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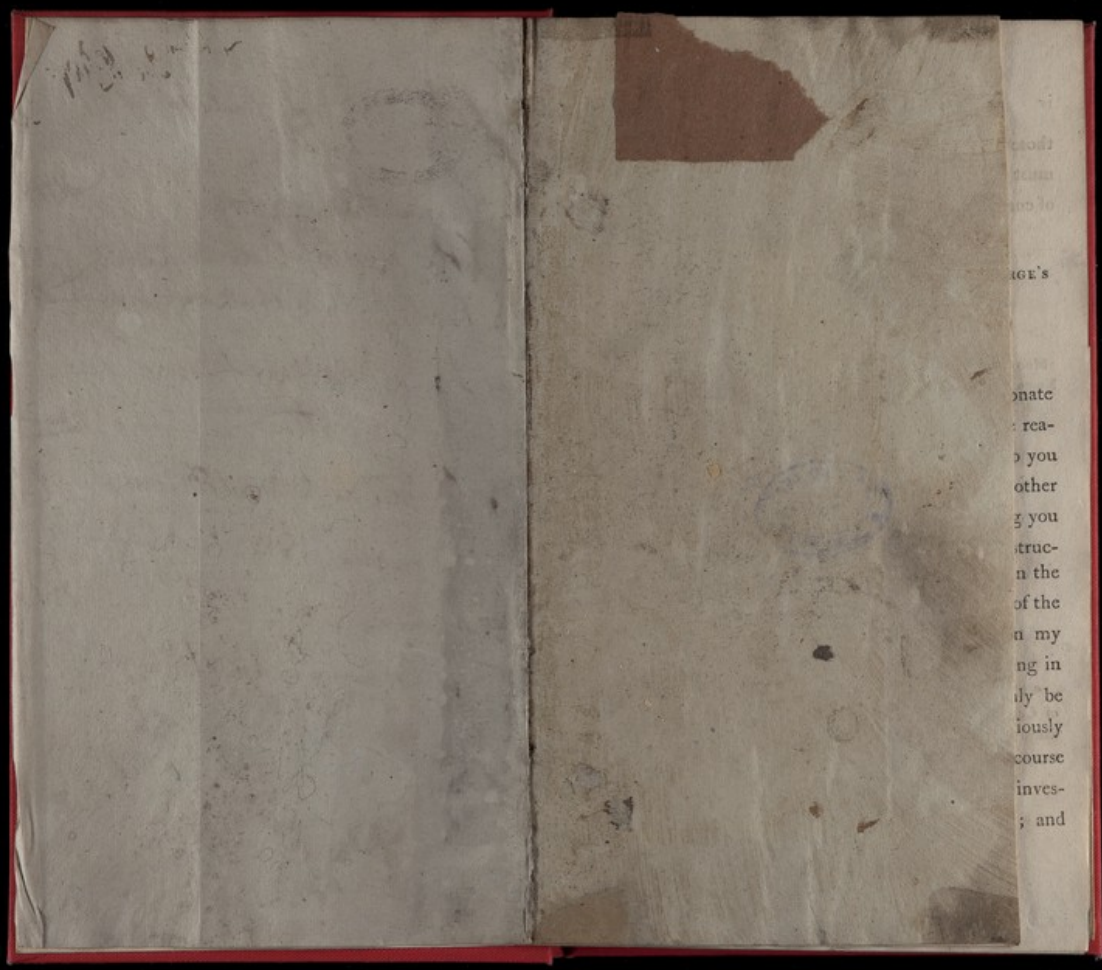

OBSERVATIONS

ON THE

CURE OF CANCER;

WITH SOME

REMARKS

UPON

MR. YOUNG'S TREATMENT OF THAT DISEASE.

BY THE LATE

THOMAS DENMAN, M.D.

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HOSPITAL, LISSON-GREEN.

THE SECOND EDITION,
REVISED AND CORRECTED BY THE AUTHOR.

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1816.

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TO

B. C. BRODIE, ESQ.

ONE OF THE ASSISTANT SURGEONS TO ST. GEORGE'S HOSPITAL.

DEAR SIR,

I WILL not mention the affectionate regard I have ever entertained for you, as the reason of my particularly wishing to dedicate to you these observations on *Cancer*. Amidst your other pursuits, I take this opportunity of entreating you to continue your researches into the morbid structure of cancerous parts, and your remarks on the effect of medicines administered for the cure of the disease. I may perhaps be too sanguine in my opinion and expectation of a specific existing in the preparations of Iron; but this can only be satisfactorily proved by experiments judiciously repeated, in a variety of cases, and in a long course of time. Much has been lately done in this investigation, by men of distinguished abilities; and

those who have seen many instances of *Cancer*, must rejoice at the prospect before us, of a method of cure being at length discovered and established.*

I remain, dear Sir,
your affectionate friend,
and very humble servant,

THO. DENMAN.

Mount Street,
November 1, 1815.

* Certainly some progress has been made towards the cure of *Cancer*, since the first edition of this account was published; and it is hoped that still farther improvements will be made.

ADVERTISEMENT.

The following pages are presented to the public as being the last literary labours in which the Author was engaged. It was his anxious wish to see this work again in print. He had made the necessary alterations a short time before his death, and had the satisfaction of knowing that the greater part of it was struck off. The recent treatment of *Cancer* had of late occupied much of his attention. For a considerable time he searched into the probable causes, and endeavoured to find the best mode of treatment, of this painful disease. Having at length heard and approved of Mr. Young's practice, Dr. Denman was desirous of communicating that information upon the subject which might become the instrument of relief to many suffering individuals. To promote objects of this description was indeed the habitual aim of that gentleman, whose loss the public

are called to deplore. It is impossible to hear of the removal of such a character without feeling emotions of sorrow and regret; and whilst his memory will be cherished in the bosoms of his relatives and near connections, the Publishers cannot forbear adding their testimony to the worth and excellence of so inestimable a man. During a short acquaintance with Dr. Denman, which was occasioned by the reprint of some of his works, they experienced that degree of kindness and attention, which they are happy in having this opportunity of acknowledging. The exalted station which he occupied in society did not induce an ostentatious conduct towards those who were in any respect his inferiors; but, on the contrary, he manifested that gentleness of manners, together with a familiar intercourse, which so adorned his general deportment. In him were combined all those amiable qualities which at once form a *friend* and a *gentleman*:—he lived not for himself, but for the good of all around him,—not seeking his own interest, but that of his fellow-creatures; breathing universal benevolence to mankind; he spent a life which was protracted to a considerable length; and after having devoted his time, his talents, and his

property to the benefit of others, he is now entered into that rest, where he will enjoy the most exalted felicity throughout a perpetual duration. Such then is a very brief sketch of the private character of the individual of whom the world is deprived; those who best knew him are most able to appreciate his merits, both in his professional capacity and domestic circles. If it be the language of presumption to say, that he was the greatest whom the world knew, it may surely with truth be asserted that *a great man has fallen.*

OBSERVATIONS

ON THE

CURE OF CANCER.

To all who are acquainted with the general structure of the human body, and with the peculiar and relative functions of the several parts of which it is composed, there never can be wanting a subject for serious contemplation. But the subject becomes far more important and interesting, if it comprehend the diseases to which the body is naturally liable; those which are produced by the necessary employments and occupations of men; those which are caused by accidents; those which are brought upon them by the irregular and unreasonable manner of their living; and above all, by the powerful influence which the uncontrolled passions of the mind are capable of producing in the body, by generating some diseases particularly afflictive, and by aggravating those which are unavoidable. The science of medicine, or the doctrine of diseases, may indeed be said to be

inexhaustible, from the variety and endless number of objects on which it is employed; as the same diseases are continually assuming new forms; and new or undescribed diseases are not unfrequently appearing. By the industry of men in general, but particularly by the exertions and persevering application of those who have dedicated their time and abilities to the practice of medicine, or by accidental occurrences, means have been gradually discovered by which the diseases the human frame is liable to, may be often prevented, always alleviated, and generally cured. It appears however from the earliest records of medicine, that notwithstanding their utmost endeavours, there ever remained a certain number of diseases, which were acknowledged to be *incurable*. By this term, it may be presumed, was only meant, that they were not to be cured by any means or methods with which the ancients were then acquainted. They, especially professional men, seeing what had been already done, were too wise to limit or circumscribe what, at some future time, might be accomplished by the continued efforts of enlightened men, separate or conjoined; or the advantages which might be gained by repeated and renewed experiments, registered for the consideration and benefit of successive generations. It is therefore the duty of every medical man to admit with much caution an opinion of the impossibility of curing any disease or any degree of disease, seeing that remedies have been already discovered for many, which were at some period of time judged to be incurable.

Of all diseases deemed *incurable*, that which is denominated *Cancer* has been most generally allowed to be so, and probably all its derivatives, by whatever name distinguished. The frequency of this disease, and the dreadful sufferings of those who are afflicted with it, are universally known. An investigation of its nature, and of some means by which it may be prevented or cured, is therefore an object of the greatest interest, to all who direct their powers towards lessening the mass of human misery. Even unsuccessful attempts to discover a cure for *Cancer*, are entitled to some share of commendation; but the acknowledgment of ignorance ought not to be considered as a sanction for negligence or indifference, or as a screen from censure. In ignorance we must ever remain, if the motives for extraordinary exertions are to be discouraged; and the pleading of the term *incurable*, seems to have had that effect, as if the faculties of our minds were palsied by despair. But it would be more consonant to reason, and to a sense of duty, to continue our efforts by opening new sources of information, by devising new means, or more efficacious modes of using those with which we are

already acquainted. In such an investigation as in this case is absolutely required, an accurate natural history of *Cancer* would be of prime advantage; and ample materials for such an history we now possess. The first part of such an history should comprise a description of that kind of constitution, which has been observed to be most liable to *Cancer*, and which is pretty strongly marked in the complexion and general aspect; of the predisposing and immediate causes; of those parts most liable to, or most frequently the seat of, the disease; of the peculiar structure and functions of those parts; of the manner in which it commences and makes its progress; of the medium by which that progress is made, whether by absorption or otherwise; and it should be marked, whether the effects of *Cancer* vary according to the structure of the parts affected; or whether in its varieties, there be any specific alteration in the nature and qualities of the cause of the disease. If different diseases have gone under the general appellation of *Cancer*, the points of resemblance and difference ought to be strongly delineated, and no position is to be admitted as irrefragable, however great the authority with which it may be made, without submitting it to the most accurate and severe examination; by which our advancement towards the great object

of out aim would indeed be rendered apparently more slow, but far more correct and beneficial.

It is also necessary that we should understand the mode of connexion between distant parts, as the *uterus* and *mammæ*; or parts more nearly connected, as the *penis* and *testes*; whether any thing more be implied by the term sympathy, than that in similarly constructed parts, if one part be excited to morbid action, all the rest, of similar construction, necessarily assume a similar action; or whether more be intended, when distant parts are affected with the same disease, than that the general state of the constitution is prone to that disease.

Cancerous humour, is a term often used, as if it were the only or most certain way by which the disease was conveyed from one part or person to another. Yet it has not been proved by experience, or by any mode of analyzing, that the discharge from a cancerous sore has the property or power of propagating this particular disease; or is composed of different constituent parts: or is possessed of different qualities, than a similar discharge from any part ulcerated by an ordinary cause. It has been often asserted, and is generally believed, that by the concubinage of a healthy man, with a woman who has a cancerous *uterus*, he will not be infected with the disease, though he may suffer some unpleasant temporary complaints from such com-

munication. It may therefore be doubted, whether there be any such thing, properly speaking, as cancerous humour; or whether this disease is ever spread by the absorption of any infected humour transferred to other parts; and the same observation may apply to what is called cancerous action; for if inflammation, for instance, be excited in a gland or other part by a cancerous cause, it does not follow that there shall be any specific action, though the cause of the action be specific. Otherwise it would be very difficult to account for the abatement or temporary suppression of inflammation in a part affected with *Cancer*, by means which are proved by manifold experience, to have no influence upon, or power over the cause. We can hence readily conceive a difference between the cause, and effects of a disease in a thousand instances; and understand that a cause of a disease may exist in the body for an indefinite time, without producing any morbid effects. Where we have the power of confining the effects, though the cause remain, it may be said, that we prevent the disease, so long as the means used retain that power, and keep the part in a quiescent state. But when we have the power of destroying or extinguishing the cause, or can render the part and the constitution, unsusceptible of any consequences arising from that cause, we may with great propriety be allowed to say, that we have cured the disease, though the consequences already produced may heal spontaneously, or be cured by medicinal treatment. It is also clear that different states of this disease may require different modes of treatment. Quicksilver has been found, by experience, to be inefficacious or injurious in every case of *Cancer*, as *Cancer*; yet it may be proer and useful in abating the inflammation caused by the disease. These observations will apply on many occasions to the subject we are now considering, and to other diseases, if any were known, which spread their influence in the manner of *Cancer*.

Various ways of pursuing the inquiry I am endeavouring to make have occurred to me. It was first my intention to have given an abstract of all which has been recorded on the subject of *Cancer*, beginning with the earliest writers, and tracing it down to the present time. In this I had made considerable progress, by the assistance of my learned and able friend Dr. *Pelham Warren*. But finding what had been said by them, mostly consisted of loose conjectures on the nature of the disease, of a list of medicines they had repeatedly used without success; that the generality of their works were copied from preceding writers, and that they universally concluded with admitting that the disease was *incurable*, I did not see the

benefit which could be gained by compiling a large book, which at last would be more curious than useful. Nor is this to be considered as an imputation upon the ancients, as if they wanted either understanding or attention; but it certainly is to be wished that we should not be so shackled by depending on the information they have given, as to prevent us from using our own faculties and exercising our own judgments. Is the practice of surgery, it may be asked, the same now that it was in the time of *Hippocrates*, or *Celsus*? yet there is surely nothing to be regretted in the change. The ancients understood and practised the art of building such ships as answered their purposes and necessities; but their art can only be considered as consisting of rudiments, and has not prevented their successors from bringing it to the state of high perfection to which it is now carried; yet this cannot be esteemed any derogation from the ancients. The same observations may be made of many other arts. But to shew an example of how little is to be learned from the ancients respecting *Cancer*, I will transcribe from *Ætius* what seems to have been the practice before, and long after his time. There is no occasion to mention an endless number of popular receipts for the cure of *Cancer*, some of which were purchased for large sums of money, especially if the name of some person of distinction

was tacked to them, all of them having fallen into discredit, and most being nearly forgotten.

Pro Cancro non ulcerato.

Lac, a quo multa pars exhalatione absumpta est—Erysimon—Psyllium—Capita Papaveris—Fraxini folia, mollia, aqua fluviatili cocta et trita, dolorem mitigant. (Alston says that Erysimum is used by *Dioscorides*, *Galen*, and *Paulus*, for the seed of that plant which agrees in virtue with the Semen Nasturtii, and the Bursa Pastoris.)

Pro Cancro ulcerato.

Urticæ folia et semen—Dracontium—Pompholix—Plumbum—Solanum—Hyoscyamus.

℞ Spumæ Argenti (Lytharge)
Adipis Porcini
Ceræ Albæ ā ℔j
Olei ʒxvj
Vitellor. Ovi assatorum xij.

Spumam Argenti cum aqua et aceto tere, deinde parum olei affunde, et vitellos admisce. Postea in mortario terantur, et cera liquefacta admisceantur; et si dolor absit, Iridis, Aristolochiæ, Myrrhæ, singulorum drachmas tres adjice.

In another prescription, the same medicines are used with the addition of Diphrix, sive Æs cum Thure et Oleo.

(Pomet describes the Diphrix as the refuse left in making Bronze.)

℞ Spodii Cuprici, loti et exsiccati
Plumbi usti et loti.
Succi Rosarum *a* ʒiv
Misce cum ungento Rosaceo.

(Spodium Cypricum idem est ac Pompholix vel Tutia. Vide Castelli Lexicon.)

℞ Rhois Coriacii (Curriers Sumach) sive
Corticis Granatorum
Rotulorum Cupressi *a* ℔j
Gallarum immatur
Cassiæ optimæ *a* ʒvj
Vini fortis ℔ xxx

Maneant per quatriduum. Decoque tunc cola, et decoque residuum ad mellis crassitudinem.

Here it may be observed that it is doubtful whether any internal medicine is prescribed, so that all their endeavours seem to have been directed to the cure of the local tumour or ulcer, and this appears to have been their general aim. Now and then some new medicine was adopted, till at length, all

which have any relation to the cure of *Cancer*, even to our days, or till within a few years, were included. But as all these were proved by long experience to be ineffectual, it occurred to me that the most promising way of arriving at the knowledge of a remedy for *Cancer*, would be, to throw aside all that had been said by the ancients respecting this disease; to begin new modes of investigation, in order to discover the cause, and structure of parts actually in a cancerous state; to detect the peculiarities of the disease; to try new medicines with caution, and new modes of using them, in a simple or combined state, or in succession, and not to disdain any for their simplicity. But seeing that in this way of proceeding, we should be deprived of some judicious and important remarks, and the benefit of many fortuitous observations made in the course of comparatively a few years, I determined on the following method. To give, upon authorities which cannot be doubted, an account of the morbid changes of structure, in parts actually in a cancerous state; to discover, if it were possible, for the further explanation of these, some analogous appearance: and then to proceed to the method of cure; interspersing such conjectures and observations as have arisen in my own mind, or as I may have collected in conversation with my friends, or as have occurred in my own practice.

In the account of the morbid structure of a cancerous part, I shall commence with that of Dr. *Baillie*, who published, in the year 1799, A Series of Engravings, accompanied with Explanations, intended to illustrate the Morbid Anatomy of some of the most important Parts of the Human Body.

In this most valuable work, which must be of the greatest utility to all who are engaged in any branch of the practice of medicine, there is one *fasciculus*, illustrating the diseases of the *Pharynx*, the *Œsophagus*, and Stomach. The Doctor has observed that the *Œsophagus* is most liable to disease, at its upper and lower extremities, and the stomach at the *Pylorus* or smaller end. In the fourth plate of this *fasciculus*, fig. 2, is represented an ulceration of the *Œsophagus* of great extent, and in the explanation it is remarked, that " the coats of the *Œsophagus* were very hard and much thickened, and on the cut surface may be observed many *white, transverse lines*. These represent the cellular membrane, interposed between the muscular fibres, thickened by disease. This preparation may be considered as affording a good example of scirrhus in muscular parts."

In the sixth plate of the same *fasciculus*, fig. 1, there is a section of a circumscribed scirrhous tumour of the stomach, thus described; " it consists of a whitish substance, having a gristly hardness,

and in some parts it is slightly intersected by membrane." In fig. 2, of the same plate, " a stricture near the *Pylorus* is delineated, produced by a scirrhous thickening of the coats at the small end of the stomach, the cut edges of the stomach, at the stricture, shewing its coats to be much thickened. The scirrhus had not advanced to form an ulcer. The distinction between the external, muscular, and villous coats of the stomach, is well marked, and some *transverse, white lines* are observable, dividing the muscular coat. These consist of thickened cellular membrane."

In plate 7th of the same *fasciculus*, is represented a section of the stomach, near the *Pylorus*, affected with *Cancer*. In the explanation of this plate it is said, " the muscular *fasciculi*, are not only thickened, but the cellular membrane interposed between them has undergone the same change, putting on the appearance of *white, transverse lines*."

In *fasciculus* 9th, Plate II, fig. 2, is a transverse section of a scirrhous *uterus*; in this are represented " a prodigious number of *membranes* intersecting its substance in various directions, and several tumours are imbedded in its substance." In Plate VIIth of the same *fasciculus*, fig. 2, is a delineation of a scirrhous *ovarium*: " it is much enlarged in its size, and consists of a solid matter, intersected by *membranes*." This figure is most expressive of the disease.

To the best of my knowledge and recollection, these very conspicuous *white, transverse lines*, and *intervening membranes*, which insinuate themselves even between the muscular *fasciculi*, were first noticed and delineated in this work of Dr. *Baillie*. They are to be esteemed as the basis of the natural history and commencement of *Cancer*, and the knowledge of them will be of much utility in many points of practice. The fine membranes are not indeed mentioned as equal to the *white, transverse lines*, but I believe they are merely different forms of the same substance. *Piso*, whose works were published in 1579, says that *Cancer* still returns, unless all its *roots* are cured, which is impossible, when it is seated in the *uterus*; but its increase may be prevented by diet and medicine. It is often provincially said that *Cancer* always returns, unless the *strings* are cleanly removed; and empirics often speak of the claws of *Cancer*, as if it were a living animal.

Dr. *Baillie* has justly observed, "that the knowledge of morbid structure does not necessarily lead to the knowledge of morbid action;" nor does the knowledge of morbid actions, diversified as they are, lead to the discovery of that peculiar change of structure, which may be the consequence of such action. Yet a discovery of the cause of the action, with the effects produced by it being made, together

with that of the means and manner in which they are produced, would be such advantages, that we might proceed with confidence to the discovery of a method of cure; by correcting or destroying the cause, by preventing or suppressing the action, and ultimately its effects; or by rendering the constitution or the part capable of resisting the influence of the disease. But diseases have been most generally cured by experiments, and the trials of different medicines, and then explanatory doctrines have been deduced from the facts. I cannot consider the induration and thickening of parts affected with *Cancer* as the commencement of the disease, but as sequels to an action excited by the *white lines* or *membranes*.

In the year 1804 Mr. *Abernethy* published, Surgical Observations, containing a Classification of Tumours, &c.

In these observations, Mr. *Abernethy* has considered, and with great judgment arranged Encysted Tumours, as a skilful Anatomist and Surgeon, according to their structure, contents, and the method of treatment which they require. One of the distinctions which he makes on the subject, is called the *Carcinomatous Sarcoma*, and this is our principal concern; but I may be allowed to mention a few previous circumstances. He thinks, "that the cysts of enlarged glands, which are of different degrees of thickness, are composed of

many *lamellæ*, formed by cellular membrane." Of this there may be some doubt, supposing, that when any poison, (or any thing which acts as a poison) is formed, or received into any part of the body, there generally commences a process, as a general principle or law of the constitution, by which the farther progress of such poison shall, if possible, be prevented, and restrained to the part where it was originally lodged, and that the cyst is the mediate instrument of such restraint. For this purpose the adhesion of inflammation may be sufficient in the first instance; but it may be presumed that an effusion of some fluid from the adjoining parts takes place, and this fluid thickened to a substance afterward becoming vascular, as in the case of inflamed membranes, may constitute the cyst. Should the adhesion of inflammation, or the cyst when formed, be insufficient to restrain the poison to the particular part, it is in many cases transferred by the lymphatics to the nearest gland to which they lead, and if it escape this, or successive glands, it will proceed to the constitution, making its devastation according to the qualities of the poison. Thus in the case of poison received in some part of the hand or fingers, the life of the patient is often preserved by the swelling of the glands at the elbow, or the axillary glands; unless the poison be of so active a nature as to outstrip, as it were, both the adhesion and

the swelling of the gland. This may have been the case with the man who was bitten by the rattlesnake; for not only did the limb suffer, but the general principle of life was in an instant so nearly extinguished, that it could not be preserved without the strongest stimulants very frequently repeated. If it be said that this poison acted immediately upon the nervous system, and not through the vascular, this supposition may be undeniable. But it may be asserted with equal truth, that *Cancer* has also its peculiar mode of devastation, for Mr. *Abernethy* himself has very sagaciously observed, that its effects are sometimes conducted "out of the course of absorption, or of the participation of irritation," and this remark deserves particular attention; for in what other way can it be possibly conveyed, except by means of these peculiar white transverse lines, or intervening membranes already mentioned?

It is proved, in Mr. *Abernethy's* opinion, "that there is a secretion from the internal surface of the cysts, which after a certain time, ulcerate (mechanically) from the accumulation of the fluid so secreted; or by the activity of the morbid principle contained in them, escaping or overcoming the restraining power of the cyst." But it is his own observation, that long before the cyst gives way, the disease *(Cancer)* is making its progress

into the constitution or the neighbouring parts, by means of the *firm whitish bands*; of the truth of which he gives this satisfactory proof. "If, after removing a carcinomatous tumour, the surgeon attend to the part taken away, he will see if any of those bands have been cut through, and when this is the case, whether some of the diseased substance, which ought to have been removed, has not been accidentally left. This circumstance cannot be observed by looking at the bleeding surface of the wound, but may be readily ascertained by examining the part which has been removed." This is a most important observation, because the propriety of removing the breast, or any other local part presumed to be cancerous, has generally rested, I believe, upon the neighbouring glands being free or unaffected by the disease; whereas this observation proves, that *Cancer* may spread its influence, in other ways, "out of the course of absorption," when the glands are clear. The observation explains the reason also why operations performed with the most favourable prospect have often terminated unsuccessfully.

In the account given of the structure of a carcinomatous tumour, Mr. *Abernethy* says, "that generally the diseased part is peculiarly hard, and there are mixed with it *firm whitish bands*; that there is no other striking circumstance, which can

be mentioned as *constantly* claiming attention, in the structure of the disease. These *firm whitish bands*, as described by Dr. *Baillie*, run sometimes in all directions, from the middle towards the circumference of a carcinomatous tumour, like rays from a centre, having little intervening matter. Sometimes these bands assume an arborescent arrangement, ramifying through the diseased substance." He adds, "*firm white bands*, like thickened and compact cellular substance, are seen, as the disease advances, to extend themselves from the original tumour, amidst the fat in which it is occasionally imbedded, intercepting portions of fat in the irregular *areolæ* which they form. These led Dr. *Adams* (to whose observations on various occasions we are much indebted) to conjecture that the fat might be originally diseased, and that these *white bands* might be a thickening of the cellular substance, which ensued as a consequence," but no notice has been taken of the fat being in a diseased state in the first instance. However these remarks are strong and repeated proofs that these *white bands* may work through a cyst long before it has undergone any apparent change.

Mr. *Abernethy* has also given an exact account of the structure of a carcinomatous testicle. After a decay of the looser parts of the diseased gland, by something equivalent to maceration, he says,

"the capsula remained perfect with a congeries of *flocculent fibres* occupying the interior part of it, which were doubtless the vessels and connecting cellular substance of the gland, not indurated by inflammation. There can be no doubt of the truth of the fact, if there be any of the explanation. This is sufficient for our present purpose."

But there is a circumstance or two more on which I beg leave to remark. He takes notice of two other cases. One of the tumours contained a fluid of the meliceritous kind, for which the patient was advised to use brine; of which application he perhaps speaks too slightingly, as the inflammation of the cysts thereby raised may be more complete, or the adhesion of the sides of the cysts facilitated, or the abolition of the cysts occasioned, and the contents more perfectly evacuated than by a small incision, or the feeble subsequent inflammation. Of the case of a wen cured by a number of small punctures into it, whereby a more serious operation was avoided, I entertain the same opinion, though the method does not meet with his approbation. It is not impossible but that at some future time both these methods, though not yet acknowledged in surgery, may be admitted into regular practice. In the case of *fungus hæmatodes*, the return of the disease after amputation is attributed to a part of the

cyst or disease being left behind. Of Mr. *Hey's* discovery of this disease Mr. *Abernethy* speaks most handsomely, as indeed does every other surgeon with whom I have conversed upon the subject. But in my apprehension, the diseased structure of the *hæmatodes* has not yet been sufficiently explored.

The whole of Mr. *Abernethy's* work shews the head and hand of a master; and should he live to finish what appears to be his plan, he will give a new face to doctrinal and practical surgery, as far at least as relates to tumours.

In the year 1805 Mr. *Home* published "Observations on *Cancer*, connected with Histories of the Disease." Of this work Mr. *Home* honoured me with the dedication, and I must ever acknowledge myself highly gratified by his good opinion.

Much credit is due to men of distinguished scientific abilities, and of high professional rank and character, who, whilst they are engaged in the active business of life, accustom themselves to keep regular accounts of cases, with the general result of their own practice, for the purpose of improving their profession. This observation applies with peculiar propriety to those gentlemen of whose works I have presumed to take this short review.

The first case related in these observations is that of a man who died with *Cancer* of the *penis*,

proceeding apparently from a violent injury received upon the part, some years before. The mischief done in the progress of the disease was really dreadful; but the great use arising from this remark is, "that while the disease was making its customary ravage on distant parts, it was stationary in the part first affected." This will incite us to make inquiry, what that state of the injured part is which disposes it to become cancerous; and it requires much consideration. For as accidents which seem to be of little consequence, as well as those which are more severe, are not unfrequently suspected to lay the foundation of, or to give rise to *Cancer*, especially in the breasts of women, we should by such inquiry be led to pay more attention than is usually thought necessary, in injuries of parts most liable to become cancerous. We may hope that when a cure for *Cancer* is once discovered, no long time will elapse before we acquire the knowledge of some method or means by which it may be prevented; of which perhaps this very case might have been an example.

In the second case it is observed, that from the ulcerated surface, a thin acrimonious fluid, limpid as water, was discharged in large quantities. This kind of discharge I have often known to be made in the beginning of *Cancer* of the *uterus*, and such

cases have in the sequel been of the most inveterate kind.

The first eight chapters of this work contain many extraordinary cases of *Cancer* in various parts of the body, interspersed with many very sensible and useful observations. Chapter 9th contains the author's observations on the nature, structure, and progress of cancer. Mr. *Home* is of opinion that "cancer is in every case, at one precise time, local in the strictest meaning of the term." The difficulty has been to fix the precise time when it ceases to be local, for this opinion will scarcely be controverted by any person who has made much inquiry, or thought much upon the subject. He also thinks "that *Cancer* is not a disease which immediately takes place in a healthy part of the body, but one, for the production of which it is necessary that the part should have undergone some change connected with disease." This may be easily comprehended, meaning, I presume, that there must be in the part a state favourable to the reception and progress of the germ of the disease, however that may be originally formed. In this chapter Mr. *Home* gives his very interesting and important description of the general appearances of a cancerous tumour, "when a section is made of such a tumour; in an early stage, when the structure is seen to advantage, it puts on the following ap-

pearances; the centre is more compact, harder to the feel, and has a more uniform texture than the rest of the tumour, and is nearly of the consistence (density) of cartilage. This middle part does not exceed the size of a silver penny, and from this, like rays, in every direction are seen *ligamentous bands of a white colour*, and very narrow, looking in the section like so many extremely narrow irregular lines passing to the circumference of the tumour, which is blended with the substance of the surrounding gland. In the interstices, between these bands, the substance is different, and becomes less compact towards the outer edge. On a more minute examination, *transverse ligamentous bands*, of a fainter appearance, form a kind of network, in the meshes of which the new-formed substance is enclosed. This structure accords with what Dr. *Baillie* describes to be the case in cancerous diseases of the stomach and *uterus*." He again observes, that "in a further advanced stage of the tumour, the whole of the diseased part has a more uniform structure; no central point can be distinguished; the external edge is more defined, and distinct from the surrounding gland; and the *ligamentous bands*, in different directions, are very apparent, but do not follow any regular course which can be traced. When the tumour has advanced to what may be called can-

cerous suppuration, which does not however always happen in the centre, before it has approached the skin and formed an internal sore, it then exhibits an appearance totally different from what has been described. In the centre is a small irregular cavity, filled with a bloody fluid, the edges of which are ulcerated, jagged, and spongy. Beyond these, there is a radiated appearance of *ligamentous bands*, diverging toward the circumference; but the tumour, near the circumference, is more compact, and is made up of distinct portions, each of which has a centre, surrounded by *ligamentous bands* in concentric circles. In some instances the scirrhus has no appearance of suppuration or ulceration in the centre, but consists of a cyst, filled with a transparent fluid, a fungous excrescence projecting into this cavity, the lining of which is smooth and polished."

In a subsequent part of the same chapter, Mr. *Home* has given a description of a tumour taken from the breast; "when the tumour had been macerated in water, for three days, in a cold season of the year, and was re-examined, its substance had become looser and more distinct; *ligamentous bands*, of a very slender texture, were readily observed in every part, forming a net work, in the interstices of which, a substance resembling imperfect granulations was included;" which sub-

stance so changed, I presume to have been effected by the influence of the *white* ligamentous bands.

Throughout this work, there will be found a great number of observations which will be of infinite use to all who wish to inquire more minutely into the structure of cancerous parts, and the manner in which the disease makes its progress; but the foregoing abstract is sufficient for the present purpose.

It is worthy of particular notice as a happy concurrence of circumstances, that when Dr. *Baillie* had mentioned the *white lines*, two men of great eminence should have taken up the subject, and besides the addition of many other observations, have applied the knowledge to practice.

I may venture to say that no facts admitted into the records of medicine, at any period of the world, were ever supported by more substantial and respectable testimony, than those which have been brought forward to prove the truth of the following inferences:

First, that in the structure of *all* carcinomatous glands, there exist those substances which Dr. *Baillie* has called *firm white lines*; Mr. *Abernethy*, *firm whitish bands*; and Mr. *Home*, *ligamentous bands*, of a *whitish colour*.

Secondly, that these substances have not been

found in any tumours, excepting such as were of a carcinomatous kind.

Thirdly, that these lines or bands, are not only found in the part where carcinomatous diseases originate, but in every part which becomes subsequently affected with the disease.

From these premises, we might be justified in coming to this further conclusion; that these lines, filaments, or bands, are constituent parts of *Cancer*, without which it never exists; to which may be added, that they are not only constituent parts of *Cancer*, but the medium by which the disease is conducted from one part to another; Mr. *Abernethy* having told us that "lymphatic glands, though out of the way of absorption, or of the participation of irritation, may become affected with the disease."

At some future time it may perhaps be discovered, what is the origin and ordinary course of these substances, whether they are vascular, and what kind of fluid passes through them; what is their uniform and exact arrangement; whether they are composed of links like the tape worm, or make their passage, like the ivy, by throwing out at short distances, little projections or holders. When a still more accurate knowledge of them is gained, our conjectures and opinions concerning them would be ascertained, and the principles of

practice probably very much improved. It may be a long time before the anatomist meets with a subject favourable to such very nice investigations, but in the mean while, practice may be much improved, by what has been already done, by repeated experiments, and by acute and persevering attention. It seems to be an indubitable fact, that far more information has been acquired of the nature and structure of *Cancer*, within a few years, than was known to all the generations of men which have gone before us.

The evident effects of various diseases, beginning with inflammation, and terminating in suppuration or ulceration, may be similar, though the cause be widely different; and the difference will be ascertained, by the antecedent circumstances and progresso f the disease, by the effects of medicines, and by the previous knowledge which experience has afforded us; but not by any particular appearance in the purulent discharge consequent to such suppuration or ulceration. Thus we inoculate with matter taken from a variolous pustule, with a view of producing the same disease in another person, in a milder form; but we inoculate with the gross matter, though not apparently different from any other matter, presuming that in such matter, the specific particle or principle, capable of producing the disease, may be enveloped; yet of the existence of such specific particle, there is no other proof than in the particular effects which follow its insertion. The purulent matter discharged from a *bubo* or chancre in the venereal disease, has the appearance of matter produced by common inflammation, but the peculiar quality of the matter is proved by the effects it may afterwards produce, and by the operation of certain medicines in that disease. Suspicion may indeed be entertained of the nature of the disease, from the situation of the *bubo* or chancre, or by their appearance, but these are not positive proofs of their being venereal, because those disorders have been known to happen, in such situations, from other causes. Certainly men of experience in that disease are seldom mistaken in their opinions, but that is sometimes the case, of which there is an example in the first case of *Cancer* of the *penis* given by Mr. *Home*, which at the commencement, from its resemblance to a common chancre, was supposed to be, and treated as, the venereal disease.

The *Lupus* is attended with many symptoms common to *Cancer*, and it is often so named; yet it is almost certainly cured by some preparation of quicksilver and the decoction of *Sarsa*; and applications of the former to what may be called Lupous sores or ulcerations are beneficial. But

every preparation of quicksilver having been found to be always prejudicial in cancerous cases, we may conclude there is no identity between the cause of *Lupus* and of *Cancer*. Moreover, I think it has been observed, which will serve to distinguish the two diseases, that when the nose is affected with the venereal disease, the bones are commonly injured; but if with the *Lupus*, the cartilages are destroyed. The former also produces corroding, or deeply eating, as well as spreading ulcers, but the latter, an alteration of structure, not unlike an honeycomb, which, if not checked, proceeds to the throat, *œsophagus*, and stomach, and at length destroys the patient, by altering the structure and depraving the functions.

I am not sure of being right in my notion of *Noli me Tangere*, which has been described by authors in various ways, but by none of them very distinctly. I take it to have been intended to describe an enlarged and indurated part, suspected to be cancerous, or of a malignant kind; which, while it remains in a quiet state, we ought not to disturb by any interposition. Should it assume any action, the name of the disease is changed, and it is to be treated according to the state it may assume.

In scrophulous cases, it seldom happens that one gland only is affected, and the case is usually judged by the seat of the part, as the parotid or sub-

maxillary or cervical glands; but whether one or more of the glands be diseased, no specific cause is suspected. The whole would be considered as a general indication of debility of the constitution. When this was amended or restored to its proper standard, the gland or glands affected, however numerous, would by common treatment be repaired, as far as a gland, the natural structure of which has been altered by disease, can be repaired. The means used for the cure of the venereal disease, are not administered in *Scrophula*, because they have been found injurious. It may therefore be said, that there is no connexion between the cause or effects of *Syphilis* or *Lupus* and scrophulous diseases; or between those and *Cancer*, unless debility of constitution be considered as such. It is to the anatomists we shall be obliged for an accurate account of the changes of structure in these different diseases.

In the opinions given respecting cancerous cases, we are very much guided by the situation of the part affected, as well as by the state of the part. Lumps in the breast, as they are popularly called, are at all ages esteemed to be of a suspicious nature, especially if their surfaces are unequal, though they have not always a cancerous tendency. For there have frequently been instances, in which these lumps have appeared in females in early life, yet

were cured by such means as have been judged proper in scrophulous disorders; and sometimes, I believe, when it has been thought proper to extirpate them with the knife.

Till it is otherwise proved, let us take it for granted that *Cancer* is a disease *sui generis*, different as to its cause, progress, and manner of making its progress, from any other disease with which we are acquainted. It was before observed that, though the cause be specific, inflammation, which is the first obvious effect, is common, as it not unfrequently yields to the means used for the abatement or suppression of it by the ordinary treatment, such as local bleeding, cooling medicines, and applications, and by strict diet. If suppuration follow, this may proceed in the manner common to all suppurating parts, but the specific effects of the cause of *Cancer*, do not appear before the abscess breaks or is opened. But while the external inflammation or suppurating process is going on, the specific cause seems to be acting with vigour in the substance of the part. The effects of this action appear to be, first, the destruction of the natural structure of the part, and secondly, the conversion of the substance so destroyed, into the means by which its own peculiar structure may be fabricated; or, as Mr. *Abernethy* has well expressed it, may build its own edifice; or as the worm in the nut first devours the

kernel, afterwards perforates the shell. So in the progress of *Cancer*, when all its devastation is committed in one part, its own powers of making progress are advanced, and its resources in the part first affected are exhausted; it then breaks through its confinement, and proceeds to other parts, where it again produces equal devastation. This may perhaps explain the observation of Mr. *Home* in the case of the cancerous *penis*, "that the disease was stationary in the part where it originated, while it was making its horrible devastation in distant parts."

In cases of *Cancer*, there seem then to be two diseases existing at the same time: one proceeding from the specific cause; the other, being no more than common effects, though arising from that particular cause; but the effects are not the principal disease. The first seems to proceed from the spreading of the disease by the intervention of the *white filaments* or *bands*, but lately discovered and described; the other from inflammation or suppuration, raised by the positive injury done by absorption, or by the alarm given to the part invaded by those *bands* or *filaments*. If a consultation were to be held on the propriety of removing a cancerous breast, or other part, one of the first things done would be, to examine the state of the neighbouring glands. When the skin of the breast becomes wrinkled, or drawn

into lines, or when the nipple is retracted, it is to be apprehended that the whole breast is affected with the disease, and the operation would fail, if those parts so affected, especially the nipple, were not removed. But if those glands are found clear of disease, consent is given to the operation, because it is believed that every diseased part can be removed by it. But if any adjoining gland, those of the *axilla* in particular, be enlarged, or inflamed, there is always some hesitation, or it is not agreed upon, presuming it to be impossible to remove the whole disease. This reasoning is founded on the old opinion of *Cancer* consisting in diseased humours. Mr. *Abernethy* has spoken very distinctly on the subject of dividing the *white filaments*, or *bands*, in operations; that if a part of these be accidentally left behind, the disease will return. There is a person in Lancashire of the name of *Taylor*, who has an extensive, popular character for the cure of many diseases, especially of *Cancer*. It is a rule with him, at least since the filaments or bands were first described by Dr. *Baillie*, to endeavour to pick or drag out those, whenever an operation has been performed, or a cancerous tumour becomes open; with the intention of preventing the return, stopping the progress, or removing absolutely the disease. How far he may succeed in his endeavours, I have not been

informed; but his intention is right. *Taylor* is a very plain homely man, with much resolution, and a good natural understanding. He reads more than is suspected, or some person reads for him, so that if illiterate, he is not ignorant.

If one gland only be affected, or not many, and these can be safely come at with the knife, the operation is ventured upon and performed. Yet with all these precautions, the operation is often unsuccessful. This must happen, because the *white filaments*, which constitute an essential part of the disease, have advanced beyond the breast or glands, which appear to be diseased. In some cases also the operation has succeeded when one or more of the axillary glands have appeared to be diseased; and this, it may be presumed, happens when an absorption from the breast has preceded the advance of the *filaments*; and the swelling or induration has disappeared after the operation. When on the removal of the evidently diseased glands, the deeper seated ones are found affected, whatever care the operator took, the operation, as far as I know, was never successful. It is probable that if *Cancer* in the breast be a creature of the constitution, the operation, *cæteris poribus*, will be less likely to succeed, than if it were the consequence of an injury inflicted on the part. Such has been the uncertainty of these operations, in cases supposed to be

cancerous, that surgeons are become far less desirous of performing them, than seems to have been the practice formerly; when without much hesitation they removed the whole breast, or tumours of any kind, because they had the power of removing them. In the same manner abscesses were opened whenever the fluctuation of matter was perceptible, without judging of the relative or consecutive circumstances. To the credit of discovering the proper method of treating large abscesses Mr. *Abernethy* is entitled.

I may take this opportunity of speaking of another part of this subject. The extirpation of a cancerous part is usually spoken of by empirics, as if they had cured *Cancer*; but this cannot be allowed to be a proper or just mode of expression, though it may answer the purpose of enhancing their merit. The amputation of a leg is not curing a compound fracture, or a diseased foot.

There are two ways of removing cancerous breasts, by the knife and by caustics. In regular practice the former method has generally been preferred; by empirics the latter. What is the difference? The removal of the part by the knife is attended with pain comparatively of short duration, and not more violent probably than that occasioned by the caustic. So far the comparison is greatly in favour of the knife. The question

then to be decided is, whether after the extirpation of a cancerous tumour with the knife, the disease be more or less liable to return, than after the caustic. Here I feel inclined to prefer the caustic to the knife for a reason assigned by Mr. *Abernethy*, that if the *white filaments* are divided, and a part of them left behind, the disease will return; but if the caustic were used, then all the adjoining fatty substance for a considerable distance is left discoloured, and somewhat altered in its texture, from the influence of the caustic; and there is reason to believe, wherever that influence extends, the *white filaments* will be destroyed, which may be called the instruments of the disease. The trials made at the *Edinburgh* Hospital to prove the comparative security of the patient from a return of the disease, when much or little skin was preserved, clearly shewed the propriety of removing as much of the skin, cellular membrane, and fatty substance, as could be safely done; though it had not then been observed that the *white bands* or *filaments* were often imbedded in the fatty substance.

The old way of employing the caustic as described from *Fuchsius*, I think, was by covering the whole of the diseased part intended to be removed with the preparation, which was usually arsenical, duly mixed, and renewing the application afterwards, till it had corroded through the diseased to

the healthy parts. Latterly it has been the practice, I understand, to draw a line round the diseased part, and to apply the caustic to the line only, repeating the application at proper intervals, till the whole substance within the circle was dug out. This has been ostentatiously exhibited as *Cancer*, the decayed substance on the surface of which was described as claws or small extremities of the disease. Nothing can be well imagined more painful than this operation; but such is the dread of this disease and of cutting, that here are at all times people found, who submit to it. It is necessary to give large doses of opium when the caustic is applied, and to supply the patients frequently with cordials to enable them to support the torture it occasions.

If it should happen that the *white filaments* do not outstrip the absorption of the matter from the axillary or other neighbouring glands, but remain confined to the breast, when this is removed, the whole disease may possibly be taken away; and the absorption to the gland being considered as an accidental circumstance, and no constituent part of the disease, the operation will succeed, and the axillary gland will be restored to health soon afterwards. It may be possible, by careful observation, to distinguish between these cases. But every gland becoming diseased by being a new nest, as it were, of the disease, forms also a new centre from

which it spreads to other parts, probably in the manner before described. In examining the structure of a cancerous gland, early in the disease, Mr. *Home* observes, there is but one centre, but in the advanced state, there are many centres, and that *filaments* or *bands* run in concentric circles. Hence it may be supposed, that if one of these centres were entirely removed, little progress would be made towards a cure, as every circle may be a different root of the disease.

If *Cancer* be allowed to be a disease *sui generis*, it appears to be so only by the *white bands* or *filaments*, which have not yet been discovered in any other disease. If they were, that disease would probably be as difficult of cure as *Cancer*, by whatever name it might be called. It is not therefore to be expected there should be an exact resemblance between *Cancer* and any other disease to which the human body is subject. Should it be further inquired whether there be much resemblance or analogy between *Cancer*, and any disease to which animals are subject, the answer would be doubtful; for though they are known to have wens, and ulcerations of different kinds, which admit of a cure with much difficulty; some resembling *scrophula*, more particularly in swine, the *herpes exedens*, and the like, it is not said that they have *Cancer*. We may then inquire why are animals exempt from

Cancer? is this exemption to be assigned to the different structure of their bodies, or to their living a more natural life, the greater part abstaining from animal food, and all of them from fermented liquors? We may then inquire whether that part of mankind which lives in the free and unrestrained use of all kinds of fermented liquors and certain kinds of diet, are more liable to *Cancer* than those who abstain from them, or use them more sparingly. It will then in all probability be decided, that those who live indulgently, keeping their bodies in a state constantly bordering on fever, are more liable to this disease, than those who live temperately. It is also thought, if not proved, that those who become corpulent or fat, through indolence and indulgence, are more liable to *Cancer* and many other diseases, than such as are of a thin habit from scanty living and regular exercise. It is also ascertained that *Cancer* is a more rapid and intractable disease in the corpulent and fat, than in persons of a spare habit. Fat, in every animal body, seems indeed to be a substance perfectly useless to their present well being; it may be considered as a store laid up for the sustenance of the body when deprived of external means of nourishment, and, like other stores, is more likely to be superfluous than deficient.

It is admitted that *Cancer* more frequently affects parts concerned with the venereal appetite than others; but it has not appeared how far the unreasonable indulgence of that appetite may dispose to this disease, though it may to many other punishments. The proofs of this might be taken from those who lead a life of common prostitution; but these most unhappy beings become sacrifices at so early a period of their lives, few of them reaching the thirtieth year of their age, that the opportunities of making correct observations are generally lost.

With the following information I have been favoured by my friends to whom I applied for their remarks on this subject.

Dr. *Pelham Warren* observed that in the most violent pain attending cancerous diseases, the vascular system was little disturbed, the pulse often remaining quiet and regular. I do not recollect that this circumstance occurs in any other disease.

Dr. *Robertson*, who has been for many years physician to the Royal Hospital at Greenwich, tells me, that he could only recollect seven cases of *Cancer*, and then it happened to old men. We may hence conclude that there is nothing in the diet or circumstances of a seafaring life which disposes to this disease.

Dr. *Ruddiman*, who resided many years on the coast of *Coromandel*, the natives of which are very

cleanly in their persons, and a remarkably temperate race of people, informs me that they are little liable to *Cancer*. I have no just reason for saying that uncleanliness actually causes this disease, but certainly cleanliness in our habitations prevents many diseases, and in our persons renders us less susceptible of them.

It has not been observed that those who work in manufactories of any kind are peculiarly liable to *Cancer*; nor those who work in mines or coal-pits; nor in any other occupation or employment, saving the poor chimney-sweepers, in whose disease, though called *Cancer*, I am not capable of judging, whether there be any thing specifically different from common *Cancer*.

It can hardly be doubted but that women are more liable to *Cancer* than men; yet it has not been proved that unmarried women are more subject to *Cancer* than those who are married.

Dr. *Adams* observed, that this disease was very rare in the nunneries or monasteries in the island of *Madeira*: but it will be recollected that, together with a life of celibacy, there is practised a constant controul over all other turbulent passions.

I think it remains a doubt whether those married persons who do, or do not suckle their infants, are more liable to *Cancer*.

It has been concluded that steril women, when married, are more subject to *Cancer* than those

who have children. But there are so many different causes of sterility, it is to be presumed that the decision applies only to one cause.

Women who menstruate irregularly or with pain, or who have profuse discharges at each period, are suspected to be more liable to *Cancer* than those who are regular, or who do not suffer at those times.

Suspicions have been entertained by some, that *Cancer* is an hereditary disease. But this can only be allowed so far as relates to some peculiarity of structure, or some disposition, rather than as a necessary consequence, as in gout and several others. But in addition to any peculiarity of structure or disposition, it is to be supposed that children live in some measure according to the manner of their parents, and a more powerful influence may be derived from this than from any other cause.

There has been no little difficulty in determining what is the earliest period of life at which *Cancer* has appeared, and at what period we are most liable to it. To the latter, I believe, may be answered, without much hesitation, in advanced life, and to women about the time of the cessation of the menses, not because of any malignity from the retention of these, as some have supposed, but because a part disposed to disease was deprived of a local discharge by which it had been relieved. The earliest case I ever saw was *Cancer* of the

tongue in a young woman about seventeen years of age. She had never menstruated, and when it appears before the time of puberty, it has not been observed to affect parts concerned with the venereal appetite.

Within these few years much attention has been paid to the diseases of the vegetable tribe, and these have been in several instances intelligently compared to those of animals. In those accounts the term *Cancer* is given to one appertaining to trees, but this seems to resemble more the *herpes exedens*, or gangrene, than *Cancer* in the human species. This is said to be cured by cutting away all the diseased part, and then favouring the healing of the wound by suitable applications, and such means as promote the activity of the powers inherent in the tree. Wounds and injuries of every kind are said to be repaired by processes similar to those which take place in animals, and this opinion, as far as I have learned by common observation, without studying the subject, is just. The anastomosing of branches is too common a circumstance to deserve notice.

In every class of animated beings, animal or vegetable, there exists a peculiar kind of life, or different gradations of the living principle. Not the least curious or wonderful of which is in the

tribe of mushrooms, and of these it has been doubted, whether they are to be classed as animals or vegetables, or whether they be not animal substances, vegetating like plants. Each individual of this tribe has its peculiarity of structure, origin, progress, duration, and qualities, some of them being wholesome food, and others the most active poisons. The *Boletus Lachrymans*, or, as it is quaintly called, the Dry Rot, from its effects on timber, though it cannot exist without moisture, has been often described. When trees have been cut down and reduced into the forms of beams, planks, or boards, they will continue perfectly sound for an indefinite number of years, according to their original texture, though liable to premature decay from various adventitious causes. Of this premature decay, the fungus called the Dry Rot is the most frequent cause in certain situations, and in every kind of timber. The growth of this fungus is extremely curious, originating in what is called diseased or altered ground; but whether it be produced from seed, or the fermentation of different substances, is not now material. It launches forth an infinite number of fine *white silky fibres*, which, if covered with stone, run for a great length, even under the whole floor of a room, sometimes forming large flakes, membranes, or sheets of the same texture. If the stones are laid so closely, that the

lines cannot escape through the seams, it creeps on still further till it finds an opening or exposure to the air, and then a fungus of a large size, and of a beautiful orange colour, sprouts forth. When this is come to a state of perfection it throws off or scatters around it an immense number of seeds of a brick colour, and almost as small as dust. The silky filaments do not always run in a straight direction, but diverging, not like the branches of a tree, but like a vine nailed to the wall, or as the ivy running up a tree to which it clings, by fixing, at certain distances, a kind of talon or nail into the bark of the tree, ever wanting some support in its progress. I might here observe, that these talons of the ivy bear, in their form and arrangement, an exact resemblance to the *lines* described in one of Dr. *Baillie's* plates. In the *creeper*, as it is vulgarly called, the talons or holders spring from the tree singly, and then throw off branches or feet, by which it fixes upon the wall which supports it. They are of a wiry texture, and resemble the foot of a fowl.

If any timber lies in the way, and the silky filaments of the *Boletus Lachrymans* come into contact with it, they penetrate into its very substance, completely destroying its texture; and timber which has been pervaded by the filaments, if of fir, has not a particle of terebinthinate matter remaining in it; or of whatever kind it may be, it has the appearance as if it had been under the influence of fire, being warped, and in many parts rendered as dry and light as powder, not unlike the substance called touch-wood.

Many remedies have been recommended for the destruction of this fungus, some to alter the quality of the ground in which it exists by means of some metallic substance which destroys all vegetative power in the soil; and that most commonly used, and thought most efficacious, is some ferruginous matter, as the scoria of manufactories in iron, or the refuse of vitriol works. Other remedies are taken from contrivances to have a constant succession of dry air, thus preventing any supply of moisture, when it inevitably decays entirely. But if any of the silky filaments escape to a part where they can get moisture, or are out of the reach of the metallic substance, they will live and produce the effects before mentioned. These silky filaments, I have persuaded myself, bear an analogy to the white bands, lines, or filaments, peculiar to cancerous disorders, in their appearance, manner, and office. If this conjecture be unfounded, I trust the reader will excuse my obtruding it upon his notice.

The ancients seem always to speak of *Cancer* as if it were a creature possessing life, distinct from

that of the general frame; giving it an election also on what substances it should attach. Perhaps it may be as difficult to explain or comprehend the manner in which an embryo becomes a living creature, as it would be to assign a satisfactory reason why *Cancer* should not be a living creature, possessing some peculiar species of life, like that of a parasitical plant. All the works of nature are mysteries, and each part, when we come to inquire minutely into first causes, is equally mysterious, except as far as the great Creator of all things has been pleased to enable us to explain his works; which power of explanation may, in fact, be considered as a revelation. It may be doubted whether any man who ever made a discovery of any thing unknown, of the highest importance to human beings, could himself conceive, much less impart to others, the manner how the first thoughts which led to the discovery came into his mind. Of life we know nothing but from its effects, and it does not appear that if we admit *Cancer*, like the *polypus*, to possess a life distinct from that of the general frame, the difficulty of discovering a cure for the disease would be in any degree increased. We may therefore without prejudice consent to the opinion of the ancients, that it actually is a living creature, and taking one step farther, allow, that every part of this creature,

when separated from the body, is as perfect and capable of becoming another creature as the parent body from which it was separated. In every species of mushroom there is, from beginning to end, a great disposition to generate *fungus*. Who could have suspected that the effect of the blight in corn was to generate an infinite number of such mushrooms.

I come in the next place to consider the means which have been recommended for the cure of *Cancer*, and shall begin with a case extracted from a Work published in the year 1780.

An Account of the Methods pursued in the Treatment of Cancerous and Scirrhous Disorders and other Indurations. By J. O. Justamond, F. R. S. and Surgeon to the Westminster Hospital.

"In the year 1770, a lady applied to me with a cancerous complaint of a very malignant nature. She had been afflicted with it nearly thirteen years. It had consisted of two scirrhous tumours, which had been removed about three years before by Mr. *Guy's* method. That gentleman was never able to close the wound entirely; and though the lady remained tolerably well for some time after the removal of the tumours, yet there was a little

crack subsisting, which furnished occasionally a greater or less quantity of discharge. Mr. *Guy* dying some time after this, and the patient growing worse, she applied to his son, from whom she received no benefit. She afterwards shewed the part to several eminent surgeons, who all advised her to do nothing to it, except to keep the wound clean. When I first saw her, the appearances were as follow. One large, oblong, pale, ill-conditioned wound in the middle, extending nearly throughout the whole scar formed by the previous application of Mr. *Guy's* caustic. This wound, surrounded by several smaller, some near, some at a distance from the larger one, and all discharging an ichorous, acrimonious fluid, which frequently inflamed and excoriated the parts on which it fell, and thus produced other wounds. The edges of the wound were tucked in, and those of the large one in particular, extremely indurated. From the most external part of the large wound, there arose a kind of cord of considerable hardness and bulk, which extended quite into the armpit, occasioned pain, and sometimes a degree of swelling in the arm of that side, and rendered the operation impracticable. Mr. *Fakwasser* and Mr. *Yatman*, were both witnesses of the case and the result of it."

From this statement of the case, it cannot be doubted, but that this was true Cancer, not only

from Mr. *Justamond's* account, but from Mr. *Guy* having before applied the caustic, from the advice given to the patient by several eminent surgeons, and from the testimony of the two worthy and respectable men whom he has named. He then proceeds.

"This I considered as a fair case to make trial of the hemlock-bath, which I was induced to do, from an account of its success I had met with some years before, written in the German language, by *Storck*, and which I translated and published in London, a short time after I returned from that country. I had already recommended this bath to some poor persons who applied to me, in the course of a few years, with cancerous complaints; but, though I offered to defray the expenses of the apparatus and the plant for them, yet I could induce very few to try it; and those who did use it two or three times, could not be prevailed upon to continue long enough to find any (good) effect from it; alleging that it was a method too troublesome for them and their families. On the other hand, hemlock was fallen into such general discredit among the faculty in England, and they were so particularly prejudiced against any thing which had the name of coming from Germany, that I could not prevail upon any of

my medical friends to try this new mode of introducing it into the habit."

This animadversion is hardly just. Hemlock was tried in every form, quantity, and method, immediately after its introduction into England, when recommended by Dr. *Storck*; but there was in a short time full proof that hemlock did not cure *Cancer*. *Storck* seems to have been an empirical enthusiast, who was not accurate in his account of the diseases which he reports as cured by it, or in that of the events.

"I resolved however not to propose this bath to my patient at first, in order not to alarm her; but to give a fair trial to the internal use of the extract of hemlock, and the external application of the plant in poultices and fomentations. She persisted for a long time, and the dose of the extract was gradually increased as far as it could be borne, but without any visible (good) effect, except a trifling alteration for the better, upon the first trial of it, or upon the first varying of these applications for some other. A year and a half, or more, passed away in this manner, during which time she tried the extract of hemlock, the sublimate, the carrot poultice, and many other things, without obtaining any relief. On the contrary she grew visibly worse. Long continuance of excruciating pain had reduced her to an extreme degree of weakness and emaciation. Her countenance was become quite livid. The (local) disease was much advanced in its progress, both with respect to the number and condition of the sores, and the extent and size of the indurations. Such in a word was her state in the month of December 1771, that her family justly apprehended, it would not be long before they should be deprived of a valuable relation and friend."

Mr. *Justamond* then proceeds:—"I had frequently taken the opportunity of endeavouring to persuade my patient to try the hemlock bath, but all my expostulations to this purpose were unavailing; so that, chagrined at the inefficacy of all the methods pursued, I had been lately revolving a design of trying the outward application of Salt Ammoniac, which I had always considered as a substance of powerful resolutive properties, and of course as a very useful topic in all indurations. I could not however readily determine upon the mode of using it in these cases, and in this dilemma communicated my ideas to Dr. *Morris*, in hope that his well-known abilities in chemistry, might assist me in settling this point. Upon my mentioning the Salt Ammoniac to him, he informed me that there was an account just published in one of the German Ephemerides, of a chemical prepa-

ration used with success in cancerous cases, in which that medicine was a principal ingredient. I procured the account, and found that the medicine was a tincture of equal parts of Salt Ammoniac and iron, in rectified spirit of wine, with the addition of oil of vitriol and oil of tartar, and directions were given for applying it. The exact mode of preparing it, shall be given at the end of this section. At present let it suffice to say, that I resolved to try it, and accordingly desired the favour of Dr. *Morris* to prepare it for me.

"The liquid being ready, I began using it as directed in the following manner. I dipped a small pencil brush into it, and smeared all the edges of the sore, and every part that was indurated with it, taking all possible care that the liquid should not run down into the ulcers themselves. The part besmeared was then suffered to dry; the wounds were covered with dry lint, and the edges with the same. It being scarce possible to prevent some of the liquid from insinuating itself into the sore, there was generally a degree of smart accompanying the dressing, but this soon subsided. My patient was directed to repeat this application of the liquor to the edges, and to all the indurated parts two or three times a day, as she could bear it. Finding in a little while that there was a visible alteration for the better, I ventured to use

the liquid more freely, and after having smeared all the indurated edges as before, dipt in it some pieces of lint or rag doubled, and layed them wet all over the edges and indurations. By this contrivance the liquid remained active upon the parts for a much more considerable space of time, and the patient had nothing more to do, than with the pencil brush, to soak the lint again as often as it became dry, or as she could support the smart. When it appeared that the liquid produced an alteration in the edges and indurated parts, I resolved to wash the ulcers themselves with it, lowering it for this purpose with water, and trying the mixture upon my tongue, till I judged it was sufficiently mild. When it happened that the edges were inflamed or excoriated by the frequent use of this sharp liquid, it was suspended till they were recovered, which they generally were in twenty-four hours. In this manner I proceeded for about three months, at the expiration of which time, the pain of the disease was less, the edges and induration began to soften, and the discharge from the sore was ameliorated.

"Notwithstanding these favourable appearances, I observed with much chagrin, that although my patient, being free from pain, was rather better in health than when this process was first entered

upon, yet the amendment in this respect was not nearly so evident as in the others. This was a material circumstance to attend to. But in what manner was this amendment to be brought about? All the ordinary remedies given as alteratives, or with an intent to restore the exhausted strength of the body, had been already administered in vain. Reflecting then upon the good effects produced by the liquid externally applied, it seemed probable to me, that a medicine of a similar nature might be given internally with some prospect of success: the *flores martiales (ferrum ammoniatum)* occurred as the preparation nearest to it, and I was the more induced to try it in this instance, from considering the invigorating power of the iron contained in it. Accordingly it was made into pills with a solution of gum arabic, each pill containing three grains of the medicine, of which the patient took at first two in the day. Five grains of the *flores martiales* were soon after put into each pill, and the dose was gradually increased, till twelve of these last pills were taken in the course of every day. When this method had been continued for *six weeks*, my patient's health was visibly mended, her complexion cleared, and her strength much recovered. Encouraged by these promising appearances, and finding that the medicine did not disagree, the dose of the *flores*

martiales was increased to ten grains in each pill, of which pills from twelve to twenty were taken in the day. The only inconvenience she ever experienced from this was, a little sickness at her stomach now and then, which was easily removed by a tea-spoonful of brandy or some warm wine, and which might perhaps be as much owing to the swallowing of a number of pills in the day, as to any effect of the medicine. It is to be observed that upon an average, my patient may be said to have taken between two and three drachms of the *flores martiales* every day, for a long continuance, without inconvenience. A few of my cancerous patients have since taken from three drachms to half an ounce of the same medicine in the same space of time, and likewise without any inconvenience, though it must be acknowledged, that this medicine, as well as others, can be borne by some in much larger quantities than by others; so that upon the whole, whether the pills are made with five or ten grains of the medicine, it may be as well to restrain the dose to about two drachms in the day, which from experience I am inclined to think will not disagree with any patient. And even this is an almost incredible dose, when we consider how seldom this medicine has been prescribed, and when it has, how sparingly.

"Three or four months after the giving of this medicine, that is about seven months (weeks) after the first application of the liquid, my patient was so much mended in every respect, that I began to entertain hopes of effecting a cure. The internal use of this invigorating medicine had so far restored her health, that she appeared like a new creature. The pain of the disease was almost entirely subdued, the indurations were all of them considerably softened, and in some places totally resolved. The cord under the armpit was much lessened. The large wound was contracted, and some of the small ones closed: the discharge from them was generally good.

"But the appearances of the sores were not so satisfactory to me, as the changes produced in other circumstances; and I soon grew sensible that there wanted some other application to them. Though some of the small wounds were healed, yet they broke out again, and this fresh ulceration was always attended with pain, and brought on at first an ichorous and acrimonious discharge. The sores in general were tolerably clear and free from sloughs, but the surface of them was rather reticulated than granulating; and when touched ever so slightly, their sensibility was so exquisite, that it was evident they were still in a fungous or cancerous state, and not yet disposed to heal properly. The common

caustics had scarce any effect upon them; neither did there appear any permanent advantage from touching them occasionally with the liquid unmixed with water. Encouraged however by the progress already made, and unwilling to have such fair prospects blasted, I resolved to try the effect of *arsenic* applied to the sores. I was aware that the fatal symptoms brought on by an indiscreet use of this medicine, had induced many eminent and learned men to reprobate it entirely; while others, it must be acknowledged, of equal repute, affirmed that it was of infinite service in cancerous affections. Sensible at the same time that this application would necessarily occasion pain, it was my desire to find out the least painful method of using it. In this view, it occurred to me, that if it were possible to make a preparation of it that should immediately act upon touching the sore, as the lunar caustic does, that the pain, however sharp at first, would not be of long duration. This idea was communicated to Dr. *Morris*, who was desired, if possible, to make such a preparation. The Doctor told me he had a preparation of *arsenic* by him, the effect of which he could not take upon him to ascertain, but believed it would be milder than the crude mineral. It consisted of equal parts of arsenic, copper, tin, and mercury, distilled in spirits of wine, and afterwards in oil of vitriol, as it

was agreed upon between us, that the action of the arsenical salt would rather be lowered than exalted by this combination, and process, I determined to try this preparation. Though I had gathered from reading, as well as general report, that the arsenic must have been used externally in pretty considerable quantities for the cure of cancerous complaints, and that with success, yet I was resolved to proceed with all possible caution in my trial of a medicine of the effects of which I had not yet been an eye-witness. I therefore reduced the mass Dr. *Morris* gave me into impalpable powder, took as small a particle of it as I could possibly separate, and laid it on the middle of one of the small sores, the size of which did not exceed that of a sixpence. I staid with my patient a considerable time to watch the effect of this first trial, and returned in the evening to inquire what degree of pain she had felt, intending, had it been violent, to prescribe her some opiate to appease it. But although she had felt the action of the medicine, yet the portion of it was so small, that the pain was very tolerable. When the part was dressed next day, it appeared, that an eschar was produced, which had extended itself beyond the point where the powder had been applied. In order to ascertain the effect of this topic, it was necessary that the eschar should be made to spread quite over the surface of the sore, and therefore I contrived to bring this about gradually by a repeated application of the powder in small quantities, sometimes with more, sometimes with less pain. It was my wish to observe what alteration would be made upon this little sore, after the separation of the eschar, before the powder was applied to the other ulcers, that my patient might be preserved from any further unnecessary pain, if it should be found not to succeed in this first trial. The experiment was carried on so slowly and with so much caution, that a few days elapsed, before the eschar had pervaded the whole surface of the sore. It was soon thrown off, not being deep, and in a few days after this, I had the satisfaction to find the little ulcer perfectly cicatrized. In the mean while it was observed with pleasure that the ease continued mending in every other particular. This course was therefore stedfastly persevered in; the liquid was used outwardly to all the indurated parts, the martial flowers were taken internally in as large a dose as they could be borne, and the arsenical powder was applied at different intervals to all the sores, in greater or less quantity, as it was judged necessary, to make the eschar more or less deep. Some of the ulcers were very obstinate, and it became necessary to renew the application of the powder to them, after the separation of the first,

sometimes of the second, and even of a third eschar. It may be presumed that the patient underwent a great deal of pain in the course of this treatment. It must be owned she did; and my attention was chiefly engaged in devising methods to give the least pain it was possible to give, and to alleviate it when it rose to any degree of violence. This did not happen often, and when it did, it was found, that the external application of an anodyne fomentation, composed of twelve poppy heads bruised, and boiled in little more than a quart of water, till reduced to a quart, was much more effectual than the internal use of opium, which at the same time was not however neglected. The warm bath proved also of great service in this particular. By thus stedfastly persevering, success was at length obtained, and in the month of March 1773, about fifteen months after the first application of the liquid, the wound was completely cicatrized."

About six months after the healing of the wound, the cicatrix was scratched, but it was healed by using simple dressings. In the year 1777, near four years and a half that the patient had continued free from any complaint, she received another injury on her breast which occasioned the cicatrix to break out again: she was no longer under his care, but we are led to believe that the case then terminated fatally.

This case is transcribed nearly in the words of the author, that the reader may form his own jugdment of it. It is a tedious and ill-told history, but I have not known the veracity of the author, though he was a vain-glorious man, disputed. His mind was unreflecting and his conduct fugitive, for after describing the preceding case, which terminated successfully beyond his expectations, he lost sight of the advantages he had gained, and applied himself to the discovery of another method of curing *Cancer*. But if such discovery be ever made, it is not material whether or no it be done by a person of whose abilities or intellectual endowments we entertain a very high opinion; or even of a person who was not educated to the profession. It is however the duty of professional men to guard the public against the fraudulent and audacious conduct of empirics, as far as their power extends; but the application for relief to that class of people, seems to be an inherent principle in human beings, when distressed by disease and urged by natural impatience.

I have further to observe, that this author speaks of Dr. *Morris* as merely subservient to his views; but he was one of the physicians of the same hospital, well informed, of a respectable character, and particularly unassuming; who gave lectures for

many years on chemistry, when that science was little cultivated in this country. It must however be acknowledged, that Mr. *Justamond* has given a case of undoubted *Cancer*, in the face of the world, when the parties concerned were living, which was cured perfectly, and remained well for several years. This could hardly have been done, had it not been truly stated, because it was every day open to contradiction. The extraordinary circumstance is, that no one person, whatever opinion might have been entertained of him, should have pursued an inquiry into the merit of the means and methods he had used. Since that time preparations of iron have been given, often with some success, in dangerous diseases, though in a less efficacious manner than *Justamond* used them. But no one, to my apprehension, is entitled to so much credit on this occasion as Mr. *Carmichael*, a Surgeon at Dublin, who published in the year 1809, the second edition of "An Essay on the Effects of Carbonate and other Preparations of Iron, on *Cancer*, &c."

This work is divided into three classes:

1. Cases of *Cancer* cured by Preparations of Iron.

2. Cases of *Cancer* alleviated by Preparations of Iron.

3. Cases of *Cancer* unalleviated by preparations of Iron.

In the first class of these cases, there are obviously many which certainly were not cancerous. A few of them I shall however transcribe, because if it be not admitted that they were of that description, the method of cure is not without its value.

Case 3d. "A small pimple first appeared at the side of the nose of a young lady, which by frequent irritation degenerated into that species of ulcer termed, *Noli me tangere*. Many experienced practitioners were consulted, who informed her friends of the nature of her inveterate complaint; and at the same time prescribed *Cicuta*, *Calomel*, Arsenical Lotions, and the other remedies employed in *Cancer*, but without any beneficial effect.

"On the 10th of October, 1805, in the sixth year of the progress of the disease, carbonate of Iron was first applied, at which period the ulcer was irregular, with high and everted edges, and discharged a thin ichor, while redness and induration extended over the greater part of her nose, so that there were serious apprehensions that the cartilage and bones were engaged in the disease.

"But on the use of Iron, the pain in a few hours ceased, and the application not having been disturbed for two days, a scab formed, which fell off at the end of that time, leaving the sore evidently

amended, and discharging healthy looking matter. The rust was applied daily till the sixteenth, when a dry crust formed, which dropping off in a few days, left the part completely healed."

Here it may be surmised that the speedy relief was to be attributed to the change of treatment, and the disuse of improper applications, as much perhaps as to the preparation of Iron. But the event proves Mr. C's superior judgment, and that the preparation of Iron was at least as proper an application as any which could have been used. The term *pimple* cannot be well understood. There are sometimes such appearances upon the nose as threaten mischief.

Case 9th. "On the 7th of May, I was called to see Mrs. *R*—— aged 59, who though of a delicate constitution, had a healthy complexion and appearance for a woman at her time of life. There was a hard insensible tumour of a dark liver colour, about the size of a turkey's egg, projecting from the centre of the right breast; the integuments had withdrawn themselves from this tumour by an inflammatory line of separation, similar to that we observe to take place in parts which are mortified, but this did not go deeper than a quarter of an inch. The tumour, though it engaged the greater part of the breast, was not attached below, nor were the axillary glands affected. I shall give

the history of her case in Dr. *Barlow's* words, under whose care she was before her application to me, and though its favourable termination is anticipated in his letter, yet I shall detail from my notes the progress of her amendment, as I make no doubt so remarkable a case must excite the attention of every practitioner."

"SIR,

As you desired, I inquired of Mrs. *R.* how long she had had the hardness in her breast before she applied to me. "She told me she perceived the hard lump in her breast still increasing in size for several months; it then became painful, with frequent darting pains, which grew more troublesome every day for some months."

"When I first saw it there was a hard irregular tumour, a very small ulcer just at the nipple, and a darkness of the skin, almost the whole extent of the tumour, which left me in little doubt of all that part becoming ulcerated in a very short time; and from every appearance, with the shooting pains and burning heat she complained of, I had no doubt in my mind of its being a confirmed *Cancer*.

"She began to take the carbonate of Iron, as you directed in your Essay, five grains every fourth or fifth hour, and the ulcer was not only sprinkled with it, but all the discoloured parts were covered

with it wet, in form of a poultice: this was renewed twice a day. In three or four days, the diseased skin began to separate all round from the sound, which separation still continued to get deeper every day, so that that part of the hard tumour was evidently separated to a considerable depth from the sound part of the breast; and from the good matter produced, and the healthy appearance of the surrounding edges, I had every expectation that the tumour would in time, by the application of the carbonate, be entirely thrown off by the sound parts. She went then under your care, and since her return home has continued in good health, with her breast (which she shewed me) perfectly healed, and free from either pain or hardness.

J. Barlow."

By the sequel of this case we are informed, that the patient was restored to perfect health, that no medicines or applications were used, but some of the preparations of Iron, and that she remained well at the end of two years.

Great allowance is to be made for the partiality which all men entertain for their own sentiments and proposals, and much may be granted to Mr. *Carmichael*. But this case does not stand on his own evidence, but upon that of Dr. *Barlow*, who

had no doubt of its being a case of confirmed *Cancer*, of its being cured by the preparations of Iron, or the confirmation of the cure for two years afterwards.

Case 10th. "In July 1806 I was requested to see, with Dr. *Toole*, a young lady about twenty-four years of age, who was afflicted with *Cancer* in her right breast. On examination both the breasts were found to be greatly enlarged, but below the right nipple she pointed out a hard lump, situated in the midst of the glandular structure of the breast, and mentioned that she had frequent severe shooting pains in the part. Her mind was so distressed on the occasion that she earnestly requested the breast might be taken off: but she was recommended to try the effect of medicine, before recourse was had to an operation of so much moment. Ten grains of the precipitated carbonate of Iron were accordingly ordered to be taken three times a day, and a weak solution of the sulphate of Iron to be constantly applied by means of linen compresses to the breast. She persevered for three months in this course, during which time her general health greatly improved, the lancinating pains almost entirely ceased, and she conceived the tumour was much lessened. At this period she was obliged to intermit her medicine, on account of the return

of severe attacks of *Dyspnœa*, to which she had been long subject. She was greatly reduced by this complaint, and during its continuance the shooting pains returned, which threw her into such despondence, she again insisted upon having the breast extirpated. This I told her I did not conceive to be yet absolutely necessary, and added, in order to satisfy her mind, that it would be right to have further advice on the subject. In consequence Mr. *Richards* and Mr. *Piele* were called in, who were of opinion that the operation would be improper, as they were not convinced that the disease was cancerous, and that an operation of so great importance should not be undertaken, unless its necessity was very evident. She afterwards resumed the ferruginous preparations, but took in place of the carbonate, ten grains of the Oxyphosphate of Iron, three times a day, and applied to her breast a lotion composed of one part of Acetate of Iron to three of water. Under this treatment the lancinating pains began to diminish in frequency, and soon entirely ceased; the hardness gradually became less evident, and after six months, during which time she persevered in the use of the medicine, was not perceptible. She has since been married, and has issue, and at present enjoys the most perfect health."

To this case Dr. *Toole* is to be considered as

bearing testimony in the first instance; and though the gentlemen who were afterwards called into consultation, were doubtful whether the disease was really cancerous, it is not said that the case did not resemble *Cancer*, but was not ascertained to be such; which, it may be presumed, could hardly have been proved except by the extirpation of the part, or by the death of the patient. Mr. C. was of opinion that it was *Cancer*, and any person acquainted with such complaints, must have been very apprehensive for the consequence. No other medicines were proposed but those recommended by Mr. C.; and the patient, by six months perseverance in the use of them, was restored to perfect health.

Case 16th. "*Diana Blackburne*, aged 58, applied to me on the 6th of July 1807, with an open *Cancer* of the breast, the ulcer deep and irregular, with elevated edges; was about the size of a half crown, and situated in a schirrhous mass, which engaged at least a third of the breast: part of the nipple had been destroyed by the disease, and the remainder, which was undermined by the ulceration, appeared as if ready to drop off. The lancinating pains were frequent, but not very severe; she was of a healthy complexion and appearance, and had not in any degree the sallowness which in general accompanies *Cancer*. She attributed

the disease to a severe contusion which she received on her breast about eighteen months before, as she observed about three months afterwards on the spot where she was injured, a small lump, like a kernel, which gradually increased to the size of the fist, and it became ulcerated eleven months after its first attack. She appeared of so strong a constitution that I ordered her thirty grains of the Carbonate of Iron three times a day, which she took without any inconvenience, and I dressed the ulcer with the Oxyphosphate of Iron.

"On the 12th of July she was entirely free from shooting pains, but no other alteration was observable till the 18th; therefore, in place of Carbonate, she was ordered to take twenty grains of the Oxyphosphate three times a day.

"On the 26th there was a considerable degree of soreness and inflammation of the whole breast, the integuments of which surrounding the ulcer had become of a bright, inflammatory red colour; but, notwithstanding the increased sensibility of the part, there were not any shooting pains.

"29th. She informed me that several large lumps or substances, like cores, were discharged from the ulcer, one of which she said was hanging loose from the sore. I found it to be precisely of the same appearance as that discharged from Mrs. *R's* breast, already described. The ulcer had become

more extensive, and was covered with a white cohesive matter which could not be washed away.

"August 5th. The ulcer had a more healthy appearance, and its sides were closing towards each other. I wished to remove the nipple, which hung over the excavation of the ulcer, connected to the breast only by a small slip of integument, and producing much irritation, but she would not allow me. She informed me that many ropy substances, some above three inches in length, had come away with the discharge.

"September 20th. The ulcer was diminished so much that it might be covered by the point of the finger; its reduction seemed not so much to be owing to the formation of granulations, as to the closing of its sides towards each other, which gave the surrounding integuments a pursed appearance. The induration was much less perceptible on the superior part of the ulcer, and the pains had altogether ceased. The Oxyphosphate of Iron had been in perpetual contact with the ulcer since she came under my care, except on the second of September, when the Arseniate of Iron was applied, and she was now directed to persevere with the former of these preparations.

"The ulcer continued stationary until the middle of October, about which time it became extremely sore and irritable, with an increase of

discharge, and an inflammatory redness of the surrounding integuments. Conceiving that this inflammation was owing to the stimulus of the dead carcinomatous substance on the sound parts, I directed the application of emollient poultices, with the view of assisting the separation of the slough. With these she persevered till the end of the month, during which time large white sloughs, similar to those already mentioned, were discharged. The ulcer in consequence became more open and extensive, but its edges were soft, and there was not the least induration discoverable in any part of the breast. About this period I sent her to Mr. *Richards* and Mr. *Piele*, with a request that they would examine her breast, as this case, I thought, as strongly evinced the efficacy of the preparations of Iron, as any which had yet occurred to me. After the separation of the sloughs, the discharge became thick and purulent, the sore filled with granulations, and was completely healed within a fortnight. I saw her three months afterwards, when she told me she had not felt the slightest pain nor induration, but continued perfectly well."

In this case, Mr. *Richards* and Mr. *Piele* are to be considered as giving their testimony, presuming that they had seen the case at the commencement, and were able to form a comparative judgment of the progress made towards a cure, while the patient was under Mr. *Carmichael's* care; otherwise her visit to them would have been perfectly nugatory and useless. Mr. C. thought the case was cancerous. What was the opinion of the other gentlemen does not appear. It might be doubtful, but any person competent to judge of such a case from the statement of it, must allow it to have been of a very suspicious nature, if not actually cancerous. Take the fact without any reasoning, and it then appears that this patient, without any other medicine than the preparations of Iron, was restored to perfect health, in the course of about five months. It seems of less consequence to decide whether this disease were actually cancerous, or one of those which have gone under the general appellation, proving in the event equally fatal; though, strictly speaking, they were not allowed to be *Cancer*.

Mr. *Brodie* informs me that in *Cancer* of the lip and of the tongue, he has lately had opportunities of finding the same structure as had been described by Mr. *Abernethy* and Mr. *Home* in cancerous glands; and that structure, it is apprehended, is to be considered as the only test of the nature of the disease. I might also have mentioned, that in the lifetime of the patient, in several cases of dark coloured and diseased *mammæ*,

I have clearly distinguished, through the thin skin, the *white filaments* so often mentioned, running in various directions.

Perhaps it may be ultimately to the advantage of society that professional men should continue to doubt the superior powers, or the specific qualities, of preparations of Iron in cancerous cases. But with the accounts already published, and a multitude of others which the practice of many individuals could supply, instead of discarding those medicines, or speaking of them contemptuously, as if they were inefficient, or actually injurious, checking not only legal but laudable attempts, it surely would be right to encourage further trials with them, with all the judgment, circumspection, and attention which medical experiments require. It would also be well to consider whether the failures to effect a cure, of which, it must be allowed, there are many examples, are not rather to be attributed to our unacquaintance with the most effectual methods of administering or applying the preparations of Iron, or the accommodation of them to particular constitutions, than to any defect in the powers of the medicine. Of the safety of those preparations, and of the general high estimation in which they have been long held in various diseases, especially in scrophulous cases, we can have no better or

more satisfactory proof than in the frequency with which they are prescribed by the most eminent and experienced physicians; so that we may make our trials to any extent, without the risk of doing mischief, which has not been the case with many other medicines: this is another considerable advantage.

It is also further to be observed, as a matter remaining to be proved, whether in cases thought to be cancerous, the *disagreement* of those preparations with the constitution of patients, is not to be considered as a presumptive proof that such cases are actually not cancerous.

There is scarcely a class of medicines in the *materia medica*, with some of which I have not made repeated trials, in all the different stages of *Cancer*; but the benefits derived from the use of any of them, have been very little indeed, if compared with those obtained by the use of preparations of Iron, and generally all other medicines have been altogether unavailing. Persuaded that the ferruginous principle in every form possesses great powers, peculiarly adapted to the cure of cancerous disorders, I hope that it will be found a specific for them, as certainly as quicksilver is for the venereal disease. Of the difficulties with which the specific powers of medicines are detected, we have a strong proof in the history of the

venereal disease: for though quicksilver was in their hands, and daily used, and for that very disease, yet some hundred years perhaps passed before a competent knowledge of the disease was discovered, or that of the proper and most effectual mode of using the remedy was attained. It cannot now indeed be considered as a specific, if unskilfully used; and had it not been for the sagacity and perseverance of a few men of more than common abilities, the discovery might never have been made. I cannot therefore help exhorting those, who have opportunities of seeing cases of *Cancer*, to continue their experiments with the preparations of Iron, as internal medicines, and as applications, until it be fully and satisfactorily decided that their good opinion of those medicines can be no longer maintained. Taking it for granted as an indisputable truth, that nothing was correctly known of the structure of a cancerous part, before the discovery of that structure by Dr. *Baillie*, and the knowledge of its progress carried to a state of great, if not absolute perfection, by Mr. *Abernethy* and Mr. *Home*, the knowledge of the cure must be very much facilitated. It is now ascertained, that at one period *Cancer* is local; the constituent parts of *Cancer* are understood, as is also the manner in which it ceases to be local, or in which it spreads from one part to

another, whether it be allowed to have a distinct animal or vegetable principle of life, or not. If this be not admitted, it is of no consequence, nor is it material to enter upon an abstract consideration of life, or the peculiar kind of life, or whether, properly speaking, it can be said to have any distinct kind or degree of life, whether it resembles the hydatid or *boletus lachrymans*, as it is ascertained that the disease has the power of extending itself to parts distant from that in which it originated or first appeared, by means and in a manner heretofore not known, nor suspected. The cure must consist in one of these things, either destroying the living principle of the substance, *nucleus*, if it exist, or germ of *Cancer*, so that it shall be deprived of its existence and power; or by rendering the part affected, or any other part to which it may accede, unsusceptible of any effects it could produce, or an unfit medium for serving the purpose of conveying it. The first might be done by caustic or ferruginous applications directly to the part, or by excision; the other by filling or loading all the constitution with the preparations of Iron to such a degree that the whole frame shall become as it were anticancerous.

Very lately one of my particular friends had an angry discoloured pimple on his nose, which gave

no little solicitude to himself and his friends. He consulted Mr. *Cline*, who touched it smartly with the lunar caustic. The first application did not answer the purpose. It was touched at proper intervals again and again, till the whole little tumour, and all its appendages, or parts connected with it, were destroyed. The sore afterward healed easily, and has remained perfectly well for many months. My much esteemed friend, Dr. *Jenner*, with whom I have often conversed on the subject of *Cancer*, assured me that in some instances he had destroyed tumours which threatened to be cancerous, by firm, continued pressure, when they were so placed as to admit of it. But with regard to putting the constitution into what is conceived to be an anti-cancerous state, that can only be effected by, I believe, giving and continuing the use of the most suitable preparations of Iron. It is perhaps not unworthy of observation, that judging by the complexion alone, that of persons afflicted with, or disposed to *Cancer*, is in general precisely such as, under any other circumstances, would be judged as peculiarly requiring the use of preparations of Iron. Should this matter be regarded and pursued with the vigour so important a subject deserves, it may be expected that, ere long, various circumstances, both with respect to the disease and the remedy, will be discovered. But

much attention and care will however be necessary when the preparations of Iron are exhibited, especially if they disturb the stomach and bowels; and other medicines may be sometimes advantageously joined with them, to prevent the inconveniencies they may occasion, to increase their powers, and improve their effects. Whether after the extirpation of local *Cancer*, it may not be beneficial to give some of the preparations of Iron, to secure the patient from a return of the disease, deserves consideration; and whether baths naturally containing Iron, or vitriolic substances dissolved in water, may not be highly proper and beneficial in many cases, as recommended by Lord *Bacon*. (*Historia vitæ & mortis.*)

A few years ago a medicine was advertised for the cure of *Cancer*, by a person of the name of *Lana*, or *Lanner*. This was a black powder, afterwards known to be the rust of iron, produced under water. Some good was effected, but it soon fell into discredit, though for what reason is not recollected; perhaps because it often failed from its being imperfecly administered.

Justamond speaks of the virtues of Salt Ammoniac in dissolving indurated tumours in very high terms, though of such tumours he had no distinct notion. There is no doubt of its being a powerful medicine, but whether it has any specific quality

in cancerous complaints, is much to be suspected. Yet it is remarkable that neither the *silky fibres*, nor the fungus of the dry rot, have been found in stables or necessaries, though closely adjoining to the parts where the dry rot has been observed in full vigour. Perhaps timber may be preserved by the volatile and saline exhalations constantly arising in such buildings, which may not be unlike Salt Ammoniac.

The virtues of *Solanum*, *Belladonna*, *Hyoscyamus*, *Cicuta*, *Nicotianum*, and other medicines of that class, are now well ascertained. Internally given, or as applications, they are proved to have no other virtue in cancerous cases, than as soothers of pain. Of *Opium* I once had an opinion that it had other virtues than that of easing pain, and it has accordingly been given steadily in very large doses; but I am now convinced that my opinion was erroneous. In some cases one preparation of narcotic medicines often agrees better than another, disturbing the constitution in a less degree, and so far the varieties may be converted to the benefit of patients. It has been often suspected, and empirically asserted, that narcotics, by paralysing, as the phrase is, the powers of the constitution, render this a more easy prey to the disease; but of this I have no opinion.

As early as the time of *Hildanus*, it was said

that all preparations of quicksilver and of arsenic were prejudicial in cancerou cases; yet there has ever been a strong inclination to use the latter, ever since the time of *Celsus*, who first recommended it, on the presumption, perhaps, as *Cancer* is a stubborn and intractable disease, some equally powerful medicine was required to contend with, and correct it. Of quicksilver sufficient notice has been already taken; but all are not yet convinced, that arsenic is an inadequate or improper remedy in cancerous cases. But in every instance in which I have known arsenic to be tried as an internal medicine, it has always excited new and serious disturbances, or added greatly to those which before existed. As an application I am not competent to judge whether it is preferable to other caustics. It may act more speedily, and corrode more deeply, but there is no reason for thinking that it possesses any specific, or anticancerous property. Whenever it was used by the ancients it was mixed with other ingredients to lessen or qualify its effects, and with this view Sulphur was generally used.

It seems extraordinary that in the various medical disputes which have been held respecting the power of acids and alkalines, in producing and curing diseases, it should have remained undecided, to which of those qualities *Cancer* should be attri-

buted. Acids and acidulated diet and applications have indeed been prescribed; as for instance, alum, by *Oribasius*, and *Atramentum* were very often used by the ancients. From a long list of popular remedies I shall select two examples. The first is taken from *Bougainville's* Voyage to the *Malouins* Islands, translated by *Pernety*, and published in 1773, which was pointed out to me by Dr. *Jackson*.

"Put a large living Toad into a new earthen pot with two ounces of the roll of sulphur. Lute the pot well, and calcine the whole. Apply the ashes to the *Cancer* when ulcerated."

The second is said to be an effectual remedy for a recent *Cancer*, which has proved successful in *every* experiment. It is taken from an American Magazine, in 1798, and was kindly communicated by Mr. *Erving* the Consul in 1803.

"Burn half a bushel, or three pecks, of old, field, red oak bark to ashes. Boil the ashes in three gallons of water till it is reduced to one. Strain that off and boil it to a third, which will be of the substance or consistence of cream or butter milk. Spread a small quantity of this on a piece of lint or silk, not bigger than the place or part affected, and apply it thereto."

I have known, says the Doctor, two plaisters effect a cure, where the *Cancer* lies in a proper

position for the medicine immediately to penetrate to the roots of it; otherwise it may require several plaisters. The plaister must be applied every two hours, until the roots of the *Cancer* are sufficiently killed. Then apply healing salve with a little mercurial ointment therein, and dress it twice a day till cured, which it will certainly be in twenty or thirty days at farthest."

These two medicines seem to be aukward methods of applying caustics to *Cancer* while it was local, and there is no doubt but they would effect an actual cure, in such cases, if the opinions of Mr. *Abernethy* and Mr. *Home* of the locality of *Cancer* are just, and they are not, I believe, at present, doubted. The case before related as being cured by Mr. *Cline*, is a good example, and perhaps all caustics are in such cases equally beneficial, if they produce equal effects.

In Mr. *Baldwin's* observations on the Plague, there is mentioned a case of *Cancer* in the lip, which was cured by oil prepared in the following manner by an Armenian merchant.

He procured a copper vessel newly tinned on the inside, and having poured into it a certain quantity of oil which was boiled over a slow fire, sufficient to keep it gently simmering for the space of three times twenty-four hours, when it acquired the consistence of an ointment, and by constantly

rubbing or anointing the part affected with this ointment, the patient was cured in fourteen days. Another case of the same kind is mentioned.

Tin boiled in oil, with a certain degree of heat, will melt or dissolve, but when the oil is cold, it is again deposited, losing nothing in its weight. It can scarcely be presumed that this medicine could ever have cured *Cancer*, but in many cases of painful tumours it certainly has soothed, and in some, removed pain beyond my expectations.

It is much to be wished that persons regularly educated to the profession, should not be so decided in their opinions of the impossibility of curing *Cancer*, as if the resources of science and art were exhausted; nor shut their eyes to, or treat with disdain, the accidental experiments which may be made by illiterate men, which may be done without exposing ourselves to the frauds of empirics. All who are seriously engaged in the pursuit of a remedy for this deplorable disease, I again most earnestly exhort to persevere in their attempts, being convinced that, as we have now got principles on which to act, the greatest part of the difficulties we had to encounter, are already overcome, even supposing the preparations of Iron should fail to answer our expectations.

I shall conclude what remains to be said on this subject, with a short account of a charity instituted in *London*, in the year 1801, for the purpose of investigating the nature and cure of *Cancer*.

Several conversations had passed between different professional gentlemen on the cause, nature, and cure of *Cancer*. As trials of medicines cannot probably be conducted with such accuracy in private practice as in public institutions, it was at length proposed that measures should be taken for the establishment of a Charity, or Institution, for the express purpose of investigating the nature of *Cancer*, and of making experiments, for the discovery of a method of curing that disease. Applications were immediately made to many gentlemen to support such an Institution, and the subscriptions were beyond all expectation liberal. In a short time it was thought justifiable and proper, to form the establishment, which was accordingly done without delay.

At a very respectable meeting of the Subscribers, Mr. *John Pearson*, of Golden Square, was nominated Surgeon of the Institution, with an understanding, that it should be chiefly under his care and direction. Such was the general opinion of his abilities and integrity, from his writings and character, that there was not, nor could be, the least objection made to his being appointed.

To Mr. *Pearson* I am obliged for several of the preceding remarks.

Treasurers and other officers were chosen, and a house was taken for the purpose, in Henry Street, Tottenham Court Road; the situation being healthy, and not too far distant, it was thought, for medical attendance.

After some time Dr. *Pelham Warren*, Dr. *John Willan*, and Dr. *Thomas Young*, were elected Physicians; and the principal Physicians and Surgeons in this city were invited to give their assistance, and to suggest any means by which the ends of the Institution were likely to be answered most effectually.

In conformity to the general design of the Institution, there were kept regular histories of the cases, of the medicines administered, and of the final issue of the cases. Where favourable opportunities offered, cancerous parts were carefully dissected, some preparations made, and a few drawings of extraordinary appearances taken.

Notwithstanding these exertions, it appeared that the great primary objects of the Institution were imperfectly answered, owing to various causes which it is not necessary to repeat.

For the purpose of rendering the Institution more adequate to the original intention, at a meeting of the Subscribers it was determined,

1. That the constitution of the present Charity shall be dissolved.

2. That the house intended for the reception of patients, ought to be in a more populous and convenient part of the town.

3. That means for admitting a great number of patients into the house should be taken into consideration.

The institution was accordingly suspended for the present, and when the accounts were settled, there was left a considerable sum of money, which now amounts to near one thousand pounds, three per Cent. Consols. in the hands of the *Drummonds*, and standing in the name of five trustees. It is to be hoped that at some, not very distant, time, the sum so remaining may, by the additional subscriptions of the former Governors, or by the general beneficence of the public, be applied to the support of a new Establishment for the same laudable purpose, and free from the inconveniencies of the former Institution.

The Cancer Institution was carried on with much spirit for about two years, during which time forty one patients applied for relief; eleven were admitted into the house, and thirty have been relieved as out-patients: all the in-patients, which were regularly attended, received as much benefit as the nature of their cases allowed. Two were relieved by the extirpation of the disease.

Of the out-patients twenty-eight had advice and medicines. In addition to the cases for which the Institution was originally established, thirteen patients afflicted with other diseases resembling *Cancer*, and which are often mistaken for it, have been cured. One in-patient and four out-patients have died.

Since the first edition of this pamphlet was written, there has been printed an account of a new method of treating Cancers of the breast, in particular, by Mr. Young. Of this method having had several opportunities of seeing the good effects, I gave the following additional account in the Medical Journal, which it seems expedient to republish in this place,

Remarks on Cancer, and of Mr. Young's new Mode of Treating that Disease.

Having, for many years past, paid great attention to the subject of *Cancer*, and supposed cancerous diseases, it gave me much satisfaction to read Mr. *Young's* book, in which he has proposed a new method of treatment, supported by the history of many cases in which it had been practised with very great advantage. Since the publication of his book I have had opportunities of seeing several under his own particular care, and have been informed of others, on which his method was tried, under the care and direction of different gentlemen; together with the effects which almost invariably follow his mode of treatment. I also beg leave to premise a few general observations on the subject.

The disease called *Cancer*, has been for time immemorial distinguished by that appellation, and for almost the same extent of time has been considered as a living substance, so far as to be imagined to possess a living principle, independent of the life of the person afflicted with it; nor is the period known when the disease was first asserted to be incurable, but that opinion remains generally, with very few dissenting voices, to the present day.

There have been two opinions concerning this disease; one, that it was local,—the other, that it was constitutional; and, according to the opinions entertained, have been the different modes of practice, the events of which have not induced an alteration of opinion.

Though the incurable nature of this disease has been generally allowed, the industry of the professors of the different branches of medicine has not slackened, for they have, with the most

commendable motives, endeavoured, by all the powers of medicine, and by all the means they could devise, to overcome the difficulties with which they were struggling.

The chemists have reasonably made their attempts by exploring the component principles of parts affected with this disease, and of the discharges thence derived, by bringing them to the test of fire, in every way in which they could be tried.

The anatomists have, with equal industry and sagacity, exerted themselves to discover the structure of parts affected with *Cancer*, at every period of the disease; and in this they have certainly succeeded by a most exact description. They have, moreover, discovered certain filaments which make constituent parts of *Cancer*, though some have doubted whether these were peculiar to that disease.

Nor have physicians, who seem to be of the opinion that the disease is constitutional, been deficient in their endeavours to discover a remedy for it, having exhibited almost every medicine which promised either an effectual cure for the disease, or to afford relief.

Surgeons who have been most frequently consulted in these cases, especially at their commencement, seem to have placed their chief confidence in the extirpation of the diseased part, by the knife, or by caustic applications. But, in these operations, which were most severe and painful, there had been so many failures; that is, the disease had so often returned, that surgeons who were circumspect in their conduct, and had witnessed such failures, used so much caution in giving their consent to the performance of operations, as almost to amount to a prohibition. But every surgeon who has performed such operations, must have considered the disease as local; otherwise he deprived himself of the only justifiable reason for performing them.

With regard to the kind of life which *Cancer* was thought to possess, some have supposed it to be similar to that of the insect from which it derived its name; some that it resembled that of the hydatid; while others supposed it to be like that of a mushroom, which is thought to partake of the properties of the animal and vegetable tribe. With regard to the last conclusion, there certainly is, from the commencement to the conclusion of *Cancer*, a great disposition to generate fungus. Whatever was the opinion while the disease remained in possession of its original powers, it was, and is still, supposed to be incurable. When, therefore, operations were not performed, and were not approved, attempts were made to cure the

disease by different outward applications, the greatest part of which were composed of very active or poisonous ingredients, which were supposed to have the power of destroying it, but which also failed.

Here, then, the matter stood, when Mr. *Young* brought forward his method of treatment, for his I must consider it, even if it had been used before, it was so little known as to have become obsolete or forgotten. By his method, some very unexpected occurrences are produced. Whatever was the degree of pain which the patient before suffered, that is speedily appeased; and, however offensive the discharge may have been previously, this becomes simple and void of smell, excepting what is usual in common sores. Now, if, by any other means, equally innoxious, such effects could be produced, I might hesitate which to prefer; but, as we are, I believe, ignorant of any such means, certainly these may be considered as great advantages. But the matter does not rest here, for there is an almost instant stop to the ravages of the disease, whether occult or open, according to the ancient expression; the discharges are gradually lessened, and from the appearance of being of a most acrimonious kind, become bland and salutary. Besides, there is evidently a gradual decrease of the tumefaction and induration; and

the whole not only assumes the appearance of amendment, but a promise of perfect recovery, as is proved in several cases which I have seen.

I have heard two reasons advanced in opposition to Mr. Young's method;—first, that other diseases, equally dangerous, may be produced by it; secondly, that, though, by his method, Cancer of the breast may be cured, it cannot be applied to many other parts affected with that disease. These seem to me mere presumptions, not arguments supported by any experience we yet have of his method. It would be equally or more fair to consider his method as standing on a principle which may lead to the cure of other diseases; for instance, of the *fungus hæmatodes*, so acutely discovered, and so correctly described, by Mr. Hey, of Leeds; and, perhaps, to many others.

Should this method of Mr. Young's be discountenanced and neglected without a fair and unprejudiced trial, I fear much injury may be done to society; to the professors of medicine in general, by abasing their most humane character; and real injustice to a very intelligent and meritorious individual.

Mount-street,
Oct. 9, 1815.

Though the following case is not completed, it is thought not improper to publish this account of it.

Near twelve months ago Mrs. *Waters* of the Alpha Cottages applied to me on account of an indurated tumour in her right breast. It was of a considerable size, painful, without discolouration of the skin, and less entangled with the adjoining parts than I recollected to have seen in any tumour of equal bulk: her general health was not impaired or affected.

The case seemed most favourable for extirpation, but of this the patient expressed great dread and abhorrence. I requested to have the opinion of a surgeon of much eminence, who also objected to the operation, assigning as a reason, the many instances he had seen of the operation failing under equally favourable circumstances. In a short time the opinion of several other eminent surgeons was taken, and they were uniformly of the same opinion, for the same or similar reasons; allowing nevertheless that there had been some exceptions to the general observation.

No benefit being received from mine or their assistance, but on the contrary the disease evidently increasing, several irregular practitioners were applied to, who gave her great assurances of a cure,

but notwithstanding their promises the disease increased.

About four months ago, when I again saw this patient, the breast was much enlarged, more indurated and painful, with a surface covered with large tubercles, and an undefined erysipelatose appearance; and there had been several returns of very profuse hemorrhage, by which her strength was much reduced. The common means for alleviating her sufferings and for checking the progress of the disease were used, but no hopes were entertained of her surviving it.

Such was the state of this patient when Mr. Young's book on *Cancer* was published. He saw her for the first time on the 15th of September; and on the following day began to practise his method. At the end of a week, during which he had continued his method, I again visited her; the tumour was then burst, and immense pieces of the hardened and enlarged parts had sloughed away; the discharge, which was not purulent but sanious, was very great; the general size of the breast was much diminished; and the undefined inflammatory appearance was reduced to a regular line at the verge of the ulceration. She was comparatively free from pain, and it was remarkable that the sloughs had been cast off from the diseased part of the breast alone; none of the original

part of the breast was destroyed or affected, and in some places there was an appearance of healthy granulations. I saw her once in several succeeding weeks. Her strength began to fail, and she took daily two or three doses of bark with snake root; was allowed a more generous diet, and several glasses of wine in the course of the day. By this method she was not only supported but restored; was soon able to come into her drawing-room, and to take an airing upon a donkey. On the 10th, after an interval of several weeks, I again saw her. A narrow bridle, which had remained after the sloughs, had given way: there were three points where the disease seemed disposed to return; one between the breasts; another towards the clavicle; and a third, which was very tender to the touch, towards the *axilla:* that towards the clavicle had the appearance of external inflammation; but all those were reduced into order by continuing his first method, increasing the pressure on the parts chiefly or more particularly affected.

When I saw her on the 9th of November her health was greatly improved, and though all the ulcerated parts had not the same favourable appearance, there was every reason to think that the disease would be ultimately removed. Judging from appearances at the time Mr. *Young* took charge of her, I thought her not likely to live

many weeks, and took it for granted that the time she had to live would be passed in extreme misery.

I also saw another case which had been under the care of two very eminent surgeons. The breast had been long ulcerated most extensively, and nothing had lately been done but with the intention of alleviating her sufferings. No case I apprehend had ever more painful and terrifying appearances; and to appease the pain she was allowed to take frequently twenty-five drops of the medicine called the *Black Drop*, with other opiate medicines. By this alone the reader will be able to judge of the state of misery she was in, and of the opinions of the gentlemen who attended her. From the time she was put into Mr. *Young's* care, the pain became easy; the spreading of the ulcer was not only stopped, but this began to heal; and when I saw her, about two months after, the ulceration, which had been in some places very deep, was healed to less than the size of a dollar. On account of her age and the state of her health, it appeared to me doubtful whether she would be able to withstand the effects of her disease, and the profuse discharge which had continued so long a time, notwithstanding the favourable appearance of the ulceration. I saw her again on the 14th of this month, and found the ulceration

in such a state that it might be said to be healed; and her health was then better than at the time Mr. *Young* first saw her.

This patient was seen for the first time in August by Mr. *Young*; and it is but justice to him to say, that at the first interview he gave her friends very little hopes of her amendment, and none of her ultimate recovery; but whenever she may die, it cannot be justly said that she was killed by the *Cancer*, but by the general weakness, and what is not improperly called, the breaking up of her constitution.

November 1815.

THE END.

T. Bensley, Printer,
Bolt Court, Fleet Street, London.

EXPOSÉ

DU

TRAITEMENT

D'UN ANÉVRISME INGUINAL

PAR LA LIGATURE

DE L'ARTÈRE ILIAQUE EXTERNE.

Par J. COLE, Docteur en Médecine,

Chirurgien à l'Etat-Major de l'Armée de Sa Majesté Britannique;

Lu à la Société d'Emulation de Cambrai;

Le 13 Septembre 1817.

« Il faut l'avouer sans détour, la ligature de » l'artère carotide primitive et celle de l'ar- » tère iliaque externe sont incontestable- » ment deux des plus belles conquêtes de » la Chirurgie moderne. » *Roux, p. 271.*

CAMBRAI.
Imprimerie de HUREZ, Grande Place.

EXPOSÉ

DE L'OPÉRATION

Pratiquée par M. le Docteur Cole, *pour la cure d'un anévrisme inguinal par la ligature de l'artère iliaque externe.*

Le vif intérêt que la Société a bien voulu prendre au succès de l'opération que je vais décrire m'est un garant de l'indulgence avec laquelle elle recevra cet exposé.

Comme je ne m'adresse point à une Société purement médicale, je pense qu'il ne sera pas hors de propos d'entrer avant tout dans quelques réflexions, qui puissent jeter un peu de clarté sur la nature de l'objet dont je vais avoir l'honneur de l'entretenir.

L'aorte s'élève du ventricule gauche du cœur; après avoir formé sa courbure, elle descend du thorax, entre les piliers du diaphragme, dans l'abdomen et forme par sa bifurcation vers la quatrième vertèbre lombaire, les artères iliaques qui se subdivisent en interne et externe près de

la jonction du sacrum avec l'os des iles. L'interne se distribue principalement aux organes de la génération, et à la partie supérieure et postérieure des cuisses.

L'externe, qui, en ce moment, nous intéresse davantage, est destinée à alimenter de sang les membres jusqu'à leur extrémité.

Ce sang, après avoir été distribué à chaque partie des membres, retourne par d'innombrables veines, qui s'unissant et s'agrandissant à mesure qu'elles remontent, finissent par se confondre en une seule qui prend aussi le nom d'iliaque externe et qui passe en dedans et un peu derrière l'artère, à laquelle elle est très-fermement unie par une forte membrane cellulaire.

Le nerf crural antérieur (second en grosseur dans la structure humaine), est formé par l'union des quatre premières branches lombaires, et passe en inclinant le long du bord du muscle Psoas à l'extérieur de l'artère.

Les artères sont composées de trois tuniques, que l'on nomme *externe*, *musculaire* et *interne*, et qui sont sujettes aux maladies comme toutes les autres parties du corps humain.

L'anévrisme, ou la dilatation de ces tuniques, est des plus communs ; il provient d'abord d'un

changement maladif dans leur structure, qui devenant plus faible, céde et permet qu'il s'y forme une tumeur dont l'étendue va toujours croissant en raison de l'impétuosité avec laquelle le sang y est lancé.

L'anévrisme se reconnaît par la pulsation de la tumeur qui est isochrone à celle du cœur. Il se caractérise encore par la cessation totale de la pulsation, lorsqu'on comprime l'artère au-dessus de la tumeur.

L'anévrisme se divise en enkysté et en diffus, ou vrai et faux ; le dernier est formé par une quantité de sang qui s'épanche dans le tissu cellulaire et parties ambiantes, par la rupture des tuniques, et le premier (celui dont il est ici question) par la dilatation circonscrite des mêmes tuniques.

Après ces observations préliminaires j'entre en matière sur le cas particulier dont il s'agit ici.

James Jones, soldat du 5.e régiment d'infanterie anglaise, de la Province de Galles, âgé de 29 ans, a été reçu le 28 juillet dernier à l'hôpital général militaire de Cambrai par M.r Bingham, qui observa que l'extrémité inférieure droite était considérablement enflée. Le malade se plaignait d'une douleur sourde et profonde qui parcourait sa cuisse du haut en bas, d'un

engourdissement dans la jambe et d'une tumeur dans l'aîne. Il ajouta que ce qui avait d'abord frappé son attention était une douleur, ensuite un gonflement qui lui survint au bas de la jambe, après la marche qu'il fit le 14 juillet pour se rendre de Bapaume sur les glacis de cette ville ; que cette enflure augmenta et que quelques jours après il aperçut la pulsation de la tumeur de l'aîne, qui depuis a toujours été croissant et qui était parvenue alors à la grosseur d'un œuf de pigeon.

On lui tira du bras 30 onces de sang et on lui prescrivit un purgatif.

Dans la matinée suivante, et après un plus mûr examen, on trouva que la tumeur était encore augmentée et que la pulsation était beaucoup plus forte ; ce qui confirma les Chirurgiens de l'hôpital dans leur crainte, en leur prouvant l'existence réelle d'un anévrisme inguinal ou de l'artère fémorale.

On réitéra les saignées ; de froides lotions furent appliquées et le malade fut mis à la diète la plus sévère.

Le surlendemain matin, à la demande du Docteur Eyre, chargé de la surveillance de l'hôpital, je visitai le malade, et après l'avoir examiné scrupuleusement, je n'élevai point le moindre

doute sur l'exactitude de l'opinion qu'avaient eue de la maladie, MM. Booty et Bingham.

Un cas aussi intéressant attira bientôt plusieurs des Chirurgiens de la garnison Anglaise et du voisinage ; tous abondèrent dans l'idée qu'on avait eue de la maladie et furent d'accord sur les moyens qu'on devait adopter pour la cure.

Le 1.er Août. Le Docteur Grant, inspecteur général des hôpitaux de l'armée, présida une consultation tenue à cet effet ; on convint de la nécessité de l'opération, et la tumeur augmentant journellement et s'étant déjà étendue jusques au-dessus du ligament de Poupart, il fut arrêté qu'on y aurait recours le plus promptement possible. On jugea le malade propre à supporter cette opération. Soldat depuis l'âge de quinze ans et exposé aux fatigues de la vie militaire, à l'épreuve de toute espèce de climats et de leurs vicissitudes, ayant servi en Allemagne, en Hollande, en Espagne, en Portugal, dans le Nord et le Sud de l'Amérique aussi-bien qu'en France, toujours il a joui d'une bonne santé. Il a environ 5 pieds 6 pouces (5 *pieds* 11 *lignes.*) Il est d'une constitution robuste, d'une stature courte et ramassée. Quant au moral, courageux et calme.

Il fut donné en partie connaissance au malade du résultat de la consultation; on lui fit remarquer le danger de sa situation, et sur-tout on lui fit sentir la nécessité de choisir le moindre de deux maux. Il fut arrêté, avec l'approbation du chef du service médical de l'armée, que je serais chargé de faire l'opération, assisté de M. Booty, et qu'elle aurait lieu le jour suivant à onze heures du matin.

A l'heure déterminée, le pubis ayant été rasé, le malade fut placé sur une table dans une position horizontale, les deux extrémités inférieures supportées par des aides. Me tenant en dehors et le dos tourné vers sa tête, je fis une incision d'environ cinq pouces de long à travers les tégumens, commençant au-dessus de la partie intérieure de la tumeur anévrismale et la terminant à deux pouces de l'épine antérieure et supérieure de l'os des iles, observant toujours la direction du ligament de Poupart et décrivant ainsi le segment d'un grand cercle. L'aponévrose de l'oblique externe se trouva découverte et fut divisée de la même manière. On coupa à travers l'oblique interne et le transverse, près de leur bords inférieurs et on aperçut le cordon spermatique passant dans l'anneau intérieur. En continuant la dissection on divisa l'artère épigastrique

et l'on s'en assura immédiatement. On écarta avec le bout des doigts la membrane cellulaire, jusqu'à ce qu'on put sentir l'artère distinctement. Pendant cette partie de l'opération, il se présenta une glande absorbante, mais le péritoine ne fut pas découvert. L'artère ne paraissant pas élargie dans cette partie, on la sépara, avec l'ongle et le bout d'une sonde, de la forte membrane cellulaire qui la réunit à la veine iliaque. Ce ne fut qu'avec la plus grande difficulté qu'on parvint à exécuter cette séparation, à cause de la ferme cohésion qui avait eu lieu entre ces deux vaisseaux, provenant sans doute de quelque action inflammatoire qui s'était étendue de la tumeur en montant le long du trajet de l'artère.

On y parvint cependant et on tenta de passer en-dessous une double ligature, à l'aide d'une longue sonde courbée. Cette sonde ne paraissant pas suffisamment flexible, on abandonna ce moyen pour se servir de l'aiguille à anévrisme (Assalini's needle) que l'on passa promptement en-dessous après avoir débarrassé, autant que possible, l'artère de toutes ses connexions, et on la retint isolée de toutes les parties environnantes. Alors on passa à travers le trou de l'aiguille d'Assalini, une aiguille courbe, armée d'une double ligature, de deux fils chacune, que l'on

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plaça autour de l'artère en retirant l'aiguille à anévrisme. S'étant bien assuré que les ligatures n'embrassaient que l'artère seule, on lia les deux fils au même endroit à environ deux à trois pouces au-dessus de la tumeur anévrismale, ce qui ne doit la faire considérer que comme une seule ligature. (1)

La pulsation cessa à l'instant. On rapprocha les deux bords de cette profonde ouverture que l'on retint sans suture par des emplâtres agglutinatifs et l'appareil fut assuré par une bande placée autour du corps du malade.

Jones, ayant supporté cette fatigante opération avec tout le sang-froid d'un homme accoutumé à envisager la mort sous diverses formes, fut mis au lit, la cuisse pliée vers le bassin et supportée par des oreillers; le membre fut enve-

(1) J'avais l'intention de faire usage de deux ligatures et de couper l'artère entre deux; mais le malade étant d'une taille courte et ramassée et la tumeur très-élevée, je trouvai que cela était impraticable sans élargir l'ouverture par une incision à angle droit à travers les transverses abdominaux, qui aurait pu exposer le péritoine à quelque danger. Je changeai d'autant plus facilement d'idée, que les opinions sont divisées, relativement à l'avantage d'une ou de deux ligatures.

loppé de flanelle, et la tranquillité la plus absolue fut recommandée au malade.

La perte de sang n'a été que peu de chose.

Peut-être aurions-nous eu immédiatement recours à la saignée, si la grande déplétion que le malade avait déjà subie, ne nous en eût empêché.

Nous nous déterminâmes néanmoins à le surveiller de près et à attaquer vigoureusement toute espèce de symptôme inflammatoire qui pourrait se présenter. En moins d'une demi-heure, la température de tout le membre avait sensiblement diminué et le pied était aussi froid que du marbre. Le malade se plaignait d'une douleur vive qu'il ressentait dans les lombes; nous l'attribuâmes à la position gênante qu'il avait été obligé de garder pendant l'opération, mais peut-être venait-elle aussi des secousses que le nerf crural antérieur avait si récemment éprouvées.

Une sensation désagréable vers la région précordiale, avec de légères nausées et une agitation mentale, nous porta à lui faire prendre immédiatement une potion aromatique opiacée.

A 5 heures. La douleur avait beaucoup diminué, mais un ténesme fatigant était survenu; on administra l'huile de Ricin dans de l'eau de Menthe.

Le pied étant très-froid, mais exempt de douleur, on y mit un autre rouleau de flanelle. On évita l'application de la chaleur, pensant que cela ne pouvait produire aucun bien et que, d'après les efforts que la nature avait à faire, il pourrait en résulter un mal.

Les battemens du pouls avaient à peine varié, soit en force soit en fréquence, et ils étaient alors à 86 par minute.

A 9 heures du soir. Il y avait eu un léger épanchement de sang, pas plus considérable cependant qu'on ne devait s'y attendre, d'après la quantité de petits vaisseaux qui avaient été divisés.

La douleur des reins avait diminué et le ténesme était disparu quoiqu'il n'y eût pas eu de selles.

Le pied ne paraissait pas aussi froid ; le malade éprouvait une légère soif. On ordonna, pour la nuit, une boisson acidulée et rafraîchissante et la répétition de l'huile de palma christi de bonne heure le lendemain.

3 *Août, 9 heures du matin.* La nuit a été assez tranquille ; le membre a recouvré sa température naturelle jusqu'au bout du pied. La douleur de l'aîne a beaucoup diminué. La pulsation est à 90. La langue nette et humide et la peau douce.

A 8 heures du soir. Le malade est très-bien, sa langue bonne, la peau moite, la pulsation douce et montée jusqu'à environ 100.

On lui ordonna une potion anodine.

Le 4 Août. La nuit s'est passée tranquillement.

Les intestins agités de nouveau.

La température du membre malade trouvée plus élevée que celle de l'autre. La langue humide, la pulsation augmentée en fréquence mais non en dureté. Il y eut une selle copieuse dans la soirée.

On répéta la potion anodine.

Le 5 Août. La nuit a été bonne.

Le membre paraissant plus chaud que l'autre, la bande de flanelle fut retirée.

La grosseur du membre continue à être la même que lorsque l'opération a été faite. Le membre n'est ni engourdi ni douloureux. La pulsation est ferme et à 104.

N'ayant point eu de selles pendant la nuit, on répéta l'huile de palma christi.

Le soir, il y a eu 5 selles et le malade se trouva très-bien. Potion anodine.

Le 6 Août. Il a passé une bonne nuit; la tem-

pérature est également rétablie dans les deux membres. (1)

L'enflure a beaucoup diminué.

La pulsation est à 95. La langue est bonne et moite. Légère transpiration. Absence totale de douleur vers l'abdomen.

N'apercevant aucun signe de fièvre symptomatique, nous espérons être à l'abri du danger qui pouvait résulter d'une inflammation du péritoine.

Le 7 Août. Vers le matin, on leva l'appareil à cause de la suppuration considérable qui avait eu lieu pendant la nuit. Avant cet écoulement, le malade ressentait dans le membre une espèce d'engourdissement qui venait probablement de la pression du nerf crural antérieur.

La plaie est saine et réduite à une simple ligne formée par la réunion des deux lèvres.

(1) Dans cette circonstance, la circulation n'est continuée que par l'élargissement des branches capillaires des artères qui s'élèvent de l'iliaque interne, savoir: *la glutéale, l'ischiaque, l'artère honteuse interne* et les *obturatrices* s'anastomosant avec les branches *circonflèxes* de la *profonde, l'externe pudendale* et *l'iliaque circonflèxe* qui viennent de la *Fémorale*, ainsi que l'a savamment démontré M. Astley Cooper, la gloire de sa profession et l'ornement de la société.

La tumeur anévrismale diminue sensiblement, le membre reprend son apparence et son volume.

La constipation obligea de faire prendre au malade une nouvelle dose de Ricin.

Ayant eu trois selles vers le soir, le malade se trouve parfaitement bien, mais ne paraissant avoir aucune disposition au sommeil, on lui fait prendre une potion anodine.

Le 8 Août. Il a bien dormi, la pulsation est douce et retombée à 84. La peau est moite.

Le 9 Août. L'appareil a été levé. La plaie a la plus belle apparence et la suppuration n'est plus que peu de chose.

La pulsation est à 80.

La langue est nette, la peau moite et l'abdomen exempt de douleur et de tension.

Le malade a bien dormi et sans le secours des narcotiques.

La tumeur anévrismale paraît dissipée et le membre n'offre plus aucun signe d'œdème.

Le 10 Août. La plaie continue à avoir une belle apparence. La pulsation est à 80, et son mouvement exactement celui de la santé.

Le 13 Août. Ce matin la ligature de l'artère épigastrique est tombée.

Le 19 *Août.* Il n'a heureusement été donné lieu à aucun rapport jusqu'à ce matin, époque où les principales ligatures ont été retirées sans autre effort que d'en tordre légèrement les bouts ainsi qu'on avait usage de faire chaque jour.

Le 25 *Août.* Le malade continue à être parfaitement bien.

La plaie n'a presque plus d'apparence de suppuration et se guérit promptement. On en toucha les petites exubérances granulées avec le nitrate d'argent.

Il ne reste plus vestige de la tumeur anévrismale. Les deux membres sont égaux en volume et en forme. Ils éprouvent exactement la même température et la même sensation. Les artères n'ont pas de pulsation évidente.

Le 10 *Septembre.* Le membre a recouvré en entier sa force et ses facultés; la plaie est cicatrisée et la santé du malade n'est point affaiblie.

En examinant de nouveau tout ce qui a eu lieu pendant le cours de cette maladie, on sera sans doute frappé de la simplicité des usages pratiqués dans les armées et des avantages qu'on a pu tirer de l'autorité qu'on avait sur le malade en ce qui concernait chaque partie de son traitement.

On ne lui avait pas fait préalablement connaître tout le danger de sa situation, et une demi-heure avant l'opération, son esprit n'avait point été fatigué par la crainte qu'il aurait pu en avoir.

Il est vrai que le jour précédent on lui avait fait pressentir la probabilité qu'on entreprendrait quelque chose pour sa cure ; mais il ne connut la nécessité d'une opération importante que lorsque tout était prêt pour la mettre à exécution.

On doit attribuer une grande partie du succès de cette opération à cette heureuse tranquillité d'esprit et de corps.

Si James Jones avait appartenu à une famille marquante et eût eu les moyens que donne ordinairement la fortune, qui aurait pu borner le premier traitement à une simple saignée, et ensuite à des apéritifs et quelques adoucissans? Qui aurait pu être assuré de la stricte observance de cette diète si essentielle à son salut ?

L'homme de l'art sentira non seulement l'exactitude de cette observation, mais il trouvera encore une preuve de la sûreté de l'opération dans la détermination qu'on a prise de l'exécuter AVANT QUE LES FORCES FUSSENT DIMINUÉES PAR DES SOUFFRANCES PROLONGÉES.

Il apercevra aussi l'inutilité de plusieurs ligatures et les avantages qu'on obtient D'UNE SEULE en ce qu'elle ne déplace l'artère que le moins possible de sa situation naturelle.

Quant à la manière d'opérer, il existait déjà diverses opinions et long-tems elles existeront encore.

Relativement à la ligature de l'iliaque externe, je dois dire qu'elle a été faite pour la première fois à Londres, il y a environ 20 ans par le célèbre Abernethy; que depuis il l'a répétée 3 fois; qu'elle l'a été 6 fois par mon ami et mon précepteur M. Astley Cooper et qu'elle a été faite avec succès en Angleterre et, je crois, en France par plusieurs Chirurgiens distingués.

Mais il résulte des recherches que j'ai eu la possibilité de faire, que c'est la première opération de cette espèce qui ait réussi dans l'armée anglaise et qu'il n'est point à ma connaissance qu'elle ait été entreprise dans aucune autre armée.

Je serais inexcusable si je ne témoignais ici toute la reconnaissance que je dois à mes collègues présens à l'opération, pour le vif intérêt qu'ils ont bien voulu prendre à mon succès. Tous ont partagé ma pénible anxiété, pendant l'espace de tems où il pouvait y avoir

du doute ou du danger; tous ont éprouvé le plaisir de l'espoir pendant la perspective du rétablissement et se sont réjouis avec moi de l'heureux résultat de cette importante opération.

Je dois aussi beaucoup de reconnaissance à M. le Chirurgien-Major Booty, pour la manière habile avec laquelle il m'a secondé pendant l'opération et pour les soins assidus qu'il a prodigués au malade, durant le cours du traitement.

En soumettant cette esquisse à la Société d'Emulation, je dois solliciter toute son indulgence; je n'ai été porté à la lui présenter, que par le désir de remplir mon devoir et de montrer combien je suis sensible à l'honneur qu'elle m'a fait de m'admettre au nombre de ses Membres. (1) J'y ai encore été engagé par la manière gracieuse et aimable avec laquelle notre digne Président, M. Latour de St.-Igest, a bien voulu m'inviter, au nom

(1) Envers l'un desquels, M. Felix, les expressions me manquent lorsque je veux lui faire connaître et les sentimens de gratitude dont je suis pénétré et les obligations que je lui dois, non seulement à cause de la manière obligeante avec laquelle il s'est offert de traduire mon observation, mais aussi pour l'habileté qu'il a montrée à vaincre des difficultés d'autant plus grandes, qu'il est étranger à la profession; difficultés qui auraient pu effrayer tout autre moins dévoué à la culture des Sciences.

J. C.

de la Société, à lui donner connaissance des particularités de cette opération et par l'intérêt que la situation critique de ce malheureux soldat a inspiré à tous les Membres qui la composent.

Je saisirai ce moment pour exprimer ici tout le désir que j'éprouve, que désormais nos contestations ne soient que de cette nature amicale; qu'à l'avenir, notre rivalité soit bornée à cultiver les arts, à vaincre les maladies du corps et à détruire les préjugés de l'esprit.

BULLETINS

DE

LA FACULTÉ DE MÉDECINE

DE PARIS,

ET DE LA SOCIÉTÉ ÉTABLIE DANS SON SEIN.

TOME QUATRIEME

CONTENANT LES ANNÉES 1814 ET 1815.

A PARIS,

DE L'IMPRIMERIE DE MADAME V.e MIGNERET,

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Articles contenus dans ce Numéro :

TRAITEMENT de la gale avec un liniment savonneux hydro-sulfuré ; par M. JADELOT.

J'AI présenté à la Société de la Faculté de Médecine, les résultats obtenus à l'hôpital des Enfans, en traitant la gale seulement avec le sulfure de potasse administré en bains.

Il paraît que les conditions avantageuses de ce mode de traitement, ont été unanimement reconnues par les médecins éclairés et sans prévention. Il en est beaucoup qui n'ont pas hésité à l'adopter soit pour les particuliers, soit dans les hôpitaux, dans les hospices, dans les prisons où il est employé sans difficulté, et avec un grand effet, contre les affections psoriques qui y sont comme permanentes et souvent si difficiles à déraciner.

Cependant, tout en convenant de l'efficacité de ce moyen, on a objecté qu'il manquait de quelques-unes des qualités essentielles dans un remède anti-psorique, pour qu'il soit d'une utilité générale ; on a pensé que ce qui s'opposerait à ce que celui-ci devînt usuel dans toutes les circonstances, c'est qu'on n'a pas toujours la possibilité de procurer des bains aux galeux, par exemple à certains ouvriers, aux militaires en campagne.

Sans examiner jusqu'à quel point cette difficulté est réelle, j'ai fait composer avec le sulfure de potasse, dont la propriété contre la

gale avait été bien constatée par son emploi en bains, différentes préparations particulières propres à être appliquées par frictions ou par lotions sur la peau.

J'ai donné à ces préparations des excipiens savonneux, de préférence aux excipiens graisseux ou aqueux qui sont ordinairement employés pour les médicamens destinés à l'usage extérieur. Ce qui a déterminé ce choix, c'est que, comme il résulte des essais que j'ai tentés, que l'action du savon sur la peau suffit seule dans bien des cas pour guérir la gale, il est évident que l'addition d'un savon dans des médicamens dont le sulfure fait la base, ne peut qu'accroître la propriété reconnue de celui-ci.

Les effets de l'une des préparations que j'ai mise en usage, et qui peut être désignée sous le nom de *liniment savonneux hydro-sulfuré*, m'ont paru mériter particulièrement d'occuper l'attention de la Société.

Voici la composition de ce liniment :

Sulfure de potasse.	Six onces. (ij hectogr.)
Savon blanc de commerce. .	Deux livres. (j kilogr.)
Huile de pavot	Quatre livres. (ij kilogr.)
Huile volatile de thym . . .	Deux gros. (viij gramm.)

On pile le sulfure de potasse dans un mortier de fer légèrement chauffé; on le passe de suite au tamis, et on l'enferme, pulvérisé, dans un flacon bien sec et bien bouché. Ou l'on fait dissoudre le sulfure de potasse dans le tiers de son poids d'eau, qu'on y ajoute douze heures avant de composer le liniment. On râpe le savon. On le fait fondre, au bain-marie, dans une marmite de terre, en l'agitant avec un pilon de bois. On y ajoute la moitié de l'huile de pavot, peu-à-peu, en triturant, et laissant la marmite dans le bain-marie. On met ensuite, dans un mortier de marbre, le sulfure de potasse pulvérisé, ou dissous dans le tiers de son poids d'eau. On y ajoute, peu-à-peu, le mélange d'huile et de savon qui était dans le bain-marie, en commençant par une très-petite portion du mélange, avec laquelle on triture fortement le sulfure de potasse. On continue de triturer le tout, jusqu'à ce qu'il ne reste plus de grumeaux de savon. On y mêle ensuite exactement la dernière moitié de l'huile de pavot et l'huile volatile de thym. Ce liniment doit être conservé dans un vaisseau fermé. On peut en préparer six kilogrammes et plus, en une fois. Il est d'une couleur verdâtre, et devient blanc par le contact de l'air; sa consistance est à-peu-près la même que celle du cérat. L'odeur de gaz hydrogène sulfuré y est entièrement détruite par celle de l'huile volatile qui n'est ajoutée que pour cet effet.

On peut substituer dans cette composition, le savon amygdalin et l'huile d'amandes, au savon du commerce et à l'huile de pavot et pulper le mélange. Ce *liniment amygdalin hydro-sulfuré* a sur la peau une action encore plus douce que le précédent.

L'application de ces moyens au traitement de la gale, consiste à étendre légèrement deux fois par jour, en se levant et en se couchant, la dose d'une once (3 décagrammes) environ de liniment, sur les différentes parties du corps, spécialement sur celles où il y a des boutons de gale.

Quand la peau s'irrite et se gerce aisément, il faut avoir soin qu'il ne s'amasse pas de portions du liniment qui séjournent au pli du coude, sous les aisselles, aux aines, et dans ce cas, on lave la peau une fois chaque jour, avec de l'eau tiède.

Si la gale est simple, il est absolument inutile d'employer d'autres médicamens externes ou internes avec celui-ci, quelle que soit l'ancienneté de la maladie, son espèce, et la quantité des boutons ou pustules : elle se guérit ordinairement ainsi en moins de huit jours, souvent en quatre jours, quelquefois plus vîte; il n'en résulte aucun mauvais effet pour la santé. Depuis plus de six mois que je pratique ce traitement dans l'hôpital des Enfans, je ne me suis pas aperçu qu'il ait été suivi de récidives de la gale.

Une seule friction suffit pour diminuer les démangeaisons ou le prurit, au point de permettre aux malades de goûter le repos et le sommeil, quand ils en étaient privés auparavant : dès le second jour, les boutons s'affaissent ; ils s'ouvrent, ensuite ils s'effacent et disparaissent plus ou moins rapidement. De légères démangeaisons se font ordinairement sentir encore pendant un ou deux jours, après que les boutons sont passés; il est utile de continuer les frictions, jusqu'à ce qu'il n'y ait plus de démangeaisons.

Il se forme quelquefois des furoncles plus ou moins gros sur différentes parties du corps, comme par les autres traitemens de la gale; ils s'ouvrent et se guérissent très-vîte.

J'ai traité, suivant cette méthode, beaucoup d'enfans dans l'hôpital auquel je suis attaché, et des adultes parmi ceux qui viennent chaque jour aux consultations qu'on donne dans cet hôpital; plusieurs médecins et chirurgiens auxquels je l'ai indiquée, l'ont employée avec le même succès.

Les qualités utiles de ce procédé curatif paraissent consister, 1.° en ce que le liniment savonneux hydro-sulfuré exerce sur la peau une action qui n'est accompagnée ni de cuissons, ni de picotemens, et qui ne détermine aucune éruption de pustules étrangères à la gale; celles qui paraissent quelquefois pendant son usage, sont manifestement psoriques.

2.° Cette composition n'exhale pas l'odeur désagréable, et même insupportable, pour des malades, qu'ont les mélanges gras quand ils sont échauffés par la chaleur de la peau, et des préparations hydro-sulfurées qui ont l'eau pour excipient.

3.° Loin de gâter le linge et de le détériorer, comme il arrive avec les onguens et avec certaines lotions, elle en rend, par sa qualité savonneuse, le blanchiment très-facile.

4.° La préparation du liniment est simple; les substances qu'il contient sont sans aucun danger, et on se les procure à un prix fort modique.

5.° Il peut être conservé long-temps sans que le sulfure s'y altère sensiblement; et on le donne tout composé aux malades, ce qui met à l'abri des inexactitudes et des erreurs dans les proportions des substances qui le forment.

Ce mode de traitement de la gale, facile, très-peu dispendieux, est à la portée des personnes de tout âge, de toutes les professions et dans toutes les situations; il ne nécessite aucune interruption dans les occupations habituelles.

Le même moyen est aussi employé avec succès au traitement de la teigne et de quelques espèces de dartres.

Cette notice de M. *Jadelot* est accompagnée d'un tableau synoptique dans lequel il expose les principaux effets de son liniment savonneux hydro-sulfuré, sur douze petites filles affectées de la gale depuis un temps plus ou moins long. Le résultat de ses observations est que chez quatre d'entr'elles le traitement a duré huit jours; chez deux autres, sept; chez quatre, six; et enfin cinq et trois jours pour les deux dernières; de sorte que la durée moyenne du traitement a été de six jours et demi. Cependant il faut observer que les frictions ont été continuées, par précaution, pendant un ou deux jours après que la guérison avait paru terminée.

EXTRAIT de deux Rapports sur les trois procédés nouveaux pour le traitement de la gale, proposés par MM. JADELOT, HELMERICK et DUPUYTREN, et mis en usage à l'hôpital militaire de l'Oursine; par MM. GENOUVILLE et DELAPORTE, chirurgiens attachés à cet hôpital.

Ces rapports ont été adressés à M. le Baron *Percy*, inspecteur-général du service de santé, qui les a communiqués à la Société.

Le procédé de M. *Helmerick* consiste dans une espèce de pommade soufrée composée de quatre parties de graisse de porc, d'une partie de soufre sublimé, et d'une demi-partie de carbonate de potasse. Avant de commencer les frictions, on fait prendre au malade un bain dans lequel on a dissout du savon vert : on le frictionne ensuite trois fois par jour avec une once de la pommade chaque fois. Sur dix-sept galeux soumis à ce traitement, dix ont guéri avec un bain savonneux et trois jours de frictions; un autre s'est frictionné quatre jours seulement, et a pris trois bains; le douzième a éprouvé un retour de la gale après six frictions; les autres ont eu besoin de douze, dix-huit et vingt frictions pour obtenir une guérison complète. Chez plusieurs de ces malades, sur-tout chez ceux qui avaient des gales anciennes, il est resté après la disparition de l'é-

ruption psorique, des rugosités croûteuses ressemblant à des dartres, qui se sont dissipées assez difficilement par les bains ordinaires.

M. *Dupuytren* a proposé une solution de sulfate de potasse chargée de soufre, et sur-tout d'hydrogène sulfuré, principalement au moment de la préparation du remède. A cet effet, on dissout quatre onces de sulfure de potasse dans une livre d'eau, à laquelle on ajoute environ une once d'acide sulfurique; les galeux se frottent deux fois par jour à douze heures de distance, avec quatre onces environ chaque fois de la solution. Après quatre frictions, on leur fait prendre un bain tiède, en continuant ainsi de suite suivant l'opiniâtreté de la gale. Vingt-six galeux ont été guéris par ce traitement; quatre ont été délivrés de leurs maladies avec deux frictions seulement, et un bain; six autres n'ont eu besoin que de quatre frictions et d'un bain : les autres n'ont pu guérir qu'après 8, 12, 16, 20, 22 frictions, et 3, 6 et 8 bains. Ce mode de traitement a été employé avec succès à l'hôpital de l'Oursine, pour des gales qui avaient même résisté au traitement ordinaire, et il n'est arrivé aucun accident ni pendant, ni après l'usage de ce remède. Cependant il a l'inconvénient d'irriter fortement la peau, ce qui oblige souvent à suspendre les frictions, ou à étendre la solution et à l'adoucir en y ajoutant une plus grande quantité d'eau. Il laisse d'ailleurs des taches et une odeur désagréable aux linges qui ont servi aux malades.

Les procédés qui sont principalement recommandés par M. *Jadelot*, sont, comme on l'a vu dans ce Bulletin, des bains de sulfure de potasse, et un liniment savonneux hydro-sulfuré; les succès multipliés qu'on a déja obtenus par ces deux moyens, sont maintenant bien connus, et sont de nouveau constatés par le rapport de M. *Genouville;* mais le liniment a sur-tout le précieux avantage de ne point exiger les bains qui sont nécessaires dans tous les autres traitemens, et de ne point tacher les linges comme le fait la solution de soufre et d'hydrogène sulfuré; c'est, au contraire, comme l'ont prouvé les expériences faites par l'économe de l'hôpital de l'Oursine, une espèce de savon naturel qui facilite beaucoup le blanchiment.

Le rapport de M. *Genouville* est terminé par quelques réflexions de M. *Delaporte*, sur la nécessité d'apporter la plus grande attention à modérer en général toutes les espèces de frictions, suivant le degré de sensibilité de la peau, et à bien distinguer les éruptions qui sont souvent l'effet même du traitement, d'avec les véritables éruptions psoriques.

OBSERVATION sur une éruption variolique dans la trachée-artère, et sur la communication des radicules de la veine ombilicale avec les veines utérines; par M. le professeur CHAUSSIER.

LA femme qui fait le sujet de cette observation, âgée de 19 ans, d'une constitution forte, d'un tempérament sanguin, parvenue au commencement du septième mois de grossesse, s'alita le 14 décembre, en se plaignant d'un mal-aise général, d'embarras, de pesanteur à la tête, et sur-tout de douleurs aux jambes. Le soir, il survint une hémorrhagie nasale très-abondante; la nuit fut agitée, sans sommeil; la peau était sèche, brûlante; le pouls roide, serré, fréquent, et la malade se plaignait d'une douleur de tête qu'elle rapportait au front et aux orbites. Le 15, mêmes symptômes; l'hémorrhagie nasale se renouvela trois fois dans le cours de la journée; il y eut constipation malgré l'usage des clystères et des boissons tempérantes légèrement acidulées; la nuit cependant fut un peu moins agitée; il y eut quelques instans de sommeil. Le 16, mêmes symptômes; cependant la peau est moins sèche; le pouls plus mou, un peu moins fréquent; il y a deux selles liquides. La malade se plaint de douleurs à la partie postérieure des cuisses. Les artères du cou battent avec force; l'immersion des

pieds dans l'eau tiède procure du soulagement; cependant, le soir l'hémorrhagie nasale recommence avec force, et la nuit se passe sans sommeil. Le 17, à-peu-près même état; point de selles. Sur le soir, on aperçoit une éruption de petits boutons à la face, que l'on reconnaît facilement pour varioliques; la nuit, point de sommeil. Le 18, l'éruption est générale, les boutons grossissent, ils sont nombreux, cependant séparés; le pouls reste fréquent; la malade se plaint d'une douleur légère à la gorge; elle a quelques nausées, et rejette par une sorte de vomissement des mucosités glaireuses; la langue est molle, mais rouge et très-chaude; la nuit, point de sommeil, un peu d'oppression, et, par intervalles, de la toux avec excrétion d'une matière visqueuse et filante. Le 19, même état; les boutons varioliques grossissent encore, la fièvre persiste, mais la douleur de la gorge augmente; les accès de toux sont moins éloignés, plus longs, et sont accompagnés d'un son aigre, d'une espèce de cri très-remarquable, avec une sorte de constriction au larynx. La malade y porte de temps en temps la main, et dit qu'elle sent en cet endroit quelque chose qui la fait tousser, qui la serre et l'étrangle; le soir, anxiété; oppression considérable; toux plus longue, plus fréquente; voix rauque; expectoration difficile, incomplète; les matières glaireuses s'arrêtent dans l'arrière-bouche, et détermi-

nent des nausées infructueuses. Mort dans le courant de la nuit, avec le gonflement, la rougeur de la face, et tous les symptômes qui caractérisent la suffocation. D'après ces derniers symptômes, qui ont tant d'analogie avec ceux que l'on observe dans cette espèce d'angine trachéale que l'on appelle vulgairement le *croup*, j'annonçai que l'on trouverait aussi dans le canal aérien un genre analogue d'altération. En effet, à l'ouverture du cadavre, on trouva le canal aérien complètement rempli de mucosités écumeuses, tenaces, accolées à la surface de la membrane interne de ce canal; il y avait aussi un grand nombre de boutons varioliques semblables, par la forme et le volume, à ceux qui existaient à la peau; ces boutons n'étaient point bornés au larynx et à la trachée, il en existait de même dans les principales ramifications bronchiques, dans l'intérieur de la bouche, au pharynx et au commencement de l'œsophage. La pièce qui a été detachée du cadavre, et que je présente à la Société, démontre l'exactitude de ce que je viens d'avancer. On ne peut donc plus en douter, l'éruption variolique peut avoir lieu dans le canal aérien, et déterminer tous les symptômes du croup. Je les ai également vus survenir dans le cours de la rougeole, et ces faits sont confirmés par l'observation de plusieurs praticiens très-recommandables. L'opinion des médecins qui ont assuré que les phlegmasies

cutanées agissent réellement comme causes immédiates dans la production du croup, qu'elles portent sur les organes de la respiration la matière morbifique qui leur est propre, n'est donc point une explication purement hypothétique, ainsi qu'on l'a avancé dans le tome VII du Dictionnaire des Sciences Médicales, page 436. Mais c'en est assez sur ce point; passons à un autre objet.

Après la mort de cette femme, on fit par les voies naturelles l'extraction du fœtus, qui, par sa conformation, son volume, son poids, fut estimé au terme de six mois de conception; mais comme après l'extraction du fœtus, on s'était borné à couper le cordon ombilical, et que l'on avait conservé toutes les parties dans leur intégrité, et leur position respective, il me parut important d'examiner, de rechercher de nouveau quel est le mode de communication qui existe entre la mère et le fœtus, et comment le placenta est attaché à l'utérus.

Dans différens cas analogues que j'ai rencontrés, j'avais fait l'injection des vaisseaux du placenta, tantôt par les artères ombilicales, tantôt par la veine, et d'après mes divers essais, il me paraissait que l'injection par les artères ombilicales, se bornait toujours au placenta, et ne parvenait jamais dans les vaisseaux de l'utérus; au contraire, toutes les fois que j'ai injecté du mercure dans la veine ombilicale, j'ai constamment vu ce métal pas-

ser en plus ou moins grande quantité dans les veines utérines. Pour confirmer cet aperçu, j'ai dans le cas actuel introduit du mercure dans la veine ombilicale du placenta, de manière à bien remplir toutes ses ramifications, et après quelques heures de repos, j'ai trouvé une partie du mercure passé dans les veines utérines, ainsi que l'on peut s'en convaincre par la pièce que j'ai détachée du cadavre, et que je présente à la Société. En l'examinant, on voit, d'un côté, le placenta attaché à l'utérus, et qui présente toutes les ramifications de la veine ombilicale remplies de mercure; d'un autre côté, et sur la face postérieure et latérale de l'utérus, on aperçoit sous le péritoine les veines utérines, et l'on distingue facilement à travers leurs parois le mercure disséminé dans leurs diverses ramifications. Pour ne laisser aucun doute sur ce point, j'ai disséqué cet utérus avec MM. *Thillaye* et *Desormeaux*; nous avons ouvert quelques-unes des branches des veines utérines; nous les avons suivies dans leur trajet jusqu'au placenta, et nous avons trouvé dans toute leur étendue du mercure disséminé en globules plus ou moins gros, et mêlés avec le sang qu'elles contenaient; nous avons ensuite décollé le placenta, et nous avons vu le mercure suinter de sa surface, et ramassé en quelques endroits en grosses gouttes. Voilà les faits bien constatés : mais qu'en conclure? parce

que mes injections par les artères ombilicales se sont bornées au tissu du placenta, et n'ont jamais pénétré dans les vaisseaux de l'utérus, ni dans les radicules de la veine ombilicale, pourra-t-on assurer que le sang apporté par les artères ombilicales du fœtus, sert uniquement au développement, à la nutrition du placenta; qu'il n'en passe point du tout dans les vaisseaux de l'utérus, ni dans les radicules de la veine ombilicale? Et parce qu'en injectant du mercure dans la veine ombilicale du placenta, on retrouve toujours une certaine quantité de ce métal dans les veines utérines de la mère, pourra-t-on en conclure qu'il y a anastomose, ou communication directe et immédiate de la veine ombilicale du fœtus, et les veines utérines de la mère? Je suis assurément fort éloigné de le penser : en effet, quoique par mes injections il soit bien démontré qu'il y a des voies de communication assez faciles entre les radicules de la veine ombilicale du fœtus et les veines utérines de la mère, il faut cependant remarquer que cette communication n'est point immédiate, mais il y a toujours entre la surface du placenta et la portion de l'utérus qui lui correspond, une sorte de membrane molle, couënneuse, poreuse, plus ou moins épaisse, plus ou moins adhérente, suivant les différentes époques de la grossesse : cette membrane intermédiaire si remarquable par sa nature, son tissu, a été aperçue par les

plus anciens anatomistes, mais elle a toujours été confondue avec le chorion. *Hunter*, qui l'a mieux connue, l'a distinguée sous les noms de *membrana caduca et reflexa;* mais comme elle n'est point bornée au placenta, comme elle s'étend sur le chorion, y adhère plus ou moins intimement, et forme en quelque sorte sa couche extérieure, j'ai cru devoir la désigner sous le nom d'*épichorion*. Quoi qu'il en soit, cette membrane, qui paraît se former dans l'acte de la conception, et appartenir plus particulièrement à la surface de l'utérus, présente une disposition, une organisation particulières aux diverses époques de la grossesse; mais dans tous les temps elle est le moyen qui unit et attache à l'utérus le chorion et le placenta, et c'est en s'insinuant à travers les porosités de ce tissu intermédiaire, que le mercure injecté dans la veine ombilicale passe peu-à-peu, et parvient ainsi dans les veines utérines de la mère: aussi, lorsqu'après avoir injecté la veine ombilicale avec du mercure, on détache le placenta de la surface de l'utérus, au lieu de trouver ce métal formant un filet continu avec l'orifice des veines utérines, on le trouve disséminé en globules plus ou moins gros dans un tissu spongieux et intermédiaire qui adhère à la surface de l'utérus plus qu'à celle du placenta. Mes occupations ne me permettent point en ce moment d'entrer dans tous les détails qu'exigerait cet objet; d'ailleurs, pour tirer de

ces expériences des conséquences positives et incontestables, il est encore nécessaire de faire des recherches ultérieures, et le temps seul peut en fournir l'occasion: en attendant j'ajouterai une remarque qui, comme les injections l'indiquent déja, semble confirmer que les radicules de la veine ombilicale du fœtus communiquent avec les veines utérines de la mère.

Lorsqu'après un accouchement naturel, facile, terminé spontanément, c'est-à-dire, par la seule contraction des organes, on examine le placenta, sa surface utérine, quoique ordinairement divisée par quelques sillons, est toujours lisse, unie, et le chorion est couvert d'une couche ou lame membraneuse mince, molle, grisâtre, tomenteuse, et cette disposition est regardée, avec raison, par les personnes de l'art, comme une preuve certaine que le placenta et ses annexes ont été complètement détachés, expulsés de l'utérus, et qu'il n'en reste aucune portion dans la cavité de cet organe. Cependant, si deux ou trois jours après l'accouchement on ouvre l'utérus, on voit que cet organe a déja beaucoup diminué de volume; que ses parois sont fort épaissies; que sa face interne est tapissée dans toute son étendue, par une sorte de membrane grisâtre, molle, couénneuse, peu consistante. On voit aussi à l'endroit où le placenta était attaché, des rugosités, des espèces de crêtes, de franges ou

de lambeaux saillans irréguliers qui sont plus ou moins gros et nombreux, et que d'après leur couleur rougeâtre, leur apparence granulée, spongieuse et mollasse, on pourrait au premier coup-d'œil prendre pour des portions de placenta déchirées et restées dans l'utérus; mais en examinant les objets de plus près, on reconnaît que cette couche molle et couënneuse qui tapisse la cavité de l'utérus, est une portion de l'épichorion qui peu-à-peu s'exfolie, se fond, se dissout, et est entraîné par les lochies auxquelles il donne cette odeur forte, particulière et semi-putride qui caractérise les couches. Quant à ces crêtes ou franges saillantes que l'on remarque dans la cavité de l'utérus, on reconnaît qu'elles appartiennent à cet organe; qu'elles sont essentiellement formées par des extrémités vasculaires qui se prolongent à sa face interne, sont entourées d'un tissu spongieux, et recouvertes par quelques flocons de l'épichorion; aussi l'on aperçoit toujours sur quelque point de ces franges saillantes, une ou deux ouvertures circulaires plus ou moins grandes, qui, le plus ordinairement, sont remplies par du sang coagulé: mais si, après avoir enlevé ce caillot, on introduit un stylet par ces ouvertures, ou si l'on y fait une injection, on parvient également dans les veines utérines; mais à mesure que l'utérus se dégorge et reprend sa forme, son volume primitif, ces franges vasculaires

diminuent peu-à-peu de volume, et en général quinze ou vingt jours après l'accouchement, et quelquefois plus tard, ce qui varie selon la constitution particulière de la femme, la face interne de l'utérus est lisse, égale dans toute son étendue, et on n'aperçoit plus à l'endroit où était attaché le placenta, que quelques petits points rougeâtres. Il semble donc, d'après ce qui vient d'être dit, que c'est principalement des extrémités des veines utérines que le fœtus tire les matériaux qui doivent servir à sa nutrition. Cet aperçu est sans doute bien contraire à l'opinion généralement admise sur la manière dont s'opèrent les diverses espèces de secrétions. On croit généralement que les secrétions, ainsi que la nutrition, ne peuvent avoir lieu que par les extrémités artérielles; mais il y a dans les réseaux capillaires une disposition particulière qui n'a peut-être point été assez remarquée; et sans nier l'influence des artères sur les secrétions, il me semble, comme je l'ai dit et imprimé depuis long-temps, que les radicules des veines concourent aussi beaucoup à ce genre de fonctions.

Sur un appareil propre à arrêter les poussières ou vapeurs métalliques que respirent les ouvriers qui travaillent sur les métaux, par M. Brisé-Fradin; extrait d'un Rapport par MM. Chaussier, Thillaye fils et Mérat.

Cet appareil consiste dans une boëte en fer-blanc, cylindrique ou carrée, percée en dessus et en dessous. Au trou supérieur est adapté un tube de verre recourbé, propre à mettre dans la bouche; celui de dessous qui reste ouvert est plus grand, et sert à introduire du coton dont on emplit la boëte. L'appareil est pourvu de deux cordons latéraux qui servent à le fixer à la partie supérieure de la poitrine, en leur faisant faire une circulaire autour du corps; il faut que cet appareil soit assez élevé pour que le tube du verre puisse facilement se placer dans la bouche. Alors l'ouvrier qui se trouve dans une atmosphère de vapeurs malfaisantes, respire par le tube de verre, après avoir préalablement introduit une boulette de coton dans chaque narine; l'air atmosphérique passe dans sa bouche, dépouillé des vapeurs nuisibles qui restent dans le coton, qu'on a soin de mouiller pour plus d'efficacité. Lorsqu'on a besoin d'expirer, on jette l'air impropre, et on

replace sa bouche au tube, et ainsi de suite, jusqu'à ce qu'on ait fini de travailler sur les substances dont les vapeurs sont pernicieuses.

M. *Brisé-Fradin* a devant nous fait volatiliser du mercure dans un creuset; son appareil a été exposé au-dessus des vapeurs; il a respiré par le tube de verre, et après l'opération nous avons trouvé des molécules de mercure dans le coton. Une pièce d'or que nous y avions placée, a été blanchie par ce métal.

L'Auteur de cet appareil a respiré ensuite des vapeurs d'acide muriatique oxygéné, en imbibant le coton contenu dans la machine, d'ammoniaque liquide, il n'en a éprouvé aucun mauvais effet. L'un de nous a respiré les mêmes vapeurs, de la même manière, et a affirmé qu'on n'éprouvait nullement leur effet irritant et suffoquant. L'air paraissait absolument de l'air atmosphérique.

Nous pensons que l'appareil présenté par M. *Brisé-Fradin*, peut convenir pour le but qu'il se propose. Nous le croyons sur-tout propre à préserver les doreurs sur métaux, de l'absorption du mercure par les voies de la respiration, et par là de les rendre moins susceptibles de contracter le tremblement qui leur est particulier, et qui a été décrit par l'un de nous. Nous disons moins susceptibles, parce qu'il y a toujours une certaine quantité de

mercure absorbé par la peau. Notre opinion relativement aux vapeurs gazeuses, telles que celles de l'acide muriatique oxygéné, est que cet appareil n'en peut préserver si on n'a pas un réactif capable de les corriger, imbibé dans le coton. Tel est l'ammoniaque pour les vapeurs citées. Nous croyons pourtant que l'appareil de M. *Brisé-Fradin* ne peut convenir que pour les travaux de peu de durée, parce que son usage pourrait fatiguer par la gêne qu'il apporte à s'en servir. Mais dans les courts travaux, ce procédé peut être avantageux, et nous engageons à s'en servir les personnes qui travaillent au milieu d'une atmosphère délétère, soit métallique, soit gazeuse.

Guérison d'un polype de l'utérus par la ligature, après la dilatation artificielle du col de cet organe; par M. Bonnin. (*Extrait d'un Rapport de MM. Dubois et Béclard.*

Madame *M....*, âgée de trente-neuf ans, éprouva au mois de septembre 1812, après trois accouchemens heureux, une hémorrhagie utérine qui ne cessa au bout de cinq mois que pour reparaître quatre mois plus tard, et qui jeta bientôt la malade dans un état d'infiltration générale et d'épuisement qui faisait craindre pour sa vie. M. *Bonnie*, consulté, chercha

à reconnaître par le toucher, quelle était la cause de cette hémorrhagie, et si cette cause était de nature à pouvoir être enlevée. Il reconnut en effet, en forçant avec l'extrémité du doigt l'entrée de l'utérus, qu'il y avait un polype développé et renfermé dans la cavité de cet organe. Il était instant de l'enlever, pour faire cesser l'accident qui en était le résultat. M. *Bonnie*, pour porter une ligature dans l'utérus, imagina d'en dilater l'orifice avec des éponges de forme conique, rapetissées par la compression, et portées dans cette ouverture étroite au moyen d'une tige flexible qui, par une de ses extrémités, les traversait dans presque toute leur longueur. La première éponge, gonflée par les humidités de l'organe, en dilata le col. Une seconde et une troisième, introduites successivement, de plus en plus grosses, ouvrirent de plus en plus l'orifice de l'utérus, et l'on put y introduire plusieurs doigts; explorer dans toute son étendue la tumeur; reconnaître qu'elle était implantée au fond de l'organe, l'attirer en partie dans le vagin à travers le col dilaté. M. *Bonnie* procéda à la ligature du polype en suivant le procédé de *Desault*, modifié par plusieurs praticiens modernes, sous ce rapport, que, au lieu de se servir d'un porte-fil creux et d'une seule pince à ressort, ils se servent de deux porte-fils de cette dernière sorte. La constriction du pédicule de la tumeur en détermina bientôt la

chûte. La santé de la malade ne tarda guères à se rétablir parfaitement. M. *Béclard* fut témoin de l'opération ; il y servit d'aide à M. *Bonnie* : c'est la seconde fois qu'il s'est trouvé à même d'apprécier son adresse dans la pratique des opérations chirurgicales.

Cette observation nous semble sur-tout remarquable sous le rapport de la dilatation préparatoire, qu'il a fallu pratiquer pour procéder à la ligature. L'épuisement produit par des pertes réitérées, en faisait une loi : il était à craindre que si la tumeur était encore longtemps renfermée dans l'utérus, la mort ne fût le résultat des hémorrhagies qu'elle occasionnait.

On doit donc applaudir à l'idée qu'a eue M. *Bonnie*, d'appliquer au col de l'utérus une opération (la dilatation), un moyen dilatant (l'éponge comprimée), appliquée déja à beaucoup d'autres ouvertures naturelles ou acidentelles dans des cas où il s'agissait, ou bien de les rétablir si elles étaient oblitérées ou angustiées, ou bien de les agrandir pour préparer la voie à d'autres instrumens ou à des corps étrangers qu'il fallait extraire, mais dont on ne trouve aucun exemple particulier, sur laquelle on ne trouve aucun précepte directement applicable au cas dont il s'agit, soit dans les ouvrages sur le traitement des polypes, comme celui de *Levret*, soit dans les traités *ex professo* sur la dilatation. (*Deux Mém. sur*

l'usage des tentes et autres dilatans, par Lecat *et un anonyme. Prix de l'Acad. de Chir., tom.* 1 ; *in-4.°*)

SÉANCES DE LA FACULTE.

13 *Janvier* 1814.

M. *Pinson* a déposé sur le bureau deux masques d'un jeune homme, dont l'un fait voir un double bec-de-lièvre, et l'autre représente le même individu après l'opération. Ces pièces avaient été demandées par M. le professeur *Dubois*, qui a opéré ce jeune homme.

L'Assemblée a pris diverses décisions d'administration intérieure, relatives aux dépenses de la Faculté. Elle a arrêté en particulier qu'il serait incessamment fait un budjet au-delà duquel il ne pourra être alloué aucun fonds sans le vœu et la décision formelle de la Faculté.

27 *Janvier.*

Son Excell. le Ministre des manufactures et du commerce, a invité la Faculté à examiner un savon dit antisyphilitique, pour la composition duquel le sieur *Leclercq* sollicite un brevet d'importation.

Les autres objets dont s'est occupée l'Assemblée, sont relatifs aux examens qui ont eu lieu dans la quinzaine.

SÉANCES DE LA SOCIÉTÉ.

6 *Janvier* 1814.

M. le professeur *Chaussier* a présenté à la Société la trachée-artère et l'utérus d'une jeune femme qui mourut de la petite-vérole au commencement du septième mois de sa grossesse. On voyait l'éruption variolique dans le premier organe, et dans le second la communication de la veine ombilicale avec les veines utérines. L'observation relative à ces deux circonstances, est insérée dans ce Numéro du Bulletin.

M. *Béclard* a lu en son nom et en celui de M. *Dubois*, un rapport sur une observation de M. *Bonnie*, qui a pour sujet l'extirpation d'un polype de l'utérus par la ligature, précédée de la dilatation artificielle du col de cet organe. Ce rapport a été adopté ; il est inséré par extrait dans ce Numéro du Bulletin.

M. *Chaussier* a entretenu la Société d'un cas d'hydrocéphale chez un enfant naissant, dans lequel il a reconnu que la sérosité épanchée dans la cavité du crâne occupait la région supérieure du cerveau dont les lobes étaient écartés, déprimés, affaissés, et refoulés à la base du crâne sur le cervelet.

La Société a entendu la continuation de la lecture du mémoire de M. *Thillaye*, D.-M. correspondant à Rouen, sur la secrétion des gaz dans quelques cas de maladies.

M. *Jadelot* a lu une notice dans laquelle il expose les effets d'un traitement de la gale avec un liniment savonneux hydro-sulfuré. Ce mémoire est accompagné de tableaux dans lesquels l'Auteur fait connaître le mode, les époques et la durée de l'administration du remède. La Société a arrêté que cette notice ferait partie de son premier Bulletin.

M. le professeur *Percy* a communiqué deux rapports qui lui ont été adressés par MM. *Genouville* et *Delaporte*, chirurgiens militaires qui ont été chargés de surveiller le traitement des galeux dans l'hôpital de l'Oursine, à Paris. A ces rapports, qui sont présentés en extrait dans ce Numéro, étaient joints des échantillons des compresses lavées, les unes après avoir été imprégnées du liniment hydro-sulfuré de M. *Jadelot* ; d'autres, du sulfate sulfuré de potasse de M. *Dupuytren* ; et les troisièmes, avec la pommade de soufre potassée de M. *Helmerick*. Les premières étaient les plus blanches ; les autres étaient grises et présentaient quelques taches, quoique le procédé de blanchiment ait été le même pour toutes.

20 *Janvier*.

M. le professeur *Petit-Radel* a été nommé président, à la majorité des suffrages.

La Société a entendu la lecture de trois observations de médecine-pratique qui lui avaient été adressées par M. *Lebrun*, D.-M., correspondant au Mans.

M. *Rochoux*, aide d'anatomie à la Faculté, a lu une observation sur une lésion organique du péricarde.

Il en sera présenté un extrait dans l'un des prochains Numéros de ce Bulletin.

On a terminé la lecture du mémoire de M. *Thillaye*, D.-M. à Rouen, sur la secrétion des gaz.

C. DUMÉRIL, *Secrétaire.*

ARRÊTÉ

DES CONSULS DE LA RÉPUBLIQUE,

Concernant les hôpitaux militaires.

Du 24 Thermidor, an VIII de la République une et indivisible.

LES CONSULS DE LA RÉPUBLIQUE, sur le rapport du ministre de la guerre; le conseil d'état entendu, ARRÊTENT :

TITRE PREMIER.

De la division et destination des hôpitaux militaires.

SECTION I.re

De l'établissement, classement et destination des hôpitaux militaires.

ART. I.er Les hôpitaux militaires seront divisés en trois classes :

1.° Les hôpitaux permanens ;

2.° Les hôpitaux temporaires :

3.° Les hôpitaux ambulans.

II. Seront appelés *permanens* les hôpitaux qui ont été conservés dans l'intérieur de la République par l'arrêté du 4 germinal an VIII : ces hôpitaux sont particulièrement destinés pour le service des divisions militaires ; toutefois ils recevront, en temps de guerre, les malades et blessés qui reflueront des armées.

III. Les hôpitaux temporaires sont ceux qui, pendant

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C. DUMÉRIL, *Secrétaire.*

GUERRE.

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III. Les hôpitaux temporaires sont ceux qui, pendant

la guerre, ou pour le service des troupes rassemblées en corps d'armée, sont ou seront momentanément établis sur le derrière ou les flancs des armées, soit en pays ennemi, soit dans l'intérieur de la République. Le nombre desdits hôpitaux sera déterminé par l'ordonnateur en chef de chaque armée, d'après la force de ladite armée, les circonstances dans lesquelles elle se trouvera, et l'avis du directoire des hôpitaux établi près d'elle. Ils seront destinés à recevoir les évacuations des hôpitaux ambulans.

IV. Les hôpitaux ambulans sont ceux qui, formés à la suite de l'armée, en suivront les mouvemens, et ne seront destinés qu'à offrir les premiers secours.

V. Les hôpitaux temporaires sont subdivisés en hôpitaux de ligne et en hôpitaux spéciaux.

Les hôpitaux de ligne sont distingués entre eux par le numéro de la ligne d'évacuation d'ambulance dans laquelle ils sont placés.

Les hôpitaux spéciaux sont distingués entre eux par l'objet de leur destination.

VI. Les hôpitaux sédentaires, destinés à recevoir immédiatement les évacuations de l'ambulance, seront de 1.re, 2.e ou 3.e ligne : ils seront établis dans les emplacemens les plus convenables sous le double rapport de sûreté et de salubrité.

VII. Les vénériens et les galeux ne seront traités que dans les hôpitaux sédentaires qui leur seront spécialement affectés; en conséquence, il sera formé à la proximité de chaque armée, des établissemens exclusivement affectés au traitement de ces maladies.

VIII. Outre les établissemens déjà existans dans les lieux où il y a des eaux minérales, il en sera, pendant la guerre, formé de nouveaux, ou bien il sera donné de l'étendue à ceux qui existent, à mesure que les circonstances l'exigeront, et sur la demande que le directoire des hôpitaux en pourra faire au ministre de la guerre.

Il sera fait un réglement particulier sur l'organisation desdits hôpitaux et sur leur régime.

IX. Dans les communes où il n'y a pas d'hôpital pour les militaires, ils seront reçus dans les hôpitaux civils.

SECTION II.

Du choix des emplacemens, et de la distribution intérieure des hôpitaux militaires.

X. Les hôpitaux temporaires doivent, comme les hôpitaux permanens, être formés dans les emplacemens qui réunissent aux avantages de la salubrité ceux de la facilité du service. Le directoire près chaque armée est chargé, après avoir pris l'avis des officiers de santé en chef, d'indiquer lesdits emplacemens au commissaire ordonnateur en chef, qui prescrit, s'il y a lieu, la formation desdits hôpitaux.

XI. Lorsqu'il ne se trouvera pas d'emplacement suffisant ou réunissant les conditions essentielles à un hôpital sédentaire, le commissaire ordonnateur pourra faire placer les malades sous la tente ou les faire baraquer : il pourra de même faire dresser des tentes ou construire des baraques pour un hôpital ambulant qui paraîtra devoir être quelque temps à poste fixe.

XII. Dans toutes les salles, les lits simples seront au moins à soixante-cinq centimètres [deux pieds] de distance latérale; les lits doubles, à huit décimètres onze centimètres [deux pieds et demi].

Lorsque les plafonds n'auront pas trois mètres deux décimètres [dix pieds] d'élévation, les lits simples ne pourront être à une distance latérale moindre de huit décimètres onze centimètres [deux pieds et demi]; et cette distance sera de neuf décimètres [trois pieds] pour les lits doubles.

Dans tous les cas, il y aura au moins deux mètres de distance entre chaque rang de lits; et si des circonstances impérieuses exigeaient une exception, elle ne pourra durer au plus que vingt-quatre heures.

XIII. Dans tous les hôpitaux permanens, et dans les hôpitaux temporaires de seconde ligne, il sera établi une

ou plusieurs salles uniquement consacrées à recevoir les convalescens : il y aura en outre, autant qu'il sera possible, une salle de rechange.

Dans chaque hôpital, autant que les localités le permettront, il sera réservé deux salles de moyenne grandeur pour les maladies contagieuses et gangréneuses.

XIV. Les latrines seront à proximité des salles, mais toujours isolées, et construites d'après les principes développés dans l'instruction qui sera rédigée sur le service de santé, et, autant que possible, à portée de l'eau.

XV. Il ne sera fait aucune construction nouvelle dans les hôpitaux militaires sans l'autorisation spéciale du ministre; et dans ce cas, les travaux seront toujours exécutés d'après les plans et sous les ordres des officiers du génie.

XVI. Nul hôpital permanent ne pourra être supprimé que d'après une décision du ministre de la guerre.

Le commissaire ordonnateur en chef de chaque armée prononcera seul sur la suppression des hôpitaux temporaires, après avoir toutefois pris l'avis du directoire de ladite armée.

Section III.

Des fournitures, linges et ustensiles nécessaires aux malades.

XVII. Dans aucun cas et dans aucun lieu, les malades ne seront posés sur le sol : dans les ambulances, on pourra, à défaut de mieux, se borner à poser les malades sur des planches ou de la paille, ou tout autre objet propre à prévenir les effets de l'humidité.

Dans les hôpitaux temporaires, il sera employé à cet effet des bois de lit, ou au moins des planches posées sur des treteaux.

Dans les hôpitaux permanens, il y aura des bois de lit ou couchettes. Le nombre des bois de lit sera toujours proportionné à l'étendue de l'établissement.

XVIII. Dans les hôpitaux ambulans, il pourra n'être employé que des demi-fournitures.

Ces demi-fournitures consisteront en une paillasse, un sac de toile et une couverture.

Dans les hôpitaux temporaires, on ajoutera un matelas au moins pour vingt demi-fournitures. Ces matelas seront réservés pour les blessures et les maladies graves ; ils seront distribués par les ordres des officiers de santé en chef. Dans les hôpitaux permanens, et dans les hôpitaux temporaires des lignes intérieures, il ne sera employé que des fournitures complètes, consistant en une paillasse, un matelas, un traversin et une couverture.

XIX. Dans les hôpitaux ambulans, il sera affecté à chaque lit trois draps, et, pour chaque malade, trois chemises, trois coiffes de bonnet.

Dans tous les autres hôpitaux, il sera affecté à chaque lit trois paires de draps, et, pour chaque malade, quatre chemises, quatre coiffes de nuit, deux bonnets de laine, une capote ou robe-de-chambre.

XX. Les malades auront deux couvertures pendant l'hiver.

XXI. Aucun malade ou blessé ne pourra être doublé, lorsque l'officier de santé compétent aura prescrit pour lui un lit seul.

XXII. Il y aura au moins une baignoire dans chaque hôpital temporaire.

Dans les hôpitaux permanens, le nombre des baignoires sera dans la proportion de deux pour cent malades ou blessés ordinaires, d'une pour cinquante galeux, et d'une pour vingt-cinq vénériens.

XXIII. Les ustensiles à l'usage des malades consisteront, pour chacun d'eux, en une assiette, une écuelle, une cruche moyenne pour la boisson alimentaire, une plus grande pour la tisane, et un pot-de-chambre.

XXIV. Il sera fourni des biberons, des crachoirs, des urinoirs et des bassins pour les malades auxquels l'usage en sera nécessaire.

Section IV.

De l'hôpital ambulant, des divisions et subdivisions d'ambulance.

XXV. L'ambulance de chaque armée sera calculée en raison de la force de l'armée, et organisée au complet; on y joindra un supplément ou réserve tant en approvisionnemens qu'en officiers de santé, employés d'administration et infirmiers. Tous les moyens de service qui devront être rassemblés, seront réglés et arrêtés par l'ordonnateur en chef, de concert avec le directoire chargé d'y pourvoir, et des officiers de santé en chef, chacun pour ce qui le concerne. On se rapprochera, autant qu'il sera possible, pour ce qui doit composer l'hôpital ambulant tant en effets et ustensiles qu'en denrées et médicamens, de ce qui est prescrit par les divers titres et articles du présent réglement pour les hôpitaux sédentaires.

XXVI. L'ambulance sera organisée de manière à pouvoir être divisée en dépôt d'ambulance, divisions d'ambulance, sections d'ambulance, et ambulance volante.

Le dépôt d'ambulance sera le résidu de l'ambulance elle-même, lorsqu'elle aura fourni au service de l'armée.

On donnera le nom de division d'ambulance à la portion de l'ambulance destinée au service d'une division ou colonne de l'armée.

Le nom de section d'ambulance sera donné à la portion de l'ambulance destinée au service des avant-postes ou petits corps détachés.

L'ambulance volante sera placée à l'avant-garde, afin d'être toujours à portée de se rendre sur le champ de bataille, dans le moment de l'action, pour administrer les premiers secours aux blessés.

La force des divisions et des sections de l'ambulance, ainsi que celle de l'ambulance volante, sera proportionnée à celle du corps auquel elles seront attachées.

XXVII. Les divisions d'ambulance destinées à suivre les différentes colonnes de l'armée, seront organisées sur le pied d'hôpitaux temporaires, dans la proportion de soixante jusqu'à cent cinquante demi-fournitures; et elles réuniront, tant au personnel qu'au matériel, tous les moyens nécessaires, de manière à former sur-le-champ un ou plusieurs hôpitaux de premier secours, même sous la tente à défaut de bâtiment. Ces divisions seront sous la police et surveillance d'un commissaire des guerres, qui correspondra avec l'ordonnateur chargé de la police supérieure de l'ambulance.

XXVIII. Les sections d'ambulance destinées à être réparties sur les différens points où l'on peut prévoir quelques chocs partiels, contiendront, dans un ou deux caissons, outre six demi-fournitures et effets accessoires, tous les moyens de pansement, tels que caisses d'instrumens, bandes, charpie, compresses, pain, vin, eau-de-vie, vinaigre, sel, bouillon, &c.

Ces objets seront confiés à un ou deux employés; il y sera attaché le nombre de chirurgiens jugé nécessaire par les officiers de santé en chef, et six infirmiers.

La police et le mouvement en seront confiés au commissaire des guerres chargé des avant-postes, ou à celui qui se trouvera le plus à proximité.

XXIX. L'ambulance volante sera attachée à l'avant-garde, et, pendant le combat, elle se portera sur tous les points où l'action sera la plus vive, afin d'y donner les secours d'urgence.

Les chirurgiens et les employés qui composeront l'ambulance volante, seront montés sur des chevaux équipés à la légère avec porte-manteau.

Il sera attaché à l'ambulance volante quatre infirmiers, et un caisson attelé de quatre chevaux, lequel contiendra six couvertures, deux brancards, une caisse d'instrumens de chirurgie, et les autres objets détaillés en l'article XXVIII ci-dessus.

XXX. A la suite du dépôt d'ambulance, ainsi que

des divisions ou sections détachées, il y aura un nombre suffisant de brancards pour recueillir les blessés, et, en outre, une quantité de voitures toujours garnies de paille, cerceaux et toiles, pour les transporter commodément au dépôt, d'où ils seront successivement évacués sur l'hôpital le plus voisin.

XXXI. Toutes les divisions et sections d'ambulance ci-dessus prescrites ne devant jamais être considérées que comme des portions du principal corps d'ambulance d'où elles ont été momentanément détachées, elles y rentreront et s'y confondront, tant pour le matériel que pour le personnel, aussitôt que l'ordonnateur en chef en aura donné l'ordre soit à toutes les parties du service, soit à une seule pour toutes, sauf à recréer de nouvelles divisions lorsque le service l'exigera.

XXXII. Le jour d'une bataille, le dépôt de l'ambulance sera placé en arrière du centre de l'armée, et aussi près qu'il sera possible sans en compromettre la sûreté. Tous les objets nécessaires au pansement et au soulagement des blessés seront déployés; les premiers secours seront administrés, et les blessés seront de suite transportés dans les hôpitaux de première et seconde ligne.

Des divisions et sections d'ambulance pourront se porter au centre et sur les ailes, de manière à pouvoir se replier l'une sur l'autre, et se réunir suivant le besoin.

SECTION V.

De la réception des malades ou blessés, et de leur sortie.

XXXIII. Nul ne sera reçu dans les hôpitaux des armées sans un billet contenant les nom, prénom, grade ou emploi, lieu de naissance, municipalité et département.

XXXIV. Ce billet sera signé, pour les militaires, par l'officier commandant la compagnie ou le détachement, le quartier-maître et le chirurgien du corps: celui-ci indiquera sommairement la nature de la maladie, et les moyens de guérison déjà employés.

Les billets, remplis sur des cartouches imprimées, seront écrits lisiblement, sans ratures, et les dates y seront en toutes lettres.

XXXV. Dans le cas où des militaires isolés en route, se trouvant malades, ne pourraient prendre de leurs officiers des billets d'entrée dans la forme ci-dessus prescrite, les commissaires des guerres, en leur absence les maires, expédieront les billets d'entrée, et sur-le-champ ils en donneront avis au corps.

XXXVI. Quant aux militaires absens par congé, ou sortant des hôpitaux, qui tomberont malades avant l'expiration de leurs congés ou en rejoignant leurs corps, il ne leur sera expédié des billets d'entrée par le commissaire des guerres, ou autres autorités compétentes, que sur le vu du congé ou de l'ordre de route dont ils devront être porteurs, et sur le certificat d'un médecin ou chirurgien du lieu.

XXXVII. Les employés ou autres salariés attachés au service de l'armée et des administrations militaires, seront reçus et traités dans les hôpitaux en cas de maladie: leurs billets d'entrée seront signés par leurs chefs respectifs; et il sera fait, pour raison de leur traitement, une retenue sur leur salaire, conformément au tarif annexé au présent réglement.

XXXVIII. Le jour d'une action, la formalité des billets n'étant pas compatible avec la promptitude nécessaire au service, les blessés seront reçus au vu de leurs blessures.

Les préposés de l'administration ne négligeront rien pour se procurer des renseignemens sur les entrans; ils feront de fréquens appels pour parvenir à les connaître.

XXXIX. Dans les quatre jours qui suivront une action, il sera envoyé dans les hôpitaux, des officiers pour reconnaître les malades et blessés de leurs corps respectifs, et pour leur expédier des billets d'entrée, en y rappelant la date du jour de leur arrivée à l'hôpital.

XL. Les prisonniers de guerre recevront, dans les

hôpitaux, les mêmes soins que les autres malades et blessés; et pour leur réception, on suivra, autant que possible, les formes ci-dessus prescrites.

XLI. Lorsqu'un malade se présentera à l'hôpital, le portier appellera sur-le-champ le chirurgien de garde, qui vérifiera la nature de la maladie.

XLII. D'après cette vérification, le chirurgien sera tenu de timbrer le billet d'entrée du mot *fiévreux*, *blessé*, *vénérien*, *galeux*, suivant le genre de maladie qu'il aura reconnu.

XLIII. Le billet, ainsi timbré, sera remis au commis aux entrées pour servir à enregistrer le malade, en indiquant le genre de sa maladie. Le billet sera visé, dans le jour, par l'officier de santé en chef; faute de quoi, il sera rejeté comme nul.

XLIV. Le commis aux entrées inscrira, en présence du malade entrant, au dos de ce billet, les armes, habits, argent et effets qui lui appartiennent, pour le tout lui être remis à sa sortie, ou, en cas de mort, à la personne chargée de les réclamer, conformément à l'article XXXIII (section V, titre I.er du présent réglement).

XLV. Il sera tenu un registre desdits effets, auxquels seront attachées des étiquettes portant le nom du malade et le jour de son entrée; ces effets seront déposés dans un magasin particulier, sous la responsabilité de l'économe.

XLVI. Aucun malade ne devant conserver avec lui ses armes, son argent, son uniforme ni ses habits, l'économe sera tenu de les retirer aux entrans, ainsi que leur linge et vêtemens: lui seul en sera le dépositaire légal, et responsable envers les héritiers ou ayant-droit des décédés.

XLVII. L'économe aura soin de faire blanchir la chemise que le malade aura quittée en entrant, afin qu'elle lui soit remise propre lors de sa sortie.

XLVIII. Après avoir été visité et enregistré, le

malade entrant sera conduit dans la salle et au lit que le chirurgien de garde aura indiqués.

A cet effet, les infirmiers de première classe remettront chaque jour, après la visite, à la salle du chirurgien de garde, l'état et les numéros des lits vacans dans chaque salle.

XLIX. S'il se présentait à l'hôpital, avec un billet d'entrée, un militaire qui ne fût pas malade réellement, ou dont l'état paraîtrait douteux, le chirurgien de garde en préviendra l'officier de santé en chef.

L. L'économe ne pourra remettre le billet de sortie à aucun malade, sans que la sortie ait été réglée à la visite par l'officier de santé compétent, lequel sera tenu de dater et signer le billet en terminant la visite.

Dans aucun cas, l'officier de santé ne se permettra de signer à l'avance un billet, sans qu'il ait été préalablement rempli.

LI. Lorsque plusieurs malades sortiront, sans être guéris, pour se rendre dans un autre hôpital, il suffira que les officiers de santé signent la feuille d'évacuation.

LII. A l'égard des malades qui seront évacués isolément, il leur sera toujours délivré un billet marqué d'un timbre particulier qui le distingue du billet de sortie ordinaire; ce dernier ne devant, dans aucun cas, être admis comme billet d'évacuation.

SECTION VI.

Du transport des malades et blessés d'un hôpital dans un autre.

LIII. Les malades et blessés seront évacués journellement de l'hôpital ambulant sur l'hôpital provisoire le plus voisin.

Pour prévenir l'engorgement des hôpitaux de première ligne, les malades et blessés susceptibles de transport seront reversés, de proche en proche, jusque sur les hôpitaux de troisième et quatrième ligne, s'il est nécessaire.

LIV. Le commissaire des guerres chargé de la police, veillera à ce que les dispositions relatives aux évacuations soient faites dès la veille, de manière que rien ne retarde le départ.

LV. Les officiers de santé chargés du service à l'hôpital ambulant et dans les hôpitaux les plus voisins de l'armée active, désigneront, chaque jour, par une liste nominale qu'ils signeront, les malades en état d'être transférés le lendemain, en distinguant ceux qui ont besoin de voiture, de ceux qui sont en état de marcher. A cette liste sera jointe la feuille de visite extraite du cahier qui sera tenu conformément aux diverses dispositions prescrites à ce sujet par la section VI (titre I.er du présent réglement).

LVI. Toutes les listes nominales ayant été remises à l'économe, il les rédigera en une seule, dans laquelle il observera les mêmes formalités que pour les billets d'entrée, en spécifiant le jour d'entrée au premier hôpital.

Il donnera sur-le-champ connaissance au commissaire des guerres chargé de la police, du nombre des malades destinés à l'évacuation du lendemain.

LVII. Lesdites listes seront doubles : l'une restera, comme pièce justificative de la sortie, à l'économe de l'hôpital d'où les malades et les blessés auront été transférés ; l'autre sera de même une pièce justificative de leur entrée, pour l'économe de l'hôpital qui recevra l'évacuation. Ces feuilles n'auront de valeur qu'autant qu'elles seront visées par le commissaire des guerres chargé de la police de l'un et de l'autre hôpital.

LVIII. Les commissaires des guerres seront tenus de faire parvenir, tous les jours, le mouvement des hôpitaux dont la police leur est confiée, au directoire de l'armée, afin que celui-ci, d'après le tableau journalier de la situation et des ressources, puisse indiquer et diriger utilement les diverses lignes d'évacuation, et les varier suivant les circonstances, pour éviter les surcharges et les engorgemens.

LIX. Le commissaire des guerres connaissant le nombre des malades qui devront être évacués et la ligne d'évacuation à suivre, en préviendra aussitôt, par une ordonnance ou exprès, son collègue ou l'économe de l'hôpital sur lequel doit se porter l'évacuation, afin que toutes les dispositions soient faites en conséquence : il réglera en même temps l'heure du départ pour le lendemain, en prenant l'avis des officiers de santé sur les convenances, le temps et la saison, et toujours de manière que les évacuations ne soient faites que de jour en hiver.

LX. Lorsque les malades ou blessés pourront être rendus en un seul jour à leur destination, les alimens et autres secours pour la journée seront fournis par l'hôpital d'où l'évacuation aura été faite ; quand lesdits malades ou blessés ne pourront arriver qu'en deux jours, il sera établi à mi-chemin, par les soins de l'économe de l'hôpital auquel ils doivent se rendre, un dépôt où ils seront reçus pour la nuit, et où des alimens et des lits seront préparés.

LXI. Pour l'ordre et la sûreté de la route, le commissaire des guerres demandera un détachement de la garde. L'officier ou sous-officier commandant le détachement recevra la consigne du commissaire des guerres ; et cependant ledit commandant ne pourra se dispenser d'obtempérer aux réquisitions de circonstance que l'officier de santé, ou l'employé d'administration accompagnant l'évacuation, pourrait lui faire pendant la route.

La consigne à donner aux commandans aura pour objet principal, d'empêcher qu'aucun malade ne s'écarte du convoi, et ne s'arrête pour prendre des boissons ou alimens autres que ceux prescrits par l'officier de santé, de veiller aussi à ce que, dans la route, il ne se joigne au convoi aucun militaire qui ne serait pas compris sur la feuille d'évacuation : l'employé d'administration tiendra, de son côté, rigoureusement la main à ce que les infirmiers donnent aux malades les soins dont ils auront

besoin pendant la route, et à ce que, sous aucun prétexte, les conducteurs ne puissent abandonner les voitures.

LXII. Si l'on ne pouvait faire usage des voitures affectées au transport des malades, il en sera fourni, sur la réquisition du commissaire des guerres, par l'administration municipale du lieu, ou par les autres autorités constituées : ces voitures seront solides, légères, et bien garnies de paille; les préposés de l'administration seront tenus d'avoir en réserve, des cerceaux et les toiles nécessaires pour couvrir ces voitures.

On évitera d'employer au transport des malades les caissons destinés à voiturer les effets et comestibles, ces caissons devant toujours être disponibles au premier ordre.

LXIII. Au moment du départ, on rassemblera dans un lieu séparé les malades destinés à être évacués ; on en fera l'appel nominal en présence du commissaire des guerres, lequel ne quittera le convoi qu'après l'avoir vu partir.

Aucun autre malade que ceux désignés dans la feuille d'évacuation, ne pourra faire partie du convoi. L'économe de l'hôpital en sera responsable.

LXIV. Le convoi sera toujours accompagné d'un ou de plusieurs chirurgiens, auxquels seront confiées les feuilles de visite destinées à éclairer les officiers de santé en chef de l'hôpital qui devra recevoir les malades. Ces chirurgiens remédieront aux accidens qui pourraient survenir pendant la route ; ils seront munis, à cet effet, des objets nécessaires.

LXV. Feront aussi partie dudit convoi, un commis de l'administration, ainsi qu'un nombre suffisant d'infirmiers, pour que les malades ou blessés ne manquent d'aucun secours. Ce commis aux évacuations, chargé pendant la route des détails d'administration, sera porteur de la feuille nominale pour l'économe de l'hôpital où devront arriver les malades : il y sera fait mention de l'heure du départ.

LXVI. Lors de l'arrivée du convoi à sa destination, il sera fait un nouvel appel des malades portés sur la feuille d'évacuation.

Dans le cas où il se trouverait des militaires autres que ceux dénommés dans ladite feuille, et qui ne seraient pas reconnus malades par les officiers de santé, il en sera rendu compte au commissaire des guerres, pour qu'il les fasse rejoindre sans délai.

Le commandant du détachement prendra ensuite du commissaire des guerres, ou, à son défaut, de l'économe de l'hôpital, un certificat qui indiquera l'heure et l'ordre dans lesquels les malades seront arrivés ; il remettra ce certificat au commissaire des guerres du lieu du départ, et il lui rendra compte de la conduite qu'auront tenue les malades pendant la route.

Les chirurgiens et les commis aux évacuations rempliront les mêmes formalités envers leurs chefs respectifs.

LXVII. Les officiers de santé en chef chargés du service, ne se permettront jamais de désigner, pour être évacué, aucun malade ou blessé dont le transport pourrait compromettre la vie.

Les malades dont les indispositions seraient légères ou susceptibles d'être terminées en peu de jours, ne seront pas évacués au-delà de la première ligne.

LXVIII. Il sera fourni, soit par les ordres du directoire près l'armée, soit sur la réquisition du commissaire des guerres, à chacun des officiers de santé ainsi qu'à l'employé qui accompagneront le convoi d'évacuation, un cheval de monture équipé ; et ils seront indemnisés des dépenses de la route, dans le cas où ils ne recevraient pas l'étape.

SECTION VII.

Des vénériens et des galeux.

LXIX. Il y aura, à la plus grande proximité des armées, des hôpitaux exclusivement destinés au traitement des galeux et vénériens.

LXX. Dans le cas où un seul hôpital serait assez spacieux pour contenir les uns et les autres, le local sera disposé de manière qu'il ne puisse y avoir aucune communication entre eux.

LXXI. Les chirurgiens des corps armés enverront dans les hôpitaux susdits, les militaires auxquels ils auront reconnu des signes vénériens bien caractérisés, ou une gale soit rebelle, soit compliquée.

LXXII. La gonorrhée simple sera traitée à la caserne ou sous la tente. Les officiers de santé chargés du traitement des vénériens, sont autorisés à refuser l'entrée des hôpitaux aux militaires affectés de ces maladies légères; ils les désigneront sur-le-champ au commissaire des guerres chargé de la police, pour qu'il leur fasse rejoindre leurs corps, où ils devront être traités.

LXXIII. Tout ce qui est prescrit par le présent réglement pour l'heure des visites, la distribution des médicamens, celle des alimens, leur qualité, la tenue des cahiers, &c. sera exécuté dans les hôpitaux des vénériens et galeux.

LXXIV. Le chirurgien et le pharmacien chargés de suivre la visite de l'officier de santé en chef, surveilleront l'administration des bains, et s'assureront du degré de leur température.

Il y aura toujours un chirurgien chargé d'assister aux frictions.

A la fin du traitement, les officiers de santé veilleront aussi à ce que les vêtemens ne soient rendus aux galeux qu'après avoir été désinfectés dans les formes prescrites.

LXXV. Les militaires affectés de gales simples ou de gonorrhées de même nature, seront traités sous la tente;

SAVOIR:

Pour les armées du midi, depuis le 1.er floréal jusqu'au 1.er vendémiaire; et pour les armées du nord, depuis le 1.er prairial jusqu'au 1.er vendémiaire.

LXXVI.

LXXVI. On suivra pour les armées de l'ouest, la même mesure que pour celles du nord.

LXXVII. Il y aura dans les camps, ou à la suite de chaque corps d'armée, un certain nombre de tentes placées séparément des autres, lesquelles seront destinées au traitement des galeux.

Les militaires attaqués de gonorrhées simples ne seront point assujétis à cette séparation pour être traités.

LXXVIII. Il sera placé un nombre suffisant de sentinelles pour empêcher la communication des galeux avec le reste du camp.

LXXIX. Les galeux ainsi traités ne seront point soumis à un régime particulier; ils se réuniront en ordinaires pour préparer leurs alimens comme à la chambrée.

Lorsqu'ils ne seront point en assez grand nombre pour opérer cette réunion, les alimens leur seront envoyés par leurs compagnies.

LXXX. Les officiers de santé des corps armés qui composeront le camp, seront chargés de ce traitement, chacun pour le corps auquel il est attaché.

LXXXI. Le chirurgien du camp le plus ancien de service, aura la surveillance du traitement des galeux, sur sa responsabilité; il convoquera ses confrères tous les dix jours, afin de se concerter sur les moyens d'amélioration qu'ils jugeraient nécessaires.

LXXXII. Si parmi les chirurgiens du camp il se trouvait un chirurgien de première classe, la surveillance lui appartiendrait; elle serait dévolue au plus ancien de ce grade, s'il s'en trouvait plusieurs.

LXXXIII. Les médicamens strictement nécessaires au traitement, sous la tente, des militaires galeux ou affectés de gonorrhées simples, seront fournis tout confectionnés par les hôpitaux militaires les plus voisins: on en excepte les boissons, qui seront faites sur les lieux.

LXXXIV. Ces médicamens seront délivrés sur le

bon du chirurgien qui aura la surveillance du traitement, lequel sera tenu de justifier de leur emploi par un état détaillé de ses consommations, auquel il joindra le mouvement des galeux, pour le tout être adressé, à la fin de chaque mois, au directoire près l'armée et aux officiers de santé en chef.

LXXXV. Ce mouvement sera visé par le commissaire des guerres et le commandant du camp, lesquels seront tenus de visiter souvent ces établissemens et d'y maintenir la police.

Les chirurgiens chargés de ce traitement se conformeront à tout ce qui est indiqué dans l'instruction du 28 germinal an IV, adoptée par le ministre; et ils rendront régulièrement compte de ce service aux officiers de santé en chef de l'armée.

LXXXVI. Le même traitement simple pour la gale et la maladie vénérienne légère, aura lieu, dans les quartiers et casernes, pour les troupes stationnées dans l'intérieur, ainsi qu'à l'armée, dans les cantonnemens et autres positions fixes. Le chirurgien attaché à chaque corps de troupe en sera spécialement chargé sous la surveillance du conseil d'administration du corps.

SECTION VIII.

Des hôpitaux près les eaux minérales.

LXXXVII. Indépendamment des établissemens qui existent à Barége et à Bourbonne-les-Bains, il en sera formé, autant que les localités le permettront, à la portée de chaque armée, pour recevoir, pendant la saison des eaux minérales, les militaires auxquels l'usage en sera prescrit.

LXXXVIII. Ces établissemens seront formés d'après l'état qui sera dressé chaque année par le ministre de la guerre, sur la proposition qui en sera faite par le directoire central.

LXXXIX. En conséquence, le 1.er germinal, les chirurgiens attachés aux corps armés réuniront les militaires auxquels ils croient l'usage des eaux minérales indispensable.

Ils les présenteront à l'examen des officiers de santé en chef de l'armée ou de l'hôpital le plus prochain. La nature des infirmités desdits militaires ayant été constatée par un procès-verbal signé des officiers de santé tant de l'hôpital que des corps armés, et du commissaire des guerres, il sera formé une feuille pour chaque corps; et les feuilles réunies serviront à composer la liste générale pour toute l'armée ou pour toute la division.

XC. Le commissaire ordonnateur, après avoir vérifié les listes, donnera les ordres nécessaires pour que chacun des militaires qui y seront compris, soit rendu à sa destination au jour qui y sera fixé.

XCI. L'ouverture de ces hôpitaux aura lieu, dans les armées et les divisions du midi, du 20 au 30 floréal; et dans celles du nord, du 10 au 20 prairial.

L'époque de la clôture desdits hôpitaux est fixée pour tous au 15 vendémiaire.

XCII. Les infirmités ou blessures qui nécessitent l'usage des eaux, seront énoncées nominativement dans l'état général; mais elles seront sommairement détaillées au dos du billet ou certificat dont chaque militaire sera porteur.

XCIII. Le billet sera présenté aux officiers de santé de l'hôpital où le militaire sera reçu. Ceux-ci, au moment de la sortie des hommes qui auront fait usage des eaux, exprimeront, à la suite dudit billet, l'effet qui en sera résulté pour chacun, et ce qu'on peut se promettre de succès en recommençant la saison suivante.

XCIV. Les militaires qui ayant été envoyés aux eaux, y contracteraient une nouvelle maladie, seront traités de la même manière que dans tout autre hôpital militaire,

et dans une salle particulièrement affectée à ces malades.

XCV. A la réserve de Barége et de Bourbonne-les-Bains, où les réglemens antérieurs continueront d'être observés, tous les hôpitaux à établir conformément à l'article I.er de la présente section, seront formés par le directoire de l'armée dans l'arrondissement de laquelle se trouveront les sources d'eaux minérales. A cet effet, il sera détaché de l'armée le nombre de commissaires des guerres, d'officiers de santé, d'employés et d'infirmiers nécessaire; et les relations de police, celles des services de santé et d'administration, seront les mêmes que dans tous les hôpitaux provisoires sédentaires aux armées.

XCVI. Les avantages qui résultent des eaux minérales n'étant pas en proportion des difficultés que leur usage présente aux militaires, ni des dépenses qu'entraînent les établissemens qu'elles nécessitent, les officiers de santé des armées et des hôpitaux militaires se conformeront à l'instruction rédigée par le conseil de santé et approuvée par le ministre de la guerre le 28 germinal an VI, sur les moyens de remplacer les eaux minérales naturelles par des eaux artificielles.

SECTION IX.

Des hôpitaux civils où les militaires seront reçus.

XCVII. Dans les places de guerre et dans les villes de l'intérieur où il n'y a point d'hôpital militaire, le soldat sera reçu et traité dans les hôpitaux civils, aux conditions qui seront réglées entre les administrateurs de ces établissemens et le directoire central des hôpitaux militaires.

XCVIII. La réception des militaires dans les hôpitaux civils, aura lieu au moyen d'un billet d'entrée pour lequel on observera les formalités prescrites pour les divers cas prévus par les articles XCVII, XCVIII, XCIX, C et CI (section IX, titre I.er).

XCIX. Lorsque les militaires se trouveront dans un hôpital civil en nombre suffisant pour former une salle particulière, ils y seront réunis; et le service qui les concerne sera rapproché le plus possible des dispositions observées dans les hôpitaux militaires, sur-tout en ce qui est relatif aux visites, aux pansemens, à la qualité des alimens et à la police des malades.

C. Le prix des journées du traitement des militaires dans les hôpitaux civils, sera acquitté ainsi qu'il est prescrit aux articles XI et XII (section II, titre I.er du présent réglement).

CI. Les officiers de santé des hôpitaux civils où des militaires auront été admis, correspondront directement avec le conseil de santé pour tous les objets relatifs à l'art de guérir.

CII. Il sera accordé aux officiers de santé des hôpitaux civils, une indemnité proportionnée à la nature et à l'importance des services qu'ils auront rendus; cette indemnité sera réglée tous les ans par le ministre de la guerre, d'après l'avis du conseil de santé, sur le rapport du directoire central.

TITRE II.

Du service de santé.

SECTION X.

Des officiers de santé, et de leur nomination.

CIII. Le traitement des malades dans les hôpitaux militaires continuera d'être confié à des médecins, des chirurgiens et des pharmaciens.

CIV. Il y aura deux classes de médecins, trois classes de chirurgiens et trois de pharmaciens.

Dans les hôpitaux dont le service exigera plusieurs

médecins, il y en aura un seul de première classe; les autres seront de seconde.

CV. Les officiers de santé seront tenus de suivre, dans leurs prescriptions habituelles, le formulaire des hôpitaux militaires; ils devront mutuellement se demander des avis dans les cas difficiles et compliqués, et réunir leurs lumières pour tout ce qui a rapport à la salubrité, et en général au perfectionnement du service de santé.

CVI. Dans chaque hôpital, les chefs surveilleront les opérations de leurs subordonnés; mais ils ne pourront donner aucun ordre relatif à la police, ni s'immiscer en rien dans les détails de l'administration. Ils adresseront au commissaire des guerres et au conseil d'administration, leurs observations sur les objets de police et d'administration qui leur paraîtront intéresser la santé des malades, afin qu'il y soit pourvu.

CVII. Le ministre, d'après le rapport du conseil de santé, nommera aux places vacantes et de création nouvelle d'officiers de santé de quelque grade que ce soit.

CVIII. Les brevets et commissions des officiers de santé, jusques et compris ceux de première classe, seront signés du ministre; à l'égard des officiers de deuxième et troisième classe, le ministre instruira de ces nominations les commissaires ordonnateurs, qui expédieront les commissions, et feront connaître les pourvus, chacun en sa qualité.

Sont exceptés de cette dernière disposition, les chirurgiens de deuxième classe attachés aux corps armés, auxquels il continuera d'être délivré des brevets signés par le ministre.

CIX. La résidence de tous les officiers de santé attachés au service des hôpitaux de l'armée, sera toujours au dépôt de l'ambulance, jusqu'à ce qu'ils aient reçu une autre destination, ou qu'il ait été prononcé sur leur sort.

CX. Aucun congé, même de convalescence, ne sera

accordé aux officiers de santé attachés aux armées et aux hôpitaux militaires, que par le ministre, et sur la proposition et l'avis des officiers de santé en chef de l'armée, et le rapport du conseil de santé.

SECTION XI.

Du conseil de santé, et de ses attributions.

CXI. Conformément à l'arrêté des Consuls du 4 germinal an VIII, le conseil de santé est établi près du ministre de la guerre, et immédiatement sous ses ordres, pour l'éclairer sur tout ce qui concerne l'art de guérir appliqué aux troupes, et le choix des officiers de santé de tous les grades, qui lui sont subordonnés.

CXII. Le conseil est composé de trois membres, un médecin, un chirurgien et un pharmacien, choisis parmi les anciens officiers de santé en chef des armées.

CXIII. Les attributions spéciales du conseil de santé consistent, 1.° dans l'examen des candidats, leur classement, et leur présentation aux places d'officiers de santé de tout grade, tant aux armées que dans les hôpitaux militaires;

2.° Dans la correspondance avec les officiers de santé sur tout ce qui concerne l'art de guérir et le service de santé proprement dit;

3.° Dans la rédaction des instructions et observations sur les objets d'art que les circonstances rendront nécessaires, et que le ministre jugera à propos de publier pour le perfectionnement des moyens de secours dus aux défenseurs de la patrie;

4.° Dans l'analyse des remèdes nouveaux sur lesquels le ministre de la guerre leur demandera leur avis; dans l'examen, le choix et la répartition des médicamens d'approvisionnement, des instrumens de chirurgie, des

bandages et autres machines destinées au service des hôpitaux ;

5.° Dans la direction et la surveillance de tout ce qui concerne la visite des militaires déjà établie près du conseil de santé ;

6.° Dans la direction et la surveillance des cours de théorie et de pratique établis dans les hôpitaux militaires d'instruction.

Le conseil de santé ne donnera des ordres que d'après la décision du ministre de la guerre et en son nom. Lesdits ordres, et tous les autres actes du conseil de santé, ne seront valables qu'autant qu'ils seront revêtus de la signature de deux de ses membres.

CXIV. Conformément aux dispositions de l'article II de l'arrêté des Consuls, le conseil de santé est adjoint au directoire central des hôpitaux militaires ; il y a voix consultative pour tous les objets relatifs à l'art de guérir. Les membres du conseil de santé pourront être appelés, soit en totalité, soit en partie, au directoire, pour y donner leur avis sur les objets sur lesquels il jugera convenable de les consulter.

CXV. Le conseil de santé soumettra au ministre un projet de réglement relatif au corps des officiers de santé de l'armée.

Ce projet de réglement déterminera,

1.° Le nombre total des officiers de santé qui doivent être entretenus pendant la paix ;

2.° Le nombre des officiers de santé qui doivent être entretenus pendant la guerre ;

3.° La manière de faire passer le corps des officiers de santé du pied de paix au pied de guerre, et de le ramener du pied de guerre au pied de paix ;

4.° Les moyens d'opérer, par voie de concours, toutes les admissions et promotions d'officiers de santé, de

manière que les talens, l'âge, le temps de l'étude, l'ancienneté du service, le zèle et la bonne conduite, soient pris en considération, et qu'ils deviennent, par leur réunion, les motifs d'après lesquels seront déterminés les choix à proposer au ministre.

CXVI. Les cours pratiques établis par le réglement du 5 brumaire an V, et dont la surveillance est confiée au conseil de santé, n'auront plus lieu que dans les hôpitaux permanens de Lille, Metz, Strasbourg et Rennes.

Le nombre des professeurs sera réduit, dans chacun de ces hôpitaux, à deux pour chaque profession.

Le conseil de santé présentera au ministre les moyens de réduire le nombre des élèves entretenus, et leur remplacement par des surnuméraires non salariés.

CXVII. Aucun des objets relatifs au service de santé ou à l'art de guérir, tels que médicamens simples, bandages herniaires, instrumens de chirurgie et autres dont il est fait usage dans les hôpitaux militaires, ne pourra être reçu dans le magasin central des médicamens à Paris, que sur un certificat de vérification de la part du conseil de santé.

CXVIII. Le traitement des membres du conseil de santé sera comme celui des membres du directoire central ; et celui du secrétaire, comme celui des officiers de santé en chef aux armées, dont il a le grade.

SECTION XII.

Des officiers de santé en chef aux armées.

CXIX. Il y aura à chaque armée, pour diriger et surveiller les diverses parties de l'art de guérir, un médecin, un chirurgien et un pharmacien en chef.

Lorsqu'il aura été jugé nécessaire d'attacher à une armée un second médecin, chirurgien ou pharmacien

en chef, cet adjoint sera aux ordres du premier, auquel il rendra compte de ses opérations.

CXX. Le poste des officiers de santé en chef de l'armée sera habituellement au quartier-général, afin qu'ils soient à portée de recevoir et transmettre les ordres nécessaires.

CXXI. Le service du quartier-général sera particulièrement affecté aux officiers de santé en chef.

CXXII. Les fonctions des chefs du service de santé étant non-seulement de procurer aux malades une prompte et sûre guérison, mais encore de prévenir par leurs conseils les causes qui produisent les maladies, ils prendront, soit par eux-mêmes, soit par la correspondance la plus suivie avec les autres officiers de santé de l'armée, une connaissance exacte de la situation des camps et des lieux occupés par les troupes, de la qualité des eaux potables, et de celle des alimens de tout genre.

CXXIII. Le nombre, la force et la destination de chacun des hôpitaux ayant été déterminés, les officiers de santé en chef, réunis, feront de concert la répartition des officiers de santé qui leur sont subordonnés, dans les divers établissemens et à la suite des divisions d'ambulance, selon les convenances de l'âge et de l'expérience, et d'après la fixation établie par la section suivante.

CXXIV. Ils feront des visites dans les hôpitaux de l'armée, lorsqu'elles seront jugées nécessaires par le commissaire ordonnateur en chef, d'après le rapport motivé des officiers de santé, et sur l'avis du directoire de l'armée.

CXXV. Le mouvement de l'hôpital ambulant sera remis, chaque jour, aux officiers de santé en chef de l'armée, et celui des autres hôpitaux leur sera adressé tous les dix jours. Cet envoi sera fait par l'économe de chaque hôpital.

CXXVI. Les officiers de santé en chef aux armées tiendront le contrôle exact de leurs subordonnés, en y comprenant les chirurgiens attachés aux corps armés; et ils recueilleront des notes individuelles, qu'ils adresseront tous les trois mois, avec leur correspondance, au conseil de santé établi près le ministre, pour le mettre en état de proposer l'avancement et les récompenses dont chacun sera susceptible.

CXXVII. Les mêmes officiers de santé en chef entretiendront avec les médecins, chirurgiens et pharmaciens de première classe employés dans les hôpitaux, une correspondance suivie sur tous les objets du service relatifs à l'art : ils dirigeront et éclaireront leurs collaborateurs dans l'exercice de leurs fonctions.

CXXVIII. Ils correspondront régulièrement tous les mois avec le conseil de santé, pour lui rendre compte de la situation de leur service, et lui communiquer les observations essentielles que présenteront les maladies régnantes.

Cette correspondance sera collective pour tout ce qui concerne le service général.

SECTION XIII.

Des officiers de santé chargés du service dans les hôpitaux militaires, permanens et temporaires.

CXXIX. Il sera attaché à chaque hôpital militaire un nombre d'officiers de santé de diverses classes, à raison de celui des malades, dans les proportions qui seront indiquées ci-après.

CXXX. Il y aura un médecin pour un nombre de fiévreux qui n'excédera pas deux cents; de deux à quatre cents fiévreux, il y aura deux médecins; de quatre à six cents fiévreux, il y aura trois médecins.

Il ne sera attaché qu'un seul médecin à un hôpital de galeux, quel que soit le nombre des malades de ce genre qui y seraient traités.

CXXXI. Le nombre des chirurgiens et pharmaciens de tout grade qui devront être employés dans les hôpitaux, sera déterminé à raison du nombre des malades, ainsi qu'il suit ; savoir :

NOMBRE de MALADES.	CHIRURGIENS par grades À EMPLOYER.	PHARMACIENS par grades À EMPLOYER.
Jusqu'à 150 malades...	1 Chirurgien de 1.re classe. 1 *idem* de 2.e 3 *idem* de 3.e	1 Pharmacien de 2.e cl. 1 *idem* de 3.e
De 150 à 300 malades ou blessés....	1 Chirurgien de 1.re classe. 1 *idem* de 2.e 3 *idem* de 3.e pour 150 malades, et 1 pour 50 malades excédant 150 ; ce qui, pour 300 malades, fait 6 chirurgiens de 3.e classe.	1 Pharmacien de 1.re cl. 1 *idem* de 2.e 3 *idem* de 3.e
De 300 à 450 malades ou blessés....	1 Chirurgien de 1.re classe. 1 *idem* de 2.e 6 *idem* de 3.e pour 300 malades ; plus, 1 chirurgien de 3.e classe de supplément pour 50 malades excédant 300 jusqu'à 450.	1 Pharmacien de 1.re cl. 1 *idem* de 2.e 4 *idem* de 3.e
De 450 à 600 malades ou blessés....	1 Chirurgien de 1.re classe. 2 *idem* de 2.e 9 *idem* de 3.e pour 450 ; plus, 1 chirurgien de 3.e classe de supplément pour 50 malades excédant 450 jusqu'à 600 malades.	1 Pharmacien de 1.re cl. 2 *idem* de 2.e 5 *idem* de 3.e

CXXXII. Au-dessus de six cents malades, le nombre des chirurgiens et pharmaciens sera déterminé par le commissaire ordonnateur, d'après l'avis du commissaire des guerres chargé de la police de l'hôpital, et les observations des officiers de santé en chef ; mais quels que soient le nombre des malades et celui des médecins, chirurgiens et pharmaciens de première classe, il n'y aura qu'un seul officier de santé en chef de chaque profession.

CXXXIII. Les proportions établies par l'article précédent ne sont point applicables au service des galeux, et il n'y aura qu'un chirurgien pour cent malades de ce genre.

CXXXIV. Dans l'application des proportions ci-dessus indiquées, le conseil de santé et les officiers de santé en chef aux armées devront prendre pour base le mouvement habituel de l'hôpital, et ne pas se régler sur la fixation du nombre de lits que le ministre y fait entretenir.

CXXXV. Les officiers de santé en chef, dans les hôpitaux permanens ou temporaires, se concerteront entre eux pour la répartition du service et la rédaction de la correspondance, ainsi que pour la distribution des chirurgiens et pharmaciens de deuxième et de troisième classe qui doivent suivre les visites et les pansemens, de manière que tous puissent s'instruire dans les diverses parties de leur service respectif, se suppléer, et alterner avec un égal succès.

CXXXVI. Les officiers de santé en chef des hôpitaux permanens correspondront tous les mois avec le conseil de santé, auquel ils doivent compte de l'exercice de leurs fonctions : ces comptes seront collectifs pour tout ce qui concerne le service général. Ils lui adresseront, tous les trois mois, chacun pour son service, l'état nominatif des officiers de santé employés à l'hôpital, avec des notes particulières sur les talens, les mœurs et la conduite de ceux de deuxième et de troisième classe.

Ce dernier état sera remis par eux, à la même époque, au commissaire des guerres ayant la police de l'hôpital.

CXXXVII. Les officiers de santé chargés des fonctions de chefs dans les hôpitaux temporaires et ambulans, seront tenus de correspondre régulièrement tous les mois, et plus souvent s'il est nécessaire, avec les officiers de santé en chef de l'armée, sur tous les objets du service dont ils sont chargés; ils leur adresseront, tous les deux mois, l'état de leurs collaborateurs, avec des notes sur les talens, le zèle et la conduite de chacun d'eux.

CXXXVIII. Ils tiendront note exacte du nombre des malades existans chaque journée à l'hôpital; et ils en enverront régulièrement le relevé, tous les dix jours, à leurs chefs respectifs.

CXXXIX. Ils seront également tenus d'adresser exactement, tous les trois mois, au conseil de santé près le ministre, les observations qu'ils auront été à portée de faire tant sur l'état des hôpitaux (spécialement sur les pharmacies), que sur les maladies qui auront régné, et lui rendront compte des traitemens qu'ils auront mis en usage.

CXL. Dans tous les hôpitaux indistinctement, outre les dissections anatomiques, les ouvertures de cadavres seront pratiquées ou prescrites par les médecins et chirurgiens de première classe, toutes les fois qu'ils auront des conjectures à vérifier ou des observations à recueillir. Ils tiendront note des faits rares et intéressans, et en feront mention dans leur correspondance respective.

CXLI. Conformément à la loi du 5 mars 1793 et à celle du 25 du premier mois de l'an II, les officiers de santé pourront reprendre, à la paix, les places fixes qu'ils auraient quittées pour être employés aux armées et dans les hôpitaux militaires.

CXLII. Dans le cas de suppression d'un ou de plusieurs hôpitaux de l'armée, les officiers de santé qui se trouveront sans activité, seront à la disposition des

officiers de santé en chef de l'armée, jusqu'à ce que le ministre ait prononcé sur la réforme de ceux dont les services ne seraient plus nécessaires.

CXLIII. Les officiers de santé attachés aux hôpitaux ou établissemens supprimés par l'arrêté du 4 germinal an VIII, conservent tous le droit d'être rappelés au service, ou d'être immédiatement réemployés, d'après la date de leur admission, les talens et le zèle dont ils ont fait preuve.

En conséquence, il sera fait incessamment, par le conseil de santé, un recensement général, par professions et par grades, de tous les officiers de santé en exercice au 1.er germinal de l'an VIII, afin que le ministre puisse juger de la validité des titres de chacun d'eux, donner la préférence des places conservées à ceux auxquels elle est due par les services et la conduite, accorder des retraites à ceux qui les ont méritées, et classer les autres pour être rappelés dans l'ordre des titres qu'ils auront acquis.

SECTION XIV.

Des médecins.

CXLIV. Les médecins sont tous, quant à leur destination, et pour les objets de service, aux ordres du médecin en chef de l'armée; ils exerceront leurs fonctions sous sa surveillance.

CXLV. Le médecin en chef, outre les fonctions qu'il partage avec les autres officiers de santé en chef de l'armée, s'assurera, tant par la correspondance, que par des visites fréquentes dans les hôpitaux, de la régularité du service dans les salles des fiévreux, de la nature des maladies qui y règnent, et du traitement qui leur convient, pour être à portée de rendre compte de tout ce qui concerne le service médical.

CXLVI. Les médecins ordinaires de l'armée suivront les ordres qui leur seront donnés par leur chef, relative-

ment aux mesures et aux précautions générales concernant la salubrité et la régularité du service.

Ils demanderont au chef et celui-ci sera tenu de leur donner ses conseils en tout ce qui concerne l'art de guérir, non-seulement en général, mais encore pour les traitemens individuels qui présenteraient des difficultés, ou qui donneraient lieu à des observations intéressantes.

CXLVII. Les médecins ne recevront dans les salles affectées aux fiévreux, aucun blessé, ni galeux, ni vénérien; ils veilleront, avec l'attention la plus scrupuleuse, à ce que les malades attaqués de fièvres ou affections contagieuses, soient placés dans des salles isolées.

CXLVIII. Les médecins tant des hôpitaux permanens que ceux employés aux armées, se conformeront strictement à toutes les dispositions des autres titres du présent réglement qui concernent le service, et leurs relations soit entre eux, soit avec les chirurgiens et les pharmaciens leurs collaborateurs.

Section XV.

Des chirurgiens.

CXLIX. Le chirurgien en chef de l'armée aura sous ses ordres tous les autres chirurgiens, soit des hôpitaux, soit des corps armés.

Il sera fait incessamment un réglement particulier, relatif aux droits et aux devoirs de ceux-ci, pour les rendre de plus en plus utiles au service.

CL. Indépendamment des fonctions communes au chef de la chirurgie et à ses deux collègues, il dirigera l'exercice de son art; il fera les opérations majeures, ou les fera faire sous ses yeux, autant qu'il sera possible.

CLI. Avant l'ouverture de la campagne, il veillera à ce que les caissons de l'ambulance soient suffisamment garnis de tous les objets indiqués à la section IV (titre I.er); et dans le cas où il manquerait quelques objets,

objets, il en rendra compte au commissaire ordonnateur en chef, et en préviendra le directoire de l'armée.

CLII. Il fera préparer à l'avance, par les chirurgiens de deuxième et troisième classe, les appareils pour le nombre présumé de blessés; le linge nécessaire à cet effet ne sera délivré par les préposés de l'administration que sur les bons du chirurgien en chef.

CLIII. Il fera composer des caisses assorties de ces appareils, lesquelles seront, par ses soins, remises dans les magasins de l'administration, pour être ensuite réparties, avec les autres moyens de secours, par-tout où il en sera besoin.

CLIV. Les chirurgiens de première, deuxième et troisième classe, attachés à l'armée, seront formés en divisions par le chirurgien en chef, qui les distribuera suivant les besoins du service: chacune de ces divisions sera composée de six chirurgiens, un de première, un de deuxième, et quatre de troisième classe; elles pourront être subdivisées suivant l'exigence des cas.

CLV. Lorsqu'une action aura été prévue, le chirurgien en chef rappellera à l'ambulance tous les chirurgiens de divers grades qui ne seraient pas absolument nécessaires dans les hôpitaux temporaires; ces chirurgiens, en retournant ensuite à leur poste, accompagneront les blessés qui pourraient être transportés.

CLVI. Dans le cas où les chirurgiens des hôpitaux de l'armée ne pourraient suffire à l'urgence du service, les chirurgiens des corps armés seront appelés par le chirurgien en chef pour les suppléer: il pourra aussi requérir les chirurgiens de deuxième et troisième classe des hôpitaux permanens qui se trouveraient à proximité de l'armée; à cet effet, la demande, visée par le commissaire ordonnateur en chef, sera adressée au commissaire des guerres chargé de la police, qui jugera si le secours momentané peut être fourni sans nuire au service habituel de l'hôpital.

CLVII. Le jour d'une bataille, le chirurgien en chef

se tiendra à l'hôpital ambulant ; il attachera à chacune des divisions d'ambulance prescrites par la section IV (titre I.er du présent réglement), un nombre suffisant de chirurgiens, qui seront munis de tous les objets nécessaires au pansement et au transport des blessés.

Le chirurgien en chef ordonnera à l'ambulance volante de porter des secours par-tout où l'action paraîtra plus vive : les divisions de l'ambulance suivront les mouvemens de l'armée ; et après avoir donné les premiers secours aux blessés, elles les feront évacuer sur les hôpitaux de première et de deuxième ligne.

Ces divisions de chirurgiens agiront toujours de manière à pouvoir se replier l'une sur l'autre, ou à se réunir toutes, suivant les besoins et les ordres qui seront donnés.

CLVIII. Lors du siége d'une place, le chirurgien en chef ordonnera, pour le service de la tranchée, une division de chirurgiens, qui seront munis de tous les objets convenables. Cette division sera remplacée par une autre, à l'heure où l'on relève la tranchée.

CLIX. Le chirurgien de première classe est, à l'armée et dans les hôpitaux, le chef d'une division de chirurgiens; ses collaborateurs sont tenus d'exécuter tout ce qu'il leur ordonnera de relatif au service immédiat des malades ou blessés confiés à ses soins.

CLX. Le chirurgien de première classe veillera à ce qu'il ne soit reçu dans les salles de blessés aucun fiévreux, ni aucun homme affecté de gale ou de maladie vénérienne, lesquels doivent être traités dans des emplacemens séparés.

CLXI. Dans les hôpitaux, le chirurgien de première classe chargé du service, aura soin qu'il y ait toujours en réserve un certain nombre d'appareils pour les grandes opérations, les fractures et les luxations des grandes extrémités.

CLXII. Il ordonnera et dirigera, pendant l'hiver, les dissections nécessaires à l'instruction ; il veillera à ce qu'elles soient exécutées avec la circonspection et la décence qu'elles exigent.

CLXIII. Les chirurgiens de deuxième et de troisième classe obéiront au chirurgien de première classe et au médecin pour tout ce qui concerne le service des malades.

CLXIV. Il est également enjoint aux chirurgiens de troisième classe d'obéir aux ordres qui leur seront donnés pour le service, par les chirurgiens de deuxième classe.

CLXV. Indépendamment des fonctions particulièrement attribuées aux chirurgiens de deuxième classe, ils seront tenus d'exercer, en toutes circonstances, celles des chirurgiens de troisième classe, excepté dans le cas où ils seront détachés en chef avec une subdivision, et lorsqu'ils rempliront momentanément les fonctions de première classe.

Section XVI.

Des pharmaciens.

CLXVI. Les pharmaciens de diverses classes recevront et exécuteront les ordres du pharmacien en chef, non-seulement pour le service de la pharmacie et des salles, mais encore pour celui du laboratoire et du dépôt des médicamens établi à la suite de chaque armée.

CLXVII. Le dépôt de médicamens établi à la suite de chaque armée pour servir à l'approvisionnement de toutes les pharmacies de la division, sera confié à un pharmacien de première classe, qui sera responsable ; il aura pour collaborateurs un nombre de pharmaciens de différentes classes jugé nécessaire par le pharmacien en chef, et qui sera approuvé du commissaire ordonnateur.

CLXVIII. Le pharmacien en chef de l'armée exercera sur ce dépôt la plus exacte surveillance, et se fera rendre compte de toutes ses opérations.

CLXIX. Indépendamment du compte auquel le pharmacien chargé du dépôt est tenu à l'égard de son chef conformément à l'article précédent, il remettra, tous les

mois, au directoire de l'armée, l'état de situation de son magasin : cet état sera composé de l'existence en magasin, au premier du mois, des recettes, des dépenses, consommations ou envois, et du restant en magasin au trente du même mois, et il sera accompagné des récépissés et autres pièces justificatives.

CLXX. Le pharmacien de première classe dans un hôpital, désignera, tous les jours, pour être de garde pendant vingt-quatre heures, chacun à son tour, le nombre de pharmaciens nécessaire au service.

Le pharmacien de garde ne pourra s'éloigner de la pharmacie pendant le temps de sa garde.

CLXXI. Les pharmaciens chargés de suivre les visites d'après la répartition faite par les chefs, se rendront dans leurs salles respectives une heure au moins avant la visite du matin, pour administrer les médicamens prescrits la veille.

CLXXII. La distribution des médicamens se fera toujours le cahier à la main : chaque pharmacien les verra prendre au malade, afin d'éviter les erreurs, et d'expliquer aux officiers de santé en chef les raisons pour lesquelles, de concert avec les chirurgiens de garde, il aurait jugé à propos d'en suspendre l'administration ; et en cas de refus de la part du malade, son numéro sera noté et désigné à la prochaine visite.

CLXXIII. Le pharmacien en chef de chaque hôpital veillera à ce que les balances et les poids soient parfaitement ajustés et étalonnés ; il ne permettra jamais que les médicamens, de quelque espèce qu'ils soient, sortent de la pharmacie sans avoir été pesés ou mesurés et étiquetés.

CLXXIV. Il se conformera à ce qui est prescrit par l'article CLXVIII (présente section), relativement au compte qu'il doit de ses opérations et de la manutention, tant à son chef de service qu'au directoire de l'armée.

En conséquence, il sera tenu de remettre, chaque mois, à l'économe, le compte appuyé de pièces dans la

forme indiquée par l'article précité ; il y joindra les cahiers de visite et les relevés de visites journalières, signés par les pharmaciens qui les auront suivies.

CLXXV. Les pharmaciens attachés pendant la campagne à une division d'ambulance, ne s'éloigneront pas du caisson affecté au transport de la pharmacie, afin d'être toujours à portée de parer sur-le-champ aux événemens qui pourraient survenir en route, et d'avoir sous la main les différens articles indispensables au service.

CLXXVI. Les pharmaciens de seconde classe, indépendamment des fonctions qui leur seront déléguées par le chef, exerceront en toute circonstance celles de pharmaciens de troisième classe, conformément à ce qui est prescrit pour les chirurgiens de seconde.

CLXXVII. Nul pharmacien ne pourra être employé dans un hôpital militaire lorsqu'il aura un établissement de pharmacie dans la même commune.

SECTION XVII.

Des pharmacies.

CLXXVIII. La pharmacie d'un hôpital permanent sera toujours dans un local suffisamment éclairé, sec, commode, au centre de toutes les parties du service, et pourvu de différens accessoires, tels que laboratoire, tisanerie, jardin, grenier, cave, &c.

CLXXIX. Dans un hôpital temporaire, le pharmacien chargé en chef du service, se bornera à faire placer dans la pharmacie et le laboratoire, de simples rayons pour y distribuer par ordre tous les objets destinés à ce service.

CLXXX. Tous les vases, boîtes et bocaux rangés dans la pharmacie et le laboratoire, seront étiquetés en français, et ne pourront renfermer qu'une seule et même espèce de médicamens.

CLXXXI. Le service de la pharmacie exigeant une

continuelle activité, elle ne sera jamais fermée ni abandonnée par les pharmaciens. Celui qui se trouvera en chef veillera à ce que ses collaborateurs ne s'absentent point pendant le temps des visites, des préparations et des distributions.

CLXXXII. L'approvisionnement de la pharmacie sera toujours calculé sur les besoins, de manière que les articles susceptibles de s'altérer puissent être renouvelés dans le cours d'une année.

CLXXXIII. Les demandes en médicamens pour le service des hôpitaux permanens de l'intérieur, seront adressées un mois à l'avance au directoire central, et calculées sur la consommation présumée de trois mois, d'après des états signés par les chefs du service de santé, et visés par le commissaire des guerres chargé de la police de l'hôpital.

Quant à la demande d'approvisionnement des pharmacies des hôpitaux temporaires tant sédentaires qu'ambulans, elle sera adressée au directoire de l'armée par les chefs du service de santé attachés auxdits hôpitaux, d'après des états signés d'eux, et visés par les commissaires des guerres qui en auront la police; il y sera pourvu par le dépôt établi le plus à proximité, d'après les ordres du directoire de l'armée.

CLXXXIV. Dans le cas où un médicament ne se trouverait point dans la pharmacie, les pharmaciens ne se permettront jamais d'en substituer un autre; ils avertiront sur-le-champ l'officier de santé qui l'aura prescrit, afin qu'il détermine lui-même les moyens d'y suppléer.

CLXXXV. Il est expressément défendu d'employer les médicamens simples et composés à aucun autre usage qu'au traitement des malades portés sur les cahiers de visite de l'hôpital, à l'exception seulement du cas prévu par les articles LXXXI et LXXXII (section VII, titre I.er du présent réglement).

CLXXXVI. Les ustensiles affectés au service de la pharmacie ne seront jamais employés à aucun usage

domestique. L'étamage des vaisseaux de cuivre sera souvent renouvelé; et indépendamment de cette précaution nécessaire, les pharmaciens auront l'attention de n'y point laisser séjourner les remèdes qu'ils y auront préparés.

CLXXXVII. Les pharmacies ambulantes ne seront composées que des objets propres à donner les premiers secours.

CLXXXVIII. Dans le cas où, lors d'une retraite, on serait forcé d'abandonner des malades à l'ennemi, le pharmacien délivrera les médicamens jugés nécessaires par les officiers de santé en chef, qui en signeront l'état, à l'officier de santé qui sera chargé de rester près de ces malades pour en suivre le traitement: celui-ci en donnera récépissé, et sera tenu d'en rendre compte à son retour.

CLXXXIX. Les pharmaciens ne pourront délivrer ni vin, ni eau-de-vie, ni sucre, ni miel, ni lait, à moins que ces objets ne soient sous forme de médicamens, et en exécution des prescriptions portées sur les cahiers de visite.

CXC. Les officiers de santé en chef d'une armée ou d'un hôpital visiteront souvent le dépôt des médicamens, ainsi que la pharmacie de l'hôpital, pour constater la nature et la qualité des objets qui s'y trouvent, et s'assurer si les quantités sont dans les proportions qu'exige la sûreté du service.

Section XVIII.

Du magasin général des médicamens, et des dépôts de même nature à la suite des armées.

CXCI. Il y aura à Paris un laboratoire et un magasin de médicamens; ce magasin ne contiendra que les drogues simples, nécessaires à la préparation des médicamens dont la manipulation en grand assure la perfection, l'efficacité et l'économie. On ne s'occupera, dans ledit laboratoire, que des compositions nécessaires pour remplir ce but.

CXCII. L'approvisionnement de ce magasin sera fait dans la proportion des besoins présumés pour un an.

La nature et l'espèce de médicamens, les véritables sources d'où il faudra les tirer, et le moment le plus opportun pour se les procurer, seront indiqués par le conseil de santé, dans un tableau annexé au formulaire des hôpitaux militaires.

CXCIII. Le nombre des pharmaciens à attacher au magasin central, sera réglé sur le rapport du conseil de santé, et d'après les travaux de cet établissement.

CXCIV. On se conformera, pour la réception des médicamens exotiques et indigènes dans le magasin général, à ce qui est prescrit par l'art. CXVII, (section II, titre II du présent réglement).

CXCV. Aucun achat de drogues simples ne sera fait dans les places de commerce, qu'au préalable elles n'aient été examinées par des experts nommés par le commissaire des guerres, ou telle autre autorité compétente. Le certificat de cette vérification sera annexé à la facture, qui, à défaut de cette formalité, ne pourra être allouée en compte.

CXCVI. Il sera établi à la suite de chaque armée, et, autant que les circonstances le permettront, auprès des hôpitaux d'instruction, un dépôt de médicamens simples et composés pour l'approvisionnement des pharmacies des hôpitaux permanens, temporaires et ambulans de la division.

Ce dépôt sera sous la surveillance des officiers de santé en chef, et soumis aux règles prescrites par les articles précédens, et par les articles CLXVII, CLXVIII et CLXIX (section XVI, titre II).

CXCVII. On préparera, dans le laboratoire des hôpitaux d'instruction, toutes les compositions galéniques et chimiques, indiquées dans le formulaire, et qui ne font point partie de celles qui doivent être expédiées du magasin de Paris.

CXCVIII. Sous quelque prétexte que ce soit, les pharmaciens ne pourront faire des achats de médicamens,

ni des fournitures particulières, même par abonnement, pour le service des pharmacies d'hôpitaux.

CXCIX. Les pharmaciens chargés en chef de la manutention du magasin central, remettront, tous les trois mois, au directoire des hôpitaux, l'état de situation de l'établissement, et le compte de leur gestion, dans la forme établie par l'article CLXIX (section XVI, présent titre).

SECTION XIX.

Des infirmiers.

CC. Les infirmiers employés dans les hôpitaux militaires et dans les ambulances, obéiront aux ordres qui leur seront donnés par les commissaires des guerres, par les officiers de santé, l'économe et les employés d'administration.

CCI. Ils obéiront également à l'infirmier de première classe, lequel sera responsable du service de ses subordonnés, tant en ce qui concerne les soins à donner à chacun des malades, que pour l'exécution des ordres généraux de propreté et de salubrité.

CCII. L'infirmier en chef sera spécialement chargé de distribuer aux infirmiers le linge de corps et de lit destiné à renouveler celui des malades, et de veiller à la remise exacte du linge sale. Il sera responsable de ces objets envers l'économe.

CCIII. Il sera commandé, pour être de garde, et pour veiller pendant la nuit dans chaque salle, un nombre suffisant d'infirmiers, dans la proportion de celui des malades. L'ordre, à cet égard, sera donné à l'infirmier de première classe, par le commissaire des guerres; en son absence, par l'économe, de concert avec le médecin et le chirurgien de première classe.

CCIV. Tout infirmier de garde pendant la nuit, qui sera trouvé endormi, sera puni d'une amende égale à deux journées de son salaire.

CCV. Tout infirmier qui sera convaincu d'avoir traité

les malades ou blessés avec négligence ou dureté, sera privé de son emploi, ou puni suivant ce qui sera jugé par le commissaire des guerres, d'après le rapport qui lui en sera fait.

CCVI. Les infirmiers qui se seront rendus coupables de fautes ou de délits relatifs au service ou à la fidélité, seront punis par le commissaire des guerres, sur les plaintes de l'économe ou des officiers de santé; ou, si le cas l'exige, ils seront renvoyés aux tribunaux ou aux conseils militaires, d'après les dispositions du code de police correctionnelle.

CCVII. D'après le rapport de l'économe et des officiers de santé sur ceux des infirmiers qui auront bien mérité, le commissaire des guerres proposera, tous les trois mois, au commissaire ordonnateur, les gratifications extraordinaires dont ils paraîtront susceptibles.

CCVIII. Les infirmiers de première et deuxième classe seront nourris dans l'hôpital à la portion du malade; mais il leur est expressément défendu d'emporter leurs portions hors de l'hôpital, sous peine de punition, et d'être privés de leur emploi en cas de récidive.

CCIX. Dans le cas d'inactivité, les infirmiers attachés à l'ambulance à la suite des colonnes d'armée, recevront, au lieu de la nourriture réglée par l'article précédent, la même ration de vivres que le soldat, laquelle leur sera délivrée des magasins de subsistances militaires, sur les bons de l'économe visés du commissaire des guerres: quant à la boisson, le décompte leur en sera fait tous les mois au taux qui sera réglé par l'administration.

CCX. Ils seront vêtus d'une soubreveste, d'un pantalon de toile pour l'été et de laine pour l'hiver, qui seront fournis par l'administration. Ces vêtemens leur seront retirés par l'économe, dans le cas où ils resteraient moins d'une année au service de l'hôpital.

CCXI. Les infirmiers seront nommés par le directoire central.

CCXII. Les infirmiers qui tomberont malades dans

l'exercice de leurs fonctions, seront traités à l'hôpital comme les autres militaires, et il leur sera fait retenue de la moitié de leur salaire pour le temps qu'aura duré leur maladie.

CCXIII. En cas de désertion, ils seront jugés suivant les lois rendues contre les militaires déserteurs qui leur sont applicables.

SECTION XX.

De la visite et du pansement des malades et blessés.

CCXIV. A l'hôpital ambulant, la visite du matin précédera le départ de l'évacuation au moins d'une demi-heure; et la visite du soir se fera une demi-heure après l'arrivée, et lorsque les malades auront été placés convenablement.

CCXV. Dans les hôpitaux permanens et temporaires, les visites du matin se feront régulièrement à six heures du 1.er germinal au 1.er vendémiaire, et à sept heures du 1.er vendémiaire au 1.er germinal; elles commenceront plutôt si le nombre des malades l'exige, pour que la distribution des remèdes se fasse toujours au moins une heure avant celle des alimens, et que celle-ci n'éprouve aucun retard: les visites du soir seront faites chaque jour à l'heure jugée la plus convenable par les officiers de santé; celle du chirurgien ne pourra être faite qu'après le pansement.

CCXVI. Pour faciliter les visites et prévenir les équivoques dans la distribution des alimens, chaque lit sera numéroté.

CCXVII. Indépendamment des visites du matin et du soir, les médecins et les chirurgiens de première classe seront tenus d'en faire d'autres toutes les fois que la gravité des maladies et des blessures l'exigera.

En conséquence il est enjoint au chirurgien de garde, dans tous les cas graves et périlleux, de faire avertir les officiers de santé supérieurs, pour qu'ils se rendent à l'hôpital sans retard, à l'effet de donner à ces malades et

blessés tous les secours dont l'application différée pourrait entraîner des suites fâcheuses.

CCXVIII. Les médecins et les chirurgiens chargés de la visite, seront précédés, à l'hôpital, par les chirurgiens et les pharmaciens de deuxième et de troisième classe, qui s'y rendront avant le pansement et la visite du matin pour préparer les cahiers de celle du jour, par ordre de numéros et par noms des malades.

CCXIX. Ces cahiers, dont chaque feuille sera tracée selon le modèle annexé au formulaire des médicamens des hôpitaux militaires, serviront au chirurgien et au pharmacien qui suivront la visite, à écrire toutes les prescriptions.

CCXX. Les cahiers de visite seront alternatifs, afin que l'officier de santé qui prescrit, ayant toujours à la main et sous les yeux le cahier de la veille, puisse vérifier plus sûrement si les prescriptions en alimens et médicamens ont été fidèlement exécutées, et juger de leurs effets.

CCXXI. Les médecins et chirurgiens seront pareillement suivis d'un pharmacien, qui leur rendra raison des remèdes ordonnés précédemment, et de l'administration desquels il aura été particulièrement chargé. Il écrira sur son cahier toutes les prescriptions de l'officier de santé faisant la visite.

CCXXII. Le sous-officier de planton, ou le commandant de la garde de l'hôpital, assistera exactement aux visites, afin de faire observer l'ordre et le silence.

CCXXIII. Les infirmiers de garde et celui de chaque quartier, suivront aussi la visite, pour rendre compte aux officiers de santé de ce qu'ils auront remarqué, et prendre leurs ordres sur les soins à donner aux malades et blessés.

CCXXIV. La prescription du régime sera toujours faite à haute voix, afin que chaque malade sache ce qui doit lui être donné en alimens. Les prescriptions seront écrites en français : on ne pourra se servir d'aucun caractère chimique ou pharmaceutique pour désigner

la substance et les doses, et il ne sera employé d'autres abréviations que celles adoptées à la suite du formulaire des hôpitaux militaires.

CCXXV. Les cahiers seront au moins de douze feuilles liées ensemble ; ils seront écrits lisiblement, entretenus dans la plus grande propreté, datés et signés à la fin de chaque visite par l'officier de santé qui l'aura faite et par ceux qui l'auront écrite.

CCXXVI. Dans les cas graves qui exigeront la réunion des connaissances du médecin et du chirurgien, ils seront tenus de s'appeler réciproquement en consultation pour déterminer le traitement ou l'opération à faire ; dans ce cas, le résultat de la consultation sera porté sur la colonne d'observations du cahier de visite, qui sera signé par les consultans.

CCXXVII. Immédiatement après la visite, les chirurgiens et les pharmaciens qui l'auront suivie, se réuniront en présence des médecins et des chirurgiens en chef pour collationner leurs cahiers et rectifier les erreurs qui auraient pu s'y glisser. Le chirurgien qui aura suivi la visite, fera un relevé des ordonnances concernant le régime alimentaire, et, après l'avoir signé, il le remettra à l'économe pour qu'il pourvoie et qu'il veille à leur exacte observation. Le pharmacien portera son cahier à la pharmacie, où les remèdes ordonnés seront préparés pour être ensuite distribués.

CCXXVIII. Les relevés de visite, prescrits par l'article précédent, formant, pour l'économe, la pièce justificative de ses dépenses et consommations journalières, contiendront le sommaire de tous les alimens à distribuer, et cadreront, pour le nombre d'hommes, avec le mouvement, de manière que le total des portions et fractions de portion, réuni avec celui des diètes, donne un nombre égal à celui des malades existans dans le jour.

CCXXIX. Les officiers de santé communiqueront leurs cahiers à l'économe, afin de le mettre en état de s'assurer de l'exactitude des relevés qui lui seront remis.

Lorsque les cahiers de visite seront remplis, ils seront remis à l'économe, qui les conservera pour les représenter au besoin.

CCXXX. Les officiers de santé en chef ayant seuls le droit d'ordonner, chacun en ce qui le concerne, les remèdes et le régime des malades et blessés, il est expressément défendu à toutes personnes, quels que soient leurs grades ou leurs pouvoirs, de s'opposer à l'exécution des ordonnances desdits officiers de santé, ni de rien prescrire de leur propre mouvement sur cette partie du service.

CCXXXI. Le chirurgien chargé en chef du service aura soin de faire le pansement un peu avant la visite du médecin, afin que s'il y avait quelques cas graves, ils pussent en conférer ensemble, et agir en tout pour le bien du service.

CCXXXII. Ce chef pansera ou fera panser les malades chaque fois qu'il le jugera nécessaire; lui seul fera les opérations majeures, ainsi que le pansement des blessures graves : il pourra cependant faire exécuter par ses subordonnés, mais toujours sous ses yeux, les opérations dont il les jugera capables.

CCXXXIII. Il tiendra la main à ce que les pansemens ne soient commencés que lorsque tous les appareils seront prêts, afin de ne point exposer les plaies à l'impression de l'air. Les chirurgiens de deuxième et troisième classe qui suivront les pansemens, auront soin de tenir les appareils prêts et suffisamment garnis de bandes, compresses et onguens usuels, le tout dans la plus grande propreté : ces préparatifs seront disposés dès la veille pour servir au moment du besoin.

CCXXXIV. Le pansement des blessés précédera toujours la visite.

Indépendamment des officiers de santé qui doivent suivre le chirurgien en chef, ceux attachés aux différentes salles de blessés ou de vénériens, le suivront aussi pour

leur propre instruction, et pour lui donner des notions sur chaque blessé, s'il en a besoin.

CCXXXV. Tous les objets nécessaires au pansement ne sont délivrés à la pharmacie, à la dépense, au magasin, que sur des bons particuliers faits par les chirurgiens de première classe, au fur et à mesure de leurs besoins; et par le chirurgien de garde, dans les cas urgens et imprévus.

CCXXXVI. Ces bons n'auront de valeur qu'autant qu'ils seront faits sans ratures, exprimés en toutes lettres, signés du chirurgien qui les aura faits, et visés de l'officier de santé qui aura dicté la visite.

Il ne sera fait de bons à la pharmacie que pour les objets qui ne seront pas portés sur les cahiers de visite.

CCXXXVII. La quantité de linge à pansement sera exprimée dans ces bons en raison de sa qualité; de sorte que les lez d'un drap seront exprimés par mètres, et le linge d'une autre forme, par son poids.

CCXXXVIII. Dans les salles de fiévreux, les chirurgiens de deuxième classe seront spécialement chargés de surveiller le service de la chirurgie. Ils veilleront à ce que les saignées soient faites et les topiques appliqués aux heures prescrites; ils prendront toujours les ordres des médecins chargés du service, et ils les préviendront de tous les cas extraordinaires.

CCXXXIX. Chaque jour le chirurgien en chef de l'hôpital nommera un ou plusieurs chirurgiens pour être de garde pendant vingt-quatre heures, qui commenceront à l'issue de la visite du matin, et finiront le lendemain à pareille heure.

Il y aura un chirurgien de garde pour trois cents malades, deux pour cinq-cents et au-delà, et trois pour neuf cents et plus.

CCXL. Les officiers de santé de garde devront être toujours prêts à porter des secours par-tout où il est nécessaire : il leur est expressément défendu de sortir de l'hôpital et de se déshabiller pour se coucher.

CCXLI. Il y aura, à proximité des salles, une chambre pour le chirurgien de garde: sa destination sera inscrite au-dessus de la porte. Cette chambre aura une cheminée ou un poêle, et le chauffage sera fourni par l'économe: elle sera éclairée d'une lampe; et le chirurgien de garde aura toujours une autre lumière à sa disposition, pour l'éclairer pendant ses fonctions de la nuit.

Section XXI.

Des alimens et de leur distribution.

CCXLII. La portion d'alimens pour chaque malade, sera, par jour, d'un demi-kilogramme de viande, deux tiers de bœuf et l'autre tiers de veau ou de mouton; lequel demi-kilogramme [une livre environ] poids de marc, de viande cuite et sans os, doit revenir à-peu-près aux $\frac{9}{16}$: de huit hectogrammes de pain, entre le bis et le blanc, de pur froment et bien cuit; d'un demi-litre de vin, de bonne qualité, et vieux autant qu'il sera possible: il sera fourni, en outre, le sel et le vinaigre nécessaires.

CCXLIII. Les alimens et boissons pour la journée entière du malade, seront fixés, dans la visite du matin, par les officiers de santé en chef.

CCXLIV. Lorsqu'un malade sera désigné pour la portion entière, il ne pourra lui être prescrit d'autres alimens que ce qui est réglé par l'article I.er (présente section). Les prescriptions d'alimens ordinaires seront toujours établies par portions entières, trois quarts, demie, et quart de portion, de manière que le pain de la soupe soit pris sur la ration prescrite.

CCXLV. Chaque pain qui sera fourni dans les hôpitaux, sera, étant refroidi, du poids d'une ou deux rations complètes, pour en faciliter, sans pesée de détail, la division en trois quarts, demie, quart, demi-quart ou soupe: il

il sera pesé, à son entrée à la dépense; et ce qui se trouvera alors de mauvaise qualité, sera rejeté.

CCXLVI. La pesée de la viande sera faite, à raison de deux cent quarante-quatre grammes cinquante-sept centigrammes [une demi-livre] de viande, pour chaque malade, infirmier ou servant, à sept heures du soir, pour la distribution du matin, et entre neuf et dix heures du matin, pour la distribution du soir; et si, dans l'intervalle de la pesée à la mise de la viande dans la marmite, il entrait quelque malade à l'hôpital, dans ce cas seulement il sera ajouté deux cent quarante-quatre grammes cinquante-sept centigrammes [une demi-livre] de viande pour chaque entrant.

CCXLVII. Le sergent de planton assistera toujours à la pesée; et aussitôt qu'elle sera faite, la viande sera mise dans un lieu dont la clef sera donnée à ce sous-officier, qui, à l'heure accoutumée, se trouvera présent pour en faire l'ouverture; alors la viande en sera tirée et mise dans la marmite devant lui. Il y aura toujours une sentinelle posée à la cuisine, à qui il sera donné pour consigne de ne laisser tirer de la marmite aucun morceau jusqu'au moment de la distribution.

CCXLVIII. On mettra dans la marmite, pour chaque demi-kilogramme de viande, un litre neuf décilitres [deux pintes] d'eau, qui seront réduites, par l'ébullition, à un litre quatre décilitres quatre centilitres [une pinte et demie]: on y ajoutera également le sel nécessaire, et, autant que la saison le permettra, des plantes potagères en suffisante quantité.

CCXLIX. Lorsque les officiers de santé jugeront à propos d'interdire l'usage de la viande et du bouillon gras à quelque malade, il y sera suppléé par un bouillon maigre, fait avec les végétaux qui seront désignés par les officiers de santé; mais ceux-ci seront tenus de remettre à l'économe, la veille du jour où le régime devra commencer, l'état des malades auxquels ils l'auront prescrit, afin que la viande qui aurait dû leur être fournie, soit distraite de la pesée.

Il sera fait mention, sur le mouvement, du nombre des malades mis à ce régime particulier.

CCL. Les alimens extraordinaires, connus dans les hôpitaux sous le titre de légers alimens, consisteront en œufs à la coque, en pruneaux, en lait simple, bouillie au lait, panade, riz au gras et riz au lait. Ils pourront être ordonnés par supplément, en une espèce seulement, aux malades qui, étant au régime gras, seront à la demi-portion et au-dessous; les panades et riz au gras tenant alors lieu de soupe, attendu que la portion de bouillon de ces malades y est employée. A l'égard des malades qui seront au régime végétal, les officiers de santé pourront ordonner ces légers alimens en deux espèces.

CCLI. Il entrera dans une panade un demi-hectogramme de pain; dans une bouillie, trois décagrammes de farine; la portion de riz au gras ou au lait sera un demi-hectogramme [une once et demie]; la portion de lait simple sera d'un quart de litre; et il entrera également un quart de litre de lait dans une bouillie et dans un riz au lait; enfin la portion de pruneaux sera de six décagrammes, pesée avant la cuisson.

CCLII. Les officiers de santé pourront, ainsi qu'il est d'usage pour les alimens ordinaires, réduire les quotités ci-dessus exprimées, en les divisant, lors de leurs visites, en portions entières, trois quarts, demie et quart.

CCLIII. Le vin, dans les hôpitaux militaires, sera rouge ou blanc, de bonne qualité; et dans le cas où l'on ne pourrait s'en procurer que de la dernière récolte, la distribution ne pourra en être faite avant le 15 germinal suivant.

CCLIV. Le vin, considéré comme boisson alimentaire, ne pourra être délivré aux malades que dans la proportion des quotités prescrites en alimens solides.

CCLV. Dans les pays qui ne produisent pas de vin, il pourra y être suppléé, pour les infirmiers seulement, par neuf décilitres quatre centilitres [une pinte] de cidre, et par un litre quatre-vingts centilitres [un pot] de bière.

CCLVI. Le commissaire des guerres visitera souvent les caves, celliers et magasins de l'hôpital, pour s'assurer de la qualité des liquides qui y sont renfermés; il pourra se faire assister par les officiers de santé en chef: et dans le cas où il se trouverait du vin défectueux ou gâté, le commissaire des guerres en ordonnera le remplacement. Il en sera usé de même à l'égard de la bière et du cidre. Il se conformera, au surplus, pour la réception de ces objets, à ce qui est réglé par les articles CCCLV et CCCLVI (section XXIX, titre III du présent réglement).

CCLVII. La distribution des alimens dans les hôpitaux militaires, se fera le matin à dix heures, et le soir à quatre heures. Le commissaire des guerres pourra néanmoins modifier quelque chose à cette fixation, de concert avec le médecin et le chirurgien de première classe.

CCLVIII. Vers l'heure de la distribution, la viande sera tirée entièrement de la marmite pour être coupée en portions en présence du sous-officier de planton, qui assistera également à la préparation des portions de pain et de vin.

CCLIX. On commencera par distribuer le pain et le bouillon en même temps: pendant ce temps, on disposera dans la cuisine les portions de viande et les autres alimens, dont la distribution ainsi que celle du vin se feront de suite et avec la plus grande célérité, sans nuire à l'exactitude ni à la propreté.

CCLX. Les distributions commenceront chaque jour alternativement en sens inverse de la veille, soit pour l'ordre des salles, soit dans chaque salle pour l'ordre des lits.

CCLXI. Le commissaire des guerres assistera, le plus souvent qu'il lui sera possible, soit aux préparations de la distribution, soit à la distribution elle-même, afin de goûter le bouillon et les autres alimens, et de s'assurer

de leurs qualités : les officiers de santé en chef feront journellement la même dégustation ; et s'ils trouvent quelque défectuosité, ils en avertiront le commissaire des guerres.

CCLXII. Les portions d'alimens, après avoir été comptées en présence du chirurgien de garde et du sous-officier de planton, seront portées et distribuées dans les salles par les infirmiers, chacun dans son quartier.

CCLXIII. Dans chaque quartier, le chirurgien qui aura suivi la visite du matin, sera présent à la distribution; il tiendra la main à ce que chaque malade ou blessé reçoive ce qui lui aura été ordonné, en observant toutefois de diminuer et de supprimer les alimens au malade à qui la fièvre ou d'autres accidens seraient survenus depuis la visite.

CCLXIV. Le sous-officier de garde accompagnera également la distribution pour y maintenir le bon ordre.

CCLXV. La distribution ne sera faite aux infirmiers et autres dont la ration est comprise dans la pesée, qu'après que la distribution des malades sera entièrement terminée ; et dans le cas où il ne resterait pas assez de viande, il y sera suppléé par des œufs ou autres alimens.

CCLXVI. Le chirurgien de garde sera tenu de veiller à ce que les malades à la diète reçoivent les bouillons qui leur auront été prescrits, aux heures déterminées par l'officier de santé qui aura fait la visite.

CCLXVII. Il sera délivré, sur les bons du chirurgien de garde, les alimens qu'il jugera convenable de faire donner aux malades entrans qui n'auraient pu être compris dans les visites, ainsi que les médicamens et autres objets nécessaires pour leur pansement. Ces bons seront présentés, lors de la visite du lendemain, à l'officier de santé en chef, pour être revêtus de sa signature.

Les bons pour alimens sont exceptés de cette disposition; ils seront annullés après que les quantités d'alimens qu'ils désigneraient, auront été portées sur le cahier de visites à côté du nom des malades qui les auront consommées, ainsi que sur le relevé des visites.

CCLXVIII. Au moyen des rations de subsistances que la loi accorde aux officiers de santé et aux employés, il leur est expressément défendu de tirer des hôpitaux aucun aliment ou objet de consommation, même sous la condition de la retenue ou du paiement.

CCLXIX. A l'hôpital ambulant, le commissaire des guerres autorisera l'économe à entretenir une marmite de précaution, afin que les malades qui arrivent successivement, trouvent toujours du bouillon. La quantité de viande à mettre chaque jour dans cette marmite, sera déterminée d'après un ordre par écrit du commissaire des guerres.

Section XXII.

Du blanchissage du linge et effets dans les hôpitaux permanens et provisoires sédentaires.

CCLXX. Dans les hôpitaux permanens et provisoires sédentaires, le blanchissage du linge se fera, autant qu'il sera possible, par des blanchisseuses externes, d'après des marchés à forfait ou à la pièce passés par le conseil d'administration, à la participation du commissaire des guerres, dans le cas où l'adjudication ne pourrait avoir lieu.

CCLXXI. Les économes seront tenus de faire livrer le linge au blanchissage aussi souvent que le rechange sera fait dans l'hôpital ; ils veilleront à ce que la rentrée s'en opère avec promptitude.

CCLXXII. Le linge qui aura servi aux galeux et vénériens, sera toujours blanchi séparément.

CCLXXIII. Les linges à pansement, bandes et compresses, seront soigneusement recueillis dans des paniers par les infirmiers qui suivent les pansemens, pour être

sur-le-champ déposés dans un baquet destiné à cet usage, et dont l'eau sera renouvelée deux fois chaque jour. Ils ne seront livrés au blanchissage qu'après cette précaution préliminaire et indispensable.

CCLXXIV. Les matelas et traversins devant être rebattus deux fois par an, leurs enveloppes seront reblanchies avant d'être employées de nouveau : il en sera de même pour les enveloppes des matelas qui, dans les cas prévus par le réglement, doivent être sanifiés et réparés sur-le-champ.

TITRE III.

Du service administratif.

SECTION XXIII.

Des fonctions du directoire central.

CCLXXV. Le directoire central établi par l'arrêté des Consuls du 4 germinal an VIII, sera chargé immédiatement, sous les ordres du ministre de la guerre, de la surveillance générale du service, tant dans l'intérieur qu'aux armées, et de la direction de toutes les opérations y relatives.

CCLXXVI. Il portera son attention et ses soins sur tout ce qui peut intéresser le bon ordre, l'économie et l'amélioration dans toutes les parties du service des hôpitaux, tant au personnel qu'au matériel ; il se tiendra exactement informé de la conduite et de la capacité de tous les individus qui y sont employés, quelles que soient leurs fonctions, afin d'être en état d'éclairer le ministre, et de lui procurer tous les renseignemens nécessaires.

CCLXXVII. Il pourra s'aider des avis et des lumières du conseil de santé, lorsqu'il le jugera convenable.

CCLXXVIII. Le directoire central présentera à l'approbation du ministre l'organisation du personnel

administratif des hôpitaux permanens, ainsi que du service des armées.

Il mettra la plus sévère attention dans le choix des employés dont il proposera la nomination, afin que ce service important ne soit confié qu'à des hommes dont les talens et la moralité soient reconnus ; et la préférence sera toujours donnée à ceux qui réuniront à ces qualités, l'ancienneté de service dans l'administration des hôpitaux militaires.

CCLXXIX. Le directoire central devant, aux termes de l'arrêté du 4 germinal, pourvoir à l'approvisionnement en tout genre, d'effets, ustensiles, denrées, comestibles, drogues, médicamens et objets de pansement nécessaires au service des hôpitaux militaires, il fera dresser à l'avance un tableau dans lequel il indiquera, par nature et quantité d'objets, ce qu'il faut pour assurer le service pendant une année si l'on est en paix, ou pour faire la campagne s'il s'agit de se préparer à la guerre ; ce qui existe en magasin, et ce qui manque pour compléter.

Ce tableau, certifié par les membres du directoire central, sera soumis à l'approbation du ministre, de même que les dispositions relatives à l'exécution et à la répartition de ces approvisionnemens.

CCLXXX. Les approvisionnemens seront calculés d'après la force et la composition de l'armée, dans la proportion du septième de l'existence effective des troupes de la République.

Pendant la guerre, le directoire central fera de plus tenir en réserve dans les grandes places de l'intérieur, sur les derrières de l'armée, un fonds d'approvisionnement de toute nature pour parer aux consommations, aux pertes et aux fortunes de guerre. Ce supplément pourra s'élever au quart de la masse générale.

CCLXXXI. Les achats d'effets et denrées pourront se faire par adjudication au rabais, ou par la voie du commerce, suivant ce que le directoire central jugera

le plus convenable sous les rapports de sûreté, d'économie et de célérité.

Les marchés et soumissions ne seront valables qu'autant qu'ils auront été préalablement soumis à l'examen du directoire central, et revêtus de l'approbation du ministre.

Les médicamens seront toujours achetés par la voie du commerce, en observant les précautions et les formalités prescrites par la section XVIII, titre II, et par la section XXIX, titre III du présent réglement.

CCLXXXII. Dans aucun cas et sous quelque prétexte que ce puisse être, les économes, gardes-magasins ou autres comptables, ne pourront prendre pour leur compte aucune espèce de fourniture, ni s'y intéresser, à peine de destitution.

CCLXXXIII. Le directoire central mettra, à la fin de chaque mois, sous les yeux du ministre, le tableau des besoins pécuniaires pour le mois suivant; il lui soumettra également l'état de répartition ou d'emploi des fonds qui seront successivement affectés au service des hôpitaux.

Il tiendra la main à ce que les économes n'apportent aucune négligence au recouvrement des feuilles de retenue.

Il exigera, tous les mois, des directoires des armées, des conseils d'administration, des économes et autres agens comptables, le bordereau de l'emploi des fonds mis à leur disposition soit par le ministre, soit par les ordonnateurs en chef ou de division, en y comprenant le montant des feuilles de retenue.

CCLXXXIV. Le directoire veillera à la rentrée des comptabilités; il les fera vérifier sous ses yeux, et en préparera la liquidation. Il provoquera des mesures de sévérité contre les comptables qui se seraient rendus coupables de négligence ou d'infidélité, de même qu'il

proposera des indemnités ou de l'avancement en faveur de ceux qui s'en seraient rendus dignes.

CCLXXXV. Il entretiendra une correspondance active avec les directoires aux armées et avec les conseils d'administration; il sera chargé de leur notifier les ordres et décisions du ministre, et de leur donner toutes les instructions nécessaires pour en assurer l'exécution.

CCLXXXVI. Le directoire central ne donnera des ordres que d'après les décisions du ministre et en son nom : lesdits ordres, et, en général, tous les actes du directoire, ne seront valables qu'autant qu'ils seront revêtus de la signature de deux membres au moins.

CCLXXXVII. Le 1.er de chaque mois, les membres du directoire central nommeront entre eux un président; ils nommeront également un rapporteur. L'un et l'autre pourront être réélus.

Le président et le rapporteur se réuniront pour présenter le travail au ministre.

SECTION XXIV.

Des directoires aux armées.

CCLXXXVIII. Les directoires créés près des armées par l'arrêté du 4 germinal, y dirigeront le service des hôpitaux, sous les ordres de l'ordonnateur en chef et du directoire central; ils étendront leurs soins et leur surveillance à tous les hôpitaux temporaires et ambulances établis dans les contrées et divisions comprises dans l'arrondissement de l'armée.

CCLXXXIX. Le directoire, à l'armée, suivra tous les mouvemens du quartier-général, de manière à se tenir toujours à portée de l'ordonnateur en chef, pour recevoir ses ordres et en assurer la prompte exécution.

CCXC. Il sera tenu de correspondre avec le directoire central, sur tout ce qui concerne le service des

hôpitaux, et notamment sur l'exécution des dispositions de l'article CCLXXVI (section précédente), qui feront également partie des attributions du directoire de l'armée.

CCXCI. Le directoire de l'armée aura sous ses ordres un agent en chef et des agens principaux, tous comptables et responsables, dont les fonctions seront indiquées ci-après.

CCXCII. Il présentera à l'ordonnateur en chef et adressera au directoire central, à la fin de chaque mois, le tableau de la situation des magasins et des hôpitaux de son arrondissement en tout genre de mobilier et d'approvisionnemens, avec indication de ce qui est nécessaire pour assurer le service.

Il joindra à cet état celui des besoins pécuniaires pour le mois suivant, et le mouvement général des hôpitaux de l'armée.

CCXCIII. Pour ce qui concerne les approvisionnemens et les effets de coucher, le directoire de l'armée instruira le directoire central, des ressources que l'on peut obtenir des réquisitions, de celles que présentent les localités, et des prix courans de chaque objet; enfin de ce qu'il est indispensable de tirer de l'intérieur.

CCXCIV. Conformément aux dispositions de l'article CCLXXXIII (section précédente), le directoire de l'armée ne devra accepter aucune soumission ni conclure aucun marché, sans préalablement les avoir adressés au directoire central, qui en fera sur-le-champ son rapport au ministre, pour être approuvés ou rejetés s'il y a lieu.

CCXCV. Dans le cas où des circonstances urgentes exigeraient quelques achats, le directoire pourra les autoriser, mais en observant de les restreindre à la proportion nécessaire pour parer aux besoins, en attendant qu'il en ait été rendu compte au directoire central, et qu'il ait fait connaître les intentions du ministre.

CCXCVI. Le directoire de l'armée fera la répartition des fonds qui seront mis à sa disposition; il en adressera l'état à l'ordonnateur en chef, et un double au directoire central : l'agent comptable sera tenu de se conformer à cette répartition pour l'emploi des fonds qu'il touchera; et il ne pourra d'ailleurs faire aucun paiement sans y être préalablement autorisé par le directoire de l'armée.

L'état de répartition susdit sera mis à l'ordre de l'armée, conformément aux dispositions de l'article XI de l'arrêté des Consuls.

CCXCVII. Lorsqu'indépendamment des fonds envoyés par le ministre pour le service des hôpitaux de l'armée, l'ordonnateur en chef aura jugé à propos d'y affecter quelques secours pécuniaires, le directoire de l'armée sera tenu d'en adresser, sans délai, l'état au directoire central.

CCXCVIII. Le directoire de l'armée tiendra la main à ce que chaque comptable lui fasse parvenir tous ses comptes, et les pièces à l'appui, dans les formes et les délais prescrits : il pourra suspendre de leurs fonctions ceux qui, par négligence, différeraient cet envoi; et il fera poursuivre ceux qui se seraient rendus coupables de dilapidations ou d'infidélité dans leur gestion.

CCXCIX. Dans le cas où l'éloignement et la position de l'armée rendraient difficiles et dangereuses les communications de quelques points de son arrondissement avec le quartier-général, les comptables pourront être autorisés à adresser directement leurs pièces et états au directoire central, auquel le directoire de l'armée aura soin de faire parvenir l'état de ceux qui se trouveront dans le cas de cette exception.

Il en sera de même à l'égard des établissemens avec lesquels, pour raisons semblables, le directoire de l'armée ne pourrait correspondre que difficilement, et dont le service aurait à souffrir, s'il n'était d'ailleurs pourvu à ce

qu'ils fussent convenablement surveillés et secourus.

CCC. Le directoire de l'armée pourra, lorsqu'il le jugera convenable, appeler les officiers de santé en chef de l'armée, pour s'aider de leurs avis et de leurs lumières.

CCCI. Les délibérations, arrêtés, ordres et autres actes du directoire de l'armée, ne seront valables qu'autant qu'ils seront revêtus de la signature de deux membres au moins.

CCCII. Les directoires aux armées seront tenus de se conformer exactement aux ordres et instructions qu'ils recevront du directoire central.

SECTION XXV.

Des conseils d'administration près des hôpitaux permanens.

CCCIII. Conformément aux dispositions de l'arrêté des Consuls du 4 germinal an VIII, l'administration de chaque hôpital permanent sera confiée à un conseil d'administration composé de trois membres.

CCCIV. Ce conseil d'administration aura sous ses ordres un économe comptable et responsable, chargé des détails et de la manutention de l'établissement.

CCCV. Il ne pourra être établi de conseil d'administration près des hôpitaux temporaires ou ambulans, à moins d'un ordre exprès du ministre.

Le directoire central pourvoira aux moyens de surveillance immédiate qu'il jugera convenable d'appliquer à ces établissemens.

CCCVI. Les conseils d'administration surveilleront le service de leur hôpital, sous les ordres du directoire central; ils dirigeront l'emploi des fonds qui y seront affectés, et s'occuperont de toutes les mesures de prévoyance nécessaires pour que les secours dus aux militaires malades soient convenablement assurés.

CCCVII. Ils recevront les soumissions qui leur

seront proposées pour la fourniture des divers objets nécessaires au service; ils s'assureront des facultés et de la moralité des soumissionnaires, dont ils adresseront les propositions au directoire central, avec leurs observations et la note des prix courans, dans le pays, des objets ou denrées dont il sera question.

CCCVIII. Ils tiendront strictement la main à ce que les économes ou employés ne s'immiscent directement ni indirectement dans aucune espèce de fournitures relatives au service de l'hôpital.

CCCIX. Le conseil d'administration de chaque hôpital permanent, adressera, tous les mois, au directoire central, l'état de situation en effets, denrées et médicamens, avec indication de ce qui est nécessaire pour assurer le service, et des moyens qu'il croirait les plus convenables pour y pourvoir.

Il adressera également au directoire central le bordereau des recettes et dépenses en deniers faites par l'économe pendant le mois écoulé, ainsi que l'état par aperçu des fonds nécessaires pour le mois courant, déduction faite du montant des feuilles de retenue.

CCCX. Il dirigera spécialement sa surveillance sur tout ce qui peut concourir au maintien de l'ordre et de l'économie dans toutes les parties du service, à la recherche et à la répression des abus, à la conservation et à l'entretien du mobilier.

Il pourra, lorsqu'il le jugera convenable, prendre l'avis des officiers de santé en chef de l'hôpital sur les moyens d'amélioration.

CCCXI. Le conseil d'administration tiendra la main à ce que l'économe tienne exactement à jour ses registres de recette et dépense en deniers, son livre d'entrées et de sorties, ses états de recettes et consommations en denrées, liquides, &c.; enfin à ce que toutes les parties de la comptabilité soient arrêtées et remises avec les pièces justificatives, dans les délais prescrits.

CCCXII. Il veillera à la stricte exécution de toutes les dispositions du présent réglement, en ce qui concerne le service de l'hôpital dont l'administration lui sera confiée ; et il sera tenu de se conformer aux ordres et instructions qui lui seront adressés par le directoire central, ou par le directoire de l'armée dans l'arrondissement de laquelle il se trouvera placé.

CCCXIII. Les délibérations, arrêtés et autres actes, de même que la correspondance des conseils d'administration, devront être signés de deux membres au moins, à peine de nullité.

Section XXVI.

Du service administratif des hôpitaux ambulans.

CCCXIV. Les détails du service administratif à l'armée, ainsi que la manutention des deniers, seront confiés à un agent général, sous les ordres et la surveillance immédiate du directoire de l'armée. Cet agent sera comptable et responsable des fonds et des objets en nature qui seront mis à sa disposition, ainsi que de l'exécution des ordres qui lui seront notifiés par le directoire.

CCCXV. L'agent comptable suivra toujours le directoire de l'armée, et ne pourra s'en éloigner sans en avoir reçu de lui l'autorisation.

CCCXVI. Dans chaque grande division active de l'armée, les détails administratifs seront confiés à un agent principal sous les ordres du directoire, et comptable envers lui, tant des fonds, effets et denrées qui seront affectés au service de sa division, que de l'exécution des ordres que ce dernier lui transmettra.

CCCXVII. Dans les subdivisions de l'armée qui comporteront plusieurs établissemens d'ambulance, le service sera dirigé par un agent, sous la dénomination d'économe

divisionnaire, lequel sera comptable et responsable envers l'agent principal de la division.

CCCXVIII. L'agent général, les agens principaux et les économes divisionnaires, ne pourront, dans aucun cas, faire des achats, souscrire des marchés, sans y avoir été spécialement autorisés par le directoire de l'armée ; ils seront tenus de se conformer, pour les dépenses qu'ils seront dans le cas d'acquitter, aux états d'emploi et de distribution de fonds qui auront été arrêtés par le directoire.

Le montant des achats ou des dépenses faits en contravention aux dispositions ci-dessus, restera à la charge des contrevenans, et sera rejeté de leurs comptes.

CCCXIX. Les agens principaux et les économes divisionnaires attachés aux divisions et subdivisions éloignées du centre de l'armée, rendront compte journellement, au directoire de l'armée, de la situation de leur service, des ordres qu'ils pourront recevoir des ordonnateurs et des commissaires des guerres chargés du service des hôpitaux, et des mesures qui en résultent, afin qu'il soit promptement pourvu à tout ce que les circonstances exigeront.

Section XXVII.

De la composition du service administratif dans les hôpitaux permanens et temporaires.

CCCXX. Les détails administratifs des hôpitaux permanens, ainsi que des hôpitaux temporaires, seront confiés à des économes, sous la surveillance des directoires des armées ou des conseils d'administration.

Ces économes seront comptables et responsables des fonds, du mobilier et des objets de consommation affectés au service de leur établissement.

CCCXXI. Le nombre des employés nécessaires au service administratif de chaque hôpital permanent ou

temporaire, sera réglé en raison du nombre de malades habituellement dans l'établissement, et dans les proportions ci-après ;

SAVOIR :

DÉNOMINATION ET FORCE DES HÔPITAUX.	GRADES ET NOMBRE DES EMPLOYÉS.						TOTAL.
	Économes.	Commis aux		Gardes-magasins		Dépenseurs.	
		Entrées.	Sorties.	Des effets d'hôpitaux.	Des effets de malades.		
HÔPITAUX de 50 à 100 malades.	"	1.	"	1.	"	"	2.
100 à 200.	1.	1.	"	1.	"	"	3.
200 à 300.	1.	1.	"	1.	"	1.	4.
300 à 500.	1.	1.	1.	1.	1.	1.	6.
500 à 700 et au-dess.	1.	1.	1.	1.	1.	1.	7.

CCCXXII. Dans les hôpitaux qui contiendront plus de 500 malades, il pourra cependant être placé un employé de plus au grade de commis aux entrées, pour aider l'économe dans les détails de sa surveillance, et le seconder dans le travail du bureau.

CCCXXIII. Aux ambulances, le service sera dirigé par des économes de 1.re ou de 2.e classe, ou par des employés de 1.re classe, suivant l'importance du détachement. Ces employés supérieurs auront à leur disposition des employés et des infirmiers en nombre suffisant pour remplir les vues indiquées par la section IV (titre I.er du présent réglement).

Ce

Ce nombre sera déterminé par le directoire de l'armée, d'après la décision de l'ordonnateur en chef.

CCCXXIV. Il sera, de plus, attaché aux hôpitaux ambulans et à tous autres, lorsqu'il sera jugé nécessaire, des employés sous la dénomination de commis aux évacuations, chargés d'accompagner les malades que l'on fait passer, par convoi, d'un hôpital à un autre, et de leur procurer, dans la route, tous les secours qui leur seront dus. Ces employés sont comptables et responsables de tous les effets qui seront mis à leur disposition pour la marche d'un convoi, notamment des effets appartenant aux malades et blessés, ainsi que des cerceaux et toiles dont les voitures seront recouvertes, et qu'il leur est expressément recommandé de ne pas perdre de vue, jusqu'à leur rentrée dans l'hôpital.

CCCXXV. Il sera entretenu, dans les hôpitaux militaires, des infirmiers de 1.re et 2.e classe. Dans la première classe, sont compris les infirmiers en chef, le portier, le cuisinier et le premier garçon de pharmacie : les infirmiers ordinaires, les aides de cuisine, ceux de pharmacie, dans les hôpitaux qui en exigent plus d'un, composeront la 2.e classe.

CCCXXVI. Dans un hôpital, le nombre des infirmiers de 1.re classe sera réglé à raison d'un pour cent malades, et ainsi de suite en proportion.

CCCXXVII. Le nombre d'infirmiers ordinaires dans un hôpital, demeure réglé en raison d'un pour douze malades effectifs : dans ce nombre, ne sont pas compris les servans attachés aux cuisines, dépenses, magasins, pharmacies, &c.

A mesure que les malades diminueront, le nombre des infirmiers sera réduit par des réformes successives, jusqu'à ce qu'il soit restreint aux fixations indiquées par le tableau ci-après. Le nombre d'infirmiers déterminé par ce tableau, devra être, dans tous les cas, conservé à poste fixe jusqu'à l'entière suppression de l'hôpital. Quant aux cuisiniers, garçons de pharmacie, de magasin,

dépense, &c., leur nombre sera invariablement réglé comme il suit :

DÉNOMINATION ET FORCE DES HÔPITAUX.	NOMBRE DES INFIRMIERS ET SERVANS qui seront attachés en tout temps aux									TOTAL
	SALLES.									
	Infirmiers en chef.	Infirmiers ordinaires.	Cuisiniers, y compris le chef.	Garçons de pharmacie.	Dépenses.	Magasins.	Propreté des cours et corridors.	Portiers.	Bains.	
Hôpitaux de 50 à 100 malades.	1.	5.	1.	1.	»	»	»	1.	à raison d'un pour 6 baignoires.	9.
100 à 200........	2.	9.	2.	1.	»	»	»	1.		15.
200 à 300........	2.	15.	2.	1.	1.	1.	»	1.		23.
300 à 500........	4.	21.	3.	2.	1.	1.	1.	1.		34.
500 à 700........	5.	29.	3.	2.	1.	1.	1.	1.		43.

CCCXXVIII. Dans les établissemens où les localités rendraient le service difficile et impraticable avec un infirmier pour douze malades, le commissaire des guerres, après s'être convaincu de la nécessité de faire une exception, et avoir pris par écrit l'avis de l'économe, des officiers de santé, et du conseil d'administration, proposera au commissaire ordonnateur une augmentation déterminée d'infirmiers, pour être par lui autorisée s'il la croit nécessaire. Dans ce cas, l'économe joindra copie de son autorisation aux états de dépense, à peine de radiation.

CCCXXIX. Dans le cas où le service exigerait une augmentation d'employés, le directoire de l'armée en informera le directoire central par un rapport motivé, d'après lequel ce dernier proposera au ministre les nominations qui seront jugées nécessaires.

CCCXXX. Les nominations ou promotions que les directoires particuliers ou les conseils d'administration croiraient devoir faire par urgence, ne seront que provisoires, et seront soumises au directoire central, qui en rendra compte au ministre pour être approuvées ou annullées.

CCCXXXI. Les économes n'entretiendront jamais de servans sous le nom de fendeurs de bois, garçons de bureau, d'appareils, et commissionnaires : les ouvrages pour lesquels il sera indispensable d'employer accidentellement des ouvriers, seront faits et payés à la journée.

CCCXXXII. Lorsque les circonstances exigeront qu'il soit pris des buandières et blanchisseuses, et des couturières pour réparer le linge, elles seront payées à la journée, sans nourriture, au prix courant des communes, qui sera réglé par le conseil d'administration, de concert avec le commissaire des guerres.

Section XXVIII.

Des fonctions et des devoirs des économes et des employés dans les hôpitaux militaires.

CCCXXXIII. Conformément aux dispositions de l'article XII de l'arrêté des Consuls du 4 germinal an VIII, les économes des hôpitaux militaires seront seuls comptables et responsables de tous les effets, linges, ustensiles et fournitures qui composent l'ameublement de l'hôpital; des denrées et objets de consommation; enfin des deniers qui leur seront confiés pour être employés aux besoins et charges du service.

CCCXXXIV. Les économes des hôpitaux permanens s'adresseront, pour tous leurs besoins soit en deniers, soit en fournitures ou denrées, au conseil d'administration de l'hôpital.

Ils auront soin, en lui envoyant l'état de leur situation, d'y joindre l'aperçu des consommations présumées, et le relevé de celles effectives du dernier mois, pour les objets compris dans l'état des demandes; ils accompagneront ces états, du mouvement décadaire de l'hôpital.

CCCXXXV. Les économes des hôpitaux des armées adresseront leurs demandes, dans la forme prescrite par l'article précédent, au chef de service qui se trouvera le plus à leur portée, lequel les soumettra au directoire, qui, après examen, ordonnera les dispositions nécessaires.

CCCXXXVI. Les économes seront tenus de faire fournir les alimens et les boissons tels que le réglement le prescrit. Il est urgent de faire entretenir avec le plus grand soin la propreté dans toutes les parties de l'hôpital.

CCCXXXVII. Si, par des causes imprévues, il arrivait qu'il manquât à l'hôpital quelque objet nécessaire au traitement des malades, l'économe en préviendra sur-le-champ le conseil d'administration, pour que, vu l'urgence, il ordonne ce qui conviendra.

A défaut de conseil d'administration dans les hôpitaux

des armées, les économes s'adresseront en pareil cas au commissaire des guerres chargé de la police.

CCCXXXVIII. Il est expressément recommandé aux économes de tenir à jour toutes les parties de leur comptabilité, de même que le journal des recettes et dépenses en deniers, et de remettre à leurs chefs les comptes et pièces de leur gestion, aux époques qui leur seront indiquées : ceux qui seraient reconnus coupables de négligence à cet égard, seront suspendus de leurs fonctions.

CCCXXXIX. Les fonctions des commis aux entrées, et des autres préposés au service administratif, étant les conséquences nécessaires des dispositions du réglement, ils seront tenus de s'y conformer ponctuellement, ainsi qu'aux instructions qui leur seront données par leurs chefs, sur les détails omis ou non prévus dans le présent réglement.

CCCXL. Les différens employés dans un hôpital seront aux ordres et à la disposition de l'économe, et graduellement responsables envers lui. Il pourra, indépendamment des fonctions particulières qui leur seront désignées, les occuper au bureau, et à toutes les opérations que la surveillance du service ou les détails de la comptabilité exigeront.

CCCXLI. Les directoires aux armées, les conseils d'administration et les employés supérieurs, pourront, en cas d'urgence, confier momentanément à des employés et à des infirmiers les fonctions d'un autre grade que le leur, sans que ceux-ci puissent prétendre au traitement qui y est attribué, sauf à prendre en considération leurs services pour leur procurer de l'avancement.

Section XXIX.

Des magasins généraux d'approvisionnement, des fournitures d'effets et denrées, et de leur réception.

CCCXLII. Il sera établi sur les derrières de l'armée, et à portée d'elle, un magasin général dans lequel sera

déposé le fonds de l'approvisionnement des hôpitaux ambulans.

CCCXLIII. Dans le cas où l'armée et ses divisions occuperaient une étendue de pays trop considérable pour que l'on pût tirer facilement des secours de ce magasin général et les répartir sur tous les points avec la célérité que le service exige, il sera formé, en arrière des ailes de l'armée, des dépôts munis, dans une proportion convenable, de tous les objets d'approvisionnement.

CCCXLIV. Chaque hôpital sera également pourvu de tous les effets, ustensiles et denrées nécessaires à son service, et dans la proportion indiquée par la section III (titre I.er du présent réglement).

CCCXLV. Les magasins désignés dans l'article CCCXLII seront confiés à un garde-magasin général comptable et responsable envers les directoires d'armée et le directoire central.

Les dépôts seront gérés par des gardes-magasins principaux, sous la surveillance du directoire de l'armée et de l'agent qui le représente, ainsi que sous celle du garde-magasin général, et responsables comme ce dernier.

CCCXLVI. En ce qui concerne le coucher des malades, on se conformera exactement à ce qui est prescrit par la section III (titre I.er du présent réglement).

CCCXLVII. On observera strictement, pour les fournitures de couchers indiquées dans la section rappelée par l'article précédent, les dimensions et proportions ci-après; savoir:

Pour les couchers à deux places, la couchette, élevée de terre d'environ quatre décimètres [quinze à dix-huit pouces], aura un mètre trente centimètres [quatre pieds] de largeur, sur un mètre quatre-vingt-quatorze centimètres [six pieds] de longueur dans œuvre.

La paillasse et les matelas auront les mêmes longueur et largeur. La paillasse sera remplie de vingt-cinq à vingt-neuf kilogrammes [cinquante à soixante livres] de paille.

Le matelas sera rempli de moitié laine et moitié crin, ou de deux tiers de l'un et un tiers de l'autre.

Le traversin aura un mètre vingt-neuf centimètres [quatre pieds] de long, sur neuf décimètres sept centimètres [trois pieds] de pourtour, rempli de laine et crin comme les matelas; et ils peseront ensemble dix-sept kilogrammes [trente-cinq livres].

Les couvertures seront de laine; elles auront deux mètres soixante centimètres [huit pieds] de longueur, sur deux mètres onze centimètres [six pieds et demi] de largeur.

Pour le coucher à une place, la couchette, le matelas et la paillasse auront la même longueur que ci-dessus, et seront réduits à neuf décimètres sept centimètres [trois pieds] de largeur.

Le traversin aura neuf décimètres sept centimètres [trois pieds] de pourtour, et autant de longueur; sa composition sera la même que ci-dessus; et ils peseront ensemble quatorze kilogrammes soixante-sept centigrammes [trente livres].

Les couvertures auront deux mètres cinquante-quatre à cinquante-neuf centimètres [sept pieds huit à dix pouces] de longueur, sur un mètre soixante-dix-huit centimètres [cinq pieds et demi] de largeur.

Les dimensions prescrites pour les couvertures ne sont pas de rigueur, vu les circonstances et pour le temps que durera la guerre; mais le directoire central est tenu de s'en éloigner le moins possible.

CCCXLVIII. Dans le cas où le directoire central ne pourrait se procurer des couvertures en quantité suffisante pour subvenir aux besoins des hôpitaux, il est autorisé à y suppléer par des courtepointes qu'il fera fabriquer à cet effet.

CCCXLIX. Les linges et effets accessoires au coucher et au vêtement des malades, seront, quant aux quantités, établis dans les proportions indiquées, et ils auront les dimensions ci-après; savoir:

Les draps pour les lits à deux places auront deux mètres neuf décimètres environ [neuf pieds un à deux pouces] de longueur, sur deux mètres onze à seize centimètres [six pieds six à huit pouces] de largeur.

Les chemises auront, pour le pan de derrière, à partir du collet, un mètre deux centimètres [trois pieds deux pouces] de longueur; pour le pan de devant, aussi à partir du collet, quatre-vingt-onze centimètres [deux pieds dix pouces] de longueur.

L'ouverture des pans sera de trente-sept centimètres [quatorze pouces] de hauteur, mesurée sur le pan de devant.

Les manches auront cinquante-quatre centimètres [vingt pouces] de longueur, non compris le gousset, sur vingt-un à vingt quatre-centimètres [huit à neuf pouces] de largeur, sans amadis ni poignet.

Le collet aura six centimètres [deux pouces et demi] de hauteur, sur trente-sept centimètres [quatorze pouces] de longueur.

Sur la totalité des chemises, il y en aura un vingt-cinquième pour les blessés, lesquelles seront ouvertes du haut en bas sur le devant et toute la longueur des manches; il y sera adapté le nombre de cordons nécessaire pour les fermer.

Les coiffes de bonnet seront coupées en rond par-le haut; elles auront, étant pliées, quarante-deux centimètres [seize pouces] de hauteur, sur trente-deux centimètres [un pied] de largeur.

Les draps, chemises et coiffes seront de bonne toile de chanvre ou de lin, dite de ménage, bien frappée, et, autant que faire se pourra, demi-blanche.

Le linge destiné au traitement des vénériens et des galeux pourra être de toile écrue, et d'une qualité plus commune.

Les bonnets seront de tricot; ils auront vingt-sept centimètres [dix pouces] de hauteur, sur trente-deux centimètres [douze pouces] de largeur.

La capote sera de drap commun ou de tiretaine : sa longueur, non compris le collet, d'environ un mètre trente centimètres [quatre pieds]; elle aura, pour le bas, à-peu-près deux mètres vingt-sept centimètres [sept pieds] d'ampleur, et un mètre trente centimètres [quatre pieds] vers le milieu du corps. Le collet aura cinq centimètres [deux pouces] de hauteur, sur quarante-huit centimètres [dix-huit pouces] de longueur.

CCCL. Il y aura dans les hôpitaux de galeux et de vénériens, des pantalons de toile grise; le rechange en sera fait tous les dix jours.

CCCLI. Les tabliers destinés aux chirurgiens seront de toile blanche; ceux des pharmaciens, de toile teinte; et ceux des infirmiers, de toile écrue. Il y aura, pour chaque médecin et chirurgien en chef, un sarrau de toile brune.

CCCLII. Les vestes et pantalons destinés aux infirmiers, seront, pour l'été, de coutil écru ou de toile forte et bien tissue: pour l'hiver, ces vêtemens seront d'étoffes de laine connues sous la dénomination de calmouc et de tiretaine.

Il sera adapté aux vestes un collet uniforme, afin que ces infirmiers soient facilement reconnus.

CCCLIII. Dorénavant, tous les remplacemens qui s'opéreront dans les hôpitaux permanens, se feront en lits à une place.

CCCLIV. Indépendamment des effets désignés dans les articles précédens, les magasins seront pourvus, dans une proportion convenable, de tous les ustensiles nécessaires au service des malades, et indiqués dans la section III (titre I.er). Il y aura des brancards en nombre suffisant et conformes aux modèles envoyés aux armées; le magasin sera, en outre, pourvu de tous les ustensile dont on peut prévoir l'usage dans des cas extraordinaires.

CCCLV. Les magasins généraux et les dépôts seront également approvisionnés en denrées, comestibles,

liquides et combustibles, et autres effets à l'usage des hôpitaux militaires, ainsi qu'en médicamens. Les remplacemens en tout genre se feront à mesure des consommations.

CCCLVI. Tous ces objets devant être de bonne qualité; dès l'instant et avant leur réception, le commissaire des guerres les fera examiner en sa présence par des experts qu'il nommera à cet effet: tout ce qui aura été reconnu défectueux sera rejeté, et ne pourra, sous aucun prétexte, être employé au service de l'hôpital. Les officiers de santé seront appelés à la dégustation des boissons et comestibles, ainsi qu'à l'examen des linges à pansement, charpie, médicamens, &c.

CCCLVII. Le magasin général ainsi que les dépôts et magasins particuliers, seront tenus dans le plus grand ordre. Tous les ballots, tonneaux, caisses renfermant des effets, des ustensiles ou denrées, seront numérotés et étiquetés.

CCCLVIII. Les ustensiles de cuisine seront fréquemment visités, pour s'assurer de leur état, faire renouveler l'étamage, et pourvoir aux réparations et remplacemens. Il en sera de même à l'égard des ustensiles de fer-blanc, afin de les garantir de la rouille, et de les faire entretenir dans l'état de propreté convenable.

CCCLIX. Les gardes-magasins porteront la plus grande attention aux caves et dépôts de liquides de toute espèce, afin de prévenir les avaries, et d'y porter un prompt remède. Ils veilleront à ce que les pièces de vin soient exactement remplies et les futailles bien entretenues.

CCCLX. Ils tiendront, avec la plus grande exactitude, les registres d'entrée et de sortie de tous les objets qui leur seront confiés; ils enverront, au moins deux fois par mois, au directoire de l'armée; dans l'arrondissement de laquelle seront situés les magasins ou au directoire central s'ils sont dans l'intérieur, l'état de mouvement et de situation de leur magasin, afin qu'il soit toujours pourvu à temps aux remplacemens nécessaires.

CCCLXI. Lorsqu'un garde-magasin recevra un envoi ou une livraison d'effets et de denrées; avant d'en charger ses registres, il préviendra le commissaire des guerres, qui procédera de suite, et à vue de la feuille d'envoi ou de la facture, à la vérification des quantités et qualités des objets arrivés.

Il sera dressé procès-verbal de cette vérification, afin qu'en cas de déficit ou de défectuosité, on puisse en découvrir la cause et en faire supporter le préjudice à qui de droit.

CCCLXII. Aussitôt la clôture du procès-verbal de la réception, le garde-magasin inscrira sur son livre les objets reçus, et en adressera, dans les vingt-quatre heures, son récépissé, visé du commissaire des guerres, au garde-magasin ou autre qui en aura fait l'envoi. Il accompagnera son récépissé d'une expédition du procès-verbal susdit, dont il sera également envoyé un double au directoire de l'armée, ou au directoire central si le magasin est dans l'intérieur.

CCCLXIII. Il est expressément défendu aux gardes-magasins généraux et principaux, de faire aucune livraison ni expédition aux conseils d'administration, aux économes ou autres préposés du service des hôpitaux, à moins que leur demande ne soit revêtue ou accompagnée de l'autorisation soit du directoire central, soit du directoire de l'armée, ou de l'agent de la division d'ambulance, suivant le cas.

SECTION XXX.

De l'équipage d'ambulance, et des voitures d'évacuation.

CCCLXIV. Les équipages d'ambulance seront administrés sous les ordres et la surveillance du directoire central des hôpitaux militaires, d'après le mode qui sera déterminé par le ministre de la guerre.

CCCLXV. Avant l'ouverture de la campagne, il sera mis à la disposition du service des hôpitaux, le nombre d'hommes, de chevaux, mulets et caissons

reconnu nécessaire pour le service des ambulances, et le directoire central en fera la répartition sur les armées, dans la proportion qui sera réglée pour chacune d'elles.

CCCLXVI. L'équipage d'ambulance à l'armée sera sous la surveillance et aux ordres du directoire, et il sera administré par des agens et préposés particulièrement affectés à ce service.

CCCLXVII. Les caissons à quatre roues seront attelés de quatre chevaux ; ceux à deux roues le seront de trois chevaux : ils seront tous recouverts d'une toile enduite.

Les mots *Hôpital ambulant*, n.° sur le berceau chaque caisson.

CCCLXVIII. La force de l'équipage d'ambulance sera calculée et établie d'après celle de l'armée, à raison de deux caissons par mille hommes sous les armes.

CCCLXIX. Indépendamment des chevaux d'attelage et de rechange, il sera entretenu le nombre de chevaux de selle nécessaire à l'organisation et au service de l'ambulance volante qui devra être formée à la suite de chaque armée, conformément à l'article XXIX (section IV, titre I.er du présent réglement).

CCCLXX. Cet équipage, ainsi composé, demeurera exclusivement affecté aux hôpitaux ambulans.

Il est expressément défendu aux commissaires des guerres et autres agens de la République, quels que soient leur grade et leurs pouvoirs, d'en rien distraire pour une destination étrangère à ce service ; les caissons ne seront même employés au transport des malades que dans les cas d'absolue nécessité.

CCCLXXI. Il sera affecté un caisson attelé de quatre chevaux, au transport des bureaux du directoire de l'armée, et un au service des officiers de santé en chef.

CCCLXXII. Indépendamment de l'équipage susdit, il sera réuni au corps ou parc d'ambulance, à la diligence du commissaire ordonnateur, un certain nombre de voitures à loyer ou de réquisition, lesquelles seront destinées

au transport des malades et blessés des dépôts d'ambulance sur les hôpitaux de première et seconde ligne.

CCCLXXIII. Le directoire des hôpitaux de l'armée sera chargé de faire disposer une quantité suffisante de cerceaux et de toiles d'un tissu ferme et serré, pour couvrir, lors des évacuations, ces voitures, qui devront être aussi garnies amplement de paille fraîche et non foulée.

CCCLXXIV. Les chefs de l'équipage exécuteront et feront exécuter par leurs subordonnés les ordres qui leur seront donnés par le directoire ou les agens supérieurs des hôpitaux, relativement à la marche et aux mouvemens de l'équipage.

CCCLXXV. Les capitaines, conducteurs et autres chefs de l'équipage, se tiendront toujours à portée de recevoir les ordres et instructions du directoire de l'armée, ou de l'économe de l'ambulance. Ils veilleront à ce que les charretiers soient à leur poste, et à ce que les caissons soient en état de partir au premier avis.

CCCLXXVI. Ils feront chaque jour la visite des chevaux, caissons et harnais : ils feront exécuter sur-le-champ les réparations nécessaires, et seront personnellement responsables des retards qui pourraient être attribués à leur négligence.

CCCLXXVII. Lorsqu'un employé des équipages aura donné lieu à des plaintes fondées sur les faits relatifs au service, il sera dénoncé par ses chefs immédiats au commissaire ordonnateur, qui pourra, selon l'exigence du cas, prononcer sa suspension ou sa destitution. Il en sera de suite donné avis au directoire de l'armée, qui pourvoira sans délai au remplacement du préposé.

CCCLXXVIII. Les capitaines et conducteurs sont responsables envers les préposés de l'administration des hôpitaux, des objets renfermés dans les caissons dont on leur aura confié la conduite ; ils ne pourront sous aucun prétexte, après le chargement fait et les feuilles arrêtées, transporter aucun objet d'un caisson dans un autre.

CCCLXXIX. L'état de chargement sera fait triple; il indiquera par quantités et espèces, sous le numéro de chaque caisson, les objets qui y seront chargés. Une expédition de cet état restera au garde-magasin pour sa décharge; le chef de l'équipage mettra son reçu au bas; la seconde sera remise au garde-magasin de l'ambulance; la troisième sera pour le chef de l'équipege, et elle sera déchargée par le préposé des hôpitaux auquel il fera la remise des objets qui y seront détaillés. Ces états certifiés seront visés par le commissaire des guerres.

CCCLXXX. Les économes d'ambulance se trouveront, autant que faire se pourra, au chargement et au déchargement des caissons, pour les faire disposer de manière que rien ne s'endommage. Ils donneront la plus grande attention à la rédaction des états mentionnés dans l'article précédent, et à ce que les numéros de chaque caisson correspondent exactement à ceux des états où les objets sont nominativement désignés.

SECTION XXXI.

Des établissemens accessoires au service des hôpitaux ambulans.

DU COUTELIER.

CCCLXXXI. A l'effet de prévenir les moindres négligences dans l'entretien des instrumens de chirurgie, et d'obvier à toutes les difficultés qui peuvent s'y opposer, il sera établi à la suite de l'hôpital ambulant un coutelier expert en cette partie.

CCCLXXXII. Il sera chargé des réparations des caisses d'instrumens de chirurgie, et du soin de les entretenir dans le meilleur état de propreté et de service.

CCCLXXXIII. Il suivra le corps d'ambulance; il sera sous la surveillance du directoire de l'armée; et quant à son travail, il recevra les ordres immédiats du chirurgien en chef.

CCCLXXXIV. Le coutelier accompagnera toujours

le caisson qui sera chargé de ses outils et des caisses d'instrumens de chirurgie en réparation.

CCCLXXXV. Dans le cas où le maître coutelier ne pourrait seul subvenir, avec la célérité convenable, au travail qui le concerne, le directoire de l'armée lui fera adjoindre un ouvrier sur la demande du chirurgien en chef.

DU CHAUDRONNIER-FERBLANTIER.

CCCLXXXVI. Il y aura, à la suite de l'ambulance, un chaudronnier-ferblantier pour l'entretien de tous les ustensiles de pharmacie et de cuisine, ainsi que des vases destinés au service des malades.

CCCLXXXVII. Il prendra, sur tous les objets de son travail, des ordres de l'économe de l'ambulance, sous la direction et surveillance du directoire de l'armée.

CCCLXXXVIII. Il sera fourni à cet ouvrier les outils et matières qui lui seront nécessaires tant pour l'étamage que pour les réparations des ustensiles de cuivre et de fer-blanc.

DU TONNELIER.

CCCLXXXIX. Il sera aussi attaché un tonnelier à la suite de l'ambulance.

CCCXC. Il sera chargé de veiller à la conservation des liquides, à l'entretien des futailles, ainsi que des ustensiles de buanderie et de boulangerie.

DE LA BUANDERIE.

CCCXCI. Pour que les draps, chemises et autres linges à l'usage des malades et blessés, soient toujours entretenus dans l'état de propreté nécessaire, il sera formé, à portée du corps de l'ambulance, un établissement de blanchisseurs ou blanchisseuses en nombre convenable.

CCCXCII. Ce service sera dirigé immédiatement par

un blanchisseur en chef, qui répondra de tout, et sera aux ordres du garde-magasin et de l'économe.

CCCXCIII. Les officiers de santé en chef visiteront souvent cet établissement, pour s'assurer de la régularité de cette partie essentielle du service, et surveiller l'exacte séparation des objets qui ne doivent pas être lessivés ensemble.

CCCXCIV. Lesdits officiers de santé avertiront l'économe des abus qu'ils auraient observés ; et dans le cas où il n'aurait pas été fait droit à leurs représentations, ils en rendront compte au commissaire des guerres.

DE LA BOULANGERIE.

CCCXCV. Sur les grains ou farines destinés au service des hôpitaux, il sera prélevé, d'après l'autorisation du directoire de l'armée, une portion qui sera affectée à l'ambulance, afin de s'assurer des moyens d'avoir du pain pour les malades ou blessés par-tout où elle s'arrêtera.

CCCXCVI. Cette farine, préparée de la manière convenable pour la qualité de pain prescrite, sera emballée avec soin, afin de supporter les transports sans inconvéniens.

CCCXCVII. Le directoire de l'armée prescrira toutes les dispositions nécessaires pour qu'il y ait toujours à la suite de l'ambulance un nombre convenable de boulangers. Ils formeront une division commandée par un brigadier, sous la responsabilité duquel seront les farines, dont il sera comptable envers l'économe de l'ambulance, ainsi que des effets et ustensiles qui lui auront été confiés.

CCCXCVIII. Les ustensiles nécessaires à la manutention des farines et à la fabrication du pain, seront, ainsi que les farines, chargés sur des caissons d'ambulance que les boulangers seront tenus d'accompagner.

SECTION

SECTION XXXII.

De l'acquittement des dépenses.

CCCXCIX. Toutes les dépenses du service des hôpitaux militaires, seront acquittées par la trésorerie nationale, sur les ordonnances du ministre de la guerre.

CD. Pour faciliter au directoire central la répartition et l'envoi des fonds qu'il sera dans le cas de mettre à la disposition soit des directoires de l'armée, soit des conseils d'administration, soit des administrateurs des hôpitaux civils, il fera dresser tous les mois des états de distribution, qu'il soumettra à l'approbation du ministre.

Ces états seront ensuite annexés aux ordonnances du ministre, afin de mettre la trésorerie à portée de faire expédier des mandats particuliers sur les payeurs de l'armée et sur ceux des départemens, soit au profit desdits directoires de l'armée, soit à celui des conseils d'administration, soit enfin à celui des hospices civils.

CDI. A l'égard des sommes provenant de la retenue exercée sur la solde des militaires pendant leur séjour à l'hôpital conformément à la loi du 26 fructidor an VII, les payeurs les remettront à l'économe de chaque hôpital militaire, ou aux administrateurs des hôpitaux civils, sur la représentation des feuilles de retenue, vérifiées et arrêtées par le commissaire des guerres qui aura la police de l'hôpital.

Les directoires de l'armée, les conseils d'administration des hôpitaux militaires, et les administrateurs des hôpitaux civils, adresseront, tous les mois, au directoire central, le double des feuilles de retenue, pour les mettre à portée d'en faire la compensation lors de la distribution des fonds à affecter au service de ces hôpitaux, conformément aux dispositions de l'article X de l'arrêté des Consuls du 4 germinal.

CDII. Avant le 15 de chaque mois, les économes des hôpitaux à la suite de l'armée ou dans les divisions,

feront parvenir, les premiers aux directoires des armées, les derniers aux conseils d'administration, l'état par aperçu des fonds présumés nécessaires pour acquitter les dépenses du mois courant : cet état sera certifié et visé par le commissaire des guerres ; ils y joindront l'état des recettes et dépenses effectives en deniers du mois précédent, arrêté dans les formes prescrites, le mouvement de l'hôpital pendant ledit mois, ainsi que les états nominatifs des employés et infirmiers attachés à l'hôpital qu'ils dirigent.

CDIII. Aussitôt après la réunion de ces états et pièces, et après les avoir vérifiés, les directoires d'armée, et, dans l'intérieur, les conseils d'administration, en dresseront un état général qu'ils certifieront, et qu'ils feront de suite parvenir au directoire central avec toutes les pièces justificatives à l'appui.

CDIV. Tous les états de demande de fonds qui ne seraient pas revêtus de ces formalités, et auxquels on aurait négligé de joindre toutes les pièces indiquées par les articles précédens, seront rejetés ; et les économes répondront personnellement des inconvéniens du retard qui pourrait résulter du défaut de versement de fonds.

CDV. A mesure de l'arrivée des états susdits dans les bureaux du directoire central, il en fera former un bordereau certifié par lui, pour le tout être mis sous les yeux du ministre, qui en autorisera le paiement s'il y a lieu.

CDVI. Quant aux dépenses à acquitter à Paris, le directoire central fera dresser, d'après ses commandes et les états présumés, l'état par aperçu des sommes qui lui seront nécessaires pour acquitter les dépenses d'un mois : lorsque cet état aura été examiné et approuvé par le ministre, le montant en sera acquitté progressivement sur le fonds mis à la disposition du directoire central.

SECTION XXXIII.

De la comptabilité.

CDVII. Pour l'exécution des dispositions prescrites,

relativement à la comptabilité, par les articles I.er, II, III, IV et VI du présent titre, les comptables seront tenus de faire parvenir, à la fin de chaque mois, au directoire de l'armée ou au conseil d'administration auquel ils se trouveront subordonnés, les bordereaux, états et pièces justificatives des recettes et dépenses tant en deniers qu'en effets et denrées de consommation, drogues et médicamens, ainsi que les états de journées.

CDVIII. Les directoires près des armées, et les conseils d'administration, recueilleront les comptabilités en tout genre, des comptables qui leur seront subordonnés, à mesure de la rentrée des pièces, bordereaux et états ; ils en feront faire, sous leurs yeux, une vérification sommaire, dont le but sera,

1.° De s'assurer de l'exactitude des recettes ;

2.° De vérifier si les comptabilités sont complètes, et si les états et pièces sont revêtus de toutes les formalités nécessaires ;

3.° De rédiger les observations auxquelles pourraient donner lieu des circonstances particulières ou locales, et la comparaison des dépenses et des consommations avec le nombre des journées d'hôpital.

Cet examen fait, il sera dressé un bordereau des comptes et pièces, pour le tout être de suite envoyé par les voies les plus sûres au directoire central, qui fera procéder à la vérification définitive et à l'apurement desdites comptabilités.

CDIX. Le directoire central adressera aux directoires près des armées et aux conseils d'administration, les instructions et les modèles nécessaires pour établir, dans la comptabilité, l'uniformité, l'ensemble et la clarté dont ce travail est susceptible.

CDX. Aussitôt après la réunion de toutes les comptabilités, le directoire central en composera un tableau général, dans lequel seront indiquées les dépenses et les consommations de toute nature, dont le montant, évalué en numéraire d'après les factures d'achat et comparé au

nombre des malades traités dans les hôpitaux, indiquera le prix auquel sera revenue la journée dans chaque établissement, et ensuite le prix commun sur la totalité des hôpitaux.

Ce tableau, joint au compte raisonné des fonds distribués d'après l'avis du directoire central, ainsi que des dispositions par lui faites pour assurer et améliorer le service, composeront le compte qui, conformément à l'arrêté des Consuls du 4 germinal an VIII, doit être, chaque année, rendu public par la voie de l'impression.

CDXI. Les commissaires ordonnateurs aux armées et dans les divisions, sont autorisés à faire mettre en état d'arrestation les comptables qui leur seront dénoncés par le directoire central, les directoires près les armées, les conseils d'administration dans les divisions de l'intérieur, ou autres chefs de service, pour être en retard de rendre leurs comptes, ou de reproduire et acquitter leurs débets, soit en nature, soit en deniers.

CDXII. Les états, bordereaux, quittances et pièces justificatives des comptes des préposés de l'administration, de quelque grade qu'ils soient, ne seront admissibles qu'autant qu'ils seront vérifiés et visés par le commissaire des guerres ayant la police de l'hôpital ou des hôpitaux de la division.

CDXIII. L'instruction publiée par ordre du ministre de la guerre, le 28 prairial an VII, relativement à la comptabilité des pharmacies des hôpitaux, continuera d'être mise à exécution. Il est expressément recommandé aux pharmaciens en chef de s'y conformer: les directoires et conseils d'administration y tiendront la main.

SECTION XXXIV.

Des appointemens, traitemens et rations fixés aux officiers de santé et employés d'administration.

CDXIV. La solde des officiers de santé de tout grade continuera d'être acquittée conformément à la loi du 11 frimaire an VI.

CDXV. Les appointemens des employés de l'administration seront réglés par le ministre de la guerre, d'après les états d'organisation qui lui seront présentés par le directoire central; mais quant aux attributions de logement et de rations, lesdits employés seront assimilés aux officiers de santé, suivant la correspondance des grades.

CDXVI. Dans tous les hôpitaux et à l'ambulance, il sera dressé, le 1.er de chaque mois, des états d'émargement des employés et des infirmiers, pour le paiement des appointemens du mois échu: ces états, certifiés de l'économe, seront soumis à l'examen du commissaire des guerres, qui les arrêtera, pour le paiement en être autorisé par le directoire de l'armée.

CDXVII. Lorsqu'un officier de santé ou un employé, de quelque grade que ce soit, quittera une division ou un hôpital pour passer dans un autre, il se munira d'un certificat de cessation de paiement, qui constatera qu'il a été payé jusqu'à telle époque, et qu'à compter de telle autre les appointemens sont dus; à défaut de cette précaution, il ne sera payé, dans la division dans laquelle il passera, qu'à compter du jour où il aura repris ses fonctions.

CDXVIII. Les officiers de santé et les employés faisant le service dans les hôpitaux provisoirement établis dans l'intérieur et situés dans l'arrondissement de l'armée, ne pourront prétendre au traitement de guerre, qu'autant qu'ils auraient été détachés de l'ambulance pour servir dans ces établissemens.

CDXIX. Lorsque les officiers de santé en chef des armées, et les chefs d'administration, feront des inspections et des courses extraordinaires pour des objets de service d'après les ordres qu'ils auront reçus à cet effet des ordonnateurs en chef, ils seront remboursés de leurs frais de route, et indemnisés des dépenses extraordinaires et indispensables, sur des états présentés par eux, et ordonnancés par le commissaire ordonnateur.

CDXX. En cas de réforme ou de licenciement

d'officiers de santé et d'employés pour cause de suppression d'hôpitaux, ou pour excédant du nombre fixé par le présent réglement, il leur sera payé un mois d'appointemens, à compter du jour du licenciement, et ils recevront en outre l'étape pour rejoindre leurs foyers.

CDXXI. Les couteliers, chaudronniers, ferblantiers, tonneliers, blanchisseurs, boulangers, attachés aux ambulances en exécution de la section XXXI (présent titre), recevront la ration en pain, viande et accessoires, comme les soldats, sur les bons de l'économe de leur division, visés du commissaire des guerres ayant la police de l'ambulance. Quant à leurs traitemens ou gages, ils seront réglés par le commissaire ordonnateur en chef, suivant les circonstances et les localités, d'après l'avis et sur la proposition du directoire de l'armée.

SECTION XXXV.

Du traitement des membres des directoires et des conseils d'administration.

CDXXII. Le traitement alloué aux membres composant le directoire central, les directoires d'armée et les conseils d'administration, est fixé ainsi qu'il suit;

SAVOIR:

	PAR MOIS.	PAR AN.
A chacun des membres du directoire central.	833f 33c	10,000f
A chacun des membres des directoires des armées.....	666. 66.	8,000.
A chacun des membres du conseil d'administration de l'hôpital permanent de la place de Paris.....	416. 65.	5,000.
A chacun des membres des conseils d'administration des hôpitaux de première classe..	333. 32.	4,000.
A ceux des hôpitaux de seconde classe.....	300. 00.	3,600.
Enfin à ceux des hôpitaux de troisième classe.	250. 00.	3,000.

CDXXIII. Tous les traitemens mentionnés dans l'article ci-dessus, seront payés, comme la solde, sur les états de revue dressés dans la forme indiquée par la circulaire du ministre en date du 15 floréal dernier.

CDXXIV. Il sera, en outre, accordé aux membres des directoires aux armées, les mêmes attributions de logement et de rations dont jouissent les officiers de santé en chef, et ils seront remboursés de leurs frais de route, conformément aux dispositions de l'art. CDXIX, de la section précédente.

Classement des hôpitaux militaires.

1.re CLASSE.

Paris,
Franciade,
Lille,
Metz,
Strasbourg,
Toulon.

2.e CLASSE.

Douai,
Luxembourg,
Landau,
Besançon,
Nice,
Grenoble,
Rennes,
Brest,
Bourbonne,
Barége,
Bruxelles.

3.e CLASSE.

Maestricht,
Liége,
Colmar,
Calais,
Mézières,
Thionville,
Mons,
Briançon,
Perpignan,
La Rochelle,
Ile-de-Ré,
Ile-d'Oléron,
Belle-Ile-en-mer.

TITRE IV.

De la police des hôpitaux militaires.

SECTION XXXVI.

De la police supérieure des hôpitaux militaires.

CDXXV. Les commissaires ordonnateurs des guerres auront, sous l'autorité du ministre de la guerre et des commissaires ordonnateurs en chef de l'armée, la police supérieure des hôpitaux militaires établis dans leurs divisions : ils les visiteront aussi souvent qu'ils le pourront, et toutes les fois que les circonstances l'exigeront. Ils veilleront à ce que les commissaires des guerres chargés de la police de chaque hôpital, remplissent exactement les fonctions qui leur sont attribuées, et leur donneront, à cet effet, les instructions convenables, après néanmoins qu'elles auront été approuvées par le ministre de la guerre, auquel ils doivent les soumettre.

CDXXVI. Les commissaires ordonnateurs confieront la police particulière des hôpitaux à ceux des commissaires des guerres de leur division dont l'expérience et les talens leur seront bien connus.

CDXXVII. Les commandans temporaires de place chargeront, chaque jour, de visiter l'hôpital, un ou plusieurs officiers de la garnison, lesquels seront tenus d'assister à la distribution des alimens, le matin et le soir.

CDXXVIII. Ces officiers feront la dégustation du bouillon, du vin et des autres alimens, mais en présence de l'économe ou d'un des employés; ils inscriront et signeront sur un registre coté et paraphé par le commissaire des guerres, les observations qu'ils auront à faire sur les diverses fournitures, afin que le commissaire des guerres puisse en prendre connaissance et y faire droit s'il y a lieu. Ils rendront compte au commandant temporaire, de tout ce qu'ils auront remarqué lors de leur visite.

CDXXIX. Le commandant temporaire de la place

fera lui-même des visites à l'hôpital, soit de jour, soit de nuit, toutes les fois qu'il le jugera convenable. S'il s'aperçoit de quelques abus, il en avertira le commissaire des guerres pour qu'il les fasse cesser; faute de quoi, il en rendra compte au ministre de la guerre.

SECTION XXXVII.

De la police particulière et intérieure des hôpitaux militaires.

CDXXX. Le commissaire des guerres chargé de la police d'un hôpital militaire, y fera chaque jour des visites, principalement aux heures de la distribution, pour s'assurer de la qualité des alimens, et faire droit sur les plaintes qui pourront lui être portées.

CDXXXI. Indépendamment des visites journalières que le commissaire des guerres fera dans les salles, offices et magasins de l'hôpital, il fera souvent des visites extraordinaires de jour et de nuit, et au moment où il sera le moins attendu, pour s'assurer par lui-même de la régularité du service.

CDXXXII. Le commissaire des guerres requerra des commandans militaires, le nombre d'hommes nécessaire pour la garde des hôpitaux ou l'escorte des évacuations : cette garde, dont il indiquera la force, sera à ses ordres, et le commandant recevra de lui la consigne.

CDXXXIII. Tous les officiers de santé et employés de chaque hôpital, indépendamment de la subordination à laquelle ils sont tenus à l'égard de leurs chefs respectifs, seront sous la police du commissaire des guerres, auquel ils doivent compte de leur conduite pour tout ce qui est relatif au service.

CDXXXIV. Le commissaire des guerres tiendra la main à ce que les visites, les pansemens, les distributions, se fassent exactement et aux heures fixées. Il veillera, au surplus, à ce que les officiers de santé et employés exécutent ce qui leur est prescrit par le présent réglement; et en cas de négligence ou autres délits, il en instruira le

commissaire ordonnateur de la division, qui procédera contre les coupables, ainsi qu'il est prescrit pour les cas qui ont été prévus; il pourra même, si le cas est grave, les suspendre de leurs fonctions jusqu'à nouvel ordre.

CDXXXV. Tout militaire malade ou blessé sera également sous les ordres du commissaire des guerres, dans tous les cas qui intéresseront le service et la police des hôpitaux.

CDXXXVI. Indépendamment de la garde de l'hôpital, il sera commandé, chaque jour, un ou deux sous-officiers de planton, qui devront assister aux pesées de la viande du matin et du soir, ainsi qu'à celle du pain, après s'être fait remettre, par l'économe, le mouvement qui indiquera la quantité de malades et d'infirmiers qui doivent participer à la consommation des alimens. Ces sous-officiers se conformeront, au surplus, à ce qui est prescrit par la section XII (titre II du présent réglement), et à ce qui pourrait leur être ordonné pour le bien du service par le commissaire des guerres.

CDXXXVII. Il est expressément défendu aux malades et blessés, d'avoir, dans les salles de l'hôpital, aucune arme, poudre à tirer, dés ou cartes à jouer, et même d'y fumer.

CDXXXVIII. Aucun malade ne pourra, sous quelque prétexte que ce soit, entrer dans les cuisines, dépenses, pharmacies et magasins de l'hôpital, les infirmiers devant toujours leur procurer ce dont ils ont besoin, d'après ce qui a été prescrit pour chacun d'eux.

CDXXXIX. Les malades observeront, envers les officiers de santé et employés, les égards et la déférence qu'ils doivent aux soins qu'ils en reçoivent.

Il est également recommandé aux officiers de santé et employés de traiter les malades avec douceur et humanité.

CDXL. Il est pareillement recommandé aux malades et blessés de traiter les infirmiers avec douceur, et de ne jamais les injurier, quand même ils leur auraient donné

lieu à quelques plaintes; auquel cas ils devront en instruire l'économe, pour qu'il rende compte au commissaire des guerres, qui punira les coupables.

CDXLI. Il sera établi, dans chaque hôpital, une chambre de discipline dans laquelle les malades qui auront commis quelque faute, seront envoyés par le commissaire des guerres, dès qu'ils pourront l'être sans danger pour leur santé. Ils y auront pour coucher un bois de lit garni seulement d'une demi-fourniture; et ils pourront, en outre, être punis par la privation des alimens et boissons qui pourraient leur être retranchés sans inconvéniens, d'après l'avis des officiers de santé.

CDXLII. Dans les hôpitaux où il n'y a ni jardin, ni espace suffisamment aéré, lorsque les officiers de santé jugeront la promenade nécessaire à quelques malades ou convalescens, ils en préviendront le commissaire des guerres, qui, sur l'état nominatif qu'ils lui en remettront, accordera la permission de sortir. Cet état, visé du commissaire des guerres, sera remis au commandant temporaire, qui désignera un nombre suffisant de sous-officiers pour accompagner ces malades pendant la promenade, empêcher qu'ils n'achètent ou ne reçoivent aucune espèce d'alimens, et pour les ramener à l'hôpital.

CDXLIII. Il ne sera permis à qui que ce soit d'entrer dans les hôpitaux pour visiter les malades, qu'en vertu d'une permission par écrit du commissaire des guerres, ou autre le représentant en son absence.

CDXLIV. En cas de violence ou de voies de fait exercées soit de la part des malades, soit par toute autre personne, le sous-officier de planton, ou le commandant du poste, prêtera main-forte et arrêtera provisoirement les perturbateurs, à la charge d'en rendre compte de suite au commissaire des guerres.

CDXLV. Dans les hôpitaux où il existe un jardin potager, il sera cultivé pour l'usage des malades; l'économe seul en aura la clef, et nul ne pourra y entrer sans sa permission.

Le jardin botanique sera sous la direction immédiate du pharmacien de première classe, qui se concertera avec les autres officiers de santé en chef, sur les espèces de plantes qu'il conviendra d'y entretenir.

CDXLVI. Le commissaire des guerres tiendra la main à ce que le nombre des officiers de santé de chaque genre, ainsi que celui des employés, infirmiers et autres personnes attachées au service, n'excède pas les proportions déterminées par le présent réglement.

CDXLVII. Les officiers de santé de tous grades et de toutes les classes, ayant droit au logement en nature ou en argent, les chefs seront logés, autant que faire se pourra, dans les hôpitaux militaires, pour y donner les secours d'urgence, et maintenir le bon ordre parmi leurs subordonnés. La désignation des logemens que devront occuper les officiers de santé, sera faite par le commissaire ordonnateur.

Lorsque les bâtimens n'offriront pas les ressources convenables, les officiers de santé seront tenus de loger le plus à proximité de l'hôpital; et dans ce cas, ils auront droit à l'indemnité fixée, laquelle sera acquittée tous les mois avec les appointemens.

Il en sera de même pour les employés qui devront jouir de la même indemnité dans les grades correspondans, conformément à l'article CDXV (section XXXIV, titre III du présent réglement).

CDXLVIII. Le commissaire des guerres sera tenu de réunir, une fois par décade, les officiers de santé en chef et l'économe de l'hôpital pour s'occuper ensemble des moyens d'amélioration du service, et de la réforme des abus qui auraient pu s'y introduire.

Il convoquera également, toutes les fois qu'il le jugera utile, une assemblée extraordinaire à laquelle seront appelés tous les officiers de santé et employés, pour entendre la lecture du réglement, et celle des instructions particulières qui auraient reçu la sanction de l'autorité supérieure.

SECTION XXXVIII.

De la propreté intérieure des hôpitaux militaires.

CDXLIX. Les infirmiers balaieront les salles trois fois par jour; savoir,

Celles des fiévreux et galeux, avant la visite du matin;

Celles des blessés et vénériens, immédiatement après la visite du matin;

Toutes indistinctement après le repas du matin et après celui du soir.

CDL. L'infirmier de première classe détachera chaque jour un ou plusieurs infirmiers ordinaires pour balayer les cours et vestibules, ainsi que les escaliers, vider les baquets, et maintenir la propreté des latrines.

CDLI. Les pots, les écuelles, et tous les ustensiles à l'usage des malades, seront rincés soir et matin avant la distribution.

CDLII. Les salles des malades seront aérées avant et après les visites et pansemens, ainsi qu'après les repas.

CDLIII. Chaque salle sera éclairée pendant la nuit; les lampes seront recouvertes d'un chapiteau auquel sera adapté un tuyau pour donner issue à la fumée.

CDLIV. Les marmites, casseroles et autres ustensiles de cuisine et de pharmacie, seront nettoyés tous les jours exactement, et rétamés aussi souvent qu'il sera jugé utile.

CDLV. Les baignoires seront rincées et lavées chaque jour, immédiatement après qu'elles auront servi aux malades.

CDLVI. Les couvertures seront aussi lavées et foulées tous les six mois, et les matelas seront rebattus aux mêmes époques, et plus souvent s'il est nécessaire.

CDLVII. La paille des paillasses sera renouvelée lorsqu'elle sera brisée, et lorsque les officiers de santé, de concert avec le commissaire des guerres chargé de la police de l'hôpital, le jugeront nécessaire. La paillasse des morts sera renouvelée.

CDLVIII. Les draps de lit seront renouvelés tous les quinze jours, et les chemises et coiffes tous les cinq jours.

Ce renouvellement habituel n'exclut pas celui que les officiers de santé pourront indiquer autant de fois qu'ils le jugeront convenable.

CDLIX. A proximité de chaque salle, il sera placé des fontaines, ou du moins des seaux et baquets garnis d'un robinet, pour donner aux malades la facilité de se laver les mains. Ces fontaines ou baquets seront nettoyés tous les matins, et l'eau en sera renouvelée ainsi que l'essuie-main.

CDLX. Dans tous les hôpitaux permanens et provisoires sédentaires, au commencement du printemps et de l'automne, on fera blanchir à l'eau de chaux les salles, cuisines, corridors corps de latrines, en observant de faire gratter les murs avant d'appliquer le nouvel enduit.

CDLXI. Pour prévenir tout accident d'incendie, les tuyaux des cheminées, fourneaux et poêles, seront nettoyés et ramonés tous les quinze jours, et même plus souvent.

CDLXII. Tous les ordres concernant les objets ci-dessus détaillés, et ceux relatifs à la température et autres moyens de salubrité, au placement des lumières et des poêles, à la division et distribution des salles, à la position des latrines et aux précautions à prendre pour prévenir l'influence de leurs émanations, seront donnés par le commissaire des guerres, après avoir consulté les officiers de santé en chef; et l'économe de l'hôpital sera spécialement chargé de leur exécution.

SECTION XXXIX.

Des portiers.

CDLXIII. Le portier établi dans chaque hôpital militaire, empêchera que personne n'y entre et n'en sorte, excepté ceux désignés dans la consigne que lui remettra le commissaire des guerres ou l'économe.

CDLXIV. Il ne permettra l'entrée d'aucune denrée, boisson, fruit, ou autres alimens qui ne seraient pas introduits par ordre de l'économe pour le service de l'hôpital, ou pour la consommation particulière des officiers de santé et employés qui y seront logés.

CDLXV. Tous les individus qui reçoivent leur nourriture à l'hôpital, devant y consommer leurs alimens conformément à l'article CCLXVII (section XXI, titre II du présent réglement), le portier ne laissera sortir aucune denrée ni boisson.

CDLXVI. Il pourra fouiller, à l'entrée, non-seulement tous les infirmiers et ouvriers, mais encore les militaires à qui l'entrée de l'hôpital aurait été permise; et tout ce qu'il saisira en contravention à l'article CDLXIV, sera confisqué à son profit.

CDLXVII. Il pourra de même fouiller, à la sortie, tous ceux qui seront suspects; il saisira les effets et objets qui pourraient appartenir à l'hôpital, consignera le coupable à la garde, et fera de suite avertir l'économe, qui en rendra compte au commissaire des guerres, pour être par lui statué ce qu'au cas appartiendra.

CDLXVIII. La sentinelle et la garde de l'hôpital prêteront main-forte au portier quand il le requerra.

CDLXIX. Lorsqu'il y aura deux portes d'entrée dans un hôpital, il n'en sera tenu qu'une ouverte, à laquelle il sera mis une barrière, afin de donner au portier la facilité nécessaire pour exercer sa surveillance.

CDLXX. Il ne laissera sortir aucun malade ou convalescent, qu'il ne soit muni d'une permission dans la forme prescrite par l'art. CDXLII (section XXXVII, du présent titre IV).

Il ne laissera également entrer aucune femme ni sortir aucun infirmier sans un billet de l'économe.

CDLXXI. Indépendamment de leur salaire, les portiers seront nourris à l'hôpital, et recevront les alimens

et boissons prescrits pour la portion entière des malades.

CDLXXII. Il est expressément défendu aux portiers des hôpitaux militaires de vendre aucun aliment ou boisson, à peine d'être privés de leur emploi, ou punis plus sévèrement si leur contravention a donné lieu à quelque désordre.

CDLXXIII. Les places de portiers seront données de préférence à d'anciens militaires qui seront en état de produire des preuves de leurs services et de leur bonne conduite.

SECTION XL.

Des testamens et des inhumations.

CDLXXIV. L'économe sera dépositaire et responsable des effets, papiers et argent appartenant aux décédés; et il sera tenu d'en adresser l'état à leurs familles, ainsi que leurs extraits mortuaires.

CDLXXV. Immédiatement après le décès d'un malade, ou blessé, dans un hôpital, l'infirmier de quartier en avertira le chirurgien de garde, qui, après s'être assuré si la mort est réelle, fera transporter le corps, par les infirmiers, dans le lieu qui sera destiné à cet effet.

CDLXXVI. Les corps des malades ou blessés décédés ne seront enterrés que vingt-quatre heures après leur mort, à moins que les officiers de santé en chef n'en décident autrement.

Les enterremens seront toujours faits à la pointe du jour.

CDLXXVII. Les fosses dans lesquelles les morts seront enterrés, auront au moins quatre pieds de profondeur, et seront exactement remplies de terre bien foulée, après que les corps y auront été déposés.

CDLXXVIII. Les dimensions des fosses communes à plusieurs cadavres, seront réglées par le commissaire des

des guerres, d'après l'avis des officiers de santé; et il ne sera procédé à l'enterrement que lorsque l'ordre pour les dimensions aura été ponctuellement exécuté.

CDLXXIX. Les cimetières ou lieux de sépulture seront éloignés des hôpitaux, des camps et des habitations; leur emplacement sera fixé par le commissaire des guerres, en observant de choisir toujours la position la moins défavorable à la salubrité.

CDLXXX. Aussitôt après une action, le commissaire ordonnateur chargé de la police des hôpitaux, commandera le nombre d'hommes suffisant pour faire la recherche de tous les morts et les enterrer.

CDLXXXI. Dans les terrains trop secs ou trop humides, on recouvrira les cadavres d'une couche de chaux, sur laquelle on versera une quantité d'eau suffisante, avant de combler la fosse avec de la terre.

A défaut des moyens indiqués, les corps seront brûlés.

CDLXXXII. Aussitôt après le décès d'un malade, l'économe fera prévenir l'officier public chargé, par la loi, de constater les décès dans l'arrondissement de la commune. Il lui présentera le billet d'entrée du décédé, pour que les noms, âge, lieu de naissance et de résidence, soient portés sur le registre de l'officier public, avec la désignation de la compagnie et du corps auquel il était attaché : la date de son entrée à l'hôpital et celle de sa mort y seront inscrites en toutes lettres; il indiquera le genre de maladie dont il est mort.

CDLXXXIII. Indépendamment de cette formalité indispensable, l'économe de chaque hôpital sera tenu d'avoir un registre coté et paraphé à chaque page par le commissaire des guerres, pour inscrire tous les malades et blessés dont le décès sera survenu.

Ce registre contiendra les mêmes détails sur le défunt que ceux indiqués par l'article précédent.

CDLXXXIV. En cas de retraite ou changement de

l'économe d'un hôpital, l'économe sortant sera tenu de remettre à son successeur le registre mentionné dans l'article précédent.

CDLXXXV. Les économes des hôpitaux militaires remettront, tous les mois, l'extrait du registre mortuaire au commissaire des guerres, qui l'adressera au ministre de la guerre.

A la suite d'une bataille ou d'une action, ou dans le cas d'un siége, les commissaires des guerres et les économes des hôpitaux se procureront, dans les régimens, bataillons et autres corps, les noms de ceux qui ont été tués. Ils réuniront sur les décédés tous les renseignemens possibles, pour les inscrire sur leurs registres, afin de fournir aux familles les extraits mortuaires.

CDLXXXVI. Les fournitures du lit sur lequel un malade aura décédé, seront sur-le-champ enlevées et remplacées par des fournitures nouvelles.

CDLXXXVII. Lorsque la maladie aura eu quelques symptômes de contagion, qu'elle aura été longue ou de nature à endommager les fournitures, elles seront, d'après les ordres du commissaire des guerres et suivant l'urgence des cas, brûlées, ou désinfectées, ou réparées convenablement : dans tous les cas, elles seront mises à l'air pendant quelques jours.

SECTION XLI.

De l'uniforme des officiers de santé et des employés des hôpitaux militaires.

CDLXXXVIII. L'uniforme des officiers de santé sera tel qu'il a été réglé par l'arrêté du 27 messidor dernier.

SECTION XLII.

Du costume des membres du directoire central, des directoires d'armée et conseils d'administration.

CDLXXXIX. Tous les membres composant le directoire central, les directoires d'armée et les conseils d'administration, seront tenus de porter le costume déterminé ainsi qu'il suit :

L'habit de drap bleu national, doublé de même étoffe, coupé droit, sans revers, boutonné sur la poitrine, dix gros boutons sur le devant, dégagé en arrondissant, en partant de dessous la dernière boutonnière, pour laisser tomber le devant de l'habit perpendiculairement le long de la cuisse;

L'habit non croisé sur le derrière; collet renversé, monté sur un collet droit de huit centimètres de haut; poches en travers; la manche de l'habit ouverte en-dessus avec trois petits boutons, dont deux sur le parement.

Ils auront deux rangs de galon de deux centimètres de largeur, au collet et au parement.

Le bouton sera sur un fond d'or, orné d'une guirlande de feuilles de laurier et de chêne entrelacées, et pour inscription, *Hôpitaux militaires.*

CDXC. Les membres des directoires et des conseils d'administration d'armée, porteront le même habit, avec un seul rang de galon au parement et aux poches.

Les membres des conseils d'administration porteront aussi le même habit, avec un galon sur le collet et les paremens.

Les économes porteront le même habit, avec un seul galon au collet;

Les simples employés, le même habit sans galon.

CDXCI. La culotte sera, pour tous, de drap pareil à l'habit; la veste de même étoffe et de même couleur, ou blanche en été.

CDXCII. Le chapeau sera uni, retapé militairement; cocarde nationale retenue à la partie gauche par une ganse en or d'un centimètre de large, la ganse arrêtée par un petit bouton;

Épée d'officier d'infanterie,

Dragonne avec torsade;

Bottes à retroussis rabattus.

CDXCIII. Le ministre de la guerre est chargé de l'exécution du présent arrêté, qui sera imprimé au Bulletin des lois.

Le premier Consul, signé BONAPARTE. Par le premier Consul : *le secrétaire d'état*, signé HUGUES B. MARET. *Le ministre de la guerre*, signé CARNOT.

Pour copie conforme :

Le Ministre de la guerre,

CARNOT.

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A

LETTER

TO THE

COMMISSIONERS OF MILITARY ENQUIRY,

IN REPLY TO SOME ANIMADVERSIONS

OF

DR. E. NATHANIEL BANCROFT

ON THEIR FIFTH REPORT.

BY

JAMES M'GRIGOR, M.D. F.R.S. E.

Fellow of the Royal College of Physicians, Edinburgh,
Deputy Inspector of Army Hospitals,
&c. &c. &c.

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LETTER,

&c.

GENTLEMEN,

IT was naturally to be expected, that, in the prosecution of your highly important labours, in the course of which you would be called upon to detect abuses long connived at, to attack prejudices inveterate by indulgence, and to expose to public reprobation frauds and peculations long practised on the public; it was naturally, I say, to be expected, that you would encounter much opposition, and that a host of foes from different quarters would be in arms against you. Innocence may escape the shaft of calumny; active virtue never fails to be the object of attack.

Had you commenced your labours in the military department at an earlier period, your task in regard to the medical branch, arduous as it is, would

have been incalculably more difficult; and your report would have excited no common sensation in the public mind. But your investigation began at a time, when, by the indefatigable industry, and incorruptible integrity of one individual, an effectual remedy had been applied to most of the abuses which had previously existed. For, however public opinion may be divided on some points, it is well known, and indeed universally acknowledged by the great body of medical officers, as well as the army at large, that these reforms originated in the judicious and unwearied exertions of the present Inspector General of Hospitals, and the well-digested system which, with the approbation of his Royal Highness the Commander in Chief, he has arranged and introduced.

By these improvements the service, as well as the public at large, have been greatly benefited, immense retrenchments have been made, the effective strength of the army has been increased, and by a more liberal remuneration being offered, men of superior talent and education have been induced to enter the medical department. Many such will, at present, be found among the regimental medical officers, that class, on whom the care of the army, in respect to health, must at all times chiefly devolve.

That these arrangements, however subservient to the general good, would produce feelings of hostility and resentment in certain individuals, who either felt themselves disappointed, or fancied themselves aggrieved, it is natural to imagine. But private interest coming in competition with public benefit, it will not be questioned, though the decision may be the ground of complaint, which should be preferred.

After my examination before your Board, I had little expectation of being again brought forward: I certainly did not feel any ambition to obtrude myself on public notice; but when character is attacked, silence becomes suspicious---it is even criminal.

In a pamphlet which has lately been published by Dr. Edward Nat. Bancroft, half-pay Physician to the Army, while he animadverts on your report, and arraigns your competency to judge of the subject, he labours industriously to impress you with the conviction, that the evidence given by me is not only inconsistent with fact, but at variance with the opinions, which I had formerly given to the public. Whether this gentleman stands single when he advances these charges, or whether he be linked with a party, of whom he steps forward as the champion, it is not for me to say, nor is it important for me to know. That his mis-statements are gross and numerous, I think I shall most clearly be able to prove.

Before, however, I proceed to the examination of his charges, I deem it a duty which I owe to myself solemnly to declare, that his insinuations respecting my alleged identity of opinions on this or any other subject with those of any other men or set of men, merely

because he is pleased to fancy an identity of interests, are illiberal and unfounded, ---more disgraceful to him than they can be injurious to me. In independence of spirit, if not of fortune, I will not yield to him, or to any man. The evidence, which I delivered at your Board, Gentlemen, was the unbiassed testimony of an humble individual, who, with some portion of medical science, had seen a considerable variety of service.---So far in answer to his very illiberal insinuations respecting the purity of those motives, by which my evidence was dictated. I proceed to examine his charges severally, as they are advanced in the letter.

The first charge insinuated against me, in common with Drs. Jackson and Borland, is that of partiality. He tells you, that our evidence, *prima facie*, ought to have been received with great caution, because "we owe our promotions "and present employments to the late "arrangements in the medical depart-"ment, and to the present system, "which (he says) has effected the de-

" pression of army physicians, and the " discontinuance of general hospitals." Hence he logically and very liberally infers, that it was to be apprehended, that " our testimonies might be partial." Now Gentlemen, a question naturally occurs, who is this Dr. Bancroft, who so readily impeaches the impartiality of all, who do not think with him? Had he no interest in the old system, or connection with its supporters? Had he no promotion to expect had this system been suffered to continue? Did he feel no disappointment on its subversion? Or were his solicitations under the present system, like Dr. Jackson's letter to Mr. Pitt, as he tells us, neglected and forgotten? Far be it from me, Gentlemen, to impeach the great purity of his motives, when he sat down to address you; but I apprehend, that there are not a few, who will suspect, that they are not quite so disinterested, as he would have you believe.

I informed you, that the mortality in the army on the continent, in 1794 and

1795, was certainly much greater in the general, than in the regimental hospitals. When I delivered this opinion, founded on my own observation, an opinion, which the writer of the letter to you himself does not venture to contradict, it was not my intention to impeach either the talents or the attention of the medical officers in the general hospitals. On this ground, therefore, he might have spared his vindication. It was the system itself of these hospitals, which I blamed, and which I have never ceased to think faulty in all its parts. The theory of Dr. Bancroft will by no means either invalidate my testimony, or explain the facts, which I adduced in evidence. I admit with him, that in general, the majority of the more dangerous cases being taken to the general hospitals, a greater mortality was naturally to be expected in them, than in regimental hospitals. But I assert it as a fact, and I call on him to disprove it, that out of any given number sent to the general hospital, and an equal number in the

same disease, and the same stages of it, retained in the regimental hospitals, a much larger proportion of the former, than of the latter, fell victims to disease. In the years alluded to, some regiments treated their own sick, sending few or none to the general hospitals. Among these, I believe, were the Blues, Buffs, and Greys; and it is a notorious fact, that these regiments lost proportionally fewer men, than any other corps in that army.

But independently of all fact, is it not known that many diseases acquire a malignant form, and that some even are generated by crowding a number of sick into one apartment, or under one roof? Is there a medical man, of any experience in the profession, who will not acknowledge, that this is actually the fact? It is too well established to admit of contradiction; and on this very principle, if I am not misinformed, hospital ships have for some time been discontinued in his Majesty's navy.

To the rash assertion, "that the regi-

"mental surgeons, not rarely send their "patients into general hospitals, some-"times when there is danger of their "expiring on the way, in order that "their deaths may not happen in the "hospital of the regiment, and that "the responsibility thereof may attach "solely to the officers on the hospital "staff," I give not the smallest credit. The charge is a libel on the whole body of regimental officers.

In pages 46 and 47 of his letter to you, the writer, after a specimen of pomposity and rhodomontade truly ridiculous, and an affectation of humour for which no man will envy him, proceeds with great formality to adduce a fact, which, I dare say, the Doctor chuckled when he wrote, believing it, I doubt not, to be a decisive blow to his opponents. He tells you, that, notwithstanding the general establishment of regimental hospitals, and, as he poetically observes, "the mode of conducting them being "in full bloom and activity," the last monthly returns of the regimental sur-

geons, made up to the 20th of March, exhibited the deaths of between 4 and 500 men in the preceding month. No man can deplore this mortality more than I do. But, when it is considered that a great number of men had been, in the beginning of the year, drawn from civil life into the militia, in consequence of a late act of parliament, and that these men having received large bounties, would, while their money lasted, naturally indulge in every species of intemperance; and when it is farther considered, that these men, when they joined, were badly clothed, that the season was extremely unfavourable, and that epidemic diseases of a peculiar cast were generally prevalent, it is not to be wondered, that great numbers were attacked with sickness, and that a more than usual proportion fell victims partly to their own indiscretion, and partly to the causes, which I have now mentioned.

But, Gentlemen, I would ask, were not these causes of the mortality in question known to Dr. Bancroft? If they

were not, he is justly chargeable with a degree of inattention, highly discreditable to him as a medical man. The same source of information, whence, I presume, he derived the knowledge of the fact, would have also acquainted him with the causes of that fact; and I beg leave to say, that when any fact is adduced against any proposition or theory whatever, the previous circumstances should be strictly investigated, otherwise the fact, even if admitted, may not warrant the conclusion. If the causes *were* known to him, he has by the suppression of these, been guilty of an act of the most culpable disingenuity; and all we can say is, that he suppressed them, only because it suited his purpose. It is likewise, Gentlemen, a circumstance not unworthy of your attention, that during this extreme prevalence of mortality, the sick in my district, and I presume also in others, had the assistance of an *army physician*.

But, as Dr. Bancroft has brought forward this instance of extreme mortality

in regimental hospitals, as an objection to their establishment, it is but fair to hear the return from the general hospital at the Isle of Wight (the only one now existing) for the same period. This return Dr. Bancroft had an easy opportunity of knowing; but, if he did know it, for obvious reasons he thought it prudent to suppress it. It is right, however, that you, Gentlemen, and the public at large should be informed, that while the mortality in the regimental hospitals, great indeed, I must acknowledge, was in the proportion of one out of sixteen, the mortality in the general hospital in the Isle of Wight was not less than one out of ten. What will Dr. Bancroft say of this comparison? *prima facie* at least, it furnishes no ground of triumph to the advocates for general hospitals.*

* That I may not be conceived by this statement, as insinuating a reflection on Drs. Moore and Lempriere, who are in charge of this hospital, I feel it incumbent on me to declare, that I know them to be men of superior talents, great attention, and of no common degree of medical science.

I have said in my evidence, Gentlemen, that in consequence of the sick being removed from the regimental and sent to the general hospitals on the continent, and from the regimental surgeons not being permitted to take care of their own sick, they became less active in the service, and felt disgusted. Now, whether the regimental surgeons will or will not thank me for this statement, (the learned Doctor inclines to the negative) is to me a matter of very little consequence. My statements are not given, to procure the thanks of any party. But this I may venture to say without incurring the charge of illiberality, that the Doctor has probably oftener than once experienced in his own feelings, that physicians are, like poets, an *irritabile genus*; and that to remove a patient from under the care of any medical man, and place him under the charge of another, as it generally implies some incompetency in the former, seldom or never fails to excite in his mind dissatisfaction and disgust.

At the period alluded to (1794), the generality of the regimental surgeons were of considerable standing in the service--- many of them men, who were looked up to for professional ability, and who, in the estimation of the army in general, were considered as superior to those who were comparatively strangers in the service, and who acted in the general hospitals. In these circumstances, the feelings of the surgeons appear to me to have been very natural. Dr. Bancroft, perhaps, gifted with high superiority of mind, and conscious of his own superlative merit, might not perhaps have felt these painful sensations; but he should have some compassion for the infirmities of those, who have not yet attained his transcendent magnanimity.

The Doctor, in order to controvert my evidence in favour of regimental hospitals, proceeds, in page 38, to observe, that it is expedient he should request me to explain " by what singular means the " greatest mortality from fever among " the British troops in Flanders should

" have happened, as Dr. Jackson informs " us (in his Outline, p. 21), in that regi- " ment (the 88th), and in one other, the " 80th; and also to explain, by what " greater singularity of causes sickness " raged with violence and devastation in " the (same) 88th regiment, during the " time it remained in Jersey, previous to " its being sent to the continent in 1794, " as Dr. Jackson also states from his own " personal observation." In answer to the question in the first part of this quotation, you, Gentlemen, will be surprised, when I tell you, that Dr. Jackson no where makes the assertion imputed to him. Now, Gentlemen, had this writer, who really in every step of his progress betrays either wilful ignorance or a studied desire to mislead by suppression of important facts, taken the trouble to read Dr. Jackson's work with any other view, than to garble and select, as suited his own particular purpose, he would have been at no loss for an answer to the second question in the quotation. Dr. Jackson himself, then likewise a regimen-

tal surgeon in Jersey, tells him the "singular means" by which sickness raged with violence and devastation in other cases, as well as the 88th regiment. In page 5, of the Outline, Dr. Jackson informs him, that "the 88th regiment arrived in Jersey from Ireland, about the beginning "of June." He tells him, "that this "was a new regiment, and therefore like "most other new regiments, was composed of heterogeneous and unsound "materials." He tells him also, "that "it was sickly when it arrived." Now, surely, after this plain statement of facts, it requires no great portion of sagacity to discover, why sickness was so very prevalent in the 88th regiment;---but the Doctor's discernment is not always in exercise. I now revert to the first part of the quotation, and I must particularly request your attention to the disingenuity of a man, who really seems determined to misrepresent and mislead. He affirms, as he pretends, on the authority of Dr. Jackson, that the greatest mortality from fever among the British troops in Flan-

ders, consisting, I believe, of about 20,000 men, happened in the 80th and 88th regiments. Now, on turning to the page of Dr. Jackson's Outline, to which the writer refers, I find that the Doctor advances no such assertion as is here ascribed to him. He informs us merely of the state of his own regiment, with which, of course, he was intimately acquainted. He tells us, also, the condition of other three regiments, adjacent to his own; with these, however, he acknowledges that he had but an imperfect acquaintance. Of the rest of the army, he professes no knowledge. Where then is the authority for Dr. Bancroft's assertion? Had he told us, that the mortality in the two regiments, the 80th and 88th, was very great, he would have told the truth. Had he told us further, that Dr. Jackson had stated this as a fact, this would have been equally true. But when he tells us, that of all the British troops in Flanders, the greatest mortality prevailed in the above-mentioned regiments, he advances an assertion, for which

Dr. Jackson gives him no authority whatever.

If Dr. Bancroft should contend, that the difference between Dr. Jackson's account and his representation of it is very immaterial: and if he should still wish to know "by what singular means" this very great mortality prevailed in these regiments; in order to gratify his curiosity I have only to remind him, that their sick were sent to the *general hospitals*, his own favourite institution, and then doubtless he will be at no loss to ascertain the real cause.

But, Gentlemen, the candid and learned Doctor has not yet done with his misrepresentations. In pages 39 and 40, he attempts next to prove, that my evidence, respecting the superiority of regimental hospitals in the West Indies, is inconsistent with my own opinion, as published some years ago: and further, that I had no opportunity of observing it, if any such superiority had existed, "*for that I was not then in Grenada.*" These, Gentlemen, are two very serious

charges; the latter imputation is peculiarly enormous. If I *was not* in Grenada, I have published a falsehood: if I *was* in Grenada, Dr. Bancroft asserts a falsehood. Which is the fact, we shall proceed to enquire.

To establish his first charge, that of inconsistency, illiberally insinuating at the same time that I have changed my opinion to promote my interest, he compares the evidence which I gave before you, with a passage in a work, entitled Medical Sketches. In answer to your question, "whether I had observed the "comparative advantages of the treat-"ment of sick in general and regimental "hospitals in the West Indies;" I told you that I had. I told you, "that in "the island of Grenada, in the year 1796, "from the want of a medical staff, the "sick and wounded, while the army con-"tinued in the field, were treated regi-"mentally; that though under many dis-"advantages, the mortality was trifling, "till after the return of the army to

" quarters, when the sick were ordered
" to be sent to general hospitals."

Now, Gentlemen, as I am extremely anxious to set this matter, important as it is to my character, in its true light, you will, I trust, pardon me if I trespass on your patience, by quoting first the whole passage from the Medical Sketches, on which Dr. Bancroft founds his charge of inconsistency; and secondly, the passage from his Letter, in which he endeavours to substantiate that charge. The passage from Medical Sketches is as follows:---

" In Barbadoes, both in the end of
" 1795 and in the beginning of 1796,
" the only disease which prevailed was
" typhus. The 88th regiment was
" healthy at St. Lucia, and continued
" pretty healthy at Grenada for three
" months after their arrival there, or as
" long as they remained to the windward
" side of the island. This was likewise
" the case with the 10th, 25th, and other
" regiments. It was only after our re-

" turn to St. George's, and to Richmond
" Hill, after we had communication with
" the 68th regiment and the general hos-
" pitals, where the yellow fever had for
" many months prevailed, that it ap-
" peared in the 88th and in other corps.
" Before the appearance of this fever, in
" the 88th, as well as in other corps,
" dysentry and intermittents prevailed
" the most. On the 12th of July 1796,
" a detachment of the 88th regiment was
" embarked at Grenada in the Betsey
" transport for England. We embarked
" 140 men; and I was most particularly
" careful not to take any man on board
" with the slightest appearance of ill-
" ness. Every precaution, which re-
" garded cleanliness, ventilation, or fu-
" migation, was adopted. The remains
" of the 8th, 10th, 25th, and other regi-
" ments were at the same time embarked
" at Grenada for England. From the
" time we sailed from Grenada, on the
" 19th of July to the 5th of August,
" seven days after we sailed from Tor-
" tola, (where we had touched for water)

" no case of this fever appeared in the " Betsey."

You have now before you, Gentlemen, the whole of the materials from whence the writer has constructed his charges. I will now exhibit Dr. Bancroft's proof. Adverting to my answer to your question, respecting the superiority of regimental hospitals, he observes, in page 39 of his Letter, " Concerning the " true import of this answer, no difference of opinion can possibly arise; you " have properly understood and interpreted it to mean, that, whilst Dr. " M'Grigor served in Grenada, the mortality under the regimental treatment " was trifling; but that when the sick " were sent to the general hospitals, the " mortality became very considerable; " or, in other words, that Dr. M'Grigor, " from personal observation, had been " able to ascertain, that under similar " circumstances and solely from the difference of treatment, a much greater " mortality had occurred in Grenada in " the general than in the regimental hos-

" pitals; and you may probably be surprised to learn *by the testimony of Dr. " M'Grigor himself*, (given on another " occasion, when he had no particular " purpose in view to bias his testimony) " that there was in reality no room or " foundation for any such comparison as " is here stated; and that, if there had " been any, it could not have fallen under Dr. M'Grigor's observation, as " you have naturally been led to suppose, because *he was not then in Gre- " nada.*

" In the year 1804, Dr. M'Grigor " published a small volume under the " title of 'Medical Sketches of the Expedition from Egypt to India, published for John Murray, 32, Fleet- " street, &c.' From this work it appears, that the 88th, or Dr. M'Grigor's regiment, which made part of the " army employed under the command " of Sir Ralph Abercrombie in the conquest of St. Lucia, during the month " of May 1796, was sent with others " *about the beginning of June to Grenada*,

" where it arrived in two or three days,
" and was employed in the reduction of
" that island.

" According to his positive statement,
" the 88th regiment continued pretty
" healthy at Grenada for three months
" after their arrival there, (i. e. *until the*
" *month of September*) or as long as they
" remained to the windward side of the
" island." " This," he adds, " was
" likewise the case with the 10th, 25th,
" and other regiments. It was *only after*
" *our return to St. George's and Richmond*
" *hill,* after we had communication with
" the 68th regiment and the general hos-
" pitals, where the yellow fever had for
" many months prevailed, that it *ap-*
" *peared in the* 88th and other corps,"
see p. 227. " Now, it is well known,
" that the *windward* or *eastern* parts of
" the island in the West Indies are ge-
" nerally the most healthy; and Dr.
" M'Grigor, in the work before us, na-
" turally and justly ascribed the absence
" of disease among the regiments before-
" mentioned *solely* to the circumstance of

" their having been *stationed in the wind-*
" *ward parts of Grenada.* He manifestly
" had not, while writing that work, the
" least idea of ascribing it to any supe-
" riority or difference in the *regimental*
" over the general hospital treatment,
" neither had he then the smallest dis-
" position to suspect that the subse-
" quent mortality arose from any such
" difference. He was, and perhaps now
" is, a believer in the contagion of the
" yellow fever; and it is to *that cause*
" *alone* that he in this work intended to
" impute the change in question. He
" is far from alluding, in any way what-
" ever to any thing unfavourable in the
" treatment of the sick in the general
" hospitals at Grenada: on the contrary,
" he says, the mortality resulted, not
" from *treatment,* but from a *communica-*
" *tion* with the 68th regiment (which is
" totally distinct from treatment, and
" the *general hospitals*;" " either of which
" causes, on the supposition of conta-
" gion, might prove equally destructive.
" Those, however, who do not believe

" in the contagious quality of the yellow
" fever, nor in the alledged mischievous
" effects of general hospitals, will readily
" account for the increased number of
" deaths among the regiments in ques-
" tion, after their return to St. George's
" and Richmond hill, in the month of
" September, by recollecting that those
" places are surrounded by an abun-
" dance of local causes of disease, such
" as are found to produce the yellow fe-
" ver in all hot climates, at certain sea-
" sons of the year; these regiments ar-
" rived at those places from more healthy
" stations in September, (commonly one
" of the most sickly months of the year)
" and also that this was one of the years
" in which the yellow fever prevailed the
" most fatally in Grenada, occasioning
" the deaths of those who were attacked
" by it, whether they were in one kind
" of hospital or in another, or in no hos-
" pital at all. So much for this part of
" Dr. M'Grigor's testimony: of the
" other part, which regards the extent
" of his opportunities for '*personally ob-*

" *serving*,' what he states to have hap-
" pened, I must leave him to reconcile
" some contradictions which seem to me
" irreconcileable. For he tells us, at
" p. 227, of his Medical Sketches, that,
" ' on the 12th of July 1796, a detach-
" ment of the 88th regiment was em-
" barked at Grenada in the Betsey trans-
" port for England,' and that he was one
" of that detachment."---He adds, ' we
" embarked 140, and I was most parti-
" cularly careful not to take any man
" on board with the slightest appearance
" of illness.' He next says, in p. 228,
" ' we sailed from Grenada on the 19th
" of July,' &c. and it appears that he
" afterwards arrived safely in England.
" Now, as *he has told us* that the regi-
" ment of which he was the surgeon, and
" the other regiments, ' continued pretty
" healthy at Grenada *for three months*
" *after their arrival there*,' and that he
" ' embarked for England' within little
" more than half of that time, I can-
" not help feeling a considerable degree
" of curiosity to know by what super-

" natural means he ' had (as he states) " in the year 1796, an opportunity of " *observing* the (comparative) advantage " of taking care of the sick regimentally, " instead of sending them to general " hospitals.' See Report, p. 185. And " how he was able to know, from *per-* " *sonal observation,* that, upon ' the *return* " of the army to *quarters*' when *he* must " have been *far on his voyage to Europe,* " ' the sick were ordered to be sent to " general hospitals, and then the mor- " tality was very considerable indeed.' " Ditto, p. 185.

Now, Gentlemen, whoever reads the extract from Medical Sketches with an ordinary degree of attention, cannot fail to perceive that, so far from ascribing the increased mortality of the 88th regiment to their removal from the windward side of the island, there is no cause whatever directly assigned for that mortality. I state merely that, after their removal to St. George's and Richmond-hill, and their communication with the 68th regiment and general hospitals, this

increased mortality commenced. From this statement a candid and impartial reader would have inferred, not surely that I meant to say that the removal was the only cause of this mortality, nor even the principal cause; but that communication with the 68th regiment and the general hospitals contributed much, if not chiefly, to this devastation of human life. The passage is too plain to admit of misconstruction. Intelligible, however, as it is, it did not suit the Doctor's purpose to understand it; for that he might have understood it, I cannot for a moment doubt, without questioning the clearness of his optics or the sanity of his intellects.

Now, Gentlemen, observe, I pray you, the ingenuity of this man. Fearful that, as there are three causes indirectly assigned for the increased mortality of the 88th regiment, the reader might advert to all the three; or, if the Doctor's ill luck should have it so, might lay the chief stress on those two he wished him to overlook, he resorts to an expedient,

by way of argument, which, as far as I know, is completely new in the dialectic art. He instructs his printer to exhibit the two principal causes in the common type, for these he wished to be thrown into the back-ground; and in order to fix the attention of his reader on his own favorite cause, and to give it a degree of prominence, to which it would have no claim, he desires it to be printed in striking italics. That case indeed must be truly wretched, which requires such artifice as this to support it; and its defender must be a miserable logician, who depends on the printer for the strength of his argument.

It did not answer his purpose to have the communication with the general hospitals considered in any degree as a cause of the great mortality; he therefore pitches on the removal as the sole cause, and he even pays me a sort of compliment for having made the discovery, by commending my judgment in forming this opinion. The art here practised deserves a harsher name than I am inclined

to affix to it. In one part indeed of the passage extracted, you will perceive that he *does* mention the communication with general hospitals as one of the causes which I might have had in contemplation; but he mentions it only to insinuate an error, and to impress you with a belief that I now represent the *treatment* in regimental, to be superior to that in general, hospitals, and that at the period alluded to I entertained no such opinion. Now, Gentlemen, if you will take the trouble to re-peruse the passage from the Medical Sketches, you cannot fail to perceive, that not a single syllable is said concerning the *treatment* in either of these hospitals---no opinion advanced in regard to their comparative advantages in respect to treatment. Nor have I, on any occasion whatever, expressed any opinion on this point. It is the system itself, and not the practitioners or the treatment that I have uniformly assailed.

But suppose that I had not been at that time so fully convinced of

the superiority of regimental above general hospitals, does it follow, that after an uninterrupted and pretty extensive experience for twelve years, I am to think, in opposition to innumerable facts, as favourably of general hospitals now, as he would persuade you, I did at that time? No man in his senses would entertain such an opinion. Consistency, Gentlemen, does not consist (pardon the pun) in an uniform adherence to the same opinion, either of men or of things, but a steady, zealous, and disinterested pursuit of truth. And I presume to add, that Dr. Bancroft has lived for the last twelve years of his life to very little purpose, if he has not seen reason to alter many of his opinions. If he has not, I am curious to know "by what supernatural means" he was at an early age protected against error, and saved the necessity of gaining wisdom by years. Experience, which, to use an old and vulgar adage, teaches fools, imparts, it would seem, no knowledge to the learned doctor.

But this instance of disingenuity is

perhaps too flimsy to escape the detection even of the most inattentive reader. I must now request your attention to another much less pardonable, because much more criminal; for its manifest purpose is to deceive you, and to involve *me* in the charge of falsehood. He states, that the regiment to which I was then surgeon (the 88th) was sent to Grenada in the beginning of June, and sailed for England on the 19th of July. This too he presumes to state, *on my authority*. He then triumphantly asks, by what means could I, in the short space of a month and a half, learn by observation the superior advantages of regimental hospitals there, and he tells you, "that he feels a considerable degree of curiosity to know, the supernatural means" by which this knowledge was acquired.

Dr. Bancroft, I have no doubt, Gentlemen, is gifted with no common share of curiosity. Had he possessed as much accuracy in his statements, as much candour in the construction of other men's

motives, and as much impartiality in the pursuit of truth, and the investigation of facts, his curiosity, if painfully excited, would have been cheaply gratified, without the fatigue of any elaborate enquiry. But, Sir (pardon me, Gentlemen, if I address myself to him for a moment), where or whence did you learn that I arrived at Grenada in the beginning of June? Who, or what is your authority for this assertion? Who told you this *important* fact, which has excited in your breast so great a degree of curiosity, and on which hangs the whole of your vile argument, and your still more detestable charge. No man, I venture to affirm, ever gave you such information. The discovery is wholly your own. And, Sir, what shall we say of your pretended candour, and respect for truth and character, when we find you either wilfully fabricating, or carelessly assuming dates to suit your own purposes, giving on my authority, a statement which I never warranted, and which is disgracefully incorrect?

I arrived, be it known to you, in Grenada on the 4th of March, and not in June, as you falsely state. And while I thus correct your error, and reprobate the motives, in which it seems to have originated, I blush for the man, who is capable of committing it.

On no better foundation, Gentlemen, than this unpardonable mis-statement, is founded the second charge, which he alledges against me, a charge so abominable to my feelings, that words fail me to chastise it in terms of sufficient sharpness or severity. With a view of discrediting my evidence, and impressing upon the public a belief, that in that evidence I did not scruple to deviate from truth, he asserts, that I was not in Grenada at the time when the 88th regiment became unhealthy; and had therefore no opportunity of making those observations, which in my evidence before you, I professed to have made.

Now, Gentlemen, the fact is, as I have just now stated, that we arrived in

Grenada on the 4th of March---that my stay there was not for *five or six weeks*, as he falsely asserts, but for *four or five months*---that, when the army took the field, I, as senior surgeon, was appointed to the superintendance of all the military hospitals, and that during this period, I had many and various opportunities of observing the superiority of regimental hospitals.* This, Gentlemen, is the fact; and had Dr. Bancroft's mis-statement been made for any other, than the insidious, purpose of wounding my character, vilifying your labours, and misleading the public mind, I should have treated it with that indulgence, which the fallibility of our nature, and the principles of charity, require us to exercise. But, when I contemplate the purpose, which this

* This statement may be corroborated, not only by my own case-books, but also by the testimony of Mr. Bruce, now surgeon to the 88th regiment, and who arrived with me at Grenada at the period alluded to; and if required, likewise by others of the surviving officers who served in Grenada.

statement subserves; when I regard the motives in which it appears to originate; my indignation swells against the audacity of its author: and I am compelled to tell him publicly the most unpleasant of all truths, that, in endeavouring to fix on me the vilest of all charges, he has himself asserted a most palpable falsehood.

It is said in evidence, that many soldiers who had been sent into general hospitals with slight ailments, caught fevers there and died. Dr. Bancroft, though a bold disputant, does not venture to controvert this assertion. But, while he admits the fact, he tells you in the first place, that the same has often happened in regimental hospitals. True, sapient Sir; it is not an uncommon thing for the member of a private family to catch a fever; but does he run the same risk, as a nurse or a servant in a public hospital, even on the most contracted scale? We do not say, that in regimental hospitals patients are absolutely not subject to contagion; but

we affirm, without fear of contradiction, that contagion is much less frequent in regimental than in general hospitals: and this is enough for the purpose of our argument.

He tells you next, p. 48, "that if "the fact alluded to in evidence have any "weight as an argument, that weight is "perhaps in favour of general hospitals, "because by receiving all the cases of "contagious disease, they save great "numbers affected with slighter ail-"ments in the former, from the dan-"ger of infection, to which they must "be otherwise exposed." This observation would be good for something, if general hospitals were receptacles for contagious diseases only; but the fact is, that patients of all descriptions are admitted into them, and thereby frequently catch those diseases, which may happen to be prevalent in them, at the time of their admission. The observation, therefore, is futile and irrelevant.

He tells you next, "that the exist-"ence of contagious disorders is not

"necessarily connected with any hospi-"tals, but is an accidental calamity, to "which all are obnoxious." If this observation have any meaning, it must be this, that every man, who is sent to an hospital, does not necessarily catch contagion. This is truly a wonderful discovery, of which the Doctor may claim the sole merit.

It was likewise said in evidence, that soldiers tarried long in general hospitals, and that the worst characters in the army ---malingerers---found their way into them, and frequently imposed upon medical officers of no previous regimental experience.* I will not fatigue your attention with quoting from the Doctor's letter a specious sample of *a priori* reasoning, for he alledges no fact to prove the improbability of this statement: it is sufficient to say, that there is not an officer in the army, of whatever description, who cannot attest it from his own experience. And I beg leave to observe, that much greater medical science than

* For a definition of *malingerers* I beg to refer to Dr. Bancroft.

is possessed either by Dr. Bancroft himself, or any of his physicians of "superior attainments," has been imposed upon by the tricks of these malingerers. Of this fact it would be easy to produce the most incontestible evidence. A physician or surgeon, whatever may be his previous "scientific acquirements," or however well "grounded" in the Doctor's "invaluable principles," in order to detect the arts of these malingerers, must have been some time conversant in a military hospital.

But the Doctor, as if aware of the weakness of his argument, perhaps also recollecting that his own skill had been sometimes defeated by the artifices of these malingerers, adduces another, I will not say a better answer to the statement in question. He tells you, that no patients are admitted into general hospitals, who have not been sent thither by the surgeons of their respective regiments; and that these malingerers must therefore have first imposed upon their own surgeons. Unfortunately, however, for the validity of this argument, like some

others of the Doctor's, it is not founded in fact. And it is to me not a little surprising, that Dr. Bancroft, even with *his* slender acquaintance with military hospitals, should advance so unqualified an assertion. Does not the general hospital at the Isle of Wight receive patients, who have not been under the charge of a regimental surgeon? Has not this also frequently been the case with the late general hospital at Gosport? And has it not been more or less the case, wherever a general hospital has existed? General hospitals *were* proverbially the hot beds of malingerers. When he rashly asserts, that the number of malingerers in the whole army does not exceed fifty, the statement must be pronounced by every military man too ridiculous to require refutation.

The sixth and last head of evidence to which the Doctor adverts, is the great waste and profusion of expense, with which the establishment of general hospitals has been attended. By adverting to my evidence, Gentlemen, you will

find, that the question proposed to me on this subject regarded only the general hospitals on the continent, and to this question I gave a specific answer: but that the expense of these establishments *has in general* been unnecessarily great, is one of those facts, which no man acquainted with them will venture to deny. The Doctor, however, labours hard to weaken this fact; and to induce a belief, that the profusion of public money in the medical department has not been greater, than the nature of the service and a due regard to the healths of the men rendered unavoidable. To impress this belief, he brings forward a string of observations, evidently calculated to mislead such of his readers, as are not acquainted with the subject, and to display his own superior tenderness and humanity towards the army. He tells you, that it is impossible to calculate the number of medical officers, and the quantities of hospital stores, which may be necessary, especially on foreign service. He tells you, what no man will deny, that, as we cannot

foresee the possible extent of sickness, true wisdom will direct us to provide for the worst. He tells you also, that we ought rather to incur a superfluity of expense, than suffer men to perish by deficiency of medical aid. All this would be extremely fine and very pertinent, if any retrenchment of expenditure were recommended, which could militate against the health or comfort of the army. All this would be very fine, if the sick soldier either had been, or could have been benefited by this profusion of expenditure. This, however, was not the case: there was a profusion of expense, which could in no respect contribute either to his health or to his comfort. And, before I dismiss this part of the subject, I must take the liberty to observe, that there is something extremely illiberal and insidious in Dr. Bancroft's observations on this point. They are intended evidently to impress the public with a belief, that it is our* wish to circumscribe the com-

* In this charge, he does me the honour to couple me with Drs. Borland and Jackson.

forts of the army, to deny the sick the necessary medicines, and to introduce a system of economy incompatible with the welfare of the troops, and repugnant to the common feelings of humanity. That such, however, can be our intention, no intelligent man will for a moment believe. What rational motive can we have for curtailing the accommodations and comforts of those committed to our charge? Is such a plan subservient to our interests? Would it advance our reputation? Would it be consistent with our duty? In short, will Dr. Bancroft inform us, what motive could prompt us to recommend a system as repugnant to humanity as it is irreconcileable with the acknowledged principles of human action? No man surely can feel a deeper interest in whatever concerns the health and comfort of the soldier, than he who has tented with him in the field, has shared in his hardships, witnessed his deprivations, and has known his services.

The Doctor next asserts, that I affirmed in evidence that the medical esta-

blishment of the Indian army in Egypt was fully competent to the care of their own sick. Here is another of his unaccountable mis-statements. A reference to my evidence will convince any reader, the Doctor himself perhaps excepted, that I made no such assertion. He affirms also, " that the Indian army was generally " kept together in healthy stations, and " suffered very little sickness." This is equally untrue, unless those stations can be deemed healthy, where plague or ophthalmia were never absent; and where one-fourth of the army was at one time confined by illness. He says, " that I " have totally forgotten the dismay, " which pervaded the medical officers of " the Indian army from the *highest* " to the lowest, when the plague was " officially reported by *him* to exist in " one of the regiments composing that " army, and though that regiment was " *my* own." I have indeed forgotten it, if that can be forgotten, which never existed.

The plague, Gentlemen, made its first appearance in two hospital servants of

the 88th regiment. Dr. Bancroft was ordered to visit them; he did so, and--- never saw them afterwards. That some apprehensions of the spread of this disease, and its fatal consequences, might have been created by this discovery, is very possible. Should the plague appear in St. George's hospital, I dare say the Doctor would be somewhat alarmed, if not for himself, at least for his patients. But that any sensation, like dismay, was excited, I have no recollection; and I am confident, that no such feeling existed among the medical officers of the Indian army.

He tells you also, "that I have forgotten the embarrassment it (the plague) created, and the difficulties of procuring any of these gentlemen to assume '*the post of honour*,' and the ultimate necessity imposed upon the British general hospital establishment, of *taking the sole charge of the* plague patients of the *East Indian* army." When first I read this paragraph, I was utterly confounded. I could hardly credit my own senses. I read it again; and I could not help exclaiming, "the Doctor here outdoes himself!!!" I have already had occasion to expose several of his mis-statements: what character, or what name, shall be attributed to the one which is immediately before us, you yourselves shall be able to judge. As soon as the plague was discovered in the 88th regiment, it became necessary, without delay, to provide one or more receptacles for patients afflicted with this disease, and likewise to appoint medical officers for attending these patients. Now, it is to be observed, that, antecedently to this event, our medical establishment had been strengthened by the accession of some hospital mates, who had been sent out to us by the British government; and when the plague made its first appearance, these Gentlemen were doing duty with us. Immediately on the disease being discovered, Dr. Shapter, then at the head of the staff, assembled the medical officers of the Indian army, and informed them, that the appointments to the pest

houses should be determined by *lot*, that a given number of the first drawn, as circumstances might require, should first take the duty, and that, in case of any of their deaths, the vacant places should be filled, according to the order of the ballot. Agreeably to this arrangement, the names of the medical officers of our army, amounting to about sixteen, with those of the hospital mates already mentioned, belonging to the British establishment, and amounting to five or six, were put into a hat, and drawn by lot in the usual manner. The precise number of each establishment, and the order in which they were drawn, not having the documents in my possession at present, I cannot now with certainty recollect. But to this I pledge myself, that if there be any error in this statement, respecting the former of these two points, the error must be so trifling that it may be deemed evanescent.

Soon afterwards, the plague appearing also in the British army, a part of their staff, in conjunction with the others, was

ordered to attend in the several pest-houses. I mean not to dissemble, that Mr. Price also very early volunteered his valuable services; and that latterly, Dr. Buchan, in a manner the most magnanimous and disinterested, rendered the most essential service to the army, by voluntarily undertaking this most dangerous duty. But it deserves your attention, Gentlemen, that during the whole of this time, the Indian establishment never failed to furnish its full contingent of medical officers. It deserves your attention, that the first medical officer that entered a pest-house, belonged not to the British, but to the Indian establishment. The gentleman I allude to is Mr. Thomas, who, I believe, is now in London. This being the case, I leave it to you to determine, how far Dr. Bancroft is justified in asserting, that the British hospital establishment took the *sole charge* of the plague patients of the Indian army. I leave it to you to estimate the correctness of that man's statements, who has either inadvertently or wilfully advanced

an assertion so totally unfounded. And, is this the man whom, in the prosecution of your important inquiries, it was your duty to consult? Is this he, who vainly enough insinuates his own superior competency to counsel and instruct you? Is this the man who, himself, loaded with errors, arrogantly assumes the province of correcting your's, *proh pudor,---hominis stultitiam.*

I will not fatigue your patience by any animadversions on the observations, which he has offered on the medical establishment of the India Company. I dismiss them with simply remarking, that they are both illiberal and unfounded. The officers of that establishment are men truly respectable, and in evidence of their talents, their zeal for knowledge, and scientific acquirements, I need only appeal to the volumes of the Asiatic Researches. Whatever he himself may feel, I have no hesitation in saying, that to be compared to such men, would reflect no dishonour on Dr. Bancroft.

Before I conclude, Gentlemen, I must once more request your permission to address myself to Dr. Bancroft. You have said, Sir, " that *you* do not wish " to excite painful recollections in the " minds of those who served with the " Indian army, and that *you* therefore " abstain from mentioning any more of " the occurrences of that period," of which you say, " *I* must admit that *you* " had personal knowledge." Away with such dark and assassin-like insinuations. Speak out like a man. I am fully prepared to meet you. I challenge you to state any one circumstance, which can occasion me the least pain on recollection. And to compel you, if possible, to accept this challenge, I thus publicly declare, that, unless you do speak out, I shall regard you in no better light, than that of a malignant and dastardly assassin.

It would be endless to pursue this writer through all the mis-statements in his letter. I have endeavoured to repel, and I trust successfully, every attack,

which he has made upon myself. I have now only, Gentlemen, to request your forgiveness for having trespassed on your patience, and addressing to you this my hasty production.

I have the honour to be,

with much respect,

Gentlemen,

Your most obedient humble Servant,

JAMES M'GRIGOR.

May 30th, 1808.

POSTSCRIPT.

On reviewing my evidence delivered before you, I find only one mistake, which it may be necessary to correct. I stated that the medical staff which came from the Cape of Good Hope to accompany the Indian army, consisted of between twenty and thirty. By this statement, I have since understood, that I have considerably overrated the number. The error, however, no wise affects the general question.

As material documents, I have here added a letter from Mr. Bruce, now surgeon to the 88th regt. relative to the time that regiment was in the island of Grenada; and an abstract of the total sick and deaths of the army in Great Britain, for every month from May 1807 to April 1808. As this return exhibits the sick and deaths in general, as well as in regimental hospitals, with the proportions which they bear to each

other, it will elucidate materially one part of my statement. I obtained this document from the records of the Army Medical Board, in consequence of the orders of his Royal Highness the Commander in Chief and the Secretary at War.

Gravesend, 25th May, 1808.

Sir,

In reply to your letter of the 22d inst. which, on account of our regiment being now on its march to Essex, only reached me this morning, I beg to inform you that the detachment of the 88th regiment, under the late Major Houstoun, which you, as well as myself, accompanied in the West Indies, embarked at Barbadoes in the *Expedition*, of 44 guns, on the 28th of February, 1796, and landed, together with detachments of the 10th and 25th foot, under Brigadier General Mackenzie, at St. George's, Grenada, on the 4th March following.

The renewal of military operations against the posts in possession of the enemy, in the interior of the island, took place, as far as my memory reaches, on or about the 29th March. But as a reference to the public dispatches on this subject, transmitted to government by Brigadier General Nicholls, who then commanded, is easily practicable, the

matter may be established beyond the possibility of doubt.

The detachment of the 88th, together with part of the 8th and 68th foot, embarked at Grenada, I think, on the 19th, and sailed for St. Kitt's on the 20th July following. I am positive that this embarkation took place later than is stated in your volume, published in 1804. Ample documents are now in my possession, *written* while I was in the West Indies, which can be produced, if necessary, to substantiate the above statement.

I am,

Sincerely your's,

N. BRUCE,

Surgeon First Batt. 88th Regt.

To Dr. M'Grigor,
Deputy Inspector of Hospitals,
British Coffee House, London.

C. Squire, Printer,
Furnival's-Inn Court.

Abstract *of the* **Monthly Returns** *of* **Sick** *and* **Deaths** *in the* **Army** *in* **Great Britain**, *from May* 1807 *to April* 1808.

Date.	In Regimental Hospitals.		In the General Hospital Isle of Wight.	
	Sick	Deaths	Sick	Deaths
May, 1807	4625	130	162	24
June	4185	80	205	10
July	4244	70	173	8
August........	3304	84	153	3
September	3818	48	189	4
October	3954	61	221	10
November	4528	95	280	5
December......	4997	81	272	12
January, 1808 ..	5255	163	235	12
February	7006	292	256	11
March	7906	411	252	5
April..........	7763	472	249	25
	61,585	1987	2647	129
	Deaths as 1 in 31.		Deaths as 1 in 20¼.	

Average Strength of the Army in Great Britain - - } 110,000 men.

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VENEREAL DISEASE,

WITHOUT MERCURY.

By G. J. GUTHRIE, Esq.

DEPUTY INSPECTOR OF MILITARY HOSPITALS, SURGEON TO THE ROYAL WESTMINSTER INFIRMARY FOR DISEASES OF THE EYE, LECTURER ON SURGERY, &c.

FROM THE EIGHTH VOLUME OF THE MEDICO-CHIRURGICAL TRANSACTIONS, PUBLISHED BY THE MEDICAL AND CHIRURGICAL SOCIETY OF LONDON.

London:

PRINTED BY G. WOODFALL, ANGEL-COURT, SKINNER-STREET.

1817.

ABSTRACT *of the* [illegible]
of SICK *and* DEA[illegible]
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April 1808.

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Read June 24, 1817.

THERE are no diseases to which the male sex is so very obnoxious as those of the sexual organs, and there are none which have more occupied the attention of surgeons; yet there is not a subject in surgery of equal importance, on which less has been written since the time of Mr. Hunter. We find that those who have had the greatest opportunities of acquiring knowledge, have for the most part refrained from communicating to the public the results of their observations; and that this has arisen rather from the difficulty of the subject than from its being so thoroughly understood as to re-

quire no comment, will be immediately acknowledged by every one of discernment and experience. In offering a few observations on the treatment of diseases acquired through promiscuous intercourse, I wish I could think they would elucidate a subject beset with so many difficulties; but the more I consider in which way this may be accomplished, the greater I find the obstacles to be surmounted, except I could at once adopt the opinions of a French anonymous, but very ingenious author *, "that there is not, nor ever was such a disease;" but to this opinion there are equally insurmountable facts to be opposed. Certain however we may be in this subject of intricacies, that the venereal disease has, within these few years, totally altered in many of those properties and effects, which are called specific; or that the greater part of the opinions which have been commonly entertained are erroneous.

In offering these remarks, I beg to be considered as merely giving a few slight sketches of opinions and facts which may be hereafter confirmed, filled up, or even abandoned, as circumstances and further observations may render necessary, and I shall confine myself as much as possible to facts, and enter as little into the consideration of opinions, that are well known and usually entertained.

* Sur la non-existence de la Maladie Vénérienne. Paris, 1811.

On the continent in general, little attention is paid to the appearance of primary sores: if a man have had a suspicious connexion, followed by ulcers on the glans penis, or prepuce, or even a gonorrhœa, he is at once declared to be infected with the venereal disease; but this does not lead in general in Italy, or in the south of Europe, to the exhibition of mercury or any other specific. In France, and particularly in Paris, the contrary is the general practice: the patient is placed on the use of the oxymuriate of mercury, and after taking about thirty-two *portions*, in half doses, twice in the day, which generally occupy the same number of days, he is considered free from disease, and this will in most cases be true in all kind of sores which have originated from sexual intercourse; but if the ulcers should not heal in this period, or secondary symptoms supervene, he frequently continues the medicine for an unlimited time. In doing this, the Parisian surgeons are however acquainted with a fact, which has, until very lately, been denied in England, viz. that every kind of ulcer is curable by common means, and M. Cullerier, the first surgeon in the Venereal Hospital at Paris, demonstrates the possibility of doing so every year to his class; but, after the ulcers have healed, he puts each patient through the usual course, to prevent secondary symptoms.

Lagneau *, the latest French author who has

* Exposé des Symptomes de la Maladie Vénérienne à Paris, 1815.

written on the venereal disease, although he acknowledges gonorrhœa may have a different origin, still endeavours to prove the identity of gonorrhœa and chancres in the greater number of cases as syphilitic affections, from the circumstance of several females having been infected by the same man with both complaints, and the same occurring in several males from communication with one woman, and he inculcates in consequence the propriety of treating them by mercurial preparations. In Great Britain, they are usually considered as distinct diseases; but in whatever way we are disposed to view the subject, it is hardly possible to reconcile the different facts which have been adduced, without admitting that ulcers will arise on the penis from the matter of gonorrhœa; that gonorrhœa will in turn be caused by the matter of these same ulcers, and that both occur in consequence of promiscuous or uncleanly intercourse. That many of the ulcers produced in this manner will occasionally assume every character of chancre, and cannot be distinguished from it, I am perfectly satisfied of, from repeated observation; but I am equally as certain that a gonorrhœa in men, with the worst appearances and symptoms, can, and often does, arise from irritating causes common to parts free from any specific disease or poison, is not distinguishable from one that has arisen from promiscuous intercourse, and that both complaints are curable in the same way and without mercury. It may be asked, can gonorrhœa, or the ulcers resulting from the matter of

gonorrhœa, produce symptoms of constitutional derangement? The evidence of authors is at variance on this subject, and I am inclined to believe, as a general rule, that they do not; although I am by no means disposed to affirm, that they cannot, under particular circumstances of constitution, produce such symptoms; but in allowing that they do sometimes follow, I am much inclined to believe, that they become serious only in consequence of the improper exhibition of mercury; and it is from the cases that have made me allow, that secondary symptoms, such as inflammation and ulceration of the tonsils, and eruptions on the skin, do follow gonorrhœa, that I have also drawn this inference.

In the British empire, surgeons, so far from confounding these complaints, have on the contrary been long accustomed to make distinctions between the different kinds of ulcers, to which the sexual organs are liable. Mr. Hunter endeavoured to point out the ulcer which he supposed to possess specific qualities, and to be the cause of what are called the secondary symptoms of syphilis; and since his time the characters he has given have been supposed to be truly diagnostic and infallible signs of a disease that required a course of mercury for its cure. His opinion has indeed so far regulated the conduct of practitioners in general, that the greater or lesser resemblance of sores to the assemblage of appearances he has described,

has decided whether a course of mercury was or was not necessary. It having been taken for granted that mercury was the only cure, that a sore possessing these characters must contaminate the habit generally unless it were prevented by the exhibition of the appropriate remedy, and that it could not be cured without it. That this was, indeed I believe, is the opinion of the most eminent surgeons in the empire, will not be denied, and I am acquainted with *none* of whose opinions records are preserved, either in their writings or by their pupils, with the exception of Mr. Abernethy, who do not allow, even if they do not support this doctrine.

Although it was supposed that a chancre was the true syphilitic ulcer, when possessing the properties I have mentioned, it was allowed, and the oldest records of surgery confirm the fact, that many other kinds of ulcers arise from promiscuous intercourse, which do not require mercury for their cure. Attempts were then made to distinguish these also; and Mr. Abernethy, Mr. Carmichael, and others, have been very successful in their endeavours. But the matter did not rest here; reference was not made alone to primary ulcers; the different secondary symptoms were also considered, and attempts again made to distinguish those resulting from each particular kind of ulcer. In this manner several diseases, supposed to depend upon different poisons, have been described, which, if they did

actually exist, would be much more dangerous than syphilis itself, which all agree in thinking curable by mercury properly exhibited, whilst the other complaints are, at the same stage of the disorder, aggravated by its exhibition.

In consequence of these opinions, it became desirable to ascertain, at an early period, whether an ulcer was a chancre or not; and many surgeons prided themselves on their peculiar talent in distinguishing those ulcers, which absolutely required the use of mercury for their cure, from those that did not; but the value of this prescience will be more duly estimated, now that it has been ascertained that every sore, of whatever description it may be, will heal without its use, provided sufficient time be granted, the constitution be good, the patient regular in his mode of living, and that attention be paid to cleanliness and simple dressing, and to keep the patient in a state of quietude.

During the last eighteen months in the York Hospital Chelsea, Mr. Dease, Dr. Arthur, Dr. Gordon and myself have been in the habit of treating all cases of ulcers on the penis, whatever form or appearance they might have, by simple mild means, that is, by dry lint, or ointments or lotions for the most part not containing mercury, in order to obviate the objection that might be made to the application of it in any form; and of near one hundred cases which have been treated in this

manner, all the ulcers healed without the use of mercury; and among them there were of course many of every description, from the common ulcer, without excavation or induration, to the solitary ulcer possessing the true characteristics of chancre. Since Mr. Rose of the Guards began to treat his people without mercury, and the practice was adopted at the York Hospital, it has been followed at several of the hospital stations, at Dover, Chatham, and Edinburgh, and in different regiments at home and abroad, especially the 57th and the staff corps of cavalry in France. From these hospitals I have seen the reports of near 400 cases more, which have been treated with the same result as far as regards the cure of primary ulcers; each ulcer appears to have run a certain course, which, as to extent, was much the same as in one of the same appearance where mercury was supposed to be necessary; and at an indefinite period of time, to have taken on a healing action, and in the greater number of instances, skinned over rapidly, leaving a mark or depression shewing a loss of substance. With us, where the ulcer had the characteristic appearances of chancre, dry lint alone was generally applied to it; where these signs were less prominent, a variety of applications were used; but there were a great number of sores both raised and excavated, on which no application made the least favourable impression for many weeks. They did, however, yield at last to simple means, after remaining for a considerable time

nearly in the same state, several of them having become sores of a large size previous to, or in the first days after their admission. If they were ulcers without any very marked appearance, and did not amend in the first fortnight or three weeks, they generally remained for five or seven weeks longer; and the only difference, in this respect, between them and the raised ulcer of the prepuce was, that this often remained for a longer period, and that ulcers, possessing the true characters of chancre, required in general a still longer period for their cure, that is, from six, eight, to ten, twenty, and even in one case twenty-six weeks healing up and ulcerating again on a hardened base. Those that required the greatest length of time had nothing particular in their appearance that could lead us to distinguish them from others of the same kind that were healed in a shorter period; neither were any of these ulcers followed by a greater number of buboes, nor did they suppurate more frequently than in the same number of cases treated by mercury; on the contrary, the ulcers were not so frequently, on the average, followed by them, neither did they so often suppurate; but this may also be attributed to the antiphlogistic means employed both generally and locally for their relief.

The fact then of the possibility of curing every kind of ulcer on the genitals without mercury seems to be fully established; but the question of

time is very important, for I have every reason to be certain from former experience, that almost all these protracted cases would have been cured in one half or even one third of the time, if a moderate course of mercury had been resorted to after common applications had been found to fail; and I have reason to think, from the treatment of other cases, that the duration of many of them might also have been shortened by the regular exhibition of cathartic medicines combined with sudorifics.

The great question however is, were these people, whose ulcers were healed under this treatment, more liable to secondary symptoms than if they had been treated by mercury? According to the opinions commonly entertained, there ought not to be a doubt on the subject; but these opinions have been formed rather on what it was supposed must follow, than on what has been actually observed to follow. From the nature of the service, it has not been possible for us to trace with sufficient exactness the whole of the persons that have been treated in the York hospital, although many remained for several months under observation; but of the whole treated, only six cases have been noticed in which symptoms strongly resembling those of syphilis made their appearance, although it is possible slighter ones not requiring medical assistance may have occurred. Of these six cases, two had ulcerated throats, combined with eruptions. In one, the papular eruption

appeared before two ulcers, one a raised ulcer of the prepuce, the other a chancre on the corona glandis, had healed; one had a syphilitic leprous eruption, and being a private patient was cured by mercury and the decoct. sarsaparillæ. Another of the same description was cured without either of these remedies.—Five of the six, then, were cured by simple means, such as cathartics, antimonials, sarsaparilla, and the warm bath, and one by the assistance of mercury.

In none of these cases were the bones affected; it is but proper, however, to remark, that several cases were admitted during this period, in which a few mercurial pills had been taken, and the mouth not been affected, and in which the primary symptoms were followed by eruptions both papular and scaly, by ulcers in the throat, by nodes, and in one case by inflammation of the periosteum covering the bones of the nose, and ulceration of the septum nasi, although mercury was resorted to for its cure; but these cases as well as many others of disease in which mercury had been frequently or irregularly used, although cured, are not included in these observations, as the exhibition of even a small quantity of it in the first instance, might be supposed by some to have a certain degree of influence on the symptoms which subsequently appeared. Mr. M'Leod in the hospital at Dover, out of fifty cases treated without mercury which he has been able to keep in view, has not

had a larger proportion of secondary cases than I have. Staff-surgeon Murray, and Mr. Evans of the 57th regiment, and Mr. Brown of the staff corps of cavalry, have been equally successful in France. In the course of twelve months they treated 134 cases, and the proportion of secondary symptoms to the whole number has been under a tenth, and of the same description as my own. In Edinburgh, the result has, in 200 cases, been the same; indeed it has been so generally uniform as far as I am acquainted, that we cannot doubt that the proportion of secondary cases of syphilis is infinitely less than is commonly supposed; but it is in all probability something greater than the preceding remarks would point out, from the cause I have assigned. It appears singular that in the secondary cases, the symptoms should all have been of a mild nature, in two instances only affecting the bones. Some of my friends, of great talents and experience, have been induced from this to suppose, that the greater severity of symptoms, which are frequently met with, have been caused by the exhibition of mercury in the first instance, which aggravated the constitutional disease. I am rather disposed to attribute their mildness to the antiphlogistic means resorted to, on the secondary symptoms first shewing themselves; because the situations I have filled have afforded me many opportunities of seeing persons suffering from the primary and secondary symptoms at the same time, where they had not taken any medicine to mitigate or impede the progress of the disease, and these were apparently running through their several stages until checked by mercury.

If we refer to Dr. Fergusson's Paper on the Venereal Disease, in the Fourth Volume of the Transactions of the Society, we shall find it stated, that in many cases in which the Portuguese certainly gave no mercury for the cure of primary symptoms, the secondary ones run their usual course even to the loss of the bones of the nose; and I am very willing to confirm a remark he once made to me, that there were more people to be met with in the town of Lisbon who had suffered that mutilation, than in any other he has seen of the same size; we cannot then doubt that secondary symptoms of the most serious nature will occasionally follow in particular constitutions.

The Portuguese, in treating all cases of ulcers without mercury, did only what we have been lately doing, and with nearly the same success, suffering considerable delay in the cure of the primary ulcers, and meeting with few cases of secondary symptoms in proportion to the total number treated. It ought, however, to be remarked, that ulcers of a mild character are much more prevalent in Lisbon than in London, because the lower classes of people, and especially females, have an abhorrence of cold water applied to the sexual organs. But independently of this, Dr. Fergusson

supposed they did not suffer from secondary symptoms, as they ought to have done according to the ideas we then entertained, because the venereal disease was mitigated by reason of a general and inadequately resisted diffusion of it among them, in consequence of their simple mode of treating it. There is not, however, any more solid foundation for this opinion, which has I am aware made a strong impression on many persons in England, than there is for that which is commonly entertained that the disease is more virulent in Portugal than in Great Britain. On this point I can also only agree with Dr. Fergusson to a certain extent. I do not think the disease which the troops contracted in Portugal, was in the slightest degree more violent than the same kind of complaint at home, neither do I place the least reliance on what has been said by others about a distemper called the Black Lion of Portugal, which I do not believe exists; but I perfectly coincide with him in opinion that the change from the climate of Great Britain to that of Portugal in the summer, with the different mode of life, does act most powerfully on our northern constitutions, and disposes strongly to inflammatory affections. It is this that rendered the same kind of wounds more dangerous to the British soldiers than to the natives, and it was to this disposition, increased by the greatest irregularity of conduct, and often by intemperance, a vice the natives are not addicted to, that we were indebted for the mutilations

which ensued from the venereal disease. If the persons affected had been managed in the manner he has informed us he treated his friend after the battle of Vimiera, the result would have been, and was in many instances very different; but in many cases of this kind, from the strong tendency to gangrene, which is great in constitutions of this description in warm climates, mercury, bark and wine were unfortunately resorted to, instead of bleeding and the most vigorous antiphlogistic treatment, and the part affected was destroyed; but I have seen the same thing happen in several hospitals both civil and military even in England. I write on this subject with confidence, because I was with the army during the whole war in the Peninsula, and had for several months together the superintendence of the hospitals in Lisbon, at a later period than Dr. Fergusson alludes to, and when this disease was one object of my particular attention.

I do not then think Mr. Carmichael's opinion, as to the secondary symptoms peculiar to the phagedænic and sloughing ulcer, receives any support from what occurred to the troops in Portugal; because it did not appear that either of them following sexual intercourse were dependent on the cause which produced the ulcer. Where many men have had intercourse with the same woman, they have not all had the same complaint, although one of the ulcers so originating has become phage-

dænic or sloughed; neither has the same woman herself suffered from this distemper; indeed the nature of an ulcer of either kind must, after a short time, effectually prevent any intercourse, and we often find, that their peculiar characters only appeared after the ulcer has existed for several days. I firmly believe also, that in the greater number of cases of sloughing ulcer, where mercury is not given, no secondary symptoms would appear: and in those cases in which they did appear, I apprehend they would be equally dependent on the state of the constitution, both as to the mode of cure and their destructive characters. In other words my observations lead me to conclude, that these ulcers do not depend upon a specific poison, but on the state of the constitution under particular excitement, and that when secondary symptoms do occur, they are not dependent on the state of the ulcer; although I am ready to admit, that in a constitution where an ulcer will rapidly become phagedænic, the secondary symptoms, when they do occur, may be different to a certain extent from those that follow more simple ulcers, in a healthier habit of body.

An officer, in the years 1800 and 1801, suffered severely from almost all the secondary symptoms of syphilis, such as sore throat, eruptions, and nodes, and recovered under the care of the late Mr. Rush. In the year 1808, he landed with his regiment in Portugal. In April 1809, he contracted, for the third time, an ulcer on the penis, but being obliged to move with his corps he found, at the end of the fourth day's march, that it was inflamed, red, painful, and swelled to thrice its natural size, altogether threatening the loss of the part: but from which misfortune he was saved by perfect quietude, and the most vigorous antiphlogistic measures. Whilst the army were in the lines in front of Lisbon, he again contracted an ulcer, which he concealed, until the increase of the disease obliged him to apply for advice, when he was ordered down to Lisbon. The penis was now in the same state as in April 1809, but instead of resorting to the same means of cure, he rode 40 miles into Lisbon without any delay; the consequence was, the penis sloughed. He underwent several courses of mercury, but the ulceration of the penis could not be induced to heal, his health decayed, his throat became sore, and a swelling took place on the back of the hand and on the foot. He was sent to England, but in vain. He lost by ulceration the remainder of the penis, with part of the hand and foot, and at last died from ulceration of the throat, worn out by disease. His military friends said that he died of the Black Lion of Portugal; but it was clearly from the improper treatment in the first instance of a simple disease, that these dreadful consequences were induced; and I have no doubt they would have been brought on at the former period, if he had been treated in the same manner.

Having made these remarks upon the cure of diseases contracted by promiscuous intercourse, without mercury, and shewn that they depend upon the state of the constitution for any peculiar malignancy, I may be permitted to revert to a former period when the same class of people were cured of the same diseases by mercury: that is, between the years 1801 and 1809, when surgeon of the 29th regiment, and I rely much on the knowledge acquired in this period, because the regimental surgeon possesses advantages as to ascertaining facts which are not to be met with in any other walk in life. The persons affected are completely under his controul, he can do what he pleases with them without restraint, and he has them under his observation for a number of years, certain that they cannot have a change of opinion, and act contrary to his wishes. In the period to which I have alluded, a great number of persons afflicted with this disease came under my care, they nearly all underwent a moderate course of mercury, provided the ulcers did not assume a healing appearance at the end of a fortnight or three weeks, and I very seldom had a case of secondary syphilis, not even in those who were occasionally from under my inspection. I am not aware of having ever discharged or lost a man in consequence of it, and the worst case I recollect is now a coal-heaver in London, having been discharged the service, on account of a fracture of the arm, and a wound of the scrotum at the battle of Roliça.

Later observation has proved, that a great number of these patients would not have had secondary symptoms, if mercury had not been exhibited; it cannot then be supposed that the mercury prevented their occurrence; but if it be not satisfactory on this point, it goes a great way to prove what is almost as interesting, viz. that mercury properly exhibited is not the cause of all the evil which in many cases is attributed to it; for if it were, these people must have given proofs of it, as every case which did not yield to simple means in the course of a fortnight or three weeks, was put upon the use of mercury. If indeed a moderate course of mercury, nay a few pills, could produce all the symptoms which are frequently supposed to arise from it, there are few of us who have lived in warm climates, where nearly all have taken it irregularly for one disease or other incidental to them, that would not be living proofs of it, while the contrary is well known to be the fact. Whether an insufficient course of mercury is more productive of secondary symptoms than no mercury at all I cannot say; but it appears to me, that it is only where mercury is persisted in after it has evidently ceased to do good, when it disagrees with the constitution, or when it is exhibited at an improper period, or very irregularly, the patient being exposed to wet and cold, that it produces those symptoms usually supposed to depend upon it. The fact I have stated as to the non-occurrence of secondary symptoms in regimental hospitals, where

all doubtful cases were treated by mercury, is so positive, that I am certain no regimental surgeon of ability will be found to contradict it; that they did sometimes occur is true, but it was only when the troops were moving and under irregular management that they were numerous, and then only in the general hospitals, where all the stragglers and all the bad or protracted cases are collected. In the half-year ending the 24th of June, near 1400 cases of primary symptoms were treated in the army in France by mercury, and in this period only 14 cases of secondary symptoms occurred. It may be said, many cases had not time to shew themselves, but then it must be recollected that all those of the preceding half-year, which required the same length of time, are included in this number, and render the calculation as correct as any computation of the kind can be. In six regiments in one district in England, 521 cases were treated in 15 months by mercury, and ten cases of secondary symptoms appeared, so that the true average proportion will be between the two, or 1 in 75. I by no means, however, wish to be understood as supposing mercury to have a good effect on all primary sores, possessing or not possessing specific characters. I am perfectly aware of its inutility in many cases, and the two following, which have lately occurred to me, would attest the fact, if the records of surgery were not already sufficient.

A gentleman perceived, after a suspicious connexion, a sore at the orifice of the urethra and two others near the frænum. For these he rubbed in mercurial ointment for five weeks, when his health deteriorating, he applied to me. I told him the two sores near the frænum would heal in a few days; but that the sore at the orifice of the urethra being dependent on situation would not heal for four or five weeks more. As his mouth was affected, I advised him to omit the mercury, and await the result. He followed my advice, and under mild applications the sores healed.

A soldier contracted an ulcer on the prepuce, and came under my care in October, 1816. At the end of five weeks, the ulcer continuing, I put him, at his earnest entreaty, on the use of mercury; his mouth soon became sore, but no amendment took place for several days in the ulcer. Three weeks after the mercury was left off, other sores of the same nature appeared; but all soon healed, with the exception of one which remained stationary. The man was now satisfied mercury would not cure him, and he waited patiently the event of his treatment, until the 18th of January, when he was discharged perfectly well.

In regard to secondary symptoms, it appears that they occur after primary ulcers which have not been cured by mercury; and that they do also occur after a well regulated course of mercury, there is no man of experience will I believe deny.

Indeed Mr. Hunter, whose accuracy in matters of fact will not be disputed, has left us through his commentator, Dr. Adams, a most interesting case of this nature, where the disease not only affected the first, but also the second order of parts, although mercury was each time properly exhibited for its cure. This case is given as explanatory of Mr. Hunter's doctrine, that if the disposition for the disease be formed, mercury cannot cure it, until it come into action; which, in plain language, means nothing more, than that the disease cannot be prevented in certain constitutions from running its own course, when it may at last be cured.

Now this part of the doctrine that the disposition cannot be cured until formed, and in action, is denied by many of Mr. Hunter's most enthusiastic admirers; but there is this difficulty on the subject, that we are perfectly uncertain, when a disposition has been formed, if such a thing do ever occur; and it is not a fair inference to conclude we have destroyed it, because it never shews itself in action; it is on the contrary more rational to suppose, that there never was a disposition formed at all. This conjecture may also be more reasonably entertained, now that we are aware the greater part of these primary ulcers, which were usually supposed to be the original cause of this disposition and action, are not followed by any such effects, except under particular circumstances, with which we are as totally unacquainted as we are

with the reasons why one man on pricking his finger in dissecting shall have a chain of abscesses to the axilla, indicating every appearance of being infected by morbific matter, whilst half a dozen others shall in no way suffer, although exposed to the same injury, precisely at the same time, and in the same way; or, why a person, although continually exposed, and under circumstances where such an effect might be reasonably expected, should, perhaps, suffer but once or twice in his life; or why, at another time, he shall suffer in the same manner from the prick of a clean needle through a leather glove, which cannot be supposed to convey any infectious matter.

If we refer to the works of Mr. Hunter, Mr. Abernethy, Mr. Carmichael, and to the recorded opinions of Mr. Pearson and others, we shall find instances of diseases arising from accidental and constitutional causes, but without any kind of primary ulcers; indeed instances are not wanting of their having arisen without any sexual intercourse having ever taken place; yet these diseases so much resembled the secondary symptoms of syphilis, that it was only by the history they were supposed not to be syphilitic.

If we inquire how opinions are now formed concerning the secondary symptoms which resemble syphilis; whether from appearances or history, and what is the object of the inquiry, I believe

we shall not find a surgeon in London who values his own opinion, will venture to give one on appearances alone: all refer to history, and the object of that to both patient and surgeon is generally to ascertain whether the use of mercury is to be recommended or not. If the history be truly syphilitic according to our notions of cause and effect, mercury is ordered on the supposition of its being the only specific, although it has too frequently disappointed us. If we find, with the very same appearances or nearly so, that the patient has gone through several severe courses of mercury, it is very properly supposed not to be equal to the cure, or that the disease is mercurial, and sarsaparilla, warm bathing, &c. are substituted. If it arise from constitutional causes, and no syphilitic taint can be traced, even at the distance of half a dozen years, a mixed kind of course is generally resorted to.

It may be said that Mr. Hunter's supposed unerring sign of the disease in all its symptoms being progressive, never retrogressive, except mercury be used, is diagnostic of syphilis; but I do not believe this to be a fact; indeed I have already said, all these symptoms are curable without mercury; Dr. Fergusson has given proofs of it in a country where none is used, and where venereal diseases are supposed to be most prevalent; and as the same thing has been recently done in Great Britain and France, I may be excused

arguing the point, because it is simply a question of fact. I deny it; but I by no means deny, on the contrary, I affirm, that in all obstinate cases of this description, after the disease is fully formed, that is, after the inflammatory stage has passed by, mercury, so long as it produces a beneficial effect, is the remedy I would use in preference to all others; but the moment this good effect was no longer progressive, that instant I would abandon it until the remedy ceased to exert an improper influence on the constitution, when I might, under certain circumstances and when a change was necessary, resume it.

If we refer to cases of the secondary symptoms of syphilis, pseudo-syphilis, or the cachexia syphiloidea, we find that in all a degree of constitutional derangement exists, producing symptoms so much resembling each other as to render the adoption of a mode of cure dependent on the history of what has been already done; may we not then be induced to suppose that neither of these states of disease depend on a specific poison circulating in the blood, and exciting particular parts into diseased action, but on a particular irritation dependent more on the state of the constitution than on the nature of the offending cause? It is allowed by all that the secondary ulcers of syphilis, as they are called, cannot produce primary ones; a proof that the nature of the disease is

changed, and that the primary and secondary disease are two distinct things.

As the irritation of a prick in the finger, only produces abscesses and general derangement when the state of the constitution is not good; as derangement of the digestive organs alone may produce in particular cases constitutional symptoms of disease resembling syphilis; as the irritation of a transplanted tooth may do so in the same manner, so am I disposed to believe that an ulcer or syphilitic chancre produces secondary symptoms only in particular states of the constitution: but what that state may be, or in what it may differ from a state of health, would be as difficult to describe as in any of the other instances to which I have alluded.

Mr. Hunter has said, "the venereal matter, when taken into the constitution, produces an irritation which is capable of being continued independent of a continuance of absorption, and the constitution has no power of relief, therefore a lues venerea continues to increase." In adopting then the opinion of secondary symptoms occurring from a peculiar irritation in the constitution, I am not entertaining a new theory, I am only objecting to that part of the old one, which supposes the constitution is unable to recover itself under any circumstances without the aid of mercury; and I do

so because I have had proof of it in many instances. But I would by no means imply that it either can or does in every instance: on the contrary, I object only to the opinion of a specific virus, absolutely requiring a specific medicine, and not to the remedy itself. Let us look upon it in the venereal disease as we regard it in other diseases, to be used only in certain cases, when it agrees with the constitution, and then with moderation and prudence, and we shall hear but seldom of the bad effects which are now so common after its exhibition.

That I may not be misunderstood in the object of this paper, I shall take the liberty of recapitulating those points on which I wish the attention to rest, as the present result of the experiment.

1. Every kind of ulcer of the genitals, of whatever form or appearance, is curable without mercury. This I consider to be established as a fact, from the observation of more than 500 cases which I am acquainted with, exclusive of those treated in the different regiments of guards, and which occurred in consequence of promiscuous intercourse.

2. Secondary symptoms, (and I exclude trifling pains, eruptions, or sore throats,) that have disappeared in a few days, have seldom followed

the cure of these ulcers without mercury, and they have upon the whole more frequently followed the raised ulcer of the prepuce than the true characteristic chancre of syphilis affecting the glans penis.

3. The secondary symptoms in the cases alluded to, amounting to one-tenth of the whole, and which were treated on the antiphlogistic plan, have hitherto been nearly confined to the first order of parts; that is, the bones have in two cases only been attacked, and they have equally been cured without mercury.

4. As great a length of time has elapsed in many of these cases without the occurrence of secondary symptoms, as is considered satisfactory where mercury has been used, viz. from six to eighteen months.

5. The primary sores were of every description, from the superficial ulcer of the prepuce and glans to the raised ulcer of the prepuce, the excavated ulcer of the glans, and the irritable and sloughing ulcer of these parts. In the inflammatory stage attended by itching, scabbing, and ulceration, they were treated for the most part by antiphlogistic and mild remedies; in the latter stage, when the ulcers were indolent, whether raised or excavated, by gentle stimulants.

6. The duration of these stages is very different, is often increased by caustic and irritating applications, and is much influenced by surgical discrimination in the local treatment.

7. The last, or indolent stage, often continues for a great length of time, especially in the excavated chancre and raised ulcer of the prepuce; and it appears to me that in these particular cases a gentle course of mercury, so as slightly to affect the gums, will materially shorten the duration of it, although in others it is occasionally of no service.

8. Although the secondary symptoms do for the most part yield to simple remedies, such as venæsection, sudorifics, the warm bath, sarsaparilla, &c. without much loss of time, that is, in the course of from one to four and six months; yet, as in the primary ulcers, a gentle course of mercury will frequently expedite, and in particular persons and states of constitutions is necessary to effect a cure; and that a repetition of it will even, in some cases, be requisite to render it permanent.

Much satisfactory information is yet to be acquired, many experiments to be instituted, and much patient investigation to be gone through, in the comparative treatment of these diseases with and without mercury, before we can arrive at any

fair conclusion on a subject of such great importance. It appears for the reasons I have already assigned, that it is to the surgeons of regiments we are principally to look for them; and from the attention which is bestowed by Sir James M'Grigor, the Director-general of the medical department of the army, to this subject, there is every reason to think that much will be done in the course of the next few years. In the mean time it is not my intention to recommend that the practice should be indiscriminately adopted in private life; but advantage may be taken of the facts I have stated on many occasions, to the essential benefit of the patients. In persons of a strumous habit, in those with whom mercury is known to disagree, in others who are supposed to labour under its effects, or of it and the disease combined, and who imprudently contract ulcers resembling chancres, and to whom a course of mercury might, according to received opinions, be highly detrimental, it must be very satisfactory to know that these ulcers will heal by simple means; and that if they be regular in their mode of life, secondary symptoms may not follow, or if they should, that there is still a probability of their being cured without the use of that remedy, which to these people may prove a greater scourge than the disease for which it is administered.

The facts I have adduced must necessarily lead many to pay greater attention to the nature of the

ulcers they continually meet with, and may induce some few to repeat the experiments for their own satisfaction: but, before the practice can become generally useful, the minds of medical men must be better satisfied of its validity, so that a hasty change of opinion may not lead to a material change of proceeding, that the efforts of one man may not be counteracted by the mere opinions of another. But I again repeat, if any one should be disposed to try the method of cure, the effects of which I have noticed, let him constantly bear in mind, that every case so treated requires as much attention and quietude on the part of the patient, and more attention and discrimination on the part of the surgeon, than when mercury is used for the cure. If any one should suppose, from what I have said, that there is no such thing as a venereal disease, that the ulcers on the penis are all common sores, requiring no more care or attention as to diet, exercise, regularity of life, cleanliness, or dressing, than an ulcer on the arm or other part of the same size, occurring from any accidental cause, he will find himself very much mistaken; and the result of his trials will be a more frequent recourse to mercury, and a longer continuance in its exhibition, than is even customary at present.

I beg it may be remarked that I have not given an opinion on, or entered at all into many im-

portant points inseparable from a due consideration of the subject; my object has only been to state a few facts, and make some observations on them. If they had been more comprehensive, I should have had to apologize for a volume instead of a paper.

THE END.

G. WOODFALL, PRINTER,
ANGEL COURT, SKINNER STREET, LONDON.

OBSERVATIONS

ON THE

TREATMENT OF SYPHILIS

WITHOUT MERCURY.

BY

JOHN THOMSON, M.D.

PROFESSOR OF SURGERY TO THE ROYAL COLLEGE OF SURGEONS, EDINBURGH, &c.

AND SURGEON TO THE FORCES.

COMMUNICATED TO DR DUNCAN, JUNIOR.

FROM THE EDINBURGH MEDICAL AND SURGICAL JOURNAL, No. 53.

EDINBURGH:

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1817.

OBSERVATIONS

ON THE

TREATMENT OF SYPHILIS

WITHOUT MERCURY.

Dear Sir,—I regret that I have been prevented, by various avocations, from fulfilling my promise of giving you an account of the observations which, for a series of years, I have had occasion to make respecting the treatment of syphilis without mercury. But, if the following brief statement of the general results of these observations shall appear to you worthy of a place in your Journal, you will oblige me by inserting it.

I was led, many years ago, by a careful investigation into the history of syphilis, and by having had occasion to see a considerable number of anomalous and untractable cases, treated by full, but ineffectual courses of mercury, to doubt the justness of the opinion so generally received, that mercury, in some one or other of its forms, is the only safe, effectual, and specific remedy for the cure of that disease. These doubts were much increased by the discussions to which the various communications made to the late Dr Beddoes gave rise, respecting the efficacy of nitric acid in venereal complaints; by the appearance of Mr Abernethy's valuable publication on the diseases resembling syphilis; and by

conversations, at different times, with my friend Mr Pearson of the Lock Hospital, as well as by the perusal of notes taken from his excellent lectures upon that subject. In the uncertainty in which I was respecting the proper diagnostic marks of constitutional syphilis, I resolved, in the treatment of those cases that should come under my care, in which mercury had had a full trial, and particularly in which it seemed to have produced injurious effects, to abstain altogether from prescribing that remedy, till a trial should be made of some of the other remedies which had at different times acquired reputation for the cure of venereal complaints. That which I made choice of was the simple decoction of sarsaparilla; and, after a very ample employment of this substance, I feel myself compelled to adopt the opinions of some of the earlier writers on the venereal disease, with regard to the singular efficacy of this root in curing symptoms which have usually been reputed syphilitic; and also, with a few exceptions, to believe in the justness of the conclusions to which the late Sir William Fordyce had been led from an extensive trial of sarsaparilla. I have employed this remedy in every form of the disease, which either remains after, or succeeds to, the use of mercury, and have had the satisfaction to observe all manner of cutaneous eruptions and ulcerations, ulcerations of the throat, pains and swellings of the joints and ligaments, and nodes of the bones, gradually disappear under its mild operation, when its use was duly persisted in, and was, at the same time, accompanied by attention to regimen, and the proper local treatment. In particular cases, the recovery has been tedious, and it has been necessary to have recourse to the use of the sarsaparilla a second, or even a third time. I may however remark, that I have never had occasion to see the venereal diseases in which it was employed make those rapid and alarming advances which we see so often occur in them during the use of mercury, nor am I aware of any permanently injurious effects which the sarsaparilla produces, either immediately, or remotely, upon the constitution.

Various circumstances induce me to believe, that sarsaparilla has formed a principal ingredient in the composition of the greater number of the secret remedies which have been sold in every country of Europe for the cure of syphilis, and which have, I believe, been found chiefly useful in those cases in which that disease has appeared to remain in the constitution after the full and repeated use of mercury. I find the sarsaparilla mentioned as an ingredient in most of the antivenereal prescriptions of the irregular practitioners, and, in particular, in those of Sintelaer, the vender of a secret remedy for the cure of the venereal disease, who practised in London about the beginning of the last century, and who appears to me to have anticipated some of the observations and discoveries upon this subject which have been made in our times. In carrying on the observations to which I have alluded, it was with no small satisfaction that I accidentally found, about six years ago, the work of this practitioner, in the library of my friend, Dr Stedman of Kinross, entitled "The Scourge of Venus and Mercury, represented in a treatise of the venereal disease, giving a succinct, but most exact account of the nature, causes, signs, degrees, and symptoms of that dreadful distemper, and the fatal consequences arising from mercurial cures, with the several ways of taking that infection," &c. "Unto which is added, the true way of curing not only the consummate and inveterate, but also the *mercurial pox*, found to be more dangerous than the pox itself. The whole illustrated by many authentic and unquestionable accounts of cures performed after the patients were reduced to the very brink of the grave by mercurial operations, the like not as yet extant." By J. Sintelaer, practitioner in physic, London, 1709.

That I have not mistaken the nature, nor overrated the value of the hints contained in this book, and which tended to confirm me in the soundness of the conclusions to which I had been previously led regarding the treatment of venereal diseases without mercury, will appear, I trust, from the following extract, selected from among many passages of a similar import.

"When, after the imperfect or preposterous cure of a consummated pox, by mercurial salivations, or sometimes also by over violent, and too frequent mercurial vomitives, there appear such symptoms as are most commonly observed in the most inveterate or radicated pox, you may then rationally conclude, that they are not so much the remnants of the former pox, but rather *the symptoms of a disease of its own kind*, being occasioned either altogether by the natural malignity and virulency of the mercurial preparations, by which these salivations or violent vomitings were raised, or at least by the intermixture of the mercury with some small remnants of the pocky ferment, which otherwise might either have been expelled or subdued by the strength of nature; but its virulency being now exalted by the malignity of the mercury, it appears attended with much more violent, and much more dangerous symptoms after the mercurial cure, than it did before.

"Hence it is that a certain modern author is forced to confess, that he believes that there are more fallen noses, corroded palates, and rotten bones, occasioned by the mercury, than by the pox.

"So that if you observe, that after the cure of the pox by mercurial medicines, either some fresh pocky symptoms, such as did not appear before, but especially such as make their appearance in the glandulous and bony parts, as ulcers in the mouth and palate, or the roof of the mouth, and violent and continual pain in the bones; I say, if you find these symptoms appear after a cure of the pox by mercury, when nothing of it was observed before; or if you find these, and other such like symptoms which discovered themselves before the said cure, become afterward more violent and frequent, you may then be fully convinced, that they owe their origin chiefly to the malignity of the mercury, or at least to its intermixture with some slight remnants of the old pocky ferment, whence it is, that we have given it the name of a *mercurial* or *symptomatical pox, called by some the bastard pox.*"

In the want of an accurate diagnostic symptom between syphilitic chancre and ordinary ulceration, and often also from the situation of a patient, upon his first applying to me, rendering it improper for him to undergo a course of mercury, I had for many years frequently been induced to treat primary venereal sores with simple local remedies. The great number of these sores which disappeared under this treatment, some with, and others without, the formation of bubo, and many of them possessing all the characters usually attributed to syphilitic chancre, rendered me extremely desirous to ascertain whether there be indeed any primary venereal sores which are not capable of being healed without the use of mercury. An opportunity for bringing this matter to the test of public experiment, has been afforded me in the practice of the Consolidated Depôt Hospital in Edinburgh Castle, to the charge of which, through the kindness of the Director General of the Army Medical Department, I was appointed in March 1816. In this hospital, open to the inspection of all the medical military officers attending the University, I have, since that period, carefully abstained from the employment of mercury, not only in the treatment of secondary, but also in that of the primary symptoms of syphilis, and have found that chancre and bubo have in every instance disappeared under an antiphlogistic regimen, rest in the horizontal position, and mild local applications, as speedily as I had ever seen them disappear in similar cases in which mercury was employed. In the management of these cases, I have had the able assistance of Hospital Mate Macgibbon, and of Assistant Staff-Surgeon Blackadder.

The mild manner in which both chancres and suppurating buboes were observed to heal under this treatment in the Depôt Hospital, induced the late Mr Hicks to follow a similar practice in the treatment of the men affected with syphilis of the 92d regiment, at that time stationed in Edinburgh Castle. The results which this gentleman obtained in the cases so treated, and which I had an opportunity of seeing until the regiment marched for Ireland, in April 1817, were precisely similar to those which I had obtained in the Depôt Hospital.

In the course of reporting the cases in these hospitals for my clinical lectures on military medicine, I was surprised to be informed, in February 1817, by Mr Kenning, resident surgeon of the Ordnance Medical Department, that a practice similar to that which I was following in syphilitic cases had been employed for a considerable period (I have reason to believe even some time previously to my appointment to the Depôt Hospital) by Mr Rose, surgeon of the Coldstream Guards, and I was happy to learn, that the results of his practice were similar to mine.

Soon after this period, the 88th regiment arriving here from France to replace the 92d, I found, that, in consequence of communications from London, the medical officers of this regiment had begun a short time before to treat all their syphilitic cases without mercury; and since that time, up to the present date, I have had an opportunity of seeing a very great number of syphilitic cases in this regiment treated in this manner, with uniform success, under the judicious management of Surgeon Johnston, and Assistant Surgeon Bartlett.

In private practice, I have followed a similar mode of treatment in a great number of syphilitic cases, many of which were seen by my friend Mr Turner, who for several years lived with me, and assisted me in my practice; and in treating these cases, I have obtained results in all respects similar to those stated to have taken place in the military hospitals.

Bubo in one or both groins, sometimes suppurating, and in other instances disappearing by resolution, has occurred in about one fourth of those affected with chancre, but in none of the chancres or buboes which I have seen treated without mercury, has any disposition to gangrenous inflammation, or to phagedenic ulceration, ever manifesteditself,—occurrences which are so common in the treatment of these affections, under even the most careful employment of mercury. In a number of the cases of chancre, a hard tubercle, accompanied with discoloration of the skin, has been observed to remain for a considerable time after cicatrization, and this part has frequently shewn a disposition to become ulcerated, when it has either been neglected or has been irritated.

A sufficient length of time has not yet elapsed to enable us to ascertain in how many cases constitutional affections will occur, or what all the constitutional affections may be among those who have been cured of the primary symptoms of syphilis without the use of mercury. Of the cases which I have seen, the number in which constitutional symptoms have supervened, has not exceeded one in ten; and the only forms of these symptoms which have presented themselves, are ulcerations of the throat, and cutaneous eruptions, sometimes accompanied by inflammation of the eyes. The ulcerations of the throat have been few in number, and generally accompanied with cutaneous eruption; they have had an aphthous appearance, and have sometimes been attended with aphthæ of the inside of the mouth, enlargement of the tonsils, and swelling of the lymphatic glands of the neck. The cutaneous affections which have occurred have been, in several cases, a reddish mottled efflorescence of the skin, resembling roseola, in others, papular, pustular, scaly, or tubercular eruptions. These secondary symptoms have usually appeared in cases where the primary sores had been long in healing, and where they had left behind them indurated cicatrices. The time at which they have generally occurred, has varied from four to twelve weeks after the appearance of the primary ulcer. The affections of the throat have been slight in comparison with those which usually take place in venereal cases after the use of mercury. The cutaneous eruptions have been chronic in their nature, and have all, as well as the sore throats and inflammations of the eye, gradually, though sometimes slowly, disappeared without the use of mercury, and without seeming to have left any injurious effects behind them. I am inclined to believe, that, if mercury had been employed, the cutaneous affections, in several of these cases, might have been cured in a shorter period of time than that in which they have disappeared; but whether, in accelerating the cure of the cutaneous eruption, that remedy might not have excited other constitutional affections, is a point which future experience can alone determine.

The secondary symptoms of syphilis, I may remark, have not appeared to me to be more frequent in their occurrence in those patients who have been treated without mercury, than in those by whom that remedy has been freely employed. Hitherto I have had no opportunity of observing among patients treated for the primary symptoms without mercury, any of those deep or foul ulcers of the skin, of the throat, of the mouth and nose, or of the painful affections of the bones, which are stated by every writer on syphilis, as the genuine products of that disease. Among the very great number of such affections which have

presented themselves to my observation, one, or more frequently more than one, course of mercury had been employed.

The results I have now stated to you are satisfactory, I conceive, in so far as they seem to establish the possibility of every symptom of syphilis being cured without the use of mercury, and by this to lead to applications of the utmost importance in practice.

They also have a confirmation in, while they enable us to explain, the numerous, and apparently contradictory, statements which have at different times been given with regard to the efficacy of the various remedies which have been extolled for the cure of syphilis, from the first appearance of that disease in Europe to the present day.

Indeed, all the observations which I have had an opportunity of making upon the symptoms and progress of syphilis, tend to confirm me in an opinion which I have for several years taught in my lectures, that it is a chronic and not an acute disease; and that the rapid progress which it seems sometimes to make, and the exasperated symptoms which it exhibits, are not the genuine or necessary effects of syphilis, but may, in most instances, be traced to intemperance, to neglect, or to improper treatment.

What then, it may be asked, is the practical conclusion to which these views lead in the treatment of syphilis? Are we to abandon the use of mercury,—to reject it as a remedy which is unnecessary, and that may be injurious; and if mercury be laid aside, must we employ other remedies, such as guiacum, sarsaparilla, or nitric acid, in its place; or may we safely trust the cure of this disease to the powers of nature alone?

Many years, I conceive, must elapse, before a satisfactory answer can be given to these questions. To be able to answer them, it must be ascertained, whether syphilis undergoes a spontaneous cure in all the forms in which it appears; and upon this being established, it must be also ascertained, whether by any, and by what means of treatment, the progress of this spontaneous cure may be accelerated or retarded.

The effect of mercury in accelerating the cure of syphilis seems to be too well established to admit of its being called in question; but in how far the use of this substance may or may not give a tendency to the recurrence of the disease in a more aggravated form, or may induce diseases different from, but resembling those described as arising from syphilis, are points still far from being sufficiently determined. The belief that syphilis can be cured safely and ultimately only by the use of mercury, is so deeply rooted in the minds of the public, and the prejudices of practitioners, are so much biassed in favour of the em-

ployment of that remedy for the cure of syphilis, that we cannot expect that its use, whether it shall be ultimately found to be necessary or not, will be generally given up, at least for a long time to come, in the private practice of our profession.

The practice however of treating venereal cases without the use of mercury, has now become very general in the British military hospitals, both at home and in France; and by a communication which I have had the pleasure to receive, at the desire of Sir James M'Grigor, from my friend Dr Theodore Gordon, I have reason to believe, that the results obtained do not differ materially from those which I have described. These results will soon, I hope, be communicated to the public; and much valuable information may be expected from the medical officers of the army who have devoted their attention to this subject, and whose situation affords them so much better opportunities than medical practitioners enjoy in the practice of civil life, of ascertaining whatever relates to the natural history or treatment of syphilis.

The following table of the cases which have been treated without mercury in the military hospitals here, since March 1816, exhibits a summary view of some of the results which have been detailed. I remain,

Dear Sir,
Very truly your's,
JOHN THOMSON, M. D.

5, George Street,
8th December 1817.

Abstract of the cases of Primary Venereal Symptoms treated without the use of Mercury in the Consolidated Depôt Hospital, and in the Regimental Hospitals of the 92d and 88th Regiments in Edinburgh Castle, from March 1816 to December 1817.

Number of cases of primary symptoms treated,		155
Of these had buboes, a considerable proportion of which suppurated,		54
All cured.		
Of these cases, secondary symptoms have supervened in		14
In the form of ulceration of the throat in	1	
——— of ulceration of the throat with cutaneous eruption in	2	
——— of cutaneous eruptions alone in	10	
——— of cutaneous eruption with iritis in	1*	
All of which have disappeared.		

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* In seven other cases of eruption, attended with iritis, which have occurred to my observation, the disease has been cured without the use of mercury.
J. T.

8

ADDITIONAL OBSERVATIONS

ON THE

CURE OF SYPHILIS WITHOUT MERCURY.

COMMUNICATED IN A LETTER TO DR DUNCAN, JUN.

By JOHN HENNEN, Esq.
DEPUTY INSPECTOR OF HOSPITALS FOR NORTH BRITAIN.

[From the Edinburgh Medical and Surgical Journal, No. 55.]

DEAR SIR,—I have been enabled to procure from the case books of the 88th regiment, which have been kept with the most praise worthy minuteness, by my friends Messrs Johnston and Bartlett, the enclosed analytical view of the hundred and five cases to which I alluded in my letter in your 54th number; and I take the opportunity of adding a few more remarks to that communication.

The appearances of the primary sores, contracted by sexual intercourse, which have presented themselves in the military hospital in the Castle, have varied extremely, but, in many instances, they have been very much influenced by their particular position. The following circumstances have been principally remarked in them. 1st, Ulcers on the internal integuments have generally had round callous edges, level surfaces, but little induration of base; they were less irritable than others, became sooner clean, and healed uniformly, but slowly. 2d, Ulcers on

the internal membrane of the prepuce have been generally either superficial or elevated; their surfaces covered with a light-coloured slough, or of a bright red with a villous appearance; their edges either regularly defined, or spread out like excoriations; their bases have been in general but little indurated, but when the ulcers have spread out, they have sometimes acquired a cartilaginous hardness, and have been extremely difficult to heal. 3d, Ulcers immediately behind the corona glandis, have been in general highly irritable, deep, scooped, indurated in their edges and base, foul, with membranous bridles, as it were, running across them, throwing off a perceptible slough, but, if mildly treated, soon healing after that event. 4th, Ulcers on the frœnum have generally followed lacerations of that part, have had considerable induration of base, and have been generally slow of healing. 5th, Ulcers of the glans have been generally excavated, but with little hardness of base, quickly throwing off a slough, and then healing rapidly.

It has sometimes happened that where a sore has spread and occupied different textures, each of its parts has exhibited the character which has generally prevailed in sores confined to that particular texture. Thus in a sore which has implicated part of the internal prepuce, corona, and glans; on the first spot it has been elevated, on the corona it has been indurated and irritable, and on the glans excavated, but with little hardness. Besides these differences, which have been apparently occasioned by position, ulcers on the organs of generation take on different actions like those on other parts of the body, and are attended with simple purulent, or vitiated discharge; with increased or decreased action, with phagedæna, sloughing, &c. Excoriations also appear, which in some instances proceed from mechanical injury, and in some from the application of an acrid matter, or from the acquired acrimony of the natural sebaceous secretion which lubricates the parts. In all these cases, early attention is a great means of preventing the sores from acquiring an irritable character. Cataplasms, astringents, and stimulants, have all their peculiar merits at particular times, and even the solution of arsenic has been found to give immediate relief from excruciating pain and phagedæna, which had followed great irritation previous to the patient being taken into hospital. In some cases blood-letting, both local and general, has been had recourse to with advantage. In many cases cleanliness alone has effected the healing; but in no instance has the application been of such a nature as to destroy the structure of the parts, and by that means prevent the absorption of the virus; this is shewn by the occurrence of secondary symptoms in our hospital, which seldom take place when the primary sores are early destroyed. In

all cases, rest in the horizontal posture is an important part of the treatment. Some of the primary sores have gone on rapidly to a cure, some have been more slow, and a few have retained their hardened edges and bases for a long time; the great majority have healed as in ordinary cases, some leaving a pit or scar behind, and some, particularly the elevated sores, have had a scab formed, which on dropping off, has left the parts sound beneath. In many instances, after having healed up, the sores have broken out again without any obvious cause, in others, the friction of the clothes or rough handling has occasioned their re-appearance, and some on the prepuce have appeared as if mechanically torn open in the effort of uncovering the glans. In all these cases, the healing of the renewed sore was as certainly effected without mercury, as that of the original one.

We have had frequent opportunities of remarking two or more sores of different kinds existing at the same time; an irregular shaped diffused sore; an elevated sore, covered with a light coloured slough, as if a bit of shamoy leather had been stuck on by some tenacious substance; a groove or streak along the glans, as if made by a scraping instrument, filled with purulent matter; and the true and perfect chancre according to Mr Hunter's definition, or the true syphilitic ulcer according to Mr Carmichael. * This last has in some cases occupied the glans, in some the prepuce, while the sores of another description have been on the same part close beside it, or on another part at a distance. Three of these cases I particularly selected for examination and public demonstration in the hospital; in one, the Hunterian chancre was on the glans, and a sore without any hardness on the prepuce; in another, it was on the prepuce, and a simple ulcer on the glans; in the third, a most perfect specimen of Hunterian chancre occupied the internal prepuce close to the corona glandis; and at about half an inch from it, nearer the frœnum, but farther from the glans, was an elevated

* To prevent all cavilling about words, I understand by true chancre or syphilitic ulcer, a sore answering the definition given by Mr Hunter in the 1st chapter of the 4th part of his treatise edited by Dr Adams, London, 1810, page 314, 526, and repeated by Mr Carmichael, Essay on the Venereal Diseases, &c. page 25. Although the callous nature of the ulcer has been handed down from the earliest writers on the disease, as characteristic, I use the term Hunterian, because the description by that eminent man is more generally known and read than those of the older writers, and is by some supposed to include every possible shade of sore capable of producing syphilis. *Vide* the authors in the collections of Luisinus and Gruner, and the work of Clowes the first English surgeon who has written on the venereal disease (in 1575); but particularly, *vide* Wiseman.

ulcer; in all these cases, the Hunterian chancre healed several days before the others.

Soldiers are gregarious in their amours, and we have frequently several men at the same time in hospitals, infected by the same woman with whom they have had connection in very rapid succession; some of them have one kind of sore, some another, and some both. * In all the instances in the following tables where there have been two or more ulcers, if one has possessed the Hunterian characteristics, both the secondary symptoms and the primary sore have been classed under that head. We have been very careful in our endeavours to distinguish the sore that has the hardened edge and base *noturally*, from that which may acquire it by *art*. This can only be done by watching the sore from its very commencement, for there is not the smallest doubt, that a sore can be artificially produced by the application of the kali purum to a sound man, which is not to be distinguished from chancre by a person not aware of the circumstance; the hardened edge and base can be perfectly imitated, and the specific distance (as it has been called) of the hardness, can be increased or diminished by the proper management of the caustic.

In primary sores of a complicated nature, the non-mercurial plan has been as strikingly useful as in the more simple. In phymosis with clustering sores on the point of the prepuce, and concealed ulceration of the glans with hardened edges, where no irritating substance has been employed to occasion them, the success has been uniform; the livid chancre of Mr Carmichael (page 20) has been treated with equal success. In fine, every thing I have seen of the practice confirms me in the possibility of healing primary sores on the genitals of whatever description they may be, without the employment of mercury, and I have met with nothing to make me question the propriety of making the trial. Of some hundred cases, none have hitherto resisted; in some of these, it is true, I should never have thought of using mercury; but by far the greater number were of that description, that not only I myself, but practitioners of much greater experience, would not formerly have thought of deferring it for a single day. I may, to a certain extent, apply the very same observation to the secondary symptoms that have succeeded the non-mercurial treatment. I have now seen a great variety of them, but I have not yet studied and compared a sufficient number of cases, to enable me to offer such positive testimony to the expediency of abstaining from mercury altogether in this class, as in the former. The facts at present ascertained are these: Secondary symptoms occur more frequently, and appear at an earlier and more determinate period than when mercury has been used; but they in many cases have gone off as soon, never, as has been supposed, proceeding from bad to worse, or from one succession of parts to another in unabated violence; on the contrary, they by no means exhibit the same violent and unrelenting symptoms which we have observed in many instances where mercury has been used; the eruptions have not run into ulceration; they have not formed into large scales or extensive blotches; nor have the bones of the nose or of other parts been in any instance affected with caries. I cannot take upon me to assert, that these events *will not* occasionally take place, but in some hundreds of cases which I have watched with the utmost anxiety, I can aver that they *have not*.

Much remains to be ascertained with regard to the secondary symptoms; but enough has already been proved, to demonstrate that the bounds within which the use of mercury has been confined by Mr Hunter, and by many eminent men since his day, may be still more curtailed, and that we may in a number of these cases, defer, or limit, or altogether omit the employment of that mineral. To the phthisical, to the scrofulous, to the maniacally disposed, the fact is invaluable. Mr Carmichael, to whom we owe a great deal, for his endeavours to limit the employment of mercury, has well remarked: "If one drachm was found capable of producing the effect, I should not think of administering an additional grain." (page 48.) But all practitioners do not act upon this enlightened principle; a certain number of ounces are supposed necessary for a cure; these are used whether the symptoms have yielded or not, or without ever trying the simple experiment of delay, and although the constitution often sustains the shock, it frequently sinks, and it always is endangered. This is not an imaginary representation; I know that *ounce* daubings have been continued for six, eight, or ten days, within the last five years, by some practitioners high in name; and quantities as great or greater upon the whole, although more minutely divided, have been used by others; but within the same period, as a most refreshing counterbalance, I know that mer-

* A curious case is given by Vigarous, which occurred in six young Frenchmen, who had had connection successively with the same woman. The 1st and 4th, in the order of connection, had chancres and buboes, the 2d and 3d gonorrhœa, the 5th, chancre, the 6th, bubo. Vigarous, Œuvres de chirurgie-pratique civile et militaire. Montpellier, 1812. Complication du vice Venerien, page 8. I have at present an instance of three individuals similarly circumstanced, the 1st escaped, the 2d had chancres and elevated sores, the 3d had gonorrhœa; the connections took place within an hour.

cury is not employed to a tenth part of its former consumption nor in one half the number of cases, by many ornaments of their profession. With such a disposition as this, and with the additional lights thrown upon the subject by the trials in the military hospitals, I have little doubt that the *real value* of mercury in syphilis will very soon be appreciated. One gentleman, who has contributed a great deal to ascertain the nature of the diseases produced by that substance, has made an observation with which I shall conclude, and which I conceive is worthy of being inscribed in letters of gold on every Lock Hospital in Europe. "It is not the name, nor the doctrine, nor the practice, of Hippocrates, or of Sydenham, of Pott, or of Hunter, which should guide us implicitly; but it is the truth, and the result of actual facts, founded on knowledge, and on reasoning, and on repeated experiments, which can alone establish a course of practice, at once safe and efficacious."—MATHIAS.

I am, Dear Sir, &c.

Queensberry House, May 25th, 1818.

Analytical Return of Venereal Diseases, treated without Mercury, from June 24th to December 25th 1817, *in the Military Hospital of Edinburgh Castle, extracted from the Case-Books of the 88th Regiment.*

PRIMARY AFFECTIONS.

1st, Description of cases that have been treated.

A Affections possessing the true Hunterian character, viz.	α Ulcers only,	- -		54
	β Buboes succeeding to ulcers, viz.	α Before admission into hospital,	19	
		β After admission into hospital,	1	20
		γ Of which were discussed,	16	
		δ Of which suppurated,	4	—71
B Affections, of various kinds, not possessing the true Hunterian character, viz.	α Ulcers only,	- - -		27
	β Buboes succeeding to ulcers, viz.	α Before admission into hospital,	6	
		β After admission into hospital,	1	7
		γ Of which were discussed,	4	
		δ Of which suppurated,	3	—34
Total number of primary affections treated,				105

PRIMARY AFFECTIONS. *Continued.*

2d, *Time required for the Cure.*

A.—OF ULCERS.

Hunterian.		*Non-Hunterian.*	
The following number of cases were cured	In the following number of days.	The following number of cases were cured	In the following number of days.
6	5	3	5
7	7	5	7
13	10	5	10
9	14	6	14
14	21	5	21
16	28	7	28
3	40	1	40
3	50	2	85

B.—OF BUBOES ENDING IN RESOLUTION.

Buboes succeeding Hunterian ulcers.		*Buboes succeeding non-Hunterian ulcers.*	
The following number of cases were cured	In the following number of days.	The following number of cases were cured	In the following number of days.
2	5	1	5
3	14	1	21
5	21	1	30
2	30	1	35
4	45		

C.—OF BUBOES ENDING IN SUPPURATION.

Buboes succeeding Hunterian ulcers.		*Buboes succeeding non-Hunterian ulcers.*	
The following number of cases were cured	In the following number of days.	The following number of cases were cured	In the following number of days.
1	30	1	75
1	45	1	95
1	50	1	105
1	65		

SECONDARY AFFECTIONS.

1st, *Description of Cases treated.*

A Succeeding the Hunterian ulcer.	*a* Eruptions only,	*α* Tubercular	4	9	
		β Exanthematous	3		
		γ Pustular	1		
	b Eruptions combined with sore throat.	*δ* Tubercular	1		9
B Succeeding ulcers not Hunterian.	*a* Eruptions only,	*α* Tubercular	1	2	
	b Eruptions combined with sore throat.	*β* Tubercular	1		2
Total number of secondary affections					11

2d, *Period of Occurrence, and Time required for the Cure.*

Description of primary affections to which they succeeded.	Case	Form of eruption.	Period of occurrence after primary affection.	Time required for the cure.
Hunterian, No.	1	Tubercular.	3 Weeks.	3 Weeks.
	2	Tubercular.	6 Weeks.	10 Days.
	3	Tubercular.	3 Weeks.	6 Weeks.
	4	Tubercular.	6 Months.	14 Days.
	5*	Tubercular.	8 Weeks.	6 Weeks.
	6	Exanthematous.	6 Weeks.	14 Days.
	7	Exanthematous.	4 Weeks.	8 Days.
	8	Exanthematous.	6 Weeks.	6 Weeks.
	9	Pustular.	3 Weeks.	18 Days.
Not Hunterian,	10	Tubercular.	4 Months.	5 Weeks.
	11*	Tubercular.	3 Months.	14 Days.

* These were the two cases in which sore throats occurred. The affection of the fauces was of an aptheous appearance, and yielded to astringent gargles in about eight days. In both cases it appeared along with the eruption.

Extracted by JAMES BARTLETT, *Assist.-Surg.* 88*th Regt.*

AVERAGE RESULTS OF THE OBSERVATIONS.

Primary Affections.

Number of days required for the cure of	Greatest.	Least.	Average
71 cases of Hunterian ulcers	50	5	18.97
34 ——— non-Hunterian ulcers	85	5	20.29
Buboes ending in resolution.			
16 succeeding Hunterian ulcers	35	5	22.75
4 ——— non-Hunterian ulcers	45	5	24.81
Buboes ending in suppuration.			
4 succeeding Hunterian ulcers	65	30	47.5
3 ——— non-Hunterian ulcers	105	75	91.67

Secondary Affections.

		Period of Appearance			Time of Cure.		
	No. of cases.	Greatest.	Least.	Average.	Greatest.	Least.	Average.
		weeks.	weeks.		weeks.	days.	days.
Hunterian tubercular	5	24	3	8 w 5 d	6	10	26
——— exanthem.	3	6	4	5 w 2 d	6	8	21
——— pustular	1			3 w.			18
——— total	9	24	3	7 w.	6	8	24½
Non-Hunterian tubercular	2	16	12	14 w.	5	14	24½

ADDITIONAL OBSERVATIONS

ON THE

CURE OF SYPHILIS WITHOUT MERCURY.

COMMUNICATED IN A LETTER TO DR DUNCAN, JUN.

By JOHN HENNEN, Esq.

DEPUTY INSPECTOR OF HOSPITALS FOR NORTH BRITAIN.

[From the Edinburgh Medical and Surgical Journal, No. 55.]

DEAR SIR,—I have been enabled to procure from the case books of the 88th regiment, which have been kept with the most praise worthy minuteness, by my friends Messrs Johnston and Bartlett, the enclosed analytical view of the hundred and five cases to which I alluded in my letter in your 54th number; and I take the opportunity of adding a few more remarks to that communication.

The appearances of the primary sores, contracted by sexual intercourse, which have presented themselves in the military hospital in the Castle, have varied extremely, but, in many instances, they have been very much influenced by their particular position. The following circumstances have been principally remarked in them. 1st, Ulcers on the internal integuments have generally had round callous edges, level surfaces, but little induration of base; they were less irritable than others, became sooner clean, and healed uniformly, but slowly. 2d, Ulcers on

the internal membrane of the prepuce have been generally either superficial or elevated; their surfaces covered with a light-coloured slough, or of a bright red with a villous appearance; their edges either regularly defined, or spread out like excoriations; their bases have been in general but little indurated, but when the ulcers have spread out, they have sometimes acquired a cartilaginous hardness, and have been extremely difficult to heal. 3d, Ulcers immediately behind the corona glandis, have been in general highly irritable, deep, scooped, indurated in their edges and base, foul, with membranous bridles, as it were, running across them, throwing off a perceptible slough, but, if mildly treated, soon healing after that event. 4th, Ulcers on the frœnum have generally followed lacerations of that part, have had considerable induration of base, and have been generally slow of healing. 5th, Ulcers of the glans have been generally excavated, but with little hardness of base, quickly throwing off a slough, and then healing rapidly.

It has sometimes happened that where a sore has spread and occupied different textures, each of its parts has exhibited the character which has generally prevailed in sores confined to that particular texture. Thus in a sore which has implicated part of the internal prepuce, corona, and glans; on the first spot it has been elevated, on the corona it has been indurated and irritable, and on the glans excavated, but with little hardness. Besides these differences, which have been apparently occasioned by position, ulcers on the organs of generation take on different actions like those on other parts of the body, and are attended with simple purulent, or vitiated discharge; with increased or decreased action, with phagedæna, sloughing, &c. Excoriations also appear, which in some instances proceed from mechanical injury, and in some from the application of an acrid matter, or from the acquired acrimony of the natural sebaceous secretion which lubricates the parts. In all these cases, early attention is a great means of preventing the sores from acquiring an irritable character. Cataplasms, astringents, and stimulants, have all their peculiar merits at particular times, and even the solution of arsenic has been found to give immediate relief from excruciating pain and phagedæna, which had followed great irritation previous to the patient being taken into hospital. In some cases blood-letting, both local and general, has been had recourse to with advantage. In many cases cleanliness alone has effected the healing; but in no instance has the application been of such a nature as to destroy the structure of the parts, and by that means prevent the absorption of the virus; this is shewn by the occurrence of secondary symptoms in our hospital, which seldom take place when the primary sores are early destroyed. In

all cases, rest in the horizontal posture is an important part of the treatment. Some of the primary sores have gone on rapidly to a cure, some have been more slow, and a few have retained their hardened edges and bases for a long time; the great majority have healed as in ordinary cases, some leaving a pit or scar behind, and some, particularly the elevated sores, have had a scab formed, which on dropping off, has left the parts sound beneath. In many instances, after having healed up, the sores have broken out again without any obvious cause, in others, the friction of the clothes or rough handling has occasioned their re-appearance, and some on the prepuce have appeared as if mechanically torn open in the effort of uncovering the glans. In all these cases, the healing of the renewed sore was as certainly effected without mercury, as that of the original one.

We have had frequent opportunities of remarking two or more sores of different kinds existing at the same time; an irregular shaped diffused sore; an elevated sore, covered with a light coloured slough, as if a bit of shamoy leather had been stuck on by some tenacious substance; a groove or streak along the glans, as if made by a scraping instrument, filled with purulent matter; and the true and perfect chancre according to Mr Hunter's definition, or the true syphilitic ulcer according to Mr Carmichael.* This last has in some cases occupied the glans, in some the prepuce, while the sores of another description have been on the same part close beside it, or on another part at a distance. Three of these cases I particularly selected for examination and public demonstration in the hospital; in one, the Hunterian chancre was on the glans, and a sore without any hardness on the prepuce; in another, it was on the prepuce, and a simple ulcer on the glans; in the third, a most perfect specimen of Hunterian chancre occupied the internal prepuce close to the corona glandis; and at about half an inch from it, nearer the frœnum, but farther from the glans, was an elevated

* To prevent all cavilling about words, I understand by true chancre or syphilitic ulcer, a sore answering the definition given by Mr Hunter in the 1st chapter of the 4th part of his treatise edited by Dr Adams, London, 1810, page 314, 326, and repeated by Mr Carmichael, Essay on the Venereal Diseases, &c. page 25. Although the callous nature of the ulcer has been handed down from the earliest writers on the disease, as characteristic, I use the term Hunterian, because the description by that eminent man is more generally known and read than those of the older writers, and is by some supposed to include every possible shade of sore capable of producing syphilis. *Vide* the authors in the collections of Luisinus and Gruner, and the work of Cloves the first English surgeon who has written on the venereal disease (in 1575); but particularly, *vide* Wiseman.

ulcer; in all these cases, the Hunterian chancre healed several days before the others.

Soldiers are gregarious in their amours, and we have frequently several men at the same time in hospitals, infected by the same woman with whom they have had connection in very rapid succession; some of them have one kind of sore, some another, and some both.* In all the instances in the following tables where there have been two or more ulcers, if one has possessed the Hunterian characteristics, both the secondary symptoms and the primary sore have been classed under that head. We have been very careful in our endeavours to distinguish the sore that has the hardened edge and base *naturally*, from that which may acquire it by *art*. This can only be done by watching the sore from its very commencement, for there is not the smallest doubt, that a sore can be artificially produced by the application of the kali purum to a sound man, which is not to be distinguished from chancre by a person not aware of the circumstance; the hardened edge and base can be perfectly imitated, and the specific distance (as it has been called) of the hardness, can be increased or diminished by the proper management of the caustic.

In primary sores of a complicated nature, the non-mercurial plan has been as strikingly useful as in the more simple. In phymosis with clustering sores on the point of the prepuce, and concealed ulceration of the glans with hardened edges, where no irritating substance has been employed to occasion them, the success has been uniform; the livid chancre of Mr Carmichael (page 26) has been treated with equal success. In fine, every thing I have seen of the practice confirms me in the possibility of healing primary sores on the genitals of whatever description they may be, without the employment of mercury, and I have met with nothing to make me question the propriety of making the trial. Of some hundred cases, none have hitherto resisted; in some of these, it is true, I should never have thought of using mercury; but by far the greater number were of that description, that not only I myself, but practitioners of much greater experience, would not formerly have thought of deferring it for a single day. I may, to a certain extent, apply the very same observation to the secondary symptoms that have succeeded the non-mercurial treatment. I have now seen a great variety of them, but I have not yet studied and compared a sufficient number of cases, to enable me to offer such positive testimony to the expediency of abstaining from mercury altogether in this class, as in the former. The facts at present ascertained are these: Secondary symptoms occur more frequently, and appear at an earlier and more determinate period than when mercury has been used; but they in many cases have gone off as soon, never, as has been supposed, proceeding from bad to worse, or from one succession of parts to another in unabated violence; on the contrary, they by no means exhibit the same violent and unrelenting symptoms which we have observed in many instances where mercury has been used; the eruptions have not run into ulceration; they have not formed into large scales or extensive blotches; nor have the bones of the nose or of other parts been in any instance affected with caries. I cannot take upon me to assert, that these events *will not* occasionally take place, but in some hundreds of cases which I have watched with the utmost anxiety, I can aver that they *have not*.

Much remains to be ascertained with regard to the secondary symptoms; but enough has already been proved, to demonstrate that the bounds within which the use of mercury has been confined by Mr Hunter, and by many eminent men since his day, may be still more curtailed, and that we may in a number of these cases, defer, or limit, or altogether omit the employment of that mineral. To the phthisical, to the scrofulous, to the maniacally disposed, the fact is invaluable. Mr Carmichael, to whom we owe a great deal, for his endeavours to limit the employment of mercury, has well remarked: "If one drachm was found capable of producing the effect, I should not think of administering an additional grain." (page 48.) But all practitioners do not act upon this enlightened principle; a certain number of ounces are supposed necessary for a cure; these are used whether the symptoms have yielded or not, or without ever trying the simple experiment of delay, and although the constitution often sustains the shock, it frequently sinks, and it always is endangered. This is not an imaginary representation; I know that *ounce* daubings have been continued for six, eight, or ten days, within the last five years, by some practitioners high in name; and quantities as great or greater upon the whole, although more minutely divided, have been used by others; but within the same period, as a most refreshing counterbalance, I know that mer-

* A curious case is given by Vigarous, which occurred in six young Frenchmen, who had had connection successively with the same woman. The 1st and 4th, in the order of connection, had chancres and buboes, the 2d and 3d gonorrhœa, the 5th, chancre, the 6th, bubo. Vigarous, Œuvres de chirurgie-pratique civile et militaire. Montpellier, 1812. Complication du vice Venerien, page 8. I have at present an instance of three individuals similarly circumstanced, the 1st escaped, the 2d had chancres and elevated sores, the 3d had gonorrhœa; the connections took place within an hour.

cury is not employed to a tenth part of its former consumption nor in one half the number of cases, by many ornaments of their profession. With such a disposition as this, and with the additional lights thrown upon the subject by the trials in the military hospitals, I have little doubt that the *real value* of mercury in syphilis will very soon be appreciated. One gentleman, who has contributed a great deal to ascertain the nature of the diseases produced by that substance, has made an observation with which I shall conclude, and which I conceive is worthy of being inscribed in letters of gold on every Lock Hospital in Europe. "It is not the name, nor the doctrine, nor the practice, of Hippocrates, or of Sydenham, of Pott, or of Hunter, which should guide us implicitly; but it is the truth, and the result of actual facts, founded on knowledge, and on reasoning, and on repeated experiments, which can alone establish a course of practice, at once safe and efficacious."—MATHIAS.

I am, Dear Sir, &c.

Queensberry House, May 25th, 1818.

Analytical Return of Venereal Diseases, treated without Mercury, from June 24th to December 25th 1817, *in the Military Hospital of Edinburgh Castle, extracted from the Case-Books of the 88th Regiment.*

PRIMARY AFFECTIONS.

1st, Description of cases that have been treated.

A Affections possessing the true Hunterian character, viz.	α Ulcers only,			51
	b Buboes succeeding to ulcers, viz.	α Before admission into hospital,	19	
		β After admission into hospital,	1	
				20
		γ Of which were discussed,	16	
		δ Of which suppurated,	4	
				—71
B Affections, of various kinds, not possessing the true Hunterian character, viz.	α Ulcers only,			27
	b Buboes succeeding to ulcers, viz.	α Before admission into hospital,	6	
		β After admission into hospital,	1	
				7
		γ Of which were discussed,	4	
		δ Of which suppurated,	3	
				—34
Total number of primary affections treated,				105

PRIMARY AFFECTIONS. *Continued.*

2d, *Time required for the Cure.*

A.—OF ULCERS.

Hunterian.		*Non-Hunterian.*	
The following number of cases were cured	In the following number of days.	The following number of cases were cured	In the following number of days.
6	5	3	5
7	7	5	7
13	10	5	10
9	14	6	14
14	21	5	21
16	28	7	28
3	40	1	40
3	50	2	85

B.—OF BUBOES ENDING IN RESOLUTION.

Buboes succeeding Hunterian ulcers.		*Buboes succeeding non-Hunterian ulcers.*	
The following number of cases were cured	In the following number of days.	The following number of cases were cured	In the following number of days.
2	5	1	5
3	14	1	21
5	21	1	30
2	30	1	35
4	45		

C.—OF BUBOES ENDING IN SUPPURATION.

Buboes succeeding Hunterian ulcers.		*Buboes succeeding non-Hunterian ulcers.*	
The following number of cases were cured	In the following number of days.	The following number of cases were cured	In the following number of days.
1	30	1	75
1	45	1	95
1	50	1	105
1	65		

Secondary Affections.

1st, *Description of Cases treated.*

A Succeeding the Hunterian ulcer.	a Eruptions only,	α Tubercular	4	9
		β Exanthematous	3	
		γ Pustular	1	
	b Eruptions combined with sore throat.	δ Tubercular	1	1—9
B Succeeding ulcers not Hunterian.	a Eruptions only,	α Tubercular	1	1
	b Eruptions combined with sore throat.	β Tubercular	1	1—2
		Total number of secondary affections		11

2d, *Period of Occurrence, and Time required for the Cure.*

Description of primary affections to which they succeeded.	Case	Form of eruption.	Period of occurrence after primary affection.	Time required for the cure.
Hunterian, No.	1	Tubercular.	3 Weeks.	3 Weeks.
	2	Tubercular.	6 Weeks.	10 Days.
	3	Tubercular.	3 Weeks.	6 Weeks.
	4	Tubercular.	6 Months.	14 Days.
	5*	Tubercular.	8 Weeks.	6 Weeks.
	6	Exanthematous.	6 Weeks.	14 Days.
	7	Exanthematous.	4 Weeks.	8 Days.
	8	Exanthematous.	6 Weeks.	6 Weeks.
	9	Pustular.	3 Weeks.	18 Days.
Not Hunterian,	10	Tubercular.	4 Months.	5 Weeks.
	11*	Tubercular.	3 Months.	14 Days.

* These were the two cases in which sore throats occurred. The affection of the fauces was of an apthous appearance, and yielded to astringent gargles in about eight days. In both cases it appeared along with the eruption.

Extracted by James Bartlett, *Assist.-Surg. 88th Regt.*

Average results of the observations.

Primary Affections.

	Greatest.	Least	Average
Number of days required for the cure of			
71 cases of Hunterian ulcers - -	50	5	18.97
34 ——— non-Hunterian ulcers .	85	5	20.29
Buboes ending in resolution.			
16 succeeding Hunterian ulcers -	35	5	22.75
4 ——— non-Hunterian ulcers	45	5	24.81
Buboes ending in suppuration.			
4 succeeding Hunterian ulcers -	65	30	47.5
3 ——— non-Hunterian ulcers - -	105	75	91.67

Secondary Affections.

		Period of Appearance			Time of Cure.		
	No. of cases.	Greatest.	Least.	Average.	Greatest.	Least.	Average.
		weeks.	weeks.		weeks.	days.	days.
Hunterian tubercular	5	24	3	8 w 3 d	6	10	26
——— exanthem.	3	6	4	5 w 2 d	6	8	21
——— pustular	1			5 w.			18
——— total	9	24	3	7 w.	6	8	24½
Non-Hunterian tubercular	2	16	12	14 w.	5	14	24½

ADDITIONAL OBSERVATIONS

ON THE

CURE OF SYPHILIS WITHOUT MERCURY.

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the internal membrane of the prepuce have been generally either superficial or elevated; their surfaces covered with a light-coloured slough, or of a bright red with a villous appearance; their edges either regularly defined, or spread out like excoriations; their bases have been in general but little indurated, but when the ulcers have spread out, they have sometimes acquired a cartilaginous hardness, and have been extremely difficult to heal. 3d, Ulcers immediately behind the corona glandis, have been in general highly irritable, deep, scooped, indurated in their edges and base, foul, with membranous bridles, as it were, running across them, throwing off a perceptible slough, but, if mildly treated, soon healing after that event. 4th, Ulcers on the frœnum have generally followed lacerations of that part, have had considerable induration of base, and have been generally slow of healing. 5th, Ulcers of the glans have been generally excavated, but with little hardness of base, quickly throwing off a slough, and then healing rapidly.

It has sometimes happened that where a sore has spread and occupied different textures, each of its parts has exhibited the character which has generally prevailed in sores confined to that particular texture. Thus in a sore which has implicated part of the internal prepuce, corona, and glans; on the first spot it has been elevated, on the corona it has been indurated and irritable, and on the glans excavated, but with little hardness. Besides these differences, which have been apparently occasioned by position, ulcers on the organs of generation take on different actions like those on other parts of the body, and are attended with simple purulent, or vitiated discharge; with increased or decreased action, with phagedæna, sloughing, &c. Excoriations also appear, which in some instances proceed from mechanical injury, and in some from the application of an acrid matter, or from the acquired acrimony of the natural sebaceous secretion which lubricates the parts. In all these cases, early attention is a great means of preventing the sores from acquiring an irritable character. Cataplasms, astringents, and stimulants, have all their peculiar merits at particular times, and even the solution of arsenic has been found to give immediate relief from excruciating pain and phagedæna, which had followed great irritation previous to the patient being taken into hospital. In some cases blood-letting, both local and general, has been had recourse to with advantage. In many cases cleanliness alone has effected the healing; but in no instance has the application been of such a nature as to destroy the structure of the parts, and by that means prevent the absorption of the virus; this is shewn by the occurrence of secondary symptoms in our hospital, which seldom take place when the primary sores are early destroyed. In

all cases, rest in the horizontal posture is an important part of the treatment. Some of the primary sores have gone on rapidly to a cure, some have been more slow, and a few have retained their hardened edges and bases for a long time; the great majority have healed as in ordinary cases, some leaving a pit or scar behind, and some, particularly the elevated sores, have had a scab formed, which on dropping off, has left the parts sound beneath. In many instances, after having healed up, the sores have broken out again without any obvious cause, in others, the friction of the clothes or rough handling has occasioned their re-appearance, and some on the prepuce have appeared as if mechanically torn open in the effort of uncovering the glans. In all these cases, the healing of the renewed sore was as certainly effected without mercury, as that of the original one.

We have had frequent opportunities of remarking two or more sores of different kinds existing at the same time; an irregular shaped diffused sore; an elevated sore, covered with a light coloured slough, as if a bit of shamoy leather had been stuck on by some tenacious substance; a groove or streak along the glans, as if made by a scraping instrument, filled with purulent matter; and the true and perfect chancre according to Mr Hunter's definition, or the true syphilitic ulcer according to Mr Carmichael.* This last has in some cases occupied the glans, in some the prepuce, while the sores of another description have been on the same part close beside it, or on another part at a distance. Three of these cases I particularly selected for examination and public demonstration in the hospital; in one, the Hunterian chancre was on the glans, and a sore without any hardness on the prepuce; in another, it was on the prepuce, and a simple ulcer on the glans; in the third, a most perfect specimen of Hunterian chancre occupied the internal prepuce close to the corona glandis; and at about half an inch from it, nearer the frœnum, but farther from the glans, was an elevated

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ulcer; in all these cases, the Hunterian chancre healed several days before the others.

Soldiers are gregarious in their amours, and we have frequently several men at the same time in hospitals, infected by the same woman with whom they have had connection in very rapid succession; some of them have one kind of sore, some another, and some both. * In all the instances in the following tables where there have been two or more ulcers, if one has possessed the Hunterian characteristics, both the secondary symptoms and the primary sore have been classed under that head. We have been very careful in our endeavours to distinguish the sore that has the hardened edge and base *naturally*, from that which may acquire it by *art*. This can only be done by watching the sore from its very commencement, for there is not the smallest doubt, that a sore can be artificially produced by the application of the kali purum to a sound man, which is not to be distinguished from chancre by a person not aware of the circumstance; the hardened edge and base can be perfectly imitated, and the specific distance (as it has been called) of the hardness, can be increased or diminished by the proper management of the caustic.

In primary sores of a complicated nature, the non-mercurial plan has been as strikingly useful as in the more simple. In phymosis with clustering sores on the point of the prepuce, and concealed ulceration of the glans with hardened edges, where no irritating substance has been employed to occasion them, the success has been uniform; the livid chancre of Mr Carmichael (page 26) has been treated with equal success. In fine, every thing I have seen of the practice confirms me in the possibility of healing primary sores on the genitals of whatever description they may be, without the employment of mercury, and I have met with nothing to make me question the propriety of making the trial. Of some hundred cases, none have hitherto resisted; in some of these, it is true, I should never have thought of using mercury; but by far the greater number were of that description, that not only I myself, but practitioners of much greater experience, would not formerly have thought of deferring it for a single day. I may, to a certain extent, apply the very same observation to the secondary symptoms that have succeeded the non-mercurial treatment. I have now seen a great variety of them, but I have not yet studied and compared a sufficient number of cases, to enable me to offer such positive testimony to the expediency of abstaining from mercury altogether in this class, as in the former. The facts at present ascertained are these: Secondary symptoms occur more frequently, and appear at an earlier and more determinate period than when mercury has been used; but they in many cases have gone off as soon, never, as has been supposed, proceeding from bad to worse, or from one succession of parts to another in unabated violence; on the contrary, they by no means exhibit the same violent and unrelenting symptoms which we have observed in many instances where mercury has been used; the eruptions have not run into ulceration; they have not formed into large scales or extensive blotches; nor have the bones of the nose or of other parts been in any instance affected with caries. I cannot take upon me to assert, that these events *will not* occasionally take place, but in some hundreds of cases which I have watched with the utmost anxiety, I can aver that they *have not*.

Much remains to be ascertained with regard to the secondary symptoms; but enough has already been proved, to demonstrate that the bounds within which the use of mercury has been confined by Mr Hunter, and by many eminent men since his day, may be still more curtailed, and that we may in a number of these cases, defer, or limit, or altogether omit the employment of that mineral. To the phthisical, to the scrofulous, to the maniacally disposed, the fact is invaluable. Mr Carmichael, to whom we owe a great deal, for his endeavours to limit the employment of mercury, has well remarked: "If one drachm was found capable of producing the effect, I should not think of administering an additional grain." (page 48.) But all practitioners do not act upon this enlightened principle; a certain number of ounces are supposed necessary for a cure; these are used whether the symptoms have yielded or not, or without ever trying the simple experiment of delay, and although the constitution often sustains the shock, it frequently sinks, and it always is endangered. This is not an imaginary representation; I know that *ounce* daubings have been continued for six, eight, or ten days, within the last five years, by some practitioners high in name; and quantities as great or greater upon the whole, although more minutely divided, have been used by others; but within the same period, as a most refreshing counterbalance, I know that mer-

* A curious case is given by Vigarous, which occurred in six young Frenchmen, who had had connection successively with the same woman. The 1st and 4th, in the order of connection, had chancres and buboes, the 2d and 3d gonorrhœa, the 5th, chancre, the 6th, bubo. Vigarous, Œuvres de chirurgie-pratique civile et militaire, Montpellier, 1812. Complication du vice Venerien, page 8. I have at present an instance of three individuals similarly circumstanced, the 1st escaped, the 2d had chancres and elevated sores, the 3d had gonorrhœa; the connections took place within an hour.

cury is not employed to a tenth part of its former consumption nor in one half the number of cases, by many ornaments of their profession. With such a disposition as this, and with the additional lights thrown upon the subject by the trials in the military hospitals, I have little doubt that the *real value* of mercury in syphilis will very soon be appreciated. One gentleman, who has contributed a great deal to ascertain the nature of the diseases produced by that substance, has made an observation with which I shall conclude, and which I conceive is worthy of being inscribed in letters of gold on every Lock Hospital in Europe. "It is not the name, nor the doctrine, nor the practice, of Hippocrates, or of Sydenham, of Pott, or of Hunter, which should guide us implicitly; but it is the truth, and the result of actual facts, founded on knowledge, and on reasoning, and on repeated experiments, which can alone establish a course of practice, at once safe and efficacious."—Mathias.

I am, Dear Sir, &c.

Queensberry House, May 25th, 1818.

Analytical Return of Venereal Diseases, treated without Mercury, from June 24th to December 25th 1817, *in the Military Hospital of Edinburgh Castle, extracted from the Case-Books of the* 88*th Regiment.*

PRIMARY AFFECTIONS.

1st, Description of cases that have been treated.					
A Affections possessing the true Hunterian character, viz.	α Ulcers only,				51
	b Buboes succeeding to ulcers, viz.	α Before admission into hospital,	19	20	
		β After admission into hospital,	1		
		γ Of which were discussed,	16	4	—71
		δ Of which suppurated,	4		
B Affections, of various kinds, not possessing the true Hunterian character, viz.	α Ulcers only,				27
	b Buboes succeeding to ulcers, viz.	α Before admission into hospital,	6	7	
		β After admission into hospital,	1		
		γ Of which were discussed,	4	3	—34
		δ Of which suppurated,	3		
Total number of primary affections treated,					105

PRIMARY AFFECTIONS. *Continued.*

2d, *Time required for the Cure.*

A.—OF ULCERS.

Hunterian.		*Non-Hunterian.*	
The following number of cases were cured	In the following number of days.	The following number of cases were cured	In the following number of days.
6	5	3	5
7	7	5	7
13	10	5	10
9	14	6	14
14	21	5	21
16	28	7	28
3	40	1	40
3	50	2	85

B.—OF BUBOES ENDING IN RESOLUTION.

Buboes succeeding Hunterian ulcers.		*Buboes succeeding non-Hunterian ulcers.*	
The following number of cases were cured	In the following number of days.	The following number of cases were cured	In the following number of days.
2	5	1	5
3	14	1	21
5	21	1	30
2	30	1	35
4	45		

C.—OF BUBOES ENDING IN SUPPURATION.

Buboes succeeding Hunterian ulcers.		*Buboes succeeding non-Hunterian ulcers.*	
The following number of cases were cured	In the following number of days.	The following number of cases were cured	In the following number of days.
1	30	1	75
1	45	1	95
1	50	1	105
1	65		

Secondary Affections.

1st, *Description of Cases treated.*

A Succeeding the Hunterian ulcer.	*a* Eruptions only,	α Tubercular	4	9
		β Exanthematous	3	
		γ Pustular	1	
	b Eruptions combined with sore throat.	δ Tubercular	1	9
B Succeeding ulcers not Hunterian.	*a* Eruptions only,	α Tubercular	1	2
	b Eruptions combined with sore throat.	β Tubercular	1	2
Total number of secondary affections				11

2d, *Period of Occurrence, and Time required for the Cure.*

Description of primary affections to which they succeeded.	Case	Form of eruption.	Period of occurrence after primary affection.	Time required for the cure.
Hunterian, No.	1	Tubercular.	3 Weeks.	3 Weeks.
	2	Tubercular.	6 Weeks.	10 Days.
	3	Tubercular.	3 Weeks.	6 Weeks.
	4	Tubercular.	5 Months.	14 Days.
	5*	Tubercular.	8 Weeks.	6 Weeks.
	6	Exanthematous.	6 Weeks.	14 Days.
	7	Exanthematous.	4 Weeks.	8 Days.
	8	Exanthematous.	6 Weeks.	6 Weeks.
	9	Pustular.	3 Weeks.	18 Days.
Not Hunterian,	10	Tubercular.	4 Months.	5 Weeks.
	11*	Tubercular.	3 Months.	14 Days.

* These were the two cases in which sore throats occurred. The affection of the fauces was of an aphthous appearance, and yielded to astringent gargles in about eight days. In both cases it appeared along with the eruption.

Extracted by James Bartlett, *Assist.-Surg. 88th Regt.*

Average results of the observations.

Primary Affections.

	Greatest.	Least.	Average
Number of days required for the cure of			
71 cases of Hunterian ulcers	50	5	18.97
34 ——— non-Hunterian ulcers	85	5	20.29
Buboes ending in resolution.			
16 succeeding Hunterian ulcers	35	5	22.75
4 ——— non-Hunterian ulcers	45	5	24.81
Buboes ending in suppuration.			
4 succeeding Hunterian ulcers	65	30	47.5
3 ——— non-Hunterian ulcers	105	75	91.67

Secondary Affections.

	No. of cases.	Period of Appearance			Time of Cure.		
		Greatest.	Least.	Average.	Greatest.	Least.	Average.
		weeks.	weeks.		weeks.	days.	days.
Hunterian tubercular	5	24	3	8 w 5 d	6	10	26
——— exanthem.	3	6	4	5 w 2 d	6	8	21
——— pustular	1			3 w.			18
——— total	9	24	3	7 w.	6	8	24½
Non-Hunterian tubercular	2	16	12	14 w.	3	14	24½

From the Author

OBSERVATIONS

ON THE PROPERTIES

OF THE

AIR-PUMP VAPOUR-BATH,

POINTING OUT THEIR EFFICACY
IN THE CURE

OF

GOUT, RHEUMATISM, PALSY, &c.

WITH CURSORY REMARKS ON

FACTITIOUS AIRS,

AND ON THE IMPROVED STATE OF

MEDICAL ELECTRICITY,

IN ALL ITS BRANCHES, PARTICULARLY IN THAT OF

Galvanism,

AND

THEIR EFFICACY IN VARIOUS DISEASES.

BY

M. La BEAUME,

MEDICAL ELECTRICIAN.

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It has been often and justly remarked of *Medical Science*, that, till of late years, few discoveries of general practical utility, had marked its progress. It was indeed, always believed by the wise, and assented to by the pious, that divine wisdom and goodness, had provided abundant store of adequate remedies for all the maladies incident to humanity; and had endowed man with such intellectual powers for research and investigation, as would enable him to sieze and apply them, to the beneficent purposes, for which they were intended. This impression, so strongly and almost universally felt, was for many ages, by the prejudices of practitioners, and the weakness of their patients, rendered of little benefit to mankind. The former, bred up in the study of a system, sanctioned rather by the authority of great names of ancient or elder times, than by its intrinsic wisdom and excellence; were content to seek reputation by passive acquiescence in the judgment of those who had gone before them, and a servile imitation of their practice. The comparative ease, with which fortune, and even fame, could be acquired by following in a beaten track, seems to have prevented the professors of the healing art from perceiving, that any system of medicine, of mere human origin, however specious and profound, which at-

tempted to fix bounds to knowledge, and limits to discovery, must ever rely for its chief support, on the power and bigotry of prejudice.

This sluggish, selfish, and stagnant feeling, among medical men, appears with few exceptions, to have continued for ages; and sufficiently accounts for the science of medicine having so long remained apparently stationary. The inadequacy of the remedies in various disorders to which they were applied, was daily detected by failure and miscarriage; but still, such was the power of indolence, or force of prejudice, that any deviation from prescribed rule—any attempt at improvement, was deemed, a dangerous, and unpardonable innovation.

This defect in the practice of regular medicine, held out an irresistable temptation to empirics of all descriptions, who, in the absence of medical education of any kind, supplied the want of skill and experience, by ignorance and presumption. This active and enterprising class of practitioners having secured a footing, soon began to pour forth a profusion of infallible nostrums, for the cure of every human complaint. Though they promised every thing, and performed nothing, or worse than nothing, their success in the participation of fees, was equal to their arrogance. Nor was this to be wondered at—health, the choicest gift of heaven, and without which all the other enjoyments of life are insipid, has ever been held too precious to be parted with, while their remains a

solitary twig on which the dejected can hang hope. Credulity, and incredulity, are alike the offspring of ignorance, and from a natural but strong desire of life in the afflicted, the Quacks, who promised to still all their wailings got possession of a vast portion of medical practice, while the regular physician who adopted only the recipes of former times, and knew no other healing stores, than such as were to be found in the national pharmacopeia, frequently failing in the application of his remedies, lost ground in private opinion, and public confidence.

The labours of the Quacks, however, were not wholly unproductive of advantage to mankind. Though destitute of all the qualities that distinguish the accomplished physician—such as learning various and profound, a thorough knowledge of the animal economy, extensive medical experience, combined with mild and soothing manners; yet the quack sometimes blundered by accident on something, that had at least the appearance of a cure, and which, however delusive, acquired him at once, profit and reputation. This rapidly increasing race of interlopers, at last roused the regulars from their contented slumbers—the latter said—"*Fools rush in where angels fear to tread*"—but, what was still worse, they had the cutting mortification to feel their own influence on the wane, and to crown their misfortunes, their gains daily diminishing. Stimulated, therefore, by a sense of interest, and at the same time, ashamed

of the triumph of an inglorious rival, the regular practitioner, was at last compelled to think for himself, to explore new sources of information, and of course, increase the general stock of medical knowledge. Thus even Quacks, with all their ignorance and presumption, contributed to the advancement of science.

Such, or nearly such, was in general the state of medical science, at the commencement of the present reign. Since that period, however, what with the knowledge acquired by *propitious accident*, and by the spirited efforts of independent and superior minds, the dominion of science has been vastly enlarged, and a flood of light has been poured upon the world.

It is not within the limits of my design, even to enumerate the various scientific discoveries, which recent times have brought to light, and which have led to an improved system of philosophy, teeming with benefits to the human race. Sixty years ago, who could have believed that air and water would be found to be compound bodies, the constituent principles of which might be rendered applicable to so many useful purposes?—About the same period, who could have conceived the vast and various powers of the steam engine, now so fully developed, and so generally known?

These discoveries may be deemed the fruits of inquisitive research, directed by sound judgment, and ardent feeling: but, though we are indebted for these, and many other important improvements

in science, to the persevering efforts of superior minds, released from the restraints of prejudice—yet, there are still some, equal at least in magnitude and utility, the knowledge of which, we owe to chance, or rather in the language of rational piety—to providence. The knowlege of the vaccine disease, a discovery, which has conferred more benefits and blessings on suffering humanity, than almost any other to be found in the records of time, had no other origin. This is a fact, that the ingenious, the patient, and benevolent *Jenner* himself, does not hesitate to acknowledge. His indefatigable industry, his perseverence "through good report and evil report," while they establish his title to the character of a benefactor of mankind, prove him at the same time, to be pre-eminantly qualified to diffuse a knowledge of this important discovery, over the whole habitable globe.

The discovery by *Galvani* of a new principle in animal electricity, which opens so wide a field for philosophic improvement, and which promises in its practical results to be as beneficial to mankind as the vaccine system; we owe to the same cause, which produced the latter. So far, we are wholly indebted to providence for discoveries of vast importance to the world. These phenomena in nature, however, had a powerful tendency to awaken curiosity, to stimulate enquiry, and rouse exertion. The philosophic of all countries, as if by a common impulse, started in the race of disco-

very, and hence may be traced the amazing improvements in electricity, which form the chief boast and pride of modern times. The great *Franklin*, for philosophical and moral purposes, first taught the world, by his discoveries in electricity, to subject the thunder of Heaven to the power of man. Since his time, a whole host of eminent physiologists scattered over Europe, have contributed to throw new lights on every branch of this important science.

The general result of all these recent and astonishing improvements in electricity, it would be difficult to sum up in few words. The uniformed, however, may form some tolerable idea of their own, from the following summary. It appears then to be a fact, established by a thousand experiments—that there is a fluid far more subtle than air, which is every where diffused through space, which surrounds the whole earth, and which prevades all, even its minutest parts. Such is the extreme fineness, velocity, and expansiveness of this active principle, that all other matter seems to be only the body, and this the soul of the universe. It produces and sustains life throughout all nature, as well in animals, as in vegetables.

But among the great purposes electricity answers in the general economy of nature; both in the production and preservation of animal and vegetable life, its medical powers in the cure of a vast variety of human maladies, is, of all its other properties, the one, most beneficial to mankind.

"It gives and preserves," says a celebrated physiologist, "a proper tone to the vessels. It promotes all secretions, keeps every part in motion: it pervades the whole animal system, producing great variety of effects—numberless vibrations in the solids, and fermentations in the fluids." Indeed, it would not be any extravagant hyperbole to assert, that electricity seems to be the grand *Desideratum* in physic, from which we may expect relief, when all other remedies fail.

The invention, the beneficial effects of which, in the treatment of many diseases, it is the intention of the following pages to point out, will, when generally known, prove of no little consequence to mankind, as its object is of the last importance. The apparatus of the *Air-Pump Vapour-Bath* comprehends, and, for the *first time*, unites the effects of *fomentation, and the cupping-glass*, two of the most powerful external means that have ever been resorted to, for acting on disease. Water and air, which till lately were thought simple and undecomposable bodies, are the means by which its powers are put in action. The first is made the vehicle for conveying the matter of heat into the system, and *increasing the force of the circulation, for relaxing spasmodic contractions and removing obstructions; and, at the same time, for giving tone to the vascular system.* The medical cases to which air may be applied, are extensive beyond calculation, whether regard

be had to the circumstances of temperature, or of an increase or diminution of its natural pressure. It is certain, that the removal of the atmospheric pressure is, in many cases, attended with the most salutary effects, and the Air-Pump Vapour-Bath is, beyond all doubt, the most powerful agent of the kind that has ever yet been used. Indeed, it is founded on the unerring principles of nature, clearly supported by reason and philosophy, and has therefore made its way in the world, unaided by any of the arts of finesse, or the tricks of chicanery.

One of the most obvious properties of air is its elasticity. This property might be exemplified by innumerable experiments. A very easy and convincing one is, merely to squeeze a full blown bladder between the hands, to which the enclosed air offers a very sensible resistance, while it is at the same time reduced into a smaller volume; but, when we cease to compress the bladder, it immediately recovers its original figure, being expanded by the elasticity of the air within. The air exerts its elasticity equally in all directions, as is evident from the spherical figure of soap bubbles, blown from the bowl of a tobacco-pipe—an experiment, which, though frequently the amusement of boys, will not appear trifling, when it is recollected, that it afforded to the immortal *Newton* no inconsiderable aid, in his investigation of the theory of colours. The same globular figure is assumed, and for the same

reason, by melted glass when inflated by the breath, blown through a long tube. Hence bottles, especially when blown thin, would be spherical, if different shapes were not given them by the resistance of the moulds in which they are cast: and, for particular purposes, they are sometimes allowed to retain their natural figure, under the appellation of glass globes.

To what extent the air is capable of compression or expansion, has not been with certainty ascertained. *Dr. Hales*, by employing a press, forced it into one 38th part of its former volume; and, by enclosing some air along with water in a hollow ball of cast-iron, and exposing it to frost, which most powerfully dilates water, while changing into ice, he reduced the air into 1838 times less space, than it occupies in its ordinary uncompressed state. Now, since air is about 830 times lighter than water, it must, in the experiment just mentioned, have had more than twice the specific gravity of water—that is, a cubic foot of air, thus compressed, must have been more than twice as heavy as a cubic foot of water, and must accordingly have weighed above 125 pounds.

The expansion of air in consequence of its elasticity, is no less surprising. *Mr. Boyle*, in one of his experiments, found that it occupied 8000 times its former volume—and, on another occasion, that great experimental philosopher brought it to expand itself into no less than 13680

times as much space, as it originally filled. This effect was produced merely by including a portion of air in a pneumatic apparatus, and removing the pressure, so as to allow it to expand by its elasticity. But by the addition of heat, this quality of the air is much increased, as may be easily proved by holding a bladder partly inflated before the fire; for no sooner is the included air affected by the heat, than it begins to expand itself, and to distend the bladder. According to the experiments of Sir George Shuckburgh, this expansion is increased at the rate of about the 440th part of its volume for each degree of heat applied, from that of temperate, on the scale of Fahrenheit.

Air, when combined with water and exposed to heat, forms steam or vapour, which, by employing great degrees of heat, has its elasticity so much encreased as to become one of the most powerful mechanical agents in nature; a fact familiar to persons conversant in the management of steam-engines. At the heat of boiling water, steam is above three times rarer than common air, and possesses about the same elasticity as that fluid.

Air being a material substance, must of course possess weight, and consequently pressure; but philosophers before Galileo and Torricelli, could not precisely ascertain the quantity of that pressure. The former of these ingenious Italians made many interesting experiments on water-

pumps, whose operation depends entirely on the pressure of the atmosphere; and the latter was so happy as to devise that brilliant experiment, which gave rise to the barometer, and is often dignified with his name. This valuable discovery gave a new and decisive turn to pneumatical inquiries; for Torricelli found on filling a tube, closed at one end, with mercury, and then stopping the open end with his finger, and inverting the tube in a bason of the same fluid, that the mercury was kept at the height of about 30 inches in the tube, by the air pressing on the mercury in the bason. Now a cubical inch of that ponderous fluid weighs nearly half a pound avoirdupois; consequently a column of mercury thirty inches high and one inch square must weigh about 15 pounds, which is therefore equal to the pressure of the atmosphere upon every square inch of surface.

Hence will appear the indefinitely various degrees of pressure, which we can employ in the application of the Air-Pump Vapour-Bath. The surface of an ordinary man's body may be estimated at about 2160 square inches, which multiplied by 15 gives 32400 pounds, or nearly 14½ tons. This enormous pressure would crush us in an instant, if it were not exactly counterbalanced by the spring of the air, or other elastic fluid, diffused through every part of our bodies; just as the pressure on the outside of a full blown bladder is sustained by the re-action of the air

within; or to give a still more apposite instance, as the pressure on the surface of a shrivelled apple is accurately counterpoised by the elasticity of the air contained in its pores. But now, if this full blown bladder and shrivelled apple be placed under the receiver of an Air-pump, we shall find that as the air is exhausted, the bladder will be more and more expanded, till it burst, and that the wrinkles on the apple will gradually disappear, and its surface become plump and turgid. As an instance perhaps still more in point, we mention a common experiment. If an egg punctured in the small end be placed in a wine-glass with the pin-hole downwards, and subjected to the action of an Air-pump, the elasticity of the air naturally enclosed in the egg, will force its contents through the perforation; but on re-admitting the air into the receiver, its pressure will drive the contents back again into the shell. Thus also it is with a small part of the human body subjected to the operation of the syringe-cupping-glass, which will illustrate our meaning better than the ordinary one. In proportion as the air is exhausted by the syringe, the fluids rush towards the small portion of surface, from whence the atmospheric pressure is removed, with such force as to occasion a tumor, and thus the blood flows through the wounds previously made by the scarificator. From these facts, and the reasons assigned for them, the transition to the Air-pump Vapour-bath, is natural and easy. For, except

with regard to the use of the scarificator, which is rendered unnecessary from the extent of surface included in the apparatus; its effects are exactly similar to those of the cupping-glass, with the additional advantage of fomenting the part.

With regard to animal, vegetable, or mineral poisons; though opportunities of judging are happily rare, it is clear, from the obvious power and properties of this apparatus, that, if early applied, much dependence may be placed in its efficacy, for their removal. If, as has been often maintained, sucking a poisoned wound with the mouth has had an effect, how much greater must the power of this apparatus be? to say nothing of the danger incurred by the person, whose mouth is applied to the part. On the important subject of suspended animation, as the principal mean of restoring the vital functions, is the application of heat; it would be difficult, if not impossible, to point out any method, by which it can be thrown through the system so completely, or in so gradual a manner, as by this apparatus.

Many of these remarks on the power and properties of the Air-pump Vapour-bath, are taken from the excellent treatise of *Dr. Blegborough.* That Gentleman was the first who addressed the public on the subject, and I have his permission to make what use of his ideas I may deem most conducive to the general good, it being his ardent wish to diffuse, as wide as possible, the knowledge of a discovery, which he has ever consi-

dered of the greatest importance to mankind. It does not, however, either accord with my design, nor is it within my competence, to indulge in any thing like eulogy, on the medical character of *Dr. Blegborough*. His professional reputation stands too high to receive any addition from my pen—but, as the attention he has paid to the Air-pump Vapour-bath, and the extensive experience he has had of its efficacious powers, may not be so generally known, it is but bare justice to observe, that, as no man is less likely to be deceived himself, or to mislead others by premature opinion, so none can be more eminently qualified to pronounce a sound and decisive judgment on the subject.

That Gentleman, in his letter to *Dr. Bradley*, on the subject of the Air-pump Vapour-bath, thus expresses himself, "This apparatus, if I am not greatly deceived, is calculated to produce excellent effects, in changing the action of diseased parts. Indeed, I have little doubt, but it will rank among the first of the modern improvements in our art; and that under the superintendence of professional men, it will prove a powerful mean, not only of alleviating, but frequently of removing, many diseases which have been hitherto considered as incurable. As the apparatus comprehends, and for the first time, unites the effects of fomentation and the cupping-glass, two of the most powerful means of acting on disease, and that on a plan more extensive than was ever

before thought of, what effects may we not be led to expect, from so extended a combination?—Every day's experience is proving to us its efficacy, in gout, rheumatism, contractions of muscles, cutaneous and other diseases, particularly of the chronic kind. The peculiar construction of the machine, is adapted to the leg or arm only; but the principle extends much farther, and can be applied to any part of the body, by the intervention of glasses or otherwise. When, then, we consider, that, by such means, the pressure of the atmosphere might be removed from so large a surface, every square inch of which, sustains a weight of 15lb, the effects on the vessels circulating the fluids, in such parts, are too evident to need insisting on in these pages. A very obvious one is that the consequent temporary expansion of those vessels, from so great a pressure being removed, must give an opportunity for obstructions to give way, while at the same time, the progress of inflammation, is arrested."

The following letter from Dr. Hamilton, physician to the London Dispensary, addressed to the Proprietor, is quoted by Dr. Blegborough:

"DEAR SIR,

"I HAVE often, since the time I examined your machine for conveying a Vapour-bath to diseased limbs, and for taking off the pressure of the atmosphere, considered it and its probable effects with much attention; and, my opinion is, that it is likely to be of the greatest use to man-

kind, in helping obstructed vessels to unload themselves. *The mode in which it must act is certainly agreeable to sound theory; and the more it is put in practice, the oftener will facts occur to confirm what I now say.* I not only view it as valuable to remove local affections of the extremities, but also to afford relief to other parts of the body, where obstructions may have taken place. There are some complaints, which would often be greatly mitigated, if not always removed, by its power in producing a general and copious sweat over the whole frame, such as in the diabetes, dropsy, and other maladies, where the skin is parched, dry, and hard. In general, it will be well to pump out the air gradually, and to see the effects of a partial exhaustion of the machine; for its being done too suddenly, would allow the air in the circulating fluids to exert its spring with too great force, producing acute pain, &c. The machine, by having a condensing pump fixed to it, might be used as a bracer, and that with beneficial and powerful effects. Was I not so far advanced in life, and so much engaged in other avocations, I would with gladness have devoted my time to the use of it; thoroughly convinced that it would prove useful to the distressed, and honourable to myself. Wishing you, dear Sir, the favour of God, which is better than life, and all that life contains.

I am,

Your friend and obedient servant,

JAMES HAMILTON."

"No. 7, Artillery-Place,
April 8, 1801.

P. S. It would be an unpardonable vanity in me to suppose that any thing I could say would add weight and consideration to the suffrage of so able a judge, whose respectable testimony has since been corroborated by the favorable opinions of some of the first physicians and surgeons in this metropolis. The late learned and ingenious Dr. Garnett, in particular, was so much struck with the value of this discovery, that on hearing of it, he immediately applied to me for one of the machines, which he forthwith exhibited and explained in the lecture on Gout, which made one of his interesting course on Zoonomia, now printing at the press of the Royal Institution, for the benefit of his orphan children.

R. B.

Such were the opinions of these eminent physicians, some eighteen years ago, on the beneficial effects to be expected from the use of the Air-pump Vapour-bath—at a time too, when the invention itself, was comparatively little known. Since that period, it has not only received various and important improvements, but its extraordinary powers and efficacy in the relief and cure of many of the most dangerous disorders that can afflict humanity, have, induced some distinguished members of the faculty, not only to recommend it to their patients, among whom are to be found, personages of the first rank in

the kingdom, but to have applied it to themselves, with the greatest benefit. Indeed, by a widely extended practice, there is scarcely any thing connected with the subject, now left to doubt or conjecture.

To an ingenuous mind, it is at all times, a painful and difficult task to speak of one's-self; but, where confidence in skill is expected to be reposed in a matter so vitally important as health, some reference to qualifications ought to be given, that can be depended upon. On this delicate part of the subject, I can only venture to say, that I have from early life, with ardour and enthusiam, devoted my time and talents, to the study of medical philosophy. In the progress of my experience, I have found, a judicious direction of that subtle and searching fluid, the most powerful of all agents for successfully grappling with the very worst of human maladies. This conviction, strongly impressed on my mind, induced me to dedicate many years of my time to the *gratuitous administration* of medical electricity, and galvanism, among the afflicted poor, and I can safely assert, with a success that seldom fell under, but often equalled my most sanguine expectations. My present varied professional practice in London, having in innumerable instances received the sanction and approbation of many of the most eminent and enlightened Surgeons of the age, not only supersedes the necessity of saying any thing more for myself, but will also

enable the public to appreciate the nature of my pretentions; and to judge, how far my habits, my attainments, and experience, may, or may not qualify me, for conducting with beneficial effect, the operations of the *Air-pump Vapour-bath*.

Here it is proper to observe, that each application of the apparatus, takes up in general, somewhat more than an hour, that is, the fomentation occupies three, and the exhaustion one quarter of an hour, or a little more. The approach of pain is the criterion, which determines the sufficiency of the exhaustion: but this and other matters must be regulated by the discretion and skill of the practioner, according to the circumstances of each particular case.

The following Cases, in proof of the efficacy of the AIR-PUMP VAPOUR-BATH, *were published years ago by* DR. BLEGBOROUGH, *a Gentleman, well known to the world for his eminent professional skill, talents, and learning; and whose extensive experience in the use of that Apparatus, peculiarly qualified him to form a correct judgment of its powers. So thoroughly was that Gentleman convinced of the great benefits to be derived from the use of the Air-pump Vapour-bath, that he published a treatise replete with scientific views and sound reasoning, to recommend it to Public Notice—a practice, which he thinks it his duty to continue to this day.*

CASES OF ACUTE GOUT.

I SHALL now state, Sir, a few cases out of a great number which have occurred to me lately, selecting those of such persons as are least difficult of access; and first, that of Mr. Seares, surgeon, of Half-moon Street, Piccadilly, to whom I am indebted for the following statement, which I shall give in his own words.

"Half-Moon Street, May 31, 1802.

"DEAR SIR,

"SEEING in the Medical and Physical Journal, a letter of your's respecting a machine

for conveying a Vapour-bath to diseased limbs, I could not possibly think of withholding my testimony of its beneficial effects in gout; I can speak of it feelingly and with gratitude, having experienced such relief from it myself, in a most violent attack of gout in the extremities.

"In the winter of 1799, by being thrown out of my chaise, I received a violent contusion on the left foot, which terminated in a most severe paroxysm of the gout; it confined me a considerable time, and rendered me unable to pursue my professional avocations: the dread of a future attack may be readily conceived. The following winter confirmed my fears, and I was visited by another paroxysm, with increased violence; for, great as my sufferings were before, they were trifling indeed compared with what I suffered then. Fortunately, by mere chance, I heard that a gentleman at Pimlico, whom I knew, had received the greatest benefit from the application of the machine. I sent therefore to Mr. James, the proprietor of it, to hear from him the principles of its operation; and as it appeared to me to be perfectly innocent, I was willing to embrace such a mode as would be likely to relieve my pain, and enable me more speedily to prosecute my professional duties. It succeeded beyond my most sanguine expectations, as on the evening previous to its application, I could not bear my feet to touch the ground: after the machine had been applied, I could press on them without

pain. The succeeding application was still more gratifying, as I could shortly afterwards walk with very little assistance about the room; and the next day I suffered only from stiffness, and the fear of reproducing an attack by any blow I might receive on the parts. This, however, subsided, and I was enabled in a day or two to attend to business. Grateful for the benefit I have received, I could not withhold giving you this hasty sketch. Without apologizing for its imperfections, I hope this, with other documents, will tend to make the machine more generally known, and I trust approved.

I am, dear Sir,

Your's obediently,

G. M. Seares."

"To Mr. Bleasborough."

Mr. Seares, after an interval of two years, during which he has enjoyed an uninterrupted state of good health, was on the 23d of September again attacked with another fit of the gout. He immediately had recourse to the machine; four applications of which were made on the 25th, the 26th, the 28th, and the 30th. After the third application he was enabled to resume, and has since continued, his usual activity in his profession. He is now (Oct. 15,) entirely free from all appearance of the complaint.

After the above statement of Mr. Seares, little further is necessary to be said on the acute stage of the disease, I shall therefore but mention one other case.

Mr. Smith, No. 47, Oxford Street, on the 20th of March, was labouring under a most severe paroxysm of the acute gout. He has been subject to frequent returns of its attacks, which always continue for some time. The application was made on the 20th and 22d, under some disadvantages, and irregularities in point of exercise. But on the 23d and 25th it was applied again, under more favourable circumstances. The paroxysm entirely remitted, since which time he has continued very well; having entirely escaped the debility, which never failed to succeed former attacks, that were suffered to run their course under patience and flannel; and he resumed his business immediately. I hope I have given him such directions respecting his future regimen, as will make the machine unnecessary for a great length of time to come. It may not be amiss to add, that Mr. Smith considers the application, independent of its utility, as no inconsiderable luxury.

CASE OF IRREGULAR GOUT.

I am happy in having rendered Mr. Mortlock, of Cambridge, much service in a complaint which comes under the above description. There seemed

a strong general gouty diathesis: his stomach was much affected; and he was taking a quantity of ginger every morning, a practice I could by no means approve, though much extolled by a certain worthy baronet. I gave him some general directions respecting regimen, and enforced the use of milk. The machine was applied fifteen times to his leg and arm. It seemed first to determine the affection to these two points, and soon to remove it altogether. He left town much improved in general health, as well as nearly cured of the particular affection. I went to make him a visit at Abington, near Cambridge; a fortnight after, a considerable thickening and hardness of the ancle had given way, and he was much better in general health. He gave me letters to some of his friends, one of which I shall take the liberty to transcribe.

"Abington Hall, April 10, 1802.

"DEAR SIR,

"I KNOW not whether you are ever afflicted with the gout; but knowing it has been severely felt in your family, I have requested my friend, Mr. Blegborough, a surgeon in London, who is proprietor of a machine, which has done me very essential benefit, both for regular and irregular fits of the complaint, to wait upon you. I will thank you to introduce him to your surgeon; not only as he wishes to make the instrument known, but also, as you will by him, be

assured that it can do harm. It would give me great pleasure to see you here; but I have long found so great a difficulty of detaining you at my house in Cambridge, when you were there, that I now almost despair of it.

I am, dear Sir,

Your's most truly,

JOHN MORTLOCK."

"To JAMES DENTON, ESQ.
Brandon."

DERANGEMENTS OF THE FUNCTIONS OF THE BLADDER.

CAPTAIN RUSH, No. 25, Nottingham Place, New Road, Mary-le-bone, was relieved from a most violent affection of the bladder of long standing. The *constans mingendi cupido* was so severe, that he declared life was not worth the tenure. From the quantity of mucus discharged, the inner coat of the bladder must have been entirely abraded. It would be presumptuous in me to hazard an opinion respecting the causes, as various ones had been assigned by a number of gentlemen who had been consulted; stone and gout among the rest. The affection, however, entirely ceased after a few applications of the machine; to a trial of which Dr. Fraser, who was attending at the time, did not object.

" Farthinghoe, near Brackley,
Northamptonshire, June 5, 1802.

" DEAR SIR,

" It is with much pleasure I inform you of the continuance of the great benefit I received from the application of your Air-pump Vapour-bath. To have given so much relief in so short a time, and that in a case the most unfortunate that ever man was afflicted with; a case that the first assistance could scarce give me any relief from, certainly discovers a power from which, under your directions, every good may be expected. It has been recommended and introduced as giving relief in gouty cases; but, although, as in my case, the gout formed a part of my complaint, yet be assured, Sir, that the other part of my complaint (inflammation of the neck of the bladder) was the cause from which my great sufferings proceeded.

" As my physician, Dr. Fraser, who is one of the most liberal of men, attended me during the application of your remedy, and to whom I explained its effects in progression, I cannot do better than refer you to his testimony. I cannot omit acknowledging the candid and polite manner in which you pointed out the attention you thought necessary, during the course of my application; a circumstance much to be desired by any one making the trial. Accept, Sir, every good wish from

Your very obedient servant,

GEORGE RUSH."

On what principle the application of the apparatus assisted in the above complaint, I shall not take upon me to affirm. Some will no doubt conclude that the affection was spasmodic. Whatever it was, it is certain that it had continued, with very little intermission, for several years. I merely give it as a fact; and think it necessary to state farther, that a recurrence of the symptoms, which were rapidly and daily increasing, has been checked by the same means; one of the machines having been sent to Farthinghoe for that purpose. And the Captain writes to me that he is again perfectly free from the complaint.

I remain, &c.

RALPH BLEGBOROUGH.

CASES OF ACUTE RHEUMATISM.

On the 20th of January, 1802, Mr. Clark, No. 18, Somerset Street, Portman Square, had been so severely afflicted with Rheumatism for many months, as not to be able to move without the most excruciating pain. It affected his breast, shoulders, and joints, and the muscles about the breast, so much that he was incapable of breathing without considerable difficulty; nor could he by any means stoop to take any thing from the ground, or bring himself perpendicular; but was under the necessity of inclining

forward at an angle of about 45 degrees. On the above date I first saw him; he had been under the care of regular men, and all ordinary means had been used without effect. He had visited Bath, and nothing seemed to have been omitted which promised relief. His pulse was quick but small; tongue white; skin dry, parched, and hard; considerable thirst, and no appetite.

I directed him to take half an ounce of Epsom salts, with half a drachm of magnesia, in two ounces of peppermint water; and took ten ounces of blood from the arm, ordering the application of the machine the following day. On the 22d in the morning, I found him much relieved. The blood shewed the inflammatory buff. There seemed a much greater freedom of circulation, and the pulse was more full and not so frequent; but the most remarkable change had taken place on the skin, which had become soft, moist, and perspirable. The patient could turn in bed, and his latitude of motion in other respects was much more considerable. The machine was applied in the evening of the 22d, and again on the 24th, on which day I ordered eight ounces more blood to be taken from the arm. The operation was mismanaged, and only two ounces were procured. On this day he repeated his draught, and on the following was so well as to induce me to inform him that he need not use the machine any more; as he could now bend his body almost as easily as in the

natural state, and was entirely free from pain. He, however, of his own accord, chose to have another application, which was made on the 27th; since which time he has remained remarkably well.

I shall state another case, as bleeding was employed in the above, though to a very small amount; yet it may, on that account, be objected to by some as not a fair one.

Thomas Pearse, a poor bricklayer's boy, Ward's Fields, New Road, Mary-le-bone, on the 13th of May last, had been confined to bed for eight weeks with this disease. I saw him at the request of a medical gentleman. He was unable to straighten his knees, which were much contracted and enlarged. His legs and thighs were literally worn to the bone; and such was the general debility, that little hope was left of its being possible that he should spring from the disease by any ordinary means; all of which had been duly administered. His left hand and arm had much of the appearance, and all the inutility, of a paralytic limb, except round the joints, which were greatly enlarged. The application was first made to the left leg twice, with considerable relief; then to the left arm twice; and afterwards to the right leg and arm, each once. His lost appetite began to return in proportion as the pain, &c. subsided. I found it necessary to regulate the porter he drank; but left him at liberty to eat any animal food they could procure for

him. He gradually recovered, and called on the 28th, at the houses of two medical gentlemen to return them thanks; the one for recommending the machine to him, the other for his care and humanity towards him prior to the use of it. I have seldom met in practice with a circumstance more pleasant to my feelings than this last case; that I was instrumental in restoring to this poor boy the use of his limbs, and to society an useful member, otherwise lost for ever, I firmly believe; nor shall the united scepticism of the world persuade me to the contrary.

CASES OF PALSY.

John Rouneberg, No. 11, James Street, Brook Street, a patient of the Mary-le-bone Dispensary, who, after having been formerly under the care of Dr. Thornton, physician to that establishment, and used among other things, the vital air without benefit, was sent to me by the late Dr. Garnett. He had been paralytic for two years, which led me to expect very little from the machine; nevertheless, at the request of the Doctor, it was tried. The effect was very considerable; for after six applications, he had so much more use of his arm, that he could lift it over his head, without the help of the other hand; could grasp any thing firmly, and carry a large pitcher of water, which he was unable to do before. A general state of excitement, however, had pervaded

the whole system; so that I deemed it prudent to desist from the application at that time. This general excitement, I had little doubt, was produced from the local one of the arm, by the increased circulation and capacity of the vessels of the part. As soon as it should have subsided, which was nearly the case, I intended to proceed, keeping in view the maxim, *Festina lentè*; and hoped I should be enabled hereafter to give a still better account of a case, which, at that early period, I could not omit noticing without calling in question the judgment of Dr. Garnett, to which I owed the utmost deference.

The patient, however, gave me the slip, and got a situation somewhere in Somersetshire, as a cook, which had been his business before his misfortune, so that I heard no more of him. There was every reason to expect, from the progress which had been made by six applications, that I should have been able to have given a very good account of the case by this time; but there is the less cause of regret, as I have it in my power to lay before my readers, the following still more apposite case.

October the 12th, 1802, Richard Jacques, No. 6, Little Mary-le-bone Street, about eighteen months ago, lost the use of both his hands: of the two, the right seemed most affected; on the back of it, there was a large ganglion-like tumor, which, with other circumstances, made the case resemble that species of paralyses, which succeeds

the painter's colic; though we could not discover that he had been exposed to the influence of lead. He had been a patient of the Mary-le-bone Infirmary, for six months, and of the Middlesex Hospital for three: of course, all the common remedies had been skilfully applied, but unfortunately had not produced the desired effect. He was not at the above date, any more than he had been during the whole existence of the affection, able to exercise his occupation, that of a shoemaker. In the two months, preceding the above mentioned date, the application had been made two and twenty times. He received no great benefit with respect to motion, for the first twelve times; though the tumor on the back of the right hand had been gradually decreasing. At this period, however, different sensations took place. The susceptibility of the parts had become much more considerable. He was seized with *Cholera morbus*, a disease at that time prevalent; after which, the bowels, hitherto in a torpid state, became more naturally irritable. His countenance lost somewhat of its leaden paleness. The secretion of bile seemed evidently more considerable. A degree of painful itchiness in the affected parts, and considerable fever took place, exactly as happened in the case of Rouneberg; which, as in that case, was the cause of suspending the application for ten days. The amendment, however, was such, as to make the poor fellow solicitous to persevere in the use of the means. He has now

so far recovered the command of his hands, as to be able to make three pair of women's shoes in two days; and there is every reason to hope that he will be able eventually to finish the same task in one day; as he was in the habit of doing, before he was seized with the disorder.

CASE OF CUTANEOUS DISEASE.

Miss Nicholls, No. 26, Margaret Street, Cavendish Square, authorises me to state that she was completely cured of the most inveterate herpetic ulceration I ever saw, which succeeded the small-pox, and had been of many years standing. The affection occupied the whole of the right leg, the discharge from which was excessive. The arms, face, and many other parts of the body were affected; all of which were well before the leg, the part alone to which the apparatus was applied. Twelve applications were made between the 30th of June, and the 2d of August. No medicine was given, except one grain of Ipecacuanha three times a day, and that but for a small part of the time. The cure was progressive and complete; for the parts affected remain perfectly free from the least appearance of irritation, and are now covered with a fine healthy skin.

CASE OF ULCER OF THE LEG.

About the middle of April last, I was desired by Dr. Sandiman to see a Mrs. Bell, from Hull,

with an ulcer on the leg. It had all the appearance of that sore which generally attends carbuncle. It was very extensive and throwing off large sloughs. The then circumstances, as well as the history of the case to that time, exactly corresponded with what takes place in carbuncle. It had commenced with a doughy swelling of a dead pale redness, implying want of power. The pain had been obtuse and burning, and the throbbings indistinct. There was great anxiety and prostration of strength. From the appearance of the sore, it would not have surprised me to have seen the arteries give way as they were completely exposed, and the ulcer was rapidly increasing in depth and extent. Under these circumstances, I did not think myself warranted in depending on the effect of the Air-pump Vapour-bath alone, though some cases of a similar nature since, have proved to me that I might have placed more dependence on it than I did. I conjoined with its application, which was made six times, between the 20th and the 30th of the month, the following plan, which I had often used before, in similar cases, but never with the same speedy effects. I wrapped up the leg after it came out of the bath, in a poultice of linseed powder mixed with common pepper, in the proportion of a pound of the former to a drachm of the latter, giving it a proper consistence with porter and lard. The system at the same time was invigorated with wine, bark, and opium. I never saw half the

change produced on a similar sore, in ten days, by the same means (without the bath) though I have often used them in such case. In the two first applications, the exhauster was not employed, lest the blood vessels should have given way. It was on the third application used slightly, and encreased every time afterwards. By the 2nd of May, the mortified parts had all separated, and it had become a healthy sore, discharging good pus. The patient now thought herself able to return home, and what was the ultimate event of the case I know not.

Many diseases are attended with local changes of a critical nature, which terminate in ulcerations of particular parts. This is frequently the case in the plague, and sometimes of the common typhus of this country, in which an anthrax or carbuncle is formed. The treatment of this ulceration is frequently attended with the greatest difficulty; and till the local derangement be somewhat changed, general remedies are often found of little effect; nay, not unfrequently even to encrease the mischief. By the use of the Air-pump Vapour-bath, the treatment of the sore can be made to keep pace with the general treatment of the system; and thus it will be found of the greatest benefit in all such cases.

This mode of treatment induces a speedy change and separation of the diseased parts; and by restoring a full and regular circulation, disposes to the renovation and healing of them.

SEVERE PAIN OF THE BACK AND HIP.

I cannot express my sentiments on this head better, than by laying before my readers the following communication.

" SIR,

" Understanding your are about to publish respecting the Air-pump Vapour-bath, I beg leave to send you some particulars concerning a case, which accidentally occurred to my notice, and which I think highly deserving attention.

" Mrs. Miller, No. 3, Buckingham-place, Fitzroy-square, an acquaintance of mine whom I sometimes visit, though not in my professional capacity, had been severely afflicted with a constant and most excruciating pain in the back and the left hip, for the space of a fortnight. Though Mrs. Miller was at that time attended by Mr. Coates, of Howland-street; yet seeing her in such extreme pain, I took the liberty to suggest, that, in my opinion, the tepid bath might tend to relieve her; but at the same time begged that the sanction of Mr. Coates should be first obtained. This, however, could not be had, and for this good reason, that in the opinion of that gentleman it would be dangerous to use so much exertion as would be necessary to place the patient in the bath; for he had observed that the symptoms were always extremely aggravated by

the least motion. I now heard for the first time of the Air-pump Vapour-bath, which had been recommended to the patient, and approved by Mr. Coates. Six hours after the first application, the pain almost entirely abated, nor has there been any violent return of it since. The application was made twice afterwards, and in the course of the three days subsequent to the first, on which it was used, and it has not been since necessary.

I do not know what are the sentiments of Mr. Coates respecting this case; but I have little doubt, from what I saw and heard of the degree of the pain, that had it not been soon relieved, Psoas abscess might have been the consequence, which I own I much apprehended; as the pain was accompanied with a strong inflammatory *diathesis*, and so severe that at that time the lady could not move, or suffer herself to be moved in the bed.

You are at liberty, Sir, to make any use you please of this information, and assure yourself, that with every good wish for your success in establishing a plan of treating many diseases, the principle of which I much approve, I remain

Yours, &c.

A. DODDS.

" January 8, 1803,
Dorset-street, Portman-square.

To DR. BLEGBOROUGH.

AN ELBOW-JOINT CASE.

November 15th, one M. Ferries, a poor man, No. 14, Buckeridge-street, St. Giles's, came to me with a diseased elbow-joint of an incredible size, which had the appearance of proceeding from a cold œdematous defluction. The hand and arm, which were much enlarged, had also an œdematous appearance: but the pain, which was excruciating, was confined to the joint. The affection had suddenly commenced two months previous to my seeing him, while he was in bed; for upon awaking one morning, he perceived the enlargement and inability of moving the limb. The habit of the patient was most characteristically strumous. Appearances indeed, altogether, were such, that I had set it down as a case so hopeless, that the Apparatus or even any other mode of treatment, was not likely to obtain credit. I, however submitted to the entreaties of the poor fellow that it should be tried two or three times; and as after these applications, the pain was almost entirely removed, we were induced to go on. The enlargement diminished daily; and though eighteen or twenty applications have not entirely removed the rigidity, or reduced the part to its natural size; yet I have no doubt that he will soon be able to use his limb in the exercise of his business, that of a carpenter, which at one time I thought he would never more be able to do.

GENERAL DEDUCTIONS

ARISING IN SOME MEASURE FROM THE FACTS ABOVE STATED.

When we contemplate the human frame, and attentively consider its wonderful self-restoring powers; though we can assign no good reason, why it should not continue for ages the same as at any given period, nor point out distinctly the causes of its progress to maturity, or of its waning to decreptitude; yet we cannot be surprised, from the intricate delicacy of its structure, that it should frequently be thrown into disorder, and that obstructions should take place in some of its minuter parts. That this should be the case, will appear the less surprising, when we reflect on the secreting and absorbing systems; the transmission of fluids through the vessels of the eye; the *vasa vasorum* which supply the coats of the blood-vessels, and are in their turn supplied by others so very minute as to escape the nicest inquisition of our sight, even when assisted by the best glasses: the glands too, placed as trusty sentinals to oppose the admission of particles unfit to be received into the mass of circulating fluids, conspire with the other wonders of the microcosm of man to heighten our admiration into astonishment!

Obstructions in such parts give rise to the diseases, a description of the treatment of which,

has been attempted in the preceding pages, on a plan eminently useful; though by no means entirely new; except in what regards the comprehensive extent and scientific combination, which, I may venture to say, has now been given to it.

Whoever reflects on the manner in which the circulation of the system is carried on, cannot fail to be struck with the superiority which this treatement in many diseases must possess; and wonder that a mode of application so useful should not sooner have been invented; especially considering our long acquaintance with the cupping-glass. In a state of health, the internal and external systems of vessels may be considered as preserving a proper equilibrium. This, however, is always exposed to be changed by the action of external causes on the surface. The effect of this alteration is, as we formerly observed, to produce obstructions, the most common consequence of which is simple inflammation, occasioning a tense, painful swelling of the affected parts; with increased heat and all the common symptoms of inflammatory fever. Should one of the large joints be attacked, we are presented with an object of attention, the more interesting on account of the complicated structure of the part, and the mischief, which inflammation, if suffered to continue any length of time, generally induces on such a part. From whatever cause the affection may have arisen, and however simple and unmixed at first, if not soon

removed, it is always liable to take on a specific action, modified by any disease to which the system may be disposed; as scorphula, gout, rheumatism, &c. This change from a simple idiopathic, to a specific affection, is often sudden and imperceptible; and white swelling, rigidity of parts and anchylosis, frequently the unexpected consequences. The elbow, but more particularly the knee joints, which from their structure and slight covering of cellular membrane, exhibit a greater variety of morbid appearances, and are more liable to suffer severely from the transitions of temperature, than almost any other part of the system. These affections are in general not more severe, than tedious and difficult of cure; and were any thing necessary to give an additional stimulus to our attentions to them, we need only mention that the other sex, both from their peculiar irritability of system, and from the present fashion and general flimsy texture of their dress, are most frequently the objects of those attentions.* Upon these ac-

*In the Statistical Account of Scotland, article Kirk-patrick Juxta, the substitution of cotton fabrics for the former domestic woollen manufactures of the country, is assigned as one cause of the late extraordinary prevalence of rheumatic and pulmonic affections in that district. We suspect the same unnatural perference of cotton, which at the same time that it greedily absorbes moisture, suffers the natural heat to dissipate, may be assigned as one great cause that such complaints have become endemic throughout the greater part of this Island. For we find Mr. Buchannan in his Account of the Hebrides, stating that, though the unfortunate people called *Scallags* in those islands, suffer every kind of hardship, yet the rheumatism is almost unknown among them; a fact, which he attributes to their general use of wollen shirts.

counts, they constitute a most important class of diseases, which require to be managed with the utmost address and attention, from whatever cause the particular attack was first induced. To anticipate such complicated mischief, as obstructions in the above parts are frequently attended with, every mean which gives hope of relief ought to be early resorted to; and none promises to be more effectual than the Air-pump Vapour-bath, which by removing atmospheric pressure, enlarges the obstructed vessels, and allows them to unload themselves; while all their anastomising branches become capable of circulating a greater quantity of fluid. The activity of the lymphatics of a part, thus relieved, must be greatly increased; and hence the finishing hand is put to an obstruction, the consequences of which, if not speedily removed, must be obvious to all.

The worst kinds of these affections are generally modifications of scrofula; because in those countries, where this disease seldom occurs in the forms of inflammation and obstruction of the mesentery, &c. *before*, and of the lungs and liver *after*, the age of pubety, white-swellings also rarely appear. In no country, that I have heard of, is this disease so common as in this kingdom; and the joints already mentioned are most liable to its attacks. The first symptom is generally a pain diffused over them, particularly encreased on motion, with a gradual stiffening of the ten-

dons, and enlargement of the affected part. The exterior veins at last become varicose, and a soft elastic feel and sense of fluctuation take place in the tumor, when pressed by the finger. The farther progress of this affection it is unnecessary to detail; as nothing has hitherto been found to check it in the stage of which we are speaking.

The Air-pump-Vapour-bath, however, offers a mean of cure powerful in its nature, capable of restoring the balance of the circulation and of removing that perseverance of obstruction, which keeps up the affection: but to be completely successful, the application ought to be frequently made, to be suited in degree to the state of the morbid parts, and to be succeeded by the cautious application of friction and stimulants. Blisters and the local detraction of blood are applicable with the greatest propriety, during the incipient stage of such affections, while the existence of inflammation is most obvious and certain.

When the cure has made considerable progress, friction is to be used, and stimulant and astringent applications made to the part, as well as tonic and invigorating remedies supplied to the general system; in order to correct the vitiated state of the babit, and to prevent a recurrence of the disease. To remove that irritability which never fails to accompany the first stage of these complaints, nothing is more essential than good air.

Such is the general outline of the treatment, which I have seen very successful in the cure of

affections of the knee and elbow-joints; and, in every view of the subject, there is little doubt that the Apparatus I recommend is, in almost every stage of them, a powerful mean of relief. In incipient cases I am of opinion it will seldom fail, if managed with that skill and address which must occur as necessary to the minds of *skilful practitioners, in whose hands alone such a valuable acquisition to our art ought to be placed.*

It must not be dissembled that it has in some cases appeared to fail*; but when we take into account, that it has sometimes been under the direction of persons totally ignorant of the laws of the animal economy, and destitute of that spirit of perseverance, generally necessary to overcome chronic affections; the wavering state of mind of irritable patients, and the general prejudice in all ranks of people against every thing new; we shall not be surprised that it should not on all occasions, have obtained the credit it deserves. In many cases†, however, in persons of

*Two cases of an affection of the knee-joint, characterized by an unusual relaxation of the ligaments, with a preternaturally encreased latitude of motion, occured to me. In one of them, the natural swell of the *vastus internus* muscle above the knee-joint, seemed entirely shrunk. In neither of these cases had the Apparatus any effect, though properly persevered in. This affection happily is not of a dangerous tendency; nor do other remedies seem more successful in removing it. See Russell on the Knee-joint, page 158.

†Aware of the delicacy necessary in mentioning names on such occasions, I have omitted their insertion; but have the privilege of making personal references to several, whenever I may find it necessary.

good sense, who submitted to proper management, it has undeniably performed such cures, as to have left a very favorable impression on the minds of several of the faculty, who have witnessed them. A remarkable case of a young lady, who had eight openings round the elbow-joint, from a scrophulous affection, got entirely well by a stiict perseverance in the application of the Apparatus. This case, as well as other remarkable ones, had a happy termination, under all the disadvantages above alluded to, except perseverance *both* in the attendant and patient.

Mercury is not thought a worse remedy in syphilis, by those who know how to manage it, so as to cure that terrible malady, because it generally fails in the hands of ignorance and empiricism.

With the last observation, I shall dismiss the above subject, and endeavour to pursue one, which it has naturally presented to my mind.

PTYALISM.

One of the most troublesome consequences attending the exhibition of mercury, we find to be Ptyalism, or a morbid discharge of saliva. This, in some constitutions, comes on unexpectedly; and often without regard to the quantity of the medicine used; and when once begun, it

continues for a great length of time, in spite of our efforts to stop it. Various methods have been recommended, but none hitherto have seemed to possess the power of even adding to the comfort of the patient, in this most shocking situation. The nitrous acid, and even borax, can not be depended on. Blisters for this purpose have by some practitioners been much extolled, and by no means on erroneous principles, except in so far as regards the irritation they often produce. The Air-pump Vapour-bath, by its more powerful influence in restoring the balance of the circulation, at the same time that it removes irritability, assists wonderfully in taking off this morbid determination; which has been known under some peculiar circumstances of habit, to have been induced to such a degree, by four or five grains of calomel, as to occasion death.

If this be the case, which I have many reasons for believing, the inference is surely not a strained one, that the Apparatus may be made subservient to a more due and equable regulation of the action of mercury upon the system, that is, that a greater quantity may be more safely thrown through it in a given time, and a more uniform impression kept up upon it, than can possibly be induced without the Apparatus. This consideration lays open a wide field, but having had so large a one already for practice, I have not had many opportunities of making observations in

this; I shall, therefore, leave it to some future occasion and hasten to subjects, on which I can speak with a greater degree of confidence.

CHILBLAINS.

This troublesome complaint, which may be classed under the head of cutaneous diseases, is very frequent in this country. Chilblains are inflammatory swellings attacking the fingers, heels, and toes, arising from extreme cold, and attended with heat, redness, shooting pain, and great itching. They generally attack children and more especially those of a delicate, irritable surface; and who, in consequence of one attack, are always liable to suffer a repetition. The treatment of this complaint consists in inducing a gradual change of temperature, and then applying stimulants in various forms, according to the degree of local derangement in the affected part. From the very nature and cause of this disorder; an obstruction and its consequences form the whole of it; the superiority of the Apparatus for its immediate removal cannot be doubted, from the very principle of its operation. Indeed it will be here found to act like a specific, and the affection cured by a few repetitions, without incuring the danger of ulceration, which so often takes place, under the common mode of treatment.

LEPROSY.

This is the most formidable of the numerous tribe of cutaneous diseases, and often baffles all the powers of our art. It is most frequent in warm climates, and though generally treated of by authors seperately from Elephantiasis; yet they may be regarded, at least so far as concerns our present purpose, as the same individual complaint. It consists of a peculiar eruption of white branny scales, with yellowish and sometimes blackish spots on the face, arms, and legs; where the skin loses its hair and becomes thick, scabby and hard. The scales, which we frequently meet with on the head and arms of some drunken people, seem to be of this sort. The parts affected are disfigured with blotches, and generally lose their sensibility entirely. The perspirable matter in this disease, is rendered too viscid by an inflammation of the subcutaneous vessels; and thus an acrid mucus is left adhering to the skin. As the disease advances, the general health begins to suffer; and at length the constitution becomes deeply affected. Glandular swellings are conspicuous in different parts; ulcerations arise as the consequences of these; and the wretched sufferer often falls a victim to the loss of some of the extreme parts. From the dreadfully infectious nature of this disease, it is

shunned more than the plague, in those climates where it makes its appearance. The wretched victims are generally abandoned to their fate by their nearest friends. Its first attack, therefore, is too often concealed in the most guarded manner. Persons of the melancholic temperament, it is observed, are most frequently attacked by it; a circumstance which may lead to some explanation of its nature. In this constitution, an original debility and rigidity of the extreme parts are conspicuous. There is, as it were, a want of expansion in the vessels appropriated to the minute circulation; and the powers of life seem to be concentrated in the larger vessels. Any peculiar acrimony being then superadded to the debility of the system, will of course operate with encreased power. The small vessels will come to be obliterated, and all the consequences of obstruction will ensue. As this mischief extends, the affected parts proportionably suffer; and in its ultimate progress, so complete is the annihilation of the circulation, or occlusion of the small vessels, that the fingers and toes have been often known to drop off. From this view of the disease, if tolerably correct, as I should apprehend it is, the plan of treatment is evident. Physicians have proceeded on the idea of connecting an acrimony with leprosy, while in truth this acrimony would appear to be only an accidental and additional cause. Hence the meansof cure have generally proved abortive,

and sometimes have encreased the affection; while the warm-bath, considered then merely as an auxiliary, ought to have formed the chief dependence for its removal. If this be the case, which every circumstance in the history of the complaint seems to confirm, the superiority of the Air-pump Vapour-bath, as affording a certain, safe, and powerful mean of restoring the minute circulation, must at least infuse *hope* into the minds of practitioners, that its application will render this *oprobrium medicorum*, no longer formidable in its appearance, or fatal in its consequences. The extent of its application of course must be regulated by the individual circumstances of patients, and the progressive experience of practitioners. When a complete constitutional change is requisite, the practice must be uniform, gradual, and continued; and, as the disease remits, the acrimony, the next object, must be attended to; though this attention, I think, by no means essential in the first instance.

ULCERATION OF THE HANDS AND FEET.

Besides the leprosy under a tropical climate, peculiar ulcerations are found to affect the extremities, particularly the feet; and either are the consequence of other diseases, or arise at times from peculiar and unknown causes. One of the most common of these ulcerations is that which attends the Yaws, or rather succeeds its

termination. I have been told that they generally affect the feet, and frequently render the patient lame for life. The common treatment consists in the use of escharotics and astringent applications. These, however, often fail, and no known means of cure can be depended on. In such circumstances, there cannot be a doubt of the Air-pump Vapour-bath being of the utmost service; if we consider either the principle of its action, or the nature of the disease. Other ulcerations, affecting the same parts, will admit a similar treatment; and if any specific acrimony is connected with the disease, the use of internal remedies, of an alterative nature, may at the same time be conjoined. It will, on all occasions, expedite the cure of such local affections, if it should not of itself prove completely effectual.

TETANUS.

This disease, which when it occurs in this country, as fortunately it seldom does, is equally fatal with palsy, affects the tropical regions with destructive frequency. It consists in an obstinate and almost unconquerable spasmodic contraction of different parts of the body, particularly of the jaw, and hence is termed Locked-jaw. The symptoms, when they extend to different parts of the body, are intolerably painful. They distract the wretched sufferer without intermission; and, compared with the numbers attacked,

the recoveries are extremely few. Spring and autumn in this country, are the most frequent periods of attack; and, where not arrising from local injury of a nerve, damp and cold succeeding excessive heat, are considered as the origin of this disease. As the morbid state here consists evidently in a permanent spasm of muscular parts, no remedy offers such a certain mean of inducing relaxation as the Air-pump Vapour-bath. To be effectual, however, it will require, I conceive, the *vacuum* to be made more complete than is necessary for most other diseases; while the degree of heat should also be as great as the patient can well bear, and continued for a considerable length of time. The frequency, continuance and degree of temperature and exhaustion, must be regulated by the morbid circumstances; and, in a disease of such fatality, experience alone can decide to what length the application should be carried.

The latest opinions of practitioners, considering debility as the cause of this disease, enjoin a stimulant and tonic plan of treatment. That debility exists, there can be no doubt; but it is a debility of a peculiar kind, and not to be removed by the ordinary stimulent remedies. The internal system, on dissection, appears no way affected. It is the external moving powers which form its seat, and these are to be acted upon more readily, and powerfully, through an external medium, than in any other way. As this is consonant with common sense, and the

obvious nature of the disease, no external means can offer such certain relief, as a combination of the two great powers of heat and moisture, aided by the removal of whatever can obstruct their operation. With much confidence therefore may this Apparatus be proposed to West Indian practitioners; as at least a powerful auxiliary to the other remedies employed, if not of itself more effectual than any of them. These very natural and obvious reasonings have had much weight added to them in my mind, by applications from many West Indian practitioners for the Apparatus, and by frequent conversations with them on the subject.

AMENORRHŒA.

The suppression of the menstrual discharge is a disease attended with many symptoms of pain, and gives rise to much inconvenience to the sex. This suppression commonly affects their general health. It is induced by a variety of causes, and by none more frequently than by a rigidity of the uterine vessels. Where this is the case, the Air-pump Vapour-bath will be superior to every other means of restoring the evacuation. In these cases it has been common to employ the warm-bath, and to assist its action by the occasional use of emetics; and where the disease has continued and proved obstinate, residence in a warm climate has even been found necessary to accomplish a cure. I never under-

stood that pressure on the femoral artery proved successful: though at one time much recommended, I believe it is now seldom used. The Air-pump Vapour-bath affords a powerful mean of relief without acting on the general constitution, on the one hand, or requiring a long continued application as a remedy, on the other. Indeed so considerable an influence has it over the vessels affected in amenorrhœa, that I am frequently under the necessity of desisting from the use of it, on this account, when making the application for other diseases.

DROPSY.

This disease may arise from a variety of causes; but is in general either the consequence of obstruction in some part, (commonly a principal organ) or of general debility of the habit. In cases of mere debility, the application of the Apparatus, succeeded by friction, will be found an efficacious mode of cure: for by the former, the enlargement will be greatly reduced, and the latter, joined with the usual remedies, will give a tone and vigour to the system, which will prevent any future accumulation. Even in cases where this disease arises from obstruction, much advantage will be derived from the use of the Air-pump Vapour-bath, as a palliative, in taking off the distention of the parts; thus suspending the progress of the disease, and giving time for the action of remedies to remove its cause.

APPENDIX.

Factitious Airs, and their Medicinal Properties.

By the patient, persevering, and enlightened labours of philsophy, during the present age, the existence of various elastic fluids, analogous to common air, have been clearly ascertained; and their beneficial uses demonstrated by innumerable experiments. The following observations, being merely intended as an index to the properties and uses of the factitious airs, and as they will be confined exclusively to those applicable to medical purposes, it is only necessary to notice five different kinds, being all that are comprehended, under that description, viz. the common, the oxygen, the azotic, the carbonic acid, and the hydrogen airs. To point out such properties only in these five, as are calculated to elucidate their action on the human body, will form the limits of my present remarks.

The common or atmospherical air, is indispensably necessary to animal life, to combustion, and to other processes. It is that invisible elastic fluid, which surrounds the earth, and in which we live: and is more or less useful, in proportion to its purity. The quality or goodness of common air, may be ascertained by mixing a certain

quantity with another particular sort of air, called *nitrous gas*, which diminishes its bulk, proportionate to its purity.

The quality of common air, is not the same in all places, nor is it constant in the same place at all times. The variation in the latter case is much more considerable than in the former; yet, upon the whole, it is not very great. But, in caves, mines, crowded rooms, hospitals, workshops, and the like, the air is less pure; yet even in such cases the difference, as indicated by the test of nitrous air, is but trifling, excepting indeed in those places in which the communication with the external air, is almost entirely interrupted.

The quality of common air is not altered by merely heating or cooling, or by keeping, or by being for a time loaded with the vapour of water, nor by rarefaction or condensation; but, it is contaminated principally by respiration, by combustion, by the fermentation and putrefaction of animal and vegetable bodies—by the calcination of metallic substances, by the presence of vegetables, when they are not under the influence of the sun's rays, and by the admixture of every other gas, or permanently elastic fluid, except the oxygen. Vitiated air is capable of being meliorated in various ways, by means natural and artificial. In the former by contact with water, as in rains, dews, &c. in the latter, by numerous methods of ventilation, already well known to the world.

The oxygen air is a fine fluid, that possesses the useful properties of common air in a much more eminent degree; viz. it assists combustion and animal respiration for a much longer time, and with superior energy. When a lighted candle is introduced into a vessel full of oxygen air, its flame becomes larger, and incomparably brighter, than in common air. Its heat is likewise increased to a very great degree. There are several substances from which oxygen air may be extracted by the action of heat or of acids, but those which, upon the whole, yield it in greatest plenty, and are fit to be used, are saltpetre, or nitre, and the metallic calces. The mineral manganese, gives a great quantity of it in an easy manner; it is at the same time a very cheap article, so that, upon the whole, manganese is at present the most eligible substance for the purpose of procuring oxygen air.

Fixed air, or the carbonic acid gas, is absolutely incapable of assisting respiration and combustion, nor is it dimished by nitrous air. It dissolves calcareous earth in the water. It also dissolves iron in water, and in that state, keeps it dissolved. This elastic fluid is produced in a great many natural, as well as artificial processes. It is frequently found in subterranean places, especially in the vicinity of Volcanos and hot springs, where, on account of its great specific gravity, it remains for a considerable time, unless it be dispersed by means of ventilation, &c. It is contained more or less in almost all the mineral

waters—it is abundantly produced in vinous fermentation. A certain quantity is produced by respiration and combustion, and will be found in a variety of mineral substances, and particularly in calcareous earth, as chalk, marble, &c. It has been pretty accurately ascertained, that the fixed air in white marble, amounts to about one-third of its weight. From all these substances a great quantity of this gas may be extracted, by means of heats, or of acids.

Inflammable air, or hydrogen gas, is the lightest of the elastic fluids. It is, as its name imports, a combustible fluid, which may be inflamed by the contact of an ignited body, but will burn only when in contact with common, or oxygen air. Though this sort of elastic fluid be absolutely unfit for respiration, it is not, however, so noxious as the carbonic acid. Hydrogen gas is abundantly produced during the dissolution of animal or vegetable bodies. It also frequently comes out of the earth where inflammable minerals are contained, as in coal mines, and mines of sulphurous metallic ores. But, in all those cases the inflammable gas, by being much lighter than common air, ascends to the upper regions of the atmosphere as soon as it is produced, and leaves the air adjacent to the ground very little, if at all, infected; excepting in vaulted subterraneous places, where, indeed, besides its infecting the common air, it sometimes takes fire and explodes, to the great danger of the

miners. By means of heat or of acids, this gas may be obtained from almost all sorts of bodies, whether they be animal vegetable, or mineral.

Previously to the late important discoveries, the ideas of physicians respecting the different qualities and effects of the atmospherical fluids, were always vague and generally erroneous. The present state of knowledge has, in a great measure, dissipated the clouds, since it has not only demonstrated the reasons upon which certain qualities of the air depend, but has likewise furnished us with the means of procuring airs of opposite qualities, and of any degree of purity, at all times and places; as also of applying them in all the extensive variety of quality, degree of purity, and length of time.

The factitious elastic fluids are applied to the lungs by the way of respiration—to the stomach and intestines by means of injections, or in combination with fluids, and to the external parts of the body merely by contact. To enumerate all the disorders for which the factitious airs are adapted, and to which they have been less or more successfully applied, would far exceed the limits assigned to these cursory remarks. Suffice it to observe, that there are few disorders that will not yield to their separate or combined powers, when skilfully directed—in suspended animation, in asthma, in consumption, in dropsy, in cutaneous eruptions, in cancer, &c. &c. &c., their superior efficacy has been demonstrated by innumerable experiments.

For a full and masterly development of the power, properties, and medical uses of factitious airs, mankind are peculiarly indebted to the patient, laborious, and profound researches of Cavallo. His scientific knowledge, his predilictions, and strength of mind, eminently fitted him for such studies; and, if any thing can add to the value of the preceeding remarks, it will be the acknowledgment, that the most of them are taken from the works of that great and distinguished phisiologist.

In closing these remarks on the medicinal uses of *factitious airs*,, it can surely require no apology for noticing one or two eminent men, whose persevering and enlightened labours, have contributed so much to bring into practice, this important branch of medical science. Though personally unknown either to Doctor *Thornton*, or Doctor *Hooper*, medical readers can be no strangers to their works; and in them will be found abundant proof of benevolent zeal employed to serve the best interests of humanity, and directed by that sound and enlarged wisdom, that can scarcely fail to ensure success. Spurnat selfish and sordid considerations, and soaring above the tainted region of prejudice, they have shed new lights on science, and set an example to the medical profession, which, if generally followed, promise to confer the greatest possible benefits on mankind. Their works speak for them, and will prove their best, as well as most lasting panegyric.

MEDICAL ELECTRICITY.

THE science of medical electricity has attained to its present perfection, by the unremitting and successful efforts of a class of modern philosophers, of the most benevolent cast of character. Though the tendency of their labours could be no other than to lessen the *quantum* of human suffering, and add to the best of human enjoyments, they were assailed by the malignant clamours of ignorance and prejudice, and not a little thwarted in their course by even the liberal part of the faculty, who, by a too indiscriminate and injudicious application of medical electricity, brought for a time discredit on its character, and retarded its progress. Various causes have indeed concurred to prevent the universal adoption of this most salutary and powerful medical remedy. Among the rest may be noticed, the ignorance of practitioners on the nature or stages of those diseases to which it is applicable—unskilfulness in the *modus operandi*—and even to the want of perseverance on the part of the patient. To these may be added the reluctance evinced by some of the faculty, to resort to this remedy, while hopes remain of effecting a cure, by any other means. Yet even in these forlorn cases, the power of electricity has been fully proved, by the extraordinary and marvellous cures it has

accomplished. The following extract from the last report of the London Electrical Dispensary, will establish beyond the power of contradiction, the truth of this assertion.

"It appears indeed from a careful examination of its records, that nearly as many patients are relieved and cured, in proportion to the numbers admitted, as are dismissed from other Medical Institutions where electricity is scarcely ever employed. If the effects of other medicines, therefore, are well ascertained, the benefit of this powerful agent cannot be demonstrated upon grounds less uncertain. It is proper also to remark that many are relieved and cured at this Dispensary who have been using medicines for weeks and months in other charities without effect; and it may be further added, that the greatest number of cases which come under care are those called *Chronic*, whose cure is by far more tedious and difficult than the *Acute*, which in other Dispensaries abound."

"*Patients admitted from Michaelmas* 1793, *to Lady Day*, 1818.

	8,366
Whereof have been Cured	3,815
Relieved	3,217
Discharged	1,216
Now under Cure	118
	8,366"

With such a cluster of convincing proofs, as these, of the salutary and extraordinary powers of medical electricity brought before the public, it might be imagined, that the most prejudiced, ignorant, and incredulous, would cease to be haunted with doubts and apprehensions, either of its safety in application, or of its certainty in producing a beneficial result. Patients, however, are naturally much influenced in their choice of remedies by the opinions of the faculty; and it is to be lamented that many of the latter, for various reasons, are not over forward in recommending medical electricity. Some few may be ignorant of its powers; and many, from the multiplicity of their other avocations, may have no leisure to study the science. Yet, it is not for want of publicity being given to electrical operations, that the science remains unknown to medical practitioners; for it has long been introduced into hospitals and army practice; and has also, in the open face of day, been successfully employed by the Royal Humane Society, in the resuscitative process of restoring suspended animation. Foreign practitioners too, have long and generally applied its powers, both in medical and surgical cases, with astonishing success.

In every disorder to which electricity is applicable I have had opportunities of witnessing its effects, both in the incipient and protracted state of the disease—in instances of infancy, youth, manhood, and old age; and in no case whatever

has the slightest injury resulted to the patient. On the contrary, I have found its beneficial effects in almost every application, but particularly so in the delicate and painful diseases peculiar to females at certain critical periods of life—in rheumatism, in paralysis in all its varieties, in sciatica, lumbago, &c. The modes I have adopted in the application of electricity, have been varied according to the age, constitution, habits, and sensibilities of the patient; and also by other circumstances connected with the nature and stage of his disorder.

The old mode of electrifying was by giving powerful shocks of two-gallon jars, and since, the charge has been diminished to quarts and pints. I have, however, by a novel, and, I trust, a happy improvement, done away with the practice of shocks altogether, except in cases of great local insensibility, in which a strong action is necessary to rouze the dormant powers. My general plan is to pour into the system a diluted stream of electricity in its mild and expansive form, directing the electric current to and through the diseased parts, without producing any of those shocks, which, where they do not injure, must at least agitate and alarm the timid. My system of treatment is founded on the laws of equilibrium, of action and re-action; my primary maxim being never to debilitate or oppress the natural energies, but to soothe the irritability of local inflammation, and to aid nature in awakening the

dormant powers. It is my practice to mark the immediate effects and subsequent results, by the expression of the eye and of the countenance—by varying the mode of operation according to the feelings of the patient—by making minute enquiries as to the effects felt from time to time—a mode, which, of all others, is the best adapted to procure the *instructive counsels of nature*, in all cases the best and *most unerring guide*. It has been an object of my most anxious attention to provide machines of the greatest powers.—Apparatus, in all respects completely adapted to every possible purpose, and which, after much labour and expence, I have the satisfaction to know I have so fully accomplished, that I can produce effects by my mode of operation, much more efficacious than the *violence of shocks*, without subjecting the patient to either dread or danger.

MEDICAL GALVANISM.

The discovery of the electric influence on the animal fibre, will ever be considered as a most important æra in medical history. The honor of that great discovery, it is acknowledged on all hands, belonged to Galvani, formerly professor of Anatomy at Bologna, and from whose name the denomination of this new branch of science is derived. That celebrated phisiologist published, about the year 1790, such an account of various new and extraordinary experiments in animal electricity, as soon drew the attention of philosophers, in all parts, to the investigation of so curious and interesting a phenomenon. It was natural enough to expect that the earliest author of Galvanic experiments, should also be the first to establish an hypothesis on the phenomena he had discovered. While, however, the novelty and importance of Galvani's experiments were universally acknowledged, his hypothesis had to encounter a very formidable opposition. That sagacious and profound enquirer thought he saw in the Galvanic action a phenomenon essentially dependent on the constituent parts of the animal. His antagonists, at the head of whom appeared the celebrated Volta, professor of philosophy in the University of Pavia; who maintained that the phenomenon manifested itself

solely by the intervention of the irritable and sensible fibre, and is not subordinate to the vital energy. In a cursory review, like this, of a subject so important, it may be sufficient to observe that, in the physical sciences, the facts and results are certain and immutable, but the hypothesis which are employed to explain the mode by which they are generated, are susceptible of almost infinite variety.

The great physiologist, Sir H. Davy, completes his definition of this wonderful and useful science in these words—"Galvanism relates to the phenomena, both Chemical and Electrical, produced by the contact of different conductors of Electricity, forming a perfect circle with each other." It is not my design here to dwell on the philosophical purposes to which Galvanism can be made subservient, and shall therefore content myself at present, with noticing its power to prevent damage to copper-bottomed ships, that being an object of great national importance. In a medical view, Galvanic electricity merits our attention beyond any thing to be discovered by mere philosophical research: its peculiar excitation of the animal functions, offers an instantaneous and powerful stimulus, in many cases, where other means cannot be so readily applied, or produce such efficacious and beneficial results. Eminent writers on Medical Electricity, have concurred in recommending Galvinism in the following cases:—in palsies of the extremi-

ties, occasioned by the debility or cessation of the nervous action,—in those even which have been primarily determined by other causes, such as the compression of the brain.—It is adapted to cases of debility of sight, Gutta Serena, and nervous deafness, when these complaints are ascribable to a want of excitability in the optic and auditory nerves; in involuntary action of the muscles, in contractions, cramps, tetanus or locked-jaw, indolent tumours or scrophulous swellings, &c. When the extraordinary influence of the principle of Galvanism, on the muscular fibres of dead animals was first observed, it was natural to expect that great advantages would result from its employment in those particular cases in which life is not extinguished, but its influence on the animal organization merely suspended. The divided part of the animal, when cut off from the sources which might be deemed absolutely requisite to the support of its living energies, still evinces manifest signs of the existence of a vital principle, when rouzed into action by Galvanism. When life is merely suspended, whether from drowning, strangling, or exposure to noxious gases, and the principle of irritability not destroyed, the stimulus of Galvanism, skillfully employed, may rouze the dormant energies of vitality, and restore the system to its active state. In short, Galvanism has been, and is still held, to be the just and unerring *criterion of vitality*.

Dr. Babington's interesting case recorded in the Medico Chirurgical Transactions of suspended animation, occasioned by exposure to fumes of charcoal is generally known to the faculty, and furnishes a striking illustration of this remark—"When nature appeared sinking rapidly, on passing the galvanic shock through the chest, the patient instantly, to the surprise of the medical men, drew his breath deeply—the muscles of the abdomen were seen to re-act, though feebly, while those of the face were slightly convulsed, and the eye-lids were raised—at each successive application of this powerful agent, the respirations were more forcibly performed, and the stroke of the artery at the wrist rose in the same proportion." In the case of Foster, also, a condemned criminal; five or six hours after his execution, such motions were produced by galvanism as led the practitioners who were present to suppose, that even at this late period, a recovery might by perseverance have possibly ensued. In the reports of the Royal Humane Society, numerous instances are found recorded in which the agency of the vital air, electricity and galvanism have been found effectual means in the recussitative process of suspended animation. Science is greatly indebted to that distinguished medical philosopher Mr. Wilkinson, for his laborious researches and his interesting work on galvanism. The reporters of the Institute of France, have justly ascribed to M. Le Gallois's

physiological work to be the most important since the days of Haller; Dr. W. Philip's work, much more deserves this encomium, it places him unquestionably on a footing with all living experimental physiologists, and while it conveys us considerable distance on the road of science, also conveys us to the possession of no small *practical benefit*, and directs to the possession of much more." See the annals of Medicine and Surgery, vol. 2, page 271. The application of Dr. Philip's discoveries is very striking, by depriving the lungs and stomach of a portion of their nervous influence as in the experiment made on Rabbits by the division of the eight pair of nerves, dysuoa and dyspepsia were *occasioned*; and then *removed* by substituting galvanism for the loss of nervous power. From these facts Dr. P. thought of employing galvanism in humoral asthma, connected with dyspepsia.—"I have employed galvanism in many cases of habitual asthma, and almost uniformly with relief. It is remarkable that in several who had laboured under asthmatic breathing from ten to twenty years it gave relief quite as readily as in more recent cases, which proves the *habitual difficulty of breathing even in the most protracted cases is not to be ascribed to any permanent change having taken place in the lungs.*

Of the above cases of asthma many occured in the town where I reside, where the patients had been obliged to abandon their employments in consequence of it, and some of them, from its long

continuance, without any hope of returning to regular work; most of them had tried the usual means in vain. By the use of galvanism they were relieved in different degrees, but all sufficiently to be restored to their employments. I have seen several of these lately, who, although they have not used the galvanism for some months, said they continued to work without any inconvenience. Some, in whom the disease had been wholly removed, remain quite free from it; some have had a return of it, and have derived the same advantage from the galvanism as at first. In some labouring under the most chronic forms of phthisis, in whom the symptoms had lasted several years and habitual asthma had supervened, the relief obtained from galvanism was very great, notwithstanding some admixture of a pus-like substance in what was expectorated.

Observations similar to the foregoing, there is reason to believe *will be found to apply to dyspepsia*, but as I have made but few trials in this disease, except where it was complicated with asthma, the removal of which no doubt contributed to a more healthy action of the digestive organs, I *cannot yet speak with certainty* of its effects in this disease, though I have repeatedly seen from the *same effect on the biliary system which arises from calomel*; a copious bilious discharge from the bowels coming on within a few hours after its employment. This seldom happens except where there appears to

have been a failure in the *secreting power* of the *liver*, or a *defective action in the gall tubes.*"

The diffidence which this great and enlightened writer expresses at the close of these remarks, first suggested to me the propriety of ascertaining so important a fact, and which by abundant opportunities, I have now satisfactorily accomplished.

I have had the heartfelt satisfaction of succeeding in various extraordinary and desperate cases, to which the galvanic influence had been before but partially applied. I have tried its effects not only in Asthma connected with Dyspepsia, but in Dyspepsia and chronic Hepapites, and Constipation, with complete success. Several patients who had laboured under the former complaint from 3 to 22 years, were all relieved by the first operation, and cured within 3 weeks. But in Dyspepsia, the curative powers of galvanism have been so astonishing, as even to surpass my own expectation. Numerous cases of Dyspepsia, combined with the most distressing symptoms—with palsy, hypocondria, vertigo, deafness, impaired vision, and a train of other afflicting maladies, have been cured in a short time. Most of those cases had been sent to me by the faculty, an account of which, at the particular request of the patients themselves, I shortly intend to publish.

If so important a benefit can be obtained by so harmless a *natural stimulus* as galvanism,

which so far from exciting any painful feeling, when properly directed, produces only a kindly genial glow in the region of the stomach, liver, lungs, and bowels—how preferable must such a remedy prove to any mercurial preparations, which seldom fail to *sap the foundation of the most robust constitution, to hurry on premature old age*, and not *unfrequently produce sudden death.* On this part of the subject, let the following opinion of Dr. Trotter be carefully perused, whom, for scientific views, for profound skill, and vast experience, is not excelled by any physician of modern times.

Dr. Trotter on the nervous temperament states it as his decided opinion, that "Mercury is the most *dangerous* of all frequent purges, it sooner exhausts the irritability and vital power of the intestines, than any other metallic oxide except arsenic—it never fails in the end to add to the disease—volumes have been written on diseases supposed to have originated from the use of mercury in Lues venerea—yet strange to relate its *most common consequences, Dyspeptic and nervous affections*, are scarcely mentioned. I firmly believe all the derangements which it occasions in the body, are *small* when compared with the *injury done to the nervous system and digestive powers*—yet some physicians and surgeons fly, even in *common cases* to one of its most dangerous preparations *hydrar. mur.* and seem to overlook its ultimate effects on the constitution. It has often been my lot to witness these effects in the

practice of others, for of *fifty thousand cases* of Lues venerea which I have attended I am convinced not one of the number required this acrid mercurial—Hæmoptisis ending in Phthisis was a frequent sequel to this treatment."—He further observes—"that in what are termed bilious, liver, and stomach complaints,—if *much nervous predisposition* exists, mercury must do a *great deal of harm* and *add* to the mischief, for this mineral, after long use, besides *exhausting* the *nervous energy*, is known to affect *the bones, and render them friable.* A poison so subtle and active, thus consumes the vigor of the body, and brings on premature senelity. These hedious effects are most probably produced by the mercurial oxide first depraving the digestive powers, preventing assimulation of the chyle, and vitiating sanguification."—Such are the distressing and destructive effects ascribed to mercury by a writer who had the best of all possible opportunities (from the high official situation he long held of Physician to the Fleet) of forming a correct opinion on the subject. This view of a matter of such vital importance to the health, happiness, and life of man is by no means solely sustained by the authority of Dr. Trotter great as that authority unquestionably deserves to be held. It is also the opinion of the most eminent of the faculty, and particularly of Mr. Abernethy, a name well known to science and the world, that most of the disorders incident to the human frame originate in the

deranged and debilitated state of the stomach and bowels. Hence their first prescriptions are generally designed to clear the prima via, and excite their powers to healthful action. In this just view then of medical science, what can be more safe and effectual as a remedy than the employment of an agent which instantly grapples with disease at its source, and the operation of which is at once easy, safe, and effectual. If other errors in medical practice can be said to have "slain their thousands, *calomel has slain its tens of thousands.*" If then the pernicious and destructive use of mercurial preparations can be superseded by the genial administration of this powerful stimulus, what devastation of constitutional vigour might not be prevented? What disease, suffering, and wretchedness, might not mankind escape? This great desideratum, I feel confident in asserting, has been obtained; for I have had the sincere satisfaction to find by experience, that, in a variety of cases to which mercury had been formerly too often applied, the galvanic treatment has proved completely safe and successful.—I feel justified in asserting that the whole Materia Medica may be searched in vain to find such a Panacea as the galvanic influence in torpor of the stomach, liver, and bowels.

The benefits and blessings which medical electricity and galvanism are adapted to confer on the afflicted, cannot long remain a matter of doubt and scepticism, with any description of

the public. They will, by their power and efficacy, speak in a language not to be misunderstood, and growing confidence will banish incredulity. As great skill and experience, however, are indispensibly requisite to their successful administration, it may not be deemed impertinent in a publication of this kind, to submit to the reader a few facts, that may enable him to judge of my fitness and capability, for a professional practitioner in medical electricity.

About fifteen years ago, I withdrew from the busy haunts of men to enjoy the quiet of a country life, and to devote myself to the study of philosophy in all its branches. Blessed with competence, I was contented and tranquil, and felt no wish to encrease in wealth. My only ambition was to be useful to my fellow-creatures. Impressed with a conviction of the comparative insignificance of theoretic knowledge, that could not be rendered practically useful, I determined from a higher motive than the love of gain, to study with a medical friend of considerable science and professional skill, in order to qualify me to administer with effect, to the necessities of the afflicted poor. Another medical friend, having kindly engaged to co-operate with me in that well-meant design; we determined to apply electricity and galvanism to every case, where these powerful agents were likely to be useful. By this plan of gratuitous practice, we were soon furnished with abundant opportunities of making fair and complete trials of their

efficacy, even in a variety of *desperate cases*. Success, beyond my expectation crowned our labours, and I found an ample reward for all my services, in the conscious satisfaction, of being made an humble instrument in the hands of Providence, of restoring the blind, the deaf, and the lame, to sight, hearing, and the right use of their limbs.

Since that period, I have continued to devote my time to the study and practice of medical electricity and galvanism, in the various parts of England and Wales, where I have chosen, from time to time, to fix my residence. In most of those places where I found dispensaries, I tendered my tuitous services, which were readily accepted, and numerous extraordinary cures were performed with the sanction, and under the eye of the faculty. To the rich as well as the poor, my services were rendered beneficial, and I enjoyed the exquisite pleasure of bestowing without receiving—realizing the truth of that delightful maxim, that—"It is more blessed to give than to receive."

Prior to my establishing myself in Town, I visited Southampton, where, there being no dispensary, I proposed to the Physicians of that place, the establishment of an electric and galvanic institution, for the relief of the poor, and the benefit of the public at large. This proposition was readily acceded to by the Physicians of the place, all of whom, together with most of

the Surgeons there, patronized the undertaking. I had the happiness to succeed in placing the establishment on a liberal footing—rich patients were made to contribute to the expence of affording relief to the poor. My directions and operations were gratuitous, and in five months, no less than three hundred cases were placed under my care. Many of these cases were altogether hopeless, but my continued success, inspired me with an ardour and perseverance, that nothing could abate.

The encouragement, liberality, and kindness, I experienced at Southampton from Doctors Waithman, Haeket, and Middleton, and the respectable surgeons of the town, have made an indelible impression on my mind. A knowledge of my success in that quarter, induced some of my particular friends to urge me to settle in the capital, and to adopt the practice of medical electricity, and galvanism, as a profession. Conscious that my labours might, by the blessing of heaven, be rendered eminently beneficial to various classes of the afflicted, and in many cases too, where the efficacy of other medical prescriptions, are at best but problematic, I resolved to follow their advice. My establishment in Southampton Row, has therefore been fitted up on a scale adapted to extensive practice, and supplied with as complete an assortment of Apparatus, as mechanical ingenuity could furnish, or money procure. Though such an esta-

blishment can only be supported by a fair remuneration for services, yet, as the alleviation of human sufferings, and not fees, is my primary object, my terms, I trust, will be found neither illiberal nor exorbitant. However singular it may sound in the ears of selfishness, and however much it may be doubted by those "whose God is gain," I can truly say, that my great motive for engaging in this arduous undertaking was, to be useful to mankind, in my day and generation. My friends, who know me, will not distrust the sincerity of this declaration; nor will my patients be forward to charge me with making gain the object of my idolatry. To strangers I can venture to promise the same attention to their cases, and the same solicitude for their recovery, which I have always found myself, from feelings of humanity, bound to observe to all.

Since I formed my establishment in town, it is but justice to many eminent persons of the faculty to acknowledge, that they have shewn me not only every mark of friendly attention, but have given me the most unequivocal proofs of their approbation, in their recommendation of a number of interesting cases, connected both with the practice of medicine and surgery, most of which, I have the pleasure to know, have been succesfully treated. My particular acknowledgments for friendly aid and kind services, are specially due to Doctors Bateman, Laird, and

Roget,—to Doctors Sims, Southey, Buchan, Davis, and Scudamore; to Messrs. Cooper, Pearson, Blair, Sir William Adams, Maule, Ogle, Hill, Anderson, Andrée, Tarrat, Pennington, and James, & *Cæt.*

Here it cannot be improper to offer a caution or two to those who may hereafter become patients—first, to beware of the effects of deferring the application of a remedy, which, in the first stages of the disorder would cure, but which, when tried as a dernier resort, might only relieve. Second, the sooner applied after the attack of disease, the sooner is the relief afforded, and the cure effected. Third, to dismiss from the mind all apprehension of pain and danger, either from Electricity, Galvanism, Factituous Airs, or the Air-pump Vapour-bath; all of which are, by a peculiar mode of application, rendered in many cases rather agreeable to the feelings, and in many more, so gentle, that an infant at the breast will receive no painful sensation from their use.

As there are various cases which daily present themselves to my notice, for the cure of which electricity, galvanism, and the medical gases, are powerfully efficacious, I now employ these agents at home, from the hours of eleven and five, the and Vapour-bath at my own house, which affords ample accomodation for those patients who may for *the night* prefer placing themselves under my own roof; or otherwise, by appointment at their own residence. *I act agreeably to*

my own judgment where patients consult me, and have no medical friend to advise them—but, where gentlemen of the faculty recommend patients, I pay the most scrupulous and minute attention to their directions. I do not traffic in drugs, nor receive fees for prescription, but confine myself exclusively to my own province, receiving fees for operations alone. I have only to add, that, when leisure will permit, I intend to publish a work on Medical Electricity, and Galvanism, Factitious Airs, and the Air-pump Vapour-bath, accompanied with numerous cases, demonstrating their powerful efficacy, in a variety of disorders, especially those of the nervous system.

BRIEF SYNOPSIS

OF THE DISEASES WHICH HAVE BEEN CURED BY THESE

PHILOSOPHICAL REMEDIES.

PALSY—general and partial, numbness, loss of voice, of taste, of smell, difficult swallowing, paralysis of the bladder, &c.

SPASM—Epilepsy, St. Vitus's Dance, Hysterics, Wry Neck Tetanus, Locked Jaw, &c.

GOUT—atonic, misplaced, regular and retrocedent.

RHEUMATISM, acute and chronic, Sciatica, Lumbago, &c.

CONTRACTIONS of the Tendons, and rigidity of the Muscles.

DYSPEPSIA (indigestion) *in the worst stages of the disease.*

CONSTIPATION, (costiveness) or torpor of the Bowels.

TORPOR OF THE LIVER, or *dificient Biliary Secretion.*

JAUNDICE, from Biliary Concretions, or spasmodic constrictions of the Biliary Ducts.

ASTHMA—Spasmodic or Habitual, *of the longest continuance.*

DROPSY, (general and partial) of the Head, Chest, Abdomen and Scrotum, and every want of action in the Absorbents.

NERVOUS HEAD-ACHE, AGUE, PNEUMONIA, PLEURISY, CONSUMPTION, HIPOCHONDRIA, &c.—Croup, Measles, Worms, Cutaneous Eruptions, Ulcers, Bronchocele, Abscess, Tumors, Cancer, Scirrhus Testes, Induration of the Prostrate, Gleet, Scrophula, Knee Cases, Sprains, Bruises, *the delicate and painful Disorders peculiar to Females, especially the young and the middle aged—and many of the Diseases incident to the EYE and the EAR.*

JUNE 29*th*, 1818.

31, SOUTHAMPTON ROW,
RUSSELL SQUARE.

FINIS.

Macpherson, Printer, Russell Court, Drury Lane.

I yesterday received the following letter from DR. BLEGBOROUGH, *which speaks so sufficiently for itself, as to render any observations from me wholly superfluous.—Its important contents concern the public much more than they can me, and I therefore think it my incumbent duty to add it as a supplement to the remaining copies unsold.*

M. LA BEAUME.

June 26, 1818.

SIR,

I have perused the little work you have sent me, and am flattered by your statement that it was the first copy received from your Printer.—I shall value it as the *primitias* of your pen, and hail with satisfaction your present attempt to do justice to those principles, and to that mode of treating many diseases, which probably through my too feeble attempt at developing them, have been so much neglected.

You certainly had, Sir, as you state, my permission to make any use of the matter contained in my little publication (of 1803, now out of print) you please. Allow me, however to say, that had you submitted your manuscript to me, I should have objected to the flattering terms in which you have been pleased to express yourself with regard to me, and my little work.

I claim no merit from that publication beyond having told a plain unvarnished tale concerning principles truly philosophical, neatly combined, and importantly calculated (I speak confidently) to remove many of the most formidable and distressing diseases, which "*Flesh is heir to.*" I thought, Sir, I

had performed a great duty to mankind, in candidly, fairly and honorably submitting to their consideration, what *primâ facie* evidence had led me to suspect, and subsequent experience had taught me to believe, was very important. After the lapse of 15 years I am at a loss to account for how little the real merits of the AIR-PUMP VAPOUR BATH is understood. Perhaps, Sir, the Public thought, that, as I ceased actively to superintend its use, my opinion of its value was altogether changed. This, Sir, I stated to you as well as to other respectable professional gentlemen who have lately called on me on the subject, equally strangers to me with yourself—was not the case. My opinion respecting its merits now soberly and seriously given, after much experience, is equal to what it ever was, and I am desirous of availing myself of this opportunity of stating to the Public through you, that the sole reason of my not continuing to patronize its use more actively, was, that, through the operation of the *then* Patent, and agency of some other circumstances, I was not unfrequently placed in situations a little derogatory to the feelings of a man of education. Having declared thus much, I will now attempt to detail to you as well as I can from recollection, the circumstances of the case of Mr. Temple, the son of Lady Temple, then residing in Brompton Grove, Knightsbridge, than which, in the whole course of my experience I know nothing of greater practical importance.

In the year 1803, during the time that my little work above alluded to was in the press, there was issuing from the same types, a small mathematical pamphlet on the hanging of gates, by Mr. Parker. Mr. Temple, who was a gentleman of great mathematical and philosophical attainment, had, with the expectation of somewhat beguiling a most afflicting and constantly excruciating pain in the hip-joint, undertaken to superintend the printing and correction of his friend Mr. Parker's work.—As good fortune would have it, one day by mistake a portion of my copy found its way to Mr. T. along with a portion of that of Mr. Parker's work; this was sufficient on peru-

sal to call and fix the attention of a Gentleman of Mr. T.'s acquirements. I was sent to, and the application made with immediate benefit: for after the fomentation had been continued the usual time, the exhaustion had not been long put in effect, before the pain seemed to shoot from the hip down the limb, and entirely disappeared. About the third day from this, there was a slight recurrence of pain, which submitted to another application, when to the best of my recollection it never again returned.—The affection was originally occasioned by exposure to cold, while assisting his infant son in flying his kite in a damp meadow.—I ought to add that it continued many weeks, may months, during which it had rendered the patient bed-rid, though he had had the advice of many eminent men on the occasion. I long retained this gentleman's confidence after this in consequence, though I have not now heard of him for some years; and was frequently urged by him to make his case known to the public.—Mr. Anderson, his Surgeon, who I believe still resides in that neighbourhood, was in attendance, and I have no doubt will recollects all the circumstances of the case.—I could, if necessary, call to recollection other striking cases; but suffice it in the words of Dr. Hamilton, which my mind entirely goes along with, to say—"*That the mode in which it must act is certainly agreeable to sound theory; and the more it is put in practice, the oftener will facts occur to confirm what I now say.*" Perhaps Sir, my testimony, entirely disinterested will now be better received. It only remains therefore, while I congratulate the Public on their being likely to have such a remedy faithfully administered, to caution you to superintend as much as possible the administration yourself, and wishing you all the success you deserve,

I remain, Sir,

Your faithful and obedient Servant,

RALPH BLEGBOROUGH.

To Mr. La Beaume.

New Bridge Street, June 25, 1818.

June 26th, 1818.

TO DR. BLEGBOROUGH.

Sir,

The favor of your Letter of the 25th inst. has conferred on me, both honor and obligation. The opinion, expressed of you and your publication, to which you would have objected, had I submitted the manuscript to your inspection, is the honest conviction of my mind—the just ascription of praise, due to integrity, talents, and usefulness. Feeling as I ever did, (and I hope I ever shall do) an independence of mind which cannot stoop to servile adulation—I am conscious of the correctness of my motive—and I may confidently add, I am *not singular* in the judgment I have deliberately formed.—Accept my best thanks, Sir, not only for your obliging and unsolicited communication of Mr. Temple's interesting and striking case, which speaks volumes on the subject, but also for the important intimation you have given me "to superintend the administration of the AIR-PUMP VAPOUR BATH, myself."—As I combine interests with none, and have commenced this undertaking, *not as a speculation to make money, but to afford benefit*, I shall most scrupulously attend to your friendly suggestion, and never put so formidable an agent into the hands of any, who from ignorance of its principles, powers, and operations, may bring discredit on an invaluable remedy.

Permit, me Sir, again to acknowledge my great obligation to you, for your polite attention, and *disinterested kindness*, and to those gentlemen also who have honored me with their confidence by their past recommendation, and their spontaneous promises of future support.

I am, Sir,

Respectfully and truly,

Your most obedient and humble Servant,

M. LA BEAUME.

31, *Southampton Row, Russell Square.*

Macpherson, Printer, Russell Court, Drury Lane.

PAMPHLETS

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