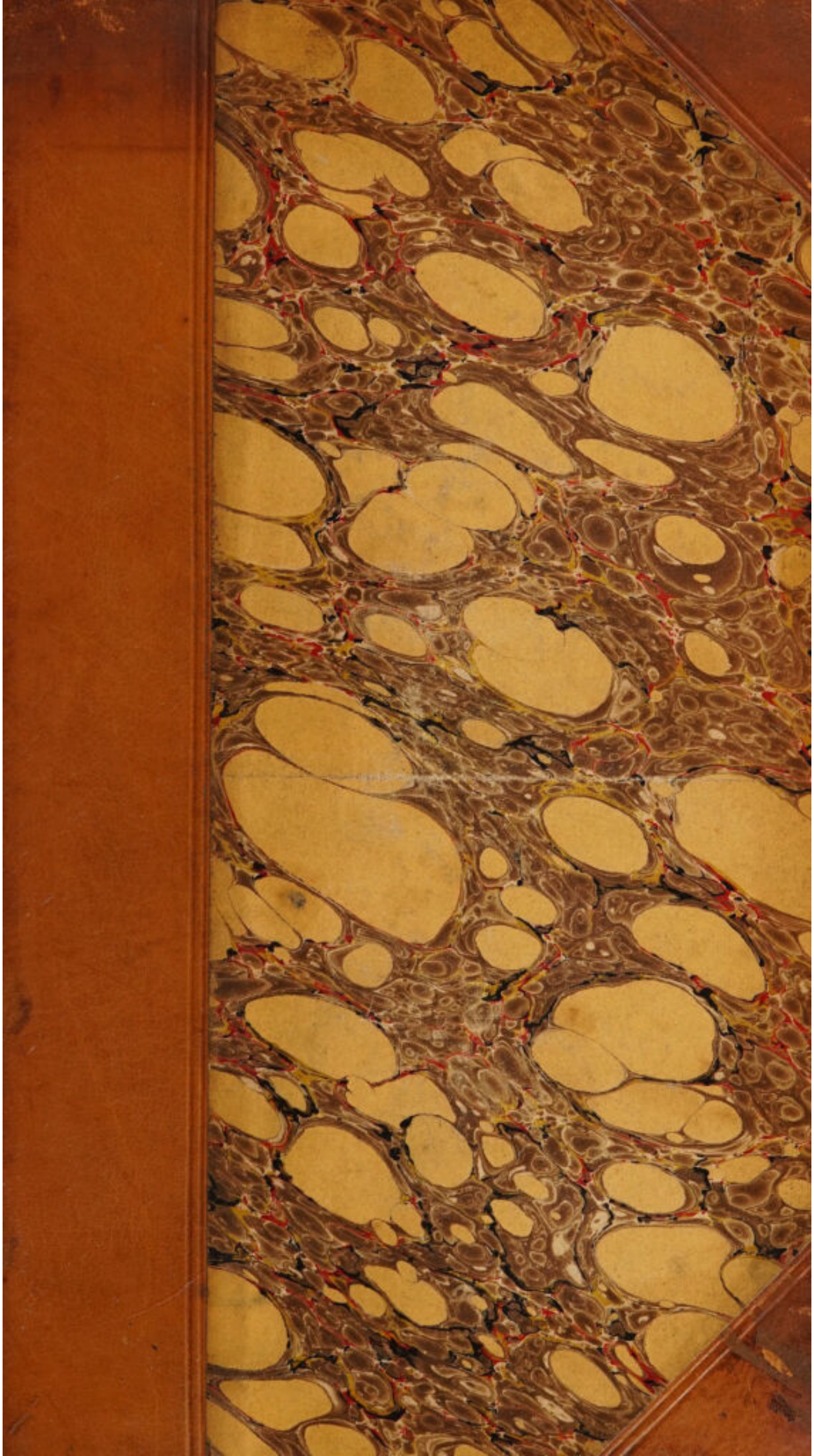
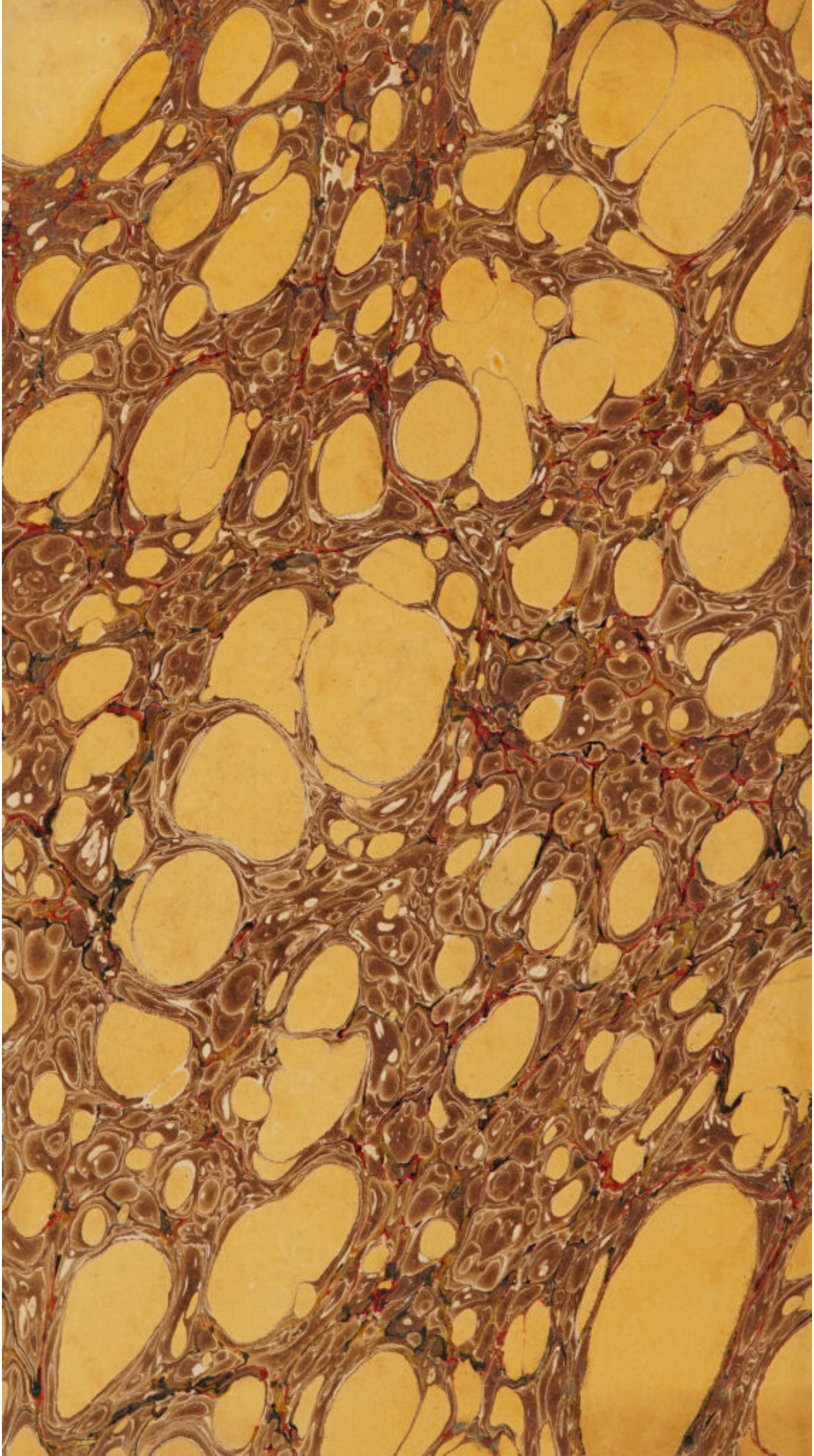
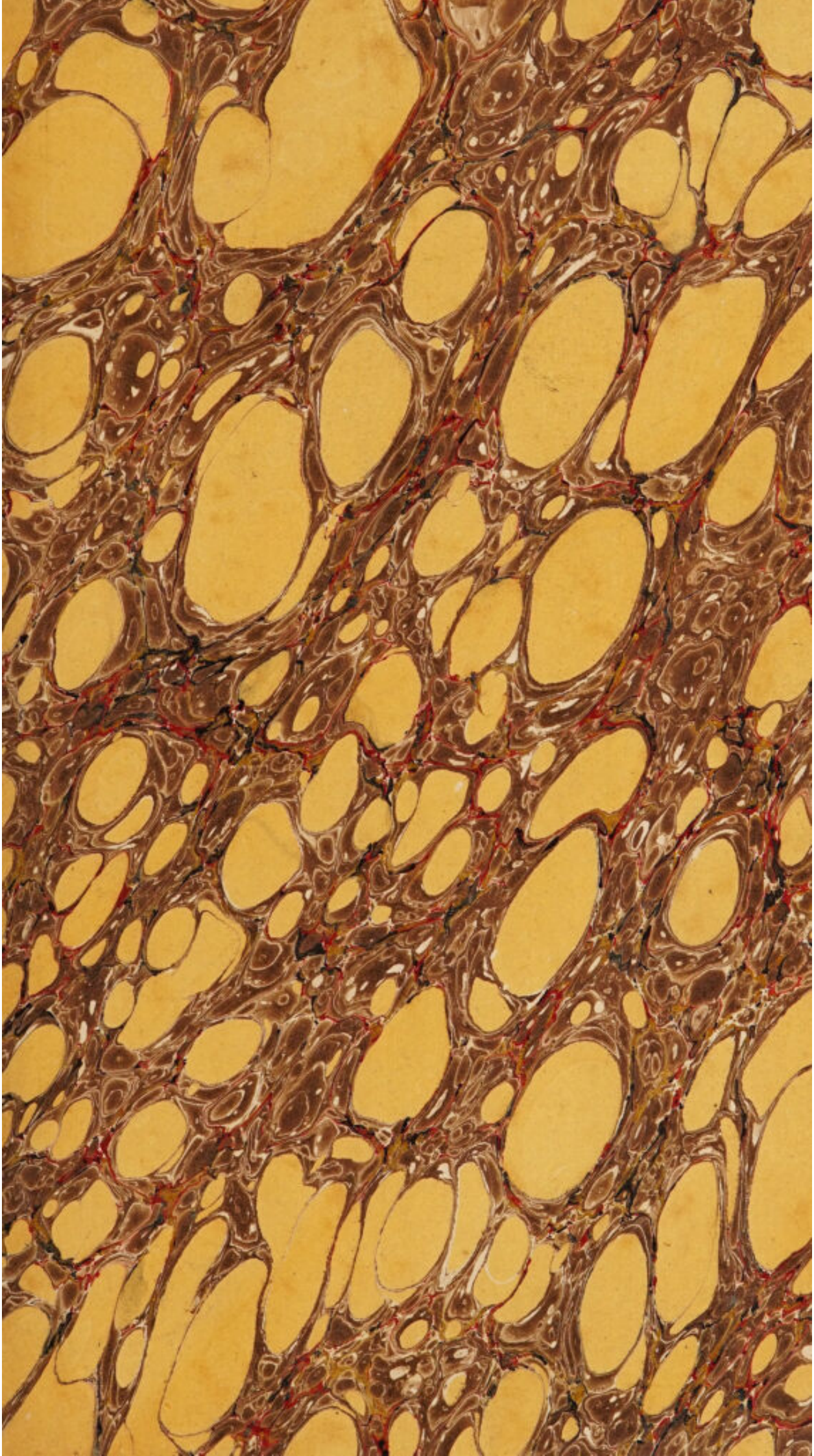
A code of instructions for the treatment of sufferers from railroad and steam-boat accidents; sudden attacks of illness, and suspended animation from various causes, until medical aid can be procured, also an essay on the cure of diseases by means of water, exercise, and diet / [Sir Arthur Clarke].







34 **CLARKE** (Sir Arthur) A CODE OF INSTRUCTIONS FOR THE TREATMENT of Sufferers from Railroad and Steam-Boat Accidents, sudden attacks of illness, and suspended animation from various causes, until medical aid can be procured. 8vo, **first edition,** half calf, m.e. **10/6**

Alexander Thom: Dublin 1849

A CODE OF INSTRUCTIONS

FOR THE TREATMENT OF SUFFERERS FROM

RAILROAD AND STEAM-BOAT ACCIDENTS;

SUDDEN ATTACKS OF ILLNESS,

AND SUSPENDED ANIMATION FROM VARIOUS CAUSES,

UNTIL MEDICAL AID CAN BE PROCURED.

ALSO,

AN ESSAY ON THE CURE OF DISEASES,

BY MEANS OF

WATER, EXERCISE, AND DIET.

"Prodesse Civibus."

By SIR ARTHUR CLARKE, Knt.,

Fellow of the Royal College of Surgeons of England; Physician to the Bank of Ireland; and Surgeon to the Metropolitan Police.

DUBLIN:

PRINTED FOR THE AUTHOR,

ALEXANDER THOM, PRINTER AND PUBLISHER,

87, ABBEY-STREET,

SOLD ALSO BY THE AUTHOR, AND AT THE RAILROAD AND STEAM PACKET STATIONS.

1849.

TO THE RIGHT HONOURABLE

THE LORD CLONCURRY.

A work calculated to relieve suffering humanity, cannot be more appropriately

DEDICATED,

than to a Nobleman whose unbounded benevolence and active charity, towards his unfortunate countrymen in distress, and to all Institutions established for their relief and support, are too universally known and appreciated to admit of any expression in his praise from

His Lordship's faithful

and devoted Servant,

THE AUTHOR.

19, Lower Temple-street,

Dublin, June, 1849.

ADDRESS

TO

PARENTS, GUARDIANS, AND INTELLIGENT PERSONS OF EVERY DESCRIPTION.

THE following concise code of instructions for the treatment of sufferers from railroad and steam-boat accidents; *apparent* deaths from drowning, hanging, and poisoning; and on all sudden emergencies or attacks of illness, until medical or surgical aid can be procured; needs no apology; as the author conceives it to be the duty of every man who has chosen medicine and surgery for his profession, to diffuse a knowledge of whatever concerns the preservation of human life, remote from medical assistance; and where the consequent delay, before professional aid can be had, is often sufficient to

render every exertion useless when it is procured.

> Principiis obsta; sero medicina paratur
> Cum mala per longas convaluere moras.
>
> *Ovid.*

Attack the disease at its outset; medicine may be too late administered when the evil has acquired strength through long delay.

But, except under such circumstances, it is not advisable for non-professional persons to undertake the responsibility of medical or surgical practice.

The work which may be considered as the *germ* of this *essay*, is a sheet published by ALFRED SMEE, Esq., Fellow of the Royal Society, and Surgeon to the Bank of England, headed, "Accidents and Emergencies, a Guide for their Treatment," &c. The plan of it is excellent; and the ability with which it is executed, leaves us only to regret that Mr. SMEE did not extend it beyond a *single sheet*. To fill up the deficiencies is the humble attempt of the author of this essay; and should he be the happy means of rescuing

one human being from an untimely grave, or of relieving the sufferings of a single individual, his endeavours, however humble, will not be in vain.

The Second Part of this essay, on the cure of diseases by WATER, EXERCISE, and DIET, or, as it is familiarly called, Hydropathy, or the Water Cure, is a branch of the HEALING ART, which, for many reasons, finds no favour with the medical profession generally; it therefore behoves the rest of the intelligent world, to carefully examine into its merits, and without prejudice, to weigh the evidence in its favour.

Many professional men ridicule this branch of medical science, merely from never having studied it, or seen it practised, and of course must be totally ignorant of it; but the author avers, that the power of curing an inflammatory or febrile complaint, in a short space of time, without lowering the system by bleeding, blistering, and drugging, is of the utmost importance to life and health; and that the water cure, judiciously managed,

will do this, leaving little or no debility behind, consequently no tedious convalescence, he will prove in this essay; while bleeding, in most cases, is followed by depression of vital energy, and diminution of corporeal strength.

In the practice of the water cure, as in many other departments of medicine, there are enthusiastic and ignorant practitioners, who, finding that they work wonders in some cases, adopt it as an infallible specific in all. They would use it to set a broken leg, or to recover a drowned man. The author is not a disciple of that school, nor is he infatuated with the water cure, as some are, in believing that medicine is wholly useless. On the contrary, he maintains that in many cases medicine is necessary, and vitally so, in conjunction with the varied and scientific employment of water, of different temperatures. For, as Mr. CARMICHAEL says, "a little medicine may achieve a great deal of good;" but by "over-*drugging* and over-*drenching*," said the late Sir WALTER FARQUAHAR, "many a

valuable life has been abridged; whereas, if the patient had borne his ailment with a little patience, and his physician given a little more fair play to the powers of nature, all might go on well for many years."

The author cannot but condemn Captain CLARIDGE's want of discretion, taste, and judgment, in his unqualified reprobation of all medical treatment in diseases, and his assertion, that "the water cure is sufficiently remedial in all diseases that medicine can cure, and for many that it cannot cure." The author does not consider hydropathy a cure for *organic* diseases; but in the prevention of permanent diseases of organs, which are as yet only *functionally* deranged, the water cure affords a remedy, competently administered, and skilfully superintended, which may be relied upon with confidence. The water cure, therefore, should be practised by those only, who are properly educated in the science of anatomy, physiology, chemistry, and the practice of medicine; for,

being a powerful instrument, it ought not to be in the hands of uneducated or unprofessional adventurers. It is a weapon that ought to be wielded by those only who are intimately acquainted with the nature of disease, and the laws that regulate the animal economy.

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CHAPTER I.

APPARENT DEATH.

IN CASE OF SUPPOSED DEATH, OR SUSPENDED ANIMATION FROM DROWNING, HANGING, LIGHTNING, STILL-BIRTHS, OR OTHER CAUSES, HOW TO ACT UNTIL MEDICAL AID IS PROCURED.

This moves our grief and pity, and we sigh
To think what numbers from these causes die.
. . . . . .
Like wretched men, upon the ocean cast,
They labour hard, and struggle to the last.
. . . . . .
For, as when sinking, wretched men are found
To catch at rushes, rather than be drowned.—*Crabbe.*

In a city like Dublin, surrounded by the tempting dangers of the sea, by canals, docks, and rivers, where sometimes the heedless pastimes of youth are the means of shortening its existence, and depriving the fond mother of perhaps her only son, or the tender wife of the object of her virtuous affections, and support of her helpless family;

it need scarcely be said, that in a city like this, whatever concerns the preservation of human life cannot be too generally known. It frequently happens that drowning occurs where the distance from medical aid is so great, as to render every exertion unsuccessful by the time it can be procured. To diffuse a knowledge of the means which have been found successful for such purposes, becomes the duty of every man who has chosen medicine for his profession. This impression of duty is my apology for introducing a few facts and observations, which are addressed to intelligent persons of every description, with the hope of affording them sufficient information on the subject, to render them one day or other, perhaps, the happy instrument of preventing an untimely death, or of restoring a valuable and apparently lost life to the community.

The difference between absolute and apparent death is, that in the first the vital principle is completely extinguished, while in the latter it only lies dormant, as in

hybernating animals, and may be roused into action, and the person thereby restored to life and health. How long a human being can continue in this seemingly lifeless state, and admit of recovery, has not been precisely ascertained; some cases of recovery are on record that took place even after interment. In "the reports of the Humane Society of London for 1787" it is stated, that there was then living in Hertfordshire a lady of an ancient and noble family, whose mother was brought to life after interment, by the attempt of a thief to steal a valuable ring off her finger. And a case is related in "Grainger's Biographical History of England," where the vital spark was not destroyed for several days. The following extraordinary cases will serve as examples.

William Earl of Pembroke *died* suddenly the 10th of April, 1630. When the body was opened, in order to be embalmed, he was observed immediately after the incision was made to lift up his hands.—See vol. i., p. 330. And Versalius, the cele-

brated anatomist, who was physician to CHARLES V. of Spain, and to his successor PHILIP II., met with a similar circumstance in the case of a Spanish nobleman, on whose body he performed a post-mortem examination, in order to discover the cause of his death. The nobleman's relations represented the anatomist as a murderer, and it was with difficulty that Philip rescued him from the Inquisition, upon condition that he should make a pilgrimage to Jerusalem; in returning the ship was cast away on the then desert island of Zante, where the unfortunate anatomist perished from hunger.

The appearances which have been pointed out as signs of the vital principle being completely extinguished are various, particularly in cases of drowned persons; but it would be unnecessary to particularize them here. It is of greater importance to know that a complete recovery has often been effected in many cases, where the marks of absolute death had appeared; let us therefore, except where decomposition or putre-

faction of the body appears, attempt a recovery; let us ever hold in view the possibility, that the person drowned "is not dead but sleepeth," or, in the words of the motto adopted by the Humane Society, "Lateat scintillula forsan"—"A little spark (vital) may lie hidden or unseen;" and remember that even an unsuccessful trial will afford us the satisfaction of knowing that "we have done our duty."

The cases of apparent death occasioned by drowning, do not however afford any example of recovery after so long an interval as those above related; yet in many of them animation has been brought about, after being suspended for several hours, and not unfrequently under the most discouraging circumstances.

PATRICK DOWNEY, of Great Britain-street, a dealer in provisions, aged forty years, fell into the Royal Canal, near Summerhill, when under the influence of liquor, and after being *a quarter of an hour under water*, he was taken up by means of drag

ropes, &c., cold, stiff, and apparently lifeless; a cart was procured and the body conveyed to the MAISON DE SANTE, a distance of half a mile from where the accident happened. I was sent for, and by the means which I shall presently point out, the man was restored to life in three hours and a half. Mr. CARMICHAEL, the consulting surgeon of that institution, can testify to this fact.

Some years afterwards the aforesaid Patrick Downey, having fallen into difficulties (being an idle, worthless, drunken fellow), applied to me for pecuniary aid, stating with great *naivete*, that as I had restored him to life, I was bound to support him.

It is well known that a considerable diminution in the ordinary temperature of the body will occasion a suspension of its functions; therefore a certain degree of heat in living bodies is indispensably necessary to keep them in a healthy state. But although the heat be indispensably necessary, it is not in itself sufficient to keep up these functions without *respiration;* for if heat be applied

to the body when the different functions are suspended, none of them can be recovered until the respiration be established, and the breathing is not always re-established in this state, in consequence of the application of heat, but often requires artificial assistance.

As a certain degree of warmth is uniformly present while the living functions continue, and as experience has shown that these functions are suspended by any thing that greatly diminishes this warmth, it is very naturally concluded, that to *restore warmth to the body* is one of the *first* steps to be taken in every case of suspended animation; but as merely restoring heat to the body will not renew all the vital functions necessary to life, an artificial respiration must be instituted by inflating the lungs with fresh air, which, in every case of apparent death, is one of the principal and most necessary measures to be taken for the recovery of life.

An erroneous opinion prevails amongst common people, that the lungs in drowned

persons are filled with water, and a practice highly dangerous has sprung from this opinion, of holding up the body by the heels and rolling it over a cask; as the violence attending this operation may readily hurt some of the internal vessels which are overcharged with blood, and thus convert what was only suspended animation into absolute death.

Various experiments on animals and dissections of bodies after drowning have proved, that unless the body lies so long in the water as to have its living principle entirely destroyed, the quantity of fluid present in the lungs is very inconsiderable; for upon drowning kittens, puppies, &c., in ink and other coloured fluids, and afterwards examining the lungs, it is found that very little, if any, of the coloured liquor gained admittance, for the muscles which form the opening into the windpipe are exquisitely sensible, and contract violently on the slightest irritation, as we frequently find when any part of our drink or food happens to touch them, or, what is

familiarly called, "goes the wrong way." In the efforts made by a drowning person to draw in air, the water rushes into the mouth and throat, and is applied to those muscles which immediately contract in such a manner as to shut up the passage into the lungs; and to this circumstance it is sometimes owing that the air blown into the nostrils, in order to inflate the lungs, cannot enter the windpipe, in consequence of which another mode of inflation becomes necessary. This contracted state continues as long as the muscles retain the principle of life, upon which the power of muscular contraction depends, and when that is gone they become relaxed, and the water enters the windpipe and completely fills the whole cavity of the chest.

As soon as the body is taken out of the water it should be immediately stripped of the wet clothes, well dried, and covered with the spare clothes of some of the bystanders, then conveyed without loss of time to the nearest hospital or dispensary, where generally medical aid can be had; but if the

accident happens remote from such institutions, the body should be removed as soon as possible to the nearest house that can be got convenient for the purpose, the fittest will be a public-house, as it generally has a good fire and plenty of hot water.

Whatever may be the mode of conveyance adopted, whether in men's arms, laid upon a door, or in a cart or carriage, a brisk motion will do no harm; but particular care must be taken that the head be neither suffered to hang backwards, nor be bent down with the chin upon the breast, but with the head and chest somewhat raised; in this position, when you arrive at the house, lay the body on a mattress, or a doubled blanket spread upon a low table or bedstead placed in the middle of the room; and let there be no more persons admitted into the apartment than six, which are necessary to assist immediately in the recovery, and they should be the most active and intelligent of the by-standers; divide your assistants into two sets—one set to be employed in restoring

heat to the body, while the other institutes an artificial respiration.

A warm or vapour bath, where it can be had, is decidedly the surest method of imparting heat to the body; but where it cannot be had the body should be wrapped up in warm blankets, and hot bricks or bottles filled with hot water, applied to the feet, hands, and under the arm-pits. This mode of diffusing heat through the body should be constantly renewed, and bags filled with warm salt, sand, or grains, applied to different parts of the body; or the body may be placed before the fire, and rubbed well and perseveringly with the warm hands of the assistants.

The practice of rubbing the body with salt or spirits is highly injurious, as the first produces sores, which are painful and difficult to heal after recovery; and the latter, instead of creating warmth, produces cold, by the quick evaporation which arises. The volatile liniment, that is, hartshorn and sweet oil, equal parts, is sufficiently stimulating, and

evaporates slowly; it may be rubbed to the wrists, ankles, temples, and parts opposite the stomach and heart. From the sympathy or consent of parts which exist between the skin, the brain, and the alimentary canal, it will be easily understood, that in restoring to the skin the sensibility it had lost, by being deprived of its heat, we restore sensibility to the stomach and other internal organs.

While one set of assistants is engaged in communicating heat to the body, the other should be employed in instituting an artificial breathing, for "air forms a portion of the nourishment of the body, and is the pabulum of fire and of life."* This artificial breathing is to be performed in the following manner:—The pipe of a common pair of bellows is to be inserted in one of the nostrils, while the mouth and the other nostril are kept closed; the assistant is then to blow with sufficient force, to raise the chest; and to prevent any air from passing into the stomach, the upper part of the windpipe is to be gently pressed backwards.

* Hippocrates.

As soon as the lungs are filled with air the mouth is to be opened, and the air expelled from the chest by moderately pressing on the breast. This process is to be repeated in a regular and steady manner until natural respiration begins, or until this and other measures have been perseveringly tried, for at least six hours, without success.

Frequently the first attempts to inflate the lungs in this way will not succeed; when that is the case, let one of the assistants introduce his finger as far as he can into the throat, depress the tongue, and draw it forwards, and with the corner of a towel, remove any frothy matter that may be lodged about the aperture of the windpipe.

Should it still be found that the air does not pass into the lungs, recourse must be had to an operation, which, should there be no surgeon at hand, may be performed in the following manner:—A longitudinal incision with a penknife is to be made through the skin and the windpipe immediately be-

low the protuberance, called the "Pomum Adami," or "Adam's Apple," large enough to admit the nose of the bellows; through this aperture the process of inflating the lungs, as already directed, is to be carried on until recovery, or all hopes are vanished.

Various means have been proposed for bringing the peristaltic motion of the intestines into action, in order to restore action to the whole system. *Tobacco* smoke was recommended by the Humane Society, and was generally employed for the purpose, but there are many strong grounds for objecting to its use. When tobacco smoke is injected into the intestines of a living person, it brings on distressing sickness, violent retchings, cold sweats, faintings, and sometimes death. Except then upon the Homœopathic principles of "*Similia similibus curanter*," which are, that all diseases are curable only by such medicines as would, in a healthy state, produce similar symptoms to those which characterize the given disease, it must be a doubtful, if not a dangerous

remedy in cases where the powers of life are already nearly exhausted. Instead of tobacco smoke, a *lavement*, composed of a quart or two of warm water, with a table-spoonful or two of spirits of hartshorn, or a wine-glassful of whiskey, brandy, or Geneva, should be injected. This step need not be taken until the artificial respiration has commenced.

A small quantity of the above-mentioned mixture may be introduced into the stomach by means of a syringe or catheter; and where Ether can be had, a tea-spoonful may be added to the draught. It is dangerous to attempt getting fluids down the throat in any other way, until the power of swallowing is restored.

As soon as the pulse* or the beating of the heart can be felt, a pinch of snuff or

* The pulse may be best felt about an inch from the root of the thumb, and about half an inch from the outside of the arm. When there is any doubt, apply your ear over the left side of the chest, as the action of the heart may sometimes be heard, when the pulse cannot be felt.

pepper may be blown up the nostrils, or they may be occasionally touched with a feather dipped in mustard or hartshorn.

The practice of blood-letting does not appear to be founded upon any rational principle in suspended animation from drowning; as it tends to lessen the action of the heart and arteries in the living body, it cannot be supposed to have a direct opposite effect in a case of apparent death (except in case of apoplexy or hanging); on the contrary, if employed here, it may tend to the entire destruction of those feeble powers which yet remain, and to increase and support which all our efforts and endeavours must be directed.

Where the patient is so far recovered as to be able to swallow, he should be put into a warm bed, and a gentle perspiration promoted by warm wine whey, and the application of warm flannel to his extremities. He should on no account be left alone until the senses are perfectly restored, and until he is visited by a medical man, who will of

course give such directions as will lead to his complete recovery. I mention this as several persons have relapsed, and have been lost for want of proper attention to them, after the vital functions, to all appearance, were completely restored.

DEATH FROM INTENSE COLD.

There are many other causes besides drowning which may suspend life, and in which by care, restoration of it may be effected.

In every instance, where a person dies suddenly without a clear equivalent cause, the heat of the body should be maintained at least for twelve hours, and an artificial respiration should be attempted, as in the case of drowning. Remember, that death may be only apparent.

It is certain death to go to sleep in *intense cold*. If a person be found under such circumstances, move him to a room where the temperature is moderate, and gradually increase the heat, as the sudden application of warmth after exposure to intense cold, has

often caused immediate death. Ladies' maids travelling on cold nights on outside carriages, have sometimes died from this cause.

APPARENT DEATH FROM HANGING.

In cases of apparent death from hanging immediately loose the cord, and proceed as for drowning, except in these cases six or eight leeches may be applied to the head.

Lord BACON relates the following:—"He was told by a physician of his time, that he had recovered a man, by means of friction and a warm bath, who had hanged himself and remained suspended for half an hour; and that he made no doubt that he could recover any person in the like circumstances, provided his neck was not dislocated by the force of his turning himself off."

STILL-BORN INFANTS.

In case of *still-born* infants proceed as for drowning. Warm frictions and gentle inflation of the lungs from the mouth of an adult, are most to be relied upon. One or

two gentle slaps will sometimes at once cause the infant to breathe.

APPARENT DEATH FROM LIGHTNING.

If the action of the heart be stopped, treat as for drowning.

A suspension of life may arise from other causes than those already enumerated, as will be seen in the subsequent chapters.

A sudden attack of serious diseases, sometimes occasions a prostration of vital powers. The face and limbs become pale, the pulse imperceptible, the body and extremities cold, and the respiration scarcely to be perceived. Under these circumstances place your patient on his back on a sofa, or in a bed, apply warmth and frictions to all parts of the body, give a tea-spoonful of sal-volatile, or hartshorn, or brandy, in a glass-ful of water, and send for a physician.

CHAPTER II.

POISONS.

CASE OF INADVERTENTLY SWALLOWING POISON, OR OF PATIENTS SUSPECTING THAT POISON HAS BEEN GIVEN IN MISTAKE FOR THE PRESCRIBED MEDICINE, HOW TO ACT.

She hath that within her veins which will soon stop up the springs of life.—*Sir Walter Scott.*

I have a faint, cold fear, thrills through my veins,
That almost freeze up the heat of life.
. . . . . .
The weariest, and most loathed worldly life,
That age, ache, penury, and imprisonment
Can lay on nature, is a paradise
To what we fear of death.—*Shakspeare.*

Usque adeone mori miserum est.—*Virgil.*
Is it so very dreadful a thing to die?

Poisons are substances which derange the vital functions, and produce death by an action not mechanical or natural, as stated in the last chapter.

All the *mineral acids* are poisons when swallowed undiluted, and produce a sense of burning in the throat, eructations from the

gases evolved in the stomach, by their chemical decomposition; difficulty of swallowing; vomiting of brownish or blackish matter; costiveness; tenesmus; weak pulse; shrivelled whitish lips, with glazed countenance and cold clammy extremities; suffocating fits; and ultimately, death.

Sulphuric acid (oil of vitriol), *marine acid* (spirit of sea salt), and *nitric acid* (aquafortis), are what are called mineral acids, and produce the above-mentioned symptoms.

Treatment.—When any of these poisons have been taken, give *immediately* olive oil, whites of eggs and water, with magnesia or chalk; or, in the absence of these, scrape the plaster from the wall, and mix with water, or soap and water, and send immediately for a physician.

Oxalic acid is one of the most rapid and unerring of all the poisons (prussic acid excepted), and is sometimes taken for Epsom salts. It produces excessive irritation and burning pain in the throat and stomach, and total failure of the pulse. Emetics should

be administered without loss of time, and large doses of magnesia or chalk suspended in water.

Arsenic produces sickness and faintness, burning pain in the stomach, violent vomiting and retching, often preceded by tightness and heat in the throat, and an incessant desire for drinking, hoarseness and difficulty of speech. The matter vomited is greenish or yellowish, sometimes streaked with blood; the abdomen tense and tender to the touch, sometimes swollen, sometimes drawn in at the navel, sometimes great irritation of the lungs and air passages, cramps of the legs and arms; pulse small, feeble, and soon imperceptible; collapsed countenance; expression of great torture and anxiety; the eyes red and sparkling; the tongue and mouth parched, &c.

Treatment.—Evacuate the contents of the stomach by an emetic, administering milk and strong barley water, or water gruel, both before and after the vomiting, and send instantly for a physician.

Mercury.—The strongest of the mercurial poisons is the corrosive sublimate, which produces symptoms similar to those of arsenic.

Treatment.—Give whites of eggs beat up with water and plenty of milk.

Copper.—Verdigris and blue vitriol are preparations of copper, which produce symptoms generally the same as those caused by mercury and arsenic; with a strong coppery taste in the mouth, and a singular aversion to the smell of copper.

Treatment the same as for mercury.

Lead.—Sugar of lead and extract of saturn, are the principal preparations of lead likely to be taken by mistake, which produceviolent and obstinate colic, (called painter's or plumber's colic,) and inflammation of the alimentary canal, and sometimes a paralysis or apoplexy. A dark tinge, similar to ink, round the gums, indicates the poison of lead.

Treatment.—A solution of the carbonate of soda or magnesia should be immediately given.

Narcotic poisons produce stupor, delirium, and other affections of the brain and nervous system. *Opium* occasions giddiness, stupor, and insensibility to external impressions, slow respiration, shut eyes, and contracted pupils; the expression of the countenance being that of deep and perfect repose. As the poisoning advances the features become ghastly, the pulse feeble, and soon imperceptible, the muscles relaxed, and, unless assistance be speedily procured, death ensues. The possibility of rousing the patient from the lethargy occasioned by opium is in general a criterion for distinguishing the effects of this poison from apoplexy and epilepsy.

Treatment.—The primary object is, to remove the opium or laudanum from the stomach as soon as possible; this may be done by emetics, or the stomach-pump; the next object is, to keep the patient constantly roused, by dragging him up and down between two men, and having cold water dashed over the head and breast, pulling the

hair, or otherwise inflicting pain, to prevent sleep. This treatment must be continued until a physician arrives.

Prussic acid is found in the essential oils and distilled waters of the bitter almond, the cherry laurel, the peach blossom, the cluster cherry, and the mountain ash. A man who had swallowed forty drops of this acid was observed immediately to stagger, and then to sink down without a groan, apparently lifeless; the pulse was gone, and the breathing imperceptible; after a short interval he made so forcible an expiration that his ribs seemed drawn almost to the spine; the legs and arms then became cold, the eyes prominent, glistening, and insensible; and after one or two more convulsive expirations he died five minutes after he had swallowed the poison.

Treatment.—The inhalation of chlorine or of smelling salts, and the cold affusion is the best treatment; and when the inhalation cannot be accomplished, give half a tea-spoonful of hartshorn or sal-volatile in water

immediately, and repeat it every quarter of an hour, until medical aid or relief is obtained; dash cold water upon the face and spine, and endeavour to rouse the patient.

Nux Vomica.—This is a most energetic poison, and causes much torture; very little is known as to the treatment; emetics and the stomach-pump can only be relied upon.

Vegetable poisons, as the yew-tree berries, tar oil, &c.; *animal* poisons, as mussels, &c., in every case excite vomiting. Nothing but the complete expulsion of the poison from the stomach can give security to the patient, or hope of success to the medical attendant.

Poisoning gases.—Carbonic acid gas, or fixed air, or fire-damp as it is sometimes called, is the most deleterious of all the gases. A person immersed in it was at first affected with violent and irregular convulsions of the whole body, and perfect insensibility, afterwards with spasmodic fits like tetanus or locked jaw; and during the second day, when these symptoms had gone off, he became

dumb, and continued so for the remainder of his life.

I saw three men drowned in carbonic acid gas in a dry well, more rapidly, than if they had been immersed in water. Under such circumstances, proceed as for drowning as in the last chapter.

The fumes of *burning charcoal* produce slight oppression at the chest, then violent palpitations; next confusion of ideas, gradually ending in insensibility and death. Dash cold water on the head, face, and chest, but not sufficient to depress the warmth of the body, until medical assistance arrives.

CHAPTER III.

HYDROPHOBIA.

IN CASE OF BITES OF MAD DOGS, CATS, OR OTHER RABID ANIMALS; POISONED WOUNDS FROM THE BITES AND STINGS OF ADDERS, INSECTS, ETC.,—HOW TO ACT.

Veniente occurrite morbo.

Meet the coming disease.

Prevention is easier than cure.

It is universally believed, and I believe truly, that not one bite of a dog in ten thousand, comes from an animal in a rabid state; but when one is bitten by a dog or cat that is unquestionably mad, take a carving fork, break off one prong, and put the other in the fire, and when it is redhot apply it thoroughly to the whole of the wound, so as to destroy the surrounding parts, and then apply a ligature immediately above the wound; afterwards a tumbler or other vessel placed over the bitten part will act as a cupping-glass, by burning under it a little paper to exhaust the air, until surgical aid can be

procured; it is almost unnecessary to state that all possible despatch should be used to obtain one.

In all suspected cases of canine madness, keep the dog chained up, for perhaps it may be a false alarm; and the continuance of the animal in health will be a great satisfaction to the party and to his friends.

To avoid a mad dog, it is necessary to know the appearance of one. The animal first becomes dull and peevish; does not apparently know those to whom he has been most attached, and his habits are completely altered; he snaps at the air, as if at insects; eats and drinks all sorts of articles (ever so dirty) within his reach; he roams about in an irregular manner, with his back arched somewhat like a cat, and his tail drooping; he runs or swims through water without difficulty. In his progress he avoids other dogs, not generally going out of his way to bite them, but will snap at them if they approach him. His bark is altered, and ends with a short peculiar howl.

Hydrophobia occurs spontaneously in dogs, foxes, and cats, but more frequently in the dog, than in either of the other animals; and it is said that the disease has been sometimes caused by the bite of a dog or cat, during the excitement produced by their fighting. Care should therefore be taken, in attempting to separate them, to avoid being bitten by either.

According to the late Dr. Colles, the number of escapes from the bites of mad dogs in the human subject (from hydrophobia), is as fifteen to one. If the tooth of the dog should have perforated articles of clothing before meeting the skin, it is possible that the saliva, or mucous secretion of the dog, may be entirely wiped from it, which may prevent the inoculation.

Poisoned wounds, from the absorption of dead animal matter, become speedily swelled, and to an alarming extent. Place a ligature above the wound, but not so tight as to stop the bleeding altogether, and apply the tumbler, exhausted of air as above. To

prevent its extension over the whole limb or body a surgeon must be sent for.

Poisonous reptiles.—There is but one poisonous reptile in the whole of the British dominions, which in some countries is called the viper, and in others the adder. It may be known from the common snake (which is harmless) by a series of black lozenge-shaped marks down the back. Should a person be bitten by an adder, treat it as a poisoned wound, by ligature and cupping-glass, previously fomenting it with warm water.

Bites of insects.—There are two classes of insects which give rise to poisoned wounds—those which sting, as bees, wasps, and hornets; and those which bite and suck as the gnat, horse-fly, flea, and bug, which have a set of lancets at the mouth, with which they pierce the skin. The bee, the wasp, and the hornet, secrete an acid poison, producing an intense pain and swelling of the part. The poison bag is in the tail, and connected with the sting. Dr. Colles, in his lectures on surgery, describes the case of a gentleman, who was stung about the throat

and chest by a great number of bees (in removing a hive), who died in ten minutes from the imponderable quantity of poison discharged through the minute stings.

In bites of insects, examine if the *sting* be left in the wound and remove it; then apply as soon as possible two or three drops of the spirit of hartshorn, or of a solution of soda or potash, which will neutralize the poison, and at once effect a cure.

The common gnats are known to produce irritating *bites*, they have no special sting, but they infuse a poison into the wound by their lancet-shaped suckers; they are sometimes very irritating, but are not attended with danger. A little eau-de-Cologne and water is the best application to these bites. Swelling, heat, and inflammation of the limbs follow the above-mentioned stings, bites, and other injuries. A wet bandage wrung out of cold water, applied to the part, and covered with a dry one, will abstract the heat and subdue the inflammation and swelling in a shorter space of time than any other application.

CHAPTER IV.

STRUCTURE OF THE BRAIN.

IN CASES OF ACCIDENTS AND EMERGENCIES TO WHICH THE BRAIN IS LIABLE, AS APOPLEXY, INFLAMMATION, COUP-DE-SOLEIL, INSANITY, DELIRIUM TREMENS, EPILEPSY, AND CONVULSIONS; HOW TO ACT UNTIL MEDICAL AID IS OBTAINED.

Oculum non curabit sine toto capite,
Nec caput, sine toto corpore,
Nec totum corpus sine anima.

The eye cannot be cured while the head is diseased,
Nor the head while the bodily system is deranged,
Nor the body while the mind is ill at ease.

THE health of the human body is chiefly regulated by the state of the brain, the heart, and the lungs (called the "Tripod of Life"), the digestive organs, and the skin. These organs mutually influence each other, and when one is deranged, the others generally suffer. Such is the harmony between all the parts of the human frame, that each is

dependent upon the other for the performance of its functions; and in the words of DAVID, "we are fearfully and wonderfully made."

To understand the accidents and emergencies to which the brain is liable, some short description of that organ is necessary; but as a minute anatomical knowledge is neither necessary to the due understanding the instructions how to act, until medical and surgical aid arrives, nor acquirable without a long and painful study, we shall confine our description within the narrowest limits.

The accidents to which the brain is liable are often sudden and sometimes mortal, such as apoplexy, inflammation, concussion, sunstroke, epilepsy, and other fits, fractures of the skull, &c. With reference to these diseases, the following particulars of the structure and economy of the brain are worthy of consideration. First, the receptacle in which the brain is contained (the bony cavity of the skull), which, though formed of

many pieces, are yet so put together as to be incapable of suffering dilatation, and consequently of admitting any variation in the size of its figure. And secondly, the nature of the organic substance itself; whose delicate and pulpy texture is familiar to every one, who has seen the brains of quadrupeds exposed in the markets. For with respect to external properties the brain is precisely similar in both the human and animal subject. On a more minute examination this pulpy substance is found to be of a very complicated form, being on every side covered by a membraneous structure, which dips down into its substance and forms numerous lobes, convolutions, and cavities, technically called ventricles, which are frequently the seats of extravasated fluid (constituting hydrocephalus, or water in the brain); and they are also found gorged with blood flown from a ruptured vessel during an apoplectic fit. This membraneous structure subdivides the brain into many minute parts or portions. The finest of these mem-

branes, which presents the most delicate and destructible texture imaginable, is laden with minute vessels, arteries, veins, and absorbents, which carry life and nourishment to every, the smallest, particle of the brain. Into this very tender and pulpy substance four large arteries, proceeding immediately from the heart, pour in, in an incessant torrent, about one-fourth of the entire mass of blood, the estimated quantity in an adult being twenty-eight pounds or pints. The precise utility of the blood in carrying on the functions of the brain, or rather its mode of action, is totally unknown, the intimate nature of the functions of the brain being hitherto an impenetrable mystery; but whatever be the operation, that operation is incessantly necessary, insomuch that upon even a momentary failure of the successive supply, fainting ensues; and if the stoppage be protracted, death is the consequence. On the other hand, it is found that *pressure* of any kind on the brain, produces stupor, sleep, suspension of respiration, and consequently

death, as may be proved by opening the skull of an animal, and applying the hand to the exposed surface of the brain, when the animal falls into stupor, and awakens or relapses as the pressure is removed or applied. But the brain being encased, as has been already stated, within the unyielding walls of the skull, it follows that every increased flow of blood to the head must produce *pressure*, by expanding the organ and rendering it too large for its receptacle, unless the veins afford a ready passage for the return of the blood, commensurate with the rapidity of its influx. Hence it happens that violent exercise, which throws the blood of the extremities back into the lungs with greater rapidity than that organ can discharge its functions, (as is proved by the panting respiration,) impedes the return of the blood from the head through the jugular veins, and occasioning some confusion of thought; and if pushed very far produce syncope,* fainting, perhaps accompanied by

* *Syncope*—Fainting, a sudden suspension of the

the rupture of a blood-vessel. Nature, it is true, has to a great degree guarded against some of the causes of these evils, by certain mechanical impediments to the progress of the blood through the arteries of the head; yet, in spite of every such arrangement, it is impossible to sustain for any length of time the causes which promote an extraordinary influx of blood to the part. Thus we cannot, for example, long remain with the head depressed below the level of the body, without great inconvenience, pain, and danger; the quantity of the blood facilitating the descent into the brain, and opposing its return in the same degree upwards through the veins. The eyes become red; the veins of the neck, face, and temples swell; the ears tingle; and the senses become confused, until distress forces the individual to seek, with rapidity, the natural erect posture.

The evils thus mechanically produced are

heart's action, accompanied by a cessation of the functions of the organs of respiration, internal and external sensation, and voluntary motion.

often caused by occasional accidents, as by a ligature round the neck, tight stays round the body, or bandages round the limbs, impeding the circulation; or by disease, such as the enlargement of the abdominal viscera, or by preternatural tumors pressing on the venous system, and interrupting the flow of blood. Thus diseased liver has been found a frequent cause of apoplexy. Sometimes a general fulness of the veins, or unusual plethora, causes a rupture of the minute vessels of the head, and sometimes perhaps a peculiarly inflammatory affection of the parts, purely local, induces the same consequences. Towards the middle and latter periods of life however, the blood, which has previously abounded more particularly in the arterial side of the circulation, begins to predominate in the veins, at the same time (the lungs and abdominal viscera being less excited to a strenuous action) a large portion of the whole mass of fluids is carried to the head. The sedentary habits and the excesses of civilized life, also contri-

bute to the same end. From one or all of these causes, the head becomes the peculiar seat of venous plethora in the advanced periods of life, which renders elderly persons peculiarly susceptible of apoplexy.

The external signs to predisposition to apoplexy are, a large head, a short thick neck, full habit of body, and generally a red face. When a person of this form and habit has led a life of indolence or inactivity; has indulged in the pleasures of the table, and is in advanced life, he becomes liable to attacks of apoplexy, more especially if he be inattentive to the state of his bowels. In general a swimming in the head, a numbness in the legs or arms, and a more than unusual fulness in the face, and sometimes a bleeding from the nose, is a prelude to this disease.

Sudden as the fit of apoplexy frequently is, it must appear, from the foregoing observations, that we are for the most part not without strong warnings of its approach; and since its attacks are so fatal, that after

the stroke scarcely one in a hundred ever perfectly recovers, it becomes imperiously necessary to watch its approaches, and sedulously avoid whatever increases the danger.

Persons having a tendency to apoplexy, or persons who frequently feel a pulsation in their temples and a fulness in their heads, cannot be too careful in avoiding the causes already enumerated; they should never indulge their appetites in any thing like an approach to satiety, or drink to excess. Their diet should be of the simplest kind, and should consist of more vegetable than animal food; they should rise early, and never eat suppers except under pressing necessity, when they should not exceed a little light soup, or something that will give the stomach little or nothing to do in the way of digestion. Malt liquors, particularly XX, are injurious in the extreme, as they produce a greater fulness in the blood-vessels than any other drink, and induce a tendency to corpulency, vertigo, and other affections of the brain. Smoking should also be avoided.

When a fit of apoplexy occurs, bleeding is in many instances considered indispensably necessary, a surgeon therefore should be instantly sent for. In the interim, the neckcloth and all ligatures on the person should be loosened, and the body supported in an upright position, in a cool, well-ventilated apartment. Should the patient immediately before the fit have eaten a hearty meal, vomiting may be excited by tickling the throat with a feather, for the purpose of discharging the contents of the stomach; but no emetic should be given, as a convulsive effort at vomiting would propel the blood too violently to the head, and would increase the mischief instead of lessening it.

INFLAMMATION OF THE BRAIN.

The line of demarcation between apoplexy and inflammation of the brain is not very clearly drawn. When inflammation of the brain occurs, it is for the most part rapidly and certainly fatal. The same causes which generally produce apoplexy, may in full

habits and in irritable nervous systems cause inflammation of the brain. In addition to these, intemperance in the use of ardent spirits, external violence, fractures of the skull, concussions of the brain, and lastly, the transferring inflammation from other parts, as for example, from erysipelas of the face, inflammatory sore throat, &c., may be enumerated.

Inflammation of the brain, frequently commences with delirium, and ends in madness. From what has been already stated, it is almost unnecessary to say, that on an attack of this kind, a surgeon should be sought for without delay; and that until his arrival, the patient should be kept in a cool, well-ventilated chamber, in a half erect posture, his head shaved, and a cloth wrung out of cold water applied all over it, covered with a dry one, which will have a tendency to draw the circulation and inflammation to the surface; and the extremities should be kept warm by means of bottles filled with hot water, and applied to the feet.

The *coup-de-soleil*, or *sun stroke*, rarely occurs in this country; it is an inflammation of the brain, almost peculiar to hot climates.

Treatment.—The same as in apoplexy.

Delirium tremens.—This is a brain fever peculiar to drunkards, or a madness from the abuse of spirituous liquors. Copious draughts of water, in which a little harts-horn or sal-volatile is added, may be given frequently until medical aid arrives. Like other maniacs, persons labouring under this disease, are often violent, and prone to commit suicide or murder; they therefore require close superintendence.

Madness is a delirium without fever, without heat or frequency of pulse. It is in some degree a reduction of the human faculties, an abstraction of the mind from the body. The mind is not affected by the organs of sensation as formerly; but there is reason enough left to form some impressions commonly erroneous. Exposed to the causes of disease, maniacs remain unaffected. Medicines lose their peculiar effects, and

often require six times their usual dose to produce the least change, so that maniacs acquire the habits of animals.

As for the management of lunatics until medical aid can be had, a long-sleeved gown will confine the hands. Every attempt to secure insane persons, except what I have just recommended, will only exasperate the disease. The patient should be secluded from mankind, in a dark unfurnished room, until a proper keeper is procured.

Epilepsy is a disease that consists of certain spasmodic contractions and affections which take place by paroxysms. The patient falls down quite insensible (hence it is called the falling sickness), the convulsion contracts all the muscles of the body; the eyes continue open without seeing; the body falls or hits against hard substances, but does not feel; frothing at the mouth, &c. The fit generally lasts ten, fifteen, or thirty minutes; the patient then comes to himself, not remembering any thing that has happened during the paroxysm.

Sometimes a sense of coldness begins at the feet, and goes gradually up to the head before the attack: this is called the "*aura epileptica.*" A ligature tied round the leg at this time, in many instances has prevented the paroxysm.

During the fit nothing should be done, but to untie the neckcloth and stretch the patient on the ground, with the head slightly raised, keeping the hands open, the limbs extended, and place a small piece of stick between the teeth, to prevent the tongue being cut. The face may be sprinkled with cold water, and the person laid on a bed or sofa, for a short time after the fit.

Persons subject to epilepsy should be very cautious of going near the fire: I have known some to fall into it, who were burned to death.

The cold bath is said to have cured epilepsy, locked-jaw, hydrophobia, and insanity. The benefit derived from the cold bath in these disorders, depends on its being used in the paroxysm or fit. Its efficacy consists in

resolving or abating the convulsion, and when this effect is produced, the return of the paroxysm is greatly retarded, if not entirely prevented. The following cases will illustrate this singular fact:—

A seaman on board H.M.S. Neptune (in which vessel I served as assistant surgeon many years ago), who was subject to epilepsy, fell overboard in a fit. He seemed at once to become sensible of his danger, as he could not swim, but a shipmate jumping in after him saved him. The moment he was brought on deck he was rubbed dry and put into his hammock. His senses returned instantly, and he fell into a sound sleep, and a profuse perspiration. The consequence was a speedy and a permanent recovery.

A man subject to epileptic fits was walking down Dame-street a short time ago, and being suddenly taken with one, and having lost all control of locomotion, was violently impelled forward into the centre of the street, at a right angle with the footway. At the moment a string of brewers' drays happened

to be passing, into contact with which he would have come, had he not made a slight motion of his hand to the driver of the first dray, who fortunately happened to be leading his horse by the head, and who seeing the man violently approaching, pulled up the horse, at which moment the poor fellow came right against the horse, and fell on his face and hands at the animal's feet. Fortunately he received no injury whatever.

A man of very irregular habits was admitted into Dr. Currie's lunatic asylum in a state of furious madness. During a violent fit he was thrown headlong into a cold bath; he came out calm and nearly rational, and this interval of reason continued for twenty-four hours. In two days after he was thrown in again, in the heat of his fury as before, and as he came out, was thrown in again, and this was repeated five times. The result was, that he was discharged some time afterwards in perfect health, in mind and body.

Previous histories are to be found in the records of medicine, of persons under the

delirium of fever, having thrown themselves into cold water, which restored them to their senses, and speedily cured them. Of these a great number occurred at sea, where it is evident such accidents are most likely to happen.—See Part the Second.

In the *convulsions* of children when cutting their teeth, which are not uncommon, place the child in a warm bath for ten, fifteen, or twenty minutes.

For the treatment of *hysteric* fits see Second Part. All FITS are intervals of unconsciousness; and therefore in almost all cases the senses of sight, hearing, feeling, and tasting are lost, or very much diminished, and the power of motion is interfered with, or takes places involuntarily.

CHAPTER V.

BLEEDING.

IN CASE OF BLEEDING FROM WOUNDS OF ARTERIES, VEINS, AND LEECH BITES; OR OF INTERNAL HEMORRHAGE FROM THE STOMACH, LUNGS, NOSE, ETC., HOW TO ACT UNTIL SURGICAL RELIEF IS OBTAINED.

THE flow of blood through the heart, arteries, and veins is called the circulation, which in the adult is double; that is, the *pulmonic* circulation, or flow of blood through the lungs, and the *systematic* circulation, or flow of blood through the system, as I shall presently briefly show.

The HEART may be compared to the SUN; it is the centre of our being, and all our faculties are but planets which move around it. If the heart be languid and oppressed, the faculties are obscured; and we only live a sort of outward mechanical life, regulated by habit or necessity.

The heart, being the central organ of the circulation, sends out from its left cavities *pure* arterial blood, which supplies all the wants of the system; and the veins receive and return the remaining blood, deprived of its purity, as it passed through the different organs, to the right cavities of the heart, where it is sent to the lungs to be purified by the functions of respiration. After this purification it is brought back again to the left cavities of the heart, and thence conveyed, as before, by the arteries through the whole system. It is unnecessary here to enter into the manner in which the waste of this vital fluid is supplied, or replenished.

The blood after its circulation through the body becomes of a dark purple or blackish hue, which, in its passage through the lungs, changes to a light vermilion red; whether this change be attributable to the absorption of oxygen (the pure vital part of the atmosphere) during respiration, or to the discharge of carbon (which occasions its dark colour), we shall not stop here to

inquire into; but it is satisfactorily proved that the difference of colour is owing to the exposure of the blood to the atmospheric air, which has lost its oxygen or vital part in passing through the lungs during the inspiration; and that this change is continually in operation, and essentially necessary for the performance of the functions of the tripod of life—the heart, the brain, and the lungs. It appears therefore, that we are momentarily depending for life on a portion of the atmosphere being taken into the blood during its passage through the lungs, and carried from thence to every part of the body.

Numerous facts and experiments have shown that if the purple venous blood, by any means found a passage into the arterial side of the circulation, it would become a deadly poison, and would paralyze every organ to which it might gain admission. Accordingly anatomy demonstrates, that the lungs are not nourished by the dark blood which circulates through them, but by

arteries which spread through the substance of the lungs, for their nourishment alone.

From these observations it must appear evident how necessary it is to place persons labouring under any kind of indisposition, in large well-ventilated apartments; but more especially when the functions of life are suspended during apparent death from hanging, drowning, loss of blood, or any other cause; and during convulsions or fits of any kind.

The simple fact set forth by Dr. ARNOTT, that a Canary bird suspended near the top of a curtained bed, in which people are sleeping, will generally be found dead in the morning, should have been sufficient to show the danger of breathing a vitiated medium; and the necessity of providing a constant and ample supply of fresh air in our dwellings, particularly in sleeping apartments.

Bleeding occurs from either an artery, a vein, or from small vessels, called capillaries (from *capillus*, a hair), which join the minute arteries with the veins. It may take place

as the result of injury, or spontaneously from various internal organs, or from leech bites.

Bleeding from an artery is known by the bright scarlet colour of the blood, and from its issuing in *jerks*. The venous blood, being of a dark Modena red, is easily known from the arterial, and flows *continuously*. Both may be stopped by putting a finger into the wound, and pressing on the bleeding aperture until a surgeon arrives; as long as the pressure is judiciously applied the bleeding cannot occur. Should the bleeding be from an artery, a ligature applied above it, that is, between the artery and the heart, will stop it. Should it be from a vein, the ligature must be applied below it. Should signs of fainting come on, do but little to rally the patient, as fainting has a tendency to stop bleeding.

To stop bleeding from leech bites is sometimes very difficult, particularly with children, who should never be allowed to sleep until stopped. In some the pressure of the

finger will stop the bleeding; but where it becomes profuse, and proceeds from parts of the body where compression cannot be made, as on the neck, abdomen, &c., wipe the cut quickly with a bit of lint or fine linen, and while it is comparatively dry, seize a small portion of the skin surrounding the bite with the finger and thumb, and between them continue to make a moderate, but not painful pressure; this will stop the bleeding in three or four minutes.

Internal bleeding sometimes flows profusely from the nose, mouth, lungs, and stomach. Under such circumstances, put the patient to bed, with the head slightly raised; keep the room cool; give the patient plenty of lemonade to drink, or a tablespoonful of vinegar in some sugar and water every two hours, until a physician arrives, or until the hemorrhage ceases.

CHAPTER VI.

CHOLERA MORBUS.

IN CASE OF SUDDEN ATTACK OF CHOLERA OR COLIC DURING THE NIGHT, HOW TO ACT.

Principiis obsta.
Resist the first beginning.

I KNOW no subject to which the above precept is more applicable than the one before us.

The distinction between the true Asiatic cholera, and that peculiar to Great Britain, may be stated in a few words.

The English cholera arises from an *increased* secretion or superabundance of an acrid or vitiated bile, with a frequent but small unequal pulse; while in the Indian cholera there is not only a suppression of the pulse, but of the bile, and all the other secretions. In the English cholera the attacks are generally sudden, and ushered in by pain, sickness, flatulence, and distension of the belly, which are soon followed by

bilious evacuations, attended with anxiety, griping, cold perspirations and spasmodic contractions. The insidious nature of the Indian cholera is such, that persons not aware of the disease, and not prepared for its attacks, are often beyond recovery before they are known to be affected. The pulse may be gone, and the serous (whey-like) evacuations take place, before the victim is aware of his having more than a slight indisposition. It frequently comes on during sleep; when the patient awakes with a collapsed countenance, blue lips and nails, shrunk fingers, and total failure or suppression of the usual secretions. Deficient animal heat, suspension of the pulse; from an interruption in the balance of the circulation, the blood preponderating in the venous side of the system. As soon as the natural heat and the equilibrium of the circulation are restored (which can only be effected by drawing the circulation to the surface of the body) the disease at once disappears.

At first a vomiting and purging of the

contents of the alimentary canal takes place; afterwards of a fluid, resembling whey or rice water; pain and burning heat at the pit of the stomach, to which the hand is often carried in agony; much anxiety, restlessness, incessant tossing about, giddiness, great loss of strength, painful cramps of the hands and feet, extending afterwards to the extremities and body. The surface of the body is cold, sometimes damp, giving the sensation felt from the touch of a frog; the tongue moist and cold, like a piece of dead flesh; the eyes sunk, surrounded by a livid circle; the features sharp and contracted; the different parts of the body wrinkled and shrunk; the general colour of the body is dusky, livid, or blue; the pulse thready and weak, if at all felt at the wrist; the course of the larger veins on the surface is marked by flat lines of a dark hue; the breathing difficult; inspirations performed with great effort, and the expirations quick and convulsive; the patient frequently calls for cold drinks; the voice is low, whispering, and interrupted; the

touch is often dull; the hearing indistinct, and all the secretions are suspended. The intellect however is clear.

The first case that occurred in Dublin in 1832, was Mrs. Douglass, the wife of a carpenter in Lower Temple-street. She was a beautiful young woman of about five and twenty years of age. In six hours after the attack I saw her, and she exhibited all the above-mentioned symptoms, and had the appearance of a woman of at least seventy-five. I could scarcely have believed she was the same person. The hand of death appeared upon her. I had not the slightest hopes of her recovery. I had however every kind of warmth applied to her; a mustard plaster to the pit of her stomach, and her whole body and extremities rubbed with a camphorated and turpentine embrocation, calomel, muriate of morphia (the sixth part of a grain), and essence of peppermint every half hour; hot bricks and bottles filled with hot water applied to her feet. At the end of six hours a re-action took place, a warm

sweat broke out all over her body, and she fell into a sound sleep, from which she awoke in about six hours after, free from danger, but greatly debilitated, and in a few days after was perfectly recovered.

At the first attack of cholera no time is to be lost in obtaining medical assistance, but as it may not be possible to have it without some delay, give an adult person twenty drops of laudanum, with three of essence of peppermint, in a little brandy and water every hour or half hour, until a physician arrives, or until relief is obtained. Let the patient be removed into a well-ventilated apartment, and be warmly covered; let the whole body be rubbed with spirits of turpentine, and a mustard blister applied to the pit of the stomach. Two or three drops of the camphorated spirits of wine may be added to the above-mentioned draught.

The following instructions concerning this disease were addressed to the country people in Russia, by authority of the government, and are worthy of attention here.

It has been remarked that just before the appearance of the cholera in a district, the inhabitants are troubled, more than usually, by diarrhœa and other complaints, trifling under ordinary circumstances, but which, in the presence of an epidemic, are apt, if neglected, to degenerate into real cholera cases.

It is well known, from the experience obtained in 1830 and 1831, that the cholera is in itself generally not contagious, but that it may become so, like some other diseases, if many sick are kept crowded together.

The cholera has been found to be most destructive in villages situated on low and marshy grounds, or near bogs and stagnant pools; and particularly where the inhabitants are confined within narrow space, and live unmindful of cleanliness.

It has been further observed, that those dejected in spirits, and easily alarmed, are more subject to cholera than those who live in confidence, and are of good courage.

The preceding remarks having been made, the following are the precautions recom-

mended for observance against this disease:—"To beware of catching cold, and particularly to protect the stomach from cold, for which purpose to wear a broad belt of cloth or stout flannel upon the skin around the waist; not to lie upon the bare ground, nor to sleep at night in the open air; after sleep or hard labour, when in perspiration, to drink no water or other beverage cold; to drink no acid beverage, and never much at a draught; to beware, of all things, of intoxication; to use light food moderately; to eat no bread insufficiently baked, no crude vegetables, no unripe fruits, nor meat or fish not perfectly fresh; and to abstain from salted meats and pickled fish that provoke thirst; to keep the person and the dwelling clean, and to allow of no sinks close to the house; to admit no poultry or animals within the house, and to keep it airy by ventilation. When there are sick, let not the place be crowded."

Notwithstanding the best precautions, the cholera may at times break out.

A person in good health may be suddenly attacked; at first sickness, the eye-sight dimmed; then, after, a shiver and rumbling in the bowels, vomiting and purging, with acute pains below the breast, under the ribs, and on the left side, attended by quenchless thirst. If the patient be not quickly succoured, cramps come in the legs and arms, which become of icy coldness; extreme weakness comes on, and a deadly paleness; the whole body becomes cold; then a hiccup, and other signs of approaching death.

The following remedies, which will cost but a few pence, I would recommend every family to possess when the cholera prevails.

No. 1.—A dram of camphor, with twenty drops of spirits of wine or brandy, powdered and rubbed up with an ounce of lump sugar—to be kept in a bottle, and marked "*Camphor Powder.*"

No. 2.—A grain of the muriate of morphia, rubbed with a quarter of an ounce of lump sugar—to be kept in a bottle, and marked "*Morphia Powder.*"

No. 3.—Twenty grains of Dover's powder, rubbed with half an ounce of lump sugar—to be kept in a bottle, and marked "*Dover's Powder.*"

No. 4.—A bottle of *Essence* of *Peppermint.*

No. 5.—A dozen of *Calomel Pills,* one grain in each.*

As much of the camphor powder as can be taken upon a sixpence, with the same quantity of the morphia and Dover's powder, and three drops of the essence of peppermint, may be given in a wine-glassful of water every quarter or half hour until a physician arrives, giving with the first draught one or two of the calomel pills. Should the vomiting be the most distressing symptom, omit the Dover's powders, and give double the quantity of the morphia.

In a multitude of cases I have given the above-mentioned powders in the *first stage,* or as soon as the *premonitory* symptoms appeared, and had seldom occasion to repeat

* N.B.—These five articles may be carried in a waistcoat pocket, and won't cost above half a crown.

the medicine after the second dose. By putting the patients in bed at once, and covering them warmly with bed-clothes, a free perspiration is produced; and by giving them plenty of *cold water* to drink (no brandy or whiskey), all the other secretions are promoted, and in nineteen cases out of twenty the collapsed stage may be prevented before medical aid can be procured.

Hydropathy is a powerful auxiliary, and a successful one in the treatment of cholera; but that can only be done under medical superintendence.

There are powerful arguments in favour of the non-contagious character of cholera; but it must be admitted, that under certain unsalutary circumstances, the disease becomes infectious. The only preventives are the cleansing of towns and cities, and the purification and ventilation of the habitations of the poor. The cholera, like the plague, propagates itself through the atmosphere, but not by contact—consequently it is not contagious.

Too much praise cannot be given to Sir EDWARD BOROUGH, and the other Sanitary Commissioners, for the salutary measures they have adopted, and for their untiring, persevering, and indefatigable exertions in the prevention of cholera in this city, which, under Divine Providence, they have kept off, notwithstanding its raging in London, Edinburgh, Liverpool, Glasgow, Limerick, Drogheda, and other towns and cities in the British dominions.

It has been said that some cases of Asiatic cholera have appeared in Dublin. I have not seen one except in the incipient stage, which under ordinary circumstances would be looked upon as trifling complaints, but in the presence of an epidemic requires prompt and energetic treatment; and this I can assert without the fear of contradiction, that up to this date (June) not a single case has appeared in the Metropolitan Police. It is true the premonitory symptoms appeared in some of them, but by the timely exhibition of the anti-cholera

remedies (by the hospital sergeants of each division) they were speedily subdued, and not a single case degenerated into Indian cholera. The force consists of 1,200 men, who, in the execution of their duty, have to perambulate through every street, lane, and alley in Dublin, in Kingstown, Dalkey, Blackrock, Booterstown, Kill of the Grange, Stillorgan, Sandymount, Ringsend, Irishtown, Donnybrook, Rathmines, Crumlin, Kilmainham, Chapelizod, the Phœnix Park, Cabra, and Glasnevin, containing forty square miles.

The English cholera and colic may be relieved, until medical aid can be procured, by adding a dose of castor oil, or tincture of rhubarb, to the above-mentioned draught.

CHAPTER VII.

RAILROAD ACCIDENTS.

IN CASE OF FRACTURED BONES, DISLOCATION, RUPTURES, RAILROAD AND STEAM-BOAT ACCIDENTS, GUN-SHOT AND POISONED WOUNDS; HOW TO ACT.

Cura ut valeas.

Be careful of yourself, that you may enjoy good health.

Non est vivere, sed valere vita.

Existence can scarcely be called life, if unaccompanied by health.

WHEN numbers of people are injured simultaneously, clear away all uninjured persons, except those whose assistance may be useful. In almost all severe accidents, concussions and bleeding are the sources of immediate danger, and the local injury is itself but of secondary importance. To stop the bleeding, see Chapter V. Do as little as possible to wounds, contusions, or fractures. In almost all cases it is better not to remove

the patient until the surgeon arrives. Those who are only shaken or slightly injured may wait quietly, or lie down for an hour or two before removed. In cases of fracture, or other severe injury, simply place the sufferer in the most comfortable and easy posture until the surgeon arrives. In case of apparent death, look to Chapter I., on suspended animation; and to injuries of the brain, to Chapter IV.

Wounds from sharp instruments are generally accompanied by bleeding. In lacerated or torn wounds, or from contused wounds from blunt instruments, bleeding does not occur to any extent. In both cases wash out any dirt or foreign body that may be lodged in them, and apply a cloth wrung out of cold water to the part every ten or fifteen minutes, which will stop the bleeding gradually, and prevent inflammation. Should a large artery be partially wounded, the hemorrhage will, of course, continue longer than if a small one were cut. Should the hemorrhage continue so as to endanger life

before the surgeon arrives, if the artery be accessible it may be completely divided.

In fractured limbs and dislocations be careful not to move the patient roughly, and make no attempt at reduction, but send for a surgeon, and place the patient in an easy position until he arrives. More damage may be done by careless moving, than that produced by the accident.

The following method of jumping off a railroad train, while in motion, was communicated to me by a gentleman connected with the Dublin and Kingstown Company, which he said he had often done without receiving the slightest injury. I do not recommend any person to try such a dangerous experiment; but although rare, it is possible an occurrence might take place in a railroad carriage while in motion, which might compel a passenger to vacate his seat and jump off the train to save his life; but except under such circumstances, it should never be attempted. The following is *verbatim* as it was repeated to me :—" You must

jump *with the train*, whatever way may be its direction, landing first on one foot, with your toe well turned out, and then the other instantly (straight), rather a kind of hop, keeping your legs and feet well forward in a standing position. The greater the span the more you are to recline your back, and the more forward you throw your feet and legs the better you allow the speed of the train to bring you upright." The following fact induced me to make the above inquiry:— A prisoner from the Kingstown police station, on his way to Dublin to be committed to prison, attempted to escape by jumping off an open third-class carriage. The police constable, THOMAS MALONE, of the F division, who had him in charge, at the imminent risk of his life, immediately jumped after him. The prisoner came on his feet, without the slightest injury, and the policeman's face, strange to say, was the first part of him that touched the ground. Having jumped the wrong way, his legs were whipped from under him, his forehead and nose being

severely contused and wounded. He however quickly recovered, secured his prisoner, and conveyed him on a common car to town. He shortly after felt considerable pain in his head, and was compelled to go into hospital, where, however, he recovered in a short time.

Ruptures are sometimes produced by jumping, falling, and other casualties, attended with intense pain, very considerable danger, and if strangulated (constricted) may in a few hours terminate in gangrene and mortification; therefore no time should be lost in sending for the nearest surgeon. A Rupture is a protrusion of some part of the abdominal viscera, generally a part of a bowel and in the groin. Until the surgeon arrives the sufferer should be placed on his back, with his knees drawn up towards his mouth, and a cloth frequently wrung out of cold water applied to the part. A gentle endeavour may be made by slight pressure and fumbling the tumor, to force it back into the abdomen, and a *lavement* thrown

up the intestines may facilitate it; but handling or feeling the part must be done with great caution.

Gun-shot wounds are very dangerous to life, more especially when the ball penetrates or traverses any of the great cavities of the body. Little or nothing can be done till the surgeon arrives, but to place the wounded in an easy position, and endeavour to stop the bleeding, should any hemorrhage take place.—See Chapter V.

Contusions and slight *bruises* are to be treated hydropathically; that is, by covering the injured parts with cloths wrung out of cold water, and changing them frequently, which will have a tendency to check any slight bleeding.

Dislocations and *sprains* are to be treated in like manner.

Explosions from *steam-boilers* may produce effects like burns, scalds, &c., and are to be treated as such.—See next Chapter.

CHAPTER VIII.

INJURIES FROM FIRE.

IN CASE OF FIRE BREAKING OUT IN ANY PART OF A HOUSE, OR OF A PERSON, WHEN ALONE, APPROACHING SO NEAR THE FIRE THAT THE DRESS IS CAUGHT BY THE FLAMES; AND IN CASE OF BURNS, SCALDS, AND ACCIDENTS FROM EXPLOSIONS, HOW TO ACT.

Neglecta solent incendia sumere vires.—*Horace.*

Fire for a short time neglected, acquires irresistible force.

A small spark makes a great fire.

SULPHUR, it is said, supplies the most instantaneous and efficacious method of extinguishing fire in a chimney, however violently it may be blazing; "by throwing two or three handfuls on the fire in the grate, it extinguishes it at once, as by magic."* I never had occasion to test its efficacy; but I have extinguished fires in chimneys more than once, by stopping the ingress of atmospheric

* Jackson on Minerals.

air up them, by means of a wet blanket applied at the front of the fireplace.

Should a room be on fire, or the bed-curtains, shut without delay the windows, doors, and every aperture through which air can pass, and cause buckets of water to be poured outside the door, which will be forced under it by the pressure of the atmosphere, and prevent the flooring from taking fire. In that way I prevented the late Bishop of Meath's house, next door to my own, in North Great George's-street, from being burned. The family were in France, and the caretaker of the house, an old woman, fell asleep, leaving the candle lighting close to the bed-curtains, which caught fire. There were other persons in the house, who discovered the smoke and gave the alarm. I was at home at the time, entered the house, found the room in flames, and caused the above measures to be adopted. The water was drawn into the room as fast as it could be supplied, until all danger of the fire spreading was over. A simple experiment, familiar to every one, will explain this fact.

Invert a tumbler, or any other vessel, over a plate of water, and put under it a piece of burning paper, and the water will be found to rise in the vessel, in consequence of the vacuum produced by the burning paper.

When the clothes catch fire, roll the person in the carpet or hearth-rug as quickly as possible to stifle the flame, leaving only the head out for breathing.

The water poultice* is the best application, and always at hand, for burns and scalds, unless there be a total destruction of the part. A surgeon should instantly be sent for, even in the slightest burn, if extensive in size, especially in children. If after the shock excessive sleepiness, or stupor, or difficulty of breathing sets in, or great pain about the stomach ensues, great danger may be apprehended.

Explosions sometimes produce effects like burns which require similar treatment.

* The water poultice is simply a doubled or trebled piece of linen wrung out of *cold* water, and applied like a common one of bread and milk.

CHAPTER IX.

CAUSES OF SUFFOCATION.

IN CASE OF A BONE OR FOOD STICKING IN THE THROAT AT MEALS, OR FALLING INTO THE WINDPIPE, HOW TO ACT.

THE passage through which the food is conveyed from the mouth to the stomach is called the *œsophagus*, from a Greek word signifying *to carry food;* and the windpipe, which is placed in the front of the œsophagus, is called the *trachea*, and is the air passage into the lungs.

The windpipe is lined with a very delicate and sensitive mucous membrane. The upper part of this tube has a thin cartilage attached to it, like a valve, and protecting the aperture against food falling into it in the act of swallowing. The food passing this covering or valve presses it down upon the opening, and thus defends the windpipe. If a crumb of bread or any other small substance, to

use a familiar expression, *goes the wrong way*, it is into the windpipe it falls through this opening, and if not thrown up again, would produce the most distressing symptoms, if not occasion immediate death. Under these circumstances however, nature comes to our assistance, and forces its discharge *upwards* by the act of coughing—the *only* effectual mode of relief; and under such circumstances it must be obvious, that instead of endeavouring to check the coughing, it should be, if possible, encouraged until the matter which produced the irritation, whether liquid or solid, be forced up again; and thus a cough becomes not only useful, but indispensably necessary for the preservation of life.

The following case, which came within my own knowledge, involves a practice so decidedly dangerous that it cannot be misplaced here, as a necessary caution against the adoption of those common-place remedies which too often induce mischief, and not unfrequently attended with the most

fatal effects. The case was that of a young lady, whose death was caused by a grain of allspice falling into the windpipe while taking some soup. The cough, which was naturally excited by the sudden irritation of the membrane which lines the windpipe, would probably have forced it up again, had not the common, but highly improper, custom of slapping on the back been resorted to, by which the grain of allspice was forced *downwards* into the lungs, and suffocation instantly followed.

Sometimes a crust of bread or a bone, in the act of swallowing, suddenly sticks in the throat (behind the windpipe) at meals, and if not forced down into the stomach by an instrument called a *probang*, may cause suffocation. The probang is a long, slender piece of whalebone with a bit of sponge at the end. The small end of a whalebone whip, or a whalebone taken out of a lady's stays, upon a sudden emergency, with a piece of sponge fastened at the end, might answer the purpose, and save a life.

In case of a fish bone sticking in the throat, passing a finger as far as possible might remove it; if not, a mouthful of bread chewed quickly and swallowed, might force it down; if that fails, the probang must be introduced.

CHAPTER X.

INJURIES TO THE EYES.

IN CASE OF LIME OR ANY OTHER SUBSTANCE FALLING INTO THE EYE, OR OF INSECTS FALLING INTO THE EAR, HOW TO ACT.

FOREIGN substances often fall into the eye, causing great pain. If in the lower part of the eye, draw down the under eyelid and remove, by a piece of moistened paper, whatever has fallen into it. If the substance be under the upper eyelid, place a bodkin across the lid, and push the lid back, so that it be completely inverted, and the substance may be easily removed.

Very minute pieces of iron and other hard substances are often driven into the eye with such violence, particularly in the open carriages on railroads, from the fire of the locomotive engines, that a surgeon is obliged to cut them out; but the operation should not be attempted by other parties, as they might destroy the eye altogether.

Lime and Roman cement are very destructive to the eye; when either get into it, wash repeatedly with vinegar and water—about a table-spoonful of vinegar to half a pint of water.

Should oil of vitriol or any other acid be thrown into the eyes, wash with a solution of soda in water, or a mixture of chalk and water.

Sometimes, from severe blows, the eye is burst. No attempt should be made, under such circumstances, to touch it, as vision might be irremediably injured by touching it with the finger: place the patient in bed, and darken the room, until the surgeon arrives.

Inflammation is very apt to occur after these accidents. The water poultice is the best preventive.

Should an insect get into the ear, put a few drops of sweet-oil into it, and the insect will come out; if not, syringe with soap and warm water.

PART II.

ON THE

CURE OF DISEASES

BY

WATER, EXERCISE, AND DIET,

WITH A FEW

REMARKABLE AND WELL-AUTHENTICATED FACTS.

The best thing is water, and the next gold.—*Pindar.*

One fact well observed is more decisive than a thousand metaphysical opinions.

CHAPTER I.

ORIGIN OF THE WATER CURE.

ORIGIN AND PROGRESS OF THE WATER CURE IN JERUSALEM, DAMASCUS, BENGAL, EGYPT, RUSSIA, TARTARY, TURKEY, PARIS, LONDON, LIVERPOOL, DUBLIN, AND BELFAST.

Water is the best gift of heaven.

In the early records of antiquity we find mention made of *ablutions* as a religious ceremony, and the means of fortifying the body against the hardships and fatigues of war, and with these views *cold water* alone was in the first instance employed.

On various occasions cold water is mentioned, in the sacred writings, as a remedy for certain diseases; and we find a striking illustration of its application as a means of cure in the account given in the gospel of St. John, chap. v., and of the healing virtues of the famous pool of Bethesda, which

CHATEAUBRIAND and other travellers state, is still to be seen at Jerusalem. "Now there is at Jerusalem," says St. John, v. 2, 3, "by the sheep walk, a pool, which is called in the Hebrew tongue Bethesda, having five porches. In these lay a great multitude of impotent folk, of blind, halt, and withered, waiting for the moving of the water." Bethesda means a house of grace or goodness, "doubtless," say commentators, "because many miserable objects there received mercy and healing." The patients said to be withered, are supposed to have been afflicted with catalepsy.*

In the Second Book of Kings, ii. 21, it appears that the practice of cold bathing, as a remedy for the cure of cutaneous diseases, was well understood in those days, and that certain rivers were celebrated for their medicinal properties. Thus NAAMAN, the Syrian, when desired by ELISHA to bathe in the Jordan for the cure of his leprosy, exclaimed—"Are not Abana and Pharpar,

* Jahn's Archæologia Biblica, xii. 119.

rivers of Damascus, better than all the waters of Israel? may I not wash in them and be clean?"—Chap. v. 12. Again, in the ninth chapter of St. John, and the seventh verse, we find that our SAVIOUR, in restoring sight to a blind man, made water a principal agent; for our Lord said to him—"Go wash in the pool of Siloam. He went his way therefore, and washed, and came seeing." The restoration of sight in this case, could have been effected without the agency of water at all, had Omnipotence so willed it; but the use of water in this and many other instances in Holy Writ, in which miraculous cures were wrought, is very remarkable, and, even in the absence of any other evidence in its favour, would justify a belief in its healing virtues.

It appears from the foregoing extracts and observations, that under the Mosaic laws, bathing in cold water was resorted to as a remedy for the cure of certain diseases; but that the ancient physicians were not governed by any decided principles respect-

ing the external application of water, appears from their very loose manner of recommending it. They prescribed ablutions and bathing without mentioning the necessary temperature of the water, being indifferent whether it were hot or cold.—See AVICENNA, TRALLION, and other ancient writers. Passing over those distant ages, we shall take a brief notice of the progress of the water cure for the last two hundred years, in Asia, Africa, and Europe.

In Bengal the cold effusion has been practised from time immemorial, as the following quotation from the "Oriental Field Sports," vol. ii., p. 318, by Captain Williamson, will prove:—"We must, however," says the author, "do the natives the justice to allow that the refrigerating principles lately adopted by some of our leading physicians, owes its origin solely to the practice of the Brahmins, or Hindoo priests, of whom the generality affect to be deeply skilled in pharmacy. I believe, if taken in time, few fevers would be found to degenerate into

typhus, and that very seldom any determination towards the liver in acute diseases would occur. Often have I known my servants, when attacked with fever, to *drink cold water in abundance, and to apply wetted cloths to their heads, with great success.*"

In Persia the cold water cure was practised upwards of two hundred years ago, upon Sir JOHN CHARDIN, a French Protestant refugee, who made a number of journeys into Asia at that time. And that a similar practice prevailed in the corresponding climate of Africa, appears from the information of BRUCE, in his Travels, where he says, "If the patient survives till the fifth day, he very often recovers by *drinking cold water*, and by throwing a great quantity on him even in bed, where he is permitted to lie without attempting to make dry or change his bed till another deluge is added to the first."

In Finland it is well known for ages, that the peasants rush out of their vapour bath, (heated perhaps to 130,) into the open air;

and roll and toss themselves in heaps of snow with delight and satisfaction. It is to this mode of bathing that the Russians, Norwegians, and Swedes owe their longevity, their robust state of health, and their cheerful and happy tempers.

In Russia the water cure, as practised there, produces a decided influence on the physical character of that nation. In the year 1818, his Imperial Highness the GRAND DUKE MICHAEL, and His Excellency the BARON NICHOLAI, were on a visit with the Lord Lieutenant of Ireland (the late Earl Talbot), and during their sojourn in Dublin visited my establishment daily, and bathed in the following manner: while their bodies were immersed in water at the temperature of 100, they had cold water (at 60) poured on their heads six or eight times during the immersion; and I was informed by their physicians (who accompanied them each day), Doctors HAMILL and MICHAELOWSKY, that such is the mode of bathing in Moscow and Petersburgh.

The celebrated scholar and writer, Dr. EDWARD DANIEL CLARKE, in his "Travels in Russia, Tartary, and Turkey," refers to hydropathic usages in Russia. In speaking of Moscow, he says, "The inhabitants of the north of Europe are exceedingly fond of the practice of bathing. As soon as they endured the high temperature of their vapour baths, which is so great, that Englishmen would not conceive it possible to exist an instant in them, they stand naked, covered by profuse perspiration, cooling themselves in the open air. In summer they plunge into cold water, and in winter they roll about in snow, without sustaining injury, or even catching cold. When the Russians leave a bath of this kind, they moreover drink copious draughts of mead, as cold as it can be procured. These practices, which would kill men of other nations, seemed to delight them, and to add strength to their constitution."

DR. EDWARD DANIEL CLARKE'S CASE.

"Being troubled with a rheumatic pain, brought on by sudden change of weather, which took place in Moscow, the thermometer falling in one day from 84 degrees of Fahrenheit nearly to 32, I was persuaded to try a Russian bath. I had been recommended to use what they termed the GEORGIAN BATH, situated in the sloboda, or suburbs, and which they described as the best in Moscow. It was a small wooden hut, at one end of which was a place black and fearful as the entrance to Tartarus. Two figures, with long beards and quite naked, conducted me in; and showing me a plank, covered by a single sheet, with a pillow, they told me to deposit my clothes there, and repose if I thought proper. As soon as I had taken off my clothes, they led me through a gloomy passage into the place called the bath, the ceremony of which I shall be very particular in describing.

"On the left hand were cisterns of water;

upon the edges of these cisterns appeared a row of polished brass vessels. On the right was a stove, and in the middle of the room a step or platform elevated above the floor. The hot vapour being collected near the roof, the more a person ascends the greater is the degree of heat to which he is exposed; a choice of temperature is therefore offered. On each side of the platform was a stove, in shape exactly resembling the tombstones in our church-yards. Their upper surface was covered by reeds, and over the bed of reeds was placed a sheet; having done this I found myself elevated, and the heat of ascending vapour threw me immediately into a most profuse perspiration. The sensation was precisely the same, which I experienced in the subterraneous cavern called the BATHS of NERO, on the coast of Baia, near Naples. I neglected to take my thermometer with me on the occasion, but the ordinary temperature of the Russian bath is well known. According to STORCH it rises from 104 to 122 degrees of

Fahrenheit; and sometimes on the upper stage, near the roof, it is 20 degrees above fever heat. Thus situated a man began to rub me all over with a woollen cloth, made into a bag, covering one of his hands, till the exterior surface of the skin peeled off. As soon as he had finished the operation with the woollen cloth, he bade me descend, and poured several vessels of warm water on my head, whence it fell all over my body. He then placed me on the floor and washed my hair with his hands, scratching my head in all parts with his nails (a great luxury with the Russians, and for reasons it is not necessary to explain). After this he made me again ascend the stove, whence, once more stretching me at length, he prepared a copious lather of soap, with which and the woollen cloth he again rubbed my body, when I descended the second time, and was again soused with vessels of water. I was next desired to extend myself on the stove for the third time, and informed that the greatest degree of heat would be given. To prepare

for this they cautioned me to lie on my face, and keep my head down. Birch boughs were then brought with their leaves on, and dipped in soap and hot water, with which they began to scrub me afresh; at the same time some hot water being cast upon red-hot cannon balls and upon the principal stove, such a vapour passed all over me, that it came like a current of fire upon my skin. If I ventured to raise my head an instant, it seemed as though I was breathing flames. It was impossible to endure this process for any length of time; therefore finding myself unable to cry out, I forced my way down from the stove, and was conducted to the lower part of the room, where I seated myself on the floor, and the doors being opened soon recovered sufficiently to walk out of the bath.

"Eminent physicians have endeavoured to draw the attention of the British Government to the importance of public baths, and of countenancing their use by every aid of example and encouragement. While we

wonder at their prevalence among all the eastern and northern nations, may we not lament that they are so little used in our own country. They might perhaps find reason to allow that erysipelas, surfeit, rheumatism, colds, and a hundred other evils, particularly all sorts of cutaneous and nervous disorders, might be alleviated, if not prevented, by a proper attention to bathing. The inhabitants of countries in which the bath is constantly used, anxiously seek it *in full confidence of getting rid of all such complaints, and they are rarely disappointed.* I may add my testimony to theirs, not only upon the occasion which gave rise to these remarks, but in cases of obstructed perspiration, much more alarming during my travels, experienced good effects. I hardly know any act of benevolence more essential to the comforts of the community, than that of establishing by public benefaction the use of baths for the poor in all our cities and manufacturing towns—*the lives of many might be saved.* In England they are

considered as only articles of luxury; yet throughout the vast empire of Russia, through all Finland, Lapland, Sweden, and Norway, there is no cottage so poor, no hut so destitute, but it possesses its vapour bath, in which all its inhabitants every Saturday at least, and every day in case of sickness, experience comfort and salubrity. Lady Mary Wortley Montague, in spite of all the prejudices which prevailed in England against inoculation, introduced it from Turkey. If another person of equal influence would endeavour to establish throughout Great Britain the use of warm and vapour baths, the inconvenience of our climate would be done away with. Perhaps at some future period they may become general, and statues may perpetuate the memory of the patriot, the statesman, or the sovereign, to whom society will be indebted for their institution. When we are told that Bacon lamented in vain the disuse of baths among the Europeans, we have little reason to indulge the expectation; at the

same time an additional testimony to their salutary effects, in affording longevity and vigorous health to a people otherwise liable to mortal diseases, from a rigorous climate and unwholesome diet, may contribute to their establishment. Amongst the ancients baths were public edifices, under the immediate inspection of the government. They were considered as institutions which owed their origin to absolute necessity, as well as to decency and cleanliness. Under her emperors Rome had near a thousand such buildings, which, besides their utility, were regarded as masterpieces of architectural skill and sumptuous decoration. In Russia they have only vapour baths, and they are for the most part in wretched wooden hovels. If wood is wanting, they are formed of mud or scooped in the banks of rivers and lakes; but in the palaces of the nobles, however they may vary in convenience or splendour of materials, the plan of construction is always the same."

From these remarks it will be evident,

that no subject was regarded with more importance in a sanitary and healthful point of view by this distinguished *litterateur* than hydropathy, either as a means of preserving health, or restoring it; and although since Dr. CLARKE's observations were made, a good deal of public attention has been directed to the necessity which exists for the establishment of baths and wash-houses upon an extensive scale, still a great deal of apathy upon so important a subject is still apparent. In England several public wash-houses, with baths attached to them, have been established, and with the most beneficial results, not only as regards the comfort and health of the poorer classes, but also of the community at large. In Belfast they have also been established; and, under the efficient control of the excellent corporation of that great commercial town, have been of immense advantage to the lower order of its inhabitants.

The addition of baths and wash-houses to the workhouses in Ireland would be a

very desirable object, and attended with very little expense; and is a subject well worthy of the most serious attention of the Irish Government; as in a country where pauperism unhappily exists to such a very great extent, and where destitution finds permanent relief in these institutions, the establishment of baths and wash-houses in every poorhouse in Ireland would be productive of the most important results, not only as regards the health of the inmates, but also in establishing habits of cleanliness, which in a national point of view would be most important, and would eventually prove the means of diffusing among the lower orders generally, a love of those habits which promote national prosperity and national comfort.

CHAPTER II.

DOUMOULIN.

"THE THREE GREATEST PHYSICIANS;" HYDROPATHY PRACTISED IN PARIS—IN DUBLIN; THE AUTHOR'S FIRST INVESTIGATIONS IN THE NAVAL HOSPITAL, IN THE MAISON DE SANTE, AND IN THE MEDICAL BATHING ESTABLISHMENT.

Physic is nothing else than the substitute of temperance and exercise, and diet cures more than the doctors.

THE celebrated French physician, DOUMOULIN, being surrounded, at his last moments, by several of the most distinguished doctors in Paris, who vied with each other in expressions of regret at his situation, thus addressed them—"Gentlemen," said he suddenly, "do not regret me: I leave behind me three of the greatest physicians." On their pressing him to name them, each anxiously antici-

pating his own name would be amongst the number, he briefly added—

"WATER, EXERCISE, AND DIET,"

to the no small discomfiture of his disappointed brethren; thus proving that he practised hydropathy; but in what year I cannot bring to my recollection, the authority for the above having escaped my memory.

Two hundred years ago, the Baron PARE, then surgeon to the Hotel Dieu, used cold water in the treatment of a variety of surgical cases in Paris; and one hundred and forty years after, Dr. CURRIE,* of Liverpool, accurately stated in his publication, the advantages arising from "the external application of cold water in typhus fever, intermittents, and scarlatina;" and during the campaign of Egypt, the celebrated Baron LARRY, surgeon-general to Napoleon's army, employed the cold water treatment in gunshot and other wounds.

* Dr. CURRIE was distinguished in the world of letters as the author of the life and memoirs of ROBERT BURNS, the celebrated Scottish poet.

The late Dr. MACARTNEY, professor of anatomy and surgery in the University of Dublin, recommended, in his lectures, upwards of thirty years ago, the cold water treatment in wounds, contusions, &c., which is in accordance with the practice of our distinguished countrymen, Sir PHILIP CRAMPTON and Mr. CARMICHAEL, late president and vice-president of the College of Surgeons of Ireland. I shall not go any further into the details or progress of the water cure, but proceed to state, in as few words as possible, the result of my own observations and experience in that branch of medicine; first endeavouring to correct an erroneous idea which prevails amongst the public, that the water cure repels the disease to some internal and important organ. Now, a more erroneous idea does not exist, as its mode of operation is exactly the reverse, which I shall presently, I trust, satisfactorily prove.

My first attempts were in the Naval Hospital, in Dublin, to which, during the late war, I was medical and surgical super-

intendent, and agent for sick and wounded seamen and marines. The naval department in Dublin at that time, consisted of a superintendent admiral, a post captain, five lieutenants, and one hundred men, with five gun-boats in the *Sea Fencible* service; a regulating captain, two lieutenants, and twenty-four able seamen, on the *Impress* service; a receiving ship and tender, each commanded by a lieutenant, with masters, midshipmen, and assistant surgeons, and from fifty to sixty able seamen, an inspecting field officer of marines, three captains, four lieutenants, seven recruiting sergeants, with their respective parties. To the above forces I was the principal surgeon for eighteen years, having also (by an order from the Admiralty) the medical superintendence of the revenue cruisers, &c. In the execution of my duty, I had to inspect all the volunteer and impress seamen, marine recruits, and landsmen for the fleet, amounting to (during the above-mentioned period) upwards of twenty thousand men; and finding a great number

of able-bodied seamen and volunteer landsmen labouring under cutaneous diseases, which rendered them unfit for the sea service, I was led to the consideration of what would be the easiest, the cheapest, and quickest mode of cure, to render them in the shortest possible time fit for the service they were anxious to enter into; and knowing the beneficial effects of the local application of *steam* by means of fomentations, and afterwards sponging the parts with cold water, I was led to investigate the effects of the application of *steam* to the whole surface of the body, and afterwards immediate immersion in cold water. So satisfactory were the results, that I had soon but little doubts that I had discovered a remedy of decisive efficacy in the treatment of many obstinate and lingering disorders, particularly of some of those embarrassing diseases of the skin.

To facilitate further my investigations, I erected, at an expense of nearly three thousand pounds, a medicated bathing establishment, which I threw open to all the army

surgeons in the garrison, and to all naval surgeons coming into the port of Dublin. In this establishment upwards of one thousand cases of various maladies (but chiefly of diseases of the skin) annually presented themselves to me, many of whom underwent what is now called the hydropathic treatment, that is, scientific bathing, aided by simple diet, and exercise in the open air; or as DOUMOULIN has expressed it, by "water, exercise, and diet." It must be evident, that in this establishment I have been enabled to pay more attention to the surface of the body than any other physician with whose practice I am acquainted; and it has been more especially my object to ascertain and reduce to general principles the employment of water in various ways to the numerous and complicated Diseases of the Skin, in the hope of extricating this branch of practice from the many absurd and fluctuating prejudices with which ignorance and empyricism has unfortunately surrounded it.

The beneficial effects of water, as I have already endeavoured to show, have been known

for ages antecedent to our modern investigations, and its present mode of application appears to have originated about the same period in Germany, France, and Ireland. I do not, however, contend for the honour of priority with PRIESSNITZ, WILSON, GULLEY, or JOHNSTON, but rather to congratulate myself on having found so able and so celebrated contemporaries engaged in the same pursuit. In all discoveries of practical and general application, it matters not where or by whom the first essay was made; and to contend for originality is not the object of the present work: it is infinitely of more consequence that the importance of the remedy should be pointed out, and its operations and effects ascertained. To these considerations the following pages will be directed; and it needs here only to be added, that the efficacy of the water-cure treatment is every day becoming more generally known and appreciated, and is now placed within the reach of all classes of the community, and may be adopted not only in private houses, but in

all public institutions, such as hospitals, dispensaries, infirmaries, and workhouses.

Having been at the head of a scientific bathing establishment for upwards of thirty years, where, as I have already stated, not less than one thousand cases have annually presented themselves to me; and having during that period devoted much of my attention to the investigation of the effects of water administered internally, and externally applied in different complaints, in addition to my experience in the naval hospital and the Maison de Sante (to which I was medical and surgical superintendent for twenty years), I must of necessity have had ample opportunities of observing the *dangers* as well as the *benefits* derived from it, in the treatment of disease; and the advantages I have had from my peculiar position, enable me to speak with authority on these points. Hydropathy, then, must be considered by all unprejudiced persons as an important branch of the healing art, and a powerful auxiliary to other medical resources; but as Dr. MEAD

justly observes, "In all things which the healing art contains, there is nothing that does good but may also do harm, and that when a remedy is used indiscriminately it must of necessity be very frequently used improperly." This aphorism cannot be kept too prominently before the mind's eye of every one who has recourse to medicine.

CHAPTER III.

THE WET SHEET.

THE WET SHEET NOT A REPELLENT; ITS EFFECTS IN FEVER, AND CHANGES PRODUCED BY IT IN DERANGEMENTS OF THE STOMACH, LIVER, SPLEEN, AND OTHER ORGANS OF DIGESTION; IN GOUT AND RHEUMATISM, IN INCIPIENT CONSUMPTION, AND OTHER CHEST COMPLAINTS; IN SCARLATINA, SMALL-POX, MEASLES, AND OTHER DISEASES OF THE SKIN; IN SCROFULA; IN DISEASES OF THE SPINE AND HIP JOINT; IN HYSTERIA, NEURALGIA, AND OTHER DISEASES OF THE NERVES.

It has long been a practice with surgeons to apply lint, or pledgets of linen, wetted with cold water, and covered with oiled silk to prevent evaporation, in the treatment of gout, rheumatism, and other inflammations; but the *wet sheet* peculiarly belongs to the Gräfenberg practice, and as a remedy, it consists with my knowledge of it to state, that it may be considered as one of the most important discoveries that has been made in the treatment of disease for many years, and instead of *repelling*, it acts as an *abstractor* of

heat and inflammation in all febrile and inflammatory complaints. It is a well-known fact, that when a cold body is placed in contiguity with a hot one, it *attracts* the heat until both become of the same temperature; and on this principle, the wet sheet lessens the pain by diminishing the morbid heat and circulation of the part. To use a more familiar example, which every one is acquainted with, if we place a hot iron close to a cold one, it parts with its heat to the cold one until an equality of temperature is produced. In this way the refrigerant, instead of repelling the disease to an internal organ, draws it to the surface of the body, and by copious perspiration carries off with great celerity the heat, the inflammation, and the pain; and brings on a speedy and a favourable crisis. But the *continued* application of a cold fluid to any part of the body, is one of the most powerful sedatives that can be used in the practice of medicine, by lowering the temperature and diminishing the circulation; and if continued too long, death or the most seri-

ous consequences may be the result. The wet sheet, therefore, should never be applied but under medical superintendence.

In the case of fever, in order to relieve the internal organs from the effects of *congestion*, a determination of blood to the surface of the body is by many deemed necessary; and to produce this effect, various drugs are employed, such as Mindererus, Camphor, James's Powders, Dover's Powders, and other *sudorifics*, which more or less injure the mucous membrane (or lining) of the stomach, and if they don't produce perspiration, prolong the disease.

In all fevers, where any of the viscera contained within the cavity of the abdomen are *primarily* affected, there are no means which afford such sudden and permanent relief as that which is obtained from the wet sheet. There is no remedy, perhaps, that carries along with it, such an appearance of novelty and danger as the wet sheet in fever; and I am aware that in recommending it I may be censured for its apparent rashness; but I do

not hesitate to state, that there is no remedy more safe, more easily sustained, or more certain of producing a speedy and a favourable crisis.

The wet sheet, or general application of water to the surface of the body, produces in a peculiar manner two diametrically opposite effects, accordingly as it is used. If it be changed as fast as the patient becomes warm, any amount of heat may be gradually abstracted from the body; but if the patient remains in it for half an hour or an hour, a pleasant sensation of warmth, and a gentle breathing perspiration is produced (and all this without injuring the tone of the stomach), while all pain and uneasiness are removed.

The partial application, or *wet bandage*, does for any part of the body, what the wet sheet does for the whole.

The modes in which water is applied in the treatment of disease, according to its nature, severity, and situation; and according to the age, sex, strength, and peculiarity of constitution, are exceedingly various: but to

enter into the various modes of employing it, would exceed the limits of this essay. By the judicious use of cold water alone, all the good effects of blistering and bleeding are most readily and certainly produced, without any of the bad effects. The bad effects of repeated bleeding in certain diseases, are well known to every medical man.

The following changes, while under the water cure, were observed to be produced on the body after pursuing the hydropathic treatment for a sufficient time by Sir CHARLES SCUDAMORE, M.D., who visited Gräfenberg in the spring of 1843, and underwent the water treatment himself under PRIESSNITZ. Afterwards he visited Drs. WILSON and GULLEY's establishments at Malvern, where he had abundant opportunities of observing the effects of the hydropathic treatment; and no author stands higher for accuracy and fidelity:—"The skin," says he, "from being pale and sallow, acquires a ruddy hue; the muscles become fuller and firmer; fat decreases, and many are glad to lose a corpu-

lent abdomen. In young growing persons it is soon made visible that the capacity of the chest increases, whence the lungs have liberty to play, and a brighter bloom appears on the cheeks.* Exercise, which was at first a difficulty, now becomes a pleasure. The mind partakes fully of these benefits of the body, the senses become more acute, the faculties more energetic, and buoyant spirits take place of languor, depression, and *ennui*." In addition to these beneficial changes, which in many instances I have witnessed, the

* Mademoiselle NINON DE L'ENCLOS, the most admired woman in France, in the reign of LOUIS XIV., when upwards of eighty years of age, possessed a beautiful complexion. She used to rail at the cosmetics of her visitors, who so frightfully daubed themselves with red and white paint. She boasted that she knew of one cosmetic, and one only, which was of the highest antiquity, and was, perhaps, the only true one acknowledged by nature. It is not only innocent, she affirmed, but proved highly *conducive to health;* it cleared the skin far beyond the milk of roses, and when accompanied with regular exercise in the open air, diffused over the countenance a more animated bloom than the finest rouge. It is needless to add, she would laughingly say, that this grand secret was no other than COLD SPRING WATER.

appetite improves, a regularity of bowels is established, and in most cases the hydropathic treatment induces a tendency to repose, checks an increased activity of bowels, and gives relief where it is impossible to cure; and, says Professor LIEBIG, "By means of the water-cure treatment, a change of matter in the human body is effected in a greater degree in six weeks, than would happen in the ordinary course of nature in three years."

From the foregoing observations, it will not be difficult to enumerate the diseases which may be cured or relieved by the hydropathic treatment.

In derangements of the stomach, liver, spleen, and other organs of digestion, which entail numerous complaints, such as gout, rheumatism, neuralgia, and perhaps three-fourths of the ailments that afflict mankind; we have now a simple remedy at hand, which restores to healthy action those important organs, whose derangement, if long continued, is sure to induce organic disease; and

this is done without injuring the stomach or the tone of the constitution.

In the incipient stage of consumption, a disease so fatal in its consequences, and so extensive in its ravages, sparing neither sex, age, nor condition, and almost hourly removing from our homes their brightest ornaments, and their most interesting and best beloved inhabitants.

In other pulmonic diseases it is equally efficacious, as in asthma, influenza, inflammatory sore throats, scrofula, diseases of the skin, spine, and hip joint.

In hysteria and other uterine affections; in hypochondriasis and dyspepsia; and in all chronic diseases arising from excess in eating or drinking; and other sensual gratifications which debilitate and enervate both body and mind; considerable aid is found in the hydropathic treatment, which never fails to benefit the patient, even in cases where a perfect cure cannot be hoped for.

In all diseases arising from impurities of the blood, for instance, cutaneous diseases,

from the slightest eruption on the face or body to the most inveterate psoriasis or elephantiasis; in scarlatina, small-pox, and measles, it is particularly beneficial; and I would venture to assert, that it bids fair to remedy those hitherto incurable maladies, the hydrophobia and the glanders, in the human subject; for from the copious perspirations induced by it, and the supplies being continued by the plentiful imbibing of pure water, there is a rapid change in the circulating mass of blood; so that noxious particles are first diluted, and then eliminated from the system. But I do not consider any individual who is worn down by lingering or long-continued disease, inanition, or length of years to be adapted for it; or those who do not possess sufficient power of reaction to restore the heat of the body after the application of the cold water treatment.

CHAPTER IV.

EFFECTS OF THE DRUGGING SYSTEM.

INDIGESTION; HYPOCHONDRIASIS; ERUPTIONS ON THE FACE; CASE OF THE HON. COLONEL F——, AND OF STAFF-SURGEON WHEELER.

INDIGESTION occurs at all seasons of the year, under every circumstance of life, and in every rank of society, no age, sex, or condition being exempt from its attacks; and no disease has afforded more encouragement to *quackery*. The countless nostrums denominated patent medicines, have no other effect in general than to establish and perpetuate the complaint; and if the unfortunate invalid be not duped by imposition and quackery, he falls a victim to the routine of practice in this class of maladies, as will appear in the two following cases:—The drastic *purgatives*, the fiery *tonics*, and the long-continued *mercurials*, are the bane of digestion. By some calomel is administered

with the same freedom and frequency as the most simple purgatives; and doubtless serious and irreparable mischief is often inflicted on the constitution by the abuse of this powerful agent. "Mercury and antimony," says a celebrated physician,* "elaborated into poisons by chemistry, *i.e.*, calomel and tartar emetic, have torn many a stomach to rags, so that it could never bear common food afterwards." And to my certain knowledge, says another,† "many a valuable life has been abridged by over drugging and over drenching." And, says the late editor of *The London Medical and Surgical Journal*,‡ "The non-professional public are every day acquiring experience on this point; and we have the means of knowing, that an important revolution in men's minds is now taking place in respect to *deluging* the dyspeptic stomach with drastic medicines."

The inhabitants of the British isles are

* Dr. Cadogan. † Sir Walter Farquhar.
‡ Dr. James Johnson.

said to be more subject to cutaneous diseases than any other inhabitants of the globe; and their avidity for swallowing drugs is almost characteristic of the British nation. Lady MARY WORTLEY MONTAGUE says, from her own knowledge, that "in eastern countries, where baths are in frequent use, diseases of the skin seldom occur." Most classes of cutaneous eruptions arise from one cause, namely, a morbid secretion from the vessels and glands of the skin, *which* are aggravated more or less by every disturbance that takes place in the digestive organs; for no two parts of the body so strongly sympathise as the stomach and the skin: no parts are more constantly liable to accidental disturbances; and these act and react so frequently on each other, that it is often difficult to discover which of the organs were primarily affected.

Among the numerous symptoms arising from indigestion, *eruptions on the face* are the most distressing, particularly to two descriptions of individuals in whom the

community are much interested, namely, the studious and the *fair sex*, who, from their sedentary habits, are more subject to this class of disease. This symptom therefore demands our most assiduous attention, for if it be neglected, or improperly treated, the blotches and eruptions in which they terminate, and the fiery redness which sometimes attends them, will inevitably destroy the finest features, and disfigure the most captivating countenance, rendering life, if not miserable, at least unenjoyable.

The term *scorbutic* is generally, but most improperly, applied to this eruption; and this serious error has induced many unwary persons to resort to the use of "antiscorbutics," "sweeteners," "lotions," "ointments," and various "cosmetics," which, by their sympathetic effect upon the stomach, increase its derangements, and at once fix and perpetuate the eruption.

Where the skin appears greasy, with numerous black points scattered over the forehead, nose, and neck; or where small,

hard, and red pimples make their appearance, a derangement in the liver and digestive organs may be suspected, and if appropriate means be not used in this stage to remove the cause, these pimples gradually become enlarged, acquire an inflamed base, and slowly change into little boils, which break and discharge their contents, leaving marks which do not hastily disappear. The forehead, sides of the nose, the chin, the throat, a little below the angle of the jaw, and the back of the neck, are most commonly the parts in which these inflamed tubercles show themselves. The stomach in such cases is generally disordered, and the appetite precarious and irregular. Almost every meal is followed by acid eructations, or flatulent distension of the stomach; the bowels are very irregular; the spirits are depressed; and the sufferer is frequently irritable, whimsical, or in that nervous state called "*hypochondriacal.*" This, in general terms, gives the outline of these cutaneous, sympathetic

eruptions on the face, which, by the simple treatment described in the following case, may be effectually cured, and the recurrence of the eruption prevented. But from neglect, inattention, or mismanagement, these eruptions may become an organic disease of the skin, termed "Achne," or stone-pock.

CASE OF STAFF-SURGEON WHEELER.

The following case appeared in *The London Medical Times* of the 13th December, 1845:—

"TO SIR ARTHUR CLARKE.

"Royal Barracks, Dublin,
"17th November, 1845.

"DEAR SIR,

"As you expressed a wish that I should give you a short statement of my case, previous and subsequent to my commencing the water cure, I feel great pleasure in complying with your request, and shall begin with the beginning.

"In the year 1841, while serving as an army medical officer in the West Indies, symptoms denoting a morbid condition of my stomach and liver commenced, and continued increasing I may say ever since that period, notwithstanding my having tried every remedy which my own experience and that of other army surgeons, of longer standing than myself, could suggest; and since my return to Europe (now upwards of three years) I have consulted some of the ablest men in the profession, both in England and Ireland. It is almost unnecessary for me to tell you the variety of drugs I have taken for the last four years—suffice it to say, that calomel, blue pill, rhubarb, colocynth, taraxacum, acids, alkalies, bitters, tonics, magnesia water, Brandreth's solution, and Holloway's pills, all had their trial; from some of which a temporary mitigation, but mitigation *only*, was produced—the loss of appetite, the constipation of bowels, the dry harsh skin, and white tongue continued. For the last

twelve months I have had a constant giddiness in my head, with dark spots floating before my eyes, and a tremor in holding out my hands. My tongue was swollen and covered with a milk-white mucous. I had heartburn and flatulence. *My face was nearly covered with small, hard, red pimples, with black points,* particularly on the forehead, round the eyes, about the nose, and on the back part of my neck, some of which *suppurated,* leaving marks which slowly disappeared. In short, so distressing were my dyspeptic symptoms, that I could not eat a meal with appetite or comfort, which obliged me to withdraw from the mess of my regiment, and to give up all society, rendering my life unenjoyable, if not miserable. Such was the state of my health and my feelings when I met with your 'Treatise on Hydropathy.' It struck me, for the first time, that mine was a case likely to be benefited by that treatment; and as 'a drowning man will catch at a straw,' I hastened to you on the 16th of October last.

After presenting myself and submitting to a personal examination, you inspired me with a hope that my case was not hopeless, as many similar ones, of longer standing, which had resisted all other medical treatment, were cured by the hydropathic treatment. On the following day I commenced, and with fear and trembling (being very nervous) underwent an operation which, I candidly confess, at first filled me with apprehensions of danger; and had you not been present, I don't think I ever should have submitted to it. I was plunged into cold water immediately out of a sweating bath, while my whole frame was covered with a most profuse perspiration, and afterwards hand-rubbed, and a cold, wet bandage applied round my body, covered with a dry one. The sensation I felt after this process was extremely agreeable, and after drinking a tumbler of cold water, I went immediately into the open air without any additional clothing to what I am accus-

tomed to wear, and exercised on foot and horseback for some hours. The following day, and every day up to this date, I have undergone the same process with pleasure and delight; the result of which is, that all my dyspeptic symptoms, including the eruptions on my face, have vanished; that I am *six pounds heavier* than when I commenced the water cure; that my bodily strength and spirits have increased; that I enjoy society; and that I feel as well as ever I did in my life.

During the above-mentioned treatment I drank daily, upon an average, six tumblers of cold water; abstained from wine and every thing heating and stimulating. I took, by your directions, a five-grain blue pill twice, but twice only, the biliary secretion not appearing sufficiently abundant. The secretions are all now natural, and the wet bandage, which was wrung out of cold water and applied three times a day, has brought out a papular eruption, which at Gräfenberg, I understand, is called the crisis, and

which is most anxiously watched and wished for there.

"I am, dear Sir,

"Your obedient servant,

"J. H. WHEELER,

"*Assistant Surgeon 2nd Dragoon Guards.*

"P.S.—For the information of such medical gentlemen as oppose and ridicule the water cure, you are at liberty to publish this case.

"J. H. W."

Mr. CARMICHAEL, then president of the College of Surgeons, saw the above-mentioned gentleman, and heard him *viva voce* confirm the foregoing statement.

Dr. WHEELER was, in July, 1847, doing duty at Newbridge Barracks, with his regiment, in perfect health, enjoying society and the pleasures of the table. Shortly after he was raised to the rank of Staff Surgeon, married a lovely and beautiful young woman of fortune, and went to the West Indies.

It may be truly said, that "the cold water treatment did for him what drugs failed of doing, or failed to do."

CASE OF THE HONOURABLE COLONEL F——.

On the 31st of July, 1842, the Honourable Colonel F—— applied to me, labouring under hypochondriasis and dyspepsia; that is, loss of appetite, lowness of spirits, great bodily debility, with a sense of uneasiness in the right side, the region of the liver, &c. He stated that he had consulted some of the first medical men in London and Dublin. He showed me nearly a hatful of prescriptions, and said "he was tired of drugs, and would take no more; and that he wished, previous to going to Gräfenberg, to have my opinion as to the water cure in his case." I examined his person, and found he had no organic disease, and told him that I considered him a fit subject for the hydropathic treatment. He put himself under my care, submitted to the necessary manipulations, the diet I prescribed, and took as much

exercise in the open air as he could without fatigue. In three weeks he took his leave of me, perfectly satisfied with the result of the water-cure treatment. Captain CLARIDGE, the enterprising promoter of hydropathy, so well known by his publications and lectures, saw my patient, and had some conversation with him. He told him the treatment he was pursuing under my directions was precisely the same as that adopted at Gräfenberg.

Men who spent all upon physician's fees,
Who never slept, nor had a moment's ease,
Are now as roaches sound, and all as brisk as bees.
Crabbe.

CHAPTER V.

GOUT.

GOUT, RHEUMATISM, AND NEURALGIA; CASE OF GENERAL SIR COLQUHOUN GRANT, K.C.B., AND GENERAL SIR JOHN ELLY; CASE OF MR. W——.

Tollere nodosam nescit podagram.
Medicine cannot cure the knotty gout.

Throw physic to the dogs, I'll none of it.

Shakspeare.

Gout.—It has been thought by many, that a fit of the gout is the means of expelling some morbid matter from the system, and therefore is a very desirable event. This perhaps is the most fatal error that has ever crept into medicine, and it has paralyzed the faculty of physic for upwards of two hundred years. On the contrary, gout is a disease painful and troublesome in itself, which becomes from time to time worse and worse, and brings with it a long train of other no less dangerous complaints.

Since the days of SYDENHAM till very lately, physicians seemed to have a dread of the gout; and their general treatment of it, for fear of doing mischief, was in most cases to do nothing. The unfortunate events which followed a number of cures,* said to be performed by quack medicines, led to the same conclusions; and the utmost effort of the old practice was, to protect the stomach, and to leave the sufferer to "Patience and Flannel." A bolder practice is now however ventured upon, and the certainty of mitigating the tortures of the complaint, shortening the fit, and preventing a relapse by the hydropathic treatment, is established beyond a doubt.

CASE OF MR. W——.

Mr. W—— had in 1840 a most unrelenting fit of the gout, which lasted nearly six months, the greatest part of which he was confined to his bed. "Patience and flannel" with an occasional dose of magnesia and

* "Omnes ad internecionem interiere," says Cadogan.

tincture of Calchicum, were the principal remedies prescribed by his medical advisers. In 1842 he was threatened with another fit, having all the incipient symptoms he had in the former attack; and recollecting the tortures he had suffered, and the length of time he was laid up, he sent for me and told me he would submit to any treatment I would point out, to mitigate the pains and shorten the fit. His hands, feet, and knee-joints were inflamed and swollen as formerly. I commenced the hydropathic treatment immediately, and in a fortnight the swelling, inflammation, and pains disappeared, and in three weeks he returned to his business which was in a public office, and he has continued from that time to the present (June, 1849) free from gout or any other complaint.

Rheumatism.—In consequence of the moist and variable atmosphere to which our contiguity to the sea exposes us, rheumatism is one of the most frequent, difficult, and tedious complaints with which we have to

deal. The stomach, from the use of Dover's Powders, antimonials, and other sudorifics, is too frequently debilitated, and the constitution thereby injured.

Gouty constitutions are sometimes attacked with rheumatism, which has given rise to an idea that they are in some cases combined, whence the common expression of "Rheumatic Gout."

In rheumatic constitutions, lameness and stiffness in the joints, and sometimes irregular flying pains are felt before rain in damp weather, or when the wind changes to the east. Soft swellings are formed near the shoulder, knee, or ancle joints; also, in some cases they suddenly arise from distension of the *bursæ mucosæ*. These complaints are speedily cured by the hydropathic treatment.

CASE OF GENERAL SIR COLQUHOUN GRANT, K.C.B., COMMANDER OF THE GARRISON IN DUBLIN.

This distinguished officer applied to me in 1826 for the cure of a *bursæ mucosæ*, about

the size of an orange, on the outside of the right knee-joint. He told me that the staff surgeon of the garrison proposed scarifying the tumour, but, said the gallant general, "though I am not afraid of the sword, I dislike the lancet, and I wish to try what you can do before I submit to it." Being unable to put a foot under him, he was carried out of his carriage into my establishment. I had him immediately placed in a sweating bath for half an hour, after which I applied a cold wet bandage round the knee, covered with a dry one to prevent evaporation, and desired the bandage to be wrung out of cold water every eight hours, and to drink a tumbler of cold water night and morning. He steadily persevered in this simple plan daily for a fortnight, when there was not a vestige of the tumour to be seen or a pain to be felt. At the end of which period the pain and weakness of the joint were entirely removed, and he was able to ride and walk as well as ever he was.

In a short time afterwards he brought General Sir JOHN ELLY to me, who was unable to walk from *lumbago*, which is a rheumatic affection of the muscles of the loins, which attacked him suddenly, and was attended with considerable pain. By a similar treatment to that of Sir COLQUHOUN GRANT'S, that is, the sweating bath and wet bandage round the loins, he was in three days free from pain and able to walk.

Neuralgia.—With respect to neuralgia or rheumatism of the nerve, I have had so many successful cases, that I look upon the water-cure treatment in this disease as a sovereign remedy.

CHAPTER VI.

PULMONIC COMPLAINTS.

PULMONIC COMPLAINTS AND HEART DISEASE; CASE OF MR. M——, OF MR. W——, AND CAPTAIN G——.

Satius initiis mederi quam fine.

It is better to be cured at the beginning of a disorder than at the end.

In the different periods of life the blood is carried with a preponderating impetus to different organs; and in almost every individual, this fluid is morbidly determined to some particular organ, which it thus renders more habitually prone to disease. The lungs are the seat of this especial determination of blood, from the period of puberty, till that of complete maturity; hence this is the time of life in which all pulmonary complaints are most dangerous; and when these organs are constitutionally the seat of sanguine congestion, it rarely happens that the

party escapes during early life from spitting of blood, imflammatory coughs, tubercles in the lungs, or some other pulmonic attack.

Diseases of the chest are principally winter and spring complaints, arising from sudden variations of temperature, cold, damp, &c.; and amongst the fair sex, there is nothing so frequently productive of chest complaints, as that fashionable state of *semi-nudity* called *full-dress,* in which they attend balls; and the utter wrecklessness with which they expose their delicate and fragile forms to the night air, after the heat and exhaustion of the dance.

CASE OF MR. M——.

Mr. M——, aged twenty-four years, sent for me on the 20th of August, 1842. He was labouring under inflammation of the lungs, and was ordered to be bled, leeched, and blistered, which he objected to, having a dislike to the lancet, an abhorrence to leeches, and no fancy for the pain of a blister. Finding he was under the care of

another professional gentleman, I of course declined any interference without meeting his physician in consultation. Dr. S.—— was sent for, and we met. I could see a smile of incredulity on his countenance, when I proposed the hydropathic treatment; and on pressing further, he, without hesitation, said, that "hydropathy, like homœopathy and mesmerism, was downright quackery, and that it would be losing precious time to delay the application of the remedies he had prescribed, and which were lying on the table. The young man having heard of some extraordinary cures effected by the water treatment, implored his physician to let him try it; and having yielded to his solicitations, it was immediately commenced in the presence of the doctor. I had the wet bandage applied to his *chest*, with directions to wring it out of cold water, and apply it every second hour, with a dry one over it, and to give him a tumblerful of cold water to drink at each application of the bandage. On visiting him the next day,

we found him sitting up in his bed perfectly free from any inflammatory symptom, preparing to go out about his business. On our taking leave the doctor apologized for the hasty expressions he had used, on our first consultation, and had the candour to acknowledge, that if he "had not witnessed the effects of the cold-water treatment, he could not have believed it."

In this case it was quite evident, that the partial application of the cold water produced all the effects (except the pain) both of blistering and bleeding. Wherever the cold water is applied, great redness is produced, which proves, beyond a doubt, that there is a great determination of blood to that part, which must have been brought from other parts of the body, the diseased part included.

CASE OF MR. W——, AGED FIFTY.

Hypertrophy of the heart, is not a common disease, but it is every now and then to be met with. Mr. W—— was subject

to frequent palpitations, which were at first supposed to be symptomatic of stomach derangement, and treated as such; but not yielding either to regimen or medicine, another view was taken of the case, and he was cupped, leeched, and blistered on the left side, on the region of the heart; and afterwards mercurialized, from which treatment he stated to me, that he found no permanent relief. He applied to me, he said, "as a last resource," in 1843. The heart's action was strong and frequent, and most distressing. He was under continual apprehension that some slight accident or bodily exertion would suddenly put an end to his existence. In truth, I had little or no hope of a cure, conceiving the disease to be organic; but that the wet sheet, which lowers the temperature of the body, would also lower the heart's action to any given degree. I applied the wet bandage to the region of the heart, which, without lowering the system, produced all the beneficial effects of bleeding and blistering, without any of the unpleasant

sensations peculiar to these operations; and as the experiment proved successful in the first instance, he continued to apply the wet bandage twice a day for six months, abstaining from every thing heating or stimulating; and the consequence has been, that he has never complained of palpitation since, and is at this moment (1st June, 1849) free from any symptom of heart or pulmonic disease.

CASE OF CAPTAIN G——, AGED THIRTY.

About two years ago, Captain G——, a member of the Hibernian United Service Club, had hypertrophy of the heart, which obliged him to abandon the active duties of the service and retire upon half pay. I put him under the partial application of the water cure, which he steadily persevered in for nine months, when all his distressing symptoms vanished.

This gentleman called upon me a few days back (29th of May, 1849), to consult me about some trifling ailment he was then labouring under, but perfectly free from

any heart or pulmonic disease, which I ascertained by the stethescope. He told me he had just returned from London, and had passed a few days at Cheltenham on his way home, and stated, that he had met Dr. ——, an eminent physician there, to whom he related the cure effected in Dublin by the hydropathic treatment. The doctor, he said, "*wondered it did not kill him*"—a clear proof that the former had never tried it, seen it tried, or even read any thing about the water cure, and of course must have been totally ignorant of that branch of medical science. Like other prejudiced and illiberal members of the profession, it appears he rejects the practice without trial, and condemns it without proof; thus becoming, as many others do, an obstacle to the diffusion of knowledge respecting it. It reminds me of an observation of one of the greatest physicians that ever lived, as applied to the medical profession in particular:—"*There is scarcely an improvement*," says he, "*in our art, however obvious, that did not experience at first the*

almost unanimous opposition of the Faculty." For example, HARVEY, who discovered "the circulation of the blood" in the seventeenth century, was styled "the Circulator," a word in its original Latin signifying *Quack;* and his rivals in practice made it a pretext for declining to meet him in consultation. He became, nevertheless, the successive physician to two monarchs, the first JAMES, and the Martyr CHARLES. Lady MARY WORTLEY MONTAGUE first introduced into England the small pox inoculation, having seen its success in Turkey. The Faculty all rose up to a man against its introduction; yet it was in a few years adopted by the most eminent members of the profession. And JENNER, who introduced the still greater discovery of vaccination, was, within my own recollection, treated with ridicule and contempt, persecuted and oppressed by the Royal College of Physicians; yet he subsequently received large pecuniary grants from Government for the benefit he had conferred, by making known his valuable discovery; and at the

present time its observance is very properly enjoined by the whole medical profession and by the Legislature. And thus we see, that truth is of a buoyant nature, and ultimately rises above the force of prejudice, the violence of ignorance, and even the keenest shafts of interested ridicule. And as Dr. WEATHERHEAD justly says of the water cure, "Many men who cannot think for themselves, will wait till the practice does not require their feeble sanction; and when they can no longer deny its utility, they will either pretend they clearly understood the thing from the first, or boldly assert there is nothing at all new in the application of the remedy." But the disapprobation or sanction of such people is at all times a matter of indifference.

One word to Dr. ——, of Cheltenham, before we part. I would recommend him to visit the hydropathic establishments of his neighbours, Doctors GULLY and WILSON, at Malvern, and read their works on the water cure: they will open his eyes, and, I trust, convince him of the impolicy of advanc-

ing an opinion respecting a subject of which he knows nothing. I would also advise the doctor to consult "Æsop's Fables," and endeavour to regulate his opinions in future by the advice contained in the moral of the story of "The Dog in the Manger."

CHAPTER VII.

HYSTERIA.

T. VITUS'S DANCE; UTERINE DISEASE; CASE OF MISS B——
——OF MISS H——.

HYSTERIC affections are of two kinds—one depending on the state of the body, the other on the state of the mind; or one attended with plethora, the other with weakness. They are both habits or dispositions to imitate rather than contract disease; so that from the slightest cause various *apparent* diseases occur, for example, fevers, inflammations, rheumatism, &c.; but instead of these apparent diseases going through their natural course, they go off whimsically, with as little cause as they come on. Thus, an inflammation that appears at the point of suppuration will disappear at once; in the same manner fevers and rheumatism will suddenly disappear, when the patient appears to be in the most

imminent danger, and whatever drugs are taken at the time, obtain the credit of the cure, although altogether inoperative in effecting it. I have seen persons affected in this way, and apparently at the point of death for two or three days, recover in a very short time without any medical treatment whatever.

In hysteric persons the mind is generally much agitated from the least surprise, sudden grief, fear, or anxiety; yet they often bear immense pain with great fortitude. To small grievances they give way; in great ones they collect all their strength and energy, and powerfully resist them.

Hysteric affections arising from weakness, are often very troublesome, but never fatal. The water cure varied and modified (which it can be in one hundred ways), or graduated according to the constitution of the patient, is the most successful treatment that can be adopted in such cases. Assafœtida, musk, castor, camphor, and valerian are generally given; but I have no faith in any of them.

A little Ether poured upon the breast, I have known in some instances to carry off the fit immediately. The muriate of morphia is sometimes useful in alleviating the paroxysm, but it should be given in very minute doses, and frequently to keep up a constant effect.

CASE OF MISS H——, ST. VITUS'S DANCE.

Miss H——, a young lady from the county Kildare, of a strong constitution, was for upwards of a fortnight labouring under symptoms of hysteria, in addition to which she had violent irregular motions of the right arm and leg, and sometimes of the whole body. The spasms had been almost constant, obliging her to be held down in bed, as they continued during sleep, which was frequently interrupted by them. Her speech was very inarticulate, her appetite bad, and her body costive; her skin dry, her pulse slow and not affected by the spasms, and her female health irregular. I was requested to see this young lady on the 28th March, 1845, her medical adviser having dis-

continued his attendance. I found her in bed labouring under delirium, with contracted pupils, and a blister on her head. I was informed by her mother that she had taken a quantity of drugs of various kinds, and a musk mixture was lying on the table. She had been placed on a strengthing diet with wine, &c., I without loss of time commenced the hydropathic treatment. The next day on visiting her I found her out of bed and moving about her chamber. The third day she was able to walk about the drawing-room for some hours without help; and on the fourth day she found herself so well, that she expressed a wish to return to the country. She had no convulsive motions or nervous symptoms after the second day of the water-cure treatment; her speech became articulate; her appetite improved; her digestive system became healthy, and her speech natural. On the fifth day she went perfectly well to the country.

St. Vitus's dance is almost peculiar to the growing state and to females, and is seldom

attended with danger; however, from neglect or mismanagement, it may be transferred to the brain, and terminate in Epilepsy. A variety of drugs have been supposed to cure this complaint, from the accidental circumstance of their having been administered at a time, when the natural strength of the constitution overcame the influence of the disease. In this way Mosaic gold, powdered tin, carbonate of iron, salt of steel, &c., have in their turn obtained the credit of cures, when, in fact, they only aggravated the disease and retarded recovery. I leave it to others to conjecture whether, had the drugging and stimulating system above mentioned been persevered in, would recovery be so speedily effected as by the water cure.

It may not be uninteresting to state, that according to the superstitions of the fourteenth century, two saints, St. Vitus and St. John, were considered to have particular connexion with this extraordinary disease (St. Vitus's dance), of which violent convulsive motions formed a principal symp-

tom. The anniversary of St. John's day has from the darkest ages been celebrated by the kindling of *bonfires!* and even to the present day the belief exists, that people and animals that have leaped through the flames or their smoke, are protected for a whole year from fevers and other diseases. This heathen custom in honour of St. John, is still kept up amongst the lower orders in Ireland on the eve of the anniversary day.

CASE OF MISS B——, UTERINE COMPLAINT.

Miss B——, aged about six and twenty, had been labouring under a uterine disease for nearly seven years, for which she had consulted some of the ablest surgeons and accoucheurs in Great Britain, and for the last six months was under the care of a celebrated Homœopathic French physician in London, from whom, she stated, she had derived more benefit than from any other treatment, but it was only *temporary*, and as a last resource her relatives and friends wished her to try the water cure. She

resided in the country some miles from Dublin, and came to town to have my opinion relative to the application of the hydropathic treatment. From circumstances which are not necessary here to relate, I satisfied myself there was no organic disease, which inspired me with hopes of success in this very interesting and apparently hopeless case. On the 20th September, 1847, I caused her to be placed in the wet sheet (*secundum artem*) in which she remained three hours, after which her person was hand-rubbed, and a wet bandage put round her body, the bandage was to be wrung out of cold water every eight hours, and she was to take a tumbler of cold water once in every third hour. There being considerable pain, irritation, and tenderness in the region of the lower stomach, I found it necessary to add to her night draught of cold water, the sixth part of a grain of the muriate of morphia. This process she went through *daily* for three weeks with pleasure and satisfaction, and she longed for the hour every morning when

the female attendant was to "pack her up in the wet sheet." She then commenced the sweating bath which she used every day for a fortnight, plunging immediately after each sudorific operation into cold water, and continuing the hand-rubbing and wet bandage as before, but discontinuing the morphia.

Before the commencement of the hydropathic treatment, this lady could not wear stays, or bear the slightest pressure on the abdominal region, and suffered constantly from pain and irritation. She now dresses like other women, feels none of her former unpleasant symptoms, can take exercise and enjoy society. The following week she returned to the country (to the inexpressible joy of her relatives and friends) with instructions to continue the wet bandage round her body for some time until an eruption would appear, which broke out in three weeks after: she has had no return of her complaint, and, if report be true, is now on the eve of being married.

CHAPTER VIII.

DROPSY.

EXTRAORDINARY CASE FROM THE USE, OR RATHER ABUSE, OF ARDENT SPIRITS.

In adopting the term Dropsy (which is but a single symptom) as the name of a specific disease, we are likely to include in it many obstinate and incongruous disorders. Like head-ache or pain in the stomach, dropsy is too vague a term for nosological arrangement; like them, it arises from a variety of causes, and like them, it forms a part of many complaints. It is the concomitant of many visceral diseases; it follows occasionally in the train of fevers; it arises often from accidental injuries; from obstructed perspiration; suppressed discharges, natural and artificial; and last, though not least, from the excessive use of ardent spirits; and present in all cases where death is ushered in by debility.

Throughout every part of the body, and in all its great visceral cavities, there is a constant exhalation of a vapoury fluid, oozing from the exhalent extremities of the arteries, and bedewing every fibre of our frame. This fluid is absorbed as fast as it is formed by the corresponding mouths of the lymphatic vessels, carried back again to the general mass of blood, from which it had been separated. If at any time this fluid be poured forth in quantities greater than can be taken up by the absorbents; or if, on the other hand, the absorbents should in any degree lose their usual power of action (the exhalents remaining unaltered), an accumulation of fluid must necessarily take place, consequently the body will be thrown from a state of soundness and health, into that of weakness and disease.

CASE OF GENERAL DROPSY FROM DRINKING.

The following case of dropsy, occasioned by the abuse of ardent spirits, is curious, and is the *first* in which I carried hydropathy

to any extent, in conjunction with the administration of medicine, as a cure for this distressing disease. The effects of it in this instance were such as to induce me to persevere in the same plan of treatment ever since, with the happiest results.

In the year 1830 the engineer of one of the City of Dublin and Liverpool steam packets was admitted into the Maison de Sante, at the recommendation of the Steam Packet Company. He was a Scotchman, thirty years of age, six feet high, strongly built, and had been a remarkably well-looking and able-bodied man. When presenting himself to me, his whole frame, *a capite ad calcem*, was deluged with water, his extremities, &c., being swollen to an enormous size. He had dropsy of the abdomen, of the chest, and of the cellular tissue. His breathing was short and difficult, and his countenance had an asthmatic appearance. He could only inhale, by the pulmometer, two and a half pints of atmospheric air into his lungs. From his size, if in health, he

ought to be able to take in at least eight pints. He had a short troublesome cough, with watery expectoration, and was unable to lie down from a sense of suffocation, which he felt when horizontally inclining. His skin was harsh and dry to the feel. He had many other symptoms, which are unnecessary here to relate. He acknowledged he was fond of whiskey, which he drank to excess. It will scarcely be believed that any human stomach could bear from twenty to thirty glasses of pure undiluted whiskey *daily for eight years*, which he confessed he had drank. He had, previous to his being sent to Dublin, been under the care of a surgeon in Liverpool, who deemed it prudent to reduce by degrees only, the daily quantity of ardent spirits he had been accustomed to, fearing that reducing him to no drink but water, would be attended with fatal consequences. He was bled, took mercurials, squills, and digitalis. Under this treatment the dropsical symptoms increased to such an alarming degree that every cavity

in his body, cellular substance and all, became involved in the disease, till it exhibited the appearance I have described.

My first object was to ascertain if there was any organic disease in any of the abdominal visceras, for which purpose I performed the operation of Paracenteisis (tapping), and drew off nearly three gallons of water from the abdomen, after which I discovered a considerable enlargement of the right lobe of the liver, with obtuse pain on pressure, for which I put him under a mild course of mercurial alteratives, with nourishing diet and copious draughts of cold water, from six to eight tumblers a day, and directed him on no account to taste either malt, spirituous, or vinous liquors, on pain of being immediately discharged. I also directed him to be put into a sweating bath at 120 for half an hour, and his body to be well spunged with cold water immediately on coming out of it, with a view of determining to the surface, and of producing moisture on the skin. From the manifest relief obtained,

I was induced steadily to persevere in this treatment *daily* for a month, and three times a week afterwards; the result of which was, that in two months he could inhale six pints of atmospheric air into his chest, by the pulmometer; the dropsical symptoms all disappeared, and he returned to his duties on board the steam packet, to the astonishment of the captain and all his shipmates.

On his leaving the Maison de Sante, he pledged himself to refrain in future from ardent spirits. He did so, and continued perfectly well for half a year, when he broke his pledge, returned to his former habits, and drank to such an excess that it brought on dropsy again, for which he was sent into the Liverpool Infirmary, and in three months afterwards was carried to his grave.

It will be seen by this case that when disease is occasioned by the immoderate use of spirituous liquors, a plan of living diametrically opposite may be adopted without danger. The change however in some con-

stitutions must be done with judgment and caution. It also shows the advantage of combining hydropathic with other medical treatment, in restoring health and strength to persons debilitated by the use or rather abuse of mercury. In the above-mentioned case, the sweating bath and the cold water spunging were used daily, by which means the system was strengthened against the debilitating effects of the mercury, and fortified against the influence of cold. Thus may the constitution be preserved, and the cure of many obstinate disorders rendered less difficult, by the assistance of this powerful and safe auxiliary; and thus may be prevented the puny and degenerate progeny of those, who from shattered, broken-down, and enfeebled constitutions, caused by disorders contracted at home, or in foreign climates, are obliged to undergo repeated courses of mercury—a necessity which seldom fails, even in the strongest constitutions, to produce a tendency or predisposition to *scrofula* and other diseases in their offspring.

CHAPTER IX.

SCROFULA.

HIP JOINT AND SPINE DISEASE.

HEREDITARY predisposition to scrofula is too evident in many instances to be contested; yet it is equally true, that we frequently meet with the disease in persons in whom no hereditary taint whatever can be found; for example, in the children of gouty, syphilitic, or dyspeptic parents, and these conditions of the parents, often become the remote causes of scrofula in their offspring.

Scrofula is peculiar to the growing state. There is however a period when it disappears, and this is usually the case when the powers of digestion are strengthened and the constitution established. Now hydropathy, skilfully managed, is a powerful means of producing these desirable effects; and the numerous cases of scrofulous glands and joints, submitted to the water cure, and

cured thereby, bear me out in these assertions.

CASE OF SPINAL DISEASE.

About two years ago a gentleman labouring under a disease of the spine called upon me, and stated that he had just returned from Gräfenberg, where he had commenced the water-cure treatment under PRIESSNITZ, and persevered in its use with the most surprising success for twelve months, but not feeling himself perfectly well, he wished to know if he could pursue the same treatment in Dublin, which he did for three months daily, when a perfect cure was the result.

CASE OF HIP-JOINT DISEASE.

Miss B——, aged seven years, was attacked with a hip-joint disease after a fall, which, at the time it occurred, was scarcely noticed. In about three months afterwards she complained of pain and swelling in the left knee joint; and shortly after the hip

became swelled, stiff, and painful. She is at present under the hydropathic treatment, and the painful and distressing symptoms are mitigated to such a degree as to induce me to hope, that a perfect cure will be established without leeching, blistering, or cauterizing.

CHAPTER X.

HYDROPATHY IN NAVAL HOSPITALS.

ADVANTAGES THAT MAY BE DERIVED IF THE WATER CURE WERE PRACTISED IN REGIMENTS, IN SHIPS OF WAR—IN NAVAL, MILITARY, AND PUBLIC HOSPITALS, ETC.; COPY OF A LETTER TO THE LATE DR. RENNY, DIRECTOR-GENERAL AND CHIEF OF THE ARMY MEDICAL DEPARTMENT IN IRELAND.

THE successful cases I have had under the water-cure treatment are too numerous to insert in this publication, but *ex uno disce omnes.* It is not my intention "to make a book," nor to detail the practice of hydropathy, but merely to state a few *facts* from which conclusions may be drawn favourable to the water cure. The few cases I have briefly stated, have been noted with attention, and are here reported with fidelity.

If hydropathy were practised in naval and military hospitals, in regiments and on board ships of war, a considerable saving of public money in the article of drugs, would be accomplished, and still, what is infinitely

of more consequence, there would be a considerable saving of *human sufferings and of human life.* The length of time the sick and wounded seamen, marines, and soldiers are usually on the sick list, while under any other medical treatment, would be considerably abridged and the convalescence being short, the men would be able to return to their duty sooner (in strength and vigour) after the hydropathic treatment, than after any other treatment whatever. This I can state without the fear of contradiction. These facts I respectfully submitted to his Grace the Commander-in-Chief of Her Majesty's forces in the year 1845, and to the Earl Auckland, then first Lord of the Admiralty; having previously in 1844, at the request of many army surgeons then in Dublin (who were anxious to try the effects of the water cure in the regimental hospitals, but could not without the permission of the Medical Director-general of the Army), written to Doctor Renny. The following is a copy of my letter:—

"TO GEORGE RENNY, ESQ., M.D.,
"Director-general and Chief of the Medical Department
of the Army in Ireland.

"Great George's-street, North,
"12th September, 1844.

"DEAR SIR,

"To lay before you an improvement in the healing art, which is sufficiently authenticated, and may be adopted in military infirmaries and regimental hospitals without danger or impropriety, is, in my humble opinion, not only a professional, but a moral duty. I allude to hydropathy or the water cure; by the adoption of which in military and naval hospitals, not only will the cause of humanity and the efficiency of the service be promoted, but a great saving to the public in the expense of drugs be accomplished; and what is still of more importance, the length of time men usually remain on the sick list while under any other treatment will be considerably abridged. Those who, like yourself, have had much

experience in hospital practice, will be able to appreciate this advantage. I fully admit the caution with which the regular practitioner should examine new doctrines in the healing art, before embracing them; and the caution with which we should adopt great changes in practice; but let him be aware of carrying this commendable practice to an extreme that would shut out all improvement or advancement in the profession of medicine. The art we cultivate is a progressive one, and by judicious investigation and sound inductions, that progress must be accelerated.

"In the hope that these few brief remarks, may induce you to cause the army medical officers serving in Ireland to inquire into the truth of hydropathy, and, if true, to promote its adoption, not only as a matter of humanity and public economy, but of advantage to her Majesty's service,

"I have the honour to be

"Your humble servant,

"A. CLARKE."

CONCLUSION.

I have briefly stated a few *facts*, attentively observed and faithfully reported as they occurred at the time; and I consider it a duty to lay them before my fellow-citizens, and to solicit their attention to a subject so deserving of their notice. If the saving of *public money*, the prevention or alleviation of *human sufferings*, and the preservation and prolongation of *human life*, be benefits, they cannot be viewed with indifference. All these advantages may be obtained by the timely employment of

WATER, EXERCISE, AND DIET,

which constitute, what is now called,

HYDROPATHY, OR THE WATER CURE;

and which I trust will not be rejected without trial, or condemned without proof.

ADDENDA.

WHILE the preceding pages were in the press, the profession and the public sustained a loss by the sudden death of Mr. CARMICHAEL,* whose name is mentioned in page 103. To attempt here any eulogy on the illustrious deceased, is not within my province; and even if it were, it would be a work of supererogation: suffice it to say, that the medical profession has lost one of its brightest ornaments, and suffering humanity one of its greatest alleviators. With the name of CARMICHAEL the noblest achievements of medicine are identified; but these are topics for his biographer. I must, however, pay my humble tribute to the genius of a warm old friend and Hospital associate; and although we may justly deplore the abrupt setting, alas! for ever, of his brilliant

* He was accidentally drowned near Howth on the 8th June, 1849.

career, yet we must remember that "there is a special providence even in the fall of a sparrow;" and that the ways of Him who treadeth the storm, and rideth upon the wings of the wind, are mysterious and past finding out.

In the year 1845 I was attending, in conjunction with the Surgeon-General and Mr. CARMICHAEL, a lady labouring under a cancer in her throat. At the desire of a near and distinguished relative in London, I sent a written statement of her case for the opinion of Sir BENJAMIN BRODIE. The case was accordingly laid before that celebrated surgeon (the head of his profession in London, and the first surgeon in the world), and on his being told that the lady was attended daily for some months by Sir PHILIP CRAMPTON and Mr. CARMICHAEL, he replied it was quite unnecessary for him to give any opinion or advice in the matter, as he said, she was under the care of "TWO OF THE ABLEST SURGEONS IN EUROPE."

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Dublin: Printed by ALEXANDER THOM, 87, Abbey-street.