

**Oeconomical and medical observations, in two parts. From the year 1758 to the year 1763, inclusive. Tending to the improvement of military hospitals, and to the cure of camp diseases, incident to soldiers. To which is subjoined, an appendix, containing a curious account of the climate and diseases in Africa, upon the great River Senegal, and farther up than the island of Senegal. In a letter from Mr. Boone. Practitioner in physic to that garrison for three years, to Dr. Brocklesby / By Richard Brocklesby, physician to the army, fellow of the College of Physicians, and of the Royal Society at London.**

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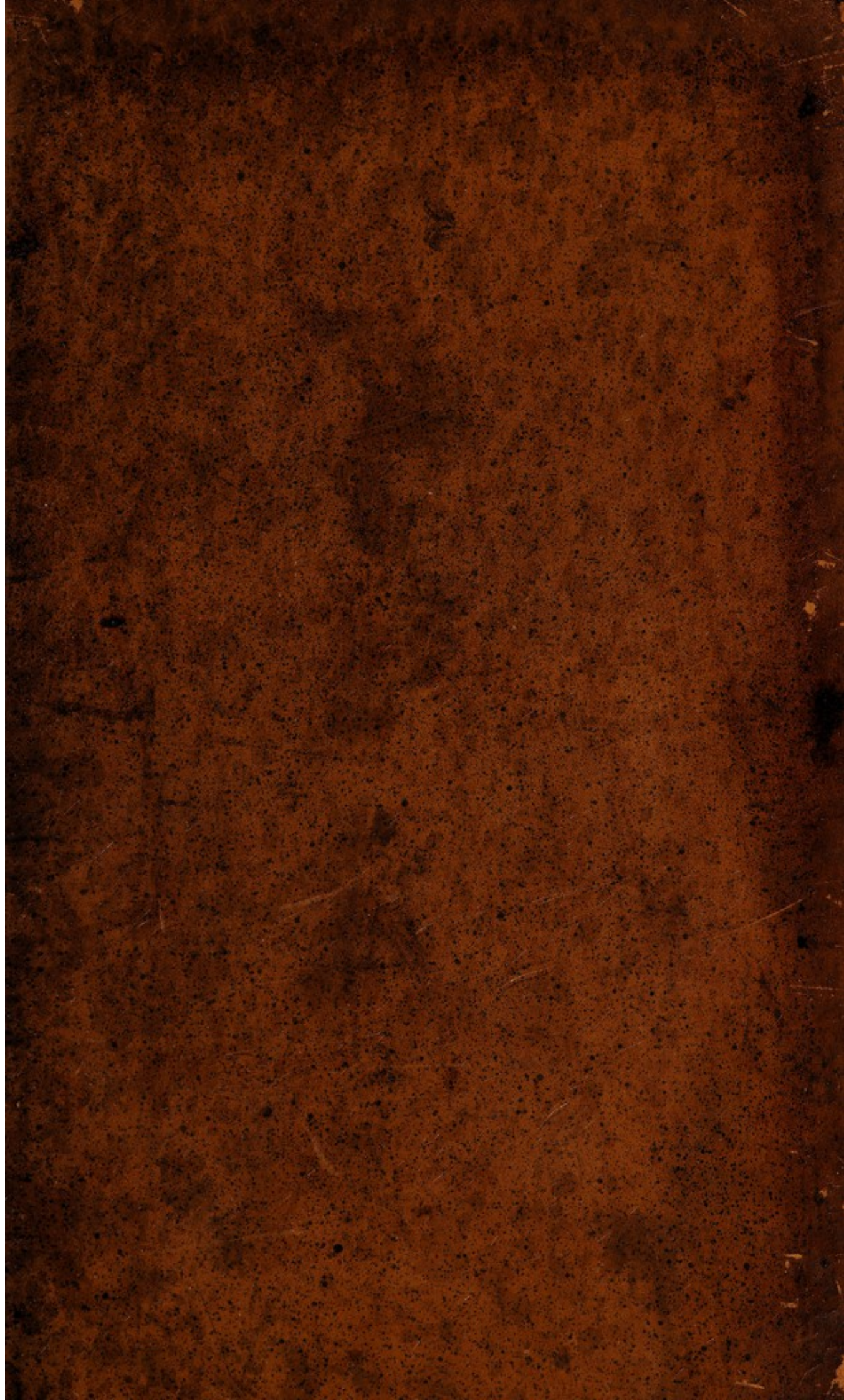
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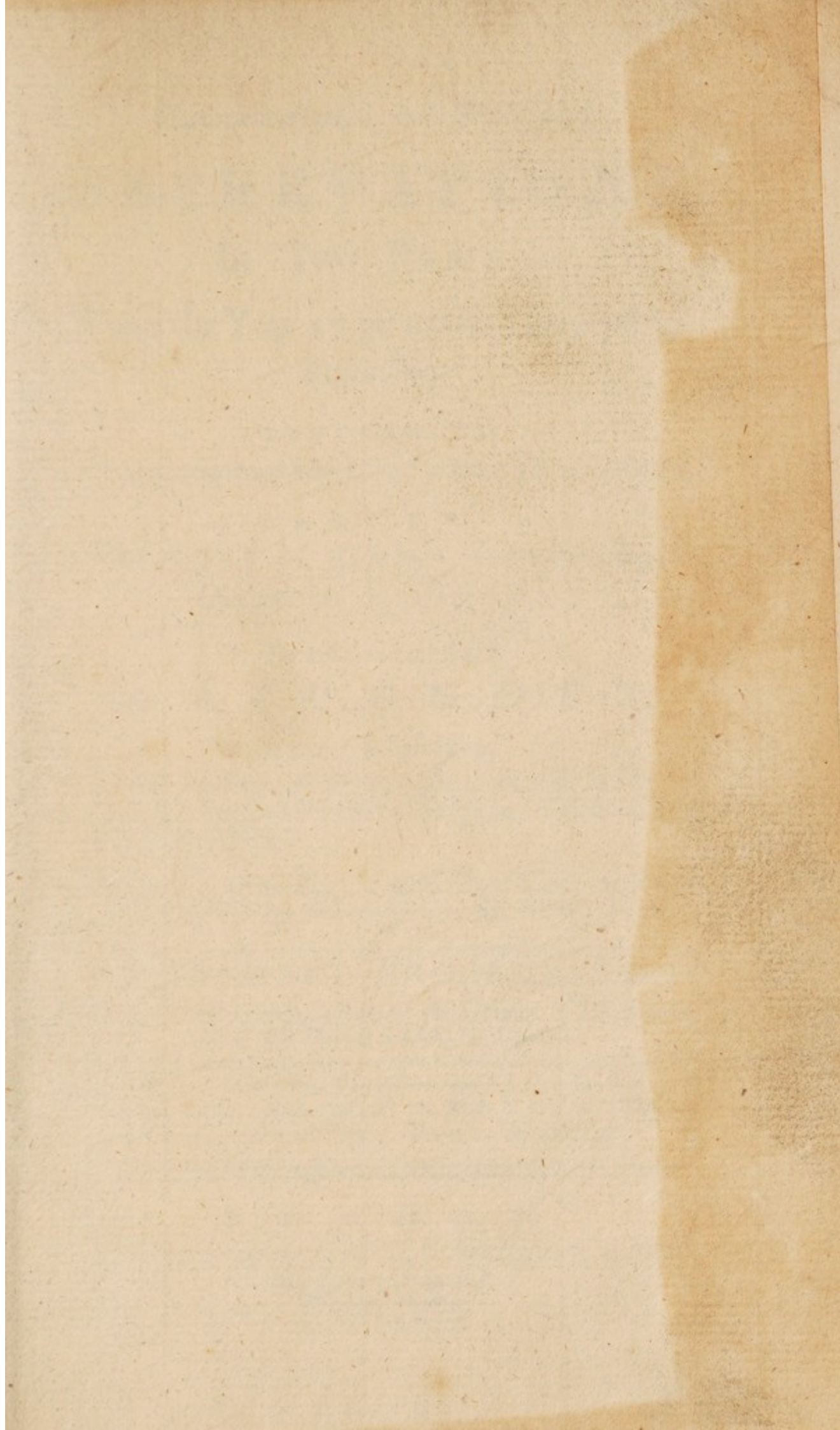




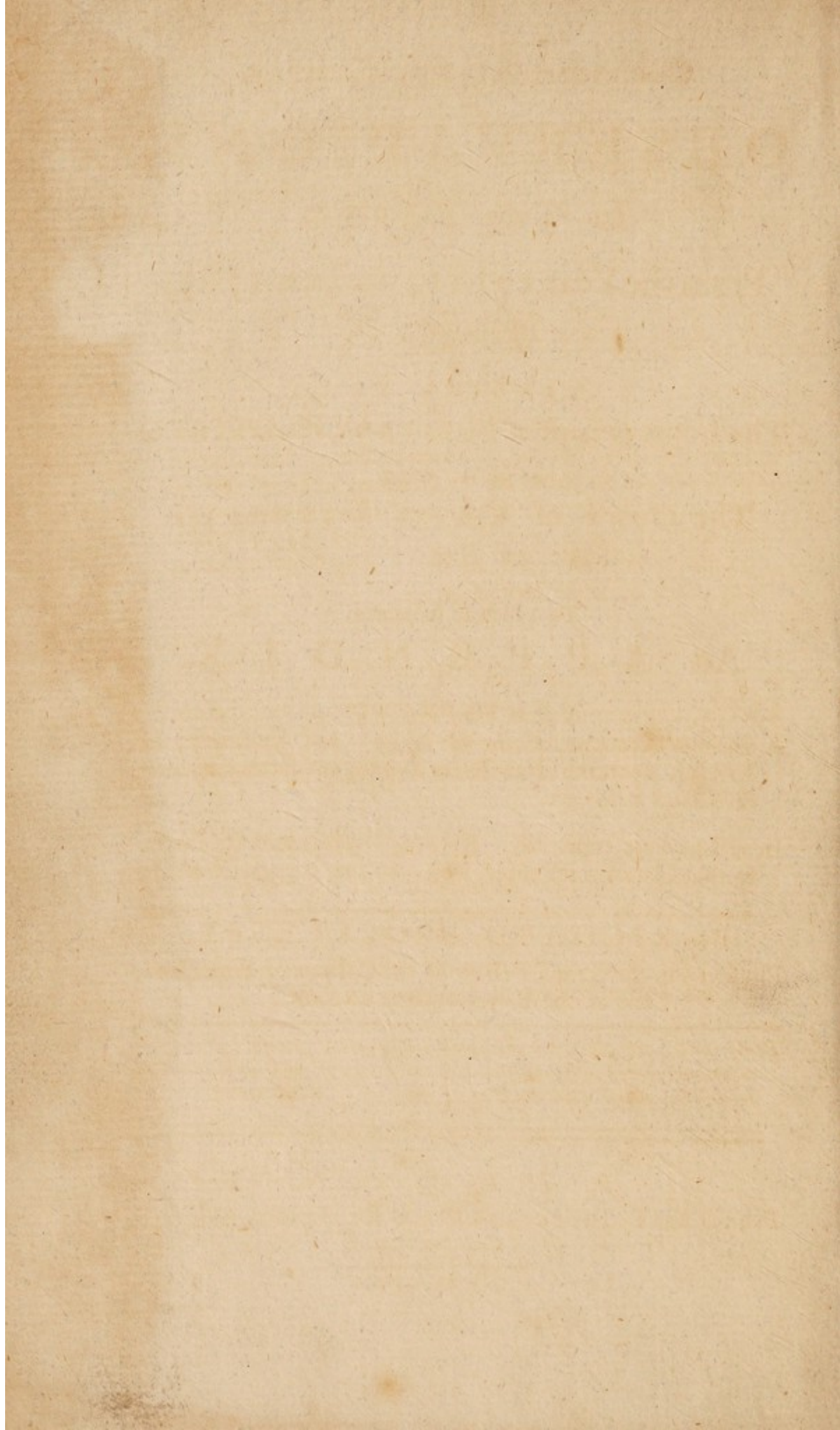


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OECONOMICAL and MEDICAL  
**OBSERVATIONS,**  
In Two PARTS.

From the Year 1758 to the Year 1763,  
inclusive.

TENDING TO  
The Improvement of MILITARY HOSPITALS,  
AND TO  
The CURE of CAMP DISEASES,  
incident to SOLDIERS.

To which is subjoined,

An APPENDIX,

CONTAINING

A curious Account of the CLIMATE and DISEASES in  
AFRICA, upon the Great River *Senegal*, and farther up than  
the Island of *Senegal*.

In a LETTER from Mr. BOONE, Practitioner in Physic  
to that Garrison for three Years, to Dr. BROCKLESBY.

---

By RICHARD BROCKLESBY,  
Physician to the Army, Fellow of the College of Physicians,  
and of the Royal Society at *London*.

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*Books will speak plain when Counsellors blanch; therefore it is good  
to be conversant in them, specially the Books of such as themselves  
have been Actors upon the Stage. BACON, Of Counsel.*

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L O N D O N,  
Printed for T. BECKET, and P. A. DE HONDT, at *Tully's  
Head*, in the Strand.

M.DCC.LXIV.



CRONCHIAL AND MEDICAL  
OBSERVATIONS

In Two Parts  
1652.4

From the Year 1780 to 1783  
CONTENTS

THE IMPROVEMENT OF THE ART OF MEDICINE  
CONTAINS THE FOLLOWING ARTICLES  
WITH VARIOUS OTHER ARTICLES  
THESE ARTICLES ARE  
EXTRACTED FROM THE  
ARTICLES OF THE  
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Medical Observations on the  
in Great Britain, made in the  
of 1783, now published for the  
Service  
An Account of the  
Containing a History of the  
Diseases of the  
and a Description of the  
the most common  
the most common

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# C O N T E N T S.

## P A R T I.

Contains Miscellaneous Animadversions, interspersed with various useful Hints to Officers, concerning the Health of Soldiers at Home, as well as on any future Expeditions on Shipboard; the Expediency of BAR-RACKS in *Great Britain*, and the Management of Camp, and other Military Hospitals.

## P A R T II.

Medical Observations on MILITARY DISEASES, chiefly in *Great Britain*, made in the Years 1758, 59, 60, 61, 62, 63, now published for the Benefit of his Majesty's Service.

## An A P P E N D I X,

Containing a curious Account of the CLIMATE and DISEASES in AFRICA, upon the Great River *Senegal*, and farther up than the Island of *Senegal*. In a Letter from Mr. BOONE, Practitioner in Physic to that Garrison for three Years, to Dr. BROCKLESBY.



# ERRATA.

Page 11, line 7, for 29th, read 20th.

60, 19, dele *and*.

80, 1, dele *be*.

99, 2, for *neither*, read *either not*.

112, 21, for *on*, read *or on*.

18, for *silk*, read *sick*.

119, 18, for *emolience*, read *emollient*.

238, 12, dele *hand*.

287, 7, for *more than*, read *very near*.

289, 8, for *days longer*, read *days or longer*.



M I L I T A R Y

# HOSPITALS

## CONSIDERED.

**I** Presume to bespeak the attention of the public to the following Essays, however short and defective from what I could wish them to be, concerning the regimen of the health of soldiers in Great Britain, as well in their encampments, as in military hospitals ; that the knowledge and remembrance of several hints and observations, may not be lost and buried in oblivion with those Gentlemen who have made them ; but that the experience of our time may be rendered

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subser-



subservient to the welfare of others; and above all, that the cause of suffering humanity, miserably persecuted in the ordinary dispensations of things, with many natural ills, and unmeasurably oppressed with all manner of distresses, in time of an active, general, and vigorous war, may, at least as far as possible, in the Physician's province, find the best assured means of relief. All men who have ever so little considered the art of war systematically, may judge, that much of the miseries experienced in it is derived from too general confusion, mis-rule, and disorder prevailing; consequently, that the calamities of war may either be aggravated or alleviated, in a good degree, according to the rate of method, or, in its absence, according to the irregularities of every kind, which must take place in that mode of life; and that these latter will be always heightened, or may be surprizingly diminished, in proportion to the neglect or provident attention of officers, and others,



others, in whom the command, conduct, and care of military men are lodged.

WITH a view in some measure to Design of the work. see what (I apprehend) is amiss, rectified, I propose to state a variety of things in the plainest and most unaffected manner I am capable of, without servile fear of any set of men; but, with the most upright intentions and regard for truth alone, I will relate such instances and examples as have often been presented on the ensuing occasions, and many useful things that have frequently occurred to a mind not altogether unqualified coolly to trace out effects, at least, to their most palpable and self-evident causes: I shall submit to the fair judgment of wise and judicious men, the impartial consideration, and candid discussion of whatever, in my private opinion, ought either to be studiously avoided, or deserves to be carefully practised, with regard to the general



management of soldiers, in order to keep them tolerably free from diseases both at home and on service. In the next place I shall recapitulate whatever distempers I have observed most prevalent amongst our troops in Great Britain; and then subjoin the curative methods to each, which I have experimentally found best in this country, and in military life.

NOR can I think my time herein unprofitably employed, even in behalf of some in my own profession, who (if I do not deceive myself) will admit, that after near five years continual experience, and after having enquired much, and long studiously thought of these matters, I am entitled modestly to propose whatever rules and cautions I think necessary to be observed, and what ought to be the occasional or general practice in an army; and I flatter myself, that I am more equal to this work, than any other new man, however superior a genius, or  
more



more distinguished character at his first out-setting, he may possibly possess. For as experience in this walk of life hath already improved my judgment, so far as to have encouraged me often to venture in my own way beyond whatever I had derived from books, and every other previous information from the most knowing in my own profession; so I make no manner of doubt, but, whosoever, duly qualified, shall take up hereafter a farther prosecution of these enquiries, at those places where I am obliged to stop short, for want of something farther material to advance withall, will himself approach much sooner and nearer towards the perfection of art, in the preservation of the soldier's health, and the cure of all military distempers.

THE first part of the ensuing pages I mean to be merely popular, or in a good degree comprehensible to readers of every capacity; and I wish to ad-



Address  
to Officers.

dress it chiefly to the Colonels in the army, or to such other commanding Officers of battalions, and their regimental Surgeons, on whom principally it will at all times depend, to put in practice, or to give a fair trial to such new ideas as they find contained herein, not repugnant to common sense, and easily reducible to practice.

I shall take leave to assert, from what I have observed in the army, that if any regiment or corps has the fortune to have only one judicious, humane, and sufficiently able Field Officer, it may always be wisely regulated and discreetly managed, as long as ever he resides with them, and so long as he has the direction of the whole. 'Tis well, however, for the service, that each regiment has at all times upon its establishment, *two* Field Officers, besides the Colonel, who is often too much absent for the happiness of his regiment; and, therefore, upon the knowledge, sagacity, and mili-



military science of the others, very much of the honour, glory, and well-being of the corps, must many times totally depend, and much will always chiefly rest with the Lieutenant-Colonel and Major. But where the three Field-Officers together happen to be perfectly well appointed, active, judicious, and desirous of every useful information from literary men, as well as from those of their own profession; one may safely pronounce, that such a regiment will be fit for service at any time, on a very short notice; and, on the hardest service, the soldiers “will  
“ not shed away from about their offi-  
“ cers, as sick feathers, though never  
“ so oft supplied,” as Milton finely expresses it: but it will be free (all other circumstances being alike) from at least one half of those miseries and disasters which are usually incidental to military life.

ONE \* such corps, indeed, in his Majesty's service, I have in my own time

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\* Seventy-second regiment of foot.



observed; where all the regulations of its interior orders, and the hidden springs of all its movements and actions, were so well contrived, and the mechanism was ever so exquisitely adjusted, that the whole, as well as every part of a system, containing 900 human forms, appeared at all times, in their tents, their hospitals, under arms, and on a march, to be actuated and put in motion, merely at the volition, and by the command of the noble Colonel, Lieutenant Colonel, and Major, each in his department co-operating with one mind, to effect that intricate, beautiful, and harmonious arrangement, the like of which, in its interior, as well as exterior appearances, I almost despair ever to see compleated again in this country.

What may  
well be  
expected  
from able  
Field Officers  
of a  
corps,

HAVING before hinted, that a faithful and judicious discharge of the duties of the Field Officers in any regiment, may obviate many diseases incidental to soldiers; I shall still farther assert,



assert, that wherever any regiment is perfectly well appointed with its three Field Officers, one may fairly carry his ideas of the force of domestic discipline, and arts of prevention, so far as to expect very few, or hardly any seeds of diseases will ever make their appearance, except such alone as are immediately derived from infection, and its hidden causes, excesses in bodily labour, want of rest, and the fatality of unwholesome climates. And I am farther of opinion, that a great part of the mischiefs which generally have attended those concomitants of war, may, for the most part, be greatly alleviated, by a faithful exertion of skill, and sufficient understanding in the Army Physician, if he were at the same time invested with a proper authority to enforce the same, and also to controul the overweening assiduity of uninformed practitioners, who, instead of relieving the patient, too often here have been the means to forward many diseases. It should, therefore, indeed, seem,



seem, that there are few particulars of a Commander's duty of more importance in time of peace or war, how much soever it may have hitherto passed unnoticed, or how little soever this doctrine may have been understood, than a requisite knowledge to train up his men to the utmost perfection of health, which their bodies are capable of, and to keep them in this state as nearly as possible, by simply habituating them, at all times, to much bodily exercise, and inuring them, by sobriety of manners, to grow familiar with wholesome hardships, and to cut off from them the supplies of every species of luxury and irregularity, which causes three-fourths of the diseases incidental commonly to military life. I had sometimes occasion myself to be astonished at the efficacy of wise regulations, and excellent discipline, surmounting even the strongest opposition of the elements. The most striking instance of this kind I ever met with, was on board his Majesty's ship *Valiant*,  
where

Instance  
on ship-  
board.



where I had the honour to be a passenger for some time under the command of the Honourable Mr. Keppel, whose humanity, and generous love of the sailors under his command, even equals his conduct at the reduction of Gorée, or in the sea-fight of the 29th of November, South-west of Belle-île, 1759, or his exemplary behaviour at the Havannah; and this attention to the care of his men renders his character as amiable at present, as it will be respectable and memorable hereafter. I was informed, by Mr. Dewer, the Surgeon on board him, that the bills of health, given in every morning to the Captain, never exceeded, for four months together, eleven or twelve men at any one time, including all accidents, and occasional fresh wounds: Yet the complement of this ship's crew (which was almost always full) consisted of seven hundred men, or upwards, confined together upon a strange element, and daily fed on very unwholesome diet, in that unnatural



natural and incommodious mode of seafaring life.

IF then, in spite of all those obstacles to the preservation of health on ship-board, such remarkable advantages accrued, in this instance, from those excellent orders of Mr. Dewer, carefully and rigorously enforced by the Captain, and which, for the most part, depended on sobriety, the strictest attention to cleanliness, exercise, and, above all things, to fresh air; what superior good effects of this kind might not a judicious and attentive land officer, quartered in such wholesome country barracks, (as we shall mention hereafter) attain to, by the unaffected, sensible, medical advice of one, who could familiarly demonstrate to him the necessity of dieting in messes at all times, of airing, and duly exercising the troops under his command?

BUT here it may be useful to mention, that above four years ago, at the desire of some officers, I drew up the fol-



following considerations relative to the healthful preservation of soldiers on board transports, but that no opportunity of making a fair tryal of them presented itself, until Brigadier General Draper happily undertook his ever-memorable expedition against the city of Manila, in Leuconia, the chief of the Philippine Isles.

IN his two months passage from Madrafs to that extremity of Asia, the Brigadier assures me, that several of these conjectures were rigidly put to the proof, and answered exceedingly well. I think it therefore entirely necessary, in this miscellaneous treatise, to preserve all of them, for the future tryals of military men, who, after his accomplished example, may possibly condescend to listen to the precepts of a practical philosophy, which presumes to plead its own utility, without the approbation or testimony of a long experience.

IN



IN all embarkations of land-forces, these hints, among others, are necessary to be observed :

Regulations in the future embarkation of troops.

THE quantity of tonnage of shipping should always be larger in summer than in winter; in hot climates, than in colder: so far, that the least proportion of room, destined for troops who are to be a month on board, should not fall short of one ton and three-fourths, per man; a longer voyage should have at least two tons, to two three-fourths allotted; and, by this method, so many lives would be saved to the publick, as would amply repay the government their extra-expences for this instance of their care and humanity.

Cleanliness.

WHILST troops are on board, the greatest imaginable care should be taken, to keep all places between decks, under the hold, near the bread-room, and Captain's store-room, perfectly clean, and continually well aired. Ventilators, above all other expedients, would certainly best answer this last



last necessary intention; but, in their absence, the ships, by contract, should be obliged to furnish air-fails, which the officer in each, commanding on board, should see used at three or four stated periods through each day, and the soldiers themselves should work them.

A standing order from the General should be renewed often, and thereby enforced, to wash, scrape, and frequently every day to sweep all places in the hold, and near the births of the men.

THE hammocks ought to be daily <sup>Airing.</sup> carried up on deck; in fair weather they should be exposed all day long, and opened sometimes to the fannings of the wind: great care, however, should be taken to avoid wetting them; few things are more prejudicial than dampness of bed-cloaths, and all superfluous humidity between decks; therefore, fumigating the ship frequently, promises considerable advantage, by putting a heated iron into a vessel filled

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ed with tar or pitch, in such manner, that the same should be all resolved into hot steams, which may correct the redundant bad moisture.

**Moisture.** No place between decks should be wetted after sun-set; the births then begin to be crowded, the current of air is obstructed, and the humid air is like a warm relaxing bath of the worst sort to the men, being replete with unwholesome moist effluvia.

Troops to be called over above deck, to prevent the indolence of the soldiers on board.

THE troops should be mustered upon deck three times every day, at least, in cold weather, and four times in hot; they should answer, at roll-calling, personally upon deck, and, at stated intervals, should be compelled to stay there a full hour each time, with awnings always provided to protect them from the sun-beams striking directly on them: During this hour they should walk briskly, sometimes climb ropes, pump the ship, cudgel, dance, and exercise themselves in all possible ways, as much as ever the nature



ture of their situation will permit. This will employ their minds, and, in some measure, keep them from *the misery of having nothing to do*, which causes many distempers in low as well as in high life: by observing this salutary practice, likewise, a current of better air passes thro' the vacant spaces between decks, and thus they may be effectually purged from offensive steams; it should never, therefore, thro' any pretext whatever, be neglected.

THE quantity, and quality of salt meat is, for the most part, too gross and hard of digestion, to be subdued by the ordinary powers of the stomach and bowels, without the aid of much exercise; nay, even with all possible care, seamen themselves are oppressed with indigestion: For this reason, in the Navy, an allowance of fresh meats and vegetables is ordered for all King's ships whilst in port\*; and the salted

Diet on  
ship-  
board.

\* The most experienced and judicious Physician of the age, Dr. Huxham, has, with a rate of benevolence only peculiar to great minds, disinterestedly laboured to persuade the Lords Commissioners of the Office of Admiralty in Great Britain, that the use of good cyder



hard food is with-held until they put to sea, and are under the necessity to use it in absence of better. A like indulgence of fresh meats would certainly be as beneficial to soldiers, on board transports in harbour, and should as certainly be granted, as often as it becomes practicable.

ought to be admitted in general throughout his Majesty's navy, as a provision exceedingly conducive to the preservation of the health of the seamen, especially in long voyages. I hope, it will not be deemed presumptuous in me here to declare, that I intirely concur with him in this; and I farther think, that all landmen especially whilst at sea, stand in more need of this salutary provision, as well as of *vinegar and wine*, than even seamen themselves, who are inured by habit to that mode of life. And I will add, in the Doctor's own words, "This, indeed, may be deemed a very expensive project; but where the lives of so many brave and useful people are in the case, I think the cost should by no means come into competition with the advantages that may be received from it: The Romans constantly carried vinegar and wine in their fleets and armies, and the common soldiers and sailors daily partook of both: Nay, they were at many other considerable expences to preserve the health of their armies." Wherefore I hope, in future provisions for British soldiers, destined on distant expeditions, some attention will be paid to these things; and, instead of tainted salt meats, to supply our army, as soon as ever it is landed in any part of the West-Indies, with sufficient quantity of *live stock*, and plenty of good Madeira wines, from North America and the island of Madeira, as the want of such provision lately, at the Havanna, brought infinite mischiefs on our troops, most of which might thus have been easily remedied, by timely contracts made in North America, and at Madeira.



It is my opinion, that, as the time approaches for the men to enter into a hot climate, their diet should, by positive institutions, be varied from what is usual at land, or in the channel service. Instinct has taught the natives, between the Tropics and in all hot climes, to live chiefly on vegetable diet, and subacid fruits; wherefore, devouring large quantities of flesh meats, and using the same hard indigestible food, as might pass off in cold weather, or more northerly regions, must alone have proved a cause of the destruction of many English lives. I recommend, therefore, for trial in hot climates, that the men on board should not have salt meat of any kind above once or twice a week, beef and pork alternately; every other species of allowance should be provided in much greater abundance, than is commonly done for sea voyages. By thus regulating the diet of soldiers, navigating in hot regions, I apprehend, many of the ordinary mischiefs attending the constant use of putrescent salted meats would be prevented.



*Military Hospitals considered.*

LASTLY, the greatest attention of the Commanding Officer is requisite to enforce sobriety beyond every other regulation. Intemperance in this matter alone, particularly in hot countries, will be sure to carry off great numbers, wherever the men are not most minutely watched, and severely prohibited the least excess in spirituous liquors: And as the foldier will practice every trick of cunning to elude the vigilance of his Officer, in order to satisfy his vitiated desires of these intoxicating poisons; so no care or pains are too great, by the most rigorous orders, to prevent such abuses; the severest discipline, in this case, becomes an act of the greatest and most exemplary humanity.

Barracks  
recom-  
mended at  
home.

BUT here I resume my Inquiry. The general use of Barracks is a subject of so great importance, that it cannot be sufficiently enforced. How is it possible for the men of each company, scattered up and down the ale-houses of a great town, ever to be regularly



gularly messed together? How is it possible, without barracks, to make a private soldier always wholesome and cleanly, farther than at a stated hour, on the Parade, for momentary shew? The day of battle is once or twice in a long campaign, when men must be used as they are wanted; but an \* attention to the well being of the men, and the preservation of their healths, ought to be a constant serious business, and an unceasing care of their Officers, as well as of the Doctor. It is only by *their* prudence and healthful regulations, the private men are to be preserved from rotting away in the most supine negligence, and dirt about their own persons, and from being spendthrifts of that very slender pittance, which they are allowed.

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\* “It is a duty incumbent on every Officer to be more than ordinarily careful in this particular, and not to think himself above looking to the messing and cleanliness of the men, since their preservation depends so much on it: For in those regiments where this method is duly observed, the men are generally healthful; but when it is neglected, great numbers fall sick and die.” *General Bland's Treatise on Military Discipline*, p. 226.



*Military Hospitals considered.*

UNTIL I see the establishment of such barracks throughout Great Britain, it were vain to expect that any regiment can be trained, in time of peace, to that perfection of health, and force of interior discipline, which is necessary : I have had, however, frequent occasion to observe a great deal of it imitated, and pretty exactly transferred into some of the late encamped *militia* regiments.

What benefit may result from them.

THUS far I thought it consistent with my plan, to express myself in favour of barracks, as necessary to save the lives of numbers of men, unprofitably and needlessly lost in this country. I conceive, by the establishment here mentioned, and by the care of the Field Officers, always effectually aided by an intelligent medical person in each battalion, any old regiment may be ever ready to take the field on the shortest notice, and when ordered on duty, would prove more healthy than any new-raised corps, hardened by two years



years encampment. But when I press for the establishment of barracks so earnestly, and upon the honestest and most humane of all principles, *the necessary care of mens lives* ; I sincerely wish, they may never be constructed upon the absurd, and miserable plan of those in Chatham Lines, and at Hilsea, near Portsmouth, which are fitted up with low cielings, and without ventilators : Such barracks, particularly, those at Hilsea, are worse for the inhabitants, than any tolerably clean King's ship riding at anchor, in harbour, or at Spithead ; because they are ever incommoded with humid, and unwholesome steams, continually exhaled from the marshy parts around them, which being overflowed twice, every twenty-four hours, to different and unequal distances, send forth the most noxious and unhealthy vapours. There are, besides, many other reasons, too tedious to mention, which make me most sincerely hope, the barracks may never be built hereafter, with salt-water bricks,



which ever attract humidity, on account of the salt, with which they are replete; that their walls may be above half a brick in thickness, and that some attention be had in laying the foundations, to carry off the stagnant waters by proper drains.

Farther  
reasons for  
barracks  
at this  
time.

NOR do I by any means despair of living to see some such wholesome barracks erected, so far as may be necessary for our troops in time of peace; as numbers of the country gentlemen, (whose prejudices and former ignorance in these matters created the most unjust opposition to this measure,) have of late had sufficient experience, from the *militia*, in which they have honourably served, to form a competent judgment of the great expediency of such repositories for his Majesty's troops; and I see no possible inconvenience, but, on the contrary, the greatest advantage to the service, if Winchester House were allotted to contain 2000 or 2500 English soldiers in times of peace,



peace, instead of 4000 Frenchmen in times of war: the situation so near Portsmouth, and at such a distance from the capital, in a very cheap and plentiful country, makes it one of the fittest stations in all England for keeping a body of troops together.

THE better regulation of Military Hospitals, is the subject next in importance to that, which has been already considered: A subject, which neither Montecuculli, Folard, Feuquieres, the *great* Condé, Marshal Saxe, Count de Crise, General Bland, nor any other military writer that I know of, has paid much attention to; for Officers, in this respect, conceived they had little more to do, than to consign the sick to the best of those miserable accommodations, which chance, necessity, or a base parsimony sometimes had provided in the Military Hospitals; and, as Officers are very inadequate judges of the nature of diseases, they must also be very imperfect judges,

Confiderations relative to Military Hospitals.



judges, what is best to be practised and regulated in them : And hence it hath come to pass, when every other branch of army-arrangements, besides that of Military Hospitals, is already digested into a method, and approaches something very near to science and system ; yet still every service in Europe labours under unspeakable inconveniences, in regard to this particular department, especially in the commencement of every war ; as the Directors act too much at large, upon temporary shifts, and never have yet sufficiently pre-concerted measures, so as to give the suffering soldier, or the judicious Officer, content and satisfaction ; neither has any thing worthy of notice, in the medical way, been attempted, until my most philosophical and ingenious immediate predecessor, Dr. John Pringle (now Physician to her Most Excellent Majesty the Queen) obliged the world with *Observations on the Diseases of the Army in Camp and Garrison*. This treatise abounds with the greatest



greatest and choicest variety of well-digested facts, and is better calculated for the enlargement of the knowledge of his own profession, than most books written in any former age: Yet from that very genuine, *Verulamian* method of investigation, which he has so closely followed, I fear few Officers derive such advantage from its perusal, as they might receive from a less valuable, though more popular treatise on the same subjects.

It is well known, that numbers of brave men are annually lost in the hospitals, for want of order and proper subordination among the Physical Officers; and that the most able and active men, unless they have a military character, cannot prevent a total relaxation of that regularity, which should be observed as well here, as in the field, among the soldiers and Gentlemen of the Profession.

To obviate these inconveniencies, and to prevent the sufferings, the distresses,



Physicians best  
qualified  
with requisite  
knowledge to be  
Directors.

stresses, and death of many useful members of the Body Politick, some regular and well preconcerted system appears to me indispensably necessary; and I see no just reason, why each superior Army Physician should not be constituted Director of that hospital in which he resides, as he alone must be the most competent judge of all physical matters under himself on the spot; or why he should not be vested with a power from the Commander in Chief, or other sufficient authority, to establish a well preconcerted plan for the hospital he has the care of. Such a plan, I can easily shew, is very practicable, and I shall gladly submit it to the consideration of some able Secretary at War, and attentive Commander, whenever the exigencies of a future war shall make a full explanation of all its parts necessary to the publick service: At present, to enter into a minute detail on this head, would only cause much envy and altercation, without producing the



the good consequences which alone I wish may be the fruits of it.

NOR is such an arrangement as here suggested, a mere ideal notion of mine, but the learned Officer may find, that Xenophon\*, the ablest General and Statesman of antiquity, has condescended to rank this also, amongst the merits he has ascribed to Cyrus; that, previous to the war, he selected the ablest Physicians to preconcert proper plans for the management of the sick, and he dismissed them afterwards with honours, as well as the rewards, they had merited on such services.

I shall next proceed to the consideration of the requisites in the character of that Officer, *Doctor*, or *Surgeon*, or by whatever other name he may be called, whose duty is the immediate care of, and attention to the health of the regiment, and whose Office should be, (in my opinion,) the next in importance in every corps after the three Field

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\* Vid. Xenoph. de Institut. Cyri. Histor. lib. viii. p. 167. Edit. Basileæ, 1572.



Doctor's  
character.

Officers; I shall divest myself of all partiality, as far as candour, good nature, and truth will allow of, whilst I examine how likely the present mode of chusing such Officers, promises to produce men adequate in qualifications to the important and highly political charge, skill, and medical knowledge, necessary for the care and preservation of 900 brave men.

Hospital  
Board  
wherefore  
instituted.

HIS Royal Highness the Duke of Cumberland, to whose systematical ideas, and most excellent regulations of discipline, before he quitted the command of the British army, this nation in *justice* ought to ascribe as much, for our military successes in the late most glorious and comprehensive war, as ever the impartial pen of martial history, has given to the immortal William the III<sup>d</sup>, for training up and modeling that army, which routed the French at Hockstet, Ramillies, and Oudenarde; he, I say, in the commencement of the year 1756, desired the Right Hon. Lord Viscount Barrington,



rington, then Secretary at War, to establish an Hospital Board for the medical service of the army, then intended to take the field ; that under their conjoint direction, this part of military service, (whether it related to medicines, hospital stores, and every other requisite provision for the sick,) might be carried into execution with abilities, regularity, and dispatch. The Hospital Board consisted of the Physicians belonging to the hospitals of his Majesty's forces, the Surgeon General, and the Principal Surgeon, and Purveyor to the hospitals, who conjointly, had it given them in charge from the Secretary at War, to digest certain rules for regulating all hospital matters : These Gentlemen consulted together to this intent, and soon unanimously agreed, among other excellent institutions, that the Physicians, as *the only judges*, were to examine, and at all times to superintend and controul, to the best of their judgment, a sufficient number of Physical Hospital



Hospital Mates; and all their regulations, agreed upon at that time, were confirmed by the Secretary at War, and never since, that I know of, have they been expressly superseded, or formally disavowed by authority.

AT that time the Surgeons acting in their own sphere, were satisfied with nominating the number of Mates deemed requisite for their own particular department. Matters once settled, on this fair, methodical plan, went on well for a time, and then, the army was every where supplied with experienced, and properly qualified people, who knew enough of medical business to set about, and to execute faithfully, whatever instructions, or positive orders they occasionally received from the Physicians, or their other superior Officers.

THE Hospital Physicians, however, being soon sent upon distant services, the Secretary at War for that time, on account of a great multiplicity of various



rious avocations in his business of the late wide extended war, procured a special new commission, as Inspector of the Regimental Infirmaries, for the principal Hospital Surgeon; under the shadow of which, He soon, in effect, undertook to do the greatest part of the business of the Hospital Board, and instead of the Physicians, to collect, admit, and recommend for employment, all the Mates and Surgeons to be appointed, as well in the medical, as in the surgical departments of the army. Thus the Hospital Board came gradually into disuse, by new commissions of this kind granted to Surgeons, who had interest enough to get them.

How far the upright intentions of this establishment have been, in all instances, fulfilled, or how ably and sufficiently, the army at all times since hath been supplied with medical assistants, let the apparent necessity for so many new commissions upon the establishment, granted since that time, and let the

D

experi-



experience of Officers make publick declaration of. I mean not, indeed, at any time to exhibit the least appearance of petulant malevolence against any set of Gentlemen: Nor should it be understood, that I industriously seek matter to find fault withal, when I designedly pass over every thing that can give offence to, or prejudice any Gentlemen, except only where the good of the service might suffer, on a future occasion, by my being altogether silent and remiss; for I purposely decline making particular mention of instances where the humane Officers complained and lamented the losses, our troops from time to time sustained by ill-timed removals, and by injudiciously harraffing of soldiers, sick in fevers, from one hospital to another, sometimes distant 100 or 150 miles; on which occasions, the sick were conveyed in open boats, sometimes in open waggons, and (too often) without any requisite provision made for transporting them at all: no wonder if one  
third



third of the numbers, so hurried about, were liable to perish between one hospital and another; and thus to exhibit a shocking proof, that ignorance, in medical matters, or inhumanity, must somewhere have existed where it should not have been\*; but if, for candour's sake, I should own, that the business referred to above, has been discharged according to the best of the Gentlemen's judgments, which I really think sufficient in their own profession; I cannot, however, be quite so fashionably complaisant, as to admit that any one of the best of them, or even any Court of Examining Surgeons, at the publick Hall, are com-

Reasons for altering the present mode of examination.

petent judges of medical subjects, sufficiently to ascertain, what are the requisite physical qualifications of men,

\* Je n'entre point ici dans le détail de toutes les especes de friponneries, qui se commettent dans les hopitaux; elles sont infinies: En général on peut dire, qu'il n'est pas impossible de se parer des plus préjudiciables au service, pourvu que ceux, qui sont proposés pour vieillir sur les Directeurs, soient gens d'une probité reconnue & incorruptible. *Mémoires de Marquis de Feuquieres, c. xl des Hopitaux.*



who presume to superintend the lives and health of 900 soldiers; which number, in time of war, is usually committed to each regimental Practitioner. I know, indeed, many (assuming to themselves the character of useful Doctors) gain an ascendancy over several of the great, as well as, of the mere vulgar, by an obsequious pliancy to their tempers, by cautiously attending to such infirmities of mind as they discover in them, by surprizing the general imbecillity of judgment in mankind, and by substituting for fair and genuine science, numberless low arts and cunning practices, which knowledge usually disdains, as peculiar chiefly to ignorance and imposture; insomuch, that many in civil, as well as in military life, are, by such artifices, deluded into a belief, that there is but little difference between the genuine Physician, and the manual, cutting, or operating Surgeon, as to their importance to the army, and their knowledge in curing diseases.

BUT



BUT all men of candour, who have ever felt, or known the force and happy effects of long and diligent studies, and continual application to any system of science, beyond momentary impulses, and the flashy conceits of petulant pretensions, will make no scruple to allow, that a want of early culture, almost a total privation in youth of intercourse with the most refined part of their profession; and (as it most commonly happens) an absolute neglect of a liberal education in the generality of Surgeons, are all together apt among them to induce Quackery, or, at best, a narrowness in thinking about medical subjects, and an absence of that comprehensive, and universal knowledge, as well as of that ingenuous cast of temper, which indeed is requisite to complete a Physician, and which those in Great Britain, beyond other men, are thought to be eminently possessed of. Every person who knows that Surgery is but a small part of the study of Phy-



sick, that it only teaches the cure of external diseases, such as properly require the knife, or plaister, and a manual neatness in bandages, &c. will easily grant, that a mere Surgeon ought not, with any justice to the patient, to attempt the practice of physick\*.

IN the above pages I have conscientiously stated my general sentiments, in objection to the plan lately adopted, from an apparent necessity at *that time* to dispatch the hospital business. When my arguments are coolly examined and weighed in the scales of reason and truth, I am in expectation, the army, upon a future occasion, will be at least brought back again to those excellent regulations instituted under his Royal Highness, by Lord Barrington; as the want of them in Germany, North

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\* A Ranby, a Hawkins, a Middleton, a Gataker, besides some others, particularly Gentlemen educated, as several are in North Britain, deserve to be excepted from the above strictures, which are not meant against any individuals, but to explain, why *our* Surgeons in general prove very bad practitioners of physick, whenever they arrogate to themselves so unwarrantable a licence, in a subject they are very unlikely to understand.



America, and elsewhere, exposed the service to manifold inconveniencies and numberless scenes of confusion; unless some future Secretary at War, and Commander in Chief, may possibly condescend to establish the better and more extensive regulations, which I already hinted at, and which I shall farther insist on hereafter, if my first endeavours meet with that approbation, which I have been studious they should merit.

IF any of my readers should think, that it became me before now, to have broached my sentiments upon these important considerations, to either of the late Secretaries at War, and to endeavour for some redress; I will fairly tell them, that, besides the reasons mentioned already; *on my first appointment in the army*, I deemed it unseasonable; and afterwards, I knew all species of reformation ever to be attended with so much anxiety, and concern to the beginners of it; that a

Why this reformation was not proposed before.



cautious temper, studious of its own ease and peace, must observe matters very bad indeed, before it will venture to stand forward as the abettor of innovations, or the propagator of any new opinions, to clash with establishments of any kind. I therefore contented myself with doing every thing in my private power, to make things upon the footing I found them in, go on for the best, and to wish in secret others might do the same, and cooperate as much in their stations with the same zealous intentions : At present, when all competition of interest, and power, has totally ceased, in the Military Hospitals, when nothing but the future advantage to the publick service can possibly have influenced me to write these things; I shall freely declare my sentiments : I trust, the benefits of holding Hospital Boards, once more upon distant services, to avail of the experience of all the members, will be recognized; that the important charge of recommending duly qualified



fied Practitioners, will be re-instated only in men, whose education intitles them to form a right judgment of these matters; and that no favour nor interest whatever, may indiscriminately connive at this power to be exercised by Gentlemen, who are not properly qualified: For I have already shewn, that in matters of science, a commission, however lucrative, does not confer the requisite knowledge of the subject. I wish therefore to see the office of Doctor to each corps, hereafter regarded, as the fourth at least in importance to the well-being of it.

It is well known in military life, that the better footing any Officer has a right to be on, from merit and superior talents in his profession, the greater services he will be enabled to do all the private soldiers, as well as Officers under him. On this account, the Gentlemen filling a medical character should be sought out more respectable, better qualified, and every way more truly honou-



Doctors  
of regi-  
ments  
should  
be better  
paid here-  
after.

honourable, and they should also be better rewarded, than the generality of the present deserve to be. My petition therefore, whenever it is wanted, shall be joined with that of others, and various important reasons and arguments shall then be urged, which I now conceal, from obvious motives; to obtain an additional bounty to be hereafter allowed to the Doctor, out of the regimental stock purse, in time of peace, or out of some other fund, in proportion to that well-timed, and useful advanced pay of his late Majesty to each Regimental Mate in the late war.

Pay, how  
to be en-  
creased.

SUCH an additional *douceur* ought to make, in my opinion, with the present pay, an annuity of 200l. or upwards, per annum, in time of peace; and as a Surgeoncy, in time of peace, was wont to be sold for 500l. and sometimes for more; by this regulation it would be worth 700l. which is the value of an annuity of 50l. per annum,



annum, at fourteen years government purchase. As I *foresee*, that money will, directly or indirectly, force, or find its own way through Office, sooner or later, in spite of the severest general prohibitions to the contrary. I am of opinion, every Surgeoncy, in time of peace especially, ought to be sold fairly and avowedly for 600 or 700l. and the regiment might be the pay-masters of the annuity settled in consideration of such sum. If the Surgeon wishes to retire, he ought to have leave to sell out, deducting from the principal he first laid down, as many years purchase as he has been in the regiment; but if he is at any time cashiered, he should forfeit his purchase money to the regimental stock-purse. Such a competency as 250l. per annum, in time of peace, would be an inducement to abundance of learned, and ingenious men, of sufficient science, to divest themselves of ambition, and to quit the farther bustle of a busy world, for the means of a genteel

Surgeoncy  
to be publicly  
sold.



genteel employment in those paths, into which, from their first out-setting in life, they had early entered.

As to the plausible objection, that Gentlemen of real merit upon this plan, may sometimes be excluded from the service, for want of 600 or 700*l.* the supposed price of a Surgeoncy in time of peace; I here frankly own the charge; but then, I am clearly of opinion, that it would be worth while to make a trial, and take the chance of finding young Gentlemen duly qualified, of a good education, and liberal turn of mind, with 6, or 700*l.* in their pockets, who might be, upon the forementioned plan, ready to enter, and obtain an equivalent annuity at fourteen years purchase from the regiment: Or if this method was found impracticable, on account of any intricacy to the corps, the Agent of the regiment should vest, in some Government funds, the sum stipulated between the Colonel, and the examining Hospital.

Another  
mode of  
increasing  
the Doc-  
tor's in-  
come.



Hospital Physician, to be laid down by the Doctor, according to the rate of his merit and qualifications, upon his first admission into any regiment ; and the person so paying should receive this additional equivalent annuity, for as much as he advanced, or paid into any publick fund on this account, in order to dignify this office, which at present is too low, in the estimation of properly qualified men.

I am very positive, this method would soon demonstrate to all the army many advantages, superior to the present mode of confiding in the mere accident, whether this, or that great man, who recommends some raw youth, just emancipated from half of his apprenticeship, for preferment sake, has conscience enough to hesitate one moment, as to the fitness or unfitness of his own recommendation : And though men of letters cannot reasonably presume to expect, in every future Secretary at War, a *Townshend*, alike the friend  
of



Advantages set  
forth.

of science, and the consummate judge of its importance, and real influence in every branch of *military*, as well as of *civil* life; yet so confident am I, that some reformation is necessary, upon motives of policy, as well as of humanity, in this particular; that, at the risque of my character, I will venture to declare, if once the proposed method was fairly tried, I am persuaded every regiment would save, even in time of peace, the suggested additional expence, only by the number of men's lives annually preserved in the army, and by the prevention of a great part of that charge which always attends the enlisting new men.

BESIDES the establishment already mentioned for the Doctor, an additional income, arising from the encreased number of men in time of war, would be a farther motive to men of merit to devote themselves ardently to this walk of life, which, at present, is far below the continued pursuits of any others,



others, than mere mechanicks in the profession ; and hence, I presume, it has happened, that so little progress has ever been made by such men, devoid of the proper qualifications, towards any rational system for the arrangement or establishment of general Military Hospitals in times of war; which, indeed, ever require to be varied in the execution, according to the intentions of the General, at the time being, and according to the number of men employed, the genius of the war, and situation of the country where it is carried on.

THAT the business of every regimental Practitioner is at all times much more the subject of medical consideration, and of cool reflection, than of mechanical dexterity in dressing, or even in cutting off a limb, will appear to the meanest capacity, who stands informed of the following fact, well vouched to me by a very ingenious and worthy man, who was seven years  
Sur-



Surgery  
much less  
useful to  
an army  
than a  
know-  
ledge of  
diseases.

Surgeon to a regiment in the late war, during which, the corps had been two campaigns upon very hard service, and had also sustained the severest shocks and losses which attended the tedious siege of the Havana: Yet the Surgeon declares, that in full seven years, he had never met with near 100 properly chirurgical cases in the whole regiment; though in that course of time, near 2000 men had gone through the regimental books, including about 400 draughted out of it into different corps\*: May we not then justly conclude, that in time of profound peace, the exigencies of chirurgical dexterity, compared to the objects of medical attention, in any regiment, are at most, one half less than they had been observed in two battles and a siege, besides, the rest of the seven years; consequently, that the medical science requisite for a regiment, is at least forty times necessary to be in some sort prac-

\* J'ai toujours remarqué que durant une campagne, les armées fondent un tiers, quelquefois de la moitié; says Marshal Saxe, vol. ii. c. ii.

tised,



tised, for once that any particular dexterity in manual operations, or surgery is required. From this, and what we have before said, concerning the incapacity of Surgeons in general to judge of medical merit, it is evident, that all future examinations of persons employed as Mates or Practitioners in the army, should be solely submitted to some one of the Censors of the College of Physicians, as one of the only legal judges of physical qualifications, together with any one of the Army Physicians conjointly, who know the proper characteristicks necessary for filling the post, and discharging a trust, which good intention, and honest meaning, unattended with competent skill, may wish in vain, but know not how to accomplish. Good policy, therefore, no less than humanity, calls aloud for some reformation hereafter; and to alter the mode of examination at Surgeons-Hall, appears indispensably necessary for the benefit of the publick service.

One or other of the Censors of the College of Physicians, and any one of the Army Physicians, to be the Examiners of Practitioners in the army.

E

As



As war is, in its nature, subversive of every principle of order, but its own, and tends directly to abolish every species of subordination, other than that of its own system; as Military Commanders likewise rarely hold the character of Philosopher, or of one who indulges in any species of refinement, in great esteem, and, as they are seldom attentive of themselves to such necessary regulations and distinctions, as already suggested, because they happen to be supposed foreign to their military province; no amendment, in this important article, can be expected at such a juncture: But Peace, which is usually the parent of refinements in art, commonly bringeth back the minds of men, to the candid and sober contemplation of whatever is found to be the best order of things, and furnishes the happiest opportunity of amending every error in the police, and management of all momentous affairs. During so favourable a season, I hope, I need urge no farther



farther arguments ; I hope, it will be sufficient patiently to submit to reason, equity, and to the experience of what is already past, in the late scenes of confusion, where science often hardly brooked, and sometimes honestly disdained to be controuled by the ignorance of men, who had no just pretensions to warrant their late acquired and misused power, how far my sentiments and hints upon these matters merit any attention ; whether so important an object, as the hospitals, does not deserve some early consideration ; and whether such palpable errors ought not to be corrected, ere a new war be kindled against this powerful and much envied country \*.

This the  
fittest time  
to rectify  
what is  
wanted.

BEFORE I proceed any farther, to deliver my general sentiments concerning the repositories of the sick, I shall first fairly state the constant practice in the

\* Enfin je le repete encore, & ne saurois, je crois, le dire assez, la moindre negligence sur les hopitaux peut causer un plus grand dommage au Roy & à l'Etat, que vingt batailles des plus sanglantes : surquoi on peut juger, qu'elle en est la consequence. *Voyez l'Ecole de Mars par Mr. Guignard, Chevalier de l'Ordre de St. Louis, 4to. à Paris, chez Simont, pag. 214.*



army heretofore in this country: As observations occur in doing this, I shall candidly censure such things, as I well know are wrong; thence I shall deduce my own reasons for recommending to future times, a plan never practised before the late war, and even then principally under my direction \*.

Irregularities in hospitals remote from camp.

WHENEVER any regiment is to come to the ground of encampment, the Surgeon is ordered thither, a day or two before, to hire a good and convenient house for the sick. Although he ought always to have done it, without regard to expence, as near as possible to the camp; in some encampments, however, it has been near five miles distant. This circumstance could not fail of producing great disorders, and irregularities in the management of the hospital; for if a guard, with an Ensign's command, hath been sometimes appointed to prevent misbeha-

\* Une armée sans bons hopitaux perit aisément, n'étant pas possible, que les actions de guerre & les maladies ne les remplissent souvent, & meme trop abondamment. *Voyez Memoires de Feuquieres, c. xli. Des Hopitaux.*



viour, it is ten to one, but such a guard, so distant from camp, was guilty of more misdemeanors than the men in hospital: If no guard is placed there, as soon as ever a soldier is able to crawl out, you will be sure to find him all day long lounging about, if not drunk in some alehouse where he can get gin; and thus adding that noxious poison to his former disease.

ON the other hand, if the sick are rigorously enjoined to abide in hospital continually, the close and confined air soon becomes a more malignant and destructive poison to their healths than gin itself, or any other intemperance. So true is Dr. Pringle's observation, "that among the chief  
"causes of sickness, and death in an  
"army, the reader will little expect  
"that I should rank, what is intended  
"for its health and preservation,  
"the hospitals themselves, and that  
"on account of the bad air and other  
"inconveniencies attending them."



The worst  
of hospi-  
tals for  
the sol-  
diers.

ANOTHER sort of regimental infirmary, which frequently is as bad as a large crowded hospital, and which I have most objection to, is as follows:

A small old house, with low cieling; a large kitchen or common room below stairs; and no other apartment in the house half so big as that kitchen; small lozenge windows without apertures, designed to keep the miserable inhabitants warm, in lieu of fire. Most commonly, the habitation hired for an infirmary has for some time been altogether unoccupied, with the walls all damp, the boarded floors half rotten, and the roof, in several parts, open above; the only circumstance to the miserable sick, which in fine weather, is a little favourable to supply fresh air without mischief. In a few words, at best it was a desolated habitation, unfit for containing a wretched family of seven or eight people, and now destined to hold the sick of a whole regiment. I have, indeed, seen such a cottage stuffed with forty, fifty, sixty,



sixty, nay, with seventy or eighty poor sick soldiers, all lying heel to head, so closely confined together within their own stinking cloaths, foul linen, &c. that it was enough to suffocate the patients, as well as others, who were obliged to approach them. In such receptacles for the sick, I have frequently observed the simplest inflammatory fever, without the least alarming symptom at the patient's admission, to degenerate, before its crisis, into the spotted and truly petechial fever, and thus be converted, by bad hospital air, from only an increased circulation of the blood, into a most dangerous putrid, or jail fever. Thus Dr. Pringle has judiciously insisted, “that air, corrupted by putrefaction, is, of all other causes of sickness, the most fatal, and least understood; for these destructive steams work like a ferment, and ripen all distempers into a putrid or malignant nature: But the air in hospitals and crowded barracks, close transport ships, and, in

Foul air productive of putrid and malignant fevers.



“ a word, from every place where air  
 “ is so pent up, not only loses a part  
 “ of its vital principle, by frequent re-  
 “ spiration, but is also corrupted by  
 “ the perspirable matter of the body,  
 “ which, as it is the most volatile part  
 “ of the humours, is also the most pu-  
 “ trescent : Hence it is, that in pro-  
 “ portion to the nastiness of such pla-  
 “ ces, to the number of dysenteries,  
 “ and of foul sores ; but, above all, of  
 “ mortifications, a malignant fever is  
 “ both frequent and mortal.”

Animal  
 steams  
 prejudi-  
 cial.

MOREOVER all animals confined in  
 too great numbers, in close places, com-  
 municate to each other very unwhole-  
 some vapours ; this (I am told) is  
 manifest in the largest aviaries, at  
 Kew, or elsewhere ; in which the  
 space is fully wide enough for exer-  
 cise, and air also is permitted the freest  
 circulation, whilst all necessaries be-  
 sides are plentifully provided for the  
 little inhabitants so confined ; yet the  
 great numbers of birds which are year-  
 ly



ly destroyed there, shew the cause to be something else than their mere confinement. Even hounds, naturally a gregarious race, are found to go mad spontaneously, when they are too closely shut up in ill aired kennels.

To obviate the manifold inconveniencies and mischiefs of corrupted air in hospitals, and all other places, where numbers of animals are necessarily pent up together; Dr. Hales long laboured with the purest, and most beneficent intentions, by every philosophic, as well as persuasive argument, to introduce the general use of ventilators; so as to cause a continual renovation of pure wholesome air, instead of that, which had been poisoned with all the noxious and suffocating steams, that incessantly exhale in crouded rooms, from putrescent and unhealthy animal bodies. These engines, no doubt, if judiciously used, would prevent many of the dangerous diseases that attend crouded hospitals, and would



Difficul-  
ties.

would recover numbers, who, by neglecting so useful an expedient, miserably languish there, and rot away. Notwithstanding all this, the difficulties that attend an advantageous application of them, the disturbance they oft give the sick people, by the troublesome current of air they occasion, the expence and inconvenience of carrying them about, for the use of regimental hospitals, the negligence, and laziness of the people in working them, and their diffidence of the utility of measures, which seem so simple and trifling; I say, all these made them fall very short of our expectations, wherever I attempted to enforce their use.

BESIDES this most important consideration concerning fresh air, which I have just touched upon; there is another, equally material, to be attended to.

INFIRMARIES, or hospitals, in all countries, are for the most part unclean



clean and infectious places, and tho' every precaution is taken to purify them, such as washing with vinegar, burning brimstone, gunpowder, or resinous substances, scouring the boards, and such like; yet a perfectly safe purification, in some cases, can never be fully effected, unless after a great length of time; the seeds of infection once sown, continue, in some instances, to spread contagious diseases, and to contaminate the house, as much as ever the walls of the Israelites were infected with the filthy leprosy, which is said to have germinated from the walls of their tents or hutts, in their tedious peregrination towards the Land of Promise.

All hospitals more or less unwholesome.

THE policy of the Jewish Law-giver, in every instance well calculated to rule a military, ferocious, and uncivilized people, was also remarkably perfect in its civil institutions, and interior regulations, even to the minutest circumstances of domestick life; info-

Mosaic institutions.



Leprosy.

infomuch, that human prudence alone has never rivalled the wonderful system of that adventurous militant commonwealth; “For those statutes and judgments which Moses taught, were even as the Lord his God commanded him they should observe in the Land of Promise.” And tho’, with the very learned Dr. Mead, we may have some difficulty in conceiving, how the leprous spots were capable of spreading, and growing upon the walls made of solid materials; yet the power of inspecting their houses, being vested in their Priests, the only men, that had the least pretensions to any species of erudition, or science amongst that illiterate and ignorant people; and when *they* supposed they discovered this foulness, orders were given first to have the walls of the house scraped all around, and afterwards, if the disease continued to break out, to pull down the house, and carry the materials out of the city into



into an unclean place. Thus, according to the Doctor, the Mosaic precepts were constituted, particularly to avert the people from idolatry, and false religion, and, at the same time, to keep them from all uncleanness: To this end likewise conspired the prohibition of eating blood, carrion, or animals which died spontaneously, swines flesh, and that of several other creatures.

In this country, the bulk of mankind scarcely conceive any disease to be so very contagious as the Syrian or Egyptian leprosy, whose infection (we are told) spread to the cloaths and houses of the people of Israel *only*; yet all Physicians know, that there is a sufficient variety of contagion amongst us, to make us always carry the remembrance of it in our minds, and to make us guard against the miseries it often produces: Every novice in the art, is enabled to form some general idea of the subtilty and power of  
of



of this inveterate enemy of human kind, from the small-pox, measles, itch, &c.

I cannot, on this occasion, omit some observations penned down by me at a time, when I was the only surviving Physician in the year 1758; when a very unusual number of sick soldiers were lodged every where round Newport, in the Isle of Wight, in old houses, barns, &c.

Diseases  
more in-  
fectious  
here, than  
the leprosy  
among the  
Jews.

Instance.

AFTER the unprosperous expeditions of that year, against the coast of France; in one of these close hovels, or miserable hospitals, a poor fellow, of the sixty-third regiment, was placed, on landing sick out of the transport. In a day or two he was seized with the worst species of the malignant *sore throat*, I ever have seen, with ulcerous mortifications about the nostrils, and other parts, which carried him off on the third day.

ANOTHER patient unfortunately was placed in the same bed, with only fresh



fresh sheets; for the crouds that hourly sickened, compelled us to be thrifty in the general use of bedding and blankets, so that he happened to be lodged in the same spot, even before death had quite chilled the putrifying body, which was displaced, to make way for him. He was instantly attacked by the same dreadful disorder, and, after a short struggle, fell a victim to it.

Ulcerous  
fore  
throat.

A third man was condemned, by hard necessity, to the same fatal abode, and soon shared the fate of his comrades. Rouzed by so many melancholy proofs of deadly infection, besides what had been already attempted, I ordered fresh bedding of every sort, the boards all around to be scraped, and thoroughly washed with vinegar: depending on this, but rather compelled by the scanty space that was allotted to the sick, a fourth victim, in the same deplorable manner, fell a sacrifice to this irresistible contagion.

Now



Now again the ill-fated spot underwent a most rational purification; vinegar fumes, burnt gun-powder, kindled refinous substances were used in abundance; all the contiguous parts were scraped, washed, and fumigated. A fifth man we thought, after all this precaution, might safely be ventured; but, alas! the event frustrated our expectations, for he too was attacked with the same disease, and not without much difficulty escaped perishing in it.

THUS after all we could do, the spot continued more dangerously infectious to the next comer, than (I suppose) any leprous house was ever known among the Israelites, though no signs were manifested upon the walls here; yet having lost four brave men, and having with difficulty saved the fifth, I was as much satisfied of the danger belonging to it, as any farther ocular demonstration could have conveyed to others. I therefore prohibited  
any



any more men to be lodged there, till after a longer interval than seven or eight days ; and yet, notwithstanding this precaution, the soldier who next lay there suffered a like attack, though he had the good fortune to recover from it, but not without much difficulty.

THIS instance clearly demonstrates, that nothing short of scraping away the whole external surface of the floor, as well as of the walls, and thereby substituting an intire new layer of the whole inside of the house, is capable to extinguish the seeds of infection in certain diseases once sown, nor to prevent them from breaking out after a long time, even in this cold northern region. But to effect any thing like this in a general way, in large hospitals, or in small regimental infirmaries, would be intirely impossible, on account of the wretched places that are commonly chosen for that purpose.



Experiments  
made with  
a design to  
obviate  
these evils.

URGED by these motives, I made several experiments, with a design to obviate such dangerous evils, which I shall now proceed to relate circumstantially; and as I go on, I shall appeal, concerning the truth of what I advance, to the evidence of some men of the most exemplary candour and honour in every point.

Temporary  
sheds  
proposed.

IN October, 1758, a greater number of sick, as before hinted, were landed out of the transports on the Isle of Wight, than all the spare out-houses, barns, and empty cottages, which could be procured for money, or the sake of humanity, at Newport, were capable of containing. In this distress, some Gentleman of the hospital proposed to erect a temporary shed with deal boards, upon the open forest, and to have it thatched over with a coat of new straw, thick enough to keep out wind and rain, and capacious enough to hold one hundred and twenty patients, or upwards; for  
doing



doing which, and the use of the boards, the country workman, who was undertaker, exacted forty pounds. Although the hovel was finished in a fashion the most slovenly, and apparently inadequate to the end proposed, upon trial it was found, that notwithstanding much extraordinary cold, as well as moisture, which the sick there lodged had suffered; remarkably fewer died of the same diseases, though treated with the same medicines, and the same general regimen, than died any where else; and all the convalescents recovered much sooner than they did in any of the warmer and closer huts and barns hired round Newport, where fires, and apparently better accommodations of every sort, could be provided for them.

Great advantages derived from them.

THIS fact, so remarkable to all people the least conversant about the sick, did not escape Mr. Adair's notice; who being Inspector of the regimental Infirmaries, about that time happened



Caris-  
brook  
Castle  
converted  
into an  
hospital.

pened to sojourn ten days, or longer, with these troops; and remarking, that this currency of fresh air had such amazing salutary effects upon the men hutted in the forest, he procured an order to convert Carisbrook Castle itself, situated upon the extremity of a very high ridge of land, into one large general hospital, where near four hundred sick might, on occasion, be lodged together, and regulated by the hospital guard, according to the directions of the Physician. At first it was expected, the sick brought to that place would do better than their comrades, who were lodged up and down in the miserable huts of the town, or than those upon the wild bare forest near Newport, under that occasional hovel; yet the event verified our conjectures only in part; for though the Castle

The open  
huts still  
better  
than the  
Castle for  
the reco-  
very of the  
sick.

was more prosperous to their recovery, than the small rooms in low roofed houses, yet more proportionally of the foresters were recovered, and that much sooner than any of the rest; and

it



it evidently appeared, that all the damage and inconvenience the men suffered from cold, or redundant moisture in that place, was much fitter to be tolerated upon the whole, than the mischiefs complicated on the sick, by huddling together three or four hundred men, and upwards, under one roof, and in the outhouses adjoining to the Castle.

I had a farther opportunity to prosecute my enquiry about this matter, in the second campaign afterwards, in the year 1760; when a dangerous putrid fever made its appearance amongst the sick of the thirtieth regiment, at Guildford in Surry, in their infirmary, which was remote from camp about five miles. This place for the sick was crouded with more than four times the number it ought to have contained; therefore, on my first visiting the house, I strenuously remonstrated against that pernicious practice of huddling so many sick in so closely con-

The advantages of well-aired temporary huts, still farther demonstrated.



fixed a place : Whereupon, General Cornwallis ordered me to give constant attendance there, and to direct whatever I judged necessary to be done on that occasion.

SAND-HEATH, near Ripley, is a common, or waste land, of a dry sandy soil, in the usual place of encampment; its front extending along the side of Guildford New River, and is separated from the neighbouring enclosures, by a marshy piece of ground in the rear, which on one side bounds a long stagnating pool several hundred yards extended, at less than one sixth part of a mile from camp, and parallel to the usual front of it. Behind this pond, an ascent of sandy mould gradually slopes, so as to render that soil at all times dry and wholesome, for hutting soldiers in convenient hovels, which may, in a very few hours, be occasionally erected here in the rear of the encampment, at a proper distance, and at an expence to each regiment,



giment, much less, by the end of each campaign, than any old cottage, hired in Guildford town, would have cost in the same time.

I have been thus particular in describing Sand-heath ground (as the probability is great) that in all future wars of this country, upon every well founded apprehension of an intended invasion from abroad, a camp will certainly be formed upon this same spot; as that situation is the best in the whole country for covering the metropolis on one side, and, for securing with ease, Portsmouth Dockyards, and also for maintaining a certain necessary chain of posts of communication, for the King's troops, throughout all the maritime counties, wherever any foreign Invader may be expected to attempt a landing; at the same time, Sand-heath is within two days long march, to succour Chatham lines, or Essex camps, upon any future pressing occasion.



WHAT, therefore, was done in the year 1760, is easily practicable, with farther improvements, at any time hereafter, when it may be necessary ; and I shall dwell longer on this part of my subject, as it is easy to foresee that this necessity of encamping, will, sooner or later, certainly be imposed on this country ; and because I think it my duty to set forth whatever may, in that hour of trial, be requisite.

Descrip-  
tion of the  
temporary  
infirmar-  
ies.

IN the beginning of September, 1760, when very unusual numbers from the thirtieth regiment, and also some few from other regiments of the same brigade, were daily falling sick of putrid petechial fevers, and when proper accommodations for the sick could by no means be procured in the town of Guildford, I pitched upon the driest and most airy spot, to be hollowed out of that rising ground before-mentioned, in a neighbouring field behind the camp : Near the edge of the hollowed ground, I drove perpendicular stakes,



stakes, about six feet high from the surface of the earth, and placed wattles between them, well coated on the side next the weather, with fresh straw; rafters were laid over in a workman-like manner, and coated thick, like the sides; this made it spacious and airy over head, and yet abundantly warm and dry, for the intended purpose.

UPON this plan, at an expence to the publick of only ten guineas, the thatchers, in the respective regiments, covered in an ample and comfortable hovel, capable of containing about forty sick. The straw, worth about five pounds, was, however, taken from the publick magazines, by the General's order; and at this inconsiderable contingent expence, besides what the Field Officers gave as a private gratuity to their respective Bricklayers, who were ordered to build a large chimney, and to put up a kitchen-grate; an exceedingly comfortable, spa-

The trifling expence of them.



spacious, and sufficiently convenient occasional habitation was constructed, ample enough to hold all the putrid cases, which, after that time, fell ill, and some were left there convalescent till the month of December following, as I understood from one of the Mates who was left behind with the sick.

BUT what I think most deserving medical attention, is, that though several soldiers were admitted into this repository, ill of a true petechial jail fever, only one or two, at most, died in it; and I candidly ascribe their fortunate escape, more to the benefit of a pure keen air they breathed therein every moment, than to all the medicines they took every six hours, or oftner: For, on account of the nature of this sandy soil, there was an opportunity to remove, as oft as necessary, the whole inner surface of the floor and walls, which might be suspected to imbibe and retain any infectious matter proceeding from the patients; and



and the sand so scraped off, was, every three or four days, ordered to be thrown out of doors.

I had a farther opportunity to improve this plan at Winchester camp, in the latter end of the campaign of the year 1761; when the daily returns of the Gloucestershire militia regiment only, amounted to near one hundred men. I took occasion to suggest to Norborne Berkeley, Esq; the Colonel, how easily this, in my opinion, might be remedied or prevented, by a small additional expence, either to himself or to the regiment, as it was only necessary to make temporary huts for twenty-four or twenty-six men in each, by cutting from the surface of the ground into the chalk underneath, five feet deep, so that no rain could ever soak through, when the subjacent platform came to be wattled over and well coated with a covering of straw. As Mr. Berkeley's humanity and boundless generosity, upon all occasions, are known

The former method again tried with advantage.



known to exceed the same good qualities in most other men, I found no difficulty as to expence ; by his order the Pioneers of the regiment immediately cleared a foundation five feet deep, and he bade me give his Carpenter my own ideas of the necessary superstructure : Thus, by a few hours work, the solid chalk was hollowed out thirty-one feet in length, and eighteen and a half or nineteen feet broad, and a little more than five feet in depth, all the way ; then, for the sides of the edifice above ground, they drove in perpendicular stakes at six feet distance from each other, and at a foot distance from the hollow made in the chalk ; wattles, such as are commonly used for penning in sheep, were fastened to the fore-mentioned stakes, to form the walls, over which a roof, of a proper span, was thrown over, and coated with the same materials ; this made a very spacious, airy, though sufficiently warm habitation, into which they descended by  
fix



six steps cut into the chalk under the roof, to prevent slipping in wet weather : A necessary brick chimney was built at one end, and the parts where their head lay next to the chalk, had boards fastened all along, in compliance with the unbounded humanity of the Colonel ; but, in my opinion, no harm or inconvenience would attend their absence, except the crumbling of the chalk sides, if touched or rubbed too much.

THREE such mansions for the sick were erected, with all speed, at about two hundred yards in the rear of the camp, and air holes in the thatch, to be occasionally opened, served instead of windows at proper distances. All men in fevers, whom I judged it safe to remove, were immediately admitted into them from the close Infirmary at Winchester, as well as from the camp. And the effect in less than a fortnight was, to reduce the numbers in proportion as four to one, and soon  
to



to reduce these numbers (twenty-four in hospital) to less than half a dozen. In this manner matters went on to the very end of that campaign, with much fewer sick than ever they had before, and all the men admitted there were cured, except three at most.

THE following year, 1762, the like method was followed on the chalky soil of a different encampment, and the sick were parcelled out in small field hospitals, constructed upon the above-mentioned plan, with the addition of a large airing porch before each hospital door, for the sick, who could crawl out occasionally, to breathe untainted air, as well as to eat their meals in it; one of the three regiments likewise which was encamped there, and now persuaded to this plan, lost not a man during the whole encampment; but I ascribe this also partly to the care and superior medical skill of an extraordinary judicious Surgeon, Mr. Robert Gordon, who enforced



forced obedience to whatever he judged to be right, as to dieting and ruling the sick, and all the convalescents of the hospital.

MEANTIME some other regiments of the brigade, who had invincible prejudices against the above practice, lost several more of their sick, proportionally at Winchester, in that and the foregoing year; and all that time the militia themselves were known to give ten guineas, or more, for a good recruit to supply the place of the deceased\*.

I have thus dwelt so long, and urged my sentiments so fully, as to the utility of these military camp hospitals; because I know, for the maintenance of good order, such ought always to be as near in the rear of the encamp-

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\* Il suffit d'avoir fait remarquer, quelles doivent etre les attentions pour le gouvernement fidele des hopitaux, tant des armées que de ceux, qui sont etablis dans les villes voisines de l'armée, afin de prevenir les *desordres*, qui dans cette derniere guerre sont infinis. This was the complaint of the author of *L'Ecole de Mars*.

ment,



ment, as with discretion they may be; for all the Officers will daily find opportunities, for want of something else to do in any fixed camp of this country, to visit and look in upon the sick, and thus they will be enabled to prevent abuses, to remark in time whatever hardship may deserve to be rectified, or to obviate all kinds of neglect towards the suffering sick soldiers. In all fixed camps of this country, I am convinced, such huts as here proposed, may even, with ease and propriety, find existence; and as hospitals, in the usual way of their being managed, have proved so pernicious, for many reasons, to the sick, as every officer of reflection must have remarked, I trust the method above recommended will meet the encouragement it deserves from every commanding officer hereafter, unless something better be occasionally suggested. And in all future expeditions to the West-Indies, or to any Tropical Climates, I hope to see due provision, in time,  
be



be previously appointed, to have a large ship or two from North America, or elsewhere, with lumber and boards always attending the fleet, that whenever a landing is once made good, in any warm climate, occasional huts, such as I have here described, may be constructed at proper distances from the fleet and army, instead of being under the necessity to huddle Officers and common men in the same wretched holds of hospital ships hereafter.

HAVING mentioned Mr. Gordon's regulations, as the best I saw practised, it will not be amiss to lay them before the military reader.

*Regulations for the Camp Hospital Management.*

I. **A** Serjeant to be appointed to the hospital, whose duty is to preserve good order and regularity among the sick, to provide all necessaries ordered by the Surgeon; to keep an exact account of the same open to

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the



the inspection of every Officer; to see that nothing is brought into the hospital but by his order, particularly no strong liquors: Every night, at tattoo beating, he is to call a roll of the sick, lock the door, and be answerable that none of them stir out, but go to bed immediately.

II. THE Pay Serjeant of each company is to pay into the hands of the Hospital Serjeant, every pay day, the subsistence of his men in the hospital, with which all proper necessaries ordered by the Surgeon are to be provided. This account is to be settled by the Hospital Serjeant, with the Surgeon, every week; and by the Surgeon, with the Paymaster, every month.

III. Two orderly men are to be appointed by the Surgeon, to assist in taking care of the sick, at the hospital, who are to take their orders from the Surgeon, or the Serjeant of the hospital, which they are punctually to obey.

IV. No



IV. No man, on any pretence of illness, ought to be excused parade, or any duty, unless he is reported to the Surgeon, and, when reported, the Serjeant, or Corporal of the company to which the men belong, ought immediately to send them into the hospital when taken ill, and in case they are not able to walk, they are to be carried thither.

V. AFTER this order, if any man is found sick in quarters, unless by the leave of the Surgeon, he will be severely punished, and if any Serjeant, or Corporal, shall be found remiss in sending the men to the hospital immediately when taken ill, he will be confined, or brought to a Court-Martial, and degraded for such neglect.

VI. EVERY man that is ordered into the hospital, is to take with him his knapsack, and necessaries, and deliver them to the Hospital Serjeant, who is to take the same into his charge, and deliver them to the man when he recovers.



VII. IF any man, during the time he is in the hospital, shall be guilty of any irregularity, or shall refuse to comply with any orders of the Hospital Doctor, or Serjeant, or make any disturbance, or shall misbehave himself to the Serjeant, or superior Officer of the hospital, he will be severely punished.

VIII. A Centry is to be posted at the hospital door every morning, at the same time as at the head-quarters, whose instructions of duty will be put up at the door in writing, which are to be read to the relieving Centry, by the Corporal of the guard at every relief.

Signed by the Colonel, to enforce the necessary obedience.

*Orders for the CENTRY.*

I. **T**HE Centry is to take care that no patient passes beyond his own guard, out of the hospital, without a ticket signed by the Surgeon.

II. **T**HAT



II. THAT no strong liquors are to be brought into the hospital; if he finds any, he is to acquaint the Doctor, or Serjeant of it, and he is to produce the same before the Doctor to be condemned.

III. He is to take care of the fire, and that no mischief whatever be done to the house, and he is not to allow of any dirt to be thrown, or laid near his post; and is not to suffer any body to enter the hospital without cleaning or scraping his shoes, and, as far as in him lies, he is to prevent too many of the people, who are of the camp, and in health, from paying frequent or long visits in the hospital.

THESE were the out-lines of such general rules as were judged necessary to be established in the camp hospitals in Great Britain; and these I thought proper to insert, as a kind of model for future practice; many other minutiae will easily occur to every person upon trial.



The neglect of the Germans in hospital matters, no example for us.

THE Germans, who speedily recruit their armies, as they happen to moulder away, take very little care of their military hospitals to this day ; and I am not so much surprized at this neglect in them, who are a people of little refinement, and careful not to incur any expences, which are not answered by some manifest and immediate advantages : They adopt this maxim, perhaps, because they observed the prodigious number of men which were daily lost in their own, and too many in our hospitals, by huddling a great number together in close and confined rooms ; and, perhaps, on account of the great charges the hospital accounts were found annually to bring on the publick : For these reasons, I say, it seems, they speculate little as to the management of hospitals ; but this mistake would be soon rectified, had they only practical philosophy enough to discern, that it was owing to certain abuses, and to the want of skill in their own rude and barbarous practitioners, when



when a fair trial of skill came to be made, and not to any absolute impossibility to save many a valuable life.

I have been at some pains to enquire how the French hospitals are managed, and have been satisfied, that this ingenious people, who in all things exhibit a specious appearance or affectation to digest their military matters by rule, order, and method, have certainly established for themselves the best mechanical arrangement of any nation of Europe; it were to be wished their example were to be, on a future occasion, more closely imitated amongst us. But still there is one thing remarkable; though the pay of a French soldier is not, out of France, sufficient to maintain him, yet, the allowance made by the government for their sick, is said to be amply sufficient at all times: They are not only better nourished wherever food is to be had near the army, cloathed warmer, and kept cleaner, but every other mecha-

The French regulations commended.



nical care is practised better amongst them, than we have had any idea of amongst us; and though few of our Surgeons do any more than barely rival the French in the exercise of their own art, yet, after all, much fewer sick and wounded were recovered, or escaped out of their hospitals, than out of ours, in the late war in Germany. Whence then can we suppose this to have happened, but from their greater ignorance or misapplication of physick? For as no nation of this age have pretended to superior knowledge in surgery so much as the French, so they are known to be generally the most ignorant and worst Physicians in Europe, ever since their Surgeons came to impose and obtrude their pretences, in the knowledge of anatomy, upon the world, as the perfection of medical science.

The former precepts enforced.

As Vegetius, in his treatise, is incessantly enforcing his favourite precepts, and acknowledged maxims, about



about duly exercising all troops, to render them perfectly masters at arms; so in this my particular department, I think I can never fully admonish all military Gentlemen, and especially military practitioners of medicine, to an observance of the regulations and precautions already mentioned: and first, how important to the health of an army it would prove, to avoid all manner of nastiness in every encampment; to have frequent attention to shifting and covering *in* all the privies in the rear, as soon as, or before ever they begin to be offensive to those who are at a few yards distance; always to keep as few as possible sick in one room, or indeed under the same roof; and also to air and turn the straw on which the men lie in their tents, twice or thrice a week, in summer encampments.

IN Pimlico Military Hospital I have often predicted what was to happen to several of the idle hypochondriacal *ma-  
lingerers,*



*lingerers*, who, from an inordinate desire to have too much medicine, would sometimes remain there much longer than I judged right. I frequently declared to such, that they could not fail, at last, to catch the hospital fever, and the event has too frequently been verified, where (to avoid the imputation of cruelty, in dismissing a poor man, full of imaginary illness, against his own will) I have been weak enough to assent to his longer continuance in those tainted abodes; and I frequently desired the Mates there to observe the truth of these presages, to procure, on my own behalf, the confidence requisite from themselves, the next time that I was under a necessity to be peremptory in any thing else that I judged to be absolutely right for the service.

I would wish, likewise, to repeat and enforce the necessity of contriving all Military Hospitals as lofty and spacious as possible, to be warm.

I can-



I cannot but totally condemn again the Infirmarys, both in Hilsea barracks, and in Brumpton lines, near Chatham, as prejudicially constructed. In the small-pox apartments of one of these, I found the cieling little more than six feet high ; yet, in each small room of this sort, sixteen loathsome bodies were often crowded ; and, so insensible had the builders been, of what was requisite in the construction of them from the first, that the small lozenge casements of these rooms were made without any openings, and no ventilator had ever been provided for the use of any of the wards. To these circumstances, chiefly, I must ascribe a very great proportional number of spotted fevers, which usually appeared among the sick last Autumn, before the plenary eruption of the small pox at Chatham : All the attending Surgeons and Mates could discern these petechial eruptions totally differing from the variolous ones. It is from a desire to remedy the like manifest errors,



rors, that I have ventured to declare my opinion, thus contradictory to measures which have the sanction of publick authority.

AND lastly, although I have already treated concerning the medical qualifications requisite for the advantage of the army, that I heartily wish were more general in all such Military Practitioners, to whom the care and management of every regiment is committed; and although I mentioned that none but Physicians were adequate judges to determine when a requisite number of all these qualifications concur in any Practitioner: I shall yet hazard some farther conjectures about other characteristics in the Doctor, which will be found equally advantageous to the regiment, with the former, and of which every Field Officer is equally as good a judge as the best Physician.

EVERY Field Officer is supposed, of himself, to have laid down some particular



cular system of order, for the management and interior guidance of the battalion under his command; and to acknowledge, as the first principle of his own power, an absolute necessity for a constant and unremitting spirit of subordination, to actuate the whole. I think the Doctor's power, in a military or camp infirmary, should be as peremptory as that of the Commanding Officer, over all his corps out of that place; he should, therefore, digest some sensible rules and orders for the management of the sick immediately under his direction, more especially as to the dieting of them; a circumstance that is always to be attended to immediately at the time, and does not here admit of any positive rules: He should likewise be ever careful as to airing and cloathing them properly, and whatever of his regulations are approved by the Commanding Officer, should be enforced by a necessary mandate in writing, ever to be affixed in the hospital for the information of  
the



the foldier, that no tranfgreffion be connived at, through a pretence of ignorance.

MANY foldiers, I have known, fuffer moft inveterate rheumatifms, and fometimes a total lofs of limbs, befides many other obftinate chronic difeafes, from the mere want of an additional warmth in cloathing: I have feen many of thefe difeafes baffle the aid of all medicines but flannel and warmth; therefore, unlefs the Surgeon, with the Colonel's approbation, may occasionally put the men in hofpital, under proper ftoppages, or enforce fome other practicable means to purchafe fuch fimple, yet neceffary additions, to their general cloathing, a regiment may pay a poor fellow his fubfiftence many whole months together, and yet he may, and often does, continue all that while utterly incapable of doing any duty, for want of that additional fupply to his ufual cloathing, which might be purchafed  
for



for about eighteen-pence, in a coarse flannel waistcoat. I have mentioned this familiar instance, rather than any things that are more complex, as I am convinced, simple as it may appear, it is at any time unlikely to be attended to, for the benefit of an individual, by a Field Officer, unless first suggested to him; more especially as a *general* provision of things of this nature would prove so far from being advantageous, that it might indeed be prejudicial and detrimental on several accounts: simplicity as to food, raiment, &c. should be the general objects of military men in camps and on service.

ANY sensible and humane Doctor might readily find out several such observations, as that above, equally pertinent to the general weal, by methodically digesting his thoughts for the Colonel's concurrent approbation, according to the dictates of common sense, humanity, and his own experience.



rience. The Doctor, too, should manifest, by all his management of the hospital, an inviolable attachment to method in all things, to fixed hours of dressing the wounded, visiting the sick, preparing their medicines, and proper medicated drinks, that the patients may never be in want of these things ; for I know, without a fixed method of doing business, wherever there are many sick, they must often suffer very much. The soldier, whilst in hospital, should be kept often either upon half diet, or, in fevers, upon less, as the nature and circumstances of the disease require ; his unexpended pay, however, should never, at those times, be sunk in any purse but his own ; it should be saved, little or much, in aid to purchase stockings and shoes, and other necessaries for him ; for those articles, kept always in good order, prove exceedingly conducive to the health of weakly men : The Doctor, or Medical Supervisor, should, on his first admission, then, give in a scheme

to



to the commanding Field Officer of the corps, and set forth in writing whatever method he proposes to prosecute in such regulations as we have mentioned. This practice throughout the army, would prove a new school of improvement, as it would put some few men, of an inquisitive turn, and of more reflexion than ordinary, upon new experiments for the general good: Upon this institution, each Doctor, within the first month after his appointment, should be obliged to inform himself of all regulations commonly practised in the service; and having formed his judgment upon the best models, from a natural emulation for honour in his profession above his fellows, he would quickly produce both rational and judicious practice in his art, as well as most useful hints towards farther improvements in his hospital arrangements.

As I wish, for the honour of the profession, that there should not be

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any



any opportunity left, to the Hospital Director, or to any other medical man, to touch the pay of the foldier in hospital, nor to contaminate liberal men's intellects with any oblique glance at fordid or dishonourable means of low gain ; the more effectually to prevent such abuses, I must urge again, that the medical establishment ought to be made more apparently respectable, than as it is now appointed, in expectation that learned and ingenious men may, in this time of peace, come into those employments ; for such men would soon evince, that this new establishment aims farther than at the mere humanity of the proposal, as it also implies the most cogent motives of a wise policy, *the best means of preserving the lives of many useful and brave men.*

I am conscious, that the foregoing sheets have to encounter in the world, with the prejudices of old establishments, and the severest strictures from  
some



some interested and angry parties, who may neither deign to enter into the merits of their cause at all, nor to shew publickly, by setting their names to their own works, the opinions here advanced to be false or chimerical; it will not therefore surprize me to find all my proposed reformation intirely discountenanced by such, or to have it forgotten totally through their interest, before a new war breaks out in this country, or that some malevolence towards the Author may attempt to whisper it down, unconfuted publickly by any man of character, or to stifle the consideration of it in the birth: But the candid searcher of truth, and every military man, who understands his own profession as a matter of science, will discover my design here has been, as on all occasions, warmly disposed to find what I take to be true, and earnestly to promulgate the same for the sake of others, without all that cautious reserve, or solemn guise, which cunning



men find conducive to their purposes to assume. Upon the severest review of what has been said, I can honestly persuade myself, that on this subject I have employed my time and faculties rationally and disinterestedly, and therefore I willingly abide by the decision of the judicious Officer, whosoever has, at any time, considered his profession systematically, and not as matter of mere hazard, and blind chance. I hope such may approve my arguments not inconsistent with their own sense : And I chiefly desire, that the indulgence I enjoyed in this country, through the benign administration of the two late Secretaries at War\*, may be herein proved to have been honestly and laudably employed, in the way of my profession, for the future good of the service, and in search and pursuit of useful knowledge. If I am so happy as to obtain such approbation as theirs on this occasion, I shall

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\* Lord Viscount Barrington, and the Right Hon. Charles Townshend.



regard it as the greatest and most acceptable recompense to my mind, which truly feels itself far above sacrificing its philosophick satisfaction in honest liberty both of speech and writing, to the most alluring prospects of favour, that might possibly be expected, by concealing those opinions which may not be pleasing to some people, stiff in attachment to their own old methods, nor to others, interested to prevent every essay towards reformation.

HERE I rest the first or popular part of this treatise.



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 ceptable recompense to my mind,  
 which truly tells itself far above facti-  
 vity, as a philosophick foundation in  
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 glory, that might possibly be expect-  
 ed by concealing those opinions which  
 will not be pleasing to some people;  
 but in attachment to their own old  
 methods, not to others, inclined to  
 prevent every thing towards reform-

I have I will the first or popular part  
 of this treatise



PART II.  
CONTAINING  
MEDICAL  
OBSERVATIONS  
ON  
MILITARY DISEASES  
IN  
GREAT BRITAIN,  
MADE IN  
The Years 1758, 59, 60, 61, 62,  
and 63.

Quoniam autem ex tribus Medicinæ partibus, ut difficillima, sic etiam clarissima est ea, quæ morbis medetur, ante omnia de hac dicendum est.

Vide *Celsum in Præfatione*, lib. i. *de Medicina*, p. 4. Lugdun. Batav. 1746.









P A R T II.

CONTAINING

M E D I C A L

OBSERVATIONS

ON

MILITARY DISEASES, &c.

**S**INCE military life is every instant obnoxious to all the common evils of human nature; and since the changes experienced in it, are more variable, instantaneous, and general, than any other stable mode produces, the Physician, and competent judge of nature, will not at all be surprized to meet here the following position, to wit, That diseases of all kinds, in war time,

Soldiers more obnoxious to diseases, than any other set of people.



time, commit greater waste on all those who follow an army, and rage continually with more desolating havoc amongst soldiers, than amongst any order of men in civil society.

WHOEVER will only one moment attend to what he himself must have remarked, from the effects of little sudden changes on his own body, will readily conceive, that innumerable greater miseries of all kinds are entailed upon soldiers; and that *they* suffer more in every extreme, but in ease and luxury, than any other which their fellow-creatures at any time are condemned to endure. In all or most of their sufferings, however, by diseases, there is some appearance of order, or particular series, which nature observes in the dispensation of them; not perhaps strictly successive or altogether exactly regular, yet still in some sort concomitant, or rather dependent on external things, viz. the seasons, climate, diet, &c.

These diseases, however, have a certain order, and a connection with seasons, climates, &c.

FOR



FOR this reason I propose to treat of the following disorders, whilst yet the remembrance of every particular is still recent on my mind, in the same order which they themselves generally assume, whenever troops are ordered out of quarters of cantonment, to take the field, which seldom happens with us before very late in the spring, or oftner towards the middle of summer; and in that order, in which, by referring to my notes, I find distempers commonly succeed each other in the course of several seasons, during which I was present with the troops.

THIS design of treating diseases, as connected with certain seasons and climates, and the robust constitutions of soldiers, I would have the reader to keep always in view; because the identical medicines and the identical disorders act with quite different effects, when these circumstances are varied in any considerable degree. As this likewise is not designed as a systematic treatise of disorders, the reader must



must not expect to find a very minute and prolix detail of their nature, symptoms, and method of cure; my purpose is only to mark those things which deserve most notice, and such methods of cure as the present practice has not, as yet, sufficiently, and perhaps not at all, adopted.

WHEN I am found to have prescribed more liberally, and, in some instances, unusual doses of medicine, let it be considered, that I practised on the athletic constitutions of soldiers, framed by nature to endure more than those who are enervated in the delicate and soft lap of luxury and effeminacy. Let it be considered, that reason and unerring experience are the guides I follow, without regarding the methods common in great towns, which seem calculated to create unnecessary mystery in the profession, to underdose the most valuable part of a medicine, and to load the wretched patient with a farrago of useless compositions,



positions, rather than to ascertain or give a fair trial to the more undoubted virtues of a few simple remedies.

IF the Bark, when it was first introduced into Europe as a febrifuge, had been always administered together with a great number of other ingredients, what could be expected from the small quantity of it, which accompanied every dose? But, if it was still farther compounded with things which destroy its virtue, who could, at this day, call it an useful medicine?

### *Of a COUGH.*

A Soldier's cough is the first, and usually the simplest, of all his diseases; and, were it not on account of the absolute inattention of the patient, would seldom, in summer, stand in need of the Doctor's assistance; however, if it adhere to a man for any length of time, it no longer is merely a troublesome complaint, but also becomes a dangerous one, by establishing

The  
Cough.



ing a foundation for various pulmonary and chronic complaints.

Bleeding  
recom-  
mended.

WHENEVER, then, a Regimental Doctor hears any soldier in the ranks, or elsewhere, cough violently and frequently, especially if it jars the back or fore-part of the head, in the direction of any of the longitudinal or lateral sinus's of the brain, or if coughing makes the eyes strain much, or start, or causes the least head-ach, or forces away the slightest streaks of blood, or makes the eye-balls sore to the touch, bleeding is, above all things, necessary, and a minute enquiry is to be made concerning all its symptoms, on the first discovery of it: For, if the Doctor overlooks these things, it is very much if the poor, supine, insensible soldier, will not so totally neglect himself, that before the campaign is over an obstruction shall be fixed on his lungs, and this, probably, may terminate in a true phthisis, especially if the patient is under thirty years of age.

BLEED-



BLEEDING, therefore, in the beginning, to ten or twelve ounces, proves a great relief, and immediately after it the patient should dilute plentifully with well boiled smooth water-gruel, and keep warm for twenty-four hours: If any thing is farther requisite, it will be fully included in two drachms of nitre, taken in every quart of warm water-gruel, throughout the day, and by abstinence from all fermented drinks and flesh meat, for forty-eight hours.

Nitrous  
draughts  
recom-  
mended.

It seldom happened that a cold with a cough was not removed by this method, unless it was also attended with a fever; and in that case it required repetition of bleeding, at proper intervals, of once in three or four days, and perseverance in the same methods with nitre, until the symptoms were relieved.

*Of the ACUTE RHEUMATISM.*

IT almost always happens, by the irregularities of soldiers on leaving their winter-quarters, that some, upon a march,

Acute  
Rheuma-  
tism.



a march, are seized with acute rheumatisms; for those men, though composed of the strongest stuff, as long as ever they are unaccustomed to fatigues, in the opening of every campaign suffer from a thousand irregularities, which their inexperience and folly run them into, as soon as ever their march rout for encampment arrives at any of the quarters, or as often as ever any alterations are made from their present mode of life, whatsoever it is. Drunkenness upon the march is a very common irregularity, and at the same time the principal source of more acute diseases, for the first week or ten days after troops have taken the field, than any other cause whatever.

A poor fellow, who by chance gets drunk upon leaving winter-quarters, on the march, usually sleeps it out upon the baggage-waggon, or under a hedge, or in a ditch; in the latter case, he heats his blood afresh, by hard exercise, and much bodily fatigue,  
to



to overtake the regiment, and to escape punishment; then flakes his fiery heat with large draughts of cold water, and thus, by chilling his blood, induces a fizy lentor in the circulating fluids, which, as they are obliged to pass through all the natural channels and strainers of the body, form obstructions, sometimes in one part, and sometimes in another.

WHEN the muscles immediately under the skin, or, I rather think, primarily the cellular membrane, that immediately intervenes between the inside surface of the skin itself, and the subjacent muscles, comes to have its vessels much obstructed, and the coagulating blood forced upon the dilated ferous arteries; then the natural tone of the fine vessels in those parts becomes weakened, and a local inflammation is brought on; if this proves very general in those vessels, so that the nervous fibres come to be much preternaturally distracted, it occasions

I acute,

Proximate  
cause of it.



acute, pricking pains, upon motion, or sometimes without the motion of those muscles, or of that extremity of the body which is affected. This condition of the part, if I am not mistaken, becomes the efficient cause of what is called an acute rheumatism, the symptoms of which, as they usually appeared, I now proceed to relate.

Diagnostic  
symptoms.

WHEN a person is at any time attacked with sharp, excruciating pains of the limbs, a slight fever, a darting anguish to the very center of the bones, quite a-crofs, which they often preposterously compare to dogs gnawing there; when the external superficies of the place swells, is often affected with much pain upon touch, and in a while is considerably enflamed: When these all together bring on a smart fever, whereby, at night especially, all the complaints are aggravated; when the pain of the disease frequently now shifts to near the wrists, shoulders, or knees, as well as to several parts of the trunk



trunk of the body, and frequently leaves a redness, or some swelling in that part which was last affected : When all, or most of these symptoms appear, they form the acute inflammatory rheumatism.

THIS, as often as it is judiciously treated, in the plainest antiphlogistic regimen, is, for the first time, carried off, in strong athletic men, as soon as ever the fever, that begun with it, is subdued, and fully terminated, by the treatment soon hereafter to be directed : But it oftenest happens, that the present attack is not the first the patient has suffered in his life time, but commonly is a repetition of some former of this same kind : The latent indisposition in the blood being stirred to action, by taking fresh cold, or some such cause operating at this time ; in which case, as well as in some others to be mentioned in the sequel, the methods of cure were required to vary.

Distinction of the recent inflammatory, and indolent cold rheumatism.



Treat-  
ment of  
the inflam-  
matory  
kind.

IN the simplest cases, when the patient was under middle age, of a stout athletic habit, with brawny limbs, and attacked for the first time, I made no scruple to direct bleeding largely as soon as ever I was master of the case; and I think it mattered not from what vein soever it was taken, that lay most favourable for puncture of the lancet. Then I immediately directed the following regimen: that, for diet and sustenance, the sick should be enjoined only to drink, for some days successively, the greatest quantities of smooth boiled water-gruel, that their stomachs would endure; in each quart of it I directed two drachms of pure nitre to be dissolved, with or without sugar occasionally, and I repeated, at proper intervals, as often as ever the stomach would bear it, large draughts of this nitrous decoction warmed; by which method I often prevailed on the soldiers to take even ten drachms of nitre, or more, the first twenty-four hours, in three, four, five, or six quarts

Nitre recommended in large quantities.



quarts of this diluting drink. So much nitre cannot generally be administered without danger of too much stimulus, unless it is given in those copious draughts of an attenuating drink. And this method was sure to prevent any mischief from that stimulating salt.

IF the disease ran still higher, or became more painful the night after the first bleeding; if the fever did not abate, and especially if there was but little, or but bad rest at night; I ordered the next morning twelve or fourteen ounces more blood to be taken from a vein, and repeated nitre as liberally as I had directed it the preceding day: But if the blood last flowing towards the end of the second bleeding, appeared more attenuated, and less gelatinous on its surface than before, I seldom ordered quite so much in quantity as twelve ounces at the third bleeding; but then insisted with the sick that they should dilute as copiously on that day, as on any of the



former, with nitrous gruel and barley water. When I found that the nitre became tolerable to the stomach, I taught the patient to dissolve half a drachm of it in a small quantity of boiling water; and when this solution was cold enough to bear it, I made the sick swallow it down, and dilute with half a pint, or thereabouts, of warm water-gruel, barley-water, or sage, balm, or mint tea. This quantity of nitre I repeated every hour, or oftener, as the stomach would bear it; and thereby I have often extended, as I said already, the doses of nitre to ten drachms, or sometimes to more, throughout every twenty-four hours. Such quantities, in three or four days, seldom failed wonderfully to relieve the patient, and very often to cure him intirely by the most plentiful and profuse sweats, which, without any other than the method here recommended, frequently continued without interruption, till near the crisis.

IT



It was very seldom requisite to bleed oftener, in the fresh rheumatism, than five times in the whole cure; and the sick had a farther advantage, by enjoining to them so much attenuating drink, that the weight and bulk of it, together with its lubricating quality, and the action of the nitre, became a sufficient stimulus to the intestinal coats, to procure one or two copious laxative stools every twenty-four hours; thus the necessity for much purging, or for repeated clysters, was hereby often obviated. In some few patients, however, whose sweats were most salutary, no quantity of nitre would open the body sufficiently; and therefore, in such of the silk, emolience t clysters daily injected and made with twelve ounces of thin gruel, two of common oil, an ounce and half of lenitive electuary, with half an ounce of nitre, procured the necessary cooling discharges by stool, and seldom made farther purging necessary. The men, treated in this simple regimen, were



commonly restored to health, and radically cured of the most painful inflammatory rheumatism in seven or eight days, without any pomp of more compound medicines: But this plain method was confined strictly to those, who now for the first time, and in their prime of life, suffered these severe and troublesome complaints.

Reasons  
for this  
practice.

As I have thus proposed nitre to be tried hereafter, in quantities so much greater than have been usually prescribed, I will, as an apology for my presumption in this matter, appeal to experience; and I beg leave to call to the remembrance of Gentlemen, the inefficacy of the practice, whilst Physicians about this town commonly expect a critical sweat from the daily use of sixty grains of nitre repeated fourteen or twenty days together. I am assured, from numberless instances, that in stout young men, by taking six hundred grains daily for four or five days successively, and diluting plenti-



plentifully, as before recommended, *plain nitre* proves the most powerful and best sudorific in such complaints, that I have ever tried ; and this quantity, or even more, may be retained in the stomach, and pass through the course of the circulation, by only diluting properly with those thin attenuating beverages, as before recommended. My own stomach will almost, at any time, bear half an ounce of nitre, and sometimes six drachms, dissolved in or diluted with three pints of smooth well-boiled gruel ; and this quantity swallowed in about half an hour's time, proves to me almost an unfailing antidote in the beginning of every incidental fever from mere cold ; I have besides seen some hundred instances of the like good effects of it upon others. Nor did I ever experience, from so large a dose, any farther inconvenience, than once being obliged to get rid of a quart of gruel, in which I had dissolved six drachms of nitre ; but I think the feverish indisposition  
of



of my stomach, at that time, was the occasion of it; for after I had ejected it, and drank some thin warm broth, I was quickly well again of my fever and sickness at my stomach.

I know certain prejudices subsist against the use of such large quantities of nitre, on account of the degrees of actual cold it is known to produce upon being dissolved in water. I will therefore say a few words on this subject, not strictly medical, yet, I hope, not altogether impertinent in this place.

MANY neutral salts, in the act of solution in water, produce a surprising degree of cold; and this fact applied in the common business of mechanical life, to congealing of snow in hot countries, and also when a greater degree of cold than ordinary is necessary in this country, to re-freeze snow or ice beginning to thaw, Confectioners usually add a few handfuls of salt or nitre to the ice or snow, which not only stops the thaw that  
was



was begun, but also superadds to the mass an immediate degree of cold, sufficient to re-congeal the whole into one solid intire substance. This observation in physics, has, I fear, been too hastily transferred into medicine; and on this account, I suppose, nitre came to be unfairly condemned for its frigorific effects. Frigorific effects of nitre are only momentary.

IN order to ascertain the rate of cold, as well as its duration, produced by dissolving the greatest quantity of nitre in a given quantity of fair water, I poured two equal measures of heated water, out of the same tea-kettle, into two water-glasses, and immersed one of Farenheit's pocket thermometers, of the same scale, into each glass, the water being so hot, that the mercury rose in both, from the 66th division to the 120th. At the instant before ever any notable degree of cold came on either, in which the mercurial gage stood at equal heights, I threw about two ounces of the powder of nitre into one: Experiment.



one : In four seconds, the mercury subsided from 120 to 105 degrees ; and when the muria cooled to 91 degrees, the fellow glass, with water only, raised its thermometer to above 100 ; but when the nitrous solution had well nigh fully taken up all the salt it could hold, then the heat of the water in each glass approached to equality, and became at last quite equal ; and the whole series of different rates of heat in both glasses, were as follow ; the first column bearing reference to the simple water, the other column to the nitrous solution.

Another  
experi-  
ment.

120	105	IN very cold weather, and when the mercury stood at 27 degrees, I immersed the thermometer into some newly drawn spring water, which immediately raised the mercury to 40 degrees ; when it ceased to rise any higher, as much nitre as could be dissolved in that quantity of water, was thrown into it, and the mercury
116	104	
111	100	
100	91	
82	74	
78	72	
70	66	
66	66	



mercury instantaneously sunk to 30 degrees, and continued gradually subsiding till it came to 27 degrees, as before. By this experiment it appears, that as soon as ever the nitrous solution had reduced the warm water to the former heat of the surrounding atmosphere, the quicksilver in the thermometer fell no farther; but each liquid in the different glasses, making the quicksilver in the thermometer alike stationary, manifested both glasses containing an equal heat.

HENCE, and from the former experiment, it appears, that cold, generated by the solution of nitre, is only momentary, and not long durable: Hence also we may conceive, why nitre taken in substance, or electary, sometimes brings on the most excruciating pains of the stomach; and why the most speedy and effectual cure of that complaint, is a large draught of broth, as hot as ever it can be swallowed down.



Treat-  
ment of  
the chro-  
nic rheu-  
matism.

THE summer rheumatism, which attacked those who were not endued with strong athletic constitutions, but who had frequently before experienced the like complaints, I treated in a different manner from that already mentioned. I altered my former intention to take the cure altogether out of the hands of nature; I now became much more sparing in taking blood; I insisted on the nitrous regimen only four, five, or six days at most, and ofteneft on the sixth day interposed a purge, with manna, and infusion of fena leaves; on the next day I began with decoction of the cortex peruv. which, if not contraindicated by much increase of the fever, I persisted in giving an ounce in decoction every day, till the ninth, or tenth; and then, if necessary, on account of costiveness, I repeated the aperient purgative; I also gave the next day the strengthening decoction as often as before, sometimes with two drachms of crude sal ammoniac added

to



to it; and this method prevailed in the second sort of bad rheumatism, and relieved great numbers, for by the ninth or tenth day the urine deposited a lateritious thick sediment, which was seldom even disturbed or interrupted longer than for a day at most, by any mild purgative, given to cool the body.

BESIDES what has been already mentioned, many soldiers, at all seasons of the year, are attacked with vague rheumatic and flying pains, which at first prove barely troublesome, and it is only after suffering a while, though without much fever, that the distemper gathers strength so far as to make the patient an object for the hospital. Whenever it was only a mere cold rheumatism, or a simple accession of temporary heats now and then returning without chills or rigours betweenwhiles, I cautiously declined the antiphlogistic method in its full extent, and only aimed at moderating the  
the



the complaints, not at removing totally the disease by bleeding and nitre only ; and this was my scope particularly, when, besides the erratic complaints of the limbs, any pain was constant in the hip ; or if the puffy swellings were near to any of the joints, and no great heat or florid appearance on the surface, as happens to be the case for the most part in old rheumatics.

Blisters.

IN such circumstances I indulged freely in the application of blisters, but directed them chiefly to the back, often to the affected parts, and always, for a considerable time, renewed the ferous discharges, by applying the epispastic ointment occasionally, during the violence of the disease.

Scarifying.  
ing.

AT other times I ordered scarifying on the affected parts, when, by long continuance of the disease, the membranes might be supposed much loaded and thickened ; and this, or emollient poultices, often surprizingly and suddenly



suddenly removed the remains (if any) of the inflammation, as well as the pain of the parts. In the mean while, I found the combination of the volatile salts with nitre, and much dilution of it with attenuating drinks, answer better than nitre alone, in these cases; and even here likewise I often gave half an ounce of nitre, and sometimes more, with half as much sal. vol. C. C. or sal. vol. sal. ammoniac, in twenty-four hours. If the pains continued excruciating, after a second bleeding, I did not hesitate too long, but gave, on the third day after I observed them, elixir paregoric to full half an ounce, diluted properly in thin liquors; and if the pains returned with greater violence at one time than another, I generally seized the times of remission, to give the bark a fair trial, either in substance, or in decoction; still continuing to exhibit at night the paregoric elixir, and to keep the body occasionally laxative with clysters, or aperient purgatives, till ten days, or a

Bark administered during the remissions.

K fortnight



fortnight were past. Sometimes, however, the obstinacy of the disease still surpassed the efficacy of the methods here proposed, and obliged me to try various other means, according to the most rational intentions on each particular occasion.

IN the cold rheumatism, I have derived remarkable benefit from the daily use of a full quart of the strongest infusion of leaves of trifol. palustre, and from half an ounce to six drachms of tinct. guaiaci volatilis, diluted in two quarts of well boiled gruel at the same time; or at others, when that remedy, tho' accompanied with paregoric elixir all the time failed of success, I have obtained the most salutary advantages for my patients, by giving that preposterous farrago, known commonly under the title of Dover's sweating powder; a combination of opium with ipecacoanha.

Dover's  
sweating  
powders  
commend-  
ed.

THIS I have sometimes ventured to extend to two drachms in twenty-four hours;



hours; as I am fully satisfied the stimulus of ipecacoanha accompanying six grains, or even more opium in twenty-four hours, where enormous pain is felt, so far prevents its narcotic effects, that very few people, who took no more than this quantity, grew delirious, or were affected with any considerable symptoms of this class, in consequence of it; and if any few, by taking sometimes more in quantity, were so, the complaint proved only of a few hours continuance; for it was carried off by plentiful ablutions of gruel, or of any thin drinks taken warm and frequently. Upon the whole, I think this strange remedy answered best in long standing chronic complaints; and in a dose not commonly exceeding thirty grains of the powder, every twelve hours, for a week together, and by lying in bed in blankets, it produced a more plentiful sweat than can easily be conceived, without ocular testimony. So many sick were evidently helped, in consequence of its use, that I ventured



boldly on the administration of opium thus combined; considering an animal body, compounded of two distinct systems, which operate mutually in many morbid cases upon one another, and appear totally distinct; I mean the affections of the living solids, and those of the fluids.

I judged it reasonable, therefore, when the course of the fluids had been checked, or in other cases sufficiently agitated by various stimuli thrown into the mass of the circulating blood, or when they had been duly altered, without obtaining the desired effect, then secondarily to attend to that class of remedies, whose immediate operation upon the body is to alluage or to diminish the oscillatory motions, or irritability of the solids themselves: and, indeed, I have the utmost reason to believe, that an attention to the properties of the living solids, as they deserve to be contradistinguished from the mechanical and hydraulic laws of the  
circu-



circulation of the blood, would greatly promote the extension of the Physicians power and dominion over this, as well as over many other diseases, which too often at length fall under the management of quacks, and old women. To restore the natural equilibrium between the containing vessels and the circulating fluids, the greatest assistance generally is to be expected from narcotics and opiates, especially in chronic diseases. The benefits derived to the languishing or afflicted patients, by their use in hysterical, phthifical, and arthritic complaints, as well as in old scurvies, and in fixed long standing pains of all parts, confirm this opinion; for these, and innumerable other disorders, are greatly relieved, by altering the irritability, or that power of sudden contraction, and consequent relaxation of the fibres, in all the muscular and nervous parts.

THESE reflexions will, I hope, warrant me for having gone farther in



the use of opium, thus corrected by ipecacoanha, than has been usually done in the treatment of old rheumatisms amongst regular Physicians.

IN the more difficult cases of some few, not yet cured in three weeks or a month, in the hospitals, by the fore-mentioned methods, I had recourse to the trial of one of the uncertain tribe of antimonial remedies, duly interposing aperient purgatives, unless such preparation of antimony loosened the body sufficiently to bring off the ferrous obstructions, which appeared to be so obstinately riveted in the finer vessels of some people in these complaints, that nothing but the most searching and drastic antimonials long continued, in small doses, had any chance to remove them. I think it certain, that very small doses of emetic tartar (half, or a quarter of a grain, two or three times a day) form the cheapest, and, in my private judgment, the best of all that class of remedies which  
are

Emetic  
Tartar a  
good alter-  
ative in  
this case.



are usually commended as alteratives; for now and then this seemed to be of service, where most other remedies had failed.

AFTER the use of all resolvent medicines whatsoever, before the cure was perfected, I found the bracing powers of the peruvian bark in some sort absolutely necessary; except after Dover's powders, which often finally perfected the cure without bark, sal ammoniac, or any other remedy, besides water-gruel, which was given in great plenty to rinse the vessels clean in the operation.

A sore throat, and want of the power of speech, were not unknown symptoms in this disease, and were occasioned by a rigidity of the uvula, and dryness of the pharynx, for want of timely bleeding in the beginning: And though bleeding removed such rigidities very soon, yet I have seen in others, for want of it, the limbs totally benumbed, and almost immoveably



Warm  
bathing,  
fomenta-  
tions, &c.  
com-  
mended.

contracted with the rheumatism, for years; and nothing availed at any time but flannels and warm bathing, or the use of warm steams of tepid water, received into an oaken close chair, every other day, for ten days, a fortnight, or longer; and we confined the vapour about the naked body of the patient, placed therein, fifteen or twenty minutes, in order to be a substitute to the external use of dry pumping (as it is called) with Bath waters. This contrivance had some good effects in the very worst cases of all, after the internal use of the most likely remedies, administered in due order, had failed of success.

THUS I generally endeavoured (having patients enough for this intention) to make proper trials, at different times, of every likely method of cure; so far that, where I was concerned, even malingerers, who too much abound in all armies, found no quarter in our hospitals; for I sometimes made  
an



an idle fellow of this sort, whom I found too fond of an hospital life, have the raw part, where a large blister had been applied, washed with weak spirits of vitriol; the smarting pain of which gave, in a little time, the command of his limbs, which, by long disuse, had become almost unequal to support the load of his body; and I often thereby cured him of his disease, and of his hospital propensity, for that time. However, such discipline may possibly appear too severe to the humanity of some people; yet all competent judges of military life (I am bold to declare) will justify even a rigorous perseverance in any method so harmless as this is, provided it were likely to prevent the mischievous effects of hospitals, and of too much physick, which soldiers, as well as some people in higher life, are known to suffer by.

*Of*



*Of the ERISIPELAS.*

Erisipelas,  
its diag-  
nostic  
symptoms.

**A**N Erisipelas is also another of the diseases that make their appearance almost as soon as ever the troops take the field in summer time, and is usually attended with the concomitant symptoms of a smart fever, and a good deal of heat on the surface of the body; sometimes it is accompanied with sweats, and sometimes is without any; with a fiery heat, and florid tense swelling on that part where the Erisipelas is seated. The tongue is generally white, though moist at first, but in two or three days is covered with a yellowish foul crust. This disease is most frequently seen on the upper and lower extremities of the body, and sometimes on various parts of the trunk: I have met with it oftenest, however, about the head and neck, upon newly catching cold. For the first three days the affected parts swell much, and are very sore, but the soreness commonly goes off when the swelling



swelling begins to subside; and when the face is the seat of the disorder, the features are often so enlarged, that you cannot see the eyes. I have frequently remarked the swelling rise all over the head an inch and an half thick in some, whilst in others only one side was affected, and that particularly about the ear, eye, and side of the nose; in some, the neck and upper part of the thorax are much enlarged: All the tense and inflamed parts, however, become relaxed again, after a few days, unless a suppuration comes on the part; which, as often as it happens, makes a tedious and very troublesome complaint. In others, a thin, sharp, serous ichor passes through the skin, and runs scalding down the sides of the adjoining parts; and this distillation of caustic serum, though troublesome, proves a speedier crisis, than the other by suppuration. As <sup>Cure.</sup> the fever, in the beginning, usually ran high, I made no scruple to use the lancet freely; I began with ordering

ing



ing twelve ounces of blood to be taken, soon after I saw most of the sick ; I repeated the same daily, to the third or fourth time ; I gave the most diluting nitrous drinks, in as great plenty as ever the stomach would contain them ; and I kept the body continually laxative with manna, and infusion of senna leaves, and with Glauber's salts. This method, together with giving five or six drachms of nitre every day, in water-gruel, or weak diluent drinks of any kind, proved the speediest and most effectual relief.

ALTHOUGH I have tried the efficacy of bleeding, and large doses of nitre, in very many acute diseases, yet I have met none with more certainty to be cured, than the Erisipelas, by this way of treatment ; nor did I ever once observe the morbid matter to be struck in, upon repeated bleedings, as often as circumstances seemed judiciously to require them : Nay, sometimes the fever was so rapid, that, in spite



spite of the best assistance from art, the caustic humour, in several people, would find its way through the skin, by the fifth or sixth day, especially where the patient was seized in the vigour of health and youth, and with strong fibres: But this exudation proved more tedious, as I said already, than dangerous, for I never saw any person die of it.

I remarked, however, a very particular species of Erisipelas, in the summers 1760 and 1761, with an erisipelatous fever, that commenced with more violent symptoms than usual: The obstructing morbid matter was at first lodged deep in the inside surface of the skin, about the face and neck, which though it was thickened near two inches in several patients, yet the external surface was flaccid and loose, without much apparent redness: To the touch, the tumid parts felt altogether detached from the contiguous muscles, and made a hideous spectacle of

A particular sort of Erisipelas.



of the sick, by reason of its uncommon size.

Its cure.

IN all such, bleeding repeated to twelve ounces, two or three days successively, and three or four drachms of nitre, or more, dissolved in copious thin potions, for continual drinking, successfully promoted the cure. It happened frequently on the fourth or fifth day of this disease, that an extraordinary tumour of the integuments of the scrotum came on suddenly, at which time the other swelling of the head and neck as suddenly subsided, and disappeared: The scrotum frequently grew so large, that both repeated fomentations and emollient cataplasms became necessary all over the affected parts; and, in a few patients, the symptoms were so rapid, that they threatened a gangrene; but a cataplasm of oatmeal, boiled to a proper consistence in old strong beer, and frequently renewed warm about all the swelled parts, prevented that mischief; and



and the largest of these tumours spent themselves generally through the surface of the scrotum, into the poultice; but I afterwards learned, that no poultice, for the use of an army, is so generally convenient, as one made by pouring some boiling water, and a little salt butter or oil, into a bowl; then, by degrees, mix as much flaxseed cake, ground into a powder, as is requisite to make it: Thus a poultice is most expeditiously and cheaply prepared for the use of all military men.

TOWARDS the sixth or seventh day, when the tumour had begun palpably to decrease, and the skin to shrivel and peel away; purging gently with manna, dissolved in infusion of sena leaves, in two or three days completed the cure: For as no acute fever whatever, bears artificial purging so early, without disturbance, as the Erisipelas; so I occasionally fell in with the prejudices of the common men against  
the



the use of clysters, to which many are most unaccountably averse; and I substituted earlier in the disease, instead of them, the use of the milder Arabian purges, to keep the body laxative and cool; and if the sick had either naturally, or by any artificial means, only one stool or two at most every twenty-four hours, farther purging, I think, was unnecessary, till the sixth or seventh day, when a quantity of manna, and infusion of senna, enough to procure four or five motions daily, whenever given, and to carry off the putrid recrements of the bowels, very soon completed our wishes. Unless, as it happened on some occasions, that a blister or two to the back, or to any other part, were found necessary, by way of a drain of the serous discharge, which continued a long while after healing plasters were applied; and, excepting this, I very seldom found occasion to use any other process than as above related, which, from the efficacy, as well as from the facility of it,



it, was better adapted to military life, than any other more complex, or copious *Materia Medica*.

*Of the simple INFLAMMATORY FEVER,  
and INFLAMMATORY SORE THROAT,  
of Soldiers.*

NO disease is so frequent, especially in the beginning of the summer, as a simple Inflammatory Fever, which is ever attended with a quick pulse, a flushing redness in the face, a white, or else a deep scarlet tongue, a general lassitude of the body, and an actual foreness in many parts, as if the sick had been beaten: They are also sometimes seized with rigors, but the fever as often attacks without them; pains of the back, and muscles likewise, and particularly of the eye-balls, most commonly attend the commencement of the disease at this season.

Simple inflammatory fever, its diagnostic symptoms.

WHEN these complaints came on, and especially if they were attended with any difficulty of respiration,  
L nothing

The antiphlogistic regimen necessary.



nothing was so immediately requisite, as a repetition of that same antiphlogistic regimen, so fully recommended already in the cure of the acute rheumatism.

HERE, indeed, I ought to lay it down as a physical maxim, that in all times of an acute fever, and in all evacuations by bleeding and purging in its cure, a due regard and attention should ever be had to the nature of the disease at the time, the strength, age, size, or bulk of the patient, and to the number and danger of the symptoms, wherewith he is attacked.

Scarification and cupping sometimes recommended ;

AFTER large or sufficient evacuations, by bleeding from a vein, I have very often experienced, in disorders of this kind, surprizing good effects, by taking yet a farther quantity of blood by scarification and cupping glasses ; especially when the languid symptoms, still attended with pains of the head, might have particularly forbidden the farther use of the lancet ; or, at such times



times of the fever, when the patient was presumed incapable of supporting any greater diminution of strength.

IMMEDIATELY after the first bleeding, I have generally ordered the patient naked into bed, and to dilute plentifully with any grateful, thin beverage, viz. water-gruel, or balm or sage tea. It is astonishing what kindly and relieving sweats follow in twenty-four hours; and this salutary crisis, the safest and most desirable of all others in acute fevers, is admirably promoted, by adding in all their drinks, as much nitre dissolved, as the sick will bear on their stomachs from time to time. and plentiful dilution. Nitre.

YET this simple practice, I found, was not sufficient in all seasons of the year, in fevers; nor did it generally answer in its full extent, however assisted with other medicines, after the month of August; for about that time, the preceding summer heats have commonly introduced such a de-



gree of putrescency into the animal fluids, that bleeding sinks the pulse too much; at least, it is not to be advised then, in my judgment, so liberally as at other times in a simple inflammatory fever: When the ultimate sanguiferous or ferous arteries *only* are choaked up with a fizy lentor, or obstructed with globules of red blood, too gross to pass through the usual strainers,

IN this last case, therefore, it is obvious, that by neglecting copious and proper bleeding in time, the thinner particles of the fluids come to be dissipated, whilst the remainder is so far condensed, or driven out of its usual series of vessels, that, in a few days, Nature, sooner or later, is obliged to have recourse to another process; whereby a separation is made of the peccant matter, and the morbid particles, lodged upon any part, come to be melted down together with the containing solids, into one homogeneous smooth consistence, known commonly



monly by the name of pus. The various mutations towards this process in all the different parts of an animal system, can be very well illustrated, by recapitulating only what happens obvious to common observation, in the inflammatory angina, quinsy, or sore throat; of which I shall here briefly treat, reserving my observations concerning the *ulcerous and malignant sore throat*, as well as my sentiments upon certain rare and uncommon maladies besides, for the materials of a second volume, which, if what I now give to the world is approved of, I propose hereafter to complete and publish in due time.

*Of the* INFLAMMATORY SORE THROAT.

IN this complaint, the inside of the mouth and throat feels hot, and becomes of a deep scarlet colour; the membranes prick and shoot, and the tonsils swell; the pain darts like a lancet through the parts, the patient has insatiable thirst and difficulty in swallowing; the mouth breaks out;

Inflam-  
tatory sore  
Throat its  
signs.



the nose swells frequently, and is sore to the touch: As the tonsils fill more, and often, when the mouth breaks out, the other parts, at first most inflamed, are now in some degree relieved; the swallowing is often so difficult, that much of the liquids which they attempt to drink, is often returned through the nostrils, not without acute pain. If, in this stage of the disorder, bleeding, lenient purges, blisters to the back and throat, and relaxing steams of water and vinegar, received as hot as may be borne on the parts, have not, after a convenient and proper time, taken back the obstructing matter; but if, in spite of all the aid of art, in this manner directed, for a reasonable length of time, the tonsils continue to enlarge, throb, and inflame more and more; pus forms in a very few days, and the abscess bursts in the throat, and, considering the numbers who thus suffer, it happens very seldom with any great danger in a simple inflammatory angina; but much  
pain



pain may often be prevented, by timely puncture with a lancet in such cases.

A process similar to this often takes place in all inflammatory swellings, sooner or later, according to the situation of the part, and the strength of the surrounding solids; and more particularly according as the swelling happens to be seated more or less accessible to the influence of the open air. As soon as ever any imposthume, Formation of an abscess in general. either naturally, or artificially by a lancet, has poured forth much of its purulent contents, the patient is immediately relieved of pain, and often cured at once of the fever, and most of the symptoms usually attending on it. This manner, therefore, which Nature chuses, and which furnishes a safe enough method of cure in very many instances, should be diligently observed, and always assisted by the Physician. Warm fomentations, and emollient pultices of boiled bread and milk, with hog's lard, or sweet oil enough added to prevent its growing



dry on the skin, ought to be used, with intent to assist Nature in melting down or relaxing the solids, as well as in assimilating the obstructing fluids, into a smooth and homogeneous purulent matter.

WARM fomentations with chamom. and lavend. flowers, or any other aromatic plants that are near at hand, may be applied in flannels to the diseased part: Emollient and gently stimulating pultices are likewise advisable to promote the work of Nature, by deriving the obstructing matter to the external parts, and by relaxing the solids, to admit of this derivation, in such manner, that the pus once formed may be fitted with safety for evacuation, either by puncture, or at some natural outlet. This tendency of Nature, sometimes to terminate fevers by an abscess, is almost always foretold by rigors, or irregular fits of shivering, without any manifest cause; afterwards, by a remission of the feverish symptoms, of pain, &c. besides the exterior



terior signs of the formation, and protrusion of purulent matter, upon some external or glandular part of the body.

IF then a tumour appear in any exterior part, not unsafe to admit of puncture, or of any proper aperture, all other evacuations besides should be suspended, in most cases, till such has been made, and while the discharge of pus goes on favourably; for it is necessary, whilst Nature is performing this her own work, only to keep the patient's body duly laxative with clysters, or lenitive electuary, till the abscess is quite cleansed, and almost healed; and whenever that (as it usually happens) is happily effected by Nature only, I generally omit to direct any farther purging or physick afterwards; for I have often found, that Nature thus works in human bodies more salutary effects, in her own inexplicable ways, than any addition of art can accomplish; always excepting, that if the patient happens to have been much emaciated or exhausted, in  
the

Evacuation prohibited during the formation of pus.



the fore part of the disease ; or if he is prone to profuse sweats, the bark daily, to half an ounce in substance, or twice as much in decoction, with elixir vitriol. often becomes necessary for a week, ten days, or a fortnight, to expedite the recovery, and to enrich the impoverished blood.

HERE I have briefly pointed out the mode which Nature follows, in bringing on the crisis of a pure inflammatory fever, by suppuration : The other methods, by spontaneous purging, vomiting, and other discharges, will be comprehended in the history of other fevers.

*Of the PLEURISY and PERIPNEUMONY.*

The Pleurisy, its predisposing and most general cause.

A True Pleurisy is the disease of spring and winter, and rarely occurs in the end of summer or autumn ; because it arises chiefly from a great elasticity and tension of the fibres, which of course condense the blood to excess, and produce a fizy lentor.

THIS,



THIS, in the athletic habits of soldiers, usually made repeated bleedings, till the tenth or twelfth time, indispensably necessary: And I found that plentiful and frequent evacuations of this kind were more serviceable, when ordered early in the disease, and that the patients could sustain this treatment, than the same quantities and the same numbers, when protracted to a later period, and only used at more distant intervals, according as the urgency of the symptoms would permit. Thus, if for the first two or three days, bleeding had been practised two or three times each day, it proved more advantageous to the patient, than the same number of bleedings repeated only once every day whilst the disorder required it: A proper regard, however, is always to be had to the strength of the patient, the number and violence of the symptoms, &c.

Plentiful  
ful evacu-  
ations ne-  
cessary,  
and to be  
used early  
in the  
disease.

IN this disease, beyond all others, the strictest regimen of diet is entirely  
ne-

A strict  
regimen  
com-  
mended.



necessary: The patient should not only be kept cool and quiet in bed, and debarred wine and every kind of fermented liquors, but he should also live, until the quick hard pulse abates, on the lightest of all vegetable diets, conveyed in the most copious subacescent vegetable potions, which ought always to be given, at least, blood-warm, but never quite cold. Water-gruel, as a mild, saponaceous, attenuant drink, supplied, in military life, the place of almond milk, &c. Or pectoral decoction of raisins, Turkey figs, and barley, boiled according to art, in fair water, and acidulated with vinegar, served for drink, and to cover the taste of whatever small quantity of ni-

Nitre, not  
to be used  
freely  
here.

tre I at any time thought proper to use in the treatment of this disease: For I found, that even small doses of this medicine proved more stimulating in this, than in any other acute disease; especially where nitre met in the stomach, with that inexplicable antipathy, which we too frequently expe-



experience in some people against it, as well as against too many other powerful remedies, to which some constitutions, by that peculiar idiosyncrasy with which they are naturally formed, are most unaccountably averse. **I** Example.

know a noble Lord, of a muscular, athletic habit of body, yet of very tender lungs, and subject to repeated inflammations of his pleura, upon the slightest occasions. Nitre is so offensive to his stomach, and so stimulating, that even ten grains, dissolved in fair water, aggravates, at any time, his disorder; and by the symptoms which he immediately suffers, he can always easily tell when nitre is given, although the quantity should not exceed that small dose already mentioned. In all such cases, it should, no doubt, be entirely laid aside.

IN the inflammatory stage of the Pleurisy, and more especially as it is most frequently attended with a Peripneumony, besides the suddenly repeated



Huxham's  
vinous ef-  
fence of  
antimony  
recom-  
mended.

peated bleedings, and warm attenuant  
forbitions, already recommended and  
deemed so indispensably necessary, I  
use Dr. Huxham's vinous essence of  
antimony, from twenty to thirty drops,  
every six hours, keeping the patient  
cool in bed, very quiet, and support-  
ed throughout the distemper upon li-  
quids only, without any flesh meat or  
broths allowed, until several days after  
all inflammatory symptoms and pain  
are removed. Without farther reme-  
dy, or pomp of art, most soldiers are  
thus to be recovered, both in the Pleu-  
rify and Inflammation of the lungs.

It must, however, be remembered,  
that though a simple rigidity of the  
fibres, and an unusual density in the  
globules of the red blood, most com-  
monly constitute the efficient cause of  
this distemper, which, however un-  
favourable they may be considered,  
are most commonly found to yield best  
and most readily to the method alrea-  
dy laid down; yet in particular *Dia-*  
*theses*



theses of the air, and when the above efficient causes concur, in particular constitutions, and, in certain circumstances, so complicated with others, that the nature of the disease is, in some measure, changed, words cannot easily express all such varieties.

The foregoing methods not to be relied on in certain constitutions of the air.

Bleeding alone, as Dr. Huxham has remarked of the Peripneumony, is not so much to be depended on; at least, until after blistering the side with a large plaister, covered well with powder of cantharides, has brought on a local inflammation and plentiful discharge of serum from that part. When the pain of the side, the tense, hard, quick pulse, and the difficulty of breathing continued on the patient, after so much blood had been already taken away, that the sick man was judged unequal to bear a farther loss by the lancet, I have known cupping and scarifying the affected side, so as to take some more blood away, at that part, give immediate relief. I have seen blistering, in the manner

Other methods recommended.

just



just now mentioned, frequently do the greatest service, when applied soon, on the second or third day, to the affected side, and also to the back; because it often happens that the pain of the side shoots through and upwards to the scapula: But I do not think it is useful to cover the legs and arms with them, though the sympathy between the breast and ancles has been celebrated by medical writers. Nor do I usually begin to blister at all (although I know it is contrary to the practice of very eminent Physicians) until after the fourth bleeding.

IF, towards the seventh or eighth day of the disease, after bleeding so repeatedly, and keeping up an excretion of serum from the two parts already blistered, still the pain and difficulty of breathing continued; I could wish to hint something in favour of a grain or two of extract of opium, but that I fear a full testimony of all I think, as to its utility, might,



might, in this tract for the use of military practitioners, addressed in a popular manner, be liable to be misapplied, and often dangerously abused.

As the attrition and momentum of the blood, in this very acute disease, are exceedingly augmented; the heat of the body is disposed to exceed its proper bounds; and this circumstance is always farther promoted by any costive habit, or retention of the fœces longer than twenty-four hours. In this case, Dr. Huxham's essence of antimony in the aforementioned dose, often disposed the body to be laxative once on each day: But where it did not operate in this manner, oily clysters, injected with a large quantity of decoction of emollient herbs, became necessary, as a fomentation to the intestines, and to effect one stool, or so, through every natural day. Any farther evacuations artificially procured by purgative medicines, seldom proved necessary in any stages of this distem-

M

per



per that I saw among soldiers, subjected to the above method.

Great caution necessary to prevent a relapse;

which is often fatal.

IN this acute disease, great caution should be observed for a good while, even after all symptoms of pain and fever are removed. Therefore, the food should be of light acescent vegetables, and not much more nutritious for a time after the disease is over, than even in the height itself. I have known slight irregularities, or inattention to these matters, bring on a relapse, that ended in an Empyema, and that again, in a \* *Tabes Pulmonalis*. Nay, after an Empyema came on, though the operation was performed

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\* In this disease, repeated bleedings, in small quantities, but according to the strength of the patient, a milk diet, and a free air in country quarters, with moderate exercise, are indispensably necessary to the last, to create an euthanasia for soldiers, who very seldom were known to recover totally from the effects of a very bad Pleurisy or Peripneumony, which had degenerated into a *Tabes*: and I think none were to be cured, even by the above methods, conjoined with any other refinements in the healing art, such as riding, gentle opiates, perpetual blisters, &c. who fell into a *Tabes* from any internal predisponent cause in the living solids themselves, or from scrophulous, glandular obstructions of the mesentery.



as early as it ought to have been, and though I have seen three, four, five, or six quarts of purulent matter discharged by the artificial aperture, in a very few days; yet not one of four cases which came under my notice, in military life, ever recovered; but the patient died consumptive, in six weeks or two months afterwards at farthest; so dangerous to every soldier is any violent attack upon his lungs and pleura, unless speedily removed.

As the Pleurisy and Peripneumony are so much alike in their effects; as they are connected with, and often degenerate one into the other; and as the method of cure is almost exactly the same in both, without any considerable variation; what was said of the former, will apply equally well to the latter; and to have treated of one, is, in effect, to have treated of both. It is therefore unnecessary to allow a separate chapter for the Peripneumony. The antiphlogistic and other methods

Apology  
for aiming  
at brevity,  
so far as to  
omit the  
particular  
treatment  
of the Pe-  
ripneu-  
mony.



of cure ; the manner which Nature assumes to throw off the disorder ; the varieties which certain constitutions of air induce ; and the general regimen, are nearly the same in this, as in the former disease. I must observe, however, that the symptoms are not so suddenly dangerous, nor so violent in the beginning, as in the Pleurisy ; and that the excretion of the morbid matter, by spittle, as it is more frequent here, should also be more regarded, and by no means be discouraged by a perseverance in too copious bleeding, evacuations by stool, or otherwise ; but should rather be assisted by balsamic medicines, early blisters, with a few drops of Huxham's tincture of Antimony, or Ipecacoanha wine, from twenty to thirty drops, which I have often found to prove the best of all expectorating medicines.

THE necessity of frequent and copious bleedings in the beginning of Pleurisies, nay, even after the most violent



violent symptoms are abated ; and the danger and frequency of a sudden transition of morbid matter, or of inflammation, from the pleura and intercostal muscles, to the lungs themselves, will appear obvious to every person, who considers, how many there are who have partial, sometimes total accretions of the pleura to one or more lobes of the lungs. Authors abound in instances of this kind : And, out of sixty adult bodies, or upwards, whom I myself, at various times, have inspected, not above one, or two at most, were entirely free of such preternatural adhesions : Yet, after the most minute enquiries, I could not learn that the patients suffered any remarkable inconvenience from them, in their former life-time.

HITHERTO we have treated of venal and inflammatory disorders ; of disorders which owe their birth to cold, obstructed perspiration, condensed solids, over agitated and consequently

Conclusion of the disorders of the spring.



vitiated fluids ; and which therefore must naturally accompany this season of the year. Whether there are not other more latent causes, which connect these disorders with the spring, may yet be very much disputed. May not that unsearchable principle, which changes and renews the universal face of brute and vegetable beings ; that, which bestows renewed vigour and passions on the drooping, languid systems of the former, and gives new life, new forms, new protrusion and accretion, to the latter ; may not that, too, which furnishes the human race with fresh supplies of health and spirits, have some latent influence on the succession of disorders ? This, as it is more evident in Autumn, we shall enquire into in the following chapter.

### *Of* AUTUMNAL DISEASES.

Autumnal disorders, their most obvious causes.

**A**S this season of the year comes on, the movements and former accretion of many orders of animate and inani-



inanimate beings, are interrupted, and, in numbers, totally at an end; and Nature now commences a new process towards their dissolution, by a mutual intestine action of the particles on each other. Heat and moisture conspire to resolve the dead bodies of reptile and other animals, and the dying parts of vegetables; and the waters, the earth, and the air we breathe, abound with volatile putrescent effluvia, which are at this season scattered around in great abundance, as is fatally experienced by those who are obliged to live in marshy warm countries, near stagnant waters, or on lands annually laid under water by the inundations of great rivers, &c.

No wonder, then, if the tender frame of man, whose precarious existence depends on an infinite variety of contrary and discordant principles, and whose body is every instant pervious to all the minute seeds of putrefaction and dissolution, which are raised into the circumambient air, and even con-



veyed to the most hidden and minutest recesses of the body, along with his common aliment, &c. should, at this season, be affected, and sometimes remarkably impaired, by the influence of such general and such active causes: No wonder if the danger of autumnal diseases is so much greater than that which usually attends disorders of the spring; or, if these tend more powerfully to urge the patient into that common state of dissolution, which at this time so generally prevails.

The greater difficulty of curing them set forth.

IN the following pages, therefore, the reader must not expect to find diseases of the Autumn yielding to the simple, anti-inflammatory treatment hitherto insisted on: He must rather expect to find them tedious, dangerous, and complicated with a variety of symptoms, peculiar to this constitution of the year; and to find the vitiation and excess of animal bile, which the above-mentioned causes very much promote, to affect, in some measure, the genius and nature of many simple, and



and otherwise innocent disorders. Neither must he expect to find me over-studious of extreme correctness or method; but rather, as I already hinted, desirous to introduce simplicity, and to advance, for the benefit of Military Practitioners, many useful and important observations, founded upon Nature; the variety of whose appearances, in the process of diseases, mocks at the narrow limits within which medical, systematic writers have confined themselves, and thereby circumscribed the healing art.

HAVING first premised, that though bilious disorders, for the reasons above specified, most universally prevail towards the latter end of Summer, and in Autumn; yet, that many of them are intercurrent in all seasons of the year, according to an idiosyncrasy of constitution in some individuals; who, without any respect to seasons, are found to generate a quantity of bilious matter, sufficient, at all times, to de-

Bilious disorders are sometimes intercurrent in all seasons of the year.



denominate and to arrange strictly, under this class, whatever acute diseases these people are ever attacked with: Having, I say, first premised this, I shall proceed to relate the usual symptoms of the bilious autumnal fever, which I annually took notice of in our camps, during four years successively.

Diagnostic  
signs of the  
autumnal  
bilious fe-  
ver.

THE sick, at first, felt an uneasy sensation at the stomach; had chilly fits, succeeded by intense heat, which was remarkably sensible to the outward touch, upon either of the hypochondres; their thirst after cooling sub-acid drinks could not be slaked for several days: They were mostly attended with a full, hard pulse, in the beginning, till it was moderated by bleeding, or other evacuations: They had also a moist, furred, yellow tongue; a florid, flushed countenance, with sometimes an uncommon stare of their eyes; next, after a short interval, came on a nausea, and stomach sickness,



ness, a bitter taste in the mouth, and a loathing all animal food for several days together, till after spontaneous and bilious stools appeared. The sick, likewise, were frequently tormented with troublesome reachings, without any vomiting, or other discharges, until the hypochondres, especially the right, became tense, hard, and sore, to the outward feel: At this time the lower belly continued bound for many days together, and quite inert, until the heat and intestine agitation of the febrile matter, by highly exalting the acrimony of the bile, so far had irritated the coats of the bowels, as to bring on copious bilious discharges, upwards and downwards: These, like a torrent, having broken the dam by which they had been confined for a time, drained off all the humours of the body by an incessant diarrhœa and vomiting, in both which operations, Nature aimed at relief, but frequently over-acted her own intentions, by exhausting the body of all its juices  
and



and strength, before the sick could recover the effects of secreting through the biliary organs such unusual torrents of morbid matter.

The crisis  
very vari-  
ous as to  
its time.

THE period of these fevers proved, for the most part, very uncertain; for I have remarked the crisis of some of them in particular constitutions, in certain circumstances, and concurring seasons, very acute, and resembling even what they always are, in tropical climates, where they seldom bear repeated bleeding; and I have seen them terminate in a few hours in a Cholera Morbus: At other times, I have attended a miserable patient nine or ten weeks, or perhaps longer, who, during all this time, was scarcely free from fever longer than twenty-four hours together; nay, others were never free so long; a remission only, for the most part, came on, rather than any plenary absence of the fever.

THIS flux-fever, which happens but rarely to the same degree in civil life,  
as



as in the army, is indeed not only the most offensive and loathsome of all military diseases in crowded hospitals, but in all climates, and in all seasons, it usually proves the most mortal, or hardest to be cured of all those which an army Physician has to contend with. In hot regions, and southern latitudes, it quickly carries off, or dispatches the patient, unless the greatest skill and attention are exercised immediately on the earliest attack; but in temperate and cooler climates, and even in the most northern latitudes, it often runs into the most tedious length, and proves the most obstinate of all distempers which arise chiefly from an affection of the fluids.

IN most of our campaigns in England, on the dissection of several, who perished in this disease, we commonly found either mortifications of the intestines, or a general inflammation of these parts, if the patient died after only a few days illness: And even when

Appear-  
ances in  
dissection.



when they had been worn away for several weeks together, by the frequent evacuations they had suffered, still a partial inflammation, or fulness of the vessels of some of the intestines was manifested on dissection.

The tedious duration of the flux.

I have known many a poor soldier, as well as some Officers, who had suffered every symptom of the flux-fever in England, as well as in tropical climates, after living at home, and in comfortable ease, labour for a long time, under the inconvenience of this discharge, without any bad symptom of fever accompanying, except when it was renewed by catching cold, or brought back by the internal use of Bath-waters, or by the use of some too powerful astringents, or by too soon returning to one's usual modes of life; but particularly by the patients indulging in malt liquors. For the bowels easily irritable, and long accustomed to pour forth their contents, are very prone to relapse, upon the commission  
not



not only of irregularities, but even by trifling excesses in the non-naturals: The patient often deplored his hard fate, in suffering relapses, even to the fifth or sixth time; and though each relapse yielded more easily to the methods of cure hereafter specified, yet not a few of them, after all, died quite emaciated, by the long continued drain of the flux; and thus eluded the powers of the best astringents and sedatives which at length became necessary, and were prescribed, when Nature had long in vain thus aimed at her own relief; and when the internal commotion of all the fluids, as well as of the solids, at length required to be appeased, or totally suppressed.

As the natural crisis of this disease is for the most part effected by enormous evacuations, upwards at first, and downwards afterwards; it is not unreasonable to suppose, that when once the natural mucus provided to sheath the intestinal canal from too frequent irrita-

Flux often  
succeeded  
by a Dys-  
sentry.



irritations, comes to be quite destroyed and carried off by those sharp bilious discharges ; then will the extremities of the mesenteric arteries pour forth pure blood ; and thus the fever will, after some time, prove dysenteric. When it came to this, the patient no longer suffered the torpid and inert state of the intestines, which was remarked to prevail at first ; but he was tormented with the most excruciating pains of the bowels, particularly in the umbilical region : Then every alteration from good to bad weather, and every change of wind, influenced the animal system ; and rain or much moisture prevailing, exasperated the disease often unto death. I have seen the patients, in this last stage, pass off little else but bloody ichor for several weeks ; and in this condition the pains of the belly were intolerable, particularly when at stool ; or if they abated, or went off partially in the upper belly or stomach, then a most uneasy tenesmus persecuted them with a partial  
and



and merely local inflammation of the intestinum rectum, and other parts thereunto contiguous; this symptom, however, was generally relieved by the method hereafter mentioned.

THE cure of those bilious acute fevers, in this country, does not so much consist in bleeding, as at first one might be apt to believe, from the strong symptoms of inflammation manifested in the commencement of the disease: However, bleeding once and again, in this country and climate, made some part of the process necessary for the patient's recovery; especially when the heat, pain, and violence of the symptoms ran high; and because an universal jaundice often appeared at the end of the fever, all over the body, in such who, in the beginning had been too cautiously and sparingly bled: I therefore, before the fifth day, prescribed it twice for athletic soldiers; but after this I found it proved either unnecessary, or rather hurtful. I found the chief indication, immediately after

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bleeding, was to prevent a preternatural distention of the stomach and bowels, by the bilious matter which seemed disposed to lodge there: And this was generally attempted, by giving a puke with twenty to thirty grains of powdered ipecacoanha root, either in a medicated draught, or in fair water: And though the stimulus thereby induced on the stomach, proved sometimes unable to bring up its contents, yet that was a strong enough dose for the generality of men; notwithstanding I have known, more than once, the belly so intirely constipated, and the stomach so strangely furcharged with ropy bile, that full one hundred and twenty grains of powdered ipecacoanha, joined with eight grains of tartar emetic, and given in the interval of three whole days, besides aperient ptisans, clysters, and repeated warm fomentations to the belly, were all insufficient to procure either a stool, or any effort to vomit. But such as suffered thus, died miserably; and



and the region of the stomach and hypochondres, changed quickly after death, from the natural, into a green or yellow hue externally; which appearance of the skin was not uncommon in this disease after death, even where the patient died without taking any medicines at all.

THOUGH this obstinate constipation happened now and then, I think vomits were, upon the whole, to be esteemed always necessary in this country, in the beginning of those bilious fevers, as well as an occasional repetition of them, throughout every stage of the disease afterwards, at least till the stomach was no longer oppressed with foul bilious matter. And this practice was strongly indicated to be repeated, by the return of the yellow furred tongue, the bitter taste in the morning, and nausea, which, from time to time, pointed out a renewed foulness of the stomach. Taking ipecacoanha upon a fasting stomach in the morning, is the most



cleanly and best time of administering this medicine; and the operation is then not only less disagreeable, but, in my judgment, in many cases, more efficacious than at any other time.

UPON the first day I saw the patient, as soon as the operation and effects of the ipecacoanha had ceased, I always found it adviseable to prescribe large quantities of weak mutton broth, and a neutral saline mixture, prepared by saturating, full half a drachm, or more, of salt of wormwood, with a requisite quantity of juice of lemons; or indeed any vegetable acid, saturated with any fixed alkaline vegetable salt. This was to be diluted with three times its quantity of mint, balm, or sage tea; and, to the whole, about a tenth part was added of brandy, nutmeg water, or any other inflammable vinous spirit at hand.

SUCH a draught as this, taken every four, five, or six hours, surprizingly allayed the raging heat of the fever at first,



first, and served likewise against many of the other concomitant symptoms; I must own, I know no medicine of equal efficacy with it, especially in the early stages of all fevers, to temper the fiery heat, and uneasy sensations attending at that time. It was no wonder, therefore, that the poor sick soldier, who now, as well as at all other times, is only actuated by the motives of present ease, thought he never could have saline fever mixture enough given him, to satisfy his eager longings.

ON the next day after the puke, (as the crisis of these fevers was principally effected by Nature, finally, in evacuations downwards) I judged it very adviseable to promote this intention, by giving some aperient gentle purgative. And altho' in recent diarrhœas, the usual and almost established common practice about the metropolis of London, is to depend chiefly on rhubarb, joined with an opiate, in small quantities; yet, by minutely watching the effects of the same, in a



sufficient number, out of upwards of eight hundred men and women, who fell ill of this fever and flux, upon the return of his Majesty's troops to the Isle of Wight, after our expeditions and descents upon the coasts of France, in the year 1758; by attending likewise to the result of this practice in our subsequent campaigns, I found some inconveniencies from the astringent powers of rhubarb, and by too early checking the bilious evacuations: For many who were treated in this usual way, immediately suffered delirious ramblings, or an increase of them, if they had any tendency to them before; they complained farther of a tightness across the chest, which called for immediate bleeding, though sometimes the patient's strength was already low, and much worn out.

For these reasons, in hospital general practice, where only what is most concise, easy, and experimentally best, should be aimed at and brought into



into use, I preferred the following form for a laxative apozem, made by boiling two ounces of four tamarinds, in three pints of barley-water, to a quart; adding two ounces of manna, and an ounce and a half of tincture of senna, with half an ounce or six drachms of Glauber's salt. A gill of this apozem was taken next morning, every three or four hours, till it answered the desired purpose; and sometimes less than three gills, through the day, with plenty of weak broth, was sufficient, and at the same time left the body more laxative, and better disposed to keep the fever under in its increase, than rhubarb alone could do.

To compose the tumult and hurry occasioned by the prescribed purge, about twenty drops of tinct. thebaica were administered, at the usual hour of rest, in a draught of rice-water, or any glutinous drink, or the saline mixture, as directed the day before. As no part of the body is so susceptible of



spasmodic affections, upon the least injury, as the intestines; so in those bilious fevers, I found it safer to begin, early in the disease, with opiates, in small doses, than in any other species of fever I have at any time attended. Then, on the third day of the disease, in about eight or ten hours after the effects of the purging medicine were over, the puke was repeated, and the saline mixture used freely all the intervening time, till the repetition of the laxative apozem next day; thus alternately evacuating upwards and downwards till the seventh day, or sometimes (though rarely,) longer, many were cured of the fever.

ABOUT this time of the disease it was found expedient to intermit two or three days between the times of repeating the operations, as above, to give the weakened patient time to recruit his strength, by nourishing rice broths, and also to make trial whether the fever was yet reduced enough to venture on the use of antiseptics and astringents; which, sooner



sooner or later, in the process of this disorder, according to the duration and strength of the fever, were in almost all cases necessary.

THE first astringent medicine I ventured upon, was made by boiling fine English oak bark, pomgranate rind, and tormentil root, of each an ounce, in ten pints of spring water, till it was reduced to a gallon; adding, towards the end, two ounces of bruised cinnamon, so as to boil about half an hour; when the decoction grew cold, about a gallon was strained off, and four ounces of strong cinnamon water were added, besides two ounces of gum arabic, and a little sugar, to make the whole more grateful. About a gill of this astringent drink was ordered three or four times in twenty-four hours, as soon as ever the feverish symptoms were sufficiently abated, to presume safely on thus moderating or checking the diarrhœa. If no unfavourable symptoms came on, or if hitherto no advantage was obtained by so much as  
here



here directed, the decoction was made stronger, by adding more of its styptic ingredients; and every night, when once the height of the fever was passed, I ventured on a larger dose, and of a warmer opiate, to wit, one scruple, sometimes half a drachm of the *Philon. Londinens.* In short, as no other feverish disorder whatever bears the early and repeated use of mild purgatives better than this, so likewise, no other demands as liberal and as frequent an exhibition of antispasmodics, especially of opium: for the irritability and tendency to spasmodic affections, is greater, in the parts that are the seat of this complaint, than in any other of the whole system. It happened too often, however, (in a general hospital practice,) notwithstanding our cautious use of astringents, that, by attempting to shorten the cure, the sick relapsed into their former fevers, which called for a repetition of evacuations upwards and downwards, besides the neutralised saline draught as before:

Bleeding



Bleeding was seldom necessary, after being ill for any time, and having the texture of the blood broken or dissolved, by breathing poisoned hospital air.

At such times, also, the neutral saline mixture, as before, with the addition of one half of a grain of tartar emetic, once in twelve hours, with a scruple of fine sugar, proved serviceable to those who still had much bilious recrements left: And when, in a few days afterwards, it had induced a remission or absence of all fever, even only for a few hours; instead of the emetic tartar, an ounce of the common bitter infusion, with the Peruvian bark, in powder, to two scruples, or half a drachm, administered four or five times in twenty-four hours, and diluted with as much of the neutralised mixture, or with plain water, sometimes afforded the most singular benefit; though it was often requisite to superadd as much of the thebaic tincture



tincture as would make the bitters rest upon the stomach, and not pass off too suddenly by stool: Three, four, or five drops of it, in each draught, commonly answered this intention.

I observed, however, many patients, in more than one season, who could neither bear the bark in substance, nor in its decoction, nor even the use of the common bitter infusion (which before had been of service) though diluted with equal parts of the saline mixture. For after the fever and morbid contents of the abdomen had been sufficiently carried off, it often happened, that from the induced irritability of the intestines, in spite of the hitherto continued use of opiates, in small quantities, copious and frequent evacuations by stool, daily undermined the patient's strength, and at length required both larger doses of opiates, and the application of some powerful astringents besides; when such was the case, the following formula, in a good degree,



degree, co-operated with this intention. Take powder of red rose leaves, and of newly boiled mutton kidney-fuet, of each four ounces, a drachm of Locatellus's balsam, or about two scruples of balsam Copaiv. Gilead, or Anapolis (for all of these, when they did not cause too much heat, were used with nearly the same success) beat them up together into an electary; the quantity of a large nutmeg of this was prescribed three or four times a day, in a draught of the astringent drink: Every night and morning, a combination of two grains of opium, with three grains of powdered ipecacoanha, made up into pills, proved highly serviceable to many, at this time of the disease. The ipecacoanha, thus administered, proved only gently laxative, whilst the combination of the opium composed whatever spasmodic affection the intestines suffered from the acrimony of the other medicine, as well as from their own stimulating contents.

Opium  
and ipec  
coanha  
combined,  
form an  
excellent  
medicine.

Piso,



Piso, indeed, who was among the first writers upon the use of ipecacanha, recommended it, primarily, for its purgative virtues, which served to evacuate most effectually downwards the morbidic and glutinous fæces, and afterwards to brace and duly to strengthen the debilitated bowels, and restore the natural and necessary quantity of their secretions. One third, however, of the dose which he recommends as only innocently purgative, proves, in general, most powerfully emetic, as well as cathartic, unless an unusual large dose of opium accompanies it. Whence this difference in his prescription arises, is not certain: Perhaps, as that accurate investigator of Nature, Dr. Pringle, observes, "The medicine is more cathartic, whilst fresh, than after long keeping, and better in decoction than in substance."

HOWEVER this may be, since opium is known to correct its emetic virtue, we may employ it extensively, as an useful and gently stimulating astringent,



gent, whilst the opium composes the preternatural irritability brought on the viscera by the acrimony of the morbid contents, as well as by the stimulus of the medicine; till Nature gains time to restore, by a sort of mechanical necessity, the natural æquilibrium which is ever necessary to be kept up between the solids and their contained fluids. Upon this reasoning I first combined these two simples in the foregoing proportions; and no medicine proved more universally salutary in that stage of the disease, where much looseness and bloody flux remained, after the fever, wherewith it began, was carried off, or had, in a great measure, terminated; and no one can well conceive, before trial, how far the lenient virtues of opium correct, and are corrected, by the stimulus of the ipecacoanha.

BUT if I found little or nothing gained by this method in three or four days, I then tried what five or six grains of pil. saponaceæ, combined  
with



with twelve or fifteen grains of rhubarb, or as much as was necessary to move the belly a few times through the day; then, each night, I gave three, four, or five grains of colcothar of vitriol, joined with about half a drachm of Philonium Londinense; or I frequently used ten or twelve grains of pil. saponaceæ, with the above astringent, as I am convinced the soap is an improvement to the opium in many instances, and I occasionally intermitted the use of rhubarb two or three days, till I had experienced how far this attempt to restore the tone of the bowels answered, but not before I was warranted to make it, in absence of feverish symptoms, and on account of the apparent sufficient discharge of morbid fæces, which had already come away in the progress of this disease.

As the different violence and danger of this distemper must always be considered to arise from a greater or a less indisposition of part, or the whole  
of



of the viscera, or of the secretions and fluids which flow upon or through them; so, no panacæa, nor uniform method of treatment, ought reasonably to be expected indiscriminately efficacious in every case; not even where the symptoms at first seem exactly to agree. The cure will rather depend on the apt time of administering of the remedies already specified, and on the sagacity of the Physician, than upon any specific powers inherent in them at all times; therefore each Practitioner, who has read what I have already said, must be left at large, and depend chiefly on his own discernment, of the aptest time for a proper application of them; and I need only wish, that we may be agreed in our conjectures of the intentions of Nature, for the cure of this distemper, which in all climates proves so great a mortality to military men.

ALTHOUGH a medical and discreet use of the above means, will be of the

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greatest



greatest service, yet, in some cases, it certainly may fail of success. The dregs of the morbid matter, which had been subdued or sufficiently lessened in most parts of the viscera, may adhere locally to some particular spot, after all its other general effects become imperceptible in the other parts.

Semiruba  
recom-  
mended.

IN some such cases as these, I tried the semiruba, to the quantity of thirty grains, in powder, or a drachm in decoction, every six hours; and I really think it justly merits a place in a military *Materia Medica*: To be used only second to the bark, in the flux, whilst yet a slight feverish indisposition, of the remittent kind, continues to harass the patient. Nor did I pass over altogether unnoticed or unessayed, in such cases, the celebrated Tili-cherry bark, (possibly the Codaga Pala of the H. M.) now and then brought to Europe from the coasts of Malabar, and there said to be a sovereign remedy in slow fevers and fluxes: But I did



did not find it answer here, better than other bitter aromatics, tending, in common with all that class, to strengthen and restore the tone of the solids, especially those of the primæ viæ: But it proved too narcotic to be used as freely as the semiruba; and I found it occasion, in one patient, the spasmus cynicus, when given to two drachms in twenty-four hours.

To restore the tone of the solids, in this disease, by all possible means, deserves our utmost care: And as good Red Port wine, diluted with water, was found necessary in all languid, worn-out cases: And as the provident and generous attention of the two late Secretaries at War\*, readily agreed to allow the expence incurred by the same, in the public accounts of the extraordinaries of each year, I oftentimes indulged many of the sick with a pint and a half, or even with more Red Port wine, properly lower-

Red Port  
wine re-  
com-  
mended.

\* Lord Viscount Barrington, and the Right Hon. Charles Townshend.



ed and diluted with water, through each twenty-four hours, for three weeks or a month together. This, likewise, with a grateful decoction of cinnamon, orange-peel, and of some other such aromatics, boiled in spring water, and given in proper quantities, proved an excellent remedy, and was often prescribed for such whose flux still continued, although the fever was cured. By openly countenancing this necessary indulgence, the men were willing to take, in a draught of this pleasant beverage, ten or fifteen grains of aromatic species, once in eight hours, or as often as ever it was necessary to warm their cold and languid intestines, and to restore a vital heat and the lost energy of these parts.

If, after all, the flux still persisted; and if a tenesmus (which was not uncommon at this period) also attended the patient; then lenient purgatives, with salts, manna, and sweet oil, were indispensably necessary again; and were to be repeated according as the strength would



would bear them, till that disagreeable complaint was surmounted; and this generally happened, after the use of them, for some time. Starch, oily, opiate clysters, likewise, when they were injected in small quantities; when they were kept up by mechanical pressure on the anus externally, and retained a sufficient time in immediate contact with the inflamed parts, were found very serviceable; and I generally ordered them in twelve hours after the above-mentioned oily lenient purge.

OF the propriety of this practice I was afterwards well convinced, by the dissection of two patients, who died in this stage of the distemper. The The foregoing practice proved to be just, by dissection. intestinum rectum, of each, appeared still greatly inflamed, for several inches above the sphincter ani; and long after the fever had ceased its effects in other parts.

YET, after every effort, so obstinate and invincible does this filthy disease sometimes prove, that nothing



Fresh air  
again re-  
com-  
mended.

but a total change of air, much riding on horseback, and an uniform course of valetudinary care and diet, for several months together, or a whole year, with the continued use of red port wine, aromatics, and other occasional remedies as before-mentioned, could remove entirely all the mischiefs, which the flux and fever would still at that time occasion, especially in the private soldiers, who had long sojourned in putrid hospital air. And though I have already, in the preliminary part of this treatise, fully delivered my general doctrine, as to the necessity of procuring a succession of fresh and wholesome air to pass through the hospitals, and all other receptacles for the sick soldiers, (whose propensity to be nasty, together with other reasons peculiar to them, makes most of the Military Hospital complaints soon participate of putrescency;) yet I cannot help insisting on this subject again, the rather to advise, that the patients should (as soon as the Physician of the hospital thinks



thinks it safe) be quartered up and down in cantonments about the villages in the neighbourhood of the hospital.

The men  
to be dis-  
persed in  
country  
canton-  
ments.

I must own I know nothing so much to be guarded against, as too long detention of the convalescents in sick hospitals. Though a wide range of quarters for the convalescents, would require an enlargement of the usual number of Hospital Mates, to visit them under the Physician, and an additional trouble to the respective regiments to which the men belong; yet the expence incurred by the same could not, in a whole campaign, amount to the recruiting charges of one-third of the sick, who are destroyed by the effects of a long confinement, in the unwholesome and nauseous steams of a dysenteric fever, and putrid hospital.

### *Of* INFECTIOUS DISORDERS.

**E**XCLUSIVE of the diseases already so fully treated on, there is yet another class, no less destructive



and fatal to an army, as often as they happen among soldiers ; I mean Infectious and Intercurrent Disorders ; such as can be communicated from one person to another, and often seize numbers at a time, whilst they appear indifferently at all seasons of the year. These, and a few of the more remarkable Chronic Diseases, are the subjects which employ the following pages.

*Of PETECHIAL or GAOL FEVERS.*

The great mortality occasioned by them.

The great and evident impropriety of committing the whole care of military disorders to Surgeons.

**E**RE I proceed to the consideration of these, I cannot help first observing, that the register kept of the mortality produced by Fevers of various kinds, in military life, shews, that full eight times the number of men have been lost in this manner, of late, more than fell immediately by their wounds, or in battle : I cannot therefore help, again and again, bewailing the prejudices, and want of judgment in these times, when medical science has been openly depreciated by *great*, though cer-



certainly, in this, not wise men, as altogether unnecessary; whilst the only necessary aid of the Faculty has been supposed to be confined within the most mechanical and lowest sphere of the healing art. Thus the credit of Surgeons has been built up, very ignorantly, upon the undervalued merit of the Army Physicians.

YET our Physicians, however discouraged by some, have still maintained, with other Officers of more cultivated minds, and of more enlarged understandings, a certain degree of superior credit: For these discerning and impartial Gentlemen have been convinced to a demonstration, that, notwithstanding the allowed superiority and advantages which the French are possessed of, in the military arrangements, and tactical establishments of their hospital matters; and though the French Army Surgeons are deservedly in equal credit, at least, with the same order of men amongst us; yet  
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in our hospitals, (which for the most part have had very little of mechanical, or military system, comparable to the French,) still more patients are annually cured, and our national loss of subjects is not by one half so great as that of the French, or of any other nation, in time of war.

WHENCE then can this arise, but from the hints, instructions, and still surviving superior medical science, which Sir Clifton Wintringham, Doctors Pringle, Armstrong, and others, more than *nominal* Physicians, who are still employed in his Majesty's armies, have been able to diffuse, from time to time, amongst such as served under them, and to set the example of what should be practised, and followed in our hospitals? This at least appears to me no more than a fair deduction from the premises here laid down: An equitable and sufficiently convincing testimony of the utility of science, as it might be extended yet farther amongst us.

I now



I now proceed to the symptoms of this Petechial, or Goal Fever, not over studious of extreme minuteness in all the variety of them; for I have not found that this method, pursued as it has long been by grave authors for ages, has wrought all the advantages to our art which have been expected from it. I shall therefore content myself with marking *strongly* some leading criterion, whereby to discriminate, early on its appearance, the nature of this dangerous disease.

THIS Fever was commonly preceded by a disagreeable lassitude of the body, till acute pains of the head and back, great oppression and anxiety on the breast, irregular shivering fits, frequently a foul furred bilious tongue, and often a bad taste in the mouth came upon them, especially if the disease happened in Autumn. In Winter, these symptoms were not always observed, nor in the full extent: A quick full pulse was found in many; whilst



whilst in others, it was only small and quick, or tremulous. But whether in Summer or in Winter, in this species of Fever, on the second or third day, the tongue grew black, and parched, and the sick withal had little or no thirst; nor did they make any complaints, but of want of sleep, which yet the spectator thought them too much inclined to; and therefore it became the duty of the attendants, to press them to drink frequently, and to moisten their insides with subtepid beverages, much oftener than they of themselves would choose it.

ABOUT this time a stupor, *a leading criterion in the fever*, universally came on; the pulse, which at first was often full, now sunk; and they had little or no extraordinary outward heat, but a parched skin, in general. Some, about the third or fourth day, talked incoherently rambling, but this soon changed to an insensible stupor, and in a little time came on cold  
and



and clammy sweats, without relieving. In many, on the second or third day of the attack, dusky or florid specks, like flea-bites, appeared all over the body, or neck, breast and arms; and whenever they came out, the pulse sunk wonderfully: Sometimes little red lines also ran out diverging from the Petechiæ, and extended frequently a good way on the surface of the skin. The eyes seemed much affected from the beginning; but the same patient who looked with a wild stare on the first days of the distemper, soon sunk into that stupor, with a shining gloss on the white of the eye and cartilaginous part of the lids, upon opening them. They continued thus almost senseless many days, and were uncommonly oppressed, before the crisis, with much sighing and grievous anxiety across the chest. The pulse, after the fifth or sixth day, was exceedingly hurried, and scarcely to be numbered; and, for some days before death, an offensive cadaverous stench issued from the sick.

SEVERAL



SEVERAL were carried off upon all days of the fever, from the third until the twenty-fourth ; and various changes happened to others, after the ninth or tenth day ; for a diarrhœa, with exceeding fœtid discharges, about that time, often succeeded ; the Petechiæ frequently disappeared ; their mouths and tongues, which had been covered over with a glutinous black slime, so as to give much trouble for many days before, sometimes, about the fourteenth, seemed to recover a better moisture ; and, if the tongue recovered its redness, and a moisture on the sides, it was a favourable symptom.

MANY of them had a subfultus tendinum from the seventh day to the crisis ; involuntary tears, hiccup, and deafness : Some had much cold and clammy sweats, several days before the fatal period of their miseries, in large round drops on their temples, nose and neck. Many had mortifications of



of some of their extremities, who still escaped with life; whilst others suffered glandular buboes, parotids, &c. Their senses, particularly of hearing, were impaired by the preceding disease, for a considerable time; and much bodily weakness occasioned their dregs of life to be long exceedingly miserable, who had thus dearly purchased such a respite.

IN this acute disorder, the first thing I advise necessary for a soldier, upon admission into the hospital, is, to wash his whole squalid body, or as much of it, at least, as can conveniently be done, with warm water acidulated with vinegar: And this practice ought to be frequently repeated throughout the progress of this terrible disease, as well as in other acute cases of soldiers; for I have often experienced the greatest advantages from it.

IN those putrid cases, the lancet ought by all means to be carefully avoided;



voided ; for, whenever the quickness and strength of the pulse, in the beginning, had imposed so far on my judgment, as at any time to make me allow of bleeding, (and this deception, in the great multiplicity of an army-hospital business, will happen even to the best judges of medicine) I found the texture of the crassamentum much dissolved and broken, and the inferior part very black and incoherent in its particles ; and the immediate sinking of the pulse, and the languor soon following that evacuation, quickly determined me against a repetition of it.

ALTHOUGH the similitude of the attack in this, and in other Fevers, and the strength of the artery in the beginning of it, may sometimes impose on the most judicious Practitioner, and make him venture too precipitately upon bleeding ; yet the subsequent symptoms of that *oppressive stupor*, and above all, a sagacious contemplation, and early attention to the prevalent  
con-



constitution and genius of acute diseases at that time, will soon discover whether the type of the present fever ought to be arranged, in the Physician's mind, under the inflammatory or putrid order; and whether bleeding ought to be advised, or carefully avoided, afterwards.

THIS point I have never heard judiciously controverted, or soberly contradicted; though I have sometimes observed a philosophical and well-grounded diffidence about bleeding repeatedly, in such a species of fever as before described, censured by a set of men, whose ignorance of all genuine practice of medicine, was only surpassed by their over-weening arrogance; and yet, *such* is the tribunal before which Physicians are amenable; so far, that the ablest and most candid men of science, are often arraigned, censured, and condemned, by the emptiest and most presumptuous pretenders, for thus acting as becomes wise and cautious practitioners.

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As soon, therefore, as a few days observation has ascertained that there is an epidemic Fever prevailing, and that it is likely to be of the malignant and putrid class, I hope the Army Physician will, in a few instances, minutely examine the texture of the blood himself, and investigate early, as becomes a Philosopher, whether bleeding is, or is not adviseable; for it is possible that one degree of malignancy in the habit of the body, may, with impunity, admit of some evacuations by the lancet, whilst another might suffer extremely by it.

Of the use  
of Vesica-  
tories in  
this dis-  
temper.

WHATEVER difficulty may at first attend our determination as to the propriety or impropriety of bleeding, I wish no greater were to be encountered in the direction and use of Vesicatories, especially those composed of cantharides. This last, in my opinion, requires a nicer and better regulated medical judgment, to ascertain with safety and precision. For, how-  
ever



ever advantageous the application of blisters may be, in a great number of cases, in this disorder, especially where a stupor comes on; still, their active dissolving power, the great pain and number of sores they occasion, the frequent necessity of turning and dressing the patient, the danger of neglect on that account, and of mortification in many instances, the stranguery, and numberless other inconveniences, in Military Hospitals particularly, which arise from the use of them, all afford the strongest reasons for being very cautious, nay, for entirely rejecting them, whenever there is good room to think the blood in a highly putrescent state.

It is true, indeed, that the mortifications produced by blisters, were always superficial, and seldom or never ended in a sphacelus, like those which came on of themselves; and there is reason, likewise, to believe, that this slight mortification being thus



diffused over a large surface in the blistered part, often prevented a deeper sphacelus in a more dangerous part. However, on account of the more pressing reasons above-mentioned, I always discountenanced the general and indiscriminate use of them, when I found any tendency of this kind; when I observed the skin very thick set with petechiæ, or a few of the above-mentioned diverging lines running out on the surface of the skin; in which last case, particularly, I always found any solution of substance whatever, so prone to gangrene, that I have seen even the wound, from a common lancet in a vein, to mortify.

As the petechiæ, however, do not always appear; as many of those fevers have *the black tongue, the stupor,* and *anxiety*, (the principal characteristic symptoms of fevers of this class) without the other symptoms which indicate the highest degree of this very dangerous distemper; in these cases,  
and



and in all the slighter attacks, if the patient can be but persuaded to take drink enough throughout the disease, to keep up a necessary moisture on the tongue about the seventh or eighth day, I think the repeated application of blisters is so far from being prejudicial, that I look upon it as very salutary. But it happens, unfortunately, that very few have this fever, without a parched black tongue, and a disregard to all drink; and, in a patient already so parched and dried up, the blisters, if they rise, rob the blood of its thinner parts, which are absolutely necessary to separate and carry off the febrile matter from the constitution.

UPON the whole, then, the difficulties which must attend all absolute directions and positive rules, concerning the application of blisters, or omitting them altogether in fevers, which deservedly ought to be arranged under this class, or type, appear to me so



complex and intricate, that, in my opinion, no written authority for, or against the use of them, deserves to be implicitly followed upon all occasions; but whether blisters ought, or ought not to be applied, and in what circumstances, is more properly to be submitted to the sagacity and discernment of the Physician attending at the particular time; who, in the course of a little observation, and minute attention to the subjects before him, will not fail to remark, when they are useful, and when otherwise; and whether, in different stages of the same disease, they do not operate with directly opposite effects.

I shall, therefore, only advise in general, that in the worst kinds, where the parched black tongue, petechiæ with red filaments, and general tendency to putrefaction, shews itself by a burning heat to the touch, and by a stench, well known to Practitioners, but not to be described in words;  
blisters



blisters are by no means to be applied. The use of them is chiefly to be confined to the slighter attacks of this species of disease, and especially to those which happen in the winter: Though I once saw as mortal a fever of this type in the winter, as ever I did in the summer time.

I well remember, Mr. Fordyce, Surgeon to the third regiment of Guards, did me the honour to call me in, to see some of his men, who had been infected with a Goal Fever, in the Savoy Prison, in the months of January and February, 1762. These men of the Guards, for some military offences, had been confined in a close unwholesome apartment of the Savoy, with many newly enlisted men, who were, without offence, in great numbers, and without requisite care in the Non-commissioned Officers, often so preposterously there huddled together, that numbers of them, in the course of the impressing service of the late war, were at various times seized with

Instances  
of this ma-  
lignant  
distemper  
in the Sa-  
voy.



the Gaol Fever abovementioned ; and we had not a few of them brought to Pimlico Hospital, in this Fever, after a mortification had deprived them of a foot, a part of their toes, or some other extremity of their bodies ; and this was absolutely owing to the nastiness and unwholesomeness of the foul air, which they were often, through the above accident, doomed to live in.

MR. Fordyce, urged by the humanity of his temper, made several judicious, and sensible remonstrances, in favour of some thorough reformation, which we both agreed was necessary, as to the mode of confining newly imprisoned men, and deserters, in such noxious places. Yet, after all, I had the mortification to find, by the numbers thrown in upon Pimlico Hospital, to the last, that all his humane and sensible objections had availed little or nothing, where they merited to have been regarded very much ; for he had to contend against some rivetted prejudices



judices of shallow ignorance, and the blindest prepossessions of a set of men, who, in defiance of every effort towards using their reason, palpably depreciated the most obvious convictions of daily experience and common sense.

As soldiers are in general foul feeders, in this, as in the beginning of most of their acute distempers, for the most part they require their stomachs to be cleansed by a puke, to remove immediately many impurities, which, if left to corrupt, would at length, in the process of the disease, stimulate the coats of the primæ viæ, so as to bring on an involuntary looseness, often improperly considered a terrible symptom in this and other putrid fevers.

BESIDES the advantage derived from the immediate evacuation of this offensive stuff from the stomach, by vomits, in the first stage; I found such remedy likewise of great use, towards the eighth or ninth day, or as soon as a slimy black mucus incrusting the teeth,



teeth, shews that the secretions in those parts are almost shut up: For there is a known sympathy between the mouth and the upper orifice of the stomach, so that whatever stimulates the one, produces some effect on the other; and I have very often observed, when the tongue has been a whole day as dry as a board, before a vomit, after the use of one, both its surface and the mouth have, for twenty-four or forty-eight hours successively, poured out a salutary and natural moisture: Wherefore, I was induced to repeat a vomit after the eighth or ninth day occasionally, to resuscitate the languid secretions in those parts; and I have used four vomits after this stage of the disease with success, on account of the irritation they caused in the obstructed lymphatics, which possibly may be the efficient cause of those fevers. I seldom exceeded eight or ten grains of ipecacoanha for a dose, as this proved a sufficient stimulus.

WITH



WITH this intention, too, I gave tartar emetic, in small quantities, a fair trial, and found no difference at all in the effect here, as well as in other diseases, requiring emetics, whether I gave just as much of it as would cause vomiting gently once or twice, or six or seven grains of powdered ipecacoanha root; so that I verily believe, the utmost either of them does, is to operate on the irritable, though languid coats of the stomach and fauces, so as to excite the secretions, which, in their present morbid state, are lessened and impaired. Nay, Dr. Huxham has remarked, in a fever of this kind, that an amazing change for the better frequently succeeded a fit of vomiting, and a stool, on the eighth or ninth day; and repeated experience hath convinced me, that gentle pukes, either by ipecacoanha, or emetic tartar, are serviceable about the seventh or eighth day; and that a judicious occasional repetition of them, even after that time, was found to depurate the mouth and throat



throat of a viscid mucus, and also tended to remove some lymphatic obstructions much more effectually than Nature, committed to herself, or unassisted, was capable of performing.

Acidulated drinks recommended in great plenty.

I think, throughout the progress of the disease, the ordinary drink for the sick should be as much acidulated with the purest undistilled French vinegar as ever their stomachs will bear: And though I am aware that transcribing a variety of formulæ into a popular treatise of medicine, usually carries an air of quackery and affectation along with it; yet, as what I write here is designed for the benefit of young and inexperienced Army Practitioners, it may be requisite to inform such, that in the beginning, and generally for the first four or five days of the distemper, the general formula I made use of was as follows:

R. Rad. Serpent. Virginian. ʒi.  
 Infunde in aquæ bullientis, ℥j.  
 Decantetur Infusionis frigida, ℥j.

R. Infus.



℞. *Infus. Rad. Serp. Virg. supra parat.* ʒj℞.  
*Acet. Vin.* ʒiij --- ʒ℞.  
*Confect. Cardiac.* ʒ℞. *vel ejusdem loco,*  
*Confect. Damocr.* ʒi.  
*Sp. Lavend. C. gutt.* L.  
*Sacchar. alb. q. s. M. Fiat haustus, quinta vel*  
*sexta quaque hora sumendus, pro re nata.*

THE intention of this cordial medicine, (notwithstanding about the twelfth part of a grain of opium sometimes used in the above quantity of Mithridate, when the absence of stupor would admit of it,) proved the most universally serviceable till the fifth or sixth day of this fever.

HOWEVER, as I have, in particular subjects, remarked superior advantages from the use of camphire, where the stomach did not nauseate that uncertain and often offensive drug; I sometimes substituted a trial of the following composition, instead of the former, especially as I often found the julep. e camphor. of the shops, required to be lowered with water, to make it sit on the stomach.

℞. *Julep.*



R. *Julep. e Camphor.* ℥j.  
*Aq. fontan.* ℥ss.  
*Acet. opt.* ℥iij.  
*Aq. Nuc. Mosch.* ℥jss.  
*Confect. Cardiac. vel*  
*Mithridat.* ℥j.  
*Sacchar. alb. q. s. Fiat haustus sexta*  
*quaque hora sumendus.*

If the stomach will bear more vinegar, I give a much greater latitude as to the dose; for, by repeated experience, I am convinced, no medicine is more salutary in this early stage of the disease. After the fifth or sixth day, however, when all the symptoms evince the general tendency of things to a putrid state, I judged the former draught, hitherto used with a camphorated julep, not so likely to prevent the putrescency that appeared, as by using about an ounce and half of decoction of Peruvian bark, with the vinegar and Mithridate, as above: And I am so far from thinking that the purging, which commonly came on by the ninth, tenth, or eleventh day, was



was occasioned by the sharpness of the vinegar ; that I rather am of opinion the use of it, as well in the form ordered above, as to acidulate with it all their common drink, prevented the excess of putrid and exceeding fœtid stools, which, whilst they came away in any moderation, I considered as a sort of crisis begun by Nature, to discharge and carry off the putrid seeds of the disease : So that, for some years, I have not discontinued the vinegar, when the stomach would endure the same, even whilst the putrid diarrhœa was exceeding frequent, or involuntary, till the feverish symptoms (the black tongue and stupor) were subdued, or much abated.

As soon as ever the languors and depression of spirits called for stronger cordials, I made no scruple to give, as the best and most generous of that class of medicines, a pint, and sometimes, occasionally, a full quart of Red Port wine, with a drachm and an half,

Red Port  
wine re-  
com-  
mended.



half, or two drachms of powder of the bark; or a decoction of half an ounce, to dilute the wine properly, through every twenty-four hours; and when the bark would neither sit in substance, nor in decoction, I made tea of mint leaves, or orange peel, to dilute the wine withal, for their necessary drink.

THE sick were so much benefited by this, that many of them, after rejecting the bark, with vinegar, and every other medicine besides, at length gratefully admitted and kept down this wholesome and palatable remedy; which, after fourteen days, or longer, struggling with the utmost danger, in a stupid and insensible condition, and almost incessant involuntary diarrhœa, restored them, at length, to health; for the bark in Port wine, thus diluted, with an aromatic infusion in water, or the Port wine with mint tea, not only proved the most acceptable refreshment to their sick and languid stomachs,



machs, but also, when impregnated with the aromatic particles of orange-peel, or a little cinnamon boiled in water, it became antiseptic more powerfully.

SOMETIMES, when the pulse was very low, and no disposition in the patients to drink of any thing else, they would occasionally admit, every half hour, a spoonful or more of pure Port wine, unmixed; and so far was it from being intoxicating in their weak condition, that above three half pints of it, through each twenty-four hours, frequently supported and raised some men, from the jaws of death, to new life and vigour, after twenty-four days.

I believe few Practitioners have ever given a fairer or more general trial to that most elegant and palatable medicine, *confectio cardiaca*, than I have done: And yet, from the result of my experience, I am inclined to give preference to a pint and an half of Red

Q

Port



Port wine, properly diluted with any convenient simple aromatic decoction, and administered daily in this fever; rather than to the usual quantity of two drachms of this, or the celebrated cordial of Sir Walter Raleigh. But as some patients stood in need of the solid as well as liquid cordials, on account of the extreme dejections and anxieties they suffered; and as the aromatics of those solid cordials, confectio cardiaca, &c. are more durable on the stomach, and more effectually resist putrefaction, than any thing but the bark, I advised the alternate use of both, in many cases where the bark disagreed.

Cleanliness and fresh air recommended.

IN the cure of this, as well as of all other putrescent diseases, nothing, in my opinion, is more conducive to the patient's recovery, than a continued attention in nurses, and in all those who have the care of the sick, to cleanliness, and frequently shifting the foul linnen, bedding, &c. I am persuaded, many hundreds of lives have been



been thrown away, by too much physical caution, lest people in fevers should catch cold by putting off their foul linnen, or by admitting any fresh air into the room, where they are preposterously doomed, for many days, to breathe such infected and nauseous steams, as often almost suffocate the attending physical assistants.

THIS practice, I take it, was established upon the observations made in the *fudor anglicus*, or *sweating sickness*, that appeared seven times in this country, in the course of a few years, a little more than two centuries ago; and is said, by all writers, to have been certainly mortal, if the sick were disturbed, or much interrupted in their propensity to sweat for twenty-four hours continually. Hence, I say, I presume it happened, that succeeding Physicians were betrayed into the practice of keeping most people, in fevers, as close as they could, from an opinion, that all other fevers were, in like manner,



most easily cured, by keeping up the same intention of sweating *only*. Happy, however, it has proved for mankind, that at length Doctor Sydenham arose, whose judgment and sagacity in diseases, proved superior to the prejudices of the age he lived in; and that he had resolution to publish opinions, which, however contrary to those of his cotemporaries, at length have been so far received and improved, by the dispassionate sense of mankind, that at present our Physicians, in general, are induced to confide as much, at least, in the general principles, by which life, in ordinary, is often protracted, in an uninterrupted course, for seventy or eighty years, as our predecessors used to do, in the preposterous compositions of multiplied insignificant medicines.

BESIDES those already mentioned regulations concerning cleanliness, I cannot omit here to express my warmest wishes relating to one other reformation,



mation, which I look upon to be absolutely necessary for the future security and preservation of many lives of soldiers.

By the provision now established, in all the barracks and publick repositories for the sick, in Great Britain and Ireland, I am informed, the Barrack-masters have made one general assortment of flock bedding, as the most durable and substantial material for soldiers. On these, for many successions, poor men, in all the varieties of military diseases, and filth, to which they are prone, are lodged from time to time; and that, without any possibility of making them wholesome or cleanly, after once they have been infected with putrid and contagious distempers.

I wish, therefore, that all flock-bed-  
ding was banished henceforth from every  
barrack, hospital, and encampment;  
and I would substitute good clean straw,  
inclosed in strong ticking mattresses,

Straw beds  
preferable  
to those  
made of  
flocks.



or paliaffes, as they are called, which admit, upon the easiest terms, of being washed often, and of having the contents frequently renewed by fresh supplies of wholesome straw, according to the exigencies of the sick, and the discretion of the physical attendant. Even already I have observed the greatest imaginable benefit partially derived from this practice, instead of using the flock-beds, that are ever most retentive of infection. As soon as the fever is perfectly removed, the diet of the sick should be nutritious and restorative, of light meat broths, and the bark may be continued twice a day, in two ounces of the common decoction, for three weeks or a month after it, as no bitter, that I know of, is better for the languid powers of the stomach, than this; and as it soon helps a soldier, after a fever, to good digestion of whatever meat his poor pay can afford.

*Of*



## Of the SMALL-POX.

THE Small-Pox is reckoned deservedly amongst the most dangerous diseases that are commonly to be met with throughout all Europe; for, by the most accurate observations made by Dr. Jurin, and others, it appears, that two in eleven, or one in five and a half, of those who are attacked in a natural way, perish under it. The same ingenious Gentleman has likewise advanced, almost to demonstration, shewing, that above one fourteenth of all who are born in and near London, are carried off by this infectious disease\*. In the army, at the beginning of the late war, I found two out of nine soldiers in the marching regiments, who, by living remote from the metropolis in country quarters, had till then escaped this disease: In some militia regiments, submitted to good notions of subordination, on account of

Small pox,  
and the  
general fa-  
tality of it.

\* Vide *Philosophical Transactions abridged*, vol. vii, p. 613, and 616,



the difference of the natural and artificial Small-Pox, near one-third of the numbers such county regiments consisted of, were inoculated; and out of one hundred and seventy men; so treated, in one regiment, one only was lost by this beneficial improvement.

A greater relaxation of all sobriety and temperance is supposed to prevail, in all military life, than among other orders of men. It is therefore natural to conclude, that such a disease as the Small-pox is more destructive, in every army in England, than any other acute disease; (considering the proportion of those who have it, after they enter themselves into it.) In short, by an estimate which I have framed, from the relations I have had from several regimental Surgeons, in the late war; the Small-pox carried off about one, out of a little more than four of those who were at any time seized with it, in the natural way, during our late encampments, and in winter quarters.

It



It is unnecessary, at present, to be minute in recapitulating all the variety of symptoms which accompany the different stages of this loathsome disease: I shall rather endeavour to mark particularly those things, which ought to be the chief objects of medical attention in military life, and the periods in which, beyond all others, the Physician's assistance is here most required.

WHEN the feverish symptoms, which <sup>Its symptoms and cure.</sup> usher in this disease, run very high; when they are accompanied with violent pains darting thro' the head, down the back, to the loins, or elsewhere; whenever any strong signs are discovered, whereby a continued delirium may be portended; when the patient is athletic; and, on account of a soldier's irregular life, when crudities, and an inflammatory disposition of the humours may be apprehended; when any of these things, I say, happen, I am confident, that bleeding, to the quantity  
of



of twelve ounces, once or twice occasionally, before the third or fourth day of the attack, is altogether adviseable.

IMMEDIATELY after bleeding, but before the eruption is at all advanced, gently to cleanse the first passages, is a sure way to moderate the subsequent symptoms of the disease: And I think this practice the more adviseable in military life, because all soldiers have generally their bowels loaded with indigestible crudities; which, if retained along with the morbid contents, that are to flow, in the course of the disease, on these parts, very much encrease the corruption and putrescency, that may produce great mischiefs, which might have been timely and judiciously prevented, by cleansing the stomach with a puke, and by giving a little aperient physick before the plenary eruption.

IN those subjects, where symptoms do not run near so high as to make bleeding altogether necessary; where only a reaching, and slight sickness of the stomach,



stomach, with a sharp pain down the back, are the chief fore-runners of the eruption; I am of opinion, bleeding may be often altogether omitted, and that all which is to be attempted, is thoroughly to cleanse the stomach by a puke, with twenty or thirty grains of powdered ipecacoanha root, which in a few hours is likely to cause one or two laxative stools. If, by the day following, this event has not happened, I think it still adviseable to persist in the above intention, and to give either as much manna, or lenitive electary, as is requisite to answer the last-mentioned purpose.

MEANWHILE, I could wish all military men, who are attacked with the Small-pox, could, like other people, be confined in bed, until near the plenary eruption; because I am convinced that, by encouraging a moderate degree of perspiration until that time, the sick are both relieved and benefited in the progress of the distemper.

The soldiers should be kept in bed at the first attack, to encourage perspiration.

AFTER



AFTER this period, until the eighth or ninth day, I think common military practice in the Small-pox, is generally very far from being serviceable. For my part, I seldom kept up any other intention, than to temper the raging of the fever with some few grains of nitre, dissolved in barley-water, which I recommend to be plentifully drank till this time.

Of the salivary discharge of the Small-pox.

WHEN the salivation, which, in the malignant kind, was copious from the fourth or fifth day of the distemper, now suddenly, or even gradually lessened; and when the swelling of the face subsided, or became flaccid, without the usual enlargement of the wrists and hands, which ought immediately to follow; I then found it very necessary to seek relief from art, whilst the variolous matter, now absorbed, was carried round again and again in the course of the circulation, and falling sometimes on the organs of respiration, much interrupted and disturbed



turbed their functions; or else it became liable to lodge upon some other vital part, and often produced the most unexpected and dangerous mischiefs, and sometimes sudden death.

As soon as ever, then, the face falls, I wish that art may always supply the swelling of the hands, which Nature, when prospering in her usual operations, is of herself wont to do. This intention, I think, is best answered, by laying blisters to the wrists, and fore-arms, as soon as the face has subsided, and it's pock flattens in the middle. Thus the languid or partial efforts of Nature are often speedily rouzed, and invited to depofite those noxious particles, which otherwise occasion the worst symptoms at this time, and death itself soon after.

I have frequently experienced great alterations for the better, when this practice was in time duly administred: And, unless a general putrescency of the fluids should forbid it, I would  
always



always recommend such an application of vesicatories as above directed, as the most certain, and as the last resource.

I have often seen the forenefs of the throat, which began on the fourth or fifth day, become again more troublesome by the eighth or ninth, in the malignant species : Sometimes it commenced at this latter time, though at first there was no such complaint ; and the discharge by salivation, which before-hand had proved copious, now often began to thicken in its consistence, or at least to abate in quantity.

THESE changes, at too early a period, being generally attended with much danger, it appeared to me very necessary to keep up the discharge by salivation ; which, as it was the most common method of throwing off the morbid matter for several days, I always regarded, as the most salutary effort of nature, and beyond every other which occurs only rarely, and with greater uncertainty.

WITH



WITH a view, then, to continue a salivary discharge, till the swelling of the hands went kindly off, and at the same time to relieve the foreness of the throat, I prescribed the following, as finding it a very useful medicine, and also very easy in the composition; a circumstance that merits the regard of every Military Practitioner.

R. *Spermat. Cet. (Vitell. Ovi subact.)* ʒjß.  
*Ol. Olivar. Recent. five Amygd.* ʒjß.  
*Solve in Aqua Font.* ʒvij. *adde*  
*Vin. Ipecacoanhæ,* ʒiij.  
*Syrup. Balsam.* ʒj. *M. exactissime, et sumat*  
*æger cochlearia duo, omni hora, vel al-*  
*ternis horis, ut inducatur Ptyalismus.*

THE stimulus which the above quantity of ipecacoanha impresses on the stomach from time to time, resuscitates the languid and almost ceasing ptyalism; and, what is really still more efficacious, towards the tenth or eleventh day, it often causes, through the day, one gentle puke, so as to clear the stomach of its offensive and morbid



morbid slime ; which operation not only gives much ease to the patient, but also helps oppressed respiration very greatly.

Of the use  
of the  
Bark.

IN the bad sort of malignant Small-pox, there is but little well-grounded expectation of success at any time : However, when the symptoms of the secondary fever do not much affect the brain or respiration ; as soon as ever the pustules become confluent ; when the face, nose, and lips, incrust over with a blackish surface ; and when the interstices between the teeth are choaked with a dark-coloured slime ; in all such cases, purging is *now* found prejudicial, and no other hope remains, but what may be expected from the bark, or its decoction, with elixir. vitriol. I have, in many cases, extended its use daily, as far as ten drachms, in decoction, when abundance of petechiæ, and livid spots in the interstices of the pustules, about the sixth or seventh day, portended the most imminent danger, if not inevitable death in a short time.

I think



I think some few escaped with life in consequence of this method ; but still I must own, far greater numbers were carried off, although treated in the same manner.

NUMBERS, in the slighter malignant kinds, after taking this remedy in decoction, together with two drachms of confectio cardiaca, for many days, continued tranquil and composed, sometimes till the fifteenth, sixteenth, or even till after the twentieth day, and without much delirium or any other alarming symptom, farther than might be expected from the quantity and general quality of the pock ; until at length they were, almost on a sudden, seized with a great difficulty, and violent shortness of breathing, together with other dangerous attacks on their vital parts, which soon closed the tragedy by death.

THESE unexpected, and often instantaneous changes, could not, with any justice, be imputed to the bark ;

R

because



because they happened oftener when the bark had not been given at all; and because no bad sign attended the use of this excellent medicine, even after the patient took six or eight ounces of it, until some disastrous symptom suddenly appeared, and carried off the poor sufferer in a few hours.

The impropriety of the general practice, in purging frequently after the disease.

AFTER having conducted the patient through the former stages of this malignant distemper, and after a total desquamation of the scabs from the face, Physicians are in general agreed in a supposed necessity for frequent and repeated purges; in order, as they say, to carry off the dregs of the disease, which had been absorbed into the mass of blood; and which, by their impurities, might create more noxious humours, which Nature often in vain labours to throw off.

I must own, I have been so far from placing any confidence in the supposed advantages of this practice, that I at first doubted, and afterwards was convinced,



vinced, that it is in general not only useless, but also very often prejudicial to the constitution ; because it tends exceedingly to weaken the tone of the body, already too much relaxed, and broken, by the preceding disease. I therefore, instead of purging, generally ordered light decoctions of the Peruvian bark, or, as frequently, the simple bitter infusion, to be taken to the quantity of a gill, two or three times a day, with a few drops of four elixir of vitriol, when I found the desquamation of the scabs had terminated kindly, and that no bad symptoms any longer existed, except a weakness and languid state of the body. I likewise prescribed for the patients, the lightest analeptic diet, in order, by the quickest means, to get them into strength and spirits ; and these succeeded soonest by a great deal, when no purging was used, other than just to keep the body laxative enough to go to stool once in twenty-four hours ; and thus, to depurate gradually, and most effectually, the putrid



contents of the primæ viæ, which had been left behind by the disease. I was still farther convinced of the impropriety of giving several strong doses of purging physick, according to the common practice, within the first three weeks after the termination of the Small-pox, by observing, that a far greater number of chronical complaints appeared in consequence of thus weakening the already worn down patient, than happened to those who were treated according to the method recommended above.

It is true, indeed, that some ill-conditioned tumours may now and then appear in such parts of the body, as will altogether warrant the expediency of attempting to carry them off by art: But still, I am clearly of opinion, that if they happen in a safe part, instead of weakening the patient by repeated purging, this process of Nature, to remove the dregs of the distemper, in a manner so salutary and efficacious



as by a large boil, should by no means be interrupted or prevented.

I once saw a patient who had the bloody Small-pox, with the pustules fessile all the time of the disease, and who made bloody urine on the three first days.

The benefit obtained from the use of the vitriolic acid.

THIS man could not bear the bark in any shape ; but relished, more than any patient I ever saw, all acidulated drinks. I therefore gave orders, that he should be indulged with as much diluting thin suppings as his stomach would bear, and that they should be made very tart with spirit of vitriol.

By this means he took, every day, till the sixteenth, about one ounce of the common spirit of vitriol of the shops. This unusual quantity induced me to try, by my taste, the strength of the spirits of vitriol which were used ; and I found them as strong an acid, as is to be met with for common sale, under the name of weak spirits of vitriol.

R 3

By



The advantage of simplicity in prescription, and of attending to the effects of certain medicines.

By this method, and by this medicine alone, he escaped through the worst sort of the Small-pox, which afforded little or no hopes in the beginning. My notion here, as well as in every desperate case, was, to try the utmost efficacy of one, or a few simple remedies, well chosen; and, with that intent, to give them in as large doses as the particular idiosyncrasy of each patient would admit of. I am thoroughly convinced this practice, discreetly followed, and duly registered in the history of medicine, would, in another century, extend the dominion of Physicians over diseases, much farther than it has been advanced from the days of Hippocrates, down to this present time.

Of Opiates.

WITH regard to the use of Opiates, I am persuaded they are not absolutely necessary in all the stages, and in the manner in which Dr. Sydenham ordered them. As opium is the noblest of all antispasmodics, with that intention,



tion, chiefly, I think it should be used in this disease, when the violence of spasms, and other alarming symptoms, that are the consequence of these, indicate the necessity of it. I could wish, in the mean time, that it may hereafter be duly inquired into, whether we should not endeavour to derive some more remarkable benefit from it, by giving a larger dose than is generally prescribed; and afterwards, whether it should not be sooner discontinued, in the course of the disease, than has been commonly done heretofore.

THUS far I have presumed to offer my sentiments, which, in some particulars, differ widely from the practice of other Gentlemen, in this disease. Conclusion, with an advice concerning fresh air. E'er I conclude, it will not be unreasonable, (I hope,) to give an advice, the observance of which, I consider as the important object of the Physician's attention, in military practice. To recommend the strictest attention to-



wards supplying the patients with a free and almost uninterrupted course of fresh air ; common sense, and the common experience of other disorders, are sufficient to satisfy : But in this disorder, particularly, nothing ever was more convincing to my mind, than the necessity of it ; and nothing, I think, deserves to be more strongly inculcated.

WHEN two out of three, who were seized with this disorder, died in low-roofed confined hospitals, a great many more proportionably escaped, of those who were, in all other respects, treated exactly in the same medicinal and dietetic regimen, but who had the good fortune to be lodged in fly-tents, pitched for the purpose, in the rear of the camp, and who were laid on good clean straw, raised a little above the level of the contiguous ground.

THE orderly man, who was allotted to the care of these men, had it given him in charge, to keep the side of the tent, that was opposite the sun, always



ways open by day, and in fair weather, except just over the head of the patient. In hazy weather, the lower part of the tent only was made bare, for a few minutes, once every two hours; or, at most, it was exposed as high up as the middle of the tent, but still so as to avoid wetting the bed-cloaths of the sick.

By this simple method, the poisonous steams of this loathsome disease, were brushed off by the wholesome breezes of uninfected air; and no medicine, that can be ordered in the cure of the Small-pox, amongst military men, was comparable to the advantages accruing from this practice. Wherefore I strongly recommend it to every future Practitioner in the army.

THE Measles are, by all authors, so commonly treated of, immediately after the Small-pox, that it would be almost a crime to say nothing of that disease in this place. I cannot, however, detain my reader, nor encrease the

The Measles; why not treated of more particularly in this place.



the bulk of this treatise, by insisting on a subject, where I have nothing new or material to offer; and where I can with so much advantage refer him, to the well digested precepts of Dr. Mead, who *first* entertained a true and philosophical idea of this disorder.

## Of CHRONIC DISEASES,

AND, FIRST,

### Of INTERMITTING FEVERS.

Intermit-  
ting Fe-  
vers.

**A**LTHOUGH all fevers of the intermitting kind do not justly fall under the class of chronic, nor of acute diseases, I think they may most advantageously be considered in this place; because, though some are acute, others of them are really chronic, and because various other disorders which they occasion, and into which they terminate, can be treated of, immediately after them, without interruption.

THESE,



THESE, like acute diseases, are very properly divisible into the vernal and autumnal orders. The former, as being the most simple and most tractable, we shall, in the first place, take notice of.

EARLY in the spring, and often immediately after men come to lie on the cold ground, when they take the field, perspiration is lessened, or obstructed, particularly in consequence of this alteration into that new mode of life; and the daily returns of the sick, in intermittents, exceed, in their amount, any other disease of the army.

Vernal Intermittents, their cause.

SOLDIERS likewise are, at the best, generally irregular in all things, *when they are off duty*; and, when they can get where-withal, they eat and drink very improperly; and, at all times, clog their alimentary passages with crude, indigestible stuff, of every kind.

THIS circumstance greatly disorders their bile: And, when a lessened perspiration



ration meets with certain vitiated qualities in the bile; by these coming to operate with various seeds of diseases innate in every man's constitution, fevers of divers sorts are induced. Nature, finding herself furcharged with perspirable matter, and prompted by the stimulus of vitiated bile, or indigestible crude humours, &c. endeavours to eliminate those morbid seeds, in a manner the best, in general, adapted to her present circumstances and occasions. When this luctation is carried on in a certain manner, and when the offending matter is thrown off by degrees, at repeated intervals, and after various periodical struggles, the disorder is classed of the intermittent kind, and the fever, which for the most part attends it, the Intermittent Fever.

ALTHOUGH in Spring the Inflammatory Fevers prevail most, as we have already mentioned, yet, as the bile is oftentimes disordered in a peculiar manner,



manner, even in this season of the year, it happens not unfrequently that the vernal acute fevers, before their effects fully cease, manifest a remission, then afterwards an intermission, before a plenary crisis. In other people, the seeds of Spring-diseases are not matured or exalted higher, than to manifest from the first, either double tertian, or tertian intermittents; and, at this season, I never met one quartan ague.

IN soldiers of athletic constitutions, Cure. it is adviseable to permit three or four returns of the paroxysms, whereby Nature, aided generally by a vomit or two, may eliminate a sufficient quantity of the morbid cause; and then the bark may be administered with safety and advantage. It should be observed, however, that although it is most expedient to observe this method, in the generality of vernal intermittents, still there are many circumstances which require a different treatment. Thus, the fevers of this class, which come  
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on in consequence of a peculiar irritability of the patient's system, on account of a latent disposition, and too frequent returns of this disorder, on account of cold, fright, or such like causes : I say, fevers of this kind, and such as come on, when the patient is not able to endure the violence of the paroxysms any longer, are to be terminated by the bark, as soon as possible.

IN the first-mentioned case, which ofteneft comes before the military Practitioner, I always found it necessary to cleanse the alimentary passages, by a vomit or two, administered either in the morning early before breakfast, or about an hour before the usual time of the returning paroxysm : And this alone was often found to vanquish the distemper. If it did not, and if the body was costive, and not moved by the vomit, about one ounce of sacred tincture, or of tincture of senna, was of service, to prepare the intestines for admitting,  
after



after the following fit, the salutary operation of that noble specific, the Peruvian bark, either in substance or in decoction. When the former is used, the quantity should not fall short of a full ounce, in powder, for adult persons, made into an electary, and given between the fits in eight or ten doses: Of the latter, two ounces of bark, boiled in spring water, from two quarts to one, make a sufficient quantity, to be taken like the electary, so that the whole quart may, at properly divided intervals, be carried into the body, before the commencement of the succeeding paroxysm. This decoction likewise, when cooled, ought to be decanted, and not strained for use; and, during the time of making it, a handful of chamomile flowers may be frequently added, as occasion requires.

As soon as the time of the expected fit is passed, without symptoms of a return; for the sake of greater security, it is adviseable, to order two-thirds of  
the



the above dose. After two days more, if still the fit keeps off, half an ounce, through the time of its expected absence, is sufficient: And finally, before the total disuse of this remedy, the patient should generally take, every morning and evening, for a week or ten days, a lump of the bark electary; and ought to wash it down with half a pint of strong chamomile tea, and particularly, as bark sits lighter, when conveyed into the stomach in a liquid form, I commonly made them rather mix the electary in a draught of chamomile tea, than to give it in a solid form by itself.

THIS treatment commonly cured most of the vernal intermittents which I saw; and I very seldom used bleeding, because I think it very rarely necessary in such cases. Indeed some few soldiers, by their irregularities, now and then suffered a relapse; but the cure was commonly compleated by beginning again with vomits, cleansing the  
primæ



primæ viæ, and by repeating the bark as before. I likewise occasionally interposed the febrifuge saline mixture, to the quantity of four ounces of lemon juice, saturated with any alkaline salt, between the paroxysms. It often happens, that the intermittents of the Spring are of so mild a nature, as to be cured even by the change of season, and warmth of the summer: And this, in general, may be remarked, that provident Nature, in the distribution of disorders, brings them on in a succession as little prejudicial as possible; for not only the universal agents of Nature, Heat and Cold, correct mutually, in their turns, the manifold inconveniencies reciprocally derived from each other, but they effect these changes gradually, and the distempers of one period of the year, directly counteract the symptoms and effects of the preceding ones.

AUTUMNAL intermittents, as they are more complicated in their origin,  
S are

Autumnal  
Intermit-  
tents.



are always more difficult to be cured than those of the spring. And because the bowels, at this time, are more loaded with bilious crudities, when fevers happen, they are not always either simply inflammatory or intermittent at first, but of a mixed bilious nature. For this reason, before a judicious Physician attempts to stop them *in this country*, he will consider, how much the necessity of ordering evacuations is greater now, than it was formerly in the spring, ere he attempts the use of the bark. This method, however, is not adviseable in all climates; for, in the West Indies, particularly after the rainy seasons, unless the fever is stopped by large quantities of bark, before a third paroxysm, (I am well assured) the patient has too little chance of escaping with life.

Their nature and cure.

I have frequently observed the mor-  
bific matter, in many soldiers amongst  
us, so turgescient, that I could not ven-  
ture



ture on the bark, before the symptoms were in a good degree tempered both by bleeding and purging oftener than once. For, where the bark was too early tried, much pain of the head, or yellowness of the eyes followed, and sometimes continual fevers were brought back, with greater violence than at first. It is true, the great Sydenham's doctrine discountenances evacuations in Autumnal Intermittents; but then, it is much to be questioned, whether the bad success which deterred him from this practice, was not owing to his very sparing use of the bark, rather than to any certain impropriety of a treatment, which is now well known to be unexceptionable in most cases, when joined with such proper and effectual doses of this powerful febrifuge afterwards, as are at this day ordered by every Physician.

UPON this plan, then, when Autumnal Diseases made their first early appearance in the month of July, I was



never afraid both to bleed occasionally, and vomit repeatedly, and to purge the alimentary canal, in such cases especially as seemed, from the turgescence of febrile matter, to require them all, and when they bore the type of continual fevers in the beginning.

BUT, as I think too much evacuation by bleeding, is, in general, more unsafe towards autumn than in spring, I never persisted in this intention, so long as to bring on any such debility, or relaxation of the solids, as could not be cured, together with the disorder, by a sufficient quantity of bark, viz. an ounce in the interval of each fit, conjoined occasionally with aromatics and filings of iron, afterwards to brace up the solids.

IN the Autumnal Intermittents, where the vital powers were much reduced, and when the turgescence of the fever was either naturally or artificially allayed enough to attempt the bark, at first, I occasionally added to each  
ounce



ounce of it, (especially in leucophlegmatic constitutions,) a drachm, or sometimes a drachm and a half, of powdered radix serpent. Virginianæ. When the bark alone, or joined with other medicines, made the bowels too laxative, so far as to destroy its febrifuge effects, by expelling it too soon, and preventing its salutary effects, I found it necessary to take away this irritability of the bowels, by adding five or six drops of tinctura thebaica to each dose of the electary.

IN other cases, where there was still too much fever to admit of an whole ounce of the cortex in the intervals of the paroxysms, I found great success from a lighter decoction of half an ounce of it with a drachm or ʒiss of powder of gum myrrh, boiled from three pints to a pint and a half, and added to an half, or a third of that quantity of the salt of wormwood mixture. This composition was given in the intervals of the fever, so as to bring



on a very plentiful discharge by sweating for a few days. Then the myrrh, snake-root, &c. were properly laid aside for the larger quantity of an ounce of bark, which was ordered for two or three days successively, and again gradually decreased as before directed. If any few cases proved obstinate to this treatment, crude sal. ammon. given in water-gruel, to the quantity of two or three drachms every day, along with a full ounce of the bark, in the most difficult Intermittents proved salutary, and terminated the disease successfully.

Ague-  
cakes.

I have frequently seen, what Dr. Pringle, after the denomination of the common men, calls the *Ague-cakes*. These are hard swellings in the left hypochondres, which sometimes remain after the imperfect cure of obstinate Intermittents\*, but most remarkably in tropical climates: And I find, by the testimony of many sufferers, that the double tertians, and bilious remittent fevers of the West Indies, and especially

\* Vide Hippocrat. de Aere, Aquis, & Locis.



of the coasts of Guinea, and of most tropical countries in general, are very often succeeded by symptoms of this nature: But above all others, where the patients had been accustomed to drink of river waters, that periodically inundated vast deserts of country, and immediately exhaled their putrescent vapours by the action of the sun's intense heat, as at Senegal, Galam, &c. where our troops died like rotten sheep\*.

IN several whom I have examined, after returning home, and in seemingly perfect health, these partial indura-

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\* The quantities of Peruvian bark consumed by our soldiers, who perished at Senegal in such numbers, and farther up that extraordinary river, since it was reduced under the dominion of Britain, are incredible; but the necessity of it in larger quantities, for the use of the troops, was so notoriously manifest to the private soldiers themselves, that mutiny amongst the troops was the alternative, if the Surgeon would not undertake, at *his own peril*, that bark, in sufficient quantities, should be sent along with each detachment, destined for Galam, Padore, and such inhospitable deserts in Africk. But all this I repeat on the report of Mr. Boone, who was Surgeon to the garrison at Senegal full three years; and the price of bark at Goree was, in scarce times, at the rate of an ounce of gold-dust for a pound of bark, so deficient had judicious regulations been somewhere, according to Mr. Mornington, Surgeon, at Goree.



tions appeared to me to be seated in the spleen. And although there is reason to think that this organ, of all others, is the least essentially necessary for life, yet, when it became so swelled and enlarged, as to exceed four, or even five pounds in weight, as I have once seen it, though not in men who ever were in Africa; it is no wonder if such an uncommon tumor should, in process of time, very much affect the viscera, by disturbing their natural situation; and no wonder if, in consequence of these disorders of the parts, which prepare nourishment for the whole body, the solids and fluids, in general, should be so much indisposed, as to make way for dropfies, of the belly especially, and anasarcaous swellings of the legs.

Cure.

THE cure of these indurated tumors always best succeeded, under me, by the use of vomits, given now and then, and by rhubarb joined with calomel purges; and, in the intermediate times,



times, by Castille soap, attenuating diuretics, and afterwards by bracing the body with the bark, rhubarb, and bitter infusion, impregnated with filings of iron.

THE treatment of the dropsies, which often accompanied and followed these tumors and fevers, shall be given immediately after that of the Jaundice.

*Of the JAUNDICE.*

THIS disorder frequently appears <sup>Jaundice</sup> after fevers of the intermittent and bilious kind; and was very common in our bilious autumnal fevers, of the years 1758 and 1760, continuing sometimes several weeks after they had terminated.

THE reasons why a Jaundice should so often appear in these disorders, and why, after an imperfect crisis, it proves a tedious, and often a dangerous symptom; why it arises sometimes without any preceding fever, and is frequent-  
ly



ly experienced here, as well as in the climates where bilious disorders appear more endemial, will easily occur to every competent judge of medical matters; to every person, who considers what I have already said, concerning the ropy viscid texture of the bile, in the beginning, and its turgescence in the process of autumnal diseases; who considers the tendency to the generation of calcarious matter, in all the fluids of the human body, which are of a much less viscid, earthy, and oily nature than the bile, and which do not remain so long in one undisturbed reservoir; who considers, that in our cold northern latitudes, the whole course of the non-naturals often happens, in military life, to be totally interrupted for a considerable time together; that fatigues, colds, watching, fasting, and every perturbation of mind, as well as of body, which commonly attend private soldiers, may hurt and indispose the solids and fluids, and, by a variety of intermediate steps, bring  
on



on disorders of the bilious kind, as well in this country, as heat, moisture, and tainted air, &c. &c. may occasion the same in the West-Indies, or other sultry climates, where the atmosphere most abounds, at certain seasons, with moisture and heat.

IN this disease, the whites of the eyes are tinged; the urine stains white cloth with a deep yellow colour; sickness at the stomach attends, and the body is costive; and whatever comes away by stool, is of a white, or clay colour; the patient is insuperably lazy, listless to motion, and quite spiritless.

Symptoms.

IN one jaundiced person, whom I opened, after he died of a fever, in the year 1758, I found the ductus communis of the bile quite impervious; and the bile in the gall-bladder was so ropy and viscid, that it could not, by any pressure, be squeezed into the intestines.

IN



Most com-  
mon cause.

IN some, who died of a chronic Jaundice, stony concretions were found in the duct or gall-bladder only, and none in the liver itself: And it is remarkable, that these concretions affect particular shapes, and that the saline particles participate of an imperfect species of chrySTALLIZATION; for in some I found them all of a pyramidal form, with smooth surfaces; in others, they were irregular solids: In general, whatever the figure was, all those of the same bladder were similar in their form. Out of one subject I took thirty-two such; the largest of which weighed forty-two grains; the least, six grains and an half; and all the rest were variously intermediate. The gall-bladder, too, was often prodigiously distended and increased beyond the natural size, and without stones.

Cure.

As to the cure of the Jaundice; vomits, and the neutral saline mixture, in very large doses, relieved this symptom, in most of those who had a fever along with it. It was necessary,



fary, however, to add diuretic salt, unless a spontaneous purging came on, and, with the termination of the fever, carried off the suffusion of the bile, which had often tinged the skin of the deepest yellow, and sometimes blackish colour, as happened in the autumnal fever, of the year 1758, in the Isle of Wight.

WHEN a diarrhœa came on, I found it best, in general, rather to encourage than to suppress it, in this country. In the West-Indies, and very hot climates, the opposite treatment to this, I am told, must be diligently observed, on account of the greater propensity to spasmodic affections there; and this dangerous drain must be early stopped, by very large doses of opium, and every other adviseable method. When the flux, with us, was very violent, all that I judged necessary, was, to gain a truce, by moderate doses of tinct. thebaica; until Nature, assisted by the saline mixture, had carried off  
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the fever. In a little time after this happened, the skin recovered its natural colour, by the use of the cortex; or, it succeeded as often, by prescribing daily a pint and a half of the simple bitter infusion, and one ounce of Helvetius's styptic tincture, with as much tinct. sacra, as was necessary to keep the body gently laxative. If the patient would persevere ten days or a fortnight, in this method, and occasionally add three drachms of sal. diuret. when any feverish heats slightly recurred, it proved sufficient to complete a cure.

SOME patients, after the fever was entirely cured, still retained the Jaundice; and this was often followed by œdematous swellings in the legs, and of the other extremities. In these cases, it was necessary, besides a vomit every third or fourth morning, to give rhubarb and a little calomel sometimes. In the intermediate days of the vomits, besides the diuretic salts already recom-



recommended, I often found a whole ounce of soap, taken every day, carried off the yellow colour, and the œdematous swellings, at the same time.

IN some cases, nothing is capable of expelling the morbid cause, without the continued repetition of emetics; and these should be given in the morning, as the most convenient time. After their operation, the patient should, in a few hours, take the neutralized saline mixture, with a drachm of diuretic salt, and one scruple of rhubarb, with five grains of calomel, once in three or four days.

THE bile, as a natural saponaceous fluid, is the great instrument of digestion, and serves to blend all the aliments into an emulsion-like chyle, which ministers to the labouring heart and wasting body, renewed supplies of strength and vigour, according to the quality or goodness of its composition. When it is either vitiated, or partially suppressed, the chyle that is next admitted

Rationale  
of the fore-  
going  
treatment,



mitted into the veins is badly assimilated, and generates crude humours. If this indisposition is continued too long, the whole mass of blood is impoverished, the solids lose their tone, the alimentary canal becomes tardy in its functions, and the recrements of the food adhering long to the folds of the intestines, cause partial obstructions, and a general indigestion. On these accounts the vomits are primarily useful, and in the next place the neutral diuretic salts and soap, to stimulate the intestines, and to supply the deficiency of bile. When the obstructions were partly removed, and when the natural colour of the skin, and of the fœces, were again recovered, a pint, or a pint and a half of the common bitter infusion, with a few drops of Mynsicht's elixir of vitriol, administered daily as before, or frequently the bark decoction instead of the other bitters, and to keep the body laxative with Sacred tincture, established the recovery, and restored the digestive faculty of the intestines.

*Of*



*Of the D R O P S Y.*

**T**HE Anasarcaous Dropsy, as has <sup>Dropsy.</sup> been mentioned already, often followed long, lingering, and intermittent fevers, where the crisis had been imperfect, where extraordinary tumors of the spleen appeared, and where the solids, in general, had been much debilitated in the beginning and progress of the disease.

**T**HE first diagnostic symptom of <sup>Diagnostic</sup> this disorder, was a swelling of the <sup>symp-</sup> legs, towards evening, which disap- <sup>toms.</sup>peared, or was much abated, every morning, by the horizontal posture of the body in the night-time. Soon after was observed a decrease of urine, and an increased thirst and desire of liquids, without a concomitant fever.

**W**HEN these were the only symp- <sup>Cure of the</sup> toms that appeared, and when the dis- <sup>most sim-</sup> order arose merely from a weak state <sup>ple kind.</sup> of the solids, the cure consisted chiefly

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in



in ordering a restorative diet; a little Red Port wine daily; the bark, in substance, given to the quantity of three ounces in a fortnight, with iron filings, and aromatic species, as before directed, or a proportional quantity of bark decoction, with a few grains of the aromatic species boiled in it, compleated the cure.

Cure of o-  
ther cases.

BUT when I had reason to believe that an Ascites, or the former, arose from obstructions seated in the liver, spleen, or their lymphatic vessels, instead of immediately prescribing corroborants, a few doses of rhubarb, with calomel, were first ordered, to purge off the recrements of the primæ viæ, and to resolve those obstructions. After using these and other deobstruent and evacuating medicines for some time, with success, when the swelling began to subside, and the patient to recover strength, I freely ventured upon the bark, or the common bitter infusion, to the quantity of a pint each day,



day, occasionally joined with two or three drachms of diuretic salt, to render the body soluble as long as was requisite.

IF, notwithstanding this treatment, the swelling of the legs or belly went on increasing, more drastic purges, with jalap and calomel, corrected by ten grains of ginger, proved necessary; and, indeed, in the Ascites, sometimes the more churlish purges, composed of gamboge and jalap; observing always to correct the flatulence their operation occasions in the bowels, by half a scruple or more ginger, and twenty to thirty drops of chemical oil of juniper. In the intermediate days, small doses of the Edinburgh squill pills should be given as a diuretic, and washed down with a draught of the saline bitter infusion already recommended: Thus endeavouring to evacuate judiciously the extravasated lymph, to brace the containing solids, and to restore their elasticity.



ALTHOUGH, in the cases already specified, this treatment was attended with general good success, yet, where obstinate obstructions had seated themselves in the more necessary viscera, and when a large obstruction, or solutio continui of the liver, or of some other bowel, occasioned the disease, or if it was owing to a rupture of any lymphatic, purgatives and diuretics were of no other service than to palliate the disorder, and to keep off the evil day for a little. This intention, however, should always be kept uppermost in the Physician's practice; for it is not easy to be well assured of the state of the viscera, which are so little exposed to our examination; and no chronical disease, in medical history, furnishes more instances of unexpected recoveries, than the Dropsy, particularly that species of it, distinguished by the name of the Ascites; which sometimes, after a long seemingly fruitless course of purgatives and diuretics, and of every rational method besides, I have seen cured by  
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the use of such things, as no Physician, reasoning only *a priori*, could conceive capable of effecting it.

I have known a few ounces of ptisan (made by boiling tamarinds and manna, of each 3jss. in fair water, and adding to four ounces of it, 3jss. of tincture of senna) purge and promote urine incessantly, for two or three days together, and absolutely, by repetition, cure the patient, in a few times, who had been long wrought with the most drastic medicines, in vain.

I have also seen, in two other instances, astonishing success from the inner rind of fresh dwarf elder, boiled in spring water, to make it exceeding bitter, and drank on a fasting stomach, in the morning, enough to vomit very severely; and to purge downwards very much; at this same time it proves very diuretic. This, too, happened after several fruitless trials, by various other cathartics.



I have found several soldiers who took one and a half, or two grains of tartar emetic, dissolved in a pint of water, in which a good quantity of parsley roots had been boiled : And this apozem, drank daily, and sweetened with honey, often proved very salutary, by promoting copious discharges both by stool and urine.

NAY, opium itself, in large doses, at night, or Dover's opiate powders, to two scruples, and lying in blankets, on account of the sweating they occasion, for twenty-four hours, may prove of service in this disorder, which is so precarious and so often unintelligible as to its cause.

BUT, in general, the most rational method of procedure, in my opinion, is, first to evacuate the extravasated lymph, by the absorption of frequent purgatives, very gentle vomits, and diuretics ; to unlock obstructions, likewise, by the same treatment ; and afterwards, to strengthen the tone of the solids by nutritious diet, exercise, frictions and astringents



stringents of the vegetable and metallic kinds, particularly by the bark, the bitter infusion, and vinous preparations of fresh filings of iron.

BUT when, by these means, a cure cannot in reasonable time be obtained, I never am averse to the free, but cautiously directed trial of a variety of empirical remedies, in this disease; which, as medical history testifies, has sometimes been cured by strange and unexpected methods.

The use of  
empirical  
remedies  
admitted  
on some  
occasions.

WHEN the solids, however, are much diseased, or, when any solution of the substance of the liver, or a ruptured lymphatic vessel, has given rise to the Ascites; purgatives should not be too long insisted on, before the patient is tapped: For this operation, performed much earlier than usual among Practitioners, and before the solids are too much melted down, will afford the most probable means of ease, if not of relief. The cure afterwards is to be prosecuted by purgatives, astringents,

Tapping,  
when use-  
ful.



&c. as already mentioned, used in a discreet and medical (that is a rational) order and succession to each other.

Worms,  
their dif-  
ferent spe-  
cies.

I purposely omit saying any thing of the other sorts of Dropsies, such as the tympanites, hydrops pectoris, &c. because I never met with them in military life, in my practice.

### *Of W O R M S.*

Symp-  
toms.

**D**URING the bilious fever, by purging in the ascites, and oftentimes without any manifest cause, the three sorts of Worms, known by the names, Ascarides, Teretes, and Tæniæ, are discharged, or come involuntarily away.

THE patient is previously often troubled with sharp gnawing pains of the bowels, a greedy appetite, and a particular fallow look, sometimes with irregular feverish heats: But the most certain sign of this disease is, the appearance of some worms, and a continuance of these symptoms afterwards.

THE



THE cure in general is performed by calomel purges frequently repeated, and by aloëtic alteratives. The *Tænia latissima Plateri*, or most troublesome tape-worm, yields best to fresh filings of tin in fine powder. Cure.

I have given this medicine many trials ; and, in children, I find, that half an ounce of it may safely be given for three days successively, and an ounce, or even more, to some adults. Only, the fourth day a brisk purge of jalap with calomel is necessary. Then the tin filings are to be given again ; and a purge at the same interval as before to be repeated.

It might appear extravagant to mention the manner in which these worms, after this course for eight or ten days, are known to come away, as often alive as dead, and in such a way as to make the ignorant think, at first, they are parting with their intestines.

It ought to be carefully remarked, in the mean time, that this medicine,  
in



in filings, is much more powerful than in powder; perhaps, because the weight of the quantity prescribed above, and the angular points of the raspings, act more advantageously on the worms, and oblige them to quit their hold of the intestines sooner, than weight alone, without sharp surfaces, is found to do.

THE *Ascarides* yield to calomel, joined with aloes, or jalap, and given every third or fourth night: In the intermediate times, one drachm of *æthiops mineral* should be given in an electary, three times a day, for a strong man. I have also found *mercur. alkalizat.* answer just as well, and in less doses than the *æthiops*.

THIS course of medicines frequently also brought away the *Teretes* in about a fortnight; but in some cases, these worms were not sufficiently affected by it. I therefore had recourse to the *Anthelmia*, or Indian pink, concerning the salutary advantages of which, in the *Ascarides*, I had heard some well vouched facts about three years ago.

I pre-



I prepared it, by infusing a drachm of the plant with the root, just as it is sold in the shops, in four ounces of boiling water; and I ordered it to be taken daily, in this quantity, at three doses, for ten days, or a fortnight together.

By what I then saw, I was encouraged to recommend a farther trial of it amongst my brethren of the Faculty in London; and since that time, Dr. Hinckley, one of the Physicians to Guy's Hospital, has prosecuted farther experiments with this plant, which he calls *Caryophillum Americanum Anthelminticum*. He gives it to the quantity of two drachms, infused in about six ounces of boiling water, in twenty-four hours. He divides the infusion into equal parts, and gives one half at bed-time, on account of certain narcotic properties, which stupify and operate powerfully when it is over-dosed: The other half he gives at twice the following day, and perseveres for a week or a fortnight in the use of this simple and easy remedy.

SINCE



SINCE that time, the Doctor, as well as I, have frequently had sufficient inducement to prescribe the root with the whole of the plant in decoction. Dr. Lining, Physician at Charles-Town in South-Carolina, is the first Medical Writer that I know of, who has noticed the anthelmintic virtues of the root; and as he observed strange effects ensue after using it in powder to one scruple, I was willing to avoid the like vertiginous complaints, and therefore first gave it in infusion, as before-mentioned; but never ventured on so large a quantity as my friend Dr. Hinckley himself has taken, nor have I been witness to any such effects, as he, after Dr. Lining, has experienced\*.

I shall only add, that it is probable, from the encrease of demand for this remedy among the Druggists, who sell it in London, the success of it is not inconsiderable; and that it is now used pretty frequently throughout Great

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\* Vide *Essays and Observations, Physical and Literary*, published by a Society at Edinburgh, 1754.



Britain. From my own experience I am convinced, after the expulsion of some of the worms, by mercurials and purgatives, that this not only removes the dregs left behind, but also prevents a return, which, in this disease, is not at all uncommon, after every other medicine.

THE generation of animalcules, in the external parts of the body, gives rise to a disorder which is much more frequent amongst all soldiers, than the former; and for this reason I must not pass it by unnoticed in this place, tho' I defer the account of the *Dracunculus* infesting the soldiers in Africa, &c. till another time.

*Of the I T C H.*

THIS disease is produced by the ova <sup>Itch, its</sup>  
of animalcules lodged in the skin, <sup>cause.</sup>  
and is chiefly fostered by filth and  
naughtiness, particularly in military life.  
I found the true Itch always yield to <sup>Cure.</sup>  
the quantity of two ounces of sulphur  
vivum finely powdered, and made in-  
to an ointment, with an equal part of  
soft



soft soap or hogs lard, and rubbed quite in at different times, on divers parts of the body, particularly on the flexures of the joints, where the disease is most manifest, and on the upper and lower extremities. These parts should be smeared alternately, every other night, and never at once ; because so much of the unctuous matter, by being rubbed on too large a portion of the skin at one time, might bring on a fever, and other dangerous symptoms, by locking up too great a quantity of perspirable matter, which should otherwise have been thrown off. By rubbing in this manner for nine or ten nights, all the animalcules in the skin with us are killed, and the cure is finished by a warm bath, and a quarter of a pound of soap, to cleanse the body from the dregs of the disease, as well as from the filth of this foetid remedy.



## L U E S   V E N E R E A.

**N**O Distemper, in medical history, <sup>Lues Venerea.</sup> has appeared with such a variety of symptoms, from the earliest accounts of it, to the present time, as the Lues Venerea. It was described in Europe, by writers, for more than half a century, before any mention was made of the Gonorrhœa, now usually the first and most frequent symptom attending the infection. But if, in the early ages of this distemper, people were not troubled with this more recent complaint, the patients were certainly much worse off; when blindness and obstinate opthalmies, buboes, chancres, foul stains of the skin, pains in all the bones, violent head-achs, and falling off of the hair, were among the first of the terrible symptoms brought on in consequence of this almost universal disease: These now, however, but rarely happen from the beginning, since the appearance of the Gonorrhœa.

THE



THE application of mercurial unctions and dressings might easily and naturally be suggested to the mind of any attentive Surgeon, conversant in business, in the foul sores and blotches of the Lues; and it is said first to have been practised by a Surgeon of Montpellier, in his dressings to the external stains in this disease: It does not appear, however, that the same Practitioner gave mercury internally.

IN the mean time, as the newly imported venom was quickly diffused all over Europe, the most rational Physicians took this contagious distemper under their consideration; and, in consequence of their improvements in the methods of its cure from time to time, we find a remarkable mitigation of all the symptoms; and the disease, at present, is neither so tremendous nor destructive as it used to be, when it first appeared in Europe.

Cure. THE recent Gonorrhœa, the first and commonest of all the symptoms,  
is



is now pretty universally allowed, by the most rational Physicians, to require very little or seldom any mercury, or mercurial preparations internally, as it (together with a swelled testicle) is cured principally by much diluting with farinaceous ptisans, for eight or ten days longer; by bleeding in the inflammatory stage, by mild laxative purges, nitre, and the strictest antiphlogistic regimen and diet in that time, according to the degree of local inflammation; and thus we commonly subdue, in the beginning, all the bad symptoms of this recent disease, in a much shorter time than was required heretofore, when mercurial and other drastic purges were in use from the very first; for such used in the growing inflammatory stage of this complaint, are likely rather to augment the heat than to allay it, and therefore, till the partial heat and fever are removed, mercury, even calomel given internally, is, by judicious Practitioners, now at length postponed.

U

A strict



A strict attention also to the cleanliness of all the parts which the gonorrhœa touches, should, especially amongst soldiers, be incessantly inculcated; and this can never be effected, without often repeated ablutions of the sanious matter, by bathing the parts, and often fomenting them (six or seven times a day,) for several days at first, with aromatic herbs, or bran boiled in water, and sometimes acidulated with vinegar.

IMMEDIATELY after fomenting the parts, injections of fresh fallad oil, thrown into the urethra from the beginning, several times a day, are of great use to lubricate and relax the inflamed parts, and consequently to allay the heat and irritation, and thereby to lessen the discharge. I think frequent immersion into warm water, and subsequent injections of sweet oil, at first expedite the cure, as much as all the rest which is done at this time.

As



As soon as the inflammation and pain of the urethra are thus abated, and that the matter discharged assumes a milder and less irritating quality, gentle astringent injections may be used, to brace the debilitated vessels, and to stop or moderate the further excretion from the irritated extremities of the vessels in the urethra, and to check the discharge of that matter, which ceases to be so malignant as at first, or is only very slightly contagious.

For this purpose, most of the Army Surgeons, according to the best of their experience, contrive a variety of formulæ of subastringent injections; in most, or all of which, a small quantity of calomel, or some other mercurial preparation, is generally thought necessary. Mr. Gordon, Surgeon to the Essex militia, cured his men sooner and better than any of the others I saw, by injecting a little of the following liquid, two or three times a day. To every fix ounces of water



he began with twenty, or thirty drops added, or as many of solution of corrosive sublimate, made in Dr. Van Swieten's manner, as the urethra would gradually bear, without inducing too much fresh inflammation; and of this he injected a spoonful two or three times a day, alternately with the salad oil, after the bathing and fomentation of the injured parts.

I have known other Surgeons use ℥ij. or 3j. of calomel, rubbed down with a double quantity of gum arabic, and dissolved, as much as may be, in six or seven ounces of pure water, to which four grains or more of white vitriol were sometimes added: And this made a very useful preparation in our military pharmacopœia. It was necessary, however, to give this general caution; that whenever the symptoms and pain grew worse, in consequence of any injection; whenever a phymosis, paraphymosis, or chordee threatened to come on, it was immediately to be discon-



discontinued until a farther occasional use of bleeding, nitre, purgatives, meagre diet, and the fallad oil as before, with a little strong mercurial ointment rubbed into the affected parts every night, had removed these complaints, so far as to admit the repeated use of the sub-astringent liquor.

EXPERIENCE will convince the most cautious Practitioners of the expediency many times of this method of cure, in preference to the other; as it cuts short the former supposed necessity of long-continued evacuations by mercurials: And unless the infection produced chancres, or a venereal ophthalmia, or something worse; or unless it lights on a constitution, much predisposed by a scrophulous or scorbutic habit, or some other cause, to heighten the symptoms, I saw very few soldiers, who applied early, that could not be easily and soon cured by this method. Nor have I any reason to believe, that more caruncles, or urinary obstructions in the urethra,



ensued after these injections, used cautiously, in the manner here recommended, than after the more tedious and operose methods of treating this stage of the disease, formerly, about London.

As we owe to the Surgeons the first hint of applying the *Bishop of Lyons's* mercurial ointment in the cure of venereal infections, so \* we are likewise indebted to the Chymical Physicians for their labours, and the introduction of all mercurial preparations made by fire: But we are, above all others, in my opinion, obliged to Dr. Plummer, for his alterative, and to Baron Van Swieten, for the corrosive sublimate in solution.

THIS last medicine is of the utmost importance in military life, being easy and convenient for administration; because it speedily removes sometimes the worst and most fixed symptoms of this infectious disease; because, in the cases where it will succeed, it manifests its good effects in a very short time, and

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\* Vide *Guidonis de Cauliaco Chirurg. parv. c. 5.*



in a week or ten days, after the first exhibition of it, to the quantity of from half a grain to a grain each day, dissolved in water-gruel, or a quart of decoction of guaiacum, sarsaparilla root, or any such liquid, it enables the men to continue in their necessary duty, without much interruption, and thus we judge, by attending to the progress of it, when, and how long it should be continued. In those cases that are capable of being cured by it, as I said already, we likewise find its operation the easiest and mildest of all the mercurial tribe: And though sometimes it will not at all effect a radical cure, yet, during a campaign, it is the best of all remedies adapted to military life; as well as sometimes to that secrecy in private practice of the highest importance, and essentially necessary to the well-being of many families, at times.

No one preparation of mercury will, in all instances, and at all times, subdue the various symptoms of this foul disease. When, therefore, the subli-



mate, administered as above directed, daily, in Baron Van Swieten's manner of *solution*, does not in the least touch the complaints, after being taken for a week or ten days; when, notwithstanding the necessary precautions of accompanying it with chalk julep, to the quantity of four spoonfuls, two or three times a day, with half a drachm of cordial confection, and four or five drops of tinctura thebaica, as often as any tendency to griping stools, or pains of the stomach, follow; I say, when these things happen, and the disease does not yield (as, no doubt, it sometimes will not) the aid of art is to be sought from other means. But, from what I have learned, all that is necessary (if attainable at all by mercury) may be obtained from the salutary effects of moderate unctions of mercurial ointment, and from Plummer's alterative pill.

BUT, instead of rubbing *in* such extravagant loads of mercury, as was formerly wont to be done, I am convinced



vinced only so much unction should be used as may cause a slight swelling, and easily tolerable foreness of the gums; and the spitting should not exceed a pint at any time through every twenty-four hours during the course.

THIS may be generally regulated by first rubbing  $\mathfrak{zj}$ .— $\mathfrak{zss}$ . every night; but, after two or three nights, by intermitting every second, to observe more gradually the effects; and also by guarding against cold, which is often wont very suddenly to induce a troublesome salivation, although the unction has been used only a few times.

THIS treatment, in most cases, carries off many symptoms of the disease in about three weeks: In others, it must be continued more than double that time; unless the confinement and low diet used in the course, have impaired the patient's constitution so far, as to oblige us to take him out of his flannels, and to substitute the use of mercurial alteratives afterwards.

WHEN



WHEN the Lues happened to be ingrafted on a scorbutic habit, Plummer's alterative antimonial and mercurial pill, from ten to twenty grains, or just as much of it as will make the body gently laxative, exceeds all other remedies. And, as the intention of giving this medicine, is to operate on the vitiated habit of the body, and to correct the morbid qualities by gentle means, without much disturbance or great evacuations; any dose to exceed this end, or to excite salivation, or purging to excess, counteracts the primary design of prescribing it as an alterative. It should, therefore, be given in such quantities only as the constitution can bear with ease, and in such a manner as may be continued for a considerable length of time without any prejudice.

WHERE Plummer's pill is used in private practice, the *sarsaparilla* root in decoction (if the patient is able to pay for it) should generally be given at  
the



the same time: For a decoction of two or three ounces of this excellent root, boiled from two quarts of water to one, strained off, and taken every day, will exceedingly facilitate the cure.

IN military practice, it is in vain to recommend it as it deserves; because, the whole small pittance, now allowed for medicine-money to each regiment, would scarce be sufficient to purchase enough even of this one article, for *their occasions*, so far as to have its virtues tried to the utmost extent, and in proper quantities. Indeed, in general hospitals, where a greater latitude, as to expence, is permitted, I have met with complaints on the head of too much charge in this article: And this is more especially to be regretted, because no medicine is equal to a strong decoction of this root, diluted with milk, and given with about a quarter of a grain of corrosive sublimate, or with a few grains of Plummer's pill; above all, in pocky hectic cases, that  
could



could not bear other medicines, nor a free use of stronger mercurials, on account of the tender and diseased state of the lungs, and great induced weakness of the body. I therefore think this excellent and simple medicine deserves a principal place in our military *Materia Medica*.

YET, after all that art can do in this disease (and few there are, in which more can be attempted) it happens that cutaneous eruptions sometimes appear, particularly in the spring and fall of the year, in the palms of the hands, and about the joints, which crack first, and then the skin peels off. As we find this symptom in such chiefly as have suffered repeated taints of the Venereal Disease, it is reasonable to suppose, that the appearance is derived from some latent seeds of former infection, ingrafted in a scorbutic habit. In many such cases, I have, in private practice, as well as in the hospitals, recommended half an ounce  
of



of Peruvian bark to be boiled, with half the above-mentioned quantity of farfaparilla root, in the above quantity of water; and I made the patients drink a quart of this decoction daily, for a week or a fortnight, which generally removed the complaint, at least for a little time.

*Of the SCURVY amongst Soldiers.*

**I**N consequence of every mode of <sup>Scurvy.</sup> life, in which the texture of the blood is totally broken down, and the solids exceedingly relaxed and weakened, the Scurvy, in all its horrid forms, may be expected to appear.

THE unavoidable irregularities of <sup>Its causes in military life.</sup> military men; their being obliged to do long continued duty in an erect posture, which very much retards their circulation, and consequently must indispose their fluids; and the pernicious effects, likewise, of frequently repeated mercurial courses; all assist to cause a general relaxation of their solids, obstructions,



structions, swellings, hardness of the parts, and afterwards, not unfrequently, foul blotches, discolourings, and such ulcers of the legs, as are commonly known under the very proper denomination of *scorbutic ulcers*.

It is true, we do not often meet with instances, in this country, of the Scurvy, in that extreme which is common in the more northerly regions, among mariners, and most people who are sometimes necessarily long inactive and sedentary, on account of the inclemency of severe winters, or who drink stagnated putrescent waters; yet still, experience teaches with us, that the above-mentioned causes are sufficiently powerful, in military life, to bring on very tedious, and often dangerous scorbutic complaints. The following, I think, is a remarkable proof, to what a height the Scurvy may arrive, even in the midst of plenty, and in this temperate climate.

I saw



I saw several of the miserable French prisoners, at Winchester, who had been shamefully abandoned, by their own government, to the exemplary humanity of a generous enemy, who, in the height of the late war, did every thing, that our own common safety could admit of, to alleviate the miseries that must necessarily attend on a constant captivity of five years. Notwithstanding the utmost care, and the best of all æconomical regulations, that ever were practised under any authority whatsoever, numbers of those prisoners, after being remote from the sea-coast, three, four, or five years, and kept continually, during this time, upon the plainest and most nutritive vegetable and animal diet, frequently fell into *all* the symptoms of the Scurvy, which are so pathetically enumerated in the account of Lord Anson's Voyage; except that *one* of resolving the callus of a fractured bone, which never happened, that I heard of, in England.

Remarkable instance of the Scurvy.

To



To satisfy my curiosity, Mr. Ham, a Mate, and Mr. Bartlett, an ingenious Assistant Surgeon to the prisoners, shewed me some men, whose teeth were all loosened, and many had dropped out; their tonsils, and upper parts of their mouths, were swelled, and several had spongy excrescences as big as a small walnut, pushed out from the roof. Sometimes the whole inside of the mouth became exulcerated, and every part which was diseased would bleed on the least motion, or touch, frequently to such excess, that the hæmorrhage became sometimes very dangerous, even to fainting. The spongy laminæ of the bones of the nose were sometimes destroyed, the breath became exceedingly fœtid and offensive, and at length the sick would faint away, by being raised to an erect position, or upon walking in the area of the hospital for air.

I also saw many of these sick have the uvea as black as a coal; and, in  
two



two men, a great portion of the whites of their eyes became also discoloured.

I learned from Mr. Bartlet, that most of these symptoms appeared alike amongst such prisoners who had lived a long time at land, as among others who were recently brought into captivity. The same Gentleman observed, that the worst symptoms were most common amongst the inactive, and dejected; for some of them were naturally so prone to laziness, that they would lie (if permitted) a whole month together in their hammocks, before any disease broke out; and by this supine sluggishness, together with their filthy nastiness, all the symptoms were very much exaggerated.

NOTWITHSTANDING the unparalleled humanity of *our Government* towards these unfortunate poor men, they suffered such distresses by the Scurvy, even amidst a comfortable provision of all things, as were unknown in our times, except among the British troops, who first wintered at Quebec, and also

X

amongst



amongst those who died at Senegal of the Scurvy.

Cure.

THE cure, according to the stages and violence of the disease, was various. In general it was effected by keeping the body soluble, by aromatic cordials, wines, onions, mustard-feed, and garlick vinegar, with the bitter infusion, warm aromatic fomentations, and aboveall, by decoctions of the Peruvian bark, soured properly with elixir of vitriol. Whoever would fully comprehend what the Peruvian bark, the most invaluable of all medicines, is capable of, amongst worn-out soldiers, and in those dyssepulotic ulcers, brought on by former hardships, and so common in the latter stages of military life especially, would do well to imitate the practice of Mr. Serjeant Ranby, in Chelsea Hospital, who there exhibits in epitome a perfect model of every thing that is right for hospital management, cleanliness, order, and such treatment of sores and wounds, as he only has had the merit of establishing. To these,  
and



and to his most liberal and general use of the bark, for a long while together, his uncommon success in their cure, and much relief of distressed humanity, ought justly to be ascribed.

ERE I conclude this work, it is necessary to admonish the inexperienced Conclu-  
sion. Military Practitioner, that although a considerable variety of disorders are treated of in the foregoing pages, yet this tract is not offered as if all that should be known in each were set forth here; nor are things placed, in every instance, in that just order, which systematic writers are necessarily obliged to observe. Agreeable to what I once before hinted, I penned these observations and remarks only as hints that occurred, for those who may not be farther advanced in the practice of medicine among soldiers: My chief aim also has been, to mark *strongly* the most essential, and such practices particularly, as are best adapted to military life; I trust, however, I have included several such regulations, cau-  

X 2
tions,



tions, and advices, as may be of considerable advantage to the *service* in general, and to Gentlemen, who shall be hereafter employed, though not acquainted with all that has been known in this department, by many at present; and even this rate of knowledge would be *dear indeed*, if acquired purely by their own experience. Ornaments of art, embellishments of erudition, or of science, are purposely omitted, to give place for more useful instructions: And how to save the life of a raw inexperienced recruit, or of a brave veteran, or how to obviate and remove the most common causes of military diseases, is, with me, a more momentous consideration, than to aim at setting off my own importance, by filling the reader's mind with matters of mere speculation, or to detain him with subjects which can come before him but very rarely. It may be, however, expedient to mention here, that I think myself particularly obliged to the Mates in practice, mentioned already



ready in this Treatise, for giving my ideas a candid trial in many instances, and, above all others, I think the service most beholden to Mr. Welsh, the Apothecary to the Hospitals, and to the late Mr. Hutchinson and Mr. Hinchly, &c. for all of them were frequent witnesses of the success attended by nitre, wine, opium, and the bark, respectively, in such large and unusual doses as are recommended by me in the preceding pages.



## A P P E N D I X.

THOUGH the following concise account of the Island and Diseases observed at Senegal, on the coast of Africa, should be arranged, in strict propriety, among the *curious and uncommon histories* of distempers, which I have been collecting for materials of another volume hereafter; yet as my chief aim has, all along, in this little Tract, been to pursue, primarily, whatever struck me as most useful and important to be known in the treatment and cure of diseases, and for the general preservation of my fellow-subjects in military life, I am still confident, whosoever has been at the pains of reading only a small part of what I have already written, will think the following concise, and very interesting letter, written by Mr. Boone, Practitioner of Physick at Senegal, merits the earliest notice and approbation of every inquisitive Reader; and, above all, of such as may hereafter have occasion,



caſion to follow after the ſweets of that moſt dangerous, but, of all others, moſt lucrative branch of commerce, particularly in the interior parts of Africa, adjoining to the river Senegal. The prodigious riſe of the river at Galam, mentioned in his letter, may be partly owing to the proximity of that place to certain great lakes in the kingdom of Tombut, which, I am informed, have their only known outlet by this channel of the river Senegal; and I am told the ſuddenneſs and violence of thoſe cataracts, in the rainy ſeaſon, makes it neceſſary to conſtruct artificial elevations on the fortrefs and houſes at Galam, to aſcend and inhabit, till the torrents of water have left their uſual habitations dry, which happens in a very ſhort time. But I truſt I ſhall prevail on Mr. Boone himſelf to communicate ſeveral particulars farther about this unknown country, equally curious as the following, with deſign to insert them in due place, if I ſhould be induced to proſecute my purpoſe hereafter.



*To Dr. BROCKLESBY.*

*S I R,*

**A**CCORDING to your request, I herein lay before you a description of the Island of Senegal, and the diseases peculiar thereunto; as also, such an account of the adjacent country, as I have been able to collect during my residence three years there. My Description of the Island, and Observations on the Diseases, you may depend upon as an undeniable truth; but what I say of the adjacent country, I can insist upon no further than what common fame reports, having never seen it myself.

THE island of Senegal is situated in the river Sanaga, sixteen degrees fifteen minutes north latitude, about fifteen miles from its mouth; it is about one mile and a quarter in length, from north to south, and almost half a mile in breadth, from east to west, and is composed of a bed of loose sands, productive of nothing but what is forced  
with



with art, and the richest manure : Notwithstanding which, it contains about three thousand inhabitants, whose principal food is fish, and a corn called maiz : This corn grows in great plenty, almost all over the whole country. It may seem surprizing, that a part of the world, so very unhealthy as this I am now describing, should yet be so populous ; but the wonder will cease, when we come to understand, that the greatest pride among the men consists in the number of their wives ; so that every one takes as many as he is able to maintain ; some six, others eight, and others twelve at a time.

To the north-east, east, and south-east of the island, lies a prodigious large and low country, covered with bogs, woods, &c. much the greatest part of which is utterly unknown to us. Now, in order to form a just idea of the unhealthiness of this climate, it will be absolutely necessary to conceive to yourself such a country, as I have above mentioned, extending three hundred



dred leagues east, and more to the north and south : Through this country several very large rivers empty themselves into the sea, particularly the Sanaga, Gambia, and Sherbro; these, during the rainy months, which begin in July, and continue till October, overflow their banks, and lay the whole flat country under water; and, indeed, the very sudden rise of these rivers is incredible to persons who have never been within the tropicks, and are unacquainted with the violent rains that fall there. At Galam, nine hundred miles from the mouth of the river Sanaga, I am informed that the waters rise one hundred and fifty feet perpendicular from the bed of the river. This information I received from a Gentleman, who was Surgeon's-Mate to a party sent there, and the only survivor of three Captains commands, each consisting of one Captain, two Lieutenants, one Ensign, a Surgeon's Mate, three Serjeants, three Corporals, and fifty private. At the island of Senegal the river rises gradually, during  
the



the rainy season, above twenty feet perpendicular over part of that flat coast, which, of itself alone, so freshens the water to that degree, that ships lying at anchor, at the distance of three leagues from its mouth, generally make use of it, and fill their water there, for the voyage home.

WHEN the rains are at an end, which usually happens in October, the intense heat of the sun soon dries up those waters, which lie on the higher parts of the earth, and the remainder forms lakes of stagnated waters, in which are found all sorts of dead animals: These waters every day decrease, till at last they are quite exhaled, and then the effluvia that arise are almost insupportable.

AT this season the winds blow so very hot from off the land, that I can compare them to nothing but the heat proceeding from the mouth of an oven, and bring with them a smell that is quite intolerable. I cannot help mentioning some of the effects of these



these terrible winds, which is, that they are of so drying and hot a nature, that the wolves, tigers, lions, &c. go to the river, and lay their whole bodies covered with water, leaving only their nostrils above it, for the advantage of breathing. The birds, likewise, are seen to soar of an immense height, and to fly a vast way over the sea, where they continue until the wind changes and comes from the west. I have known it have such effects on iron, that locks have been rendered entirely useless, so that the keys would not move them; but, as soon as it changes, they have been of their wonted use.

THUS I have described to you, in as concise a manner as possible, the island of Senegal, and the country adjacent, as likewise the rains, the overflowing of the river, and the winds; and come now to remark those seasons of the year, when the different disorders happen.

IN the months of August, September, October, and part of November,  
the



the bilious and putrid fever always rage, the former of which would admit of bleeding in the beginning, by means of which, together with other evacuations, and the neutral salts, the disorder generally intermitted, and the bark recovered the patient.

BUT in the putrid fever, the lancet should be entirely laid aside; for notwithstanding some of the symptoms might indicate bleeding to those who are not acquainted with the diseases in that part of the world, I would by no means recommend it, for I have often seen it productive of the worst consequence; but if the pain in any vital part should seem to indicate an evacuation to be necessary, I would judge dry cupping most proper (I mean in violent pains in the head, &c.) As for the general treatment of these disorders, they have been so judiciously layed down by eminent Physicians, that I shall say nothing further of it.

THE use of the bark in the above disorders, and in many others, obliges  
me



me to return you my most sincere thanks, for that inestimable medicine; for in these deplorable diseases, nothing gave us hopes of our patient but that; and, indeed, its value was so well known to the Officers, that they scrupled even to go their command up the river, without a large quantity of it, together with all other sorts of medicine, so that the Governor has sent to Goree for it, before the party could proceed on their command.

It is very true, you supplied us with such immense quantities of it, as is almost *incredible*; but notwithstanding this, necessity has obliged me to offer Masters of ships three guineas per pound for any quantity they could part with for immediate use; and, indeed, you will not wonder at this, when you are informed, that in the months December, January, February, and March, I have had four hundred patients prodigiously ill of Tertian fevers, which have been so very obstinate, that I have been obliged to order bark to be taken  
almost



almost as common food; and, indeed, had it not been for this medicine, we might not have had five men living on the island.

FROM March to August, we have few or no disorders except the Scurvy and Dyfentery, which I take to be chiefly owing to the purity of air during this time, occasioned by the wind continually blowing from the sea; the scurvy and flux probably proceed from the badness of the water, salt provisions, and the want of vegetables; even here the bark was of infinite service, in removing the complaint of the former; as for the latter, it required no particular treatment, but what has been already laid down, except administering opiates more frequent than in Europe. From this account, you will not, Sir, be surprized, that the total loss of British subjects in this island *only* amounted to above two thousand five hundred, in the space of three years that I was there, in such a putrid moist air as I have described.

THUS,



THUS, Sir, I have given you an account of those diseases, which fell under my inspection while in Senegal ; and though I cannot be so particular and explicit in so short a letter as this, as I otherwise might be, yet if an enlargement upon this subject might be thought by you to be by any means serviceable to any who might visit these parts, nothing would be a greater pleasure than an employment of this sort to your

Most obedient,

London,  
Oct. 8,  
1763.

and most humble servant,

JOHN BOONE.

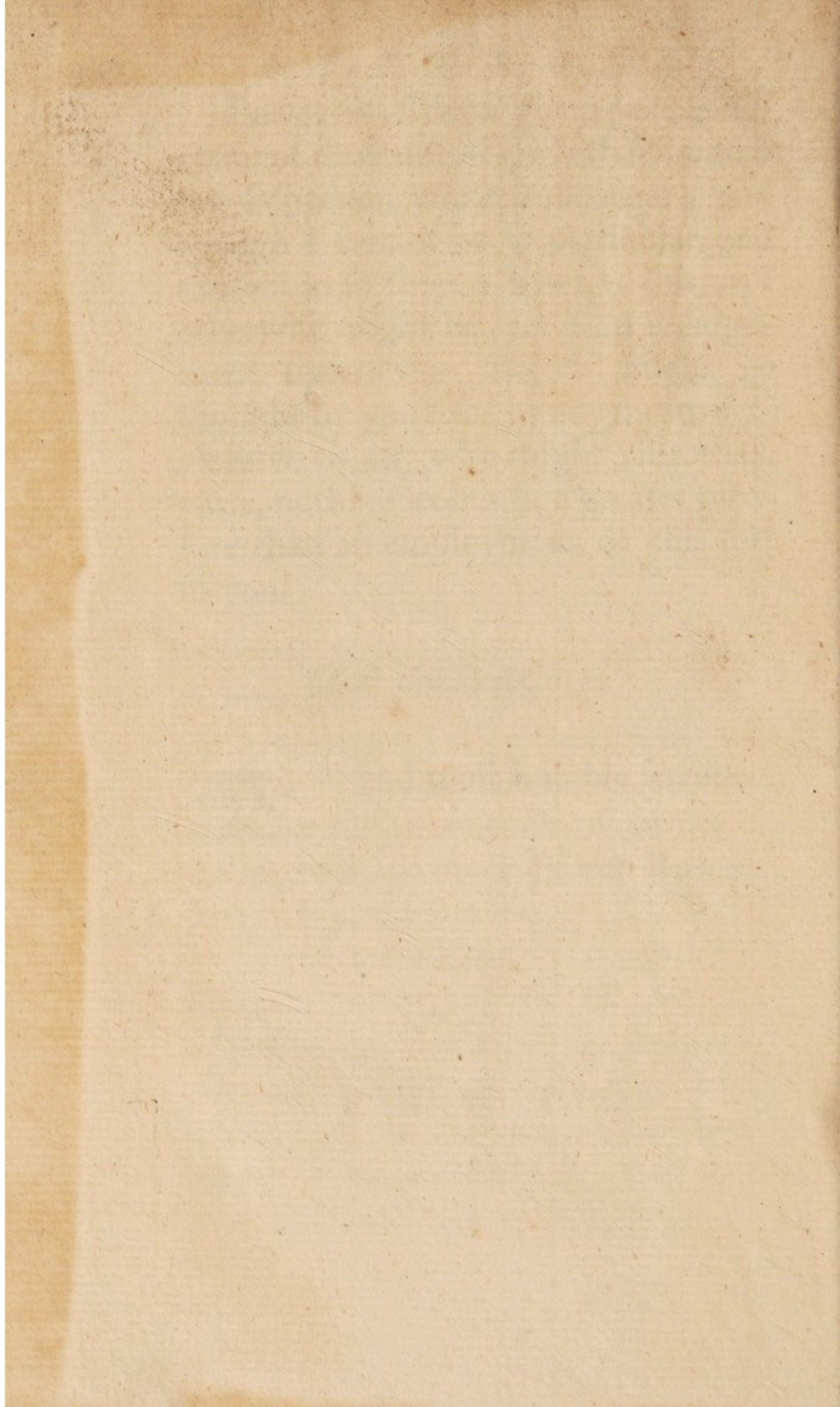
F I N I S.



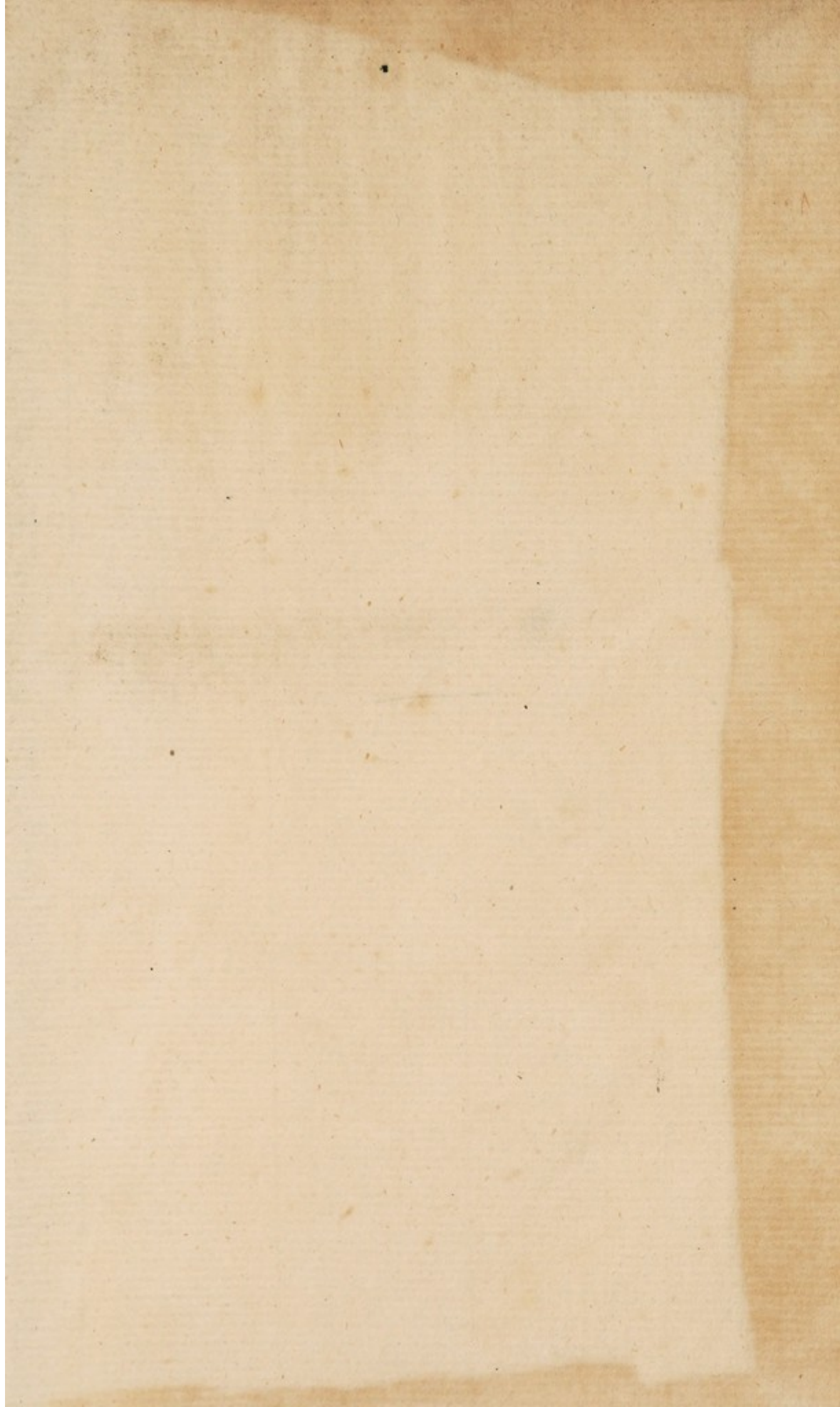
My dear Sir,  
I have the honor to acknowledge the receipt of your letter of the 10th inst. and in reply to inform you that the same has been forwarded to the proper authorities for their consideration. I am, Sir, very respectfully,  
Your obedient servant,  
J. H. [Signature]

M. J. [Signature]  
[Address]















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CL<sup>80</sup><sub>47</sub>



