm opposition; but this will never serve with the unprejudiced, for a reason, that they are always unnecessary.
Of extra-Medicines allowed each Regiment, when in Camp, independent of the Medicine Money; and of their unnecessary Expenditure.

To every regiment encamped in England, as well Militia, as Regulars, a chest of medicines is sent by government, in addition to the common allowance of medicine money. I presume the same is followed on services abroad. This is done on the supposition of more diseases appearing in camp, than in quarters, and on a presumption that the medicine money may be too scanty to purchase all that may be required. Both these should be proved before the supposed deficiencies be supplied.
With respect to the first; it frequently happens, that where the ground for the encampment has been well chosen, and a due regard paid to situation, soil, and water, as far as circumstances permit; neither more diseases, nor greater fatality will take place, for the most part, in camps, than in quarters. Though Great Britain be chiefly meant here, we may add Ireland also; nay, instead of more, much less sickness has taken place; and camps have proved more healthy than either quarters or barracks were in large towns, or in bad situations, or otherwise unfavourably contrived*. I can point out an instance,

* Several of the barracks are ill-contrived; we may give for example, those of Chatham Lines, and Hilsea, at Portsmouth. The barracks at Tynemouth, are not only too small, but the walls too thin. If barracks be built of brick, the walls should be of a proper thickness to resist the rain, &c. Great attention should likewise be paid to the quality of the bricks. If they be made of salt water, the walls can never be dry,
where a camp turned out more healthy, both to the officers and men than quarters. In one case, in all probability it saved the life of an officer. This gentleman was of a slender make, a delicate constitution, and mobile temperament from nervous weakness, chiefly induced by irregularity in living: he had been long affected with a chronic catarrh, and even laboured under an affection of the lungs. This was proved repeatedly from the bloody sputum, he ejected at different times. His cough was always incessant, and frequently depriving him of sleep; and he was almost as emaciated, as if in the last stage of a consumption. But soon after taking the field in the beginning of July, 1782, on a dry

dry, from the strong attraction subsisting between the acid in the bricks, and the moisture of the atmosphere. I have seen floors laid with such bricks, that were constantly wet, as if new washed, though a fire was kept almost daily in the room.

common,
common, in an elevated situation on the eastern coast of Suffolk*, all his former complaints almost entirely vanished; he recovered his flesh; his cough disappeared; and every day gave him a healthier look.

The good effects of the healthy situation did not take place in him alone, but among the troops in general that formed the camp. In the end of September, when they were reviewed by the Commander in Chief, not a single man was ill in one of the regiments, and in the other scarcely any, that deserved to be in the Surgeon's lift. During a space of four months, only one man was seized with a fever; nor was this the offspring of the place; for he brought it with him, from a prison where he had been confined for several months be-

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* On Hopton Common, between Yarmouth and Lowestoffe,
fore; the commanding officer having given him up to the civil law, for an accusation brought against him.

Wet, and otherwise unhealthy seasons, may happen; nor will the service always admit of the best situations for encampments. For the most part, however, in England and Ireland, it will be the fault of those concerned in choosing the ground, if the situation be bad. We are not now hemmed in to a mile or two by an enemy. Proper attention is very far from being paid to the situation of camps on every occasion; might we not bring the common now mentioned as an example? In the year 1781, a number of troops were encamped on it in a piece of low ground, but not above a musquet shot more to the north; whenever a few hours of rain came, the water stagnated among the tents, and even descended from the higher ground among them, the bad effects of which were severely felt. They were taught by next year, that
that experience, at the expense of much sickness, which common sense, without much philosophy, might have plainly predicted, and at first pointed out to them, in laying out the ground.

The Surgeon in these cases is seldom consulted; indeed he is seldom present: for the ground is generally marked out some time before the troops arrive on it. As he is much concerned in the consequences, he should have a vote in the management, and more especially as his medical knowledge gives him, or ought to give him pre-eminence in judging of it; therefore he should be sent to the spot to reconnoitre, some days before the march commences.

The Quarter-master is always sent; he may now accompany him, and in forming his opinion of the soil, &c. he should take the assistance of the medical people near the place. He will be of much more utility employed on this service than with the regiment
regiment on the march, to watch for accidents and other maladies, which seldom take place; and where, like field service, as already treated of, when they do happen, he can prove of little use till the men arrive at the destined ground; besides, a second advantage would result from it; he would have a place provided for an hospital, and be prepared to receive what sick he had. It is always some days after their arrival before the sick can be accommodated, in the manner we generally go to work at present.

We know, indeed, that at an average with other countries, Great Britain may be stilled moist; the seasons are variable, and the weather often suddenly changeable throughout the island; yet we find also in it, occasionally, long sets of fair dry weather; it was so in the summer of 1783—it has been so even in winter seasons. The greater degree of exercise the soldiers are obliged to take, from the nature of camp duty,
duty, is considerably in their favour, provided it be not carried by frequent field days, to a degree of over fatigue. It is well known, that nothing is more conductive to diseases than indolence. A certain degree of exercise in moist and relaxing weather, and when the men are not suffered to lie down in wet clothes, is altogether necessary to obviate sickness. The beneficial influence of motion, in carrying on the circulation of the fluids, and preventing obstructions, is equally well known; none will deny that it braces and strengthens the body.

In towns, soldiers, for the most part, have too little exercise; infectious diseases are frequently fostered there; and troops quartered in them very apt to catch the reigning maladies, their way of life contributing to this end; their billets are dirty and incommodious, and their own irregularity great. Wherever infectious diseases happen, if soldiers be exposed to contagion,
gion, they are more severely handled by them than others. Such diseases, also, are always observed to take their rise among the poorest of the inhabitants, where their clothes are seldom changed, and their dirty and ill- aired habitations seldom swept; living in close allies, and confined streets. In these places the soldiers are frequently conversant, which exposes them to the infection; while their poor living, as a debilitating cause, predisposes their bodies for its reception.

Again, if provisions be wholesome, and the season not remarkably moist, we have no reason to apprehend much disease in camp. It seldom happens that provisions are scarce, or of bad quality in England; it is famed through Europe for plenty. Soldiers encamped here are not cut off from supplies by an enemy; neither are they, in general, harrassed with fatigue. The markets are open to them; they are now stocked in greater abundance, by such as
as have provisions to dispose of in the neighbourhood. None need complain of hunger who has money to purchase. A soldier has always his stated pay, on which he endeavours to live, now faring better, now worse, according to the rate of victuals; but as messes are formed in camp, and a contractor furnishes them with provisions; their fare is nearly the same whether dear or cheap.

**Wet seasons, vitiated air, and salted food** will give rise to the scurvy; but all these causes are seldom found to concur in England; hence it is rare to find this disease among camps in Britain. Bad food, and wet seasons, &c. will likewise give rise to dysentery; and very dry ones lay the foundation of cholera, yet record does not furnish us with many dangerous epidemics of these kinds, during the encampments of Britain. In many parts, we grant, intermittents, are endemic; but we neither find them so dangerous nor so numerous, for the
the most part, as in some other countries, where there is more moisture, more wood, and less free perflation. The jail, or camp fever, has appeared in England; it has done the same, and even to a great degree in quarters. It arose among the troops in the castle of Edinburgh, in the spring of 1780; and, perhaps, on other occasions, with as much violence and danger as ever it has been found in camps. All these diseases are more the offspring of other climates than Great Britain; and on average, as often in towns, as in camps formed in any part of the island. Now, if this be allowed, it is plain, there is not more need of additional medicines in camp; and it follows, that the additional chest is unnecessary.

As to the second argument, that the common medicine-money is not sufficient,

* Vid. Dissert. in aug. de febr. auctore. J. Bell, 1780.
we have already delivered our opinion and reasons on it. We showed, that not above a third of it is ever expended in medicines, nor is it wanted; hence we have proposed the sum of ten pounds to be taken from it, as part of the additional pay to be granted to the Surgeon. Genuine medicines may be purchased for 60l. a year, more than sufficient for the sick of 700—in peace we have only 400 men. The regiment is seldom compleat; yet, did it consist only of twenty men, the full complement of medicine-money is given.

We shall suppose that the chest dispensed yearly to each regiment in camp, is worth at an average 6l. 6s.—and let us again suppose the number of regiments encamped to be sixty*—this amounts to

* In 1782, sixty-three regiments were encamped in England.
360 guineas a year. This sum will be much better bestowed in money to the Surgeon of each regiment, as an augmentation of the pay. It will be said, that it is a matter of no moment whether he receives the medicines or the money, since he can save it out of the medicines; but it will be better to stop it, and let six pounds a year be granted; i.e. let him enjoy a subsistence of eleven shillings a day, of which this will make part of a fund from whence it is to be defrayed.

It is readily granted, that taking the field is more expensive than quarters. A marquee must be purchased, with bed and utensils necessary to furnish it; but the forage of three horses will assist in defraying it.*

* In the plan proposed, it was mentioned, that the Surgeon should be allowed Rations equal with a Captain, during encampments, &c. a Captain receives for 3 horses, besides Bat. and Baggage money.
State this at two shillings a day; which in five months, the usual time of encampments, amounts to 15s. This we allow, is far inferior to the first year's expences in camp; but taking three years, at an average, it will be sufficient; a good marquee will last three summers, if the weather be moderate; the first year's expences we shall state at 27s. 2s. the next two only at 10s. each*; the whole extra-expences then, for taking the field for three years, amount only to 42s. 2s. his forage money, for the same time is 45s.—But to this we are to add the Bat. and Baggage money, allowed officers in camp, and his share of this is to be equal to a Captain's; from all which it appears, that the extra allowances in camp, are a sufficient ballance for the extra

* At a moderate estimate, the bed will be 10s.—a table and two stools, 1l—the marquee, 1l—these summed up, amount to 27s. 2s. This was the expence to the officers at Hopton Common in 1782.
expenses; and, therefore, this additional medicine chest, on this plea, is unnecessary.

Let me conclude these remarks with a hint at surgical military precedence. From the lowest order, a regimental Mate, to the highest, that of Surgeon-General, it is as follows—Regimental Mate—Hospital Mate—Regimental Surgeon—Apothecary to a general hospital—Surgeon to an hospital—Surgeon General.—In this line of precedence we find the Apothecary ranks almost at the head. It is not from the regimental Surgeons that a Surgeon to a general hospital is chosen, but from the apothecaries; and before the regimental Surgeon has any prospect of succeeding to this rank, he must be degraded to an Apothecary, an humble mixer of drugs. Strange, truly! I object not to the Apothecary of an hospital being rewarded with 200/. a year; though even this is stepping far beyond what is given to men of the same employment, out
out of the army. It is seldom the salary to
the Apothecary of hospitals, out of military
life, exceeds half of what is thought ne-
cessary for the Surgeon. It is generally
thought, that there is less expence neces-
ary in an education for this branch, than
for a Surgeon. Here the regimental Sur-
geon is obliged to subsist on 4s. a day—the
Apothecary has no less than 10s. with the
addition of superior rank. This order
ought, in justice to the regimental Sur-
geon, to be changed. Hospital Surgeons,
should be chosen from regimental Surgeons;
and men possessing knowledge of the mix-
ture and composition of drugs, who
have undergone proper examinations for the
same at Apothecaries Hall, and none else,
should be chosen to fill up this office.

C H A P.
C H A P. X V I I.

Necessity of a liberal Education to practice Medicine successfully — Regimental Practice more the Province of the Physician than the Surgeon.

MEDICINE, though frequently termed an art, is a science, and truly a very complicated one; in comprehending it, as becomes its professors, every part of nature is to be studied; but more particularly the animal, vegetable, and mineral kingdoms; nor is this to be done superficially; nay, with much care and attention are the component parts to be scrutinized, and their principles investigated by such as wish to be liberally educated in it.

STRABO
Strabo says, it is impossible to be a great poet, without being a man of real probity; this observation is, undoubtedly, not less applicable to the physician than the poet,—"can any physician in good conscience venture to prescribe a medicine, without at least having formed inductions from the most exact analogy?—is not that man an enemy to his patient, and to society, who pretends to cure without knowing to a certain degree, the nature of the disease, both from its causes and symptoms, and its antecedent, and present state? is it not to be wanting to every thing we owe to humanity, and even to religion, to approach the bedside of the sick, without having previously acquired the necessary knowledge? can any man say to himself, I have done all I could do, if he is unable at the same time to say, I know all that I ought to know?"—Such is the language of a celebrated physician, a language that must speak to every man's breast, and carry conviction wherever it is heard.

A know-
A knowledge of natural and experimental philosophy, is in a physician almost absolutely necessary; nor should moral philosophy be excluded. In a word, a Physician should not only be acquainted with physics, i.e. with the works of nature in general, but likewise metaphysics. I remember to have heard the same declaration from an illustrious professor* to his pupils. His opinion, on this head, he told them was, that a man who was not a tolerable metaphysician, would never be a discerning Physician.

It was not his intention by this, to inculcate that false species of reasoning, which confounds the mind without enlightening it, and, like an ignis fatuus, leads farther astray the farther we pursue; not the subtile disputations of the

* Professor Cullen.
necessitarian, or the reveries on the doctrine of chance. His meaning was, if I may be thus far allowed to interpretate it, that accurate investigation, and chaste reasoning, proceeding cautiously from what is known, to what is unknown, or from effects to their causes, is the true way to arrive at the end in view, an explanation of various phenomena that present in the course of medical practice; and without some enquiry into the union of soul and body, and of their action on each other, this cannot so fully be done.

The ingenious Dr. Percival, in a paper written to prove the utility of experimental philosophy, and endeavouring to wipe off a stigma thrown on it by the author of Hermes, speaks of metaphysics in these words, after telling us he had always studied them with delight, "it (this science) invigorates the faculties of the mind, and gives precision and accuracy to our investigations, by instructing us in the nicer discriminations.
of truth and falsehood.* — "The mutual action of the body and the mind upon each other, is felt every moment. The knowledge of the nature, effects, symptoms, and measures of these reciprocal influences, forms no inconsiderable part of the science most necessary to the Physician, the Moralist, and the Divine †." 

In a former part of this work I have adduced facts to prove the reciprocal influence the body and mind have over each other, where I had occasion to mention that disease distinguished by Nosologists under the appellation of Nostalgia. It was there shown ‡ that the affections of the mind were capable of inducing even fatal diseases, and that many have fallen a prey to them. In Switz-
erland there is a dance which the young shepherds perform, to a tune played on a sort of bagpipe; the tune is called *Rance de vaches*; it is wild and irregular, yet has nothing in its composition that could recommend it to our notice. But the Swiss, it is affirmed, are so intoxicated with this tune, that if at any time they hear it, when abroad on foreign service, they burst into tears, and *often fall sick*, and *even die* of passionate desire to revisit their native country. For which reason, in some armies, where they serve, the playing of this tune is prohibited *. True then, it must be, as the poet has beautifully expressed it, that

There is in souls a sympathy with sounds,
And as the mind is pitch'd, the ear is pleas'd

* Vid. Dr. Beates’s *Ess. vol. II. p. 175.—Alfo Roufseau Dict. de Musique. art. *Rance de vaches.*
With melting airs, or martial, brisk, or grave.
Some chord in unison with what we hear,
Is touch'd within us, and the heart replies.
How soft the musick of those village bells,
Falling at intervals upon the ear,
In cadence sweet! now dying all away,
Now pleading loud again, and louder still,
Clear, and sonorous as the gale comes on.
With easy force it opens all the cells
Where mem'ry slept. Whenever I have heard
A kindred melody, the scene recurs,
And with it all its pleasures, and its pain.

"Every experienced Physician," says
Zimmerman, "knows that the diseases of
the mind will yield to no physical remedies,
unless the soul concurs at the same time in
relieving the patient.—The more the soul of
the patient seconds the endeavours of the
Physician, the greater will be his hopes of
success. An intelligent, and prudent Phy-
sician has often begun and compleated cures

* Cooper's Poems, v. II. p. 23.

which
which seemed to be impossible.—If therefore there are diseases, in which the patience, the assiduity, and the indulgent attention of a Physician, can so far influence the mind of a patient, as to contribute to his cure, may we not very justly conclude, that the dispositions of the soul may be the occasional causes of changes in the body.—It proves to us, that the passions, and dispositions of the mind, having so great an influence on our health, it befoves the Physician to aim at keeping both the mind and the passions of his patient in order.”—Another author, in his facetious and humorous manner *, compares the relation between the body and soul, to a coat and its lining; for, if you rumple the one, says he, you rumple the other.—If this be true, which almost every day's experience fully proves, the study of the passions would

* Tristram Shandy.
seem an indispensable part of a Physician's education; and on this ground, we assert, that not only a knowledge of the physical but the moral man should be acquired. Physicians seem to be more interested in the acquisition of this knowledge, than any of the other classes of civil life; the passions come in for so great a share in diseases, that it would seem criminal in a Physician to enter into practice, without having particularly applied himself to the study of man."

It is by "nice discrimination," by rational investigation, and precision, that we may hope to distinguish what is true from what is not, and thus pursue our researches successfully; and the farther we recede from this plan, the nearer we approach to empiricism. As far, then, as metaphysics can assist us towards this end; so far they are useful. For though an empiric may occasionally be successful in his practice, yet it is but reasonable to conclude, that nine times out of ten
ten he must miss his aim. A blind man cannot distinguish colours, nor he that is deaf, the harmony of combined sounds in music; neither can an effect be removed when the cause lies concealed, except by mere chance, on which no wise man will ever build his dependance.

Some may answer, that the most acute investigations of the best cultivated understandings, will frequently fail in finding the real causes of certain phenomena, that present in the cultivation of medical science, and in practice; or when found, that they are as far from being able to remove the maladies induced, as if unknown and undiscovered. This is granted; but if the informed may, and often do, the uninformed in such intricate cases, must necessarily fail. But it should be remembered, that in consequence of their ignorance, in cases where the literary and more enlightened man would succeed, they will as assuredly
assuredly err, unless accident turns the scale in their favour.

It is true, experience will teach us on several subjects, where reasoning could have none, or but little effect; but let this maxim be constantly kept in view—to reason, as a practitioner, and practice with reason.—Experience, we know, proves, that scammony will purge, that arsenic will poison. It tells us also, that neutral salts as well as several other substances of the mat. med. will do the same. By reasoning alone, perhaps, we never could have been able to discover this. The experience that taught us the purgative qualities of medicines, teaches at the same time their different modes of operation; it points out that the one acts mildly, while the other is highly irritating and drastic. But when, in certain circumstances, we are about to make a choice, which to prefer, we call in reasoning to our aid, which we build, indeed, on this experience. After investigating the cause,
cause, we make an estimate of the power to be applied for its removal, with a due allowance for constitution, and the present strength of the system. It is this that determines the choice we are about to make; it is this that cautions us against the use of the one, while it acquiesces in, or enforces the use of the other. It is by this that we are informed, that a promiscuous application of them, though both seem to produce the same effects, i.e. open the belly, would prove very detrimental, and highly injurious.

This, it will be said, is still in part reasoning from experience; I grant it; and wherever it will apply, we ought to have recourse to this guide; but many circumstances will present themselves, wherein we shall not have it in our power to appeal to the decision of this judge. Here we must rest satisfied with a less certain method; our reasoning must now be drawn from Analogy; from subjects where we can trace a degree
degree of similarity, and our conclusions must be formed accordingly.

"As a Physician," says a learned author, "is not always able to choose his method of treatment, and as many accidents may occasionally vary the appearance of a well known disease, it will be necessary to have recourse to analogy: and how can any man give the necessary scope to his enquiries on such an occasion, who is not able from his reading," (his knowledge) "to draw together all the lights, which different authors may afford him on the subject?"

**Analogy**, indeed, may not on every occasion, be a safe and unerring guide, nor universally afford us confidence of success; but surely it will be preferable to blind chance, which begets rash practice!—A rush taper is better than total darkness.—On the whole, we must have a proper notion of the nature of the affection, and the powers
ers to be applied for its removal, before we can venture on rational grounds to attempt a cure.

An Empyric says to a person with a complaint in the organs of hearing, "Sir, you must apply blisters; I know from experience, they will remove affections of the ears."—If a second consults him, the same remedy is proposed; and the same to a third, a fourth, &c.—for, in fact, he professes but one remedy for all the varieties of the diseases of this organ, though arising from the most opposite causes; in one, perhaps, from some mechanical cause, as from Cerumen hardened, and plugging up the meatus; in another, from an inflammation of the membrane lining the ear; in a third, from a carious of the bone of the ear itself; and in a fourth, from some affection of the portio mollis, or branch of the auditory nerve, that is spread over the windings of the cochlea.
It would be absurd to suppose in these different examples, that one and the same method of treatment could succeed; nor would any man, informed in his profession, and who had taken pains to investigate the cause, ever recommend it. He founds his cure on a knowledge of the parts concerned, and the nature of the affection; and should his practice not succeed, he can with tolerable confidence point out the obstacles to the patient's recovery; or show why the disease is seated beyond medical assistance.

I entirely agree with an author, often mentioned in these pages, when he says, "there are certain practitioners more blameworthy than the empyres"—The reason he gives is, that though they go by the name of regulars, they seldom or never employ investigation, or reasoning on the subject of their profession. He continues, "all their ability seems to consist in copying formulae."—Then follows, a few examples,
amples, somewhat similar to those already advanced.—"A girl comes to them," he says, "with chlorosis, they give her some cooling medicine, because there is fever. A pregnant woman complains of retention of urine, and they give a diuretic; they are ignorant that it is the foetus that presses on the neck of the bladder, and that a diuretic may be fatal in such a case. These people not only do not see the chain of circumstances that occasion a disease, but they are strangers to every one of them.—Shall I say what I think? the Physician who sees all the circumstances of a disease, and he who sees only a part of them, or rather his own prejudices, must necessarily be of different opinions; and yet they will all swear by their experience.—A man defends, even to his latest moments that which he thinks he has seen, without asking himself whether he was capable of seeing.—A drunken man swears that every thing dances around him; a superstitious man believes in magic; a little mind dreads apparitions; all these speak
speak from *experience*, fancying that it is from *experience* they have learned all things. The Physician who has discovered the ways of nature, and follows her in them every day, and the old nurse who is directed by this Physician, both appeal alike to *their experience*, and the former very properly; but ought any one to appeal to his experience who does not possess a proper talent for observation?—Is it by a blind practice, with a few receipts, and many prejudices that we see nature?”—certainly not.—She must be traced by careful investigation.

It is acknowledged, that many cases will occur, where we can only apply the means of relief to obviate particular symptoms; and where the causes of the affection cannot be discovered during the patient's life. Our knowledge of the structure and functions of some parts of the body is yet in its infancy; we know little of the uses of the spleen, and almost as little of the nervous system. Perhaps the progress of ages
ages in philosophical investigations, be it ever so industrious, will fail in finding the causes of the various affections of the nerves, of their modification, and manner of operating; or tell with certainty, where the percipient principle has its seat, whether diffused equally over the whole, or if it places its residence in a particular part; or wherein lies that connection so intimately uniting the soul and body, giving them that reciprocal action which has lately been taken notice of, or how that mutual sympathy comes to pass which so invariably prevails between them.

The most ignorant Quack, however, reasons, but he reasons badly. If the reasonings of the systematic, with every advantage of education in his favour, fall, and indeed, must sometimes fall short of the truth, what is to be expected from the other?
"Baron Haller informs us that Boerhaave, who even to his seventieth year, had, in general, devoted sixteen hours every day to the study of his profession, often complained of extreme difficulties, and of people who were daring enough to practice without having ever studied, or reflected in their lives." Reasoning then, and reflection, I am persuaded, shall be found not only highly necessary to the medical practitioner, who wishes to be useful to society, and an honest man, but altogether indispensable.

As to moral philosophy, I mean a knowledge of the operations of the mind; this, and the philosophy of physic, seem to be intimately allied in some of their parts, and like the shades of a picture, slide insensibly into one another.

With respect to what seems more immediately in the Physician's line, no man can, on rational pretensions, profess to remove
move the diseases of the body, who is unacquainted with Pathology; and this must lead to the study of the human structure; he must know the functions of the different organs in health, as far as they can be known, before he becomes a judge of the defects he observes, or is qualified to attempt a restoration of them to their natural condition. Anatomy is the study of time; it cannot be comprehended without labour and close application. On this the foundation is to be built; it is the support of the future fabric.

In a former part of this work* I have spoken more fully of the advantages that result to the medical practitioner from his acquaintance with the component parts both of man and other animals; for comparative anatomy is far from being an useless study;
several of the parts in other animals can be more particularly traced, and better investigated than the same parts can be in man, and analogy will occasionally teach him to draw the same conclusion relative both to the similarity of functions and structure.

In the light of conveying true knowledge to build future practice on, anatomy is one of the principal key stones. In the light of conveying a knowledge of the power and wisdom of omniscience, the Creator of all things, and proving the existence of an all wise, and powerful First Cause, it must afford one of the most striking proofs. Hence it would seem impossible, that an Anatomist can ever be a Polytheist, much less an Atheist. — It teaches us, then, religion, and veneration towards the Supreme Being, while it assists us in removing the maladies that "Flesh and Blood are heirs to?"

Galen, a name well known in physic, was a Polytheist till he studied anatomy;
my; on considering the various uses of the Hand, and reflecting on the beauty, regularity, and wisdom of its structure, he was compelled, as it were, to believe in the one living God. He called out as he examined it, in a kind of extacy, *Behold! this is the work of works!*—after his conversion, brought to pass in this manner, he composed a Hymn on the subject; it consisted almost entirely of praises on the hand, and an enumeration of this part of the human body.

From the study of the structure, the student must proceed to the uses of the parts he has thus examined. Physiology, a name which has been given to this study, is no less complicated. When we consider the numerous tubes of various sizes, structure, and uses; the different fluids, formed by peculiar organs, and fitted for particular purposes; the various glands, with their different secretions, all adapted for different ends, and regulated by the justest laws; the more solid parts
parts of the fabric, as the bones, cartilages, tendons, ligaments, &c. for giving strength and motion to the machine; with the manner of their nutrition and natural decay, it will evidently appear, that this study is none of the least complicated.

Pathology, or the study of the deviations of these organs from health, must be founded on this. When he is well instructed here, and in anatomy, he has far from finished his task; if he stops here, it were as well he had never begun. In comprehending the modes of action of several of the organs, it will appear how necessary a knowledge of natural and experimental philosophy must be.

Before he can comprehend the functions of the Eye, he must have previously studied the doctrine of light, and colours; and this will require a certain portion of mathematical learning. At first view it may seem absurd to maintain, that mathematics are necessary
necessary to the successful practice of medicine; yet this example alone, were we to advance no other, would be sufficient to prove it.

But the diseases of the Ear are as much the Physician's province, as those of the eye; yet before he can obtain a just knowledge of this organ, he must make himself acquainted with the medium through which sounds are communicated; the properties then of the air must therefore be investigated, as far as it is concerned in communicating this sensation. This is a branch of natural philosophy, to which the name of Pneumatics has been given, and is equally as indispensable as the foregoing.

Hydraulics, and Hydrostatics have, in like manner a reference to the human frame, in as far as the body is a compound of tubes containing circulating fluids, and having a similitude to fluids conveyed through tubes out of the body, making a due
due allowance for animate, and inanimate matter, the moving powers, the cohesion of parts, and their viscosity, with their ramifications, angles, friction, and other causes of retardation. This is another wide field, requiring an acquaintance with mathematical, and experimental philosophy.

Chemistry teaches many things respecting the animal machine, as well as the properties of those parts of nature, i.e. those substances, employed in the removal of diseases. Heat is something, without which, in a less or greater degree, animal life cannot for any time exist; chemistry seems to afford us the best knowledge of this. By heat we may be said "to live, breath, and have our being." Besides this, it teaches likewise various other operations, and processes necessary to be investigated by the medical enquirer.

By chymistry he can give or take away at pleasure, certain properties from substances, which
which enables him to produce particular changes on the human body. We omit mentioning its great utility in the arts, which has rendered life so comfortable, being less connected with our present subject. To this part of philosophy, then, the Physician is greatly indebted.

The nature of the Air, also in a different sense, from that of conveying sounds, i.e. in as far as it becomes noxious and wholesome; or salubrious, and vivifying to animal life, is another material branch, a knowledge of which we derive from chemistry. It is by this, among other things, we have been able to detect the qualities of the various species of Gases, or elastic fluids. We no longer now stand in stupid wonder at the death of a dog, held over the Grotto del Cani, or seem amazed at the noxious effects of the fumes of charcoal, or the dire exhalations that often suddenly deprive the unsuspecting Miner of his life. The nature of fixable and inflammable air is
at length, by the assistance of chemical analysis, and fortunate experiment well known, and has opened another ample field of useful investigation.

By the same branch of science, in like manner, we obtain information relative to another fluid, not less essential to the health of the human race; I mean Water. If the various changes of the air materially affect the living body, the various admixtures found in this Element, as well as the many species of which from this cause it consists, have no less a share in producing noxious or salutary effects. By chemistry, we can make it our antidote or our poison; it detects the principles on which these depend; and compounds, or decompounds it at the Physician's will, rendering it subservient to his intentions. This is an extensive study; but without a competent idea of it, how limited, how imperfect must be the medical practitioner's skill!
From a knowledge of the effects of heat and moisture on the human body, when conjoined, he learns the remote causes of several fatal diseases; he reasons on the sedative powers of contagion, and becomes the better enabled from such investigations to apply his method of cure.

Many of the changes in the vegetable world, seem likewise to be produced by chemycal laws*. With this assistant we can

* A late writer of respectable abilities, in an essay on the study of natural history, complains that not only Mineralogy, but Chymistry, is less attended to with us, than with several of the neighbouring nations. In Sweden and Germany, Mineralogy forms a distinct and honourable profession, like the Divine, the Physician, or the Barrister. In these countries they have colleges for regularly teaching it. The Russians and Spaniards have lately adopted this plan; the French, likewise, have formed a Mineralogical School at Paris; and persons are employed in tracing subterraneous maps of the whole kingdom of France, and Mineralogical
discover several of the properties of plants; we can separate their parts, and reject or

logical voyages have been taken at the public expense; yet England has paid, hitherto, little attention, comparatively, to this study. Though our own country is allowed to be richer than France in mineral productions; it has been chiefly confined to a few gentlemen of the medical profession*. "Even chymisty," says he, "which we shall attempt to show is the parent of Mineralogy, has scarcely been attended to in England, whilst neighbouring nations have pursued it with enthusiasm ardor. It forms the favourite occupation, and most fashionable object of attention, not only of the middling, but even of some of the highest ranks of society."—Amongst these, says Mr. Kirwan, we may reckon in Russia, Prince Gallitzen; in Germany, Count Sickengen; in Italy, the Counts de Saluces, de Morrozo, and the Marquis de Gironi, governor of Leghorn; in Geneva, Mr. de Saussure; in France, the Dukes de Chaulnes, Rochefoucault, and D'Ayen; the Counts de Lauraguais, la Geray, Milly, Tresslan, and De-la-Tour d'Auvergne; the Marquises d' Courtenvaux, and de Courtinvron; the Barons d'Olbach, and de Servieres; Messieurs Tru-

* Vid. Kirwan's Elem. of Min. p. 28.
chuse that which suits best with our intentions.

A knowledge of this part of nature makes another branch of medical science. Many of the articles used by the practitioner are derived from the vegetable world. Botany, therefore, or a knowledge of plants, whether respecting their external figure, or internal qualities, cannot be dispensed with by the scientific Physician. Under this head I comprehend that study, known by the name of Materia Medica, which teaches the manner of preparing the daine, Lavoisier, Montigny, de Morveau; and among the Ladies, Madame la Presidente d’Arconville: to this list we may add the Earl Dondonald, in Scotland, and Mr. Kirwan in England*; several others in Great Britain may certainly be added to these two gentlemen, though they may not appear among the most conspicuous.

* Dr. Kentish, on Nat. Hist.
substances obtained from the vegetable world, for medical purposes, and points out the inequalities, or the doses in which they are to be exhibited. The former leads him, as it were, by the hand to the plant; the latter prepares it for exhibition. This is a branch of useful study, and one, which unluckily, is by the generality, even of sensible, and otherwise literary practitioners of late years, too much over-looked; I mean the Materia Medica. For botany, as an amusing part of science, is more attended to.

The study of the vegetable kingdom, in another view, is not only curious, but highly interesting; it enlarges our ideas with regard to the operations of nature, and conducts us forwards in the scale of science. Till lately this branch also was little cultivated; but since philosophers have turned their attention this way, every day's experience proves more and more its consequence to the existence of life. We are not only supplied from thence with food and
and medicine, but it has its effects in a special degree on the atmosphere with which we are surrounded; it seems to be the chief restorer of the salutary quality of the air. After it has been rendered noxious by various phlogistic processes, it dephlogisticates, and renders it once more fit for respiration; it drinks up, and is even nourished by what would destroy man, and returns it to him again, like gold, as it were, from the refiner's furnace, new combined, and new modified. Here we find putridity has its use, and through the medium of the vegetable kingdom, becomes the foundation of that which is pure.” This is a beautiful link in the laws of the creation, and the existence of the world. It is a law founded on wisdom supreme, that as soon as one principle becomes unfit for certain uses, it is only then rendered fit for its destined functions in another part; here is order springing from confusion, and beauty from deformity. It is the work of God!—
I need not mention here the mineral kingdom; it is evident the medical enquirer must not overlook its investigation, since it affords him several of the most powerful of these articles by which he effects his purposes. This is also a branch which will require his attention; but, perhaps, this may be in a great measure comprehended under the head of chemistry, which we have already endeavoured to point out as an indispensable study.

Natural history he will likewise find of importance; it will assist in explaining several of the operations of nature, and farther enlarge his ideas. I mean something more by it however than a mere arrangement and classification of the different articles usually comprehended under this term. He must investigate the cause that gave existence to many of these productions. This may lead him to consider the formation, not only of the productions of the earth, but the earth itself. It will teach
teach him in a more medical view, both the animals and the climates, each class inhabits, with something of their variety and nature.

In a word, as all the parts of science have a relation to one another, and all ultimately assisting in explaining the properties of animal life, and the diseases to which every thing "that breathes the breath of life" is subjected, it behoves him who is engaged in the removal of them, and professes to alleviate the tortures of pain, to be duly conversant with all. But as the life of man is so limited, and the various studies mentioned so complicated, that the longest period of mortality is far too short for the intimate comprehension of the whole, a general, or more superficial knowledge is all he can aim at, is all he can hope to attain.

In our proceedings here, however, we ought always to bestow more time and attention
tention on those branches that have a nearer relation to the chief point, than to others, which are secondary only, and may be called more ornamental than useful; hence I have passed over several, that if a medical man has leisure to cultivate, it will be well for him to pursue.

Electricity we have already mentioned; but it is more than one of those ornamental branches; it is among the indispensible parts of a Physician's education; and this will readily be granted, when, not only the principal rank it holds in the universe, and its great agency in nature, but even its application more immediately to the diseases of the body, are considered.

Nosology I have likewise left untouched, a study however, which the Physician will find of no small importance in his distinction of the various maladies incident to man. To find out the disease under which our patient labours, is one great
great step towards the cure, and one not, on all occasions, easily attainable; it is the province of nosology to teach this, as it enumerates the leading symptoms that characterise it.

And notwithstanding what some even of the learned say of its inutility, I mean, of dividing diseases by its assistance into classical order, I am persuaded, it will be found of no little moment to the practitioner at the bedside of his patient. The student will certainly find his account in it; his memory will be assisted by a nosological arrangement. Hold it in the light of only a common-place book, and its usefulness must be manifest; but it will do more, it will be found applicable in practice.

Diseases are sometimes as truly marked, as the writers on this subject have represented them. Systematic arrangements have proved useful to the progress of botanical studies, and in other branches of natural his-
tory, and I can find no sufficient arguments for rejecting them in medicine. I am inclined indeed to consider them as equally advantageous there.

The dosing of medicines, which is termed *Po[yo*logy, demands also the medical man's consideration; something has already been advanced on it in a former part of these observations*¹. To learn the more common doses of the various articles exhibited in diseases, as they are given in different authors, will require attention and time. To know this branch as far as books can teach it is necessary; but no book can lay down infallible rules here. All they can do is, to inform us of the quantities that have been exhibited. The different articles in use become different medicines, according to the quantities, and the time

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* Vid. vol. I. ch. 6.
in which they are administered. Thus, ipecacuanha given in a small quantity will prove cathartic; and in a larger, emetic. Rheubarb in small quantities becomes astringent, if given at proper intervals; in larger, it purges. &c.—The knowledge then of the dose must depend on a knowledge of the affection, and on proper views of the animal economy, with a knowledge of the idiosyncrasy, and present strength of the habit; from which it must appear, that no general rules can hold good, but that the dose must be varied as exigencies require, to bring the disease to a termination; all which must be calculated at the bedside of the patient, and the quantity adapted for the present individual, and the present moment of that individual's complaint.

After what has been said on the foregoing subjects, it will be unnecessary to mention regimen in diseases, as a knowledge of it is founded, like the dosing of medicines,
medicines, on a knowledge of these. It is a part, however, that ought to be considered of more importance in restoring the sick, and valetudinarian to health, than I fear, is generally done. There is no part of the science of healing, wherein a man shows his judgment more, than in the regimen he lays down for his patient. In most of the chronic diseases, and these are very numerous, he can do as much, if not more by this, than by his prescriptions made up at the apothecary's shop. But to bring to pass the great end in view, both must be judiciously united.

By regimen, I not only comprehend diet, i. e. meat and drink; but the state and temperature of the air, cloathing, exercise, sleep, and watching; the just regulation of the secretions, and excretions, and in a word, "quid ferant vires, et quid non."—In this the former habits of the patient are carefully to be considered. Much might be written on the subject of regimen;
men; but it is not our business to enter any farther into it here, than just to point it out to the medical practitioner's notice, as being a part comprehended in his medical education.

Though bathing be none of the articles which can be noticed in a pharmacopæia, it may nevertheless be termed an active medicine, and one from which, much good, or much ill may accrue, according as it is applied. I know not whether it can be ranked in the class with those things we more strictly call regimen. But rank it where you will, it demands attention, and no small share of judgement to advise it with propriety, and modify it with medical discernment.

Nothing, now-a-days, is more common than bathing, and no part of medicine, perhaps, more indiscriminately, and, it is to be feared, more injudiciously, in the greater number of instances, made use of.

This
This will be sufficiently proved, from the promiscuous use of evacuations recommended to bathers, previous to their going into the bath. If the case be such as is proper for bathing, it must be such as excludes all debilitating causes; and surely purging, called, for I know not what reason, preparation for bathing and drinking the waters, is one of the most powerful. Both bathing and drinking are tonic powers, the latter gently stimulating and invigorating the habit, and the diseases requiring them are consequently those of debility; it must appear, then, that this debilitating course must be contrary to just reason, and true medical philosophy. But to know when, and how to apply these, like regimen, requires a previous acquaintance with the animal economy in all its parts, and a knowledge of the diseases then under consideration. Much may depend on the regulating the temperature of the water; the present strength of the habit; the time of the day for
for bathing; the length of time to continue in the water; whether the patient should bathe early in the morning, and with an empty stomach, or if a certain quantity of food should be allowed; how often he should go into the water in a given time; all demand serious reflection. An error in these must tend to the patient's hurt instead of his welfare. On this part, also, much might be said, but it does not in this place fall any farther under our cognizance, than to point it out as highly deserving the medical philosopher's notice, and showing him the importance of its consideration in the course of his studies.

I have hitherto said nothing relative to Languages. In a Physician, a classical education is altogether indispensable; but this we have always supposed a point incontroversible, and that the student is well acquainted therewith, before he enters on the more material parts of his medical education.
cation. For though languages may only be considered by many as the shell, the external crust of education, which teaches words without ideas, sounds without things, yet before we can with advantage proceed farther, it is incumbent on us to penetrate here. Our literature must be greatly confined, if we can only read philosophy in our native tongue; and though we may at length learn by translations, yet it will come late; half the world will have the start of us: like a lame horse we may hobble after, but we can never come up with the chace.

Some of the modern languages are almost indispensable to the Physician. French is not only the polite, but almost the universal language of Europe, both with the philosopher and the gentleman.

"By a proficiency in languages, other studies are with more facility acquired." One of which never, on any pretence whatever to be omitted, is Latin. This, though a dead
a dead language, "spaketh to all men." It is more particularly the language of philosophers than any other; every medical author, almost, who wishes his labours to extend, sends them into the world in this dress. This we find often practised in Britain, as well as on the Continent; nor is it a superficial knowledge of it, medical men ought to possess; they ought to have a critical discernment of its beauties; for as they should speak it with some fluency, so they should write it with tolerable correctness, neither of which can be well performed, unless their proficiency in it has been carried thus far.

Although we have few authors in Greek, of much importance, (for the works of the antient physicians, even of Hypocrates, are not at this improved period of medical knowledge held in so great esteem as heretofore, since the introduction of experiment in this science) yet this language should by no means be overlooked.
Many Greek phrases are to this day retained; many of the names in use, both in chemistry and anatomy, as well as in other branches of philosophy, are derived from thence; and to be unacquainted with their origin, would be unpardonable.

From what has been said, it will appear, that he who turns his attention to the practice of physic, should begin at an early period of his life to direct his studies to this end, since an education, so large, so extended is required, before his purposes can be properly accomplished.

* The genius, and industrious application of some men will make amends for deficiencies here. Boerhaave, was upwards of thirty when he turned his thoughts to the study of which we are speaking. It was seldom, however, he laboured less, as has already been said, than sixteen hours a day, throughout the greater part of his life after. He was bred indeed to the church, and had more than a superficial idea of
Besides, the mind is then retentive of impressions, and if well directed, will afterwards proceed in the proper path; or to use the words of a modern poet, speaking of the importance of youth well directed, in forming the learned as well as the virtuous man*.

'Tis granted, and no plainer truth appears,
Our most important are our early years;
The mind imprefsible, and soft, with eafe,
Imbibes, and copies what she hears and sees;
And thro' life's labyrinth holds fast the clue,
That education gave her, false, or true.

When a man has finished what is called a liberal course of studies, a polite education, such as entitles him to a Master of Arts Degree, he is only then, and not before, properly qualified to enter on the more school and university knowledge; hence his preliminary education was classical and complete.

extended study of medicine, which ranges in a yet wider sphere, turning its views to all nature.

Nay, it is the opinion of a learned author, that to complete the education of a Physician properly, an education extensive beyond all others whatever, he should possess a tolerable notion of the law—and "this," he adds, "to complete the character of general and extensive knowledge; a character which their "(Physicians)" profession, beyond others, has remarkably deserved *.

Such is the outline of a Physician's education; such is the great objects he has to grasp at; such his education ought to be; and such, we hope, it is for the most part found,

A recommendation, comprehending so many objects, and some of them that may seem, at first sight, altogether foreign to the science we have chiefly in pursuit, will be little relished by those, if any there are, who may think a few months of one or two winters at the lectures of some medical teachers, whether in the metropolis, or an university, with a few years of an apprenticeship in some apothecary's shop, are sufficient credentials to recommend them, as able practitioners, to the notice of the public.—The credulity of our countrymen, too often leads them to believe so,—a credulity, which one would suppose endemial to Great Britain, and some of her appendages; for it is in these only, of almost all other parts of Europe, where empiricism and credulity of this nature seem to hold their sovereign sway.

"The Physicians in Chili," we are told, "blow around the beds of their patients, to drive away diseases.—The people there
there think that physic consists wholly in this wind; and their Doctors would take it very ill of any body, who should attempt to make the method of cure more difficult. —They think they know enough, when they know how to blow *.”

But it will be said, what has all this to do with regimental Surgeons? our business, in these pages, was not to display the qualifications necessary for the Physician, but to point out the duties of the regimental practitioner. The more obvious parts of education, it will be said, are sufficient for him, since his business is more with external, than internal diseases.

May it not be expedient to enquire into the truth of this position, and ex-

* Vid. Zimmerman.
amine whether a regimental practice partakes most of physic, or, of what is commonly called surgery?

Something has already been said on the subject, and when every circumstance is maturely weighed, it must only serve farther to confirm, that the regimental practice requires more of the Physician's than the Surgeon's assistance; it must therefore follow, that the place should be supplied, not out of the number of the latter, as is most commonly done, but from the former; and on this ground, the sketch we have offered of a Physician's education is tenable.

On examining the diseases that are most prevalent among soldiers, and in regimental practice we find the far greater number of them, such as fall under this particular province.
The following may be enumerated among the Pyrexia. Fevers of all the different kinds. Typhus, Sunochus, Intermittents, and all their variations, as remittents, &c. every one knows the attention we ought to pay to the class of fevers; they appear, at least, three times for once of most other diseases, and prove as often fatal. Among the Phlegmasia, we may reckon Ophthalmia, and even Phrenitis; this may, and does arise in the army, from too much exposure to the rays of the sun, or what is termed Insolation. Cynanche tonsillaris; Cynanch. maligna, a very fatal, and no infrequent disease. Cynanche Parotidea, Cyn. Pharyngebra. I pass over the Cyn. Trachealis, or Croup, as less frequent and more subject to children. Peripneumonia, Pleuritis, both frequent in the army. Gastritis, Enteritis, Nephritis, Rheumatismus, both of the acute and chronic species. As this disorder always arises from cold, and as the nature of a soldier's life is well understood, I need not say
say how frequently it is to be met with amongst soldiers.

Of the Exanthemata, we may enumerate the following; Erysipelas, Variola, Rubeola, Scarlatina: I pass over the military fever. Among the Hæmorrhagies, Epistaxis, Hæmoptysis, and its sequela Consumption, another disease very frequent, and almost always fatal. I say almost always fatal; for by the present fashionable modes of life, irregularities, and late hours, &c. it is often induced, and but seldom we find it cured. As the important part in the obviating, or removing of all diseases, is the beginning; and as this complaint, particularly, creeps on slowly, and without giving such uneasiness as to create alarm to the patient, it has generally arrived to a growth, difficult by the most judicious treatment to be stopped, before any assistance from the faculty is sought for, and is, I fear, too often confirmed and rendered past remedy, by the injudicious treatment.
treatment that many of these unfortunate patients experience from those into whose hands they resign themselves. Indiscriminate bleeding, purging, and a low diet, are the means in general use, even among the greater number of the regular and well-informed practitioners.

"Mistakes in medicine always entail mischief. The danger of bad treatment never appeared more fully than in that dreadful endemic, of this island, the Pulmonary Consumption. Thousands have been literally sent to the grave by the lancet and low diet. And innocent as milk may be, it has in the hands of medical men, been converted into a most destructive poison. False notions of nourishment have given rise to false medical practice; and practitioners have imagined that they were supporting their patient, whilst they were feeding his complaint*." This is

* Dr. Kentish.
a disease, wherein regimen in all its parts strictly adhered to, and judiciously laid down, in which I include a nice attention to the temperature of the air, and its salubrity, can do more than all the drugs ever administered in it.

"Medicine is but a secondary aid—a substitute for the natural powers of food, of diet, and of regimen.—Unhappily, however, Physicians, have reversed the view, and, instead of considering, that the existence of the body in disease, as well as in health, is supported by the same agents, they have fought for the cure of disease on different principles—they have ransacked the three kingdoms of nature, and laboured in the very elements for their imaginary powers of physic—with what success the present state of practice, and uncertainty of cure, can tell.—I mean not," continues this author, "by these observations to debase my profession—on the contrary, I mean to insist upon an impor-
tant truth, and wish to turn the attention of patients and Physicians to their proper objects.—If both do not attend alike to the habits of life, neither can be benefited; the patient cannot derive relief, nor the Physician credit.—When we act in concert with nature, we have much in our power—when we contradict her indications, all is mischief.”—Many observations might be made on the present mode of treating Consumption, but this cannot be entered on here. That it is a disease frequently occurring in the army, and requiring the ablest of the profession, whose exertions even too often fail, is all we want to establish.

But to return;—Cystirrhagia, Hæmaturia, Hæmatemesis, fall likewise under the Physician’s department; and among the Profluvia, Dysenteria, and Catarrhus, both chronic and acute; here, I also place that infectious species called Influenza, on

which
which the reader will find a few observations, subsequent to this chapter.

Among the Neuroses, Paralytis; Syncope; Epilepsia; all which frequently take place; palpitatio—Asthma; I pass over Hypochondriasis and Dyspepsia, as rarely occurring. Pertussis sometimes occurs; Colica often, and is never without danger; Cholera; Diarrhea; which as often prove troublesome.

Among the Cachexiae, I have met Atrophy in the army. Among the Aquosæ, Anaśarca; Ascites; Hydrothorax. Among the Impetigines, Scrophula; Syphilis. This last, as may be supposed, from the unrestrained use of unclean women, is very frequent. Scorbutus is likewise to be found in the army as well as at sea; it may happen even in England. During the war preceding the last, it appeared among the French prisoners at Winchester, with all its malignity, though they had been four
four or five years at so great a distance from the sea coast *. It appears very frequently inbesieged towns; for example, at Minorca, in the late war, and seems to have been one of the chief causes of the surrender of the troops to the enemy. Lepra likewise appears, and Icterus, which I have often met with.

Among the Locales, we may place Gonorrhea, one of the most frequent, and in general most troublesome in the army, as are all venereal complaints; and also among the worst cured, though almost every one pretends to a knowledge of them. We meet also Obstipatio, Icturia, Herpes, Tinea. I place Bubo among the venereal complaints. These are enumerated as the most frequent in the army; many are omitted which may occur occasionally.

To balance them, let us enquire what diseases appear in regimental practice, more immediately requiring the Surgeon's assistance. With respect to the pure surgical cases that occur in regimental practice, they are for the most part, neither many nor of a complicated or difficult nature. Now and then a phlegmon, ulcers, and ulcuscula; by these I mean trifling ulcers, that require very little medical, or surgical treatment. Small wounds; for it is seldom that large wounds occur; these may be slight cuts on the fingers, and contusions on the head. Sprains of the ankles, wrists, and shoulders; dislocations; but these last are what, I believe, seldom happen; yet, since they may, we shall give them a place. Among the Ectopiae, Hernia; this again, if it does occur, which I acknowledge to have sometimes seen, is a complaint of such a nature, that it totally disables the man, so affected, from the service. And hence such are always discharged, unless it happens to Taylors, when they are kept for
for the purpose only of working in the regimental shop. Sometimes, among the surgical complaints, we find Hydrocele, also Schirrus, particularly in the testicles.

For the most part, neither wounds of the head are found so dangerous as to indicate the use of the trepan; nor wounds of the extremities so large as to require amputation, ever occur; now and then a broken leg, from a fall may happen. Large wounds happen often enough, we confess, after battles, but we have already mentioned how seldom battles on land are fought of any consequence, or magnitude; I mean where much of this practice is necessary. A Bunker's Hill battle does not take place every war. In long continued sieges they are to be found; yet the number of sick, from the beginning of the siege of Gibraltar, till its conclusion, have not been many, when we consider the number of regiments, and of Surgeons that were stationed
tioned there. From this view, we may learn how much more necessary Physicians in regimental practice are, than Surgeons, strictly so called.

In the war before our late unhappy and ill-judged contest with our American kindred, it appears from registers kept of the mortality produced by fevers of various kinds in military life, that eight times more men have been lost by these, than fell immediately by their wounds, or in battle. This is a farther proof how necessary Physicians are; yet medical science continues to be much depreciated, and even thought unnecessary; while the department has been constantly consigned to the lowest sphere of the healing art.

* Vid. Mil. Dis. by Brocklesby.
Surgery and Physic are held distinct; this is universally granted by the distinct incorporated societies into which the two branches are separated; and what is of more importance, the education in many respects differs. The Surgeon generally contents himself with a much more circumscribed plan.

I know a late writer has doubted the propriety of distinguishing them into two separate branches; but till he can change the mode of education; till he can bring the Surgeon to spend the same length of time in study, that the Physician is obliged to spend in college before he be licensed; and till examinations be equally strict, and on the same subjects, it will be in vain to consider them as one and the same; and to conclude that every man who can dress a simple wound, or make a few unguents, is equally capable of superintending fevers and the other diseases of the system which we meet with in the army, would be as absurd.
The generality of what are called Surgeons, i.e., who style themselves such, are contented with serving an apprenticeship of a few years; then go to London or Edinburgh a few months, in winter, to walk the hospitals; return home and set up for themselves; and this forms the whole of their medical education*; the greater number never offering themselves as candidates for a Diploma in the branch they profess, as will appear by the small list of examined Surgeons published by authority from Surgeon's Hall.

Before I finish this head, I think it may not be out of place to mention the

* In Ireland it is even more imperfect. What is stiled a regular Surgeon in Dublin, where the best in the kingdom are supposed to reside, only serve an apprenticeship to some Surgeon in the Metropolis. Many, however, go now to Edinburgh from Ireland, to pursue their studies.

R r 2 preliminary
preliminary education of such as intend to study surgery, which is required by one of our continental powers; and if it be contrasted with the little attention that is generally bestowed on this part among us, I fear the comparison will be considerably against Great Britain, notwithstanding the fame she has justly acquired for her medical erudition. I shall give the account as I find it.

"Madrid, May 4, 1787.—The King has approved of the establishment of a College of Surgery, in this capital, under the name of St. Charles, and under the immediate protection of the Royal Council, similar to those of Cadiz and Barcelona. This college will be composed of a President, eight Professors, and a Dissector of distinguished merit; elected from the number of those who travel at the Royal expence, for knowledge and improvement in the art of surgery. This school will admit none but those who are furnished with
with certificates of their having studied Humanity, Logic, Algebra, Geometry, and Experimental Philosophy for a due time. Those certificates, besides warranting the life and manners of pupils, must contain the names of parents, place of birth, and be signed by Curates."

_Here_ is an education becoming and proper; and a man studying surgery on such a foundation must practice with credit, provided he has been blessed with a due share of genius to improve by his opportunities; for it is both these united, that forms the man of professional skill. We so far agree, however, with the poet, that,

"Tho' nature weigh our talents, and dispense,
To every man his modicum of sense,
Yet much depends, as in the Tiller's toil,
On culture, and the sowing of the soil*."

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_I KNOW_
that the surgical depart-
en liberally studied, is as com-
plicated in some of its parts as the Phys-
fician's; and requires both genius, appli-
cation, and much reading; but the num-
bers that study it in this extended sense
are few, when compared to the number of
such as we hinted at above. Suppose surgi-
cal cases to be far more frequent than we
find them in regimental practice, they are
still few, and the treatment easy and sim-
ple, when compared to the diseases that
belong properly to the care of the Physi-
cian. Soldiers, whether in peace or war,
are every day of their lives exposed to the
causes of the one; i.e. to what induce
those diseases, we have ranked under the
medical head; while on the other hand,
they may not be exposed once in a life
time to that of the other.

What has already been said to prove
that the practice requires more of the Phy-
sician's than the Surgeon's aid, we appre-
hend
hend is sufficient to convince our readers of its truth; but it will appear still farther from the following fact, which, indeed, the public have been in possession of these twenty years. I quote it from an author who wrote so long ago as 1764, and who likewise touched on the same subject, and hence I am happy to have his testimony to corroborate my own opinion, that the regimental practice belongs more to the Physician than the Surgeon, or to use his words, "more than mechanical dexterity in dressing a wound, or even of cutting off of a limb."—"The fact," says he, "was well vouched to me by a very ingenious and worthy man, who was seven years Surgeon to a regiment in the late war," (i.e. in the war preceding our last) "during which, the corps had been two campaigns on very hard service, and had also sustained the severest shocks and losses which attended the tedious siege of the Havannah, yet the Surgeon declares, that in full seven years, he had not met with a hundred, properly,
chirurgical cases in the whole regiment, though, in the course of that time, near two thousand men had gone through the regimental books, including 400 men draughted out of it into different corps."—"May we not then justly conclude," he goes on, "that in time of profound peace, the exigences of chirurgical dexterity compared to the objects of medical attention in any regiment, are at most one half less than they had been observed at two battles and a siege, besides the rest of the seven years; consequently, that the medical science requisite for a regiment is at least forty times more necessary to be in some measure practised, for once that any particular dexterity in manual operation, or surgery is required."

* Vid. Mil. Dis. by Brocklesby.
This granted then, which cannot be denied, is it not strange, that the army should be supplied with so few of the one profession, though their assistance be so frequently wanted, and with so many of the other branch, though there be in general so little need for operations in military practice, or of their assistance in other diseases, where it becomes their province to act?

However the present age may boast of literature and refinement; however, we may hold ourselves in high estimation above the antients, both in respect of knowledge in war and philosophy, yet they seem to have taken a greater advantage of the science they possessed, and no doubt, reaped, as the fruits thereof, a proportionable success. Xenophon, in his history of Cyrus*, a general, who in the estimation of this historian, was the ablest of all ant-

tiquity, mentions, among his other qualifications for a general, that previous to a war, he wisely chose able Physicians, for the management of the sick, and dismissed them afterwards with honours, as well as with the rewards earned by their services. It were well, if Britain copied his example: but it is too notorious how little attention is paid to this subject; an over negligence both in choice, and in rewards, would seem a reproach on us. The small, and inadequate pay is a sufficient proof of this; or, their dismission at the end of a war without any provision whatever. The naval medical gentlemen will join me in the observation, and corroborate the assertion; more than two thirds of whom are then turned adrift; the militia practitioners will confirm it likewise, who, though they have served the whole duration of a war, be it ever so long, are similarly treated, and unregardedly discarded; and the regimental Mates, in the regular service, will also unite their testimony.
But to return; the few Physicians that are appointed to the service, are seldom convenient to give their advice in medical cases, except, immediately, in the places where they remain. Such as at sieges*, and large Encampments, where a general hospital is formed, there we find a Physician. During a period, perhaps, of twelve or more years, an army Physician never sees a regiment till it be brought to form part of an Encampment. Does it stand in no need of a Physician all this time? Is his utility only to continue a few summer months, during an encampment, and solely in time of war! Strange supposition! This is placing great confidence in the abilities of regimental Surgeons. Surely we

* Sieges are often very healthy. On the 24th of July, 1782, there was in Gibraltar 7234 privates; the number of sick was only 265; and, some of these, we are told, appeared in the ranks occasionally.

* General Evening Post, Oct. 5, 1782. S f 2 would
would be apt to conclude that their capacities must be well known to Government, before such important charges could for so long a time be committed entirely, and without control, to their disposal.

It will be said, there is a Surgeon-general to inspect the conduct of these gentlemen; but it is as seldom he visits regiments; nor, indeed, would it be possible for him, scattered, as regiments must be, over so large an extent of country. In summer he pays a formal visit to each Encampment, and in each regimental hospital, if there be no general one, he stays a few minutes; but he is never seen more during the campaign. All this might be easily rectified, either by such a method as we have already ventured to point out, or some other which the wisdom of Government might devise.

It may be objected here to my recommendation of Physicians in place of Surgeons, for regimental practice; that I am contending
contending more for a shadow than a substance; for a name than a reality. Far be this from me! It is the same thing, as to the effect, by what name they go; whether by that of Physician, or Surgeon, provided they be men of sense, and knowledge in their profession. Names can never change things; they can never change a Physician to a Quack; nor a skilful Surgeon to a Mechanic, though all the world, in common conversation, should denominate them so.

"What is a name?" says the Poet,
"That which we call a rose, by any other name would smell as sweet, so Romeo Wou'd, were he not Romeo call'd.

And so will a man of medical knowledge, be still a man of medical knowledge, let him be called by what title the world pleases. But I do contend that he should possess the education of a Physician; and of course, it were better if he had a Physician's diploma in preference to a Surgeon's, since the examinations that obtain them
them are on different subjects, and require a different direction of studies.

It is well known, that whoever studies medicine, studies at the same time the scientific parts of surgery, and is equally skilled in it with him who calls himself a surgeon, except in handling the knife. With this it is not his province to interfere, as it would intrude too much on the profession of his brother; but if engaged in regimental practice it may occasionally be necessary that he should practice operations. It is absolutely incumbent on the Physician to acquire this knowledge in surgery, because he is frequently called where a great part of the complaint is surgical, and has besides, repeated opportunities of seeing operations.

In such cases, his opinion respecting the health of the system is required, and according to it the Surgeon acts, whether it be to operate or not; but it is not equally necessary for the Surgeon to study the practice
tice of medicine. With anatomy both ought to be well acquainted, but both not always with physiology, general pathology, and those branches mentioned above. Nor is it absolutely required from the Surgeon to study the Materia Medica, except so far as respects plaisters, unguents, frotuses, and and the like. While I say this, I do not mean that they are, in general, found unacquainted with more; I only contend, that it is not considered as requisite for obtaining their surgical diploma.

Instances, it is said, have occurred during the late war, where Surgeons were raised to the office of Physicians by the mere word of a Commander in Chief. We shall not say that the knowledge of such were not sufficient for the office to which they were elevated; but we may be allowed to remind even commanders, that it is an unwarrantable step in them. It is an encroachment on the regular bred Physician, and on the prerogative of the University.
versity. It may likewise prove a discouragement from study, and examinations. As soon as such proceedings get abroad, and when it is found, that the lowest practitioners stand a chance to be advanced to the privileges of the Physician, and enjoy without study those emoluments he ought to receive, Candidates for the army will spare themselves the trouble of tedious preparations for examinations, as well as the expense of a Doctor's degree: they will remain contented with a Surgeon's diploma; perhaps, even never apply for this.

Suppose Generals were never to make such appointments without a recommendation, yet this is not enough; the person to be promoted ought to have the sanction of an University, a lawfully instituted seminary of medical knowledge. A man may give universal satisfaction to officers by his manner of conducting himself; or he may ingratiate himself into the favour of those that have power to serve him. If the promotion
motion he obtains, be in his own line, it is well; but when those bounds are broke down, by an *ipsa dixit,* then it becomes a fault. A General has as much right to create a Bishop, as he has to create a Physician, i.e. he can do neither; it is beyond his proper sphere of action. It is just as absurd as if the College of Physicians would pretend to create a General, who never was bred to war, and possesses neither practical knowledge in the art, nor lawful authority for such proceeding.

Surely he would never be acknowledged among general officers as one, though the University should meet and in the most solemn manner proclaim him such. It is just the same with a General who dubs a man a Physician, if an University, who have properly the power of such creation, never conferred on him this dignity; he may indeed give him the emolument, this he has in his power to do; but I will submit it even to himself, if this be acting with propriety,
and for the welfare of his Sovereign's service. His Sovereign has delegated to him this power of commissioning medical people to relieve the complaints of the soldiery; not with the expectation that it is to be abused by the introduction of irregular persons. Such a station ought to be considered as the second in military life. When things go on in this manner, it is no wonder if Generals find their armies composed of feeble and unhealthy soldiers; or to use the words of Milton, "If they see the soldiers shed away from about their officers as sick feathers, though never so often supplied."

But to return; to recommend study, and to endeavour to point out the advantages of improving the mind, to such as have the practice of medicine in view, and more especially, to regimental practitioners, who are chiefly the objects of these pages, cannot, I think, be censurable; and I hope my endeavours towards this end, however
however imperfect, should they not deserve applause, will, at least, be allowed to pass without the accusation of presumption, or the odium of arrogance, and self-importance.

In discharging a trust of such magnitude, of such consequence to the public welfare, as the practice of medicine, it becomes a duty of the first kind to prepare ourselves with care and diligence, and to call to our assistance every aid we are able to procure. Nor, perhaps, is it beneath the wisest, the most informed, and experienced of the profession, to reflect, and that seriously, on the following sentiment, viz. that, —“it is, often, not from any deficiency in the engine when we fail, but from an error in us who wield it.” —Or, in the words of Pope,—that,

—“if vain our toil,
The fault lies in the culture, not the soil.”

T t 2 W E R E
Were we to consider a knowledge of the sciences only, in the light of making us more happy, independent of their assisting us in medical researches, this ought to be an inducement to cultivate them. For happiness is what every one has in view, however different the ways may lead, through which it is sought; and there is a pleasure in pursuing science, in searching for knowledge, not less to the mind engaged therein, though at first less apparent, than in the flowery and inviting paths of frivolous amusement, and dissipation; a pleasure too, that affords satisfaction on reflection, when those years are almost full, that requires us "to be numbered with the dead," which the other cannot bestow. Our various enjoyments through life are heightened by science.—"Science renders life less animal, less confined to the dust we tread on."—And so great is the satisfaction of acquiring knowledge, "that, (so we are told) Archimedes absorbed by this pleasure, did not even perceive the soldier who came to plunge
plunge into his breast, the sword which ought to have protected him."

I shall conclude the foregoing remarks with the sentiments of a distinguished author*, on the superiority of the person whose mind is improved and enlightened by literature, in what sphere of life so ever he be, over him who remains in the darkness of ignorance. After telling us, that the waste of time is a very calculable loss, but that depravation of mind is a waste of a much higher denomination, he goes on—"the votary of study, or the enthusiast of fancy, may incur the first, but the latter will be suffered chiefly by him, whom ignorance, or want of imagination has left to the grossness of mere sensual enjoyments. In this, as in other respects, the love of letters is friendly to sober manners, and

virtuous conduct, which in every profession is the road to success and to respect.

"To the improvement of our faculties, as well as our principles, the love of letters appears to be favourable.—They give room for the exercise of that discernment, that comparison of objects, that distinction of causes, which is to exercise the skill of the Physician; to guide the speculations of the merchant; and to prompt the arguments of the lawyer; and though some professions employ but very few faculties of the mind, yet there is scarce any branch of business in which a man who can think, will not excell him who can only labour. We shall accordingly find, in many departments where learned information seemed of all qualities the least necessary, that those who possessed it in a degree above their fellows, have found from that very circumstance, the road to eminence and to wealth.

He
"He who has mixed general knowledge with professional skill, and literary amusement with professional labour will have some stock wherewith to support him in idleness, some spring for the mind when unbent from business, some employment for those hours which retirement or solitude has left vacant and unoccupied."

A SHORT
A SHORT DESCRIPTION OF THE INFLUENZA, WITH ITS DISTINCTION AND METHOD OF CURE.
P R E F A C E.

The following short Essay on the Influenza was written during the last epidemic attack of the disease, and published in June, 1782, before it had entirely disappeared in the neighbourhood where the remarks were made. It is republished here as connected in some measure with my observations on the medical practice of regiments.

A SHORT
SHORT DESCRIPTION, &c.

THE inclemency and backwardness of the season* have been remarked by some of the oldest people alive, to be the greatest in their remembrance. The spring proved exceedingly cold, which checked vegetation; and in several parts of Scotland, numbers of cattle perished for want, as neither fodder nor grass could be procured for money; many were killed for the same reason. Our accounts from Plymouth are nearly similar.

* Spring, 1782.
A Gentleman, who took for several months past an exact account of the state of the weather, assures us that he found the thermometer stand one degree lower on the 22d of May, than it did on the 22d of the preceding December; and that on Christmas-day last, and Whitsunday, it stood precisely at the same height. For three months we have scarcely enjoyed a single day, without more or less rain.

About three weeks ago there was a dreadful thunder storm; the morning shone bright, and the day warm till about 12, when it lowered on a sudden. The lightning and thunder were remarkable, accompanied with a shower of large hail stones. I took up some as they fell, examined their size, and am persuaded they would have measured upwards of half an inch round; the thunder lasted more than half an hour, and the hail continued to fall about a quarter of an hour or twenty minutes. It did not, however, spread to any
great distance, for five miles from this no hail was perceived.

Since this it has thundered frequently, but the most remarkable was about the 24th of May. It began in the evening, a little before sun-set, and continued at least for two hours. The thunder at this place, however, was less remarkable than the lightning; I stood with a gentleman here to observe it nearly the whole time of its continuance. Preceding the thunder, it was a dead calm, and the day likewise by far the warmest we had experienced for a length of time before.

There was something awfully beautiful in the lightning. It did not appear in flashes in general, but in large balls, one rolling after another over the heavens northward of us, and now and then dashing one against another, driving off large sparks, producing a great and sudden glance, which enlightened the street of the village for an instant,
instant, as if the sun had shone forth; yet the thunder was at a considerable distance, as we could easily ascertain by the interval between the lightning and the peal. From this we concluded ourselves in no danger, and stood with the less concern to view the uncommon appearance it produced.

We presaged, that over the places where the fire balls past, there must be damage sustained, and almost the next post confirmed our suspicions; for not only houses were burned, but several persons lost their lives, and many trees were shattered to pieces.

Nearly about the same time the Influenza made its appearance in London, and the country round. It spread in a few days with great rapidity, insomuch, that a physician of extensive practice in the city, is said to have visited no less than one hundred and seven patients labouring under it in one day.
At St. Alban's it soon became prevalent; the soldiers that lay there seemed to be the first victims of its fury. Out of three companies quartered in that town, scarcely a single man was fit to do duty—the officers suffered in like proportion; for one only escaped the complaint.

In the neighbouring towns it raged with no less severity. I have seen seven in one family, nine in another, five in a third, and in a fourth, eleven seized with it. We had accounts, that in Sir Patrick Blake's family, fifteen laboured under it; and in the Duke of Marlborough's, no fewer than twenty-seven.

This is allowed to be one of the widest spreading epidemics in the whole catalogue of diseases. It is not confined to those on land; at sea it rages with equal fury. The accounts we have from the fleets, confirm this remark. It is said, that 400 of one ship's company, and 300 of another, came
came lately on shore ill of it; nor does it seem to be confined to the human species; for it is said horses are in like manner sufferers, as well as sheep; but this I will not give for a fact.

In my journeys to visit patients, I have observed both horses and sheep cough frequently; I think others have observed the same in former similar epidemics; how far it was connected with it, I dare not say.

The last time it made its appearance is yet fresh in the memory of every one; it is but a few years ago; at that time it spread in a short period over all Europe; I am told it has at present reached the Continent; and there is some reason to believe, from the experience we have in the disease, it will visit many parts before it ceases *.

* Since this was written, there are accounts of its having made its appearance at Stockholm and other parts of the Continent, where it rages with violence.

SYMP.
SYMPTOMS.

The first symptoms are, a great cough, with straitness about the breast, and considerable dyspnoea. The patients generally complain, as if they had something like a ball in their throat, about the head of the sternum; to this they attribute the want of free respiration; a coryza, or running at the nose, always takes place, thin and acrid, excoriating the upper lip, and vellicating the membrana sneideriana, rendering the inside of the nose extremely painful: this is always accompanied with a violent sneezing, which adds very much to the pain of the head. In general, among my patients, I found a soreness over the eyes, chiefly about the brows, which they said was seated in the bone, and rendered them stiff and painful to be opened, nor when open could they bear a strong light. A rheum also distilled from them, not un-

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like what we observe take place in the measles.

The head is also in this complaint much affected, especially the fore part, in the course of the frontal sinuses. This pain is much aggravated by coughing; at the same time are felt universal pains over the whole body, such as we often meet with in continued fevers; there is generally a febricula, which is known by the alternate heat and cold the patients feel; and in some cases the pulse is evidently accelerated, and the fever running very high; but in the greater number of those that came under my care, this did not happen.

In many I could distinguish very little fever, by what remarks I was able to make on the pulse: in others, nevertheless, it was sufficiently evident, and many were weak thereby and faint. There is always some thirst accompanying it. In my own case, and
and in all those I visited, the pain on attempting to cough was felt about the head of the sternum, reaching as far down as its middle, but not spreading far on either side. I found very few who pointed at the seat of the pain as placed near the cartilago ensiformis. From this it appears to be entirely confined to the trachea, and its first ramifications; neither the pleura covering the lungs, nor their proper coat having much part in the affection.

In some who were valetudinarians, whose lungs were previously in an unfound state; or where there was an hereditary taint, laying an easy foundation for an affection, the case was otherwise. These were seized in a more violent manner, and the complaint here put on a more dangerous appearance.

The pain in the breast is seldom felt but on attempting to cough. Then it resembles
fembles the pricking of a thousand pins, almost totally checking the effort.

The throat and mouth burns with heat, with an uncommon smarting pain all over the fauces, and behind the velum pendulum palati. The tongue and fauces become dry, and considerably parched. In two patients this was remarkably the case. Some bled at the nose; and one patient had abscesses formed in both ears, which burst and have continued discharging for some time past.

As the complaint abates, the pain in the breast ceases; first gradually leaving the sternum and neighbouring parts, but continues fixed some time longer about its head, with a duller and less acute sensation on coughing, which very little now, if at all, impedes that effort of nature to free herself from something irritating.
In this stage, expectoration becomes more easy, the cough less severe, *i.e.* less painful, as was already mentioned, but not less frequent; the fit not ceasing till a quantity of mucus be pumped up. Though a diarrhœa be not a characteristic symptom, nor frequently met with, yet I have seen some few cases where it was conjoined. In some of these, however, it existed before the Influenza made its appearance.

The duration of this disease, in general, is not long. I have seen none very ill above a week: many not more than three or four days. Others, however, have been less mildly dealt with, and have laboured under it for upwards of fourteen. It generally leaves the body weak and debile, and for a considerable time unfit for much exercise.

A gentleman who left London a few days ago, told me, as he passed through the streets pretty early in the morning,
that he observed many of those who cry things for sale, leaning their heads against the walls of the houses, and in this situation crying their goods; not being able to support themselves upright.

The seat of the complaint seems, from the history we have given of its symptoms, to be entirely placed in the mucous membrane of the trachea, sneiderian membrane, and that lining the frontal sinuses. That there is an inflammation induced in those, must also be obvious; and this greater or less, according to the violence of the disease, and habit of the patient.

**DIAGNOSTIC.**

It is no difficult task to distinguish it from an inflammation of the lungs; and pleura. The state of the pulse, which in this complaint is for the most part soft and feeble, in the pleura generally full and hard, would of itself suffice for this purpose; but
but the coryza, which never takes place in the pleurisy, will be still a farther mark: nor are there found in pleurisy those wandering pains over the body, so universal in this disease. It has, indeed, a nearer resemblance and connection with the catarrh. In both we often meet with coryza, pains in the head, and over the body; but the sporadic nature of the one, appearing only in those persons who have been exposed in a particular manner to cold, and the epidemic nature of the other, attacking almost every one indiscriminately, without distinction of sex, age, or situation, will direct us in our diagnostic. Perhaps, we might add a previous constitution of the air, and state of the weather, at least, in giving a predisposition to it. A man who had a compound fracture of the thigh, and had been confined to bed by it for upwards of four weeks before the disease made its appearance, was seized with it, and suffered equally with the rest of the family. This is a strong proof of its epidemic and contagious
tagious nature. But the chief diagnostic mark is its arising from a specific contagion inducing a great degree of debility.

It has been supposed by some that pneumatic inflammation has been contagious from its appearing as an epidemic; but I am of opinion, we may, without great difficulty, distinguish between such an epidemic, if it ever does become so general as to put on the appearance of one, and the Influenza, from the difference both in the extent and rapidity of the spreading of this beyond the other, not to mention several other obvious distinctions to discriminate them.

CURE.

When the Influenza is skilfully treated, it seldom proves fatal *; on the other hand,

* I have heard only of one person who died of it, since its present commencement: he was previously in a bad state of health.
if unskilfully handled or entirely neglected, it may lay the foundation for consumptions. The inflammation may spread; may penetrate into the substance of the lungs, abscesses may be formed; the consequence of which must be absorption: the mass of fluids in this manner will be contaminated, and the patient at length sink under a confirmed hectic.

With respect to the method to be pursued; in this part of the country venesection is unsafe, unless in plethoric and robust habits. It yields in most cases to the other modes of removing inflammation. We are to administer plenty of thin, diluting liquors, such as barley-water with a little nitre, or acidulated with orange or lemon juice: sage tea, ground-ivy tea, balm tea, orange whey, weak negus made with oranges or tamarinds, lemonade sweetened with honey. Whatever one of these we choose for drink, it should be used somewhat warm. The relaxing powers of such liquids
liquids are greater when sub tepid than either altogether cold or when made pretty hot. It should be a constant rule to sip of these drinks every now and then, whether thirst requires it or not. Our drinks may be sweetened to our taste with honey, succ. glycer rh. or liquorice-root, boiled in it.

Gentle diaphoretics ought not to be omitted to promote a free perspiration, on which a great part of the cure will depend. For this purpose sp. minderer. with a few drops of vin. antimi. and a few of L. Laud. will answer. If our patients are not so bad as to be confined to bed, we should at least caution them to stay within doors; but it would be better still to advise them to keep in bed to encourage perspiration. The feet should be every night bathed in warm water. This will not only bring the determination of the blood from the bronchiæ, and of course relieve them, but a considerable absorption of the water will be made, and the blood even in this man- ner.
ner, if there be any degree of siziness existing in it, diluted, and the cohesion of its gluten loosened. When the cough is distressing and keeps the patient from rest, an opiate must be administered. I give them with great success: for admit there be present a considerable share of inflammation, yet the irritation occasioned by the cough more than over-balances the heating qualities of the opiate; nay, a night's rest from coughing, wonderfully promotes expectoration. It is needless to mention mucilages, after what was said above on drinks. Solutions of gum arabic will prove here very serviceable. Constiveness is to be obviated by some of the milder laxatives; perhaps cream of tartar made into an electuary with honey may supersede all others; for the simpler our prescriptions are, so much the better. A multiplicity of medicines only breeds commotion and interrupts the action of one another. We may relieve the pain of the throat, by ordering the steams of warm water to be inhaled. This may be medi-
cated with herbs as we may judge proper, though the warm water alone will answer nearly as well. If proper inhalers, such as described by Mr. Mudge, be not convenient, a tea-pot, wrapping the pipe round with a handkerchief or towel, forming a sort of tube, may answer as a substitute.

The food should be light; rice or bread pudding; thin broths, fago; to a pint of which, a glass of white wine may be added. Panado, to which likewise, if our patient be not very feverish, we may add a little wine.

If the appetite be not much impaired, which I have sometimes found the case, and the patient ardently wishes to indulge in some fresh meat, it should be boiled. Roast meat heats too much, as having its fat or gravy, in a great measure, retained in it by the constant rotation it undergoes in dressing.
As vegetables are laxative, and do not produce so much chyle as flesh meat to disturb the animal æconomy, we may allow our patients such of the olera as they choose.

I seldom find it necessary either to bleed or blister *; nor have I heard of any cases so treated in a circuit of between twenty and thirty miles round this place, save one Lady at St. Alban's, where the Surgeon thought it necessary, and whose blood indeed was considerably inflamed, as appeared by the coagulable lymph separated on its surface. I have been informed, however, that in London they both bleed and blister with advantage. In some parts of the city, however, I am authorized to

* One Surgeon in this town tells me, he has applied blisters in a few cases where the difficulty of breathing was great, bending the body forward, and threatening (he said) suffocation.
fay, bleeding did not answer. Dr. Rogers, Physician to the Finsbury Dispensary, Clerkenwell, whose opportunity of seeing the disease has been extensive both in his public Dispensary and private practice, informs me, that in place of finding it accompanied in general with much inflammation, it rather verges towards the typhus type. In one case this was remarkable; so that he was obliged to administer the bark in various forms. This patient was a Lady, and of a delicate habit.

My friend Dr. Willan likewise, Physician to another Dispensary in the city, saw a case where a few ounces only of blood were taken away; the consequence of which was a depression of spirits and lowness of pulse, where the beats could with difficulty be distinguished for three days after, notwithstanding endeavours to raise it.

Vomits too, in the beginning, have been said to have very good effects; but in
this country I have not seen a single emetic ventured on; and have heard only of two or three instances of it. They create great irritability; for this reason I should be afraid to venture on them. It is true, they open the pores of the surface, and relieve obstructed perspiration; but this may be done with more safety without them.

With respect to bleeding; the nature of this place and season, sufficiently caution against it. The country is woody; the leaves of the trees now pretty fully opened; hence they retain a greater quantity of moisture, and from their shade impede the free circulation of the air; the rains for months past almost continual, and of course much stagnating water on the ground. A constant exhalation of vapour is daily more or less taking place; by this means the atmosphere is loaded with moisture: and as the summer is now advancing, when the sun shines forth, it is with vigour, which raises the moisture still more.

This
This variability of weather, often in the same day, is sufficient to relax the most robust fibre, and induce debility in the strongest habits.

That this is the case is evident, from the number of intermittent fevers round this neighbourhood. Of numbers that dwell along the banks of a small rivulet that waters this, and several other villages in the course of twelve or fourteen miles, fevers of this type are to be found at present almost in every family. I have seen children under them of six years of age, and one so young as two; nor is this, as I am informed, a rare occurrence. The typhus has likewise showed itself in several instances of late in this place; all these plainly point at debility; for these reasons, I have not bled in a single case, excepting in one, of the many I saw under the present epidemic; nor indeed does the state of
the inflammation in the least warrant its propriety.*.

In our practice among the poor, who are deprived of those conveniencies to be met with in genteeler life, we may fully answer our purposes by the Sp. Minder. & Vin. Antim. as mentioned already, giving plenty of milk posset, made either with butter-milk, or in its stead good vinegar.

Mucilaginous drinks may be made cheap, and good enough with Rad. Glycerh. Spanish juice, decoctions of common mallows, lintseed tea, decoction of bran, made palatable with honey, or such like, the expence of which they may easily bear.

* Since this was written, a gentleman of this place tells me, he has bled in some few cases with advantage; yet I examined the blood of one of his patients, and it confirmed what I advanced. The patient had insisted, however, on being bled.
Fifteen grains of nitre may be added to any of these, three times a day.

Whether we practice among the poor or otherwise, strong sudorifics should be avoided. Hence Pulv. Dover. Camphor, and such like, are improper; these both heat and irritate too much. For the same reason we should avoid all the warm Alexipharmics. Some order to the poor, treacle posset, made with treacle and ale, and oftentimes adding butter. This surely is an unwarrantable practice; it must throw the patient into a copious sweat, and from such relaxation of the perspirable pores, he is in ten times the greater danger of catching a fresh cold. Lubricating and softening liniments, will avail much in taking off the tickling cough, and allowing the mucus to thicken, these may be composed of Conserv. Cynosbat. ol. Amygdolar. Mucilage of Gum Arabic, and Paregoric Elixir, or Syr. Papaveris. Some add to this a few drops of Elix. Vitrioli: but I would object
ject to this, as tending, perhaps, to check perspiration.


Spermaceti mixtures likewise, if it is judged necessary, may be given; but the Linctus seems to answer better.

By such means as those we may reasonably hope to obviate all the bad effects of the Influenza, without the loss of blood in most instances, and restore our patients to their former health and vigour. Let us remember the proverb, ne sanguinis humani prodigus, at least before we use the lancet, let us weigh well the symptom that seems to indicate it.

As the Author's intention in this little tract is rather to appear useful than elegant; he has therefore been at little pains with regard
gard to dictation, or ornament. To write plain, so as to be rightly understood, is all he aims at. The humane reader will, he is persuaded, easily forgive errors of that nature, in a sketch written in haste, and intended for immediate use; and as he has consulted no author in drawing it up, nor opened a single book on the subject, his description is to be considered as solely made from his own observations, since the present commencement of the disease: for this reason he hopes he is not censurable, if all its variety of symptoms be not enumerated.

The young practitioner, who has not had an opportunity of seeing the disease before, as well as the patient, may perhaps reap some advantage from the short and imperfect account given of it here. And if this end be obtained, he shall be the less anxious, on the present occasion, respecting literary reputation.

_Luton, Bedfordshire, May 28, 1782._

**THE END.**
ERRATA.

Dedication. Vol. I. p. 1. l. 4. after have add granted. l. 9. after in general, add I am strongly induced. l. ditto, after both add by. l. 10, 11, for strongly unite to call for, read to make.

VOL. II.

Ch. xi. p. 1. l. 2. from bottom, for (,) after alone read (;) Page 8. l. 5. for (,) after besides read (;) Ditto l. 3. from bottom, after Surgeon add (,) Ch. xii. p. 49. l. laft, after up add (,) p. 75. l. 5. after party dele (,) p. 87. l. 1. for law, read power. p. do. l. 12. after ignominious, for (,) read (,) Ch. xiii. p. 94. l. 9. for effect, read affect. p. do. l. 7. from bottom, for minuta read minutiae. p. 105. in the note, for vol. I. read vol. 8. p. 108. l. 15. for ounces, read ounces. Ch. xiv. p. 162. l. 13. dele not. p. do. l. 18. for (;) read (?) Ch. xv. p. 192. I. 5. from bottom, for indispensably, read indispensable. p. 201. l. 1. for hire, read here. p. 208. l. 12. for the army customs and regulations, read the customs and regulations of the army. p. 225. l. 8. for legs, read leg Ch. xvi. p. 239. l. 2. from bottom, after intermitenis, dele (,) p. 240. 1. 11. after on, add an. Ch. xvii. p. 254. l. 4. before Physicium, add (") p. 259. l. 5. from bottom, for bone, read bones. p. 276. l. 2. for inequalities, read quantities. Do. l. 9. after practitioners, add (,) Do. l. do. after years, dele (,) p. 300. l. 2. from bottom, after here, dele (,) p. 321. l. 10. for was, read were.