

Hydrotherapia, or, The water cure : being a practical view of the cure in all its bearings, exhibiting the great utility of water as a preservative of health and remedy for disease, founded on observations and experience made at Grafenberg. To which is added a description of Grafenberg, and the system there, as practised by Vincent Priessnitz ... Together with a short sketch of the history of the water-cure from the remotest antiquity, and remarks on sea bathing / By Thomas Smethurst.

Contributors

Smethurst, Thomas, 1804 or 1805-

Publication/Creation

London : J. Snow, 1843.

Persistent URL

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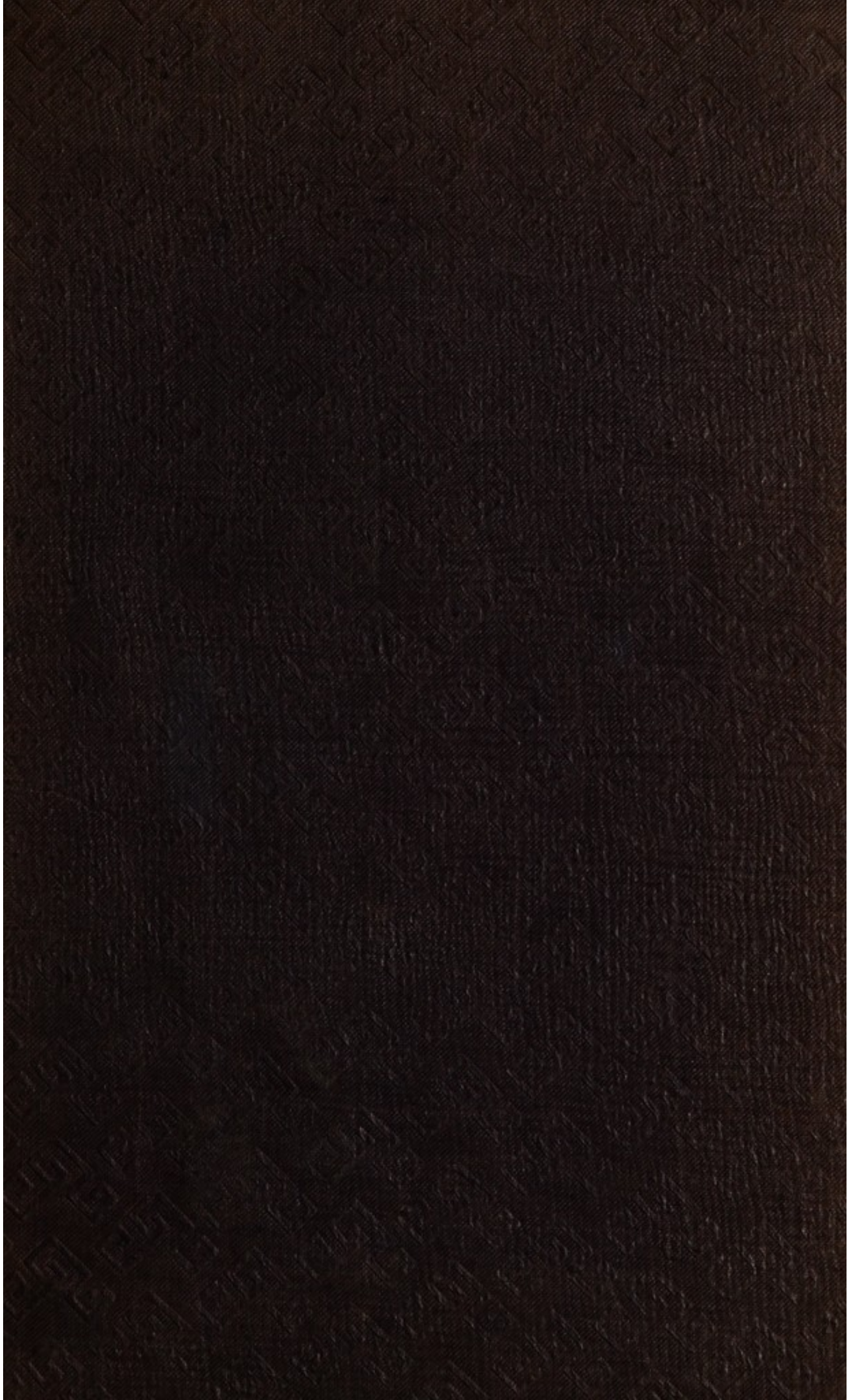
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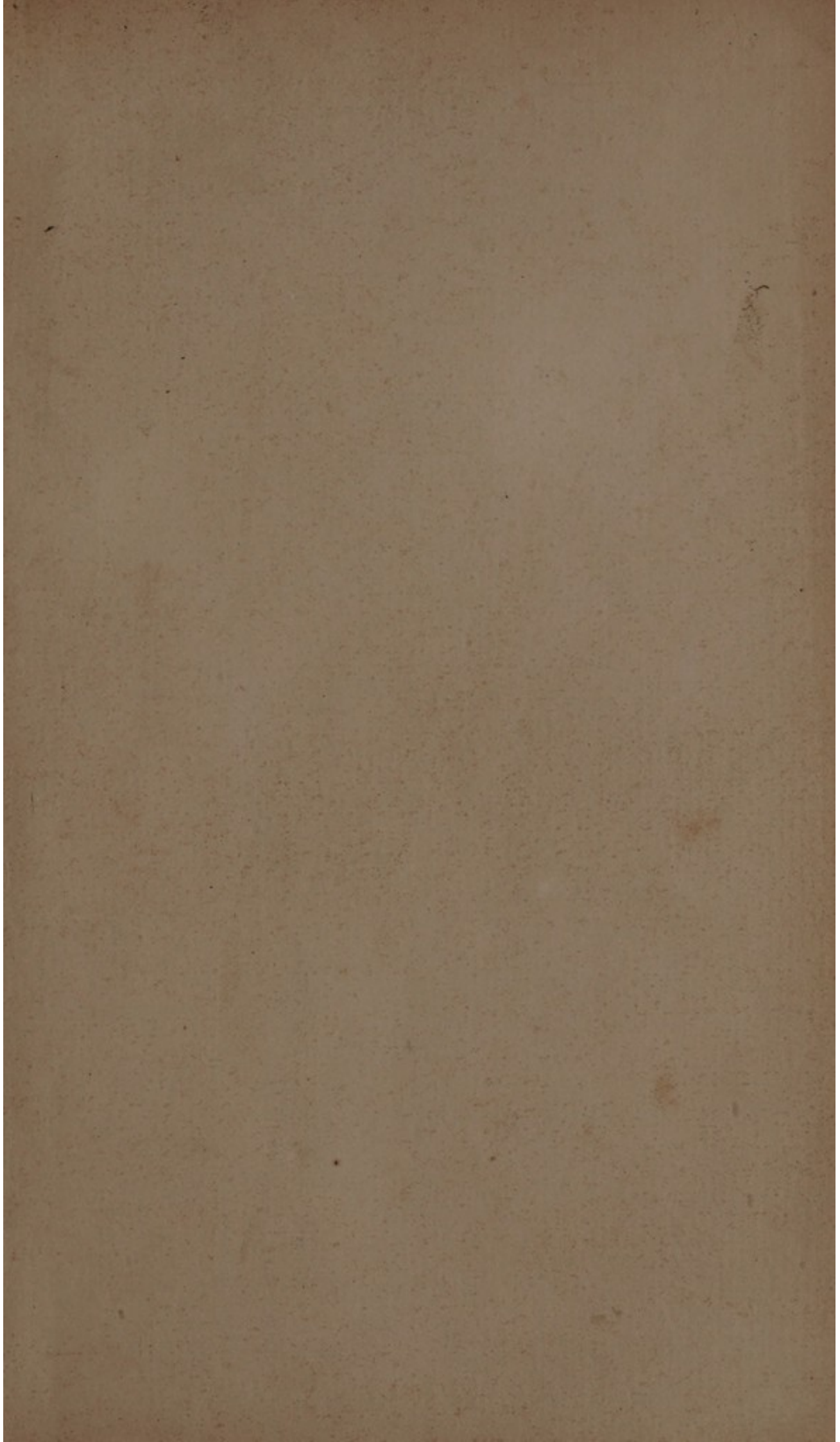
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W. v. Prunz, Prinz Brütz.

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HYDROTHERAPIA;

OR,

THE WATER CURE.

BEING

A PRACTICAL VIEW OF THE CURE IN ALL ITS BEARINGS,
EXHIBITING THE GREAT UTILITY OF WATER AS A PRESERVATIVE
OF HEALTH AND REMEDY FOR DISEASE,

FOUNDED ON OBSERVATIONS AND EXPERIENCE MADE AT

GRAFENBERG.

TO WHICH IS ADDED

A DESCRIPTION OF GRAFENBERG,

AND THE SYSTEM THERE, AS PRACTISED BY VINCENT PRIESSNITZ.

Illustrated with a Portrait, several Engravings, and

MANY CASES;

TOGETHER WITH

A SHORT SKETCH OF THE HISTORY OF THE WATER-CURE FROM
THE REMOTEST ANTIQUITY,

And Remarks on Sea Bathing.

BY THOMAS SMETHURST, M.D.

"Facts are chiefs that winna ding,
And downa be disputed."—BURNS.



LONDON:

JOHN SNOW, 35, PATERNOSTER-ROW.

1843.

HYDROTHERAPY

THE WATER CURE

BY

WILLIAM W. WELLS, M.D.,
OF NEW YORK

NEW YORK

1881

WELLS

THE WATER CURE
BY WILLIAM W. WELLS, M.D.

TYLER & REED,

PRINTERS,

5, BOLT-COURT, LONDON.



SPENCER HOUSE, RAMSGATE, KENT,

March 1, 1843.

MY DEAR SIR,

It affords me much pleasure dedicating to you this Treatise in support of those principles of the Water-cure which you have so eminently contributed to establish in this country. That the health of our fellow-creatures may become as universal as your benevolence can desire, and that you may long live to enjoy the happiness of witnessing it, is the most ardent wish of

MY DEAR SIR,

Yours truly,

THOMAS SMETHURST, M.D.

TO R. T. CLARIDGE, ESQ.

General James W. Forsyth

March 1, 1842

My Dear Sir

It is to me much more gratifying
to see this Treaty in support of those
rights of the Wharfedale which you have so
generously and ably maintained in this country
than the health of our fellow-countrymen may be
concerned to maintain in your hands and
and that you are not only to help the
progress of civilization in the West Indies

Yours truly

THOMAS BENTLEY

To His Excellency

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P R E F A C E.

THE object of the present work is to promote the proper knowledge of a subject which has recently occupied much of the public attention—I allude to the Water-cure. Simple as this cure may appear from the simplicity of the remedy employed, and known, or believed to be known, by everybody—namely, water, there is a very great deal to be said and learned as to the effects of its manifold applications. The days for the search after the philosopher's stone are pretty well over, and the idea of finding a remedy, in the shape of pill or draught, by way of panacea, may be said to have passed also; this being admitted, I will not, as many have done, attempt to cry up water as an universal, and the only sure and safe remedy. I acknowledge the wonderful effects of it as related by others, and witnessed by myself; I acknowledge it as a Divine gift, and desire to see it used and appreciated as such. The folly, to use a mild expression, of despising water, even

as a beverage, will be evident, although with sorrow be it said, it still prevails to a great extent ; but the doubts as to its efficacy for curing and eradicating disease must be overcome : to accomplish this is one of the chief aims of these pages.

A residence of some months at the "Water University," as Gräfenberg is called on the Continent, careful study, diligent inquiries and observations there, have crowned my former prepossession in its favour, and brought conviction home to me. I cannot say water will cure all and every disease, and in a short space of time. I must at once state, and I do so to prevent many disappointments, that some chronic affections will require many, many months to be thoroughly eradicated ; and in stating this, let me appeal to the reader, whether it can be expected that a disease which has, perhaps, hovered about the body for years, is to be expelled by the touch of a wand, as it were ? and whether it is not sufficient to establish the usefulness of the water treatment, and its general adoption, if diseases of some years' standing be cured in as many months, as I have seen—diseases, too, which have resisted all the efforts of our art ? Medicine has done much in

its time, and undoubtedly will do so still; but this is no reason why we should not devote our attention and energies to what might be termed a new branch of the science. And here I must state briefly that the Water-cure should be practised by properly qualified medical men only, and that such should make it their study; for, however paradoxical it may appear to some of my readers, I maintain that it is a study, and one requiring the greatest attention and research; for it is not sufficient to swallow large quantities of water and apply wet bandages to any ailing part: the effect of certain quantities of water in certain constitutions; of the various degrees of wet in the compresses or bandages; the time of their application in different diseases;—all this, and much more must be acquired and thoroughly known. And who but a medical man, a man acquainted with the human frame, and diseases incident to it, can make the proper deductions and inferences? who but one absolutely making it his profession can have sufficient knowledge of the subject to practise it with utility? In anything like a serious disease, therefore, it would even become dangerous to treat oneself, as many, by the perusal of works on the subject, might be induced to do.

In the course of this work I have endeavoured to show such casualties and ailments as might safely be treated at home by persons of common sense, having a due regard and care for the prescribed rules ; but I repeat, that anything like a disease should not be meddled with, unless under proper advice. Let me assure every one who may doubt this, that no interested motive prompts these remarks, but a sincere desire to guard the public and individuals against experimentalizing too much with water, where such a valuable boon as health is concerned. Health is not difficult to preserve, by proper attention to the necessary action of the human body ; and the rules I have laid down in this publication will, I trust, contribute to preserve the health of many a one who will deign to grant it an attentive perusal. That there is a great deal more to be said on the subject of the Water-cure than what this work contains, is self-evident ; and although I have endeavoured to make it as complete and useful as possible, many new facts daily arise to add to the knowledge of the system. My great object is to obtain proselytes to the cure, satisfied of its great utility. The number of establishments on the Continent similar to the parent one at Gräfen-

berg is constantly increasing, and some of them are at the expense of various governments. Many medical men of first rate eminence have written in the highest terms on the subject, and practise the cure to the exclusion of medicine. All this argues much in favour of our propositions. Now, if the system really be so beneficial as I conscientiously believe it to be, I see no reason against its general introduction into this country, where a vast deal of suffering and disease exist, particularly of a nature to be easily expelled by water; and it would be a great question of economy too, to have it introduced into our public establishments, as hospitals, union-houses, &c., by which an immense annual saving might be effected in the aggregate.

To render this publication more complete, I have availed myself of such sources as the several writings on the subject afforded me. May it prove beneficial to my fellow-countrymen—may its plain statement of facts have the effect of convincing the doubtful, and confirming in belief the wavering—may it be the means of preserving the health of many, which, for the want of proper knowledge, might have fallen a prey to insidious disease, and of restoring many a constitution,

which, for want of courage or other causes, has been injured ; and, above all, may it prove advantageous to the rising generation by their being timely inured to the use of one of Heaven's greatest blessings—Water. If all, or any of these results do occur, I shall be amply rewarded ; and should there still be any sceptics, to them I can only say, in the words of Holy Writ, “ Go and do thou likewise.”

INTRODUCTION.

MANY, and no doubt the majority of my medical readers, are still opposed to the Water-cure, and look upon it with a prejudiced eye ;—many more among the public have yet to be convinced of its benefits—but it cannot be otherwise. As with every great truth, it is slow in forcing itself upon the mind, but in the end truth must prevail.

No science, it is an admitted fact, has been more subject to error than the medical one ; the errors and discrepancies since its cultivation have been innumerable. The faculty are often divided as to the effect of certain medicines in particular diseases, and if we consider that a drug is often effectual in one case, and utterly fails in another, apparently similar one, the anomaly will be explained. Civilization has made too rapid a progress, and knowledge is dawning far too brightly on mankind, to attempt to confine any particular branch of it to an exclusive class ; and we do not see why a knowledge of the human body, its functions, its diseases and their cures, so necessary to

our well-being, should not be or form part of a man's acquirements. We do not mean to assert that the perusal of a few medical works will constitute a doctor;—penetration—correct judgment—presence of mind—great and manifold cultivation and learning are requisite to assume a commanding position in the profession; although it cannot be denied that the study and practice of two thousand years have brought to light many truths in the science, and that many names by diligent and vast researches have added a lustre to it, we must, on the other hand admit, that the further we swerve from nature, the more complicated does the science become.

The human race has been totally changed by centuries of progressing civilization, and although the vital power in its essence still remains the same, its outward appearance of necessity assumes quite a different form, the numerous outward influences from the very cradle conducing to a life far removed from nature. As a necessary consequence, the appearances in disease also assumed a different form, the disease itself became different, and the cure could no longer be confined to the simple method which was based upon the regulated due action of the vital power. The profession therefore had one of two courses to pursue: either by a more careful study of nature to endeavour to lead back the altered appearances to the original simple ones, and thus not lose the right track; or, what was certainly more convenient and ensured quicker results, they had to seek for new remedies to overcome these altered states: hence the

accumulation of the vast treasure of therapeutics; for as the faculty found or believed they found in this or that proceeding, or in this or that remedy, an antidote for all diseases, arose those medical systems and schools, each well founded in its time. "C'est le premier pas qui coute." Once swerved from the right path, it was no easy task to regain it. Confidence in the power of nature gradually vanished, the "*vis medicatrix naturæ*" was no longer spoken of, nor the proper guidance and support of it taught; each pursued his own course, believing it to be the right one; or at all events having the conviction that he was not more mistaken than his colleagues.

Considering well all these circumstances, the medical world cannot fail, sooner or later, to pay much more attention than they have done to the cure of diseases by water, and not deny it the merit it has, because it happens that it is through a retired countryman the system was founded, and not a man brought up in our schools and educated in our hospitals.

My object is to show, that in water we have one of the most powerful therapeutic agents yet discovered, that its effects in curing disease are wonderful, and that a general adoption, now that once it has taken root, cannot fail to take place in many and most diseases. Also, that it is not quite so innocent (if abused) as many pronounce it to be, which I shall more fully demonstrate hereafter. Some of the writings on the subject border on the miraculous, whilst others are quite opposed to

the use of water: it is these extremes which should be avoided;—the corn must be winnowed from the chaff, and as, when the latter is given to the winds, the former becomes useful; so I hope to see the time, when all exaggerations will have been sifted from the truth, and the real sound principles remain. Extravagant zeal is often injurious to a cause, which also applies to the case in point; for if we are told by the friends of water, of a chronic disease of twenty years' standing being eradicated in as many days, and by such an easy process, try ourselves a similar case coming under our own practice, and fail, we at once come to a judgment quite as wrong, as believing in the eradication of such a long standing disease, in such a short space of time; and yet this frequently happens. Some medical men, desirous to give water a trial, have tried, and found it wanting, through lack of perseverance however in themselves, or in their patients, and occasionally adding a dose of their own, by which the cure was either interrupted or defeated. The Water-cure requires patience, perseverance, and a knowledge of its great effects; without these it is impossible to succeed; it requires careful study, and I doubt not but that by a proper and due cultivation, Hydrotherapia may become even more brilliant in its results. The use of medicines according to the present allopathic principles, in going through the Water-cure, is to be utterly repudiated; chiefly because all the functions of the organism are kept in complete activity whilst under the treatment, as far as the existing vital power in the

individual treated admits of this ; and that, such being the case, the remedies administered may have a different effect to what is anticipated, or wished for, their effects under such circumstances not being known.

As we have hinted, the originator of the present system of the Water-cure is a retired countryman, named Vincent Priessnitz, living in a nook of the Austrian Silesian territory, on one of the Sudates mountains. Although, as will be shown in the short historical sketch, water has been in use as a curative remedy from time immemorial, the credit of reducing it to a system unquestionably belongs to Priessnitz. Gräfenberg is the name of the mountain on which he resides, where his wonderful cures have been performed, and whence his fame is carried to all parts of the civilized world. Every one who has visited Gräfenberg will admit that it is no paradise, as far as comforts are concerned; and yet, since a series of years, it has been visited by numbers of persons in the higher ranks of society. The patients form a most heterogeneous assemblage, being composed of individuals of different countries and different stations of life, the higher grades predominating. We there find princes, dukes, counts, barons, &c. It is important for us to observe these personages, and to make our deductions from their presence.

The amount of evidence thus offered by persons well calculated to form a correct judgment as to the excellence and superiority of the Water-cure, should

not be lost upon us. We may safely infer that all other remedies had been tried in vain; and it is certain, that those persons visiting Gräfenberg, had the means of consulting the most experienced physicians of all countries, and in many cases have done so, and been pronounced incurable. They renounce all comforts to which they have been accustomed all their lives, pass through the water ordeal, and are new born as it were. This speaks volumes for the Water-cure. The blind confidence which was apt to be required by medical men, especially in the treatment of chronic diseases, will now be difficult to attain, if we view the many cases which their skill has been unable to conquer, and which are accumulated at Gräfenberg and other similar institutions.

I hope my medical and other readers will not run away with the idea that there is no theory in Priessnitz's doings, and that it is all chance-work. They could not be more mistaken; and I have convinced myself at Gräfenberg that Priessnitz has a reason for all he does. Although, possibly, he is deficient in the art of combining thoughts according to the adopted rules, and wanting the power of eloquence, he nevertheless acts upon certain and fixed principles. By theory of disease, I understand the view of its appearances which must occur to produce that state in an individual, which we call disease: this must be removed, or it may lead to dissolution: by theory of a cure, that which must necessarily be conceived in order to comprehend the

bringing back a diseased part to a proper state of health. A slight attention to Priessnitz's practice convinces us that he has formed a theory of disease, and of the process of cure.

The following observations will, I hope, demonstrate this. An abuse of the means of preserving life and health often becomes a painful source of disease;—the food we eat, our drink, the air we breathe, our clothing, our dwellings, nay, our noblest instincts, may, if abused, become causes of manifold diseases. Now, as every thing that has to be taken up as a part of our body must assume a fluid form, (into which the stomach reduces solids,) so also that which gives the matter for a disease of the body must, in its gradual rise and increase, be, above all, in connexion with the liquid part of the body, principally the blood. The greatness and violence of the disease will bear an exact proportion to the quantity of morbid matter accumulated:—the illness which breaks forth suddenly and reaches a climax, is frequently coming on slowly and by degrees. It is surprising enough, that the majority of mankind pay too little attention to their bodies to take due cognizance of the often highly important, though scarcely perceptible origins of disease. By degrees inconveniences and indispositions arise:—the healthy parts of the body are still enabled to overcome momentarily the progressing evil by perspiration, vomiting, or sometimes eruptions on the skin. And here let us particularly bear in mind, that it is often the most subtle

and malignant part of the whole substance of the disease that is eliminated from the body by the skin. Such periods may be termed crises. As a proof of this proposition, I need only mention the sudden disappearance of these eruptions—falling back upon the inner and nobler organs, as in scarlet fever, measles, small-pox, &c.—often becoming dangerous and of deadly consequence; and as a further corroboration, we may adduce the happy effects produced by the sloughing away and desquamation of skin in some pernicious maladies. At the same time, we observe, that the kidneys and the bowels take their part in getting rid of what is deleterious. But it is not always that such an important crisis takes place. A disease may sometimes take the direction to the intestines, or an outward structure, and here produce various local disorders which generally have some connexion with the original disease, but gradually assume a standing of their own. Many sorts of humours could be mentioned as forming the foundation for disease. Under the denomination of gastric humours might be comprehended the foundation for the so called gastric diseases, for nervous fevers, erysipelas, scarlet fever, measles, various sorts of pocks, gout, and other forms of disease. But, besides this, they are distinguished according to their nature; rheumatic, (often connected with acidity in the stomach, and which seem nearly allied to the gastric,) various other gouty, hæmorrhoidal, scrofulous, scorbutic, psoric, syphilitic, cancerous, and drug diseases; among the latter,

mercurial ones particularly. To these may be added, those arising from miasma or contagion, which thrive the more, the more gastric humours the body contains, as in the form of the cholera, and as it is seen in yellow fever and pest. The same, however, as every good physician would do, Priessnitz seems to search for the natural connexion of the causes of disease, which is fully illustrated as follows:—for instance, he will not expect appearances showing the presence of humours for disease in cases of great weakness, in consequence of the immoderate loss of the fluids, or the numerous nervous maladies, the result of enervation, or in a merely local disease, as in stomach complaints, chlorosis, &c.

Having thus endeavoured to show some of the chief causes of disease, the next question is: How is the cure to be effected? Here we must at once acknowledge, that it is by the free working of our natural powers that health is recovered. We see this confirmed every day, and daily experience proves, that this so called healing power finds the best and safest ways to bring about a cure; therefore all obstacles to the recovery of health must be removed first, and the remedies applied so that this power may choose its own means of bringing the disease to an end. It is evident that a disease is the more easy to be overcome, the fewer single organs, and the slighter they are affected. We perceive that the energy of the power that is to produce health is the greater, the greater the number of the more important

organs untouched by disease: therefore not to diminish the strength of these organs, all that can tend to weaken the human body must be avoided, blood-letting, general or local, must be eschewed, for if a constant generation of blood is going on, no material relief would be afforded by the operation, and means would have to be taken to reduce an excessive regeneration to a proper level; but if a disease takes a simple direction, and to single parts of the body, there are other means of equalizing the circulation of the blood, than by weakening the whole organism.—Cases threatening immediate death are exceptions.—For the same reason purgatives should not be given, for the quantity of blood only can be diminished, and not its quality, upon which every thing depends. These induce the ejection of those superfluities which have to be ejected, and at the proper time and place, may be useful; but secretions may at the same time be expelled, of which, at all events, we cannot always tell whether the nature of the evil would not require them in some other direction. And after all, what avails it? A momentary relief by means applied almost constantly (purgatives) is of no avail in chronic maladies. Is the condition of the bowels which caused the want of action changed? and does not the want of action rather increase than otherwise by the constant use of purgatives, so much so indeed, that the application of more powerful medicaments becomes necessary, and that they at last have no effect at all? The regulation of the bowels in chronic

disease requires great perseverance, and is attained by the combined use of dietetic remedies, but their proper action then becomes the surer. Everything that is still healthy in the man, and has not succumbed to disease, must be nourished, must be strengthened, in order to bring back to the normal state those parts which have suffered most, by a preponderance of the sound ones, or at least to render the diseased parts harmless, and check the encroachment on the sound. On this account the bowels require the first attention; the lower story is generally the worst: it is from here that ruin spreads over the body, but it is also here that the first step for a cure may be made—in the place, namely, where food is digested, and the blood prepared—if pure and good fluids are distilled. Hence many necessary acts of the cure lead upon this point, among which, the necessity of avoiding all excitement, and commanding the passions whilst undergoing the cure, will be manifest, as the bad effects of indulging them to excess is at all times injurious, and well known by everybody to be so. The great object in effecting a cure, is to bring back, by all means in our power, nature to its pristine state, and develop the vital power within, so as to afford it strength to check the encroachment of disease, and overcome it. Here is one of the difficulties of the system. It is the vital power which is so difficult to be discerned by an ordinary observer, and even by many of the profession, as there are persons who, to all appearance, seem well, to have sound muscles, lively motion, and animated

expression of the eye, yet there may be great want of the vital power ; and on the other hand, persons who have a thin, spare look may be possessed of a great fund of this power, when disease, or exertion, put it to the test. In such cases, much nicety of judgment is necessary, and the fallacy of believing that water cannot hurt if it does no good, is here well demonstrated: for if, as some imagine, it is enough to drink pailsful of water, and be wrapped in the blanket and wet sheet to effect a cure, they misunderstand the powers of the element, a correct knowledge of which is absolutely necessary to make use of it with advantage. The loss of the vital power in the former case, argues a derangement of one or more organs of the human body, and a complication or form of irregular action must exist somewhere: that complication must be unfolded, and the irregular action repressed or diverted into proper channels ; until this is done, success cannot be expected. The effect of water is to brace the system generally, and the susceptibility of impression is much increased by its use: if, therefore, where a derangement of structure has taken place, water be applied to such structure suddenly and incautiously in large quantities, the effect produced naturally will be (the moving powers not being sufficiently balanced) to overstrain the disorganized structure, this not being equal to the stimulus, to increase the general derangement, and lead to dangerous consequences.

To trace the cause of the gradual deterioration of the vital power is not a difficult task, and we need but cast

a retrospective glance on the history of mankind to make it clear to us.

The wants of our ancestors were few, and at all times they were enabled to satisfy them with what their country afforded. Nature, in her bounty, has provided every people with means for subsistence suitable to their position and the climate they inhabit. The people of the torrid zone are provided with plants of the most volatile and heating properties; all sorts of hot spices grow in the hottest parts of the earth, and are wisely ordained for their inhabitants, whose bodies, weakened by the parching rays of the sun, require stimulants to strengthen the nervous system, and thus render it equal to the influences of the climate. But surely the Creator, in his benevolence, would also have granted these gifts to the inhabitants of the milder and colder zones, had their nature required it. Not that the latter divisions of the earth are deficient in stimulants, for here, too, we find plenty of aromatic and ethereal productions, though of a milder species. The people of the west require less of strong stimulants; in their organism and in their diseases, structural derangement is predominant, whilst in their antipodes, nervous complaints rule principally; for this reason, the more cooling and quieting remedies are necessary for the former. It is, therefore, distinctly nature herself that indicates to all sufficiently clear our nourishment and remedies. It is man, in his vanity, believing that the produce of the whole earth is his, as its lord and master, and

his insatiable avarice, that brought the productions of foreign climates, as articles of luxury, to us, by way of tickling the palate and heaping up treasures. The great use, or abuse, of these articles produced the numerous prevalent nervous disorders. As it was impossible to check the use of these luxuries foreign to our nature, remedies had to be found to counteract their bad consequences, increased by these being exotics. The fair inference is, that by avoiding an indulgence in these extraneous matters as food, drink, &c., we shall preserve health where it exists, prevent disease, and, where this unfortunately has gained the ascendancy, conquer it by a simple means. Nothing can do this more effectually than water, as the experience of late years proves to demonstration; and I, therefore, entertain sanguine hopes of its practice and gradual extension. That this will be a work of time is possible and probable, for changes in systems cannot be made suddenly; and perhaps it is as well: an effectual guard is thus raised against unwarranted innovations. One great object will, at all events, I hope, have been attained:—people will not have that childish fear of taking water for quenching their thirst and refreshing their parched tongues; and I hope too, I may add, that medical men will have found in water a remedy, and a more universal one, than any other for the guidance of fever, that great assistant in the cure of many diseases.

The search for truth in the present age is uncontrollable; all propositions are inquired into, and a cause

must be found for every effect. Doubt at first rested on every valuable experience made ; no tenet so sure, no principle so safe, no right so firm, but it was assailed by scepticism in its most violent form ; and much has been thrown into oblivion—much upset that was not founded in truth. Truth appears the brighter after all her struggles ; and the truth of the great value of water, as I shall endeavour to show it in the following pages, I hope to see triumphant, and at no distant period. To see its benefits extended must be the desire of all well-wishers of their species. Their co-operation in my object I need not ask ; innate philanthropy will, perhaps, do more to urge them on, than all an humble individual like myself can say ; but it is more or less in every one's power to add their mite to the attainment of this object.

Candour, and an adherence to facts, have been the stimulus in the production of this work ; with candour, I hope and trust, it will be viewed ; and in now proceeding in my task, I must crave the indulgence of my readers for all its defects, and which I hope to have an opportunity of rectifying in a future edition.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. The second part outlines the procedures for handling discrepancies and errors, including the steps to be taken when a mistake is identified. The third part provides a detailed explanation of the accounting cycle, from identifying the accounting entity to preparing financial statements. The fourth part discusses the role of internal controls in preventing fraud and ensuring the integrity of the financial data. The fifth part covers the requirements for external audits and the importance of transparency in financial reporting. The sixth part addresses the legal implications of financial misstatements and the consequences of non-compliance with accounting standards. The seventh part discusses the impact of technology on accounting practices and the need for continuous learning and adaptation. The eighth part provides a summary of the key points discussed in the document and offers recommendations for improving financial management practices. The ninth part includes a list of references and sources used in the preparation of the document. The tenth part contains a concluding statement and a signature block for the author.

PART I.

HISTORICAL SKETCH OF THE WATER-CURE.

First Period.

OLDEST TIMES—FROM THE CREATION OF THE WORLD TO THE
ARABS.

FROM — TO 900.

SECTION I.

From the Creation of the World to Galen. From — to 131 A.C.

WATER has been in use from the remotest antiquity as a dietetic remedy. The first rite of ancient hospitality consisted in offering water for drink, and for washing and bathing. Moses commands the use of it for washing and cleansing the body; and we often find reference in the Scriptures to water as possessing a Divine power. The Egyptians and Chaldeans disputed whether the god of fire or of water was the most powerful; and the latter was declared victorious, as strengthening health and curing disease. The old Persians drank nothing but water; and with the Greeks it was an especial favourite for bathing. The Spartans dipped their new-born children into the bath; and the Macedonian women

had to bathe in cold water after child-birth. Pindar says: ἀριστον μὲν ὕδωρ,—“water is the best thing.” The Scythians and old Romans used the cold bath, until they became effeminate by the luxuries introduced, and then made use of the warm one; to the former, their muscular strength and prowess in battle must be attributed. The effeminate Augustus, who was reduced to that degree of susceptibility that a draught of wind caused violent catarrhs, and who, at the suggestion of his physicians, had his rooms covered and lined with fur, so as to exclude the wind, was by such unnatural proceedings brought to the brink of the grave; at last he recovered his lost health upon the advice of Antonius Musa, who prevailed on him to drink cold water, and be washed and bathed in it. The old Germans and Gauls had holy woods and springs in which they worshipped the deity of their health.

Pythagoras (530 B.C.) and Hippocrates, father of medicine, (454 B. C.,) most strongly recommended the use of cold water. The first named knew aspersions and rubbings; with aspersions, or ablutions, he treated spasms and diseases of the joints. He recommends the use of water in jaundice, hypochondria, rheumatism, palsy, tumours, cancer, gout, fever, diseases of the lungs, &c. Herodicus, in the time of the Peloponnesian war, (431—404,) recommended bathing with rubbing for strengthening and maintaining health. Dionippos, of Eos, retained only the cold drinking in fevers from among the dietetic rules of Hippocrates; whilst the

scholars of Chrysippus, of Chridos, (340,) condemned drinking as injurious. Erasistratus, of Ceos, (340,) waged against this prejudice. Cold bathing was in great use at Rome; the fatigued soldiers plunged into the Tiber. In the reign of Tarquinius Priscus, (616—578,) bathing institutions, and some assert, also, falling baths were formed. Asclepiades, of Prusa, (90 B. C.,) introduced a new era in bathing. By his zealous championship of cold bathing, he acquired the name of *Ψυχρολουτης*, “cold-bather.” He also applied cold water inwardly and outwardly in diseases; he made use of the *balneæ pensiles*, which probably are drops and shower-baths. A hundred years later, Seneca mentions the suspension-baths, the contrivances and manner of warming baths; it was a sort of heating the air by pipes. Steam reduced to water was used also as a shower-bath, and alternately cold. Almost every sort of bathing was in use, but the application of cold was by degrees quite done away with, until the fore-mentioned Musa re-established the fame of cold water. This physician also made use of cold plunging-baths, and cured Horace by them. His brother Euphorus, physician to the Numidian king, followed his example. The scholar of Asclepiades, Themison, (50 B.C.,) also spoke in praise of the effect of cold water. His follower, Eudemus, recommended cold water clysters in pains of the stomach. Celsus particularly (23 A. C.) recommended cold water as a dietetic and therapeutic remedy against flatulency, giddiness, catarrh, swollen glands, weakness of the

stomach, pains in the joints, hot fever, jaundice, drowsiness, diseases of the lungs, cholera, dysentery, diarrhoea, gout, hydrophobia, &c., &c. Its application as a beverage, washing, bath, ablution, and aspersion is known to him. The then progressing Christianity sanctioned the use of river-baths by baptism. Cold baths were even allowed in winter by Charmis, of Massilia; and Seneca, the philosopher, used them at this time of the year with enthusiasm. Agathinus (80 A. C.) declares warm baths to be weakening, and praises cold ones, with rubbings and douche, even with children. His scholar, Archigenes, (100 A. C.,) the pathologist, and celebrated by first dividing mineral waters according to their ingredients, also praises cold water. Arctæus, (60 A. C.,) the greatest physician between Hippocrates and Galen, made use of it in inflammations of the brain; and recommends swimming and cold ablutions for head-aches and giddiness. Socanus (100) recommends cold bathing in complaints of the chest, asthma, weakness, and gout. Herodotus (117) complains of the neglect of cold bathing at Rome. But cold water would have been quite thrown into oblivion with the progress of debauchery and effemination, had not Galen, (131—200,) the founder of allopathy, applied both cold and warm water in his practice. He ordered warm ablutions and douching at the springs;—also cold baths, nay, even immersions into cold after the warm ones, and even recommended plunging baths for consumption.

SECTION II.

From Galen to the Arabs. 131 A. C. to 900.

THE field of science lay long neglected after Galen. All we find is, that Antryllus (200) was not unfriendly to the use of cold water, and applied sea-water in eruptions of the skin. Cælius Aurelianus (210) liked cold plunging baths; in madness, cold ablutions; in maimings, cold aspersions with salt or sea-water, or plunging baths in common water; ablutions in dropsy and diseases of the bladder; cold fomentations in hæmorrhage, overflowing of the menses, bleeding piles, and particularly cold water in inflammation of the brain, head-ache, gout, jaundice, and many other maladies. Ætius (543) employed cold water in fevers, irregular menstruation, madness, &c. Alexander, of Trelles, (570,) used it in bilious complaints and gout. Paul, of Ægina, (670,) in diseases of the eye, colic, &c. About or after this period medical systems and processes of cure became more artificial, and the simple observance of nature was abandoned.

Such was the Water-cure in past ages, when water was used as a dietetic and therapeutic remedy, but without any scientific knowledge. We now come to the Second Period.

Second Period.

FROM THE ARABS TO HAHN. 900 TO ABOUT 1800.

MIDDLE AGES.

This period comprises two Sections; the first representing the complete falling off; the second, the regeneration of the pure observance of nature.

SECTION I.

From the Arabs to Floyer. 900 to 1650.

THE Arabs, who endeavoured to enrich chemistry and pharmacy, also endeavoured to introduce new remedies, and to restrain the use of water most anxiously. Yet, Rhazes (923) praises cold water in weakness of the stomach; in measles and pox, cold water as drink, and vapour baths; in fever, cold water; bleeding of the nose, cold washings and ablutions of the head. Avicenna (1036) knows cold baths and their use in vomiting, nausea, and diarrhœa, but recommends great caution in their use, according to age, constitution, and season. He praises aspersions for fainting fits, asthma, fever, and knows its use as injection. By degrees, however, the mass of drugs caused cold water to fall into disuse.

Let us bear in mind the great influence which the

progressing culture of the human race, and of the sciences particularly, had in the therapeutic science. As long as the other sciences progressed, physics shared their activity; but when the former began to sink into darkness,—when religion was supplanted by superstition, philosophy by sophistry and cunning,—when despotism became right,—the medical science could not fail to fall too, and its representatives were but hireling slaves in the persons of the monks,—its arena, their cloisters. But when religion, philosophy, and tyrannized right burst the fetters which had held them too long, medicine too raised its head; schools and universities arose, but the use of cold water remained excluded; and even in the religious baptismal rite, the practice of dipping the body under water was by an ecclesiastical order (1287) discontinued, and a mere sprinkling of the head substituted. The leprosy, which broke out during the time of the crusades, caused the introduction of warm baths and the rise of the so-called bathers, (an inferior class of doctors,) who kept bath establishments and rooms for the poor. Sweating was resorted to, but cold water eschewed. Only warm baths were in vogue. Genlis de Foligno, who laid great stress on diet, (1348,) yet found many sophisticated arguments against the use of cold baths; he, nevertheless, recommended cold aspersions in cases of great debility. At this time arose the use of mineral springs. In Italy, douches were erected. Savonarola employed cold water: in menorrhagia, inflammations, cold baths; local ones, in weakness

of the eyes; and even cured gout by cold aspersions. Barzize praises cold washings after tepid baths, as strengthening; the rising douche in diseases of the womb; Cardanus, (1501—1576,) cold ablutions for gout, without swellings of the joints. Fernelius (1558) knew the cooling effect and warming reaction of baths, and recommended them in cases of consumption. On the one hand, science enlightened those times; superstition, alchemy, astrology, and chiromancy counteracted these good effects, until the discovery of the art of printing, and of America, dispelled the darkness. Paracelsus, (1517,) born near Zurich, in Switzerland, stemmed the spirit for imitating the Greeks and Arabs, and, basing his theory on physiology and practice in the natural healing power, led to study and observation. Although there was much sophistry in his system, he was much in advance of the times he lived in, and made use of everything to establish a new structure. He wrote no work on the Water-cure, but recommended its use strongly for drinking and dipping, in hydrophobia. Douches and mineral baths were now much sought after. Thurneyssen, (1530—1596,) who gave the first intelligence to Europe of the medicinal springs, recommended, in servile imitation of Paracelsus, the use of mineral baths, despising fresh water; but other physicians of the time praised the latter. G. Ryff, Strasburg, (1544,) and Bartholomew Viotti, of Clivola, (1550,) spoke in praise of drop baths for weakness in the head. Ugulius de Monte Catino (1553) prescribed plunging baths.

Amatus Lucitanus recommended it in hot bilious fevers, cholera, inflammation of the bowels and breasts, cancers, and tumours. Andreas Baccius (1588) substitutes ablutions for baths in inflammation of the brain. Gunther, of Andernach, (1574,) eulogises ablutions of the skin, to promote evacuations and sound sleep, and complains of the neglect of baths. Physicians had been compelled to abandon these in consequence of the mineral springs,—the search after panaceas and charms,—and the introduction of other remedies, such as *Ipecacuanha*, &c.; but chiefly in consequence of the general spreading of venereal disease, which was attributed to the promiscuous bathing of the sexes. For this reason Mercurialis (1530—1606) used medicated ablutions. J. Bohinus (1541—1613) sulphur springs; also douches and vapour baths. J. C. Claudinus (1619) opposed the use of cold fluids, as tending to check the inner warmth: indeed, Daniel Lennert (1572—1632) poured tepid milk on hectic subjects. There were individuals, however, who praised cold water, as J. Lamzwerde, (1608.) Henricus ab Hiers, at the same period, cured leprosy with cold plunging baths. The learned Alpinus supported the dietetic use of cold water, describes the Egyptian Nile baths, and names the diseases in which cold baths are to be used. Septata (1638) recommends cold douches and drop baths in siriasis, head-aches, cold water drinking for diarrhœa; compresses, in colic. He recommends cold as stopping hæmorrhage. Fabricius Hildanus (1560—1634) speaks highly of cold water for the frost-

bitten, but warns against its sudden use after being heated. Vander Heyden (1643) calls cold water a blessing from God, for rich and poor, and sets its value above all other medicaments. For the frost-bitten, for madness, maimings, megrim, hoarseness, constipation, and diarrhœa, he praises it; and in a dysentery which broke out, he cured 360 patients with it. Severinus (1580—1656) and Sylvaticus (1575—1656) praise drop baths. Diemerbrock (1665) relates a case of a person curing himself of a diarrhœa with cold water. Rolfinecius praises cold ablutions in chronic head-aches; yet there always existed prejudices against it. Ettmüller (1611—1683) only allows cold baths in desperate cases, as in hydrophobia. In spite of the reigning opinions of the thickening of the blood, they never thought of diluting it with water, but rather took to tea, it having become a fashionable beverage. Vittel (1678) mentions a cold spring in York, famed for curing rickets, gout, cramp, &c. The Dane, Bartholin, (1680,) recommends rubbing with snow against pest, hot fever, pulmonary consumption, colic, constipation, gout, inflammation, &c. Helmont, (1644,) who calls water the origin of everything, recommends its use as a dietetic remedy, and dipping in cold water in mental diseases; his son, F. van Helmont, likewise recommends it.

A better knowledge of the use of cold water is diffused in the next century, even with non-medical men, and a new era commences with Floyer.

SECTION II.

From Floyer to Hahn. 1650 to 1780.

As times progressed, as the sciences and liberty of thought advanced, prejudices gradually disappeared; and among them, the prejudice against cold water. Our countryman, Floyer, victoriously won the field which had been struggled for step by step. What Guidot (1691) commenced by the introduction of pumps and baths; Robertson by cold baths and immersions; Lock (1704) by the recommendation of drinking, washing, bathing, and swimming, Floyer achieved by his *Psychrolusia*, which passed through six editions in London in a short time. He recommends cold baths, describes their effects, and mentions the diseases in which they are to be used. His opponents he challenges to examination and observation. Among the diseases in which he recommends the use of cold water are toothache, inflammation of the brain and throat, piles, gout, chlorosis, &c. Being successful, he found many friends and imitators. Brown, Blair, and others saw good results; Blair in cold falling baths for delirium, maimings, &c.; Bayonard for rickets. Fuller, Smith, (1724,) and Hancock (1722) praise it in fevers and pest. George Cheyne (1671—1748) complains (1725) of the neglect of baths, which he considers as necessary in a house as table and bed-room, considering their beneficial effects on the nervous and blood systems. Richard Mead (1673—1751) advises cold baths in madness, maimings,

St. Vitus' dance, and hydrophobia. Huxham, (1768,) scholar of Boerhaave, calls the strengthening effects of water wonderful, and particularly recommends it against consumption. Thomas Short (1750) praises cold baths in dropsy and bites of mad dogs.

Very slowly did the prejudices against water disappear among the people and the profession. Even more than Floyer, Lucas recommends water as an universal remedy, and accessible to all parties under restrictions, particularly in hot and chronic diseases. Buchan (1729—1805) effected much good by recommending strongly the use of cold baths for children. Boerhaave had pretty correct notions of the use of cold water; he employed it principally in maimings and desperate cases; cold washings in inflammations of the eyes; and recommends immersion in hydrophobia. There was a time, in Italy, when cold water was used to a great extent, through the Capuchin monk, Bernardo, of Sicily, a scholar of the great Rovida, (1724.) He used iced water for drinking, in quantities of three to four quarts a-day, and as injections and fomentations. Crises by the skin, urine, or stool, were his chief object. Nicola Crescenzo (1727) praised a more simple treatment, and blames the faculty for not adopting it. He and Dalli (1727) used it most internally; as baths, seldom. Lancisius (1654—1720) knows cold baths and douches as preventives of spasm. Todano and Sengez would cure everything with cold water; nay, they drove it to a pitch of cruelty. Cold water was not enough; it must be mixed with ice and

snow, and every invalid must drink five pints every three hours. If they shivered with cold, they must not be covered, for frost is a part of the cure, as also hunger; the patients being only allowed two to four yolks of eggs daily. If the invalid could not stand the cold, cold wet compresses were to be put over the liver and the hips. Drowsiness, and such like, mattered not; sprinkle iced water on the face, put snow on the hands and feet, cold compresses on the head and other painful parts. Child-bearing women were as little an exception as children, &c. "There is nothing new under the sun." Sengez ordered the patient suffering from burning fever to be laid into a double sheet, hung up by the four corners, to be covered with snow up to the mouth, and shaken until perspiration broke out. Now the application of cold water was most extensive; but by its abuse, its benefits were lost sight of, and it called forth rancorous opposition. Yet there were always voices raised for truth, recommending the golden middle line. Michellotti (1740) used the falling baths cautiously. Cirillo and Sarcone (1764) prescribed the cautious use of iced and snow water in a malignant epidemic which broke out in Naples, as also cold baths and compresses. Antonio Cocchi (1695—1758) knew falling baths, and recommended them in chronic blennorrhœa, and cold baths as more useful and better than mineral douches. The French quack, Barbereau, sold at a high price sealed bottles, containing common water, under the name of the eternal fountain. It was discovered; but the use of

common water was acknowledged, which Hoguet (1707, confirms. Geoffrey (1721) put this question to the Parisian Medical College: whether cold water be a preservative against infection? The answer was affirmative. He thinks it useful in all diseases, variously applied; and states its defect to be, that it is generally known and little regarded. Noguez (1735) praises cold baths in rheumatism, pleurisy, constipation, gout, epilepsy, and diseases of the chest. Chirac (1735) makes a great stir with his Water-cures; Barrere, (1755,) cold aspersions in lock-jaw. Le Dran had douches erected. At that time, several prize essays were made on the applications of cold water. Raymond, of Marseilles, (1755,) was a successful candidate. The celebrated and popular Tissot eulogizes cold baths in nervous complaints and suppressed perspiration; he even thinks cold washing and immersion beneficial for little children. It was he that made cold baths fashionable in Paris. Pomme urges cold as baths, foot-baths, and injections in diseases of women; and was the originator of a better and more cooling treatment in chronic nervous complaints. We now find the first floating baths, with drop and pumping baths on the Seine, erected by Pailerin in 1760. Much information as to the utility of douches is contained in the prize essay of Marteau. He distinguished these from drop baths, searches into the temperature of the baths, praises douches in idiopathic epilepsy, hysteria, drowsiness, loss of memory, maimings, apoplexy, chronic rheumatism;

discountenances them in gout; recommends cold baths in madness, dropsy, spitting of blood, hæmorrhage, erysipelas, &c. Children he has bathed a few days after birth. Nor were the northern nations deficient in a knowledge of the virtues of water. In the year 1688, we find many soldiers and sailors plunging into the Baltic whilst in a delirious state; and their subsequent cure is commented on by Unsenius. Pechlin (1646—1706) relates the same thing. Carl, a Danish court physician, (1747,) acknowledged the use of cold water. Clemens Fade (1736—1808) endeavoured to introduce drop baths into Copenhagen for dietetic application. The Swede, Bergius, (1763,) wrote on the subject of cold baths as beneficial in many maladies. In Poland, the court physician, Moneta, (1729—1792,) employed cold water in catarrh, cough, sore throat, &c.

The use of water was gradually spread in Germany. Bergen (1658—1736) called the attention of the Germans to the cold baths in England. Wolfert speaks of the cold eye-douche, and drop bath for the ears, established at Hofgeisnar. Vitus Rudlin, of Ulm, very cleverly set forth its advantages and disadvantages. Wedel, of Jena, (1721,) brought method into the use of the various baths. Krause, of Jena, also (1718) praises cold water for drinking, and Fisher in the rickets. Hoffman, the celebrated and successful physician, is a warm eulogiser of cold water; baths in diseases arising from too active a circulation of the blood; drinking in hot fever, cholera, diarrhoea, colic, spasm in the stomach,

hypochondriasis, hysteria, gout, hæmorrhage, &c. In nervous diseases and hypochondriasis, he prefers tepid baths. He is, however, a friend to falling baths. Professor Schulze in Halle praises cold water, but has some prejudices against it. Schwertner in Jauer has edited a collection of German, French and English writings on the subject. Van Swieten, (1699—1722,) scholar of Boerhaave, praises cold falling baths and immersions in maimings. Beer (1748) calls water the most natural, complete, and approved medicinal remedy, but does not speak of it as a beverage. Krüger in Halle calls it an universal remedy. Daniel (1771) recommends cold baths and compresses in hot fevers, madness, weakness of the joints, involuntary emissions, &c. Danter (1784) speaks of its manifold advantages as injection in diseases of the womb. In the poetical maxims of the life of Triller of Wittemberg, water is highly lauded. Leuthner cured many chronic nervous complaints, hypochondriasis and hysteria by cold baths, ablutions, fomentations, and injections; Pietsch, (1773,) gout, by dipping hands and feet into cold water. Unzer (1727—1799) urges the use of cold baths, cold ablutions in siriasis; in constipation, cold foot baths and aspersions of the upper hips with iced water. But the most important writer of the time is J. S. Hahn, (1696—1773,) who indeed established a sort of Water-cure, using it for all diseases, but he also employs other remedies. In the year 1742, his father, Dr. S. Hahn, in Schwiednitz, Silesia, a great worshipper of cold water, had cured his

eldest son, J. G. Hahn, of a most dangerous epidemic. The Junior edited a work "On the Power and Effect of Cold Water," which passed through four editions from 1783 to 1784. He recommends washing in small pox and eruptions of the skin, falling baths in inflammation of the brain, douches in maimings, cold injections in diarrhoea, foot baths in old and incurable injuries, injections into the nostrils for colds, into the ears for deafness, and he particularly urges its use in chronic diseases, and is zealous in his endeavours against the use of warm baths and other prejudices.

Surgery, too, now attained better cures by cold water; Schmucker (1786) and Hahn's scholar, Theden, contributed much to this.

ON THE APPLICATION OF COLD WATER IN SURGERY.

It was Ambroise Paré (1509—1590) who discovered the best balsam for wounds in fresh water, and cultivated the natural method, after its well known use in surgery before Celsus, Hippocrates, and others, had been lost sight of amid the numerous artificial remedies. The superstition of the times ascribed the healing virtue to the fanatical conjurations, and forgot the water; for which reason Biondi's writings, (1510,) and even the authority of Fallopius (1523—1563) were insufficient. Pallatius (about 1540) succeeded in convincing himself of the use of common water, and urged its introduc-

tion. The disputes of Joubert, (1529—1582,) the friend of water, and his opponent Martels, tended to call forth grounds and proofs of its beneficial effects. The cloud of superstition still hung heavily on those times, when the happy cure of the Duke of Orleans by Chirac, induced Lamorier (1730) in France, Sancussain, (1659—1737,) Benevoli, (1685—1756,) and Caldoni, (1724—1813,) in Italy, to open new channels for the use of water. The German surgeons, Heister (1682—1758) and Platner, (1694—1747,) used water with vinegar. Geisler (1746) employed drop baths in diseases of the joints. But it was principally Schmucker (1712—1786) in wounds of the head, and Theden (1714—1797) who secured much extension to the use of cold water in surgery. A miller had effected some wonderful cures by water, and Lombard (1741—1811) and Percy (1754—1825) learned it from him. Larrey, under Napoleon, saw the finest effects of cold water in Egypt. Kern, in Vienna, greatly assisted in the extension of the use of cold water in surgery. The discussion between Kern, Walther, and the French, as to who had the merit of first introducing it in surgery, tended greatly to its more general use. Hahneman, Richter, Zeller, Frumpf, Dzondi, Georgi, Sarenbach, Rust, and many other surgeons, have the merit of increasing its use in surgery. Among the productions of later times, the writings of Jossé (French, 1835) should be mentioned.

Third Period.

LATER TIMES.—CULTIVATION OF THE WATER-CURE.

From Hahn down to the Present Times.

In later times, so rich in revolutions and innovations in science, water also acquired much attention, and it was asserted by some of the continental non-medical men to be a universal and only dietetic and curative remedy. This, however, went on with a spirit of destruction of every thing else, without scientific or intellectual bounds; so that, resisted to the utmost by the profession, it would have been nearly thrown into oblivion, had not a countryman met with the most happy results by his system, which is approaching a scientific foundation and the greatest perfection. This period, therefore, falls into two Sections, of which the first is a preparation for the second.

SECTION I.

From Hahn to Oertel. 1780 to 1826.

ALTHOUGH the Germans were great water-drinkers, the other applications of this element were less liked; and Hahn's writings, devoid of scientific principles, met with little approbation from the faculty, who at the same time avoided all examination and observation which might have enabled them to form a securer basis. The merit of extending the use of water is here again attributable to our own country. Dr. Wright (1777) caught a dangerous fever from a sailor, who refused to

take any remedy, and died on the eighth day of his disease. Dr. W., after trying several remedies, determined on the Water-cure. He undressed, and with a cloak round him went on the deck of his vessel, threw off his cloak,—had three pailsful of sea water thrown over his head, and after one or two fluctuations, by repeating this bath several times, quite recovered. In 1779 he communicated a report of his proceedings to the London Medical Journal; he was very successful in Edinburgh with his method, and declared cold ablutions to be the best preservative against hot fevers. Contemporary with Brandreth, Dr. Currie (1750—1805) made his first trials with water in a contagious fever which broke out at Liverpool. He succeeded to admiration, and published his views and experience on the subject in 1801, together with a list of 153 cures from among the great number he effected. Gerard (1796) recommends cold ablutions in scarlet fever; also in maimings, madness; half-baths in spitting of blood; cold baths in fits. Dr. Currie made a regular system of the indications in fever and inflammation. Gregory, Falcon, Dimsdale, Hume, Marshall, and many others followed in the use of cold water. Dr. Jackson was a great advocate for the use of water in all sorts of fevers, and practised the water treatment with great success. He chiefly used sea water, and thus the most malignant contagion was often obviated. Bateman recommended water in scarlet and typhus fevers. Santer in acute rheumatism used cold fomentations, and Dr. Armstrong in scarlet fever. In

Germany, Müller had made some experiments in Minden, and Brandis in Kiel, (1786;) the result caused water to be more used, and Currie's book, translated by Michaelis, contributed to this. Müller used washings and ablutions in measles; Brandis, ablutions in typhus, immersions in hectic, and cold ablutions in chest diseases. He recommended plunging baths in summer and Russian baths in winter for rheumatism, and was one of the first to apply cold for cholera. Currie's method of treating scarlet fever was imitated by Marman; and Frank (1803) introduced the cooling plan into the Vienna hospitals. Hubertus, in Vienna, (1804,) ordered cold washings in scarlet fever and measles. Much credit is due to Dr. Colbany, of Presburg, who stood alone in his profession and incurred their enmity, but who suffered no consideration to stand in the way of achieving good. He did effect a great deal of good by his numberless cures of scarlet fever, and thus earned the reward of perseverance; he also employed ablutions in typhus and eruptions. Fröhlich (1810) followed in bilious, nervous, and scarlet fevers. In an epidemic typhus fever which broke out in Goldkranach, Hirsch saved sixty-four persons by the water treatment.

Not to tire our readers with the mention of more names, we will proceed to the great Hufeland, who strenuously urged river baths to be used, and who, in energetic language, attributed the effemination of the present race to the neglect of them. Dr. Welper had a floating bath erected in 1801 at Berlin, with douche

and shower-baths. Sea-bathing now got into great repute for constipations, rheumatism, irregular menses, and in sensitive nervous systems, &c. Kathlor and Geriz searched into the effects of cold water on healthy bodies; and a bathing chair was invented by Weidlich for the application of clysters and injections into the cavities of the abdomen. The typhus of 1813, and later the cholera particularly, brought cold water into great use. Dr. Milius, in Cronstadt, saved numberless typhus patients without any medicine. His plan was this:—his patients were wrapped in a sheet, dipped three or four times into a tub filled with river water, had cold water poured over their heads,—then taken out of the sheet and put into bed wrapped in dry blankets. He also applied this with happy effect in chronic nervous diseases, madness, hypochondriasis, and depression of spirits. Hufeland approves of the cooling treatment in this epidemic, but warns against unconditional cold ablutions, for which he lays down rules. Göden, of Gumbinnen, decidedly praises cold ablutions, distinguishing the forms of typhus for which they are more favourable. Horn, too, contributed much to the cultivation of this method. Reuss, of Aschaffenburg, employed cold in various forms, in typhus and also in measles, small-pox, scarlet and other fevers. Greiner, in Eisenberg, saw beautiful results from cold ablutions, particularly in the second stage of typhus. Hartman (1813) proved that cold was the best destructor of contagion. Wedekind, Marcus, Dzondi, Lobenstein, Hodel, and

other Germans used cold water with the best results in typhus fevers, and many more communicated the happy results of their experience.

The Hufeland Medical Society prize question, on the outward application of cold water, and which was well answered by Reuss, Rittschaff, and Fröhlich, (the latter obtaining the prize,) shows the importance attached to the method. By the manifold applications of cold water the most happy cures of many diseases were effected. The douche, used by Dupay, Sedillot, Steinmetz, Haas, Wetzler; the shower-bath, by Kurz, Hayfelder, Sunderlin, in a dietetic way; and by Hufeland, Rust, Kluge, Barez, in Berlin; Clarus, Iorg, Haase, in Leipzig; and Vogel, in Rostock, in a therapeutic manner, and the vapour-baths, acquired more and more friends.

Falling baths in their various modifications have been pronounced indispensable by Esquirol, Graves, Schneider, Bird, Heinroth, and fixed indications have been made for their use; but by far the greatest impulse to the general use of cold water was given by Professor Oertel, of Ausbach; and although in his enthusiasm he has been led to a great many exaggerations as to the effect, and in his desire to appear a great reformer seemed to have wished to upset all existing theories and systems, he has unquestionably the great merit of having spread the knowledge of the use of water by his own extensive observations of its good effects, in a dietetic and also therapeutic view, and by his numerous popular writings on the subject.

SECTION II.

From Oertel to Priessnitz and Latest Times.

THE precept of Oertel spread rapidly over the Continent, partly by the truth it contained, partly by the seeming easy facility of application, and partly by the peculiar manner of giving it publicity. The water method assumed the appearance of a proper system, and an extent it had never reached before. The motto was, "Drink water in abundance; the more the better: for it prevents and cures all evils." Contradictions, slanders, eulogies, and real true experience were mixed helter skelter. Societies were formed in Germany, who employed water dietetically and medicinally; water cures were spoken of on all sides, applied at random without distinction and without reason, and the mania would have exhausted itself, had not the unassuming Vincent Priessnitz become known. Through Priessnitz, a plain man, who had tried the curative effects of cold water on himself, and on many thousands since, the Water-cure will be handed down to posterity. Without medical, anatomical, or physiological knowledge, he has applied cold water most rationally. He has formed a pathology of his own, (humoural pathology;) his ideas as to the structure of the human body are his own also; and he saw his theory justified in the result of the appearances, during the course of his cures. The subject is so important that we must devote another article to it, to

which we refer the reader. Accordingly, under the head of Vincent Priessnitz he will find more remarks regarding this, I fain must say, wonderful man; and may I be permitted to direct the attention of my medical readers to it likewise? May I entreat and urgently implore them not to blind themselves to facts, but grant the subject that attention to which it is so justly entitled, for the sake of science and suffering humanity? It should be their duty to observe and search into the various effects of water, with the view of improving and perfecting the system; and the many difficulties should but form a fresh stimulus. It is no discredit that Priessnitz, the humble peasant, be their prototype here, for bravely and fearlessly did he combat and overcome all obstacles.

Much has to be pruned until the fruit can ripen and attain to maturity: and much prejudice and misunderstanding has to be mastered before the Water-cure can become—what in the course of time it cannot fail to—a blessing to mankind.

PART II.

PRIESSNITZ AND GRÄFENBERG.

SECTION I.

Vincent Priessnitz.

IN the preceding Part we briefly alluded to this extraordinary man, and now proceed to give a few more particulars of him. The place of his birth was Gräfenberg, and his parents humble peasants, whose small estate he was early called upon to manage; his father having been struck with blindness, and thereby incapacitated from attending to the necessary duties. Temperately inclined, he was not long in discovering the virtues of the pure spring water which abounds in the neighbouring woods and mountains, as the best restorative after the many fatigues incident to a country life such as his; and the great spirit of observation with which he is naturally gifted, soon led him to discover its more valuable properties in healing. The first stimulus, I am authentically informed, which Priessnitz had, was through a man who was in the habit of visiting his father's house from the neighbouring little place, Ludwigsthal, and whose business, iron and wire

working, often caused him to get scratches and wounds in his hands and feet, which he cured by washing the parts well with cold water, and then putting linen rags dipped in water on them. This could not escape Priessnitz's penetrating eye, and he practised similar means in healing the bruises his people and the neighbouring peasantry got in the course of their laborious occupations.—When still a youth, he had the misfortune to break two of his ribs by a fall from a wagon. The surgeons in the nearest small town, Freiwaldau, could do nothing for him: Priessnitz, confident that if he could but replace the bones, the rest would be an easy matter to readjust by the agency of water, left no means untried to effect his purpose, and at last succeeded, after many and painful attempts. He had now passed the climax of his sufferings; he assuaged the violent pain by putting cold water compresses on the injured part, and, aided by an undiminished natural healing power, he was soon quite restored to health and his wonted employment. This successful operation and brilliant cure established his fame in the neighbourhood, and he was looked upon as Nature's doctor. The gift of discovering disease, and of judging correctly of the condition of the vital power in individuals, founded on a correct view of organic changes, seems to have been a gift of Heaven to this humble countryman. True, it is extraordinary; yet, *in rebus naturæ*, to the one, it is given to call forth the full harmony of sounds, a mystery to others, and an enigma to himself; to

another, untaught, to answer the most abstruse scientific questions; as, among later instances, the case of Vito Mangiameli, who, yet a boy and unschooled, solves mathematical problems without mechanical aid, upon principles of which he is himself not conscious. Thus Nature stamped Priessnitz a man of genius: her ways are wonderful. Man in his arrogance forgets Nature, swerves more and more from her, and becoming intoxicated with the success of artificial discoveries, he forgets the innate and original impulse, or scorns to acknowledge it.—As a punishment, Nature often chooses her own means of revenge, and shows the wonders she can effect, unaided by the studies and researches of vain-glorious man.

But Priessnitz would never have become what he is—the wonder of all Europe—had he not been possessed of much energy and spirit, together with great presence of mind, another of his characteristic qualifications, and a very essential one. He has acquired the confidence of all seeking his aid, by the numerous cures he has effected, by the success and truth of his prognostications, and the firmness and calmness of his demeanour. All these things combined inspire an invalid to exercise patience and courage in the carrying out of the apparently somewhat rigorous cure. The obstacles he had to contend with were numerous. His success caused the envious doctors in the town of Freiwaldau to oppose him by all means in their power. They denounced him to the local authorities as an empiric,

practising the healing art without license, so that these were compelled, according to the letter of the law, to impose a heavy fine on him. Priessnitz, nothing daunted, appealed against this sentence: the penalty was set aside, and the Austrian government, in its anxious care for the health of its subjects, sent a commission of inquiry to Gräfenberg, among which were eminent medical men. The result of this investigation was all Priessnitz could desire: he was allowed to build an establishment and continue his practice, the commission having convinced themselves of the good effects of his system. Thus good came out of evil, as is often the case. The overcoming of obstacles thrown in his way but tended to inspire him with increased courage; the difficulties, to urge him to greater exertion; the doubts raised against him, to redouble his attention; and the increasing number of his opponents, to raise the importance of his cause in his own eyes. Priessnitz and his institution, perhaps, would never have become what they are, but for the steeling power of opposition. He observed, studied, and improved his method, and from the treatment of outward ailments with which he commenced, he gradually proceeded to internal and more dangerous diseases. Priessnitz's natural spirit of inquiry became manifest; from the deductions and inferences he made during a long and abundant practice, he gradually progressed to the manifold applications of water, and to the compresses, which, according to the degree of wet they contained, and the time of application, were divided

into anti-inflammatory, warming, soothing, &c. He found that this simple remedy could act in a twofold and quite opposite manner, and acquired the knowledge of using them among the other numerous applications with a high degree of skill, tact and advantage. By his long experience he formed a theory of his own, founded on the appearances and effects of diseases he had previously treated, and maintains that he is able to cure all diseases by the simple and various applications of water, which medical men declare curable by the aid of drugs; and he is right; nay sometimes, cases which have been given up by the faculty, are cured by the Water-cure. There are, however, cases which he will not undertake at all; where organic malformations exist, where the individual has been long and plentifully treated with iodine and mercurial preparations, and some few others; for experience has taught him that the Water-cure would be without result, where those medicines had been long in the system, as they quite destroy the activity of the glands, particularly those of the abdomen.

According to his view, the cause of disease lies in an alteration, corruption and stagnation of the secretions. It cannot be expected that an uneducated man, who does not possess a notion of the knowledge and aids of the learned in the developement of such an idea, can give a scientific explanation of the correctness of his views; yet he is justified in his opinions by the results of his treatment. In performing his cures, his object is to diminish and regulate the too violent acting and

exertions of the natural healing power in inflammatory diseases; and to excite it, on the other hand, to more stimulating action in chronic affections, and thus remove the complaint. He has a method of his own of examining his patients, and it is in the strictest harmony with the individual application of his subsequent cure; he observes the whole person of the invalid, his demeanour, his movements, his looks, and his voice, all of which tell many a tale to a practised eye,—the more so, if the life of the individual has been moved by various passions. He listens attentively to the story of his patient, and if it is very long, sometimes forgets the beginning before it is completed; as the Spartans of yore in an oration of the ambassadors from Mycena: occasionally asks a question or two, frequently none at all; at the tongue he never looks, and the pulse he never feels. The most important guide for him, however, is his view at the first bath of his patients, which he invariably attends, and draws vast advantages there; he can at once form an opinion of the extent of disease and suffering, and of the state of bodily energy, which contributes much to the correct view of the disease, and an approximate prognostication of recovery. The part which has suffered most, the remains of former disease and treatment, are easily discovered; as also defects forgotten to be named, or from a false sense of shame intentionally omitted by the patient. Another highly important point, having reference to the sweating process peculiar to Priessnitz's system, must be added. The skin, one of

the most important organs of the body, the true functions of which are so little known and less attended to, suffers material alterations in its colours, thickness, elasticity, its peculiar glossy appearance, capacity to bear warmth and to perspire, apart from the diseased formations on the same, and which are classed under the name of eruptions. What a number of various shades of colour do we behold; from the milk-white of some hectic subjects, to the wanness of others; the yellow of the icterical, to the yellow greenish of the so called black jaundice: how different also according to the parts of the body. How dry and brittle, full of chinks, gaps and crevices, parched in appearance and rough to the touch, is many a skin: how relaxed with some, compact and firm in others. To all this must be added the degree in which the skin takes the water, whether it is wetted by the element equally, or whether it cleaves to the surface in drops on account of its greasiness. It strikes me that with all this, Priessnitz substitutes amply for what might escape him by his not examining the tongue and the pulse, were he acquainted with our method and knowledge. As a guide for a more profound knowledge of the exact state of the disease, we must add the first effects of the cure, as also the appearances which occur sooner or later, and which place the chance of recovery nearer, or more distant.

Medical men going to Gräfenberg must form no unfit or incompatible expectations. Of the administration of any medicine there is no question there, what-

ever the disease and its fluctuations. In the great saloon there is among the rules of the establishment one which enjoins patients not to use any medicines, and a request to quit the institution if it cannot be withstood. In a similar manner, professional men are requested not to interfere with their advice in any cases, or to leave the establishment. Priessnitz is actuated in his cures by circumstances, and finds for every patient, and for every disease, somewhat different means and ways. Simple as these seem, we repeat, they must yet be administered, from their generally strong effect, with a great knowledge of the state of the malady, and great nicety of combination. It is indeed often surprising, how deep his acquaintance seems to be with diseased action, many examples of which I had whilst at Gräfenberg.

It gives me much gratification to be able to bestow my humble meed of well-merited praise on Priessnitz: his name will live in the pages of history. Nor have his exertions been unrewarded in a pecuniary point of view; he is now the most wealthy man in his neighbourhood, and his family, at present eight children, will be well provided for. He is reported to be possessed of £50,000, which sum there, is equal in this country to £150,000.

By the portrait I present to my readers, they will be able to form an idea of this extraordinary man; he looks, however, ten years older than he is; his age is forty-three. He is of the middle stature, with limbs

well knit, and strong muscular strength ; in demeanour calm and modest, and very reserved, merely answering such questions as are put to him, and frequently with a yea or a nay. Proper explanations and reasons for his proceedings are, however, to be got out of him at times, and which I have succeeded in for the benefit of my countrymen. He has arduous duties to perform, indeed too much so, and here is one of the defects of Gräfenberg. Not a tittle of the merit due to Priessnitz, have I been found to deny to him, and the respect all his patients entertain for him, nobles and princes included, I share to the fullest extent ; I must, however, remark, for the benefit of those visiting Gräfenberg, that Priessnitz does not run after his patients ; the patients must go to him, and glean all they require to know, for, as stated, he is reserved to a fault. I have known persons who have not seen him for more than a fortnight ; indeed, none but bed-ridden patients does he visit. He is always to be consulted at meal-times, at which he heads the first table, therefore, here the opportunity occurs for eliciting information on the nature of one's disease. A serious evil exists as regards the quality of the food and the extent to which this is indulged in by the patients, respecting which we will speak under the head of Gräfenberg, where the process of the cure, and manner of living there, will be fully described.

In the year 1842, the number of patients amounted to about 1200,—out of these five deaths occurred ; but

it is stated that two out of the number had not been accepted by Priessnitz, they therefore remained upon their own responsibility. This group was composed of Austrians, Prussians, Russians, Poles, &c., &c., and among them forty-six English: which latter comprised Sir Augustus d'Este, General Sir John Wilson, Colonel Bowen, four English physicians, &c., &c. In 1841, there were but two English, about the same number of patients, and as few deaths.

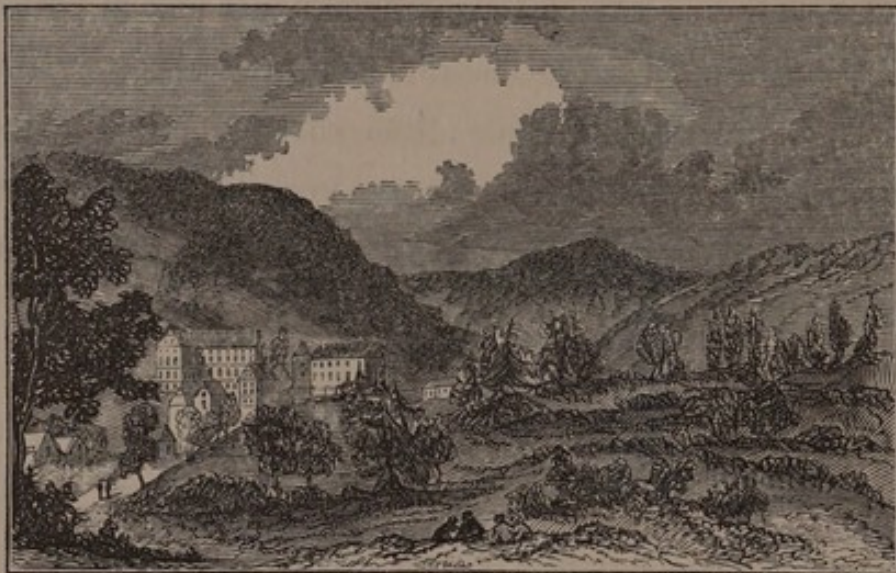
In concluding this article, we may yet add in praise of Priessnitz, that his riches have not, as too often happens, inflated his pride; but that he is the same humble, modest, and unassuming man, respected and esteemed by his neighbours for his humanity and benevolence.

SECTION II.

Gräfenberg.

THIS mountainous district is situate about 1000 English miles south-east of London, and is remarkable for the beauty of its neighbouring scenery. The picturesque and magnificent views from the Nesseltop are particularly grand, from whence the whole of the Prussian Plains, to the extent of many miles, and the garrison town of Neisse, twenty-four miles distant, may be seen. Nesseltop is an hour and a half's walk from

Gräfenberg, but will well repay the trouble by the enjoyment created upon beholding the splendour of its views. Gräfenberg, as stated, is one of the Sudates mountains, a range of hills within the borders of the Austrian portion of Silesia, and is therefore under the Austrian dominion. From its interesting and natural beauty, its variety of hill and dale, extensive surrounding forests, the fine bracing air, the inexhaustible springs



amid the neighbouring rocks, and romantic situation, it is well adapted for the establishment founded thereon—for such whose disease is the result of effeminacy—the consequences of a town life—and whose system rather requires to be steeled amid such atmospheric changes. To have spent a portion of one's life in this merry temple of nature, and in the simple mode of living there, must indeed tend to correct the notions imbibed in our artificial state of society.

The many comforts and luxuries we have been accustomed to in this state we shall miss at every step; but although this is very unpromising at first, it is nevertheless astonishing how soon we get inured to the change: the business of the day is so varied and complete, that there is scarcely time for reflection. These occupations, together with early retiring to rest, conspire to pass the time away very quickly.

I had the bad luck to arrive there about ten o'clock at night, shaken to pieces and full of aches and pains, having unfortunately been deceived by the post-master at Neisse, who assured me I should arrive there (traveling post) in four hours. This induced me to proceed on, as it was but then half-past four, and a pretty proceeding it was. I was bumped, thumped, tumbled, and shaken about in such a manner, from the badness of the roads and the crazy old royal post-chaise, (a wicker basket fixed upon boards without springs,) that active inflammation set in rapidly, and I suffered the most intense agony in consequence. In this dreadful state I at length arrived at Priessnitz's large house, at the before-mentioned hour, when the postilion blew repeated blasts from his brazen trumpet loud enough to awake the slumbering, but to no effect. At length, tired and impatient, I descended from the carriage, and hammered away at the door with my walking stick with all my might, assisted by the driver. This succeeded in bringing a sort of stable-boy to the door with a lantern, who

informed me that I must return to Freiwaldau, sleep at the hotel, and come up in the morning, as Mr. Priessnitz never saw any one who arrived in the night. This intelligence was any thing but pleasing. I made known my disastrous situation, and entreated to see Priessnitz: the youth was inflexible. I then asked to be conducted to an Englishman. I was taken to a Scotchman, to whom I related my painful state. He told me Priessnitz would not see me, and I must go back to the town. I stated my inability to do so, and requested to know if I could not have accommodation of any kind as a makeshift. He replied no, there was not a bed to be had. I then expressed an anxious desire to put up with a mere shelter for the night. He said it was impossible, there was no covering, and that I should be frozen to death, the weather being very cold. I told him I did not care; I had suffered so much in my knee, that I would much rather put up with that than return; and, indeed, I meant not to leave the house. This induced him to speak seriously with the boy, who then informed me that he had some straw in a house over the way, if I liked to lie upon that. I assented willingly; but he said he had no covering whatever: that mattered not: a shelter and rest I wanted; so I gladly accepted his offer. We entered this promised mansion by a flight of half-broken and irregular dirty stone steps—Priessnitz's original bath-house. The interior was quite a scene; something alarming. On my left a descent of dark and dirty stone steps, from which issued a loud noise of

running water ; a long passage lined with blankets and sheets, possessing a most offensive odour ; we ascended very dirty stairs to the top, where we encountered more blankets and their effluvia. At length I was shown into a chamber, and was informed that it was the best in the house ; one for all the world, as I thought then, (first impression,) like a stable-loft swept out ; consisting of coarsely plastered whitened walls ; an old dirty deal bedstead—something in the shape of an egg-box placed upon four legs—containing some loose straw which had been put in many a perspiration by its departed owner, who had quitted this apartment the previous morning ; an old deal chest of drawers ; two chairs and table to match, with a brown earthenware (poor person's baking) dish for a wash-hand basin ; a German stove, bottle and glass, and no window blind. I almost forgot to mention a hole cut in the floor to sweep in the dirt of the chamber, as this is the utmost extent of cleansing these dwellings. On this straw I was told to sleep, and thankful I felt for it ; I wrapped my cloak round me and lay down, soon after which, to my inexpressible satisfaction and delight, I was covered with some person's sweaty blanket. Such is a Gräfenberg reception, whether prince or doctor, if they venture after the prescribed time. I afterwards ascertained that my chamber really was about the best, being what is called a double room, that is, for two persons. There is a room in Priessnitz's large house in which seven persons reside ; there is another also in the wooden house across the

road of still larger dimensions, in which fourteen persons reside. Even this accommodation is only to be procured in winter: therefore I advise all persons who arrive late or early to put up at the hotel in Freiwaldau, called the "Silber Kroné," and seek the best accommodation at their leisure; for by so doing they will be sure to meet with better than what they must put up with, nolens volens, if they came unawares.

Before I proceed further into the particulars of Gräfenberg, it may not be out of place, while on the subject, to name the routes which persons desirous of going thither may take.

FIRST ROUTE.

From London to Hamburg by steam-packet, thence to Berlin by mail coach, then to Frankfurt on the Oder by railway, from there to Breslau by mail coach, from the latter, to Olau by railway, whence half-a-day's journey by one of the railway coaches will take them to Neisse, and from there a private carriage or post-chaise to Gräfenberg in six hours.

The railway from Breslau to Olau, is intended to be completed to the Austrian frontier.

SECOND ROUTE.

From London or Dover to Ostend by steamer, thence to Liège by railway, from Liège to Aix-la-Chapelle by diligence, thence to Cologne by railway, from Cologne

to Mayence by steamer up the Rhine, from the latter to Frankfurt on the Maine, by railway, thence to Leipzig by mail coach, from the latter to Dresden by railway, thence to Neisse by mail coach, and lastly to Gräfenberg, as before described.

From Liège to Aix-la-Chapelle, two or three persons joining will find comfortable private coaches to convey them there at a trifle more expense, and with a far greater degree of comfort. The railway from Liège to Aix-la-Chapelle will probably be completed in the autumn of this year. The passage from Cologne to Mayence takes in all the most picturesque and romantic scenery of the Rhine. Persons finding the journey too fatiguing from Frankfurt to Leipzig, will do well to rest at Gotha a day or two, being one of the most delightful places I have ever been in. But they must take the precaution to carry their passports about them, as I was stopped in the street by the soldiery and asked for mine—a disagreeable rencontre.

About half-a-day's journey by coach from Gotha, is one of the best water establishments at a place called Elgersburg, superintended by Dr. Piutti at the government's expense.

We now return to our subject. I stated that Gräfenberg was suited for certain persons, but it is not for weakly patients, such as are not equal to the exertions of mounting the hills, or who require a more uniformly mild climate, for it is very raw and tempestuous there sometimes, particularly so during the spring and winter—

snow, storms, and frost, frequently setting in about the end of October—snow not unfrequently knee deep—and after a thaw and subsequent frost the walks become dangerous even for those who are very robust; they are, therefore, obliged to have the assistance of spiked sticks and heels to secure them from falling. Priessnitz recommends winter for the cure as taking better effect than at other periods of the year, and there were from 200 to 300 patients undergoing the cure amid all the rigours of winter when I left.

The nature of one's daily occupation will be gathered from the following recital. About five o'clock in the morning, the baddiener, or bath servant, comes and wraps the patient up either in a coarse thick blanket, or wet sheet, (leaving nothing but the face uncovered,) over which he places a feather bed, tucking it very closely under him, and then generally leaves him from one to two hours until he gets warm or perspiration breaks out, as may be desired. After this he is conducted down to the cold bath, into which he plunges. Being dried and dressed, the patient generally takes an hour's walk to the different springs, and drinks plentifully of the fresh water—returns to breakfast, consisting of black or rye bread and butter, buttermilk, and fresh milk; of these things the patients partake *ad libitum*. Should white bread be preferred, it is to be purchased, and not objected to by Priessnitz. After this meal, another hour's walk, then to the douche, sitting bath, or wet sheet, changing the compresses, &c.; afterwards walk

repeated—then comes the welcome sound of the dinner bell, one o'clock, which all are anxious to hear. Dinner generally lasts an hour and a half, as the food is recommended to be taken slowly and not hot to aid digestion, hot food being deemed injurious. After dinner drinking is somewhat diminished—walks are taken, and at five o'clock the blankets, wet sheets, or sitting baths, are in requisition and repeated accordingly. The next meal and last is supper, which is on the table at seven, and consists of the breakfast fare with the occasional addition of boiled potatoes in their skins during the winter months. After which an hour is passed in agreeable conversation, and bedtime is looked to with pleasure. Some have more or less umschlags or compresses to apply to the various parts, but all have what is called Neptune's girdle round their waists, which is exchanged for the flannel we usually wear, and which is effected not only without detriment, but with positive good. All flannel is at once discarded; Priessnitz discourages the use of anything but linen worn next to the skin. In very severe weather he sometimes wears wash leather over his shirt, but never makes a practice of it. All the compresses are of course made of linen, and the same material is recommended for night shirts.

After pursuing this treatment for some time, more or less, according to the state of the individual, age, constitution, and sex, the cure begins to work its effects, and that harbinger of a better state, the crisis, sets in. This is a most important part, and one that

requires considerable knowledge of the subject to treat ; all the phases and appearances must be noted and acted upon, according to the emergency, by the various applications resorted to for alleviating pain, and facilitating recovery. Crises are sometimes dangerous, the pain excruciating, and the patient in the highest state of nervous fever and excitement ; here the greatest tact and skill become necessary, to guide the struggle between the disease and the natural healing power, for if too much impetus is given to the latter, or the crisis is too much forced when the vital action exists but in a reduced measure, the consequences may prove fatal. The cure is generally very much modified during this critical period, and when happily overcome, a restoration to health is all but certain. For this reason the crisis is hailed with the utmost delight by the Gräfenbergers, many of whom, indeed, make it a topic of constant conversation, if they are lucky enough to get one ; this is very instructive to an observing practitioner, and cannot fail to enhance his knowledge if he narrowly watches those changes which occur, and the mode of quieting, accelerating, and relieving them. The discharge from these crises is often very offensive, and of different colours and consistence ; once discharging, it is easy to promote the flow of matter by the application of the wet fomentations, which is very necessary.

We will now speak of a very important part of the cure—I allude to diet. Every one will admit that in the treatment of diseases, leaving out of the question

its great value for people in good health, this forms one of the principal considerations. We have already stated that for breakfast and supper, rye-bread, fresh and salt butter, fresh milk, and buttermilk, with the addition of some potatoes to the latter meal in winter, is given at Gräfenberg. Dinner is composed of greasy soup, bad beef with sweet sauce, baked veal or mutton, pickled cucumbers, gherkins, or sourcroust, with twice or thrice a week farinaceous food, in the shape of dumplings, puddings, &c., and occasionally potatoes and cabbage; much water is drunk during this repast. Priessnitz says, and I fully coincide with him, that the body should not be weakened by a withdrawal of food whilst under treatment; indeed, the great quantity of water which is drunk facilitates and aids digestion considerably, and acts in so strengthening a degree, that not only does animal food become un hurtful, but rather necessary. We must add the sweating, the repeated bathing, and the exercise in the keen and bracing mountain air; exercise, too, often connected with some exertion in ascending and descending the hills, &c., and last, though not least, a mind free from mental occupation or anxiety. All these circumstances stimulate the appetite; but to see the patients at Gräfenberg eat would indeed astonish the warmest supporter of the maxim, that the body ought to be strengthened, not weakened. It is also a matter of surprise how Priessnitz, with all his clear-sightedness and judgment, should persist in making such an awful mistake—at least,

what I cannot help considering such. A strengthening, but simple nutriment should be served, and this should be properly prepared. It is the very reverse at Gräfenberg; there the food is of a very indigestible nature, the meat being full of sinews and very poor—little more than tough animal fibre—sour gherkins and cucumbers—dumplings swimming in grease, and bad pastry. The rye-bread is seldom sufficiently baked, and frequently comes on table warm, which renders it difficult of digestion; and the bad consequences of eating too much of such improper food above mentioned, in dyspeptic cases, we are well aware of. It is certainly not good for persons having weak stomachs and bad digestion to eat enormous quantities of potatoes for supper, as I have seen. Priessnitz adheres to his opinion that water will dissolve and digest everything, and therefore allows his patients to partake freely of the diet named; but I am persuaded many of the cures are retarded by it.

There is a billiard and smoking-room, which I conceive to be highly detrimental to the progress of the cure, as it is generally filled for hours in bad and cold weather, and is without ventilation, every window being closed; no chimney, and a German stove always heated. This may be considered a fault of the patients themselves; but at present I see no remedy, as their own chambers are nearly under the same disadvantages, not being provided with a chimney. Priessnitz expects the patients to watch closely the

effects of the prescribed treatment and report thereon, for he has no time to visit all, as may be supposed, having four or five hundred to attend to—consequently, he visits only such as are incapable of getting out, the rest must shift for themselves; in this respect they are generally very attentive, and strictly adhere to his injunctions as that of an oracle, and very properly so too, if they wish to get cured. In some few instances, but I hold these as exceptions to the general rule, the patients neglect to consult with Priessnitz, trusting to the assistance of the baddiener, which is decidedly wrong, and is highly reprehensible, as I will instance. A gentleman, who had been a patient four months, came to me and showed me his thumb, which was much swollen, highly inflamed, and exceedingly painful, which had continued so for three weeks; I remarked that the covering was too light; he said it was the same as Priessnitz gave him. I advised his consulting Priessnitz, and blamed him for the delay; he replied, that he had not slept for the last three weeks, that Priessnitz did not understand his case, and he would not see him, that he knew better how to treat himself. He was very excited, and, seeing that he might easily be relieved by proper treatment, I told him that there was deep-seated matter under the fascia, and that he must get a much larger piece of linen—one that would hold water enough to keep wet a long time, and envelope the whole hand in it, so as to make a nice fomentation or poultice, and he would soon be better.

He acted under my advice, he obtained almost immediate relief, and in three days it discharged profusely; the treatment was kept up, and he improved rapidly in health. Had he consulted Priessnitz, as he was in duty bound to do, he would have been spared his intense sufferings.

Nearly all the patients take their meals in the saloon of the large house. It is capable of containing five or six hundred persons. It is 120 feet long and 40 wide, and has a balcony for an orchestra, in which a band performs at the dinner-hour throughout the summer season, and on every Sunday during the winter months, besides every Sunday evening, when a ball takes place. There is much gaiety and hilarity during the ball, from eight till ten; and a stranger certainly would not suspect that the motley group of dancers and lookers-on were invalids. Priessnitz and his wife are often present. The saloon forms a good promenade in bad weather, and ample space for playing at battle-door, la grass, dancing, &c.; but the Gräfenbergers are not generally particular to the state of the weather; armed with immense top boots, they defy hail, snow, rain, or wind. Neither are they over warmly clad. But connected with the advantages of this great room are some drawbacks: it is never kept sufficiently warm to feel comfortable; the tables are never uncovered, always having the table-cloths and plates on them for the next repast; the kitchen and bakehouse are immediately under it, from whence arise disagreeable odours; and this is not the worst part of it,—there are excessively

filthy smells from the entrance of the house to the saloon, arising from the sweating-blankets and linen which is hung up in all directions; and the water-closets on the stairs are always most filthily dirty: exhalations not compatible with health. Priessnitz does not recommend too much artificial warmth, as it tends to weaken our bodies; and the more we are exposed to the atmospheric changes, the better shall we be protected from their consequences. We must keep up a due action in the circulation by exercise in the open air: after being a little fortified by the treatment, we may venture out in the most tempestuous weather without fear, and clad in such light clothing that we might suppose the death-blow would be given to the soundest constitution. One gentleman, during my residence at Gräfenberg, walked about in the month of December in nothing but a merino dress; no flannel, drawers, or great coat; and he was one of the most robust and lively of the patients. He staid five minutes in the cold bath, also under the douche, whilst in that severe weather no other person could bear it above two; the temperature of the water being at one degree Reaumur above the freezing point.

In December, when I left, there were still about 120 patients at Gräfenberg, and as many more in Freiwaldau. The dwellings in this town are more commodious, the air not so keen, and the walks not so dangerous, being on a level, for which reason many prefer passing the winter months in it; but it has this disadvantage—the

baths must be brought into the rooms whenever required, whilst at Gräfenberg nearly every house is provided with a fresh running bath; besides, here one meets with an inexhaustible fund of information, and agreeable society, all of which contribute to the restoration of health. The expense of living at Gräfenberg is about thirty shillings a week, including Priessnitz's fee. Persons about to visit the place will do well to provide themselves with many trifling necessary comforts, as they are not easily procurable, and of very indifferent quality. Neither should they omit providing themselves with Austrian money, as English bank notes are refused, and the sovereign will only fetch nineteen shillings. Any person may dine à la table d'hôte for a moderate charge with the patients in the great saloon, or have a private table if desired. The travelling expenses, either route, to go comfortably, are about £20, and the time required from ten to twelve days.

The 2nd of October, 1842, was a day of great rejoicing at Gräfenberg: it was the forty-third anniversary birthday of Priessnitz, commemorated by a rich merchant from Vienna, who was cured of a chronic disease of long standing. This gentleman had an obelisk erected for one of the best springs in the woods, which bore the name of Hirsch, or stag-spring; on this spot, two hundred years ago, fell a Priessnitz, an ancestor of our renowned Vincent Priessnitz, in the defence of his only daughter against the Swedes who

then invaded the country: both fell a sacrifice to the infuriated soldiers. On the completion of the spring in question, it was christened and called "Priessnitz Spring," the year 1642 being placed over, and 1842 under the name of "Priessnitz Spring," to mark the two events. There was a procession formed of all the patients, three or four hundred in number, headed by a band of music profusely decorated with garlands, and followed by the flags of all the nations, individual members of which were present, twelve in number. Each had their own flag made at their own expense, in honour of the country they represented; and the Union-jack waved triumphantly next to the national flag of Austria; besides which, there were the Prussian, French, Belgian, Bohemian, Hungarian, Dutch, &c. The cur-gäste, or cure-guests, brought up the rear:—all who could walk or hobble joined, the ladies enlivening the scene by their presence. After the ceremony of consecrating and christening, a collation was served up, consisting of potatoes and salt, which were boiled in large saucepans in gipsy style, fifty yards from the spring;—these were relished with copious draughts of the pure water from the Priessnitz spring. Due honour was paid to Priessnitz and to the various nations by their healths being proposed; all were received with tremendous cheering, which made the very woods ring again; a salute of cannon succeeded every toast: greater joy and hilarity could not be witnessed in the most sumptuous feast. The procession retraced their steps to the house in a

similar manner : the evening was finished with a grand ball, the spacious saloon being brilliantly illuminated. Priessnitz absented himself that day, but his health was drunk again and again, each time cheered louder and louder, with bumpers of—WATER.

PART III.

WATER, &c.

OF THE QUALITIES OF WATER AND ITS EFFECTS UPON THE HUMAN BODY IN GENERAL.

PURE water is commonly described to be a transparent fluid, without colour, smell, or taste; in a very slight degree compressible; not liable to spontaneous change; liquid in the common temperature of our atmosphere, assuming the solid form at 32° Fahrenheit, and the gaseous at 212° , but returning unaltered to its liquid state on resuming any degree of heat between these points; capable of dissolving a greater number of natural bodies than any other fluid whatever, and especially those known under the name of the saline; performing the most important functions in the vegetable and animal kingdoms, and entering largely into their composition as a constituent part: therefore it necessarily excites our utmost attention, as being indispensably essential to our existence.

Up to the last century water was held to be a simple elementary substance; it was only in the year 1781 that the celebrated French chemist Lavoisier, after various experiments, showed it to consist of fifteen

parts hydrogen, and eighty-five parts oxygen. Recent and more exact analysis proves it to be eleven hydrogen, and eighty-nine oxygen ; our atmospheric air consists of eighty parts nitrogen, and twenty parts oxygen. It is from those component parts of water that its qualities become apparent as means of preservation for all inanimate and animate nature.

The animating and nourishing property of water is its attribute as an element, quite apart from any accidental admixture: the same as, in reference to the atmospheric air, we regard the element in its composition with oxygen as a principle of life ; so also water, as an element, in its admixture of oxygen and hydrogen, tends to maintain the vital power by nourishing and strengthening it. In the same manner as air, being inhaled into the delicate texture of the lungs, is decomposed, and the oxygen or nourishing part taken up into the system, water becomes decomposed, either by the organs of digestion when taken internally, or by the whole surface of the body when applied externally, and the oxygen assimilated to it. The vital principle depends upon a due supply of oxygen ; and this is found in much greater proportion in water than in air. Who knows not the balm which a draught of fresh water is to the thirsty ? the new power and life which the depressed body attains by a bath in the river on a sultry summer's day ? Organic life can exist as little without water as without air. All vegetable life perishes under a broiling sun ; as in the deserts of Africa, when no shower of rain

refreshes the earth; but as soon as the rainy season sets in, the vegetable kingdom blooms luxuriantly, where, previous to that, not a blade of grass met the eye of the weary traveller. The fruitfulness of Egypt is alone owing to the periodical inundations of the Nile.

Some animals subsist upon water entirely, as leeches: an experiment made in this respect by our late countryman Fordyce is particularly remarkable. He took some gold fish, placed them in a glass with fresh water, which in the beginning he supplied every twenty-four hours, but afterwards every three days; there they existed for fifteen months without any other nourishment whatever, nay, had grown twice their size in that time. We have instances of men who have lived upon nothing but water for a considerable time: a religious fanatic in Albany, America, formed a resolution to abstain from all food; towards the end of May, 1829, he began to eat very little, which he continued till the 2nd July, after which period he ceased eating altogether; but in lieu of this he washed himself daily with cold spring water, from time to time rinsing his mouth with it, and drinking five pints every twenty-four hours. This abstemiousness he carried out full six weeks, when death put a period to his existence. He had gradually got thinner and weaker, until he lost all strength, and his breath and perspirations had become fetid in consequence of the corruption of the secretions. Now, could he have lived so long without food, if the water he drank and the ablutions he made use of had not nourished

his body, and thus excited afresh the vital power within?

Another quality of water is its fluidity, thereby becoming a powerful dissolvent, without which no process of life can exist; without fluids nature dies, and without fluids the destruction of the human body, composed of fluids and solids, is inevitable: all nature, and consequently also the human body, exists but by a constant and unceasing change of its constituent parts; the unserviceable portion is secreted and replaced by new matter from nature. This constant change, however, can only take place by the agency of liquids, the digestion of the food taken, its conversion into nourishment for the blood, the formation and maintenance of the solid parts of the body by the blood, and lastly, the ejection of the refuse and deleterious parts from the body; in a word, the whole process of chemical-animal life rests on the condition of liquidity, and the foundation of every thing fluid in nature, is water.

Such are the properties of water, apart from its temperature; in latter times it is cold water principally that is applied as a therapeutic agent.

Hitherto, when cold water has been used in surgery or medicine, it has been only with reference to its first, or anti-inflammatory effect, whilst the second effect or reaction has been quite overlooked.

In the influence of cold generally on any part of the human organism, we perceive a double effect; its direct or primary, and its secondary effect or reaction. The

first appears hostile enough: the part which comes in contact with the cold loses its warmth, its sensibility is diminished, the vessels are contracted, the blood and fluids are propelled to the interior, the surface touched by cold becomes pallid, and an interruption to the due secretions of the part is the consequence. But as every thing acting injuriously on the human body causes in the same a counteraction, to equalize the effect, and as nature generally applies more power than is required for the mere warding off the attack, so the organism tries here to conquer and overcome the discomfiture, and the roused vital power causes an increased action to the surface. If, therefore, the cold has not had too long or powerful an effect, the return to life of the part affected is manifested by increased sensibility, and by a pricking and burning; the skin becomes reddened, a greater generation of warmth takes place, the blood streams to the part in larger quantities, the secretion is increased, the skin, full of blood and moisture, becomes soft and perspires: this is the *indirect effect* of cold, or the reaction of the organism. This remarkable double effect of cold is also apparent in its influence in the whole system. The first effect of it is hostile to organic life, checks all its developements, the nervous system appears depressed, the peculiar warmth of the body, the elasticity of all its parts is impaired, the blood is lessened and condensed in the arteries, the secretions are retained, digestion weakened, the nourishment interfered with, and the size of the whole frame diminished. The second effect, or

reaction, has quite opposite results: warmth and blood return, the appetite is immediately increased, digestion proceeds more energetically, the organs of sense are quickened, each muscle is strengthened; in short, the whole being gains strength, which is made manifest by a joyful feeling of health.

For the reaction of cold, the double law exists, that it exceeds the primary effect by far in intensity and extensiveness, and that it is the more powerful, the more sudden the transition from warm to cold. The first or primary effect can vary in different degrees, from the lowest, scarcely exciting sensibility, to the highest, when it destroys organic life. The intense degree of the primary effect of cold depends greatly upon the extent of the organic surface with which it comes into immediate contact, but it is not this alone which determines the effect only to the part touched, or to its spreading over the whole organism. If the relative degree of cold is not powerful, or does not last long enough to change materially the functions of the organ touched—if this organ is comparatively self-dependent, and of less importance to the whole body—if the sensibility of this organ, or the whole organism, is trifling—if great power and energy exist in the individual, &c., and at the same time only a small portion of the body is brought into contact with cold, the primary effect will be confined to this organ. According, however, as one or the other of these conditions is favourable to the spreading of this local action, the greater extension will the primary effect have.

The total effect of cold, primary, and secondary or reaction, must be considered as an animating and strengthening remedy, when the powers of life are weakened by laxity and atony. Proper judgment must, however, be used as to its application: in a due degree, it tends to strengthen and preserve health: we all know that a bright winter's day is more animating than a sultry one in summer; that the inhabitants of the colder regions have more strength and live longer than those of the south.

In a much greater degree does cold water affect the organism beneficially, both in its primary and secondary effect.

DIETETIC USE OF WATER.

The object of dietetic observances in general, is to preserve health, prevent disease, and prolong life. To attain these, elixirs of life, wonderful essences, and secret remedies, were formerly resorted to; but, as we advanced in knowledge, these became disreputable; nevertheless, we still find many, even among the better informed classes, who, from time to time, have recourse to drugs and quack medicines of all sorts, in the hope of thereby improving their health, and preventing disease. It is particularly for purgatives that Englishmen have a great predilection,—for the so called blood-purifying drinks, for mistaken strengthening remedies, and for

mineral waters. Some of these media, if suitably applied, might be of infinite use to the sick, but to the comparatively healthy they are detrimental. The true means of strengthening our bodies consist in a due regimen, to which appertains moderation and simplicity of food and drink, proper exercise in the fresh air, and consequent enjoyment of serenity of mind. The foundation for a long and healthy life should be laid in childhood and youth, by an appropriate physical education.

INTERNAL DIETETIC USE OF WATER.

Drinking in general.

Drink is as indispensable to man as food and air; indeed, hunger is more easily borne than the excruciating pain of thirst. In spite of this, many, and females particularly, gradually wean themselves so much from drinking, that they seldom feel a pressing desire for it, and rarely take anything but tea and coffee: the bad consequences of these prejudicial habits do not fail to set in; the fluids gradually assume a thick, viscous consistency, the necessary ejection of deleterious humours is impeded, their retention causes all sorts of diseases of the alimentary canal, skin, &c., indigestions arise, chronic diseases of the liver and spleen, and lastly, the whole nervous system shares the general disorder, and torturing hypochondriasis is the result.

The question next arises: What beverage is most suitable for man for daily use? FERMENTED LIQUORS comprise all sorts of beer and wine. Light, simple beer, imbued with a sufficient portion of malt and hops, and well fermented, is, taken moderately, a very proper drink for many persons, as it not only quenches thirst, but excites the nerves agreeably, and thus strengthens the body by the carbonic acid it contains. Beer of this description is bright, has a thin, whitish froth; but this is not always to be obtained, and in summer, when most required, is frequently least calculated to answer the desired end; it is then either spoilt in the cellarage, or is too fresh or sour; in either case it is very unwholesome, and injurious to health. But even the best beer, if taken in large quantities, brings a host of diseases in the course of time, being too nourishing, producing thick, heavy blood, and generating fat; the consequences are, congestions in the abdomen, constipations of the bowels, piles, apoplexy, &c. Strong brown beer, in particular, is apt to produce these bad effects; but the most injurious sort is that which is adulterated with powerful, noxious and poisonous ingredients, such as green copperas, cocculus indicus, and other pernicious drugs, thereby attaining not only an intoxicating property, but having the more serious evil effect of these becoming mixed with the blood, heating it, rendering it unfit for the due nourishment of the body, and thus affecting the brain and nerves, giving rise to palsy, epilepsy,

apoplexy, insanity, and even death. Good beer will agree very well with spare or enervated persons, or such as exert their bodies considerably; those of a strong nature, however, of sedentary habits of life, and otherwise addicted to good living, should avoid it in any but very moderate portions. A glass or two of *wine*, in cheerful society, or after considerable corporeal or mental exertion, can do no harm to a healthy person. If taken daily, and in excess, it causes trembling of the extremities, chronic eruptions on the skin, bad digestion, hardening of the liver, gout, stone, and leads to death, by consumption, dropsy, or apoplexy. A great deal depends on the sort of wine. Our limits will not permit us to enter into a description of the various sorts of wine; suffice it to say, that the inferior, and generally adulterated wines, are very prejudicial, taken habitually.

DISTILLED LIQUORS.—What has been said of wine, appertains, and in a stronger degree, to brandy, rum, gin, whiskey, sweet liqueurs, &c. Spirits are not unjustly called liquid fire; they not only expedite the process of life in a fearful manner, and destroy the body, but likewise blunt the mind against the perception of all that is good and beautiful. Unfortunately, in spite of the temperance societies, the abuse of spirits appears little abated. Most, if not all, the physical and mental degeneration of the lower orders must be attributed to this. It has been maintained, that spirits and beer are an essential requisite for labourers in the free

air, and especially in cold, humid weather ; but this is an error, and the circumstance of their employing latterly in America, on railways, ships, and other similar works, only such men as have renounced spirits altogether, with greater advantage for the progress of their labours, proves it such.

TEA, COFFEE, CHOCOLATE, ETC.

TEA, if taken strong, affects the nerves in a very high degree ; is always apt to produce hypochondriasis and hysteria ; and causes involuntary emissions in the male, and flueurs blanches in the female sex. COFFEE.—The constant use of coffee, particularly if strongly prepared, is exceedingly injurious to some. Plethoric persons, or such as suffer from diseases of the chest, spitting of blood, piles, irregular menstruation, hysteria, hypochondriasis, or weakness of the nerves, flueurs blanches, &c., must avoid it, its effect being to increase these maladies ; whilst, on the other hand, many of them disappear if cold water and milk is taken instead. Old, phlegmatic, or literary persons may, however, indulge a little in it. CHOCOLATE.—The frequent drinking of chocolate gives rise to indigestion ; and if prepared with spices, as is often the case, considerably excites the blood and nervous systems. We have another beverage to consider, prepared by nature, and not by human art, (or was, before man tried his genius at imitation ;) we allude to MILK.

It is the first drink for the new-born, its nourishment, and indispensable to its thriving. Adults, used to simple food, may take it even in large quantities, and with benefit; those, however, whose stomachs are naturally weak, or excited and weakened by artificial, spicy and piquant food, milk will not agree with; and least of all with persons used to beer, wine, or spirits: it curdles in the stomach, the cheesy particles become attached to its walls, the whey becomes sour, and the fatty oily substances become rancid. As a natural consequence, we have heartburn, spasms, diarrhœa, and other bowel complaints, &c. LEMONADE, &c.—Cooling drinks of this kind check the process of life, and the developement of too great heat in the body; they are, therefore, salutary in moderation, but taken to excess, produce weakness of the stomach, &c.

WATER THE MOST USEFUL DRINK FOR THE HEALTHY.

Nature seems to have assigned water as a drink for all its creatures, in spreading it over the face of the earth. Animals satisfy their thirst with water; and with people still living in a natural state water forms the only drink. All other beverages are the produce of civilization and progressing luxury, which generate artificial wants. *No other beverage is better* calculated to quench the thirst, and to replace the moisture withdrawn from the body by perspiration and other natural evacuations, than water,

pure and fresh from the spring. It aids digestion in a mild and not exciting manner; it gives a good and relishing appetite. Water-drinkers are seldom subject to pain in the stomach, spasms, phlegm, and similar affections: great regularity of the bowels prevails, so that no destructive purgatives are required; whilst beer being very satisfying, an habitual drinker of it, has already on that account not so good an appetite. Wine taken in quantities daily, gradually blunts the nerves of the stomach to that degree, by over-exciting them, that at last only strong-spiced food becomes palatable. Brandy-drinkers forget eating altogether, and constantly suffer in a variety of ways.

Some persons contend that they cannot tolerate water, because it swells their stomachs, and renders them uncomfortable, producing indigestion, &c. It certainly at first does not seem to agree with those who have spoiled their stomachs with too much exciting food and drink; but it is only in appearance, a consequence of the total disuse of water. Such persons should be urgently advised to simplify their mode of living, and accustom themselves cautiously to drink water, ere their disease reaches a higher and perhaps incurable degree. If this advice is followed, they will in a short time not only be able to tolerate water, but have a better appetite, and thus improve their health materially.

The alvine evacuations stand in close conjunction with digestion. If the stomach possess the requisite power to work up the food taken, the indigestible

remains of the admixture are ejected daily with facility. Water, therefore, will, by strengthening the stomach, promote these excretions. But besides this, water facilitates the opening of the bowels, by raising the activity of the intestines. Costiveness is one of the most frequent ailments, particularly with persons of sedentary habits. Water-drinking must therefore be strongly recommended to them, in order to get rid of an affection which acts not only very unpleasantly on the body, but on the mind.

Water cools and refreshes the blood, prevents any viscous tendency, promotes its due circulation, and thus wards off many dangerous diseases. It also assists the secretions and excretions, particularly by perspiration and urine, and by this means eliminates many morbid humours from the body. It is a well-known fact, that by drinking a few glasses of cold water quickly, an abundant perspiration will be the consequence, particularly if wrapped up warmly in bed. There are some stimulants that will produce a stronger flow of urine than water, but then the kidneys are apt to be over-excited, and relaxation follows, which not unfrequently leads to dropsy. Water, likewise, acts sedatively, at the same time strengthening the nervous system; it therefore prevents hypochondriasis, hysteria, and spasmodic attacks, which have their origin in increased excitability of the nerves, called nervous weakness. It raises the energy of the muscles; that is, increases corporeal strength, and enables the body to undergo

fatigues, to which beer, wine, and spirit-drinkers would soon succumb. Persons addicted to spirituous liquors are generally quarrelsome, violent, and choleric; whereas the water-drinker acquires a certain equanimity which is not easily disturbed, in the course of the frequent disagreeables inseparable from life.

The reader may perhaps be astonished to find us attribute so many extraordinary qualities to water, which probably he has till now despised; and we admit that the expectations of its good effects may be disappointed, if the mode of living be otherwise irregular. Simple food, proper hours of rest, appropriate exercise, enjoyment of fresh air, &c., are conditions without which the object of water-drinking, as set forth, will scarcely be attained. He who spends his nights at the gaming-table, daily loads his stomach with dainties, or who constantly sits at home, without ever inhaling the free and fresh breeze of heaven, cannot expect that water-drinking will keep him in good health, or obviate disease. The first duty requisite is to bridle his passions, or cast off bad habits; then the most brilliant results may be anticipated.

ON THE QUALITY OF GOOD AND THE MEANS OF IMPROVING BAD WATER.

A good drinkable water must be as pure as possible, that is, free from all heterogeneous admixture. The

waters that flow within or upon the surface of the earth contain various earthy, saline, metallic, vegetable, or animal particles, according to the substances over and through which they pass. Rain and snow waters are purer than those, though they also contain whatever floats in the air, or has been exhaled along with the watery vapours. Chalybeate springs are distinguished by their containing more mineral particles and various gaseous matters. Distilled water is allowed the highest degree of purity; it is then a powerful solvent: but such water, quite pure, is unfit for daily drink. Mineral waters are very useful for many invalids, and serve as remedies for the restoration of health, but they cannot answer for daily use; nor is river water fit for this purpose, being deficient of carbonic acid gas, and rendered impure by the many substances from the three kingdoms of nature, thrown into it, or taken up in its course.

The most suitable water for drinking is good spring water; the mineral particles it contains are so trifling that they can only be perceived by chemical analysis,—and they facilitate digestion, so that even a weak stomach can bear it; the oxygen it contains also gives it a peculiar enlivening power. Springs which have their origin in rocky soils, of course, have the preference over those in marshy ones. The greatest attention should be paid to the cleanliness of the pipes, if spring water is conducted through them. A good water for drinking should be without taste, smell, or colour; it is brighter than water that is not pure, and must also possess a

certain degree of *cold*, which braces and strengthens the organic fibre, whilst tepid or warm drink weakens it; besides this, it is the cold that retains the carbonic acid gas in the water; as soon as this assumes a warmer temperature, the carbonic acid gas evaporates. It should therefore be kept cool. It must be fresh when drank, that is, not have stood too long; every one knows the difference,—the former refreshes and animates the body, whilst the latter, with a stale and insipid taste, does not. The cause of the freshness of water is the carbonic acid gas it contains: fresh water therefore has to be distinguished from cold water; it is fresh through the carbonic acid it contains, cold by the lower degree of temperature. Water drawn from the spring has both qualities, but after standing a few hours in a cold place it may retain the lower temperature, but is no longer fresh, for the carbonic acid gas gradually evaporates; in a warm place the evaporation goes on much quicker of course. The evaporation of carbonic acid is easily perceived by the eye, in the rising of small bubbles of pearly appearance, and which adhere to the sides of the glass, or vessel; where this is observed, the water is no longer fresh. Water for drinking should therefore be had fresh as often as possible, kept in earthen or glass vessels well covered or corked up, and in a cool place.

To improve inferior water, a little admixture of vinegar, honey, or wine was resorted to in former times. Hahn, who is a great authority in these matters, recommends the addition of a little salt, lemon-juice, or vine-

gar to an impure water, or to let it boil once and cool. Hufeland, another great authority, gives the following prescription to turn a foul and smelling water into good water for drinking purposes in a short time. Mix a table spoonful of powdered charcoal in a pint of water, stir it well, let it stand a few minutes, then filter it gently through a piece of filtering paper into another vessel, when it will become colourless, tasteless, and without smell, and thus perfectly sweet for drinking. Lowitz, of Petersburg, is the original inventor of this method. In travelling, a supply of powdered charcoal in stopped bottles may not be an unnecessary appendage.

OF THE QUANTITY OF WATER TO BE DRANK DAILY.

Fixed rules cannot well be given for every individual : to drink water to excess, as some enthusiasts recommend, we do not approve of ; at the same time admitting that it will prove less injurious than any other beverage taken in excess. Too large a quantity of it will interfere with digestion ; when that is the case, persons will experience an uneasy feeling : in some solitary instances even dangerous consequences may ensue from too great a pressure on the nerves of the stomach, which may terminate in apoplexy, in the same manner as over-feeding sometimes does ; therefore every one must judge for himself of the amount he can take without disadvantage. At all events, beginners in water drinking should com-

mence with small portions, and gradually increase them, progressing without morbid exactness or anxiety. As little can be said in regard to the order of drinking water; the great rule is to drink when you are thirsty; there being however some, females particularly, who seldom have thirst, we will add a few special limits. To drink a glass or two of fresh water on getting out of bed and during dressing, will be found very beneficial, from its invigorating and aperient effect. Fashion has made coffee the general beverage for breakfast, but every warm drink is, strictly speaking, an unnatural one; for the thirsty require a cold, refreshing, and enlivening draught. Coffee has, however, become indispensable to many, and its deleterious effects have been lost sight of in the course of years. Those, therefore, who have been long accustomed to it, may take it for breakfast; but, to lessen its heating properties, it should not be too strong, and should have an adjunct of milk and sugar: others not so much addicted to coffee drinking, yet still desirous of a warm breakfast, may take chocolate, not spiced; or milk, if suitable for them. Those who take exercise in the air, or perform bodily labour, will be sure to be thirsty; a few glasses of fresh water may then again be taken with advantage. The habit of taking spirituous or fermented liquors, for, or with any luncheon, cannot be sufficiently deprecated, as it spoils the appetite for the principal meal, and renders persons unfit for the avocations of the day. Opinions are divided as to drinking with dinner: some consider it necessary to

assist digestion, others believe it diminishes the gastric juice, and so protracts digestion. My opinion is, that drinking a little during meals is essential, that it aids the digestive functions; and nothing is better for this purpose than water, for this simple reason, that water agrees with all kinds of food; beer is too satisfying, and there are many edibles in conjunction with which it causes heaviness and flatulency. Generally speaking, beer is not at all suitable for drinking at dinner; a glass or two of light wine, to those who are accustomed to it, is to be preferred. Liquors during, or after dinner must be thoroughly repudiated. We shall certainly promote our health best by drinking a glass or two of fresh water. The habit of taking coffee after dinner, to say the least, is superfluous; a strong stomach needs no stimulant, and in a weak one, the blood vessels and nervous system will but be the more excited. During the hours after dinner, most persons require more or less drink—satisfy the voice of nature, and drink plenty of water. The evenings are generally closed with either taking beer, wine, or spirits and water. I have said enough as to these; sleep cannot be refreshing after imbibing a quantity of unwholesome, hot, and heating liquors. The best narcotic is water. He who drinks only water during the evening, will have a calm and quiet sleep, free from anxious dreams—he will be refreshed in body and mind, and will cheerfully pursue his daily occupations.

ON THE NECESSITY OF USING CHILDREN TO WATER
DRINKING.

It is particularly with those who have been accustomed to water drinking in childhood, that it will show its good effects in after life. During the first nine months, the infant is to be nourished by its mother's milk which serves as food and drink; it is gradually accustomed to other sustenance during the period of weaning. After this is accomplished, however, the infant should have fresh water, as well as milk. By water drinking in childhood and youth, the foundation of a durable stomach is laid, and thus of a healthy body throughout life. The nervous and blood systems are over excited by taking viands, spices, beer, wine, chocolate, coffee, &c.; a constant artificial state of fever is maintained, and the process of life so much accelerated by it, that children fed in this manner, do not attain perhaps half the age ordained by nature. Besides this, experience has taught that they generally become passionate and wilful, having neither the will nor the power to make themselves or others happy. Futhermore, too exciting and nutritious food gives rise to many diseases, to which they fall a sacrifice in early years. Parents should weigh this well; they should throw aside their prejudice against water, which they look upon as weakening, ignorantly considering that the tender organism of children requires far more nourishing diet to bring it to maturity, than the already per-

fectured body of the adult; this is a wrong notion: children thrive best upon a simple, moderately nourishing vegetable diet, on milk and pure water; we see this confirmed in the cottage of the peasant.

EXTERNAL DIETETIC USE OF COLD WATER.

The external use of cold water is of no less importance for the preservation of health than drinking it. According to physiological facts, there is a constant imperceptible secretion going on from the skin, of a vapoury fluid, whereby large quantities of morbid matter are eliminated from the body. If this secretion is increased by continued heat, hot liquors, corporeal motion, &c., it is condensed into a dripping fluid,—perspiration. The retention or suppression of this secretion is the cause of many diseases, among which, catarrh, cough, rheumatism, and diarrhoea, as also various skin diseases, may be enumerated as some of the minor ones; dangerous fevers and inflammations of the intestines, however, are often the consequence of suppressed perspiration, or, in other words, of a cold. It is not only in healthy days, but in time of sickness too, that nature eliminates by the skin morbid humours, by which the disease was generated or maintained. The skin must therefore be considered as a medium of purification, by which the healthy can be preserved against illness, and the sick restored to health. Not only is the skin an exhaling, but also an inhaling organ; not only does it

absorb innumerable, and to the senses imperceptible particles from the air, but takes up other substances with which it comes in contact, into the body. In one respect, it is often the medium of infection, in the other, medical men are wont to introduce medicine through it into the body. These short remarks will sufficiently testify the great importance of the skin, greater indeed than most people seem to believe. The external application of cold water, besides the frequent change of linen and bedding, is highly conducive to its proper action, and to strengthen it.

OF COLD ABLUTIONS.

Pure spring water is decidedly the best for cold ablutions; we need, however, not be too chary as to this for such purposes, but use it as time and opportunity favour. The process should be thus: begin with the head, face and neck, then the chest, arms and abdomen, lastly hips and legs. Headaches, inflammation of the eyes, toothaches, &c., are the consequences to some, if they expose themselves to the atmospheric air with the hair wet; the loss of hair has often been observed to be the result: the hair must therefore be carefully dried. The palm of the hand, a sponge, or a piece of flannel, should be used to rub the body well with. A tub of sufficient size to be able to stand in, and receive the water as it flows down the body, answers the purpose well. This, with a basin of water and a sponge, is

all that is required, a sheet laying handy to rub oneself dry with. When all is finished, after having rubbed the whole body over as above with the palm of the hand constantly wetted, dip the sponge in the water and press it over the head, so that the water runs down all parts of the body. The washing and drying must be done quickly; in eight or ten minutes the whole should be completed. The best time for these ablutions is the morning, immediately after getting out of bed; during sleep the perspiration is generally stronger than when awake, and the body is thus immediately freed of the nightly exhalations, and fitted for the duties of the day. If the operation is repeated before going to bed, a sound and refreshing sleep will be the result. As for the temperature of the water, the general rule is to apply it as it comes from the spring. It is only weakly persons, and such as are not at all accustomed to the cold, that should begin with tepid water and gradually proceed to cold; a sponge should be used at first.

The advantage of these daily ablutions is very great; they serve for cleanliness, to clear the skin of the humours secreted, and thus maintain and promote its activity. Warm washings weaken, whilst cold strengthen the skin.

A weak skin renders the possessor liable to constant perspiration, and great susceptibility to every change of temperature. He, therefore, constantly suffers from cold, cough, and rheumatic affections. No means are so well adapted to destroy that susceptibility to catching

cold, and with it the cause of much illness arising from colds, than perseverance in daily ablutions. Their effect extends beyond the skin; through the connexion of this organ with the whole body, by innumerable nerves and vessels, they give tone to the muscles, diminish the excitability of the nerves, promote the due circulation of the blood, and thereby prevent congestions; in a word, promote the due harmonious action of all the functions of the body, upon which health and long life depend.

Cold ablutions are the best protective against contagious diseases. Drugs, fumigations, &c., avail little or nothing against them, as we have unfortunately witnessed of late years in cholera; but cleanliness, support of the chief organs and maintaining the evaporation by the skin, with a cheerful spirit, afford the best protection. Cold washings effect this, and the low temperature of the water probably acts against the infectious humours. Dr. Rohmid, in Inowraclaw, in the province of Posen, Prussia, found that several daily ablutions of the whole body with cold water, effectually guarded against infection from scarlet fever. A skin strengthened well by cold water ablutions, was even known in 1813-14 and 15, during the malignant nervous fever of the time, to eject the already received virus.

We may remark, in conclusion, that these ablutions form a substitute for baths, for weakly bodies, for whom the latter are too powerful, and a capital preparation for those desirous to accustom themselves to bathing.

Cautions.—The room in which these ablutions are

made, should be free from all draughts; the uninitiated should begin with tepid water first; friction is indispensable; never undertake an ablution when the body is heated by exercise; passive perspiration produced by being wrapped up in a blanket, or by the usual covering of the bed, is what is required, to insure safety and success; be particular to rub the hands and feet dry, in cold weather especially, to prevent their chapping.

COLD BATHS.

We will here speak of baths in general, such as are applicable to persons in health; those more especially adapted for disease, will be fully treated of in the next part.

Baths may be divided, according to their temperature, into cool, varying from 55° to 75° Fahrenheit; cold from 45° to 55° ; and ice-cold from 35° to 45° ; the effect of the cold bath depends partly upon its temperature, and partly on the pressure of the water. At first, it makes a violent impression on the skin and the numerous vessels and nerves of which it is composed; the skin is then contracted, the blood recedes from the external and presses on the internal parts. The consequence is, a paleness and shrinking of the skin, shivering and trembling, quick and difficult breathing, together with a slow pulse—a minute or two, however, and all is changed. The vital power resists forcibly the influence of the cold, foreign to its nature; the blood soon

flows with increased strength to the outward parts, warmth returns, the skin becomes reddened, breathing regular, the pulse quicker, and a general sensation of ease is felt. Leaving the bath at this moment causes the full and beneficial effects. A general warmth and increased evaporation by the skin takes place, the muscles acquire increased power of action, all the functions of the various organs are performed with increased activity, appetite is heightened, the mind becomes easy and cheerful; in a word, the whole system is strengthened. The effects of the cold bath, however, are very different if the bather remains in it too long; the counter effect or reaction of the organism is able to overcome the blasting effects of cold only for a short time; a fresh shivering and trembling sets in, which sometimes cannot be subdued by the most active exertions of the body; the skin becomes pale and wan, a violent headache and general relaxation take place.

The following general rules should be observed:— Never bathe with a full stomach, but after digestion has been thoroughly effected; therefore four or five hours after a hearty meal should be chosen; but before breakfast, or a couple of hours after a light breakfast, in some instances, is preferable. Never enter a cold bath when the body is heated by exercise, or perspiring through any but passive means. If you are hot, walk gently, and get cool by degrees, undressing slowly. Apoplexy, followed by death, is not unfrequently the consequence of cold bathing, arising from want of

caution, and is ignorantly supposed to be produced by spasms. Before entering a cold bath, the head and chest should be washed, to prevent congestion of those parts. The duration of the bath is to be determined by its degree of temperature; the colder the water, the shorter should the time of bathing be. When a sensation of cold or shivering has set in, the proper measure has been exceeded: generally, we should not remain longer than one or two minutes in an ice-cold bath; in a cold one, two to five; and in a cool one, five to seven: the weaker the constitution, the shorter the duration. The cool baths are best for dietetic use; the cold will only do for robust constitutions, gradually accustomed to such; the ice-cold require the utmost caution, and are more intended for the cure of disease.

It is necessary to be very active in the bath, and to rub the body well with both hands; nothing tends more to promote the due circulation of the blood, to obviate costiveness, to cause more activity in the nerves, and to strengthen the skin. After the bath, dry and dress quickly, and take moderate exercise in fine weather; if damp and raw, it is more advisable not to use the bath at all. Sensitive persons, who are subject to cold, nervous weakness, &c., must prepare themselves for cold baths by repeated washings and ablutions of a graduating temperature, and then should take them at first not quite cold, but tepid; the gradual transition from one to the other, will have a highly beneficial effect on their constitutions. Bathing-dresses, in some cases, may

occasionally be used with advantage, to check the too great action of the water on the skin. The cold bath should not be recommended to plethoric persons, nor to those who have a disposition to apoplexy, nor such as suffer from giddiness and noise in the ears, weak lungs, asthma, nor during menstruation.

RIVER BATHS. The above rules will also apply to river baths, which have a decided preference over tub-baths. The enjoyment of the free air connected with them, and the constant renewing of the water, are superior inducements for their use; and particularly the free and uncontrolled motion of the body, by swimming especially, is highly beneficial. A few observations on this head may be useful.

Persons should be ever careful not to commit excesses in bathing. Beginning too early in the year, and leaving off too late, is sometimes injurious; the water being unwarmed by the sun's rays is often much too cold, and produces cough, catarrh, rheumatism, headache, stiffness of the joints, &c.; the attempt at strengthening the body, at which these practices aim, will fail if over done. Bathing twice a day is therefore also objectionable. One river-bath daily is quite sufficient for all purposes of health; indeed it is even well occasionally to omit it, particularly in raw and damp weather, so as not to blunt the susceptibility of the body for water too much. Of course the duration of bathing in rivers may be longer than in tubs, on account of the before-mentioned reasons, but fifteen minutes is quite long enough. Exhaustion

should never be permitted to take place while bathing. The best times for river bathing is either before breakfast, or from ten to twelve in the morning, and from five to seven in the evening.

What we have stated as to ablutions applies in greater force to cold and river-baths. They are the best remedy for preserving and strengthening health, and against many diseases, particularly the contagious. We may in this place make a few remarks on

SEA BATHING.

This is a very important subject, and has been highly extolled by the faculty as a remedy for the cure of many diseases, and as preserving and improving health. Unfortunately, very little attention is paid by the majority of medical men to its importance, for want of time and opportunity in some, and total and wanton neglect in others. Forming, as it does, a considerable auxiliary to the Water-cure, I hesitate the less to present my readers with my views on the subject, founded on practice and experience during my residence at Ramsgate.

Who, among those who frequent our shores, has not been impressed with the manifold influences which the sea has upon the heart and spirits? and who, in beholding its vastness and expanse, is not delighted at its grandeur? If these impressions arise on beholding it, they are heightened, and particularly in a physical point

of view, on coming in contact with the element. By the beating of the waves, and constant renewing of the water, it strengthens, animates, excites, and enlivens in a *higher degree than any other kind of bath*. The whole system is stimulated by the strong beating and shock of the waves; much tone is given to the nerves; and the proper circulation of the blood is promoted. The free air and scope for action add materially to its advantages: it differs, however, in the following points from river water. By the considerable quantity of salty particles it contains; by the stronger pressure of the water produced through the saline substances; by the undulation of the waves, electric in their influence; by the temperature, which, according to careful examination, is, in the height of summer, proved to be lower, (55° to 65° Fahrenheit,) but also more equal than river water; and by the sea air, containing not only salty particles, but muriatic acid.

The best time for the use of sea-baths is from May to the end of October. One bath a day is generally sufficient, either before breakfast or two hours after, as has already been mentioned. Persons whose nerves and skin are very sensitive will do well to have tepid baths first, and gradually accustom themselves to colder ones before they bathe in the open sea; frictions with a coarse towel should be used in these preparatory washings. Damp and foggy weather is not favourable for sea-bathing, and it had better not be resorted to on such days. For all other necessary rules we refer the reader

to the last article on cold baths, which are equally applicable to sea-bathing.

To search more particularly into the effects of sea-bathing, we must consider its salty particles which act as a powerful stimulant on the surface of the skin, as the glowing sensation and the redness produced testify. The effect of these saline substances is not confined to the surface of the skin merely, but penetrates the organism, as by the activity of the absorbing vessels these substances are partially assimilated with the fluids. It is through this, that sea baths become a highly powerful solvent of constipations and hardening of the glands, and even have the property of improving a faulty admixture of the fluids. We must further consider that in the greater pressure of sea water compared to river water, as in the greater power of the waves, we find the cause of its so remarkably enlivening effects on the nerves. By the lower temperature of the sea the muscular fibres become contracted and braced, and the whole organism strengthened. Notwithstanding the lower temperature, the risk of catching cold is much less in the sea than in the river, which is attributable to the salty particles, by which the activity of the skin is raised, and more warmth generated in the body. The animal and vegetable substances contained in the sea no doubt also act beneficially on the whole system, to which we must add the bracing properties of the sea breezes, eulogized so much by the ancients. It is a fact founded on experience, that the inhabitants of the

sea coast generally enjoy excellent health, and attain a good old age. We thus find sea bathing to be one of the most active remedies for strengthening the skin and muscles, for diminishing the excitability of the nerves and dissolving hardening of the glands. For the preservation of health, it is therefore highly commendable. Sea bathing is also very beneficial in checking and curing disease; caution in its use, however, is not only necessary, but must be urgently enjoined. The shock to the system in nervous affections, where properly guided, is very beneficial; it should not be too great where too much torpor exists, or much active inflammation, for we must recollect, a steady and active reaction becomes our aim. Sea bathing will be found of the greatest service in cases based upon want of nervous energy, or general relaxation of the system; in chronic nervous diseases, epilepsy, St. Vitus's dance, hysteria, hypochondriasis, involuntary emissions, weakness of the eyes, skin diseases, scrofula, rickets, diseases incidental to females, such as flueurs blanches, chlorosis, &c., in liver affections and diseases of the kidneys, and likewise in cases of consumption it is also highly useful; but neither irritation nor inflammation of an active character must be present, or the worst consequences might ensue. We will now conclude this part of the subject with a few hints as to the

EXTERNAL APPLICATION OF COLD WATER IN
INFANCY AND OLD AGE.

It has already been stated how necessary it is to use

children to water drinking; the external use of cold water should also begin in childhood, but much modified, for I cannot coincide with those who recommend infants to be bathed in cold water almost as soon as born. The new-born baby, accustomed as it has been to a very warm, congenial temperature, requires, for some time after birth, a warm and well-regulated temperature, and can only be inured to colder treatment with the utmost caution, and by very slow degrees; the suckling infant therefore does not require for the first three months cold water as an external ablution. I would recommend tepid ablutions and baths as being more fit, and which I know to be very salutary.

The child should, immediately after birth, be bathed in lukewarm water, which equals new milk just drawn from the cow, in temperature at about 90° Fahrenheit. Similar baths should be applied daily during the first three months; morning is the best hour, but not immediately on waking, or after taking nourishment; one or two minutes' duration for the bath is quite sufficient. The child must then be dried quickly and carefully, and dressed warmly to prevent its taking cold; much friction should not be used, but the moisture gradually and perfectly absorbed by the application of a piece of soft linen.

It is best to take fresh spring water, adding a sufficient quantity of warm to raise it to the required temperature. After the first three months, the infant may be very gradually used to cooler water, and by slow degrees to the cool baths. In the eighth or ninth

year, river or sea baths may be resorted to ; and quite cold water used for ablutions.

For very advanced age, cold washings and baths are likewise not recommendable. Where the due warmth and energy of life is diminishing, where the skin becomes drier and stiffer, tepid baths are more desirable for preserving life. They maintain the natural warmth, promote all the secretions, particularly of the skin, and diminish, by replacing the deficient moisture, the stiffness of the joints and hardening of the organs. Cold baths withdraw the warmth of life from old persons, not for a few minutes, as with the young, but permanently, there not being sufficient power to resist the influence of the cold. Where the vital power is already too much exhausted, the forcing of the blood upon the inner and more important organs by cold baths may prove fatal. Of course, there are some constitutions which have naturally acquired such energy as to have greater power in old age, than many young persons of the present day. Such may use the cold baths with advantage in later days ; and it is to be hoped that more attention will henceforth be paid to the physical education of children to enable them to pass through life in health, enjoy a robust old age, and obey nature's last call without murmuring and without pain.

PART IV.

HYDROTHERAPEUTIC OPERATIONS.

PREFATORY REMARKS.

IN fever as well as in most chronic diseases, water is the most suitable beverage. Every state of fever is a morbidly increased process of life, and all fevers begin with cold, followed by heat, which generally, sooner or later, ends in perspiration. The feeling of cold is frequently a mere shiver, often however, very chilling in its effects. The circulation of the blood and the breathing are quickened, and the pulse therefore beats faster than in health. The natural consequence of the increased circulation of the fluids is an accelerated destruction of the solids and evaporation of the fluid parts, and therefore gradual emaciation of the sufferer. The appetite is mostly lost, but thirst is more or less great. The happy termination of fevers is generally manifested by various secretions and excretions; this process is called the crisis, which usually consists in critical bleedings, perspiration, urine, and fæces.

It is very necessary for a favourable issue of fevers to satisfy and quench the parching thirst of the patient,

for critical perspiration and urine can only be brought about by a sufficiency of moisture in the body. The thirst of feverish patients is therefore the voice of nature and must be attended to; the ancients knew this when they said, in fevers, "one must drink or die."

The question now is, Which is the best beverage in fevers? The faculty order all manner of artificial preparations, such as effervescing drinks, cooling acids, various sorts of teas, &c. These remedies occasionally answer well enough; but in most cases they become quite a torment to the invalid, and he pants for a draught of fresh spring water, which is generally denied to him, although it is the only suitable beverage. Galen gave his fever patients as much cold water to drink as they wished for, arguing that it diminishes the internal heat, strengthens the solid parts, and carries off the morbid humours by perspiration, urine, &c. Fresh cold water is therefore the best drink for fever patients, because it moderates the heat, diminishes the quickness of the breathing and the pulse, promotes evaporation by the skin, and produces refreshing sleep. The patient may drink as often and as much as he pleases; but it is preferable to drink in small quantities, so as not to oppress the stomach too much; this deserves to be particularly noted during the cold shiver.

From our remarks in another place as to the effects of water drinking in health, we may infer that cold water is also most salutary in chronic diseases, nay, has of itself a curative effect: by its cooling, refreshing

qualities it becomes a real remedy in diseases of the blood system, determination of blood to the various parts, hæmorrhage, and in nervous diseases it is invaluable from its soothing and strengthening effects. It is further of most beneficial influence by its attenuating properties and power to increase the secretions in diseases of the alimentary canal, which are often the consequence of a thickening of the fluids and retention of vitiated matter.

I cannot conclude these remarks without a few words on the use or abuse of mineral waters. We know the good effects of some mineral springs in many chronic affections, and that many owe their restoration to health to their use; but we cannot deny that it is one of the fashions of the day to visit the spas for the "dolce far niente," the many diversions to be found there. Let such free their minds from tormenting cares at home, at the same time drinking plentifully of fresh spring water and living otherwise temperately, and the chances are they will find quite as much, if not more relief, than from the boasted spas.

Many chronic affections will yield to regular and temperate living upon the principles laid down in the course of this work, aided by the free use of our own pure and excellent springs.

SWEATING IN THE DRY BLANKET.

Several hours of the day are generally spent in this process, and few dispense with it.

A large, thick, coarse blanket, measuring seven feet by eight, is spread upon the mattress, which is made of straw. The patient then lies down upon his back at full length, naked; the bath servant immediately wraps one side of the blanket round him, tucking it well under the body; he then draws the other side over tightly, fastening it about the shoulders and feet, so as to exclude the atmospheric air. Over this is placed a down bed, which is tucked under the body, so that the figure resembles an Egyptian mummy; sometimes a counterpane is placed over all. The invalid remains in the blanket until perspiration has continued the required time.

When the sweating is complete, the servant removes the coverings, unwraps the blanket at the feet, damping these and the face with cold water; he then puts on the patient's feet a pair of straw slippers, and conducts him to the cold bath which, at Gräfenberg, is frequently down three flights of stairs; or the invalid is put into the half-bath; in this case it is brought into the chamber and prepared there. After remaining in the bath the prescribed time, the patient is well rubbed dry, dresses quickly, and walks out for exercise.

A straw mattress is used in the sweating process, because the straw can be removed and replaced by

fresh, as often as necessary ; a feather bed or horse-hair mattress would absorb too much perspiration, and could not so conveniently or cheaply be exchanged ; besides which, it would be both offensive and unhealthy.

The sweating, in some instances, takes place to such an extent that it penetrates through the mattress and drips on the floor.

Those who perspire with difficulty have extra covering placed upon them, and the head sometimes enveloped likewise, the face only being left exposed. They should rub their feet together and make such gentle movements as they are capable of by rubbing the body with their hands. The time necessary for the requisite perspiration is generally from one to three hours, according to the malady ; so that the patient is enabled to sleep part of this time ; and, as the wrapping up generally takes place about five o'clock in the morning, he is not deprived of his usual or necessary quantum of rest. In some cases, a urinal is placed in bed, so that the invalid may not be either disturbed from the sweating process, or inconvenienced in consequence.

The heat of the body, and particularly the skin, having risen to a high degree, perspiration commences, when the windows are ordered to be thrown open, and the patient, from time to time refreshed with a little cold spring water, which he sucks through a bent glass tube, one end being placed in his mouth,

the other in a glass of water, to spare and cool the lungs, to facilitate the circulation of the blood, and promote perspiration at the same time. The head and shoulders should be well raised at the time of wrapping up, to render the position as comfortable as possible; this is easily effected at Gräfenberg through the management of the straw mattresses, which are divided into three separate ones, partly for this purpose, and partly for shifting about and drying after each sweating. The dry heat of the blanket, at the commencement of using it, is disagreeable, but the uneasy feeling soon vanishes, and on the symptoms of perspiration appearing, the whole body feels light and relieved. The time for sweating entirely depends on the constitution, disease, and other circumstances; beginners take from half-an-hour to two hours, but many lie three or four hours, especially those afflicted with syphilitic-mercurial diseases, gout, &c. The surest sign of the sufficiency of sweating, is the appearance of moisture on the face, and if continued beyond this, an uneasy feeling, with heaviness and pain in the head, succeeds; this point should never be exceeded, and the moment it sets in the unpacking should take place. Some imagine that by forcing the sweating an hour or so more, the cure will be accelerated, but injury and delay of the cure are certain consequences. Those who are subject to determination of blood to the head have wet umschlags or compressers applied round it, and renewed from time to time while under the process

of sweating. Some, too, must place wet compresses on any painful local affection, as open crisis, &c., previous to getting into the blanket. Persons who suffer from internal congestions of blood should drink a glass of fresh water, in order to withstand the forcing of the blood upon the inner organs when in the cold bath, and it is necessary to avoid exposure to draughts of cold air in going to it. The effect of the cold bath, after the skin has been put in a proper state of excitement by this process of sweating, is to strengthen the whole body.

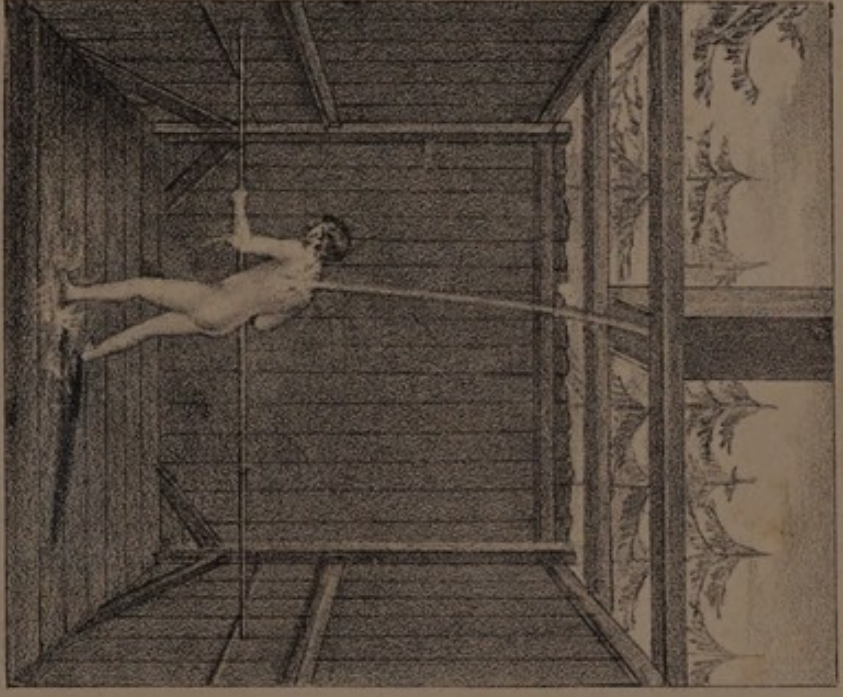
Caution and circumspection are necessary—the time varies considerably; if the invalid is weak, he is to sweat little at first, once a day; after a short time twice a day, morning and afternoon, for a short period only, taking moderate exercise previous to, as well as after the operation; if it weaken him, it is diminished for a time; the same if perspiration is too easily excited, and flows profusely—as with sensitive temperaments and weak skins. Various causes induce the greater or less profusion of perspiration: rheumatic and arthritic subjects sweat easily and profusely; corpulent bodies more than spare ones; staunch water-drinkers more than those who drink sparingly, weakly persons with a tender, delicate white skin, sooner and more profusely than the robust, and more than those of a phlegmatic temperament; with those who are afflicted with piles, perspiration is brought about with greater difficulty, and is of shorter duration than with gouty



SWEATING.



GOING TO THE COLD BATH AFTER SWEATING.



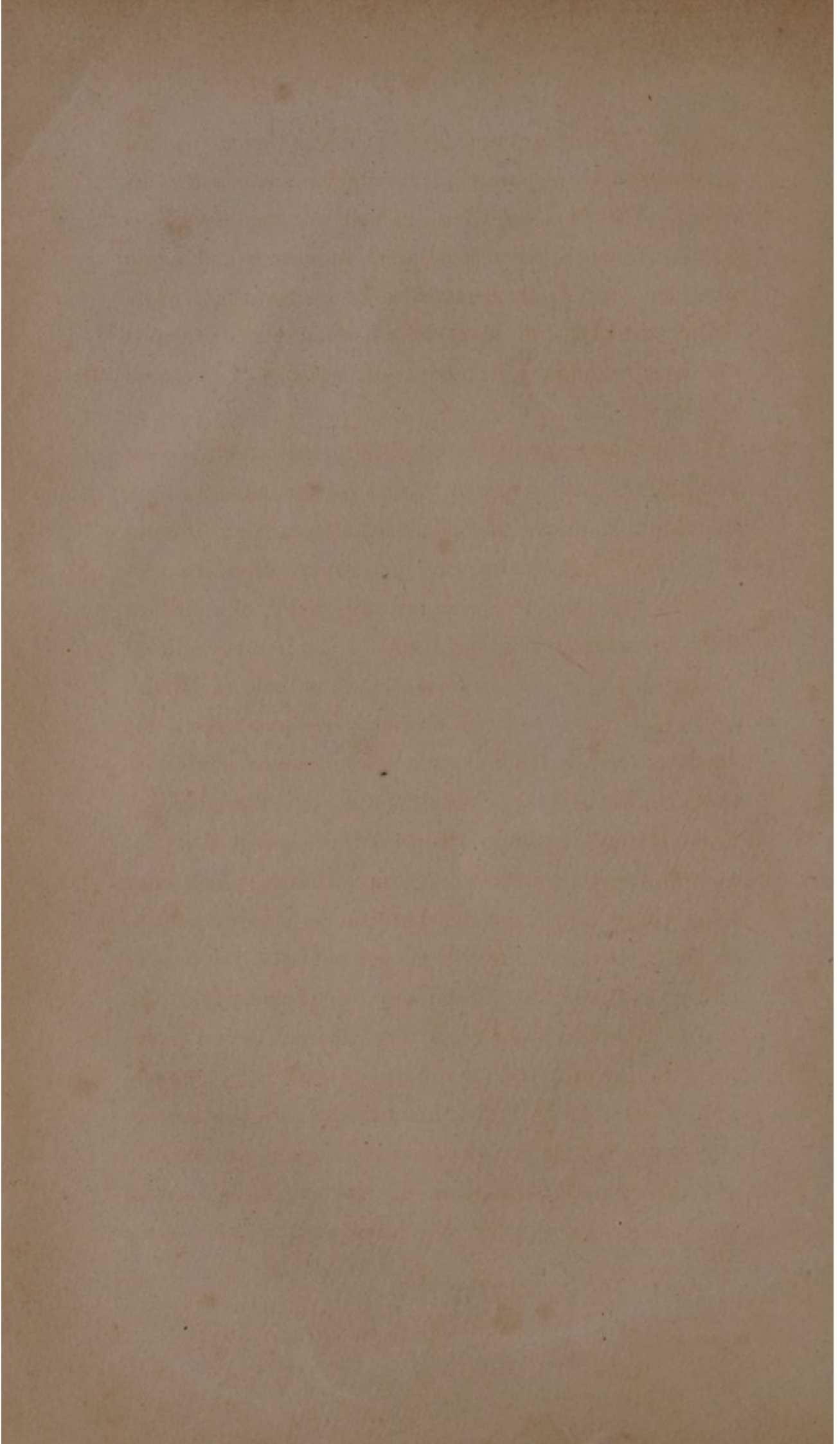
DOUCHE BATH.



HALF BATH.



HEAD AND SITTING BATH.



subjects. Exercise immediately before being packed up facilitates the sweating very much; when the atmosphere is moderately warm and not too dry, it is sooner promoted, and is slowest in stormy and damp weather. Artificial heating of the body by warm drink or otherwise is never allowed; the heat must always be produced by the proper activity of the vital functions.

In the beginning of the cure, the perspiration is clear and bright; but in proportion as morbid humours are dissolved and drawn to the surface, it assumes a different consistency. In rheumatic and gouty affections particularly, it often gets clammy and sticky, of a yellow dark colour, and fetid acid smell. It is a remarkable appearance and very important in a pathological point of view, that where much medicine has been taken, the sweat of the individual assumes an odour similar to those medicaments. Such sweats are called critical. Some patients undergo the sweating process daily for months together without getting thinner, which may seem paradoxical enough; but the facts are incontrovertible, as the thousands of persons who have been under treatment at Gräfenberg, amply testify. The *modus operandi*, however, is very different to the means hitherto in use with the faculty. Whilst they prescribe warm baths, gruel, hot tea, &c., in conjunction with powerful medicinal sudorifics, besides calling into aid the heated atmosphere of the rooms, Priessnitz and his followers attain the same end by the simple

and safe process described, giving the patient fresh air and water, both very desirable. Whilst under medicinal treatment, the stomach, intestines, and blood, are heated in an unnatural manner; we find that, by Priessnitz's method, the proper heat of the body only is called into activity, the organic heat is concentrated, and the inner organs, the lungs especially, are refreshed by the cold water and kept at a proportionately low temperature. This is the reason why the body does not become enfeebled, nay, on the contrary, all the organs increase in strength, notwithstanding these profuse perspirations. A further contrast between the two modes, is the already pointed out cold ablution or bath, invariably succeeding the sweating; the secretion is thereby duly washed from the body, which is greatly refreshed by the operation.

We find an undue action of the skin in almost every disorder; this should be properly regulated, in order to render that organ fit for the elimination of morbid humours. The sweating and bathing, therefore, go hand in hand; without the former, the skin would become too compact, dry and brittle, apt to chap; without the latter, it would become too much weakened and relaxed. We have elsewhere spoken of the skin, and stated that the most subtile part of a disease is often eliminated by it, and there are many diseases that yield to this simple process only. Invalids have been known to arrive at Gräfenberg quite emaciated, scarcely able to sit up, much less walk, and yet have increased in

strength and bulk under the sweating treatment, gradually and cautiously administered.

THE WET SHEET.

The application of the wet sheet is essentially the same as the blanket, but is used with a variety of intentions. A sheet of somewhat coarse linen, of about two yards long, and one and a half wide, is well soaked in cold spring water ; it is then thrown over a pole and wrung ;—after which it is spread over the blanket, and the patient lying down on it, is wrapped up first in the sheet, and then in the blanket, and covered over as before mentioned. The first sensation is a slight shiver, which is rather unpleasant and disagreeable, and probably continues for two or three minutes, after which a pleasing change comes over the spirits ; a calmness and feeling of ease ensue ; the whole system is soothed and tranquilized. This agreeable change commences and increases with the warmth, and if continued for about half an hour, the repose is so comforting that the patient is loth to be disturbed. A coarse sheet is preferred for two reasons, the first is, that it remains moist longer than a fine one ; the second is, that it acts in a slight degree as a counter irritant to the skin. The patient generally remains in the sheet until sufficiently warmed ; this usually occupies half an hour to an hour, when the time for bathing approaches. Sometimes the sheet is replaced by fresh ones, if it dries too soon ; when this is the case,

it must be effected quickly, a fresh sheet being ready, so that the least possible time may be lost.

These wet sheets are great soothers and sedatives, and particularly useful in fevers, inflammations, &c., to allay pain and heat. A case of violent catarrh, accompanied with fever, which occurred when I was at Gräfenberg, was perfectly cured in an hour by wet sheets, a fresh one applied every ten minutes, an *abreiben*, or wet sheet bath, completing the cure. These "*abreibens*" are frequently resorted to, for weakly patients, after being wrapped up in the wet sheet as described, and answer the purpose of a bath in a modified degree; they are frequently used two or three times daily. Sometimes perspiration cannot be elicited without the wet sheet, which stimulates the skin to increased action. The soothing and beneficial effect of the wet sheet is so great in a variety of cases, that if but once tried by any one, the fear of danger—if any fear exist—will be obviated,—the more so when I state that some persons at Gräfenberg sleep in wet sheets almost nightly, enjoy good rest, and are fresh and joyous in the morning. Before going into the sheet or blanket, and before taking a bath of any kind, the body should be in a proper state of temperature. When the body is cold, the cold baths cannot produce the proper reaction, *and may do harm*. At the risk of being deemed prolix, I state particularly, in order to prevent error and consequent mishaps, that the body must be at a proper temperature, but not hot; I mean an easy, comfortable feeling of warmth. After violent

exertion, the person must be cooled by a gentle walk, and then a moderate degree of rest; lying in bed a short time, if cold, will produce the required warmth. It is very different, plunging into a cold bath of from 35° to 50° Fahr., after sweating in this way, to doing so after sweating by the artificial means resorted to for that purpose; for as explained, in the one case it would be dangerous, whilst in the other, the body being kept cool and refreshed, the absence of all danger is clearly manifest: this is corroborated by the numbers daily undergoing the operation, and frequently twice a day at Gräfenberg and elsewhere,—indeed the cold bath after a good sweat, is a real luxury. When unaccustomed to the bath, going to it for the first time, dripping with perspiration, one is apt to cast a suspicious look at the water; but off with the blanket and sheet, and after wetting the head and chest, plunge bravely in, and enjoyment will be the reward.

BATHS AND ABLUTIONS.

THE WANNENBAD OR FULL-BATH.

We were unconsciously led to speak of this bath in the preceding article, the two being so much combined, it was almost impossible to speak of the one, without alluding to the other. Under the head of cold baths, we gave some general rules which will apply in their hydrotherapeutic use here.

The largest bath of this kind at Gräfenberg, is ten feet diameter, and four feet deep; the rest are considerably smaller, and most of them sunk nearly upon a level with the flooring, which is exceedingly inconvenient, on account of the stooping preparatory to taking the bath. Fresh water is constantly flowing from the upper mountains into these baths, which is a great advantage. The average time of using them is about one or two minutes, but there are a few persons who remain in five or six.

Novices merely plunge in, hurrying out as quickly as possible. Priessnitz enforces the necessity of every one making use of these baths, wetting the head and chest before the general immersion, to guard against any undue action.

The temperature of these baths in summer varies from 42° to 50° Fahr., in winter from 32° to 36° Fahr.; in the middle of November last, the temperature was as low as 34° Fahr.; ice began to form ridges on the sides of the baths, but all plunged in with as much delight as ever, emerging from their blanket or sheet, either of these operations always preceding the cold bath, for the purpose of relieving the internal organs, and tempering the surface of the body. *Some* of the patients, diminishing the extent of their treatment preparatory to quitting the establishment, took the cold bath immediately on getting out of bed, dispensing with the wet sheet or blanket, their cure being either complete, the rigours of winter too disagreeable, or too great for their constitutions, or

being desirous to join and enjoy their Christmas party at home, and exhibit their improved health and spirits, as the case might be, delighted as much in it as they regretted the time when they would be deprived of the luxury.

Priessnitz and all his family take a cold bath, winter and summer, immediately after rising in the morning, and Mrs. Priessnitz continues them throughout her pregnancy.

The duration of the cold bath greatly depends upon the heat of the body arising from the perspiration: cold water cannot withdraw excessive heat from the body in less than two or three minutes, and the greater the difference between the temperature of the body and that of the water, the greater the effect of the cold, and the better the reaction.

Much activity, and friction of the whole body with the palms of the hands, whilst in the cold bath, is strictly enjoined and should never be omitted, as the effect will be more salutary.

THE HALF-BATH.

This bath is very much after the make and fashion of one of our usual full-length domestic chamber baths, such as are in general use, and is mostly applied as a preparatory one. The water used in it seldom exceeds six inches in depth, and is generally used tepid,

though the temperature is often made to vary in the different purposes to which it is applied. The patient sits in this bath, and is well rubbed by the baddiener, assisting himself as much as he is able, frequently wetting his hands for that purpose; the time usually occupied is from five to ten minutes, but in some cases it is quite uncertain. Sometimes it is used alternately with the cold bath, commencing with the tepid, plunging into the cold, and returning to the tepid; thus novices are prepared for the full-bath. Those who are disabled from going to the cold bath, are supplied with a half-bath in their chamber.

Priessnitz makes this his favourite bath in the cure of fevers generally, and with astonishing good effect; he also uses it with the opposite intent, namely, to create a fever, in order that he may bring about a crisis by drawing the humours to the surface; under both these considerations, he not unfrequently keeps the invalid in this bath for hours together, thus he renders a very gentle, mild bath, one of the most powerful. Its advantages are too great to speak of in this brief space; suffice it to say, it will be found one of the most essential in the hydrotherapeutic operations.

THE ABREIBEN, OR WET SHEET-BATH.

This is another substitute for the cold bath when circumstances do not warrant the latter, and an exceedingly

delightful and refreshing one it is. A sheet is well saturated with cold water, but not dripping, which the baddiener so places over the patient (who stands in the middle of the room,) that the whole of the person is enveloped; both parties commence rubbing, the servant standing behind, making use of both hands by laying hold of a fold of the sheet, which he uses as a housemaid would her scrubbing brush, and which is continued for about five or ten minutes; afterwards this is exchanged for a dry one, which is used in a similar manner; by this time a very agreeable warmth and comfortable state of feeling ensues, which is kept up by subsequent exercise in the open air.

I can strongly recommend this as a mode of preserving the general system against change of temperature, thus fortifying the body against attacks of cold, and as a means of purifying the skin. The best time for the application is immediately upon getting out of bed in the morning.

THE DOUCHE-BATH.

There are several douches at Gräfenberg and Freiwaldau; latterly a very commodious one has been erected at Gräfenberg for winter use, consisting of one large waiting room with a stove in it, two distinct inner chambers which further lead to two others, into which the douche is playing. This is a comfortable accommodation for douching, but it has, like all the rest of them, a

great disadvantage in regard to its locality, being placed in a dell of the forest, which is troublesome and inconvenient to arrive at for those not strong on their legs. All these douches are half an hour's walk from the dwelling, which is said to be requisite on account of insuring a proper degree of warmth, previous to submitting oneself to them; this part of the business could just as well be effected by having them close to the premises, for the patients would regard the necessary advice in this respect, just as much as in other cases of the same importance.

The water is conducted from the upper mountains to these buildings through wooden pipes, from the termination of which is attached a square wooden spout, from whence the water falls perpendicularly in a column varying from one to three inches, and in height from ten to twenty feet.

The douche is one of the most powerful baths there is, its effects on the organism are great, exciting vital action in all its functions, partly by its mechanical force and partly by its temperature; it should therefore be used with discretion, particularly when a crisis is approaching or apprehended, for it may then be requisite to discontinue it altogether for a time. Its action is so great that it seems to move the very inmost recesses of the body and excite its morbid humours to the surface, and thus frees the system from impurities which, in all probability, have been accumulating for years. But notwithstanding its general good effects,

great caution in its use is highly requisite; for by exposing oneself too long to its action, it may prove injurious, particularly with sensitive constitutions.

Exercise must be taken before douching, in order to create a comfortable degree of warmth, so as to offer more resistance to the cold, and thus excite a better reaction and proper energy of the body; a glass of water taken before and after the douche is an excellent auxiliary to this; but a good rubbing when drying, and walking afterwards, is indispensable, and must, on no account, be omitted.

On entering the bath, wash head and chest, then fearlessly go under the stream, and receive it on the shoulders, neck, and back; then uniting the hands over the head, the stream falling upon them will descend like a shower bath all over the body. By means of poles which are fixed conveniently, the position may be changed in numberless ways to expose all parts of the body, the region of the stomach and abdomen always excepted. The duration of the douche varies from two or three minutes to fifteen. In summer, it is frequently taken twice a day; in winter, five minutes is considered a long time. On leaving the douche, a slight cold is felt, more or less according to the temperature of the atmosphere; but a feeling of warmth is soon manifested, the circulation of the blood becomes more active, and all the organs of the body assume a high degree of activity.

The douche is beneficial in strengthening the general

functions, and promoting a proper circulation of the blood; it is serviceable through its searching action on the body, by stirring up vitiated humours, otherwise firm in their stronghold, to the surface of the skin, and expelling them in the form of crises, &c. It is especially useful in long standing sprains, weakness of the extremities, and general atony of the muscular system, arthritic cases, and rheumatism. About two hours after breakfast is considered the best time for douching; but many resort to it before that meal.

LOCAL BATHS.

Though local, these baths are general in their influence; the most prominent is

THE SITTING BATH, OR SITZ-BATH.

We are indebted to Priessnitz for the invention of this bath. Few of the Gräfenbergers escape the sitz-bath once a day; some have it twice or thrice daily, from its so much esteemed importance. It consists of a round tub, very much resembling a washing tub, of about sixteen inches in diameter, with a portion cut out from one side, about one-third of the circumference, which forms the front part, so that it becomes convenient for bending the legs over it, and placing the feet on the ground, whilst the back, being higher, serves as a support; they are all nearly of a height,

but differ in circumference, according to the size of the party using them. Fresh water is poured in them until it reaches an elevation of about four inches, in which the invalid sits for a limited period, varying from ten minutes to an hour or more, according to circumstances. Only a small quantity of water is made use of in this, as well as in some of the other shallow baths, that reaction may be sooner effected; for if too large a quantity of this element were to be employed, the consequence would, in some cases, be a determination of blood to the inner organs, from the body not giving out sufficient caloric to heat it to an equal temperature with itself, whereas, on the other hand, a small portion quickly attains the heat of the blood, and so produces a quicker reaction.

The patient, whilst sitting in the bath, is covered with a sheet or cloak, and must not remain passive, reading, as erroneously represented in some of the plates; but must use his hands, applying as much friction as possible to the abdomen, &c.

The feeling in taking this bath for the first time is far from pleasant; but its important action in drawing the caloric down soon becomes manifest by the water becoming of the same temperature.

The effects of this bath are highly beneficial in a great number of diseases, particularly of the stomach and bowels, removing obstinate constipation with little or no difficulty. Also in all disorders of the generative system, it will prove highly efficacious.

One or two sitz-baths, of from ten to fifteen minutes' duration, daily, will act as a powerful tonic; and where strengthening of the parts is the object, nothing can be better. It should, however, not be taken immediately before going to bed, being too exciting.

Morning and afternoon are the best times; a walk should follow, water being taken slowly and in small quantities during and after the bath. In diseases of the womb, it sometimes acts quite in a miraculous manner; the profession may well be astonished and incredulous, until they test the truth of it. Irregular menstruation is speedily improved, and cured in the course of a short time by its use. It checks the too abundant flow by its strengthening and contracting property; and on the other hand, by stimulating and adding tone to the organs, promotes it, if suppressed. Leucorrhœa yields effectually to its judicious application, combined with other parts of the treatment, comparatively in a very short time.

It is a potent agent against diarrhœa, dysentery, and cholera. For costiveness there is no better remedy, and the exhaustion consequent upon taking medicinal remedies is entirely obviated. For piles a certain cure succeeds a persevering use of the sitz-bath. But likewise in diseases of the heart, chest, head-aches, &c., these baths are very effectual, and form a most important point in the treatment of maladies by the Water-cure.

THE SOLE-BATHS.

These are taken in a small tub affording room for the feet; the water is about an inch deep, cold or tepid, and applied for short or long periods, the same as the foot-baths, but they act in a much milder degree.

THE FOOT-BATHS.

In this bath the water reaches over the ancles; rubbing the feet together or with wet hands is essentially necessary; its effect is derivative, counteracting or drawing down inflammations, &c. This is an important doctrine, and we find Priessnitz always endeavouring to lead the morbid humours to parts which are less subject to derangement.

These baths are exceedingly useful in relieving affections of the head and eyes, and particularly serviceable in curing cold feet, which is usually accomplished by putting the feet in cold water for ten or fifteen minutes, once or twice a day, rubbing them the whole time as already stated, and taking exercise afterwards. Before the application of these baths, the feet should always be made warm by friction or walking.

Corns and bunions will yield to this treatment after removing the horny or hard cuticle; wet soothing bandages being nightly applied.

THE HEAD-BATH.

This is taken in a kind of brown earthenware baking-dish, which at Gräfenberg is the wash-handbasin for those who choose to use one. When about to be made use of, it contains water to the depth of two inches, and the most convenient place for using it is most assuredly the sofa; the patient, lying at full length, places the back of his head in the bath for about ten or fifteen minutes; then alternately the sides for five minutes more. It is found very useful in chronic affections of the eyes, rheumatism in the head, deafness, convulsions, &c.; and is particularly serviceable in infantile disorders of the brain, but is always used in conjunction with other remedies appertaining to the water treatment.

THE ARM AND LEG BATHS.

These are taken in narrow tubs suitable for the purpose: the arms and legs are immersed, and are chiefly used for allaying inflammation of the parts, and promoting external abscesses in diseases of the joints of long standing. Their duration is sometimes considerable, an hour and upwards. For allaying violent pain in the hands, and drawing off any inflammation there, the elbow is kept immersed in cold water for half-an-hour or more, according to the state of the suffering, thus acting as a derivative.

THE EYE-BATH.

Small glasses made for the purpose, filled with water varying in temperature, are applied to the open eyes, and continued for about five minutes. The action of these baths is materially assisted by rubbing the forehead and temples with the hand at liberty, dipped in cold water. They will be found beneficial in inflammation of the eyes, and other painful affections of the parts. Those who study and write a great deal, who find their eyes getting weak and painful, the head hot, &c., will do well to take these baths twice a day for five minutes, adding a sitz-bath of twenty minutes once a day.

The use of snuff-taking may be quite superseded by sniffing up a little cold water several times a day, and ejecting it; the effect is quite as good, and a bad habit may thus be got rid of.

THE MOUTH-BATH.

This may not be considered a correct heading: but for want of a better term, I beg leave to denominate it such. The internal cavity of the mouth and throat is repeatedly washed and gargled with cold water, which is ejected as often as it gets warm.

Dr. Granichstädten, of Vienna, relates the case of Anton Pauly, a merchant of Presburg, who, for the sake of humanity, made it public in the Presburg

Journal, "Æhrenlese" of 10th August, 1832. He had been a sufferer for twenty-five years with pains about the chest, spasms, and constipation, to which, in later years, were added sleepless nights and loss of appetite. All the prescribed remedies were of no avail; new complaints arose, and his pains increased; deafness, acute pains in the joints, eruptions on the skin, and bleeding of the gums and tongue. Under these unfavourable circumstances, he resorted to cold water for relief, drinking of it freely, and using it as a wash for the mouth. He applied it in this manner in the morning, after dinner, and in the evening, using it perseveringly to the amount of ten pints a day for eight weeks, and he had the satisfaction of seeing all his disorders gradually disappear, although between forty and fifty years of age.

This bath is very serviceable in inflammations of the mouth, gums, &c.; it should, as an act of cleanliness, be used after meals, which preserves the teeth. Very cold water should be avoided immediately after hot food or drink, being injurious; and it may in time spoil the enamel of the teeth.

INJECTIONS.

Injections of water are used up the nostrils for scrofula, and other affections of the nose; into the ears for deafness, &c.; and into other cavities of the body, for a variety of purposes, with the most satisfactory result.

THE UMSCHLAGS, OR WET BANDAGES.

These bandages form an important adjunct to the cure, and are made use of in three different ways with dissimilar intentions. The first, or cold wet anti-inflammatory compresses, have for a long time been used in surgery: they consist of single pieces of linen well wetted in fresh water, which are placed over the affected part without pressing the water from them, in order that they may cool the more by abstracting heat rapidly from the part, by evaporation; hence their great use in active inflammations, bruises, burns, scalds, &c.; they should be renewed as often as they become warm.

The second, or soothing compress, is a piece of linen, doubled several times and well saturated with water. This is applied to the affected part, and covered with dry linen, so as to exclude the atmospheric air. The moisture contained in the linen is soon transformed by the heat of the body into a vapour; the part, therefore, may be said to be in a constant vapour bath: when hot, it must be changed. It is useful for promoting suppuration and discharge of ulcers, and serves as a sedative in painful affections. It is often used conjointly with sitz and foot baths.

The third kind is of quite an opposite character; pieces of linen are soaked in water and *well* wrung out, they are applied where required and covered with dry linen, so as to protect the parts carefully from the action

of the atmospheric air; they should be changed as often as they get dry.

It is a bandage of this kind that is worn round the waist day and night by all patients, and is about three yards long and one foot wide, a portion of which, just enough to go round the body, is wetted, and well wrung out; this is wrapped round the body closely, and as closely covered over by the dry part, which is tied by strings attached to its end. This bandage is singularly efficacious in aiding digestion, and promoting the peristaltic motion of the intestines, very essential to insure a proper action of the bowels.

No blister can draw better than these stimulating bandages, perseveringly employed; they excite and strengthen the part, and are particularly useful for dyspeptic, scrofulous, gouty, rheumatic, and syphilitic diseases. They are often applied near inflamed organs, so as to dislodge the vitiated humours, by abstracting heat from the neighbouring, and generating it under the covered parts.

The most relaxed skin is brought into activity by the application of the stimulating umschlag—if for the whole body, in the shape of a wet sheet.

The compresses often assume various shades of colour, especially when acting on parts where ulcers had previously existed; the water they are washed in, clearly manifests a discharge through the skin, by the great discoloration which takes place, and in some instances, by the most nauseating effluvia. I have known new com-

presses to become thoroughly rotten in a short time from these exudations, a proof of the destroying effects of these viscid and acrid humours.

Caution in their application is necessary; their effect is warming and soothing when not wrung out too much, and not remaining on too long; the time for changing them should not be neglected, for before being quite warmed they act in a *cooling*; if quite dry, in a *stimulating* manner.

I may remark, with regard to the material for these compresses, &c., that fine linen should not be used; because it does not contain a sufficient quantity of moisture, and in friction does not sufficiently stimulate the skin. The compresses, however, to be used in ulcers, or highly inflamed parts, should be finer, which excite the parts in a much less degree than the coarse linen.

PART V.

HYDROTHERAPEUTIC TREATMENT OF DISEASES.

FOUNDED PARTLY ON PERSONAL OBSERVATION, PARTLY ON THE
EXPERIENCE OF MANY EMINENT MEDICAL MEN ON THE CON-
TINENT, AND THEIR DEDUCTIONS FROM SUCH EXPERIENCE.

IN the preceding parts we have descanted upon the general principles of Hydrotherapia. We gave the theoretic views of Priessnitz, and explained the manifold ways in which he applies, and is capable of extending his remedy. The present part shall be devoted to the consideration of such diseases, as experience proves may with advantage be treated upon the Priessnitz principles. I will not in this place enter into a comparison between the medical and the Hydrotherapeutic treatment. Time only can prove the superiority of the latter, if not in all, in most diseases.

The historical sketch in the beginning of this work exhibits the great value which the ancients attached to water, and the various ways in which they used it; but none ever thought of combining and modifying its application in such numberless ways; thereby superseding, to a vast extent, the use of our pharmacopœia. This was granted to Priessnitz, and through him will be

handed down to posterity. It is through him we are now enabled to treat and eradicate diseases with a simple remedy—a gift of nature—with a natural process and a due regard to the vital power.

Every organic life is limited, on the one hand by the constant struggle of its eternal idea to reveal and maintain itself—and on the other, by the influence of the outer world—an outward and an inward agent thus form all and every manifestation of life.—The external agent is formed by all that exists without the sphere of organic life, and that effects this in a certain degree. The internal agent, however, is the innate cause of all development of life, the lasting idea of life, and which is only developed in and by the influence of the external agent. What reason acknowledges here from general principles, experience fully confirms. All special and definite actions in nature are brought about by the alternate working of two opposite agents; there is no magnetic, electric or chemical process, no solution, no crystallization or combustion, unless two different bodies—two substances—act and react upon each other.

What appertains to every process of nature is applicable to the particular process of life, as the single organization in which this exists, must, as part and parcel of entire nature, submit to her laws. Life in the individual is, therefore, not one power but two, opposed to, and alternately acting on each other; and which, forming as they do, the principle of life, may be called vital power. The normal and harmonious, as well as

the abnormal moving of the functions of life, are produced by these two powers. Therefore to check an abnormal diseased manifestation of life, and lead it on in its development to the recovery of health, the external agent must be called into play, and regulated so in its influence on the internal one as to alter the product of both, and reduce it to the normal state. All the powers and functions of the organism, stand in such close connexion, that it is only in their harmonious and equal action we find health. The vital power and the organs, therefore, are in constant alternate action and re-action; the derangement of one organ argues the derangement of all, and which to a certain extent takes place, although we may not always perceive it. The vital power being the result of the harmonious action of all the functions of the organism, it is the first and most important point to which attention must be paid in the cure of disease. In the strengthening of, and rendering the vital power predominant, lies the hope of recovery. The disturbance of the equilibrium in any one power will thus necessarily produce a change, either by a direct mechanical outward attack on an organ, in consequence of which the functions are changed, and which reacts upon the vital power, or by attacks on the vital power itself, thereby reacting on the outward organs, and producing a change in the activity of their functions.

This view is borne out by the fact of the happy results of Water-cures being always preceded by percep-

tible secretions of humours. These critical appearances, called crises, being the product of the struggle of the vital power, can only occur when the organism is strengthened, and the vital power, through this, increased sufficiently to struggle with encroaching disease. The extent of the vital power, which is always in exact proportion to the more or less advanced diseased appearances, determines the longer or shorter duration necessary for the strengthening of the vital power, as also the more or less violent critical struggle between health and disease.

Two important questions must be decided in proceeding to the cure of disease by water: First, *The idiosyncrasy of diseased persons*; and, secondly, *What diseases are suitable for the treatment?*

As success can only be expected when the vital power is still able to combat the encroachment of disease, or capable of being recovered sufficiently to commence the struggle, it follows that the solution to the first question lies simply in the state of the patient's strength. *If the existing vital power be sufficiently strong to bring about a proper reaction by the stimulants applied, without succumbing to these stimulants, there is a possibility of success.* Progressing disorganization, or continued obstruction of such organs, upon which the process of life essentially depends, must cause life—the vital power—to be depressed to such a degree as to render a recovery impossible, if the functions of such organs cannot, in part at least, devolve upon others. The vital power

can, under such circumstances, never attain its full energy. Now, as the chance of success depends upon this alone, we arrive at the answer of the second question: *What diseases* are suitable for the water treatment? All advanced disorganizations of inner organs are unfit for the treatment. The utmost that can generally be expected is a degree of alleviation of suffering, and a moderate extension of the span of life by a judicious dietetic use of water. Under this category would come, consumption in its last stages, organic diseases of the heart, far advanced chronic dropsy, cancer, &c.; neither can internal organic malformation be removed by the water treatment.

The practical solution of these important questions is very difficult; experience, judgment, and talent are necessary. A due guiding of the vital power, or support of it in its struggles to recover health, is the most essential point; and according to the disease, age, sex, and constitution, the practitioner will have to employ the *anti-inflammatory, exciting or stimulating, strengthening, derivative, soothing or revulsionary process*; all derived from the various combinations of the many applications of water as Priessnitz practises it, and by which he has saved hundreds from seemingly inevitable death.

We shall now proceed to lay before our readers the diseases which are advantageously treated by the Water-cure; but among the many disorders which the system is highly calculated to remove, we cannot help, in con-

cluding these remarks, to point out the so-called drug diseases. These are maladies generated by the use or abuse of medicines, particularly mercury, which entail a train of sufferings, rendering life miserable and a burden to the individual. Priessnitz found an eradicated remedy for them in pure cold water. The fact is incontrovertibly proved by the hundreds and thousands cured of such diseases at Gräfenberg, and similar institutions: who, given up as lost, were there restored to life, health, and enjoyment. Were the Water treatment effectual in nothing else, it and its founder would find honourable place in the history of medicine: but the inference should not be lost: remove the cause—the inundation of patients with deleterious drugs—and the effect will be, the immediate expunging of, at all events, one class of diseases from our records. In proportion as our wants and mode of living get simplified, we shall require less of stimulants, and in proportion will disease and suffering, till now advancing with the progressing state of civilisation, be diminished.

N.B. I have made use of the word *tepid*, in speaking of the temperature of water throughout this work, for want of a more appropriate term, but do not mean it to denote a temperature of 80° Fahrenheit, which is its general signification. It must be understood as water varying from 60° up to 80° Fahrenheit, according to circumstances.

SECTION I.

Fever.

No other method of cure so soon obviates the endangering of life in many malignant fever diseases as the use of cold water, which, moreover, due caution being exercised, leaves no bad consequences. Any doubts as to the efficacy of the Water treatment in fevers, can be at once removed by a short visit to Gräfenberg, Priessnitz never failing in a case; and further confirmation will be found by reference to the accounts published by our own countrymen, Currie, Wright, Jackson, &c., and among the continental doctors, Reuss, Colbany, Fröhlich, Milius, &c.

Abstractedly considered, fever is not only a disease, but also a result of the struggle between the vital power and the inimical influences, external and internal, which intercept the due and regular action of all the functions of the organism to an extent sometimes endangering life itself.

The struggle is manifested particularly in the blood vessels, being the vital functions, but does not fail also to draw the animal functions into the general struggle.

We may, therefore, define fever to be the exertion of the whole vital power to render nugatory the attacks on the organism, or on single parts thereof, and to guard it against disease, or overcome it where these influences have already taken place to an extent to cause disease.

Fever never can be local; it affects the whole body: it may exist without any other visible affection, but no disease is free from feverish appearances, however trifling. The violence of fever will depend upon the violence of the attack on the organism, and the extent of the resistance capable of being offered by the vital power. The effects of fever are as happy in the restoration of health, as they are injurious, if this end, whatever the cause of failure, be not attained.

We know from experience that in fevers certain appearances, and their durations, occur and recur at regular intervals; from this we make inferences and deductions, regulating our treatment accordingly.

In endeavouring to treat fever upon hydrotherapeutic principles, we must note whether it is simple; that is, such where its action is chiefly manifested in the vital organs, the other organs of the body suffering in a more subordinate and equalized degree; or whether it is compound, namely, where the fever has a near reference to some other disorder. Fever in the latter case often is the consequence of such disorder; the signal, that the vital power has collected all its energy to eject forcibly the inimical influences from the organism, influences which the organ attacked is unable to withstand. This is frequently the case in fevers accompanying inflammations, catarrhal, nervous and gastric affections; in wounds, rheumatism, gout, &c., in which cases fever, the vital power possessing sufficient energy, is the forerunner of a perfect cure.

In the treatment of fevers, we must note the appearances before the access of heat, and endeavour to equalize them. Much depends upon this, particularly where the strength of the individual is much reduced, or where violent fluctuations may from some cause be apprehended. By anticipating the attacks, we aid in bringing about a milder and quicker termination of the disease.

SIMPLE FEVER.

Symptoms: alternate cold, dry heat, perspiration, and a quick pulse, thirst, and loss of appetite. Sometimes it is ushered in by degrees, sometimes comes suddenly. Causes: bad air and diet, colds, mental afflictions, &c. Treatment: if the patient's strength is not too much reduced, he is, if the fever begins with the cold shiver, placed in a tepid half-bath, the back, abdomen, and loins being well rubbed, water of the same temperature being poured down his neck; this is continued until the shiver yields to a more easy feeling: he is then dried, and put to bed. When symptoms of heat are manifested, the patient is wrapped in a wet sheet which is changed as often as the heat becomes violent. This change of sheets is continued until a mild perspiration breaks out, which generally succeeds as the excessive heat subsides. In the last sheet, perspiration is kept up for thirty minutes, more or less, according to circumstances, and promoted

by water drinking; a half-bath of five to fifteen minutes' duration in tepid water ends the fever. As often as there is a fresh fit, the treatment is renewed. The quantity of water to be drunk, is according to the invalid's desire.

By the half, or sitz-bath, to be employed at the commencement of the cold, the access is broken and shortened, and the skin prepared for the promotion of perspirations.

If the fever begins with heat, or the first application is neglected at the shivering fit; if prostration of strength, or increased excitability be indicated, the treatment is commenced with wet sheets. Air and moderate exercise in the interval of the prescribed baths are to be strongly recommended. Should violent critical appearances set in—such as bleedings, diarrhœa, vomiting, congestions of the blood in the head and chest—foot and sitz-baths, umschlags and plentiful drinking of cold water, serve to soothe and aid the critical secretions.

When the fever is abated, the strengthening process is resorted to for completing the cure. Gradually the transition is made:—a wet sheet in the morning for a while, with a tepid bath after it, and by degrees a colder one. With an accession of strength, the wet sheets are exchanged for gentle sweatings in dry blankets, and by and by a douche. A heating compress is worn round the waist constantly, to aid digestion, and sitz-baths of thirty, forty, and sixty

minutes are alternated with the half and full bath, as may be advisable.

In all fever diseases, a proper diet must be observed, and nothing but fresh cold water taken for drink; if not accustomed to cold water, drinking small quantities at first will soon enable the most delicate stomach to take it: cool, light nourishment should be administered; hot food avoided.

This is the general treatment; of course not exactly applicable for *every* individual.

INTERMITTENT FEVER.

If some other ailment exists or is forming, and the fever is the accompaniment, the treatment must principally be directed against the disease; for the fever, in that case, is only a symptom of the disorder. According to the nature and violence of the disease, the treatment will be modified.

The intermittent fever is distinguished by regular accesses every other day or every third day. Each fit commences with violent cold, not unfrequently accompanied by vomiting, succeeded by great dry heat, thirst, and violent headache, and terminates in abundant perspiration; the cold lasts from a few minutes to a quarter of an hour; the heat and perspiration many hours. In the intervals, the patient is in comparatively good health.

Proper treatment will soon obviate all danger, and after the access, it should be particularly directed to the cause, generally irregular action of the bowels, indicated by a coated tongue, loss of appetite, nausea, fulness in the stomach, &c. When the attack is violent, half-bath, sitz-bath, and wet-sheet are resorted to, to arrest its progress or mitigate its violence. The application of the wet sheet just before the paroxysm will, in most cases, greatly tend to diminish its force. The treatment is repeated in every fresh access, until the fever is subdued.

INFLAMMATORY FEVER.

The symptoms denote general inflammation in the system; face red, pulse hard, tongue scarlet coloured, urine high-coloured, unquenchable thirst, skin dry, body costive, great restlessness, and loss of sleep. It lasts five, seven, eleven, and sometimes fourteen days. It attacks persons of all ages and habits, and at all seasons, particularly in spring, and is common in cold and temperate climates. Sudden transitions from heat to cold, swallowing cold liquor when the body is much heated by exercise, intemperate indulgence in spirituous liquors, violent passions of the mind, &c., &c., are among the exciting causes.

An antiphlogistic treatment must be resorted to, but the practice of blood-letting in such cases must be utterly avoided. Excitement of all kinds should be

eschewed, the diet sparing, and plenty of cold water given for drink. The stimulus of heat must be especially avoided, covering and clothing light, exposure to air and free ventilation of the apartments as much as possible. In general cases, the treatment, as in simple fevers, will, with these precautions, be sufficient. In cases of local inflammations, the treatment must then be directed against these; half and sitz-baths, with soothing compresses, will subdue the inflammation, and at the same time the fever.

BILIOUS FEVER.

In these there is a complication of gastric, catarrhal and rheumatic affections, which are chiefly consequent on defective secretions and excretions; the treatment must be directed against the diseases producing the fever. To overcome occasional attacks of fever during the progress of a cure, and for the promotion and facilitation of critical appearances, stimulating wet sheets are made use of, and where there is local inflammations, soothing compresses to the parts adjacent.

NERVOUS FEVER.

There is a double appearance in nervous fevers, an excited or blunted state of the nerves. The first begins with moderate cold and alternate heat, added to great

weakness and relaxation. The pulse is quick, weak and irregular; patient restless, talkative, and unable to sleep. The eye quick and wandering, and the senses often keen. The skin burning hot; the tongue at first is not much coated, but as the disease advances, gets dirty-brown, dry, cracked and trembling; involuntary evacuations by stool and urine occur: the invalid fancies he perceives all sorts of phantoms, cries and laughs alternately; becomes delirious, which progresses to insanity. The second species has quite contrary symptoms. The pulse is slow, weak and small—the patient indifferent to outward impressions—lies quietly in bed—sleeps fast—his senses are dull—sight and hearing weakened; and the whole physiognomy assumes somewhat of a stupid look. Pain is not complained of in either case. A burning, dry, brown, cracked and trembling tongue is present here too. There is delirium, an utterance of low murmuring sounds. The drowsiness often increases to stupefaction. The duration of a nervous fever is fourteen days at least, frequently three to six weeks. The recovery is seldom ushered in by critical appearances, but by diminution of the accesses. We all know that this is a dangerous fever, and particularly if accompanied by inflammation of the nobler organs, as the brain, &c., which is not a rare case. Nervous fever is not always a self-standing disease, but the produce of other diseases.

The epidemic nervous fever, causing vast devastations in time of war, is often connected with the putrid fever; it is therefore also called the contagious typhus. In

these forms of the disease petechiæ—literally, flea bites, from the resemblance they bear to these—appear on the surface of the skin, and which always denote great danger. This is called the petechial fever.

The treatment of nervous fever requires the greatest nicety of judgment, as from the weakness and excitability of the nervous system, the applications of cold water may easily become too exciting. A cooling treatment is essential. The wet sheet here offers advantages which cannot be replaced by any other remedy, acting in a soothing, and at the same time strengthening manner. It is therefore advisable to commence the treatment with these, changing them as often as circumstances require, and only very gradually adopting the sitz and half baths, which on the other hand should not be too long delayed. Nor should the water for these baths ever be of a higher temperature than 65° to 70° Fahrenheit.

In the latter stages of the disease, when delirium, &c., has set in, an energetical and judicious application of the half and sitz baths must be resorted to, with friction of the whole body, and cold compresses on the head and neck. Where nervous fever is a symptom and not a disease, there is no fear that in treating it the regular process of the cure may be interrupted, for the baths take effect on the whole organism, and the subduing of one symptom can never be accomplished at the expense of others, or of the original disease.

The limits of our work will not permit us to allude

more particularly to the experience of olden times ; but as to the happy effects of water in malignant fevers, in more recent periods, a few remarks may not be uninteresting. The surprising effects of the treatment of Currie, Wright, Jackson, &c., will be found in the writings of the times. We all know that in the malignant epidemic fever which broke out in 1813 and 1814 in Germany, and the neighbouring countries, thousands were saved from impending death by water. The great German physician Hufeland declares, from his vast experience, that fresh air and cold, (applied by means of air and water,) and a due regard to cleanliness, are the best remedies against typhus. Water was drunk plentifully and applied externally in various forms then. The most usual and highly beneficial plan consisted in the application of cold compresses on the head, as the principal seat of suffering ; if putrid diarrhœa occurred, or the abdomen was tympanitic, a compress round it did most essential service. A second way was the washing of the whole surface of the body with cold water ; by these means, the fever was diminished, the violence of the whole disease abated, and the skin stimulated. The drier and hotter the skin, the colder the water. A third manner of applying it was by pourings over with cold water, or ablutions and falling baths (douches). This method is the most powerful, but most successful, and indeed, frequently wonderful in its result ; the greatest discretion in putting it into practice is, however, essential.

With young and robust constitutions, in the earlier stages of the disease, with a dry and hot skin, the effect of the third method is most beneficial. In advanced stages, with old and exhausted, weakly and excitable persons, it might prove injurious.

Tepid baths, with cold compresses, have the preference here. No medicine of any kind was employed by Hufeland nor by Dr. Horn, of Berlin, who also effected a great many cures in the same epidemic fever by the simple agency of water. The experience made by Goeden also proves how beneficial cold ablutions are in typhus fever. He instances many cases of recovery by it, and the plentiful drinking of cold water, of some, and the death of others who had been made to drink wine, in the years 1814—15; the contrast being heightened by the recovery of such patients as at the same time enjoyed the cool air out of doors, or in a cold room with all the windows opened in the midst of winter.

The applications of water by the medical men of the time were varied, but all successful; the cooling and water treatment saved those who submitted to it from choice or necessity. Whilst others, prejudiced in favour of old customs, and particularly people living in towns, fell a sacrifice. Many physicians and their modes of operation might be named, but it would lead us too far; it may be useful, however, to embody the experience made, in a brief summary, viz. : — cold water is the best beverage for those afflicted with

nervous fever. Let them drink it as often and as much as they please, due caution being exercised during a cold fit and abundant perspiration; but in a dry burning fever it is highly beneficial: the internal burning and anxiety are diminished, the pulse and breathing more calm, delirium is moderated, the evaporation by the skin greater, and a general perspiration and refreshing sleep frequently is the result.

The external application of cold water in the most malignant nervous fevers surpasses all medicines, and is most beneficial in the first stages of the disease.

In the milder forms, cold washings and cold compresses on the head or abdomen, according to circumstances, are sufficient; whilst in more malignant forms ablutions or pourings over with cold water are essential.

The greater the heat of the patient the lower should the temperature of the water be; and if not obtainable cold enough, should be iced, the compresses particularly.

When the patient is cold, the outward application of *cold* water must be avoided; and likewise if the vital power is much reduced by constitution, old age, or the encroachment of disease.

PUTRID FEVER.

This form is seldom a disease of itself, but produced by other diseases, particularly nervous fevers, &c.

There is in this disease a great tendency to putrefaction. The symptoms are: great and burning heat, small pulse, great debility, fetid breath and perspiration, and fetid evacuations; petechiæ, streaks of blood on the skin, hemorrhage, very fluid dark blood, distended abdomen, excessive and often involuntary motions, dark brown urine, clammy and debilitating sweat; frequently accompanied by other nervous symptoms. The putrid fever is one of the most dangerous, lasts three to four weeks, and longer, if death does not occur sooner.

Cold regimen is the most important remedy. The room must be well ventilated and cool, and all that is taken, cool. Cold water for drinking, and cold washings of the whole body are urgently to be recommended. Then follow cold compresses, cold injections, ablutions, and, if practicable, cold baths. The frequent rinsing of the mouth with cold water is very useful.

CHILD-BED FEVER.

Priessnitz is said to have been very successful in the cure of some desperate cases of this form; but of course, from the materially reduced state of the sufferer, none but the most skilful hydrotherapeutic practitioner should attempt it. Priessnitz made use in these cases of wet sheets, and occasionally a half-bath, with rubbing of the feet; after a gentle perspiration, a tepid half-bath is given. In cases of great debility and unconscious-

ness, he ordered a washing of short duration of the whole body—face, stomach, back, arms, and feet, being well rubbed—before proceeding to the wet sheets. Sitz-baths he avoids in such cases, to prevent over-excitement of the parts. Women, who before and after pregnancy, are accustomed to proper dietetic observances as to water, are seldom troubled with this fever, and when it attacks them, it is in a very mild form.

YELLOW FEVER.

A yellow colour of the skin, and vomiting black matter are its characteristics; America and the West Indies its home. The accompanying fever is nervous or putrid. Death frequently ensues after forty-eight hours. Many have fallen a sacrifice to it, also, in some of the Spanish and Italian seaports, as Gibraltar, Barcelona, Livorna, &c. The treatment would of course have to be modified according to circumstances. On the authority of American and English physicians of eminence, we find cold compresses on the head, cold washings and ablutions most beneficial.

SCARLET FEVER.

The symptoms consist of a lighter or darker redd-

ing of the skin, over the whole or part of the body, inflammation of the throat, burning heat, and a quick pulse. The eruption generally remains four to six days, getting gradually paler, and the skin becoming desquamated at the hands and feet. The fever is inflammatory, gastric, or nervous, and (in some epidemics) putrid; mostly, however, it is of the nervous character, is frequently dangerous and contagious, carrying off many, particularly children.

Under the head of skin diseases, we give the general treatment, to which we refer our readers; it applies to this disease, as do also the remarks regarding the warm treatment in use till now; than which nothing can be more erroneous, as the experience of late years fully testifies. Of course, a due and careful regard must be paid not to expose the patient to draughts, but a cool regimen is absolutely essential.

In no disease have the beneficial effects of cold water been more prominent than in scarlet fever, particularly in its malignant forms. Currie cured vast numbers by it, and his own two children, one of five, and one of three years, among the number. Wright and Gregory were also very successful. The Hungarian Doctor, Colbany, had thirty eight patients in the violent scarlet epidemic in Presburg, *all* of whom he cured by water. Dr. Reuss, in Aschaffenberg, in 1820, cured thirty to forty by it, losing one child of three years and a half old. Kreysig, in Dresden, and Horn, in Berlin, mention many cases of cures by cold ablutions, or pourings over,

in scarlet fever combined with inflammation of the brain. Above all, however, the celebrated Fröhlich, in Vienna, experienced the most happy results by his internal and external water applications in this malignant fever. He, however, always tried the temperature of the patient, keeping the thermometer ten to fifteen minutes under the arm-pits. He used water as washings, baths, and ablutions. The greater the heat, the colder the water. When the heat of the body, with a dry skin, did not exceed 98° Fahrenheit, he ordered—as often as the skin got dry—a washing of the whole body in water of 90° Fahrenheit, giving a cup of aromatic tea to aid perspiration. His rules were fixed as to the higher degrees of heat in the body. If 100°, he ordered washings in water of 75°.

104° 60°

107° to 108° 34° to 40°

Fröhlich states cold baths to be more effectual than washings, but when the heat of the body is high, he considers ablutions most effectual. In such cases he had one or two pailsful of water of 40° to 50° Fahrenheit, poured over the naked body of the patient, and repeated several times a day, as the heat again rose after the cooling effect of the ablution. Sometimes two or three ablutions were sufficient for the cure which was established, when, after the last cooling, the body attained its normal heat, and retained it for six to eight hours, the skin becoming soft and exhaling secretion; then a few washings or baths of 92° to 94° Fahrenheit were all that was

required. Fröhlich states, he never experienced the eruption to recede, but the patients speedily recovered.

Many more names might be quoted for the treatment, eminent in their profession on the Continent; Granichstädten, of Vienna, among them; he pursues the Priessnitz method with success.

SECTION II.

Inflammations.

The cause of every inflammation is an accumulation of blood in the organs affected; hence redness, heat, pain, and swelling, are the symptoms; added to which, we have more or less obstruction in the due performance of the functions of the organs affected, and more or less of fever. Inflammations rank amongst the most considerable diseases of the organism, but are more easily overcome than many other diseases, with proper treatment, and an otherwise pretty healthy state of the body.

Those who live temperately, and observe proper dietetic rules as to water, cut off many an inflammation in its birth.

The critical appearances in inflammation are very various: the happiest result is dispersion. Critical perspiration, urine, diarrhœa, or hemorrhage, terminate, it if the treatment is not too long delayed; where inflamma-

tion has reached such a height as to disturb the functions of the parts, and affect the neighbouring ones in some degree, eruptions in the skin will be the forerunner of recovery. Inflammation may end in hardening, suppuration or mortification, if neglected or improperly treated. The treatment will always have to be directed against the whole organism and not locally, in considerable not superficial inflammation. In external inflammation, the consequence of slight wounds, contusions, &c., unaccompanied by fever, and with otherwise healthy persons, the treatment may be local, though, if general, it is to be preferred. Above all things the cause must be ascertained and got over. All excitement of mind and of body, particularly of the affected parts, must be avoided. The attainment of the dispersion must be the object: therefore the congestion must be diverted to the peripheric organs—the skin especially—and this will be best effected by raising the activity of the healthy organs, so as to enable these, by their increased action, to draw off the congestion from the diseased part and thus reduce the pain, gradually restoring the organ to its normal state. The more vital, therefore, the organ attacked, the more it compromises the rest of the organism—as in inflammations of the brain, spine, lungs, stomach, &c.—the more must the treatment be directed upon the entire system; on the other hand, the more self-dependent the diseased organ is, the nearer to the periphery of the body, and exposed to outward influences, as with the organs of sense, the more must the

treatment be local, in connexion with the general treatment.

For the attainment of the dispersion and diversion of the congestions, the hydrotherapeutic anti-inflammatory process is highly commendable. Priessnitz discountenances bleeding in toto: he maintains, that it only weakens the organism, and deprives it of the means of exerting the vital power. Emetics and purgatives, he looks upon in the same light, and declares, from experience, fresh cold water, judiciously applied, to be quite as effectual in averting danger, without the weakening effects generally succeeding bloodletting, &c.

In purely acute inflammation, the anti-inflammatory process, consisting in full baths or half-baths, according to the individual case, with sitz-baths and cooling compresses, are resorted to. In inflammations of external parts, cold compresses must constantly be applied: they remain longer on the parts, are changed to soothing, and lastly to exciting bandages, when all symptoms of inflammation have subsided, and the calming of the excitement, the healing of the critical eruptions, or the strengthening of the recovering organ, becomes the object. If these appearances are connected with fever, wet sheets and half-baths are employed; sitz-baths and injections at the same time aid defective digestion.

In inflammation of important inner organs, where no counter indications forbid the direct attack on the inflammation, the treatment might be as follows:—

With the strictest regard to the state of the patient's

strength—according to which the temperature of the water is regulated—as also to any other counter indications (e. g. congestions to the head and chest in the sitz-bath, induced by the bent position, &c.,) the patient is placed in a half or sitz-bath of tepid water. In this bath—with constant rubbing and adding of gradually colder water—the patient remains until the inflammatory symptoms abate considerably, cold water being drank the while. By this bath and friction the congestions are drawn from the internal to the external parts. In order to aid in the effect, it is often necessary to apply cold bandages on the parts covering, or adjacent to, the diseased organs; in inflammation of the brain, croup, &c., this must not be neglected.

Previous to the inflammatory symptoms abating, there is a cold shiver which must be awaited in the bath, and the patient be quite cold also under the arm-pits; it is only when the normal heat returns—when hands and feet get warm—that the patient leaves the bath, is dried and put to bed, more or less cooling bandages being applied to the diseased parts. Mostly a gentle sleep and mild perspiration ensue; this is washed off in a half-bath: if the symptoms recur, the sitz or half-bath must be repeated, but this is rarely the case. If costiveness or retention of urine exist, sitz-bath and injections must be applied, also stimulating bandages round the stomach and genitals to restore the functions of these organs.

For some time after perfect quiet must be maintained,

to subdue the excitement of the nerves, more or less great during the baths. The soothing plan—wet sheets, sitz-baths, of longer duration—must be resorted to. By-and-bye, to strengthen the organism, the strengthening process ensues: sweating, short cold baths, exciting or stimulating bandages, short sitz-baths, douches, &c.

Diet not too nutritious, and cool; cold water for drink, and fresh air when possible.

WOUNDS, FISTULA, &c.

Festering wounds, if accompanied by inflammations of the neighbouring parts, are treated first with compresses, not too much wrung out, and always renewed when they get warm. Tumours, before they break, often cause violent pain; to diminish this, derivative baths are used, namely, sitz, foot, elbow, and head-baths, (according to the case,) of longer duration; exciting compresses, near the affected parts, and calming ones on them. A tumour should take its own course, and not be opened artificially; nor when opened and discharged be healed by salves, ointment, or artificial remedies. This alludes particularly to the tumours frequently rising on the skin in the course of the Water treatment, and termed crisis. In these cases, when the inflammatory symptoms have abated or been subdued—after the breaking and discharging of matter—the compresses applied are more wrung out and remain on longer, but

must not be allowed to get quite dry, as in this state, by cleaving to the wound and entailing a necessity for forcible separation, the irritation would be great. The wet sheets and baths, &c., necessary to the cure are continued; at the same time the bowels must be kept in regular order.

Parts covered with wounds or affected by violent pain must not be bathed too long in cold water, but rather other parts of the body submitted to bathing.

ULCERS.

Ulcers are treated in similar manner; but the application of wet sheets at the same time, with occasional sweating and sitz-baths of long duration, are necessary; ulcers generally indicating faulty and vicious fluids, so that the body must be strengthened, in order to fit it for the preparations of healthy secretions. Ulcers seldom arise in consequence of the hydrotherapeutic treatment of inflammations, and where they previously existed, they are brought to discharge by persevering in the treatment, the organism being strengthened; once discharged, they then soon heal.

When mortification of a wound has taken place to any extent, there is little hope, although numerous examples are on record of Priessnitz effecting wonders, even in such stages; many limbs after being destined to amputation were by him restored to health. A striking

instance is related of an old wound—the consequence of a long and severe illness—being treated for sixteen weeks by Priessnitz, with anti-inflammatory, cold wet bandages, and at the same time with the stimulating douche. The pain and excitement were raised to a frightful height, and mortification was commencing. A medical man, moved by the complaints of the patient, would close the wound by artificial means, intimating, at the same time, that he might be compelled, in case of emergency, to make new wounds. A change in the treatment, however, the application of wet sheets, warming and soothing bandages, discontinuance of douche, sitz-baths of short and sole-baths of long duration, did away with all symptoms of mortification in five days, and brought the cure into regular train.

By similar derivative, soothing treatment, with a due regard to the strengthening of the organism, the progress of mortification is sure to be arrested.

CROUP.

A cautious, but at the same time, quick and determined proceeding, is necessary in all inflammations of inner and more important organs, as of the brain, spine, chest, abdomen, &c., as life often depends upon it. Cold water will never refuse its service, and is said to have done wonders also in dangerous cases of

croup. This disease is incidental to childhood. It consists of an inflammation of the windpipe, secreting a membranous effusion, by which the air is excluded from the lungs; suffocation is the result. Croup is ushered in by slight cough, hoarseness, and sneezing, as if cold had been taken; soon after, or in a day or two, a peculiar shrillness and singing of the voice is perceived, as though the sound came through a brazen tube; the cough is dry, hard, and recurring periodically, sometimes after an elapse of hours. Respiration, swallowing, and speaking, are difficult, and there is pain felt in the parts. If anything be expectorated—which is the case in later stages, with much pain and trouble—it is matter of a purulent appearance, and sometimes films, resembling portions of a membrane. Croup often quite disappears for a short time,—occasionally is fatal in seven or eight hours; generally three or four days elapse, and at times it lasts from nine to seventeen days. The danger of the disease speaks for the necessity of the promptest attention.

Among the happy results, we must name that of Dr. Hellering, who saved a child of six years from inevitable death. He had treated the child for four days by the anti-inflammatory process; the symptoms were increased. He now had *ice cold* compresses applied round the neck every five minutes, with evident relief; after two days a sanguineous matter was discharged, and the child recovered.

In desperate cases, we hear of cold ablutions in

later times. The first who attempted it was Dr. Harder, of St. Petersburg. His own daughter, one and a half year old, had had croup twice, and in the summer, 1819, was again attacked with it. All remedies were of no avail; death seemed at the door, when the father determined on the following treatment:—he had his child put on a hay mattress, face downwards, held down, and two pailsful of water, of 60° to 65° Fahrenheit poured over it at a height of half a yard, from the head downwards, particularly on the back, after which the child was dried and put to bed. Breathing became freer; but the symptoms, after two hours, returned, when the ablution was repeated, and again ten times after several fluctuations, when all danger was at an end, and the child recovered.

Harder names two more successful cases of his own experience; and his followers, Müller, Aberle, Wolfers, Baumbach, &c., saved many children by it, frequently after two or three ablutions and rubbings. The energetic effect of the water tends at once to stop the undue secretion of the organs and to regulate their due functions; the secretion itself is altered by drinking fresh water and rinsing the mouth well, and is easier ejected. According to Priessnitz, a half-bath, or wet sheet, may be commenced with.

Many children fall a sacrifice to this fatal disease annually, which, henceforth, I hope will not be the case.

INFLAMMATION OF THE EYES, EARS, &c.

The cause must be discovered in these and similar cases, as in inflammation of the tongue and glands. If purely inflammation, unconnected with any other disorder, the treatment must be local; first cold, then soothing, and lastly stimulating bandages. At first, derivative local baths, namely, if the organs of sense are affected, baths for the occiput and sides of the head; if glands, according to their seat, head, elbow, foot, or sitz-baths; by and by, strengthening local baths are useful. A stimulating bandage round the abdomen, and drinking cold water, will keep the digestive apparatus in good order, which is necessary.

CHRONIC INFLAMMATIONS.

Chronic inflammations and their consequences, thickenings and hardenings, are frequently cured by appropriate treatment, but slowly. It depends on raising the activity of the functions, generating in them a new life with a quicker change of fluids; therefore the strengthening method is to be employed. Sweating in dry blankets and wet sheets, wearing stimulating bandages, cold baths of short duration, and ablutions, with much friction, sitz-baths of short duration, douche, injections, and plentiful drinking of cold water, will, judiciously varied, often overcome the disease in hopeless cases. Of course, all the symptoms must be

watched, counteracted, or accelerated, according to circumstances, as they arise. A gradual strengthening of the organism and improvement of the vital power will renew the long-interrupted struggle, and bring back acute inflammation; the anti-inflammatory process must then be substituted for the stimulating one: the appearances of fever, eruptions, &c., are treated with wet sheets, sitz-baths, fomentations, &c. Chronic inflammations of long standing frequently disappear gradually, without any fever or inflammatory symptoms. They are determined by perspiration, urine, diarrhoea, hemorrhage, &c. In very obstinate cases, years may elapse, but the result is certain. After cures of this nature, a proper dietetic use of water must be adhered to, to prevent a relapse.

SECTION III.

Hemorrhages and Congestions.

Hemorrhages are active or passive. The former, being created by greater activity of the blood vessels, and often occurring in plethoric constitutions, are at times beneficial, and must not be suppressed violently; the latter, being caused by general or local debility and relaxation, must be immediately obviated. In the former case, the object should be to diminish the increased flow of blood; in the latter to strengthen

the vessels, so that they may be able to resist the violent accumulation of the blood: nothing is more calculated to do this than the proper application of water.

BLEEDING OF THE NOSE.

Frequent bleeding of the nose, particularly in youth, denotes a weak organization of the lungs, and in women attaining puberty, irregular menstruation. Where it exists, the living must be well regulated; a cool and nourishing vegetable diet being essential. Cold water is the best beverage here. Fresh air and exercise, with cold washings, will regulate the equilibrium. A violent flow can be stopped by half-an-hour's foot-bath, up to the ancles, in tepid water, cooling compresses for the occiput and neck, with drinking and sniffing up water.

SPITTING OF BLOOD.

Spitting of blood is a symptom of incipient consumption generally. The patient must be kept very quiet, avoiding all excitement, bodily or mental. The application of cold water must be very gradual. Cold washings of the chest, plentiful drinking of fresh pure water with the chill off, with cooling compresses on the chest, will be very serviceable. Moderate applications of the wet sheet will tend to prevent a recurrence.

The diet must be mild, cold, and not too nutritious. Priessnitz cured many persons, whose lungs were already slightly affected, by a very careful application of gentle and gradually more stimulating applications of water.

VOMITING OF BLOOD.

Caused frequently by overfulness of the vessels of the abdomen, and diseases of the liver and spleen. The hydrotherapeutic treatment will be slow in its effect, though with perseverance—the patient's strength not being too much sunk—it may ultimately be successful. Where it is very violent, and congestions to the chest are feared, foot-baths—the water reaching over the ancles—will be useful; if insufficient, half-baths, with rubbing of the body, particularly the abdomen. As the cure progresses, sitz-baths of an hour, or longer. Water drinking is essential, but in small quantities; stimulating bandages round the abdomen must be worn, food cold and light, and all excitement avoided.

PILES.

A sedentary life, excesses in sensual enjoyments, over indulgence in spirituous liquors, are the predisposing causes. Piles may be termed a chronic disease of the abdomen, arising from congestions of the blood in the

rectum, often terminating in fluxes of mucus, or of blood, by which relief is generally obtained, and in which case, they are often the preventive of more serious evils, such as spitting and vomiting of blood, apoplexy, &c. When blind, forming little tumours on the surface of the anus, they often give rise to more serious disorders:—their prevention by the dietetic use of water is easy, even where there is an hereditary predisposition to them.

There is no better remedy than water for piles. There must be diversion of the cause, by lessening the accumulation of the blood, and causing a proper circulation thereof.

Sweating, cold baths, stimulating bandages round the abdomen, derivative sitz-baths, frequent injections, and plentiful drinking of water, are the best and surest means for regulating the functions of the abdominal organs, and the free circulation of the fluids. If the strength of the patient allows it, the douche—submitting the back and loins to its action—will be useful in strengthening the part. Cold, light nourishing diet, with fresh air and exercise, are essential in this disease.

Cases of rapid cures of piles are frequent. The critical appearances are sanguineous and mucous discharges, perspiration, eruptions on the skin, tumours on the abdomen, loins, and perinæum; the douche must then be discontinued, wet sheets used to perspire in, and tepid water for bathing.

IRREGULAR MENSTRUATION.

Irregularities in menstruation are the cause of many serious evils, and they exist particularly among women of the middle and higher classes of life, in consequence of a defective physical education. The irregularity consists either in too abundant a flow, too little, or a total suppression.

A cool and simple diet, daily drinking of cold water, and enjoyment of fresh air, with moderate, not fatiguing exercise, avoidance of catching cold, particularly by wet feet, and of all mental commotions; daily washing or bathing of the whole body, chiefly of the abdomen, loins, and the lower extremities, will be especially useful. The circulation of the secretions is thereby promoted, the skin strengthened and guarded against atmospheric influences.

The treatment must tend to restore the equilibrium of the circulation, and to strengthen the nervous system, and must of course vary according to circumstances: in general, the patient's strength permitting it, a gentle sweating in dry blankets or wet sheets, morning and afternoon, with subsequent cold or tepid full or half-baths, friction being used. Plentiful water drinking in the course of the day, and plenty, though not heating or fatiguing exercise in the fresh air; also two sitz-baths of fifteen to twenty minutes; these must, however, be *omitted* at the usual period of menstruation. Before

going to bed, foot-baths of ten to thirty minutes, and stimulating bandages round the abdomen night and day. The diet must be cool, light, and nourishing. These proceedings will soon bring matters into regular course. In congestions of the head and chest, cold wet compresses are applied to these parts.

The sitz-baths must be used with the utmost caution, as they would do more harm than good, if used during the period; foot-baths are a good substitute. This treatment applies for suppressed menses.

In the event of their flowing too profusely, in consequence of great weakness or relaxation, sitz-baths of ten to fifteen minutes' duration, added to the general strengthening process, may be taken with advantage, even during the period, if other circumstances—such as congestion of the blood to the inner organs—do not forbid their use.

Should there be hysterics before or after the period, tepid half-baths or foot-baths with soothing fomentations are applied until overcome; after which, injections and the wet sheet.

In violent and dangerous menorrhagia during menstruation, or after child-birth, derivative foot-baths, injections, soothing, and afterwards stimulating bandages round the abdomen are applied, then follow the wet sheets.

Priessnitz assures us, from experience, that pregnant women may undergo the treatment with great

advantage to themselves and their offspring, and that it will prevent abortion.

We may mention, *en passant*, that in cases of irregular menses, sea-bathing is of most essential service in alleviating pain and restoring suppressed courses. It is also of remarkable efficacy in a disease connected with, or the consequence of irregular menstruation, and of which we may speak here, namely, the green sickness, or—

CHLOROSIS.

This complaint yields speedily and perfectly to the hydrotherapeutic treatment, but the dietetic observances must be very strict. Long sleep in soft and warm beds, or heated bedrooms, much sitting and reading, too much dancing, warm, relaxing drinks, hot (also spiced) food, fat and heavy farinaceous diet, and flatulent vegetables, (such as peas) must be repudiated.

Of course, the treatment must be adapted to the strength of the patient, and be very gradual. Wet sheets are of most beneficial effect, used morning and evening; after being warmed, tepid, and by degrees, cold ablutions follow. In the course of the day two sitz-baths of twenty, forty or sixty minutes, with rubbing of the abdomen. Stimulating bandages round the abdomen, and when the strength of the patient has increased, an occasional douche.

CONGESTIONS OF THE HEAD AND CHEST.

These frequently become dangerous, causing unconsciousness, swimming of the head, delirium, and inflammations of the brain. Above all, long derivative foot-baths are useful, or, according to circumstances, tepid half-baths, and at the same time cooling compresses on the head; the former are continued until the violence of the attack has abated, when wet sheets are applied to soothe the nervous system, and promote critical appearances. A gentle perspiration must be produced by the wet sheets—changed more or less frequently, according to circumstances—after which a tepid half-bath, and friction of the whole body is continued as long as the patient finds it agreeable.

In the application of sitz-baths in all congestive affections, or diseases where they may reasonably be expected to arise, the utmost discretion must be exercised, as the bent position may easily increase the tendency to determination of blood to the head and chest. Caution in water drinking must also be strictly enjoined, for too large a quantity, by its mechanical pressure, obstructs the activity of the abdominal viscera, and impedes the circulation.

Congestions are frequently brought to a favourable issue by hemorrhages which are treated by derivative

and local baths, as described. The activity of the bowels must be promoted by stimulating bandages round the abdomen. Occasionally critical diarrhoea puts an end to the congestions; foot-baths and clysters are then useful. If the patient has quiet sleep during the critical appearances, it should not be interrupted; but if sleep is disturbed by anxious dreams, foot-baths and wet sheets should be immediately resorted to.

Congestions of the chest, the symptoms of which only arise gradually, and generally become chronic, are essentially treated like congestions of the head, with wet sheets, tepid half-baths of three-quarters of an hour each, &c. Delay should be avoided, and the treatment resorted to in good time.

SECTION IV.

Diseases of the Excreting and Secreting Organs.

I. SKIN DISEASES.

The skin is one of the most important organs of the body, and deserves our most serious attention. Its great importance may be judged of from the fact of every man exhaling daily three pounds of superfluous humours by perspiration, which was proved by Sanctorius, after twenty years' experiments with himself. We may well infer, that if by an undue performance

of the functions of this organ, this necessary exhalation is suppressed, that injury to the general health, by the retention of these superfluous humours, must be the result. In another part of this work, we have spoken of the manner of Priessnitz' examining his patients, and of the advantage he has in doing so; for as the most malignant matter is often eliminated by the skin, its good or bad condition, in a great measure, indicates the more or less favourable, quicker or slower issue of the disease. Indeed, its importance has been always acknowledged, but unfortunately lost sight of, to the evident astonishment of the few, who yet act up to nature's laws. The anatomical view of the skin, with its numberless vessels and nerves, membraneous and other formations, connected with all parts of the system, is sufficient to impress us with its great importance, and with the necessity of a most careful regard to the due fulfilment of its functions.

The weakness of the skin is an unfortunate concomitant of the present state of society, and more unfortunate cause of many diseases.

A healthy skin generally shows much elasticity, flexibility, smoothness, and compactness; an even temperature all over the body, winter and summer; further, an even pale-red colour, a little brighter at the joints, all over the body; and, closely examined, an admixture of pale-red and pale-bluish specks, lost in each other, through which the larger bluish veins shine forth.

Such a skin is not affected by the ordinary change

of temperature; but the effect of a higher degree of temperature, as in the reaction of cold, is manifested by the blue-red and pale-bluish specks named above becoming more perceptible, (the colour being still all even,) by greater smoothness, tone, and elasticity, or by a more compact and rougher touch. Such a skin does not perspire, even after some considerable bodily exertion; but the imperceptible evaporation is always going on. When sweat breaks out, it is usually over the whole body; it is fluid, does not dry too soon when brought in contact with the atmospheric air, nor does it leave any lassitude when it ceases, or is washed off.

Nothing is easier than by attention from the very earliest youth, to preserve such an organ, and thereby stifle disease in its birth.

When the skin becomes faulty, it is indicated either by great *weakness and relaxation*, the consequences of which are profuse sweats at night, or attending the least exertion; or by great *dryness, inactivity, and closeness*, which intercept perspiration altogether.

In the first case, frequent cold washings, baths of short duration, and particularly douches, carefully used, when practicable, will be beneficial. Wet sheets are useful too; they are changed according to circumstances; the patient must, however, *never* perspire in them, but take a full bath or good ablution when warmed. After nocturnal perspirations, the body should be washed with cold water immediately on

waking; a full bath, where practicable, (the utmost care being taken to guard against catching cold on the way to it,) is of course preferable.

We must observe, that if these night sweats occur whilst undergoing a course of the water treatment, the sweating in blankets, at the time of their occurrence, is omitted, in order not to weaken the patient too much. These nocturnal sweats always argue some disorders and irregularities, which are often the consequence of the disease, and sometimes of an excess in the treatment.

In the second case, *suppression of perspiration*, the wet sheets are applied, frequently changed, until sweat breaks out, when a good ablution or bath, in cold or tepid water, follows, according as circumstances make a higher or lower degree of temperature necessary; this soon restores activity to the organ.

ERUPTIONS OF THE SKIN.

The views hitherto maintained in disorders of the skin, namely, to guard the patient carefully against wet and cold, have been quite refuted by the experience of Priessnitz, Currie, Wright, Fröhlich, Kreysig, Colbany, and others. Nothing can equal the beneficial effects of the water treatment in skin diseases. The divisions and subdivisions of eruptions on the skin are numberless; but for the hydrotherapeutic treatment, and especially for

the object of this work, a simple division into acute and chronic, according to the slower or quicker appearance, will amply suffice.

In the treatment of eruptions of the skin, we must examine whether they are local—merely a disease of the skin,—to what extent other organs, or the whole organism, are affected,—lastly, whether they have special reference to any and what diseases,—and carefully adapt our treatment to the constitution, age, sex, &c., accordingly.

In *acute* eruptions, as in scarlatina, measles, critical tumours, &c., the general treatment should be as follows:—

Most acute skin eruptions being commenced or accompanied with fever, the object will be to guard against it; thus cooling the nervous and blood systems, and at the same time regulating the due functions of the skin. Wet sheets, frequently changed, with half, and sitz-baths of longer or shorter duration, are applied. After the fever is subdued, the invalid remains longer in the wet sheets, until perspiration takes place: this is kept up for a while, according to the patient's strength, and followed by an ablution; exercise in the fresh air should succeed this when at all practicable.

To aid digestion and support the general effect, stimulating bandages are worn round the abdomen, and soothing ones on the painful and afflicted parts. Local baths are to be avoided where there is pain, or where the admixture of the fluids in the invalid is faulty,

because determination of blood to the parts may be increased and give rise to inflammations, ulcers, &c. Where great inactivity exists in the skin, the wet sheets must not be wrung out too much, and must be changed more frequently—particularly if they get warm soon; or alternate washings in tepid water may be resorted to.

The utmost caution is necessary in the use of sitz-baths in many skin diseases, as in pox, scarlatina, measles, &c.

In cases where the extremities do not get sufficiently warmed in the wet sheets, or where the abdominal viscera do not duly perform their functions, and obstructions exist, the wet sheet should be applied from the chest to the knees, hands and feet being wrapped in the dry blanket.

When cold water is incautiously applied, and the organism thereby violently excited—when the first symptoms of fever are not regarded, convulsive appearances frequently precede the breaking out of critical and other acute eruptions. In bad cases tetanus may even supervene; a half-bath of tepid water must be immediately taken, and the patient rubbed in it, until a violent cold shiver sets in, soon after which the symptoms generally disappear; one or two hours may sometimes elapse; of course, there should be fresh hands when required. The patient is then put to bed; according to circumstances wet sheets are alternated with half-baths, until all feverish and convulsive appearances

abate, which circumstance generally occurs at the same time with the full eruption of the skin.

If skin eruptions are accompanied with inflammatory, catarrhal or nervous affections, which is particularly the case in scarlatina, measles, &c., they must be specially treated. All the water applied should be tepid, and soothing compresses used chiefly on the afflicted parts, chest, eyes, &c.

In some eruptions, particularly scarlatina, measles, &c., it is not absolutely necessary that the eruption should be visible on the skin, or remain so during the whole course of the disease. It breaks out sooner or later, and sometimes not at all: it is sometimes perceived only on single parts; disappears, returns to other parts occasionally, and frequently over the whole body, and even in its cavities.

Exposure to air and moderate movement is very desirable in the intervals between the baths, &c.

The treatment with wet sheets, half-baths, and compresses is always to be preferred to the mere ablutions, being safer and surer in their effect. The treatment with the former must be continued until desquamation of the skin takes place; the number and duration being then diminished.

In simple cases of eruptions, only one wet sheet is necessary in the morning, and after perspiration has broken out, an ablution in tepid water is taken, supposing the individual to be otherwise healthy.

ERYSIPELAS.

The treatment of erysipelas is as follows:—sweating in wet sheets, sitz-baths of forty to sixty minutes, the patient's strength permitting it, are alternated with the application just now described. Many cases have been cured in a few days by the above means, whilst with the ordinary treatment in use, weeks elapse amid pains and sufferings in the heated atmosphere of a sick room, and frequently, after all, terminate in death.

PSORIC AFFECTIONS.

To chronic psoric eruptions of the skin, as to most chronic diseases, we may apply the wise saying, that "prevention is better than cure:" for the latter will be very slowly brought about by the water treatment, particularly if the individual has used many medicines and warm baths, and the disease is inveterate and of long standing; in which case many months may elapse before the disease is eradicated: and all the various applications of water in its manifold ways will have to be industriously made use of. The revulsionary and strengthening plans are here in their places, but very, very gradually must the treatment be increased. Perseverance is necessary here, and a degree of courage, for frequently during the course of the treatment, violent

and painful acute appearances may arise, old and long-forgotten sores may break out again, which often are the forerunners of a radical cure. At such times, of course, the treatment must be much modified.

Diet is an essential point: light, cool food, cool clothing and bedding, and an avoidance of all violent commotions must be enjoined: also plentiful drinking of cold water, and active exercise in fresh air.

II. DISEASES OF THE EXCRETING AND SECRETING ORGANS OF THE ABDOMEN.

Equally important with the skin is the due regulation of the bowels; for all undue action thereof produces, sooner or later, general disorder and serious diseases; indeed, all diseases are more or less connected with an undue fulfilment of the functions of the abdominal viscera.

However easy to prevent this, the number of sufferers of chronic bowel complaints is vast, partly caused by irregular living, and partly by a free use of drugs to counteract the evil effects of the same, but which, whilst they afford momentary relief, re-act very prejudicially on the whole organism, the bowels being the first attacked, and destruction thence spread over the whole body.

Weakness of digestion is speedily remedied by a dietetic use of water, and a stimulating bandage round the abdomen.

DIARRHŒA.

This is often a very favourable critical appearance in the course of an hydrotherapeutic treatment. When it is violent and attended with pain, sitz-baths, long and frequent, and, in need, two or three injections will speedily rectify it. Friction of the abdomen must not be omitted, nor water drinking.

A gentleman, during my residence at Gräfenberg, had been attacked with a violent fit of diarrhoea, which kept him confined for two or three days to his bed, during which cold fomentations were applied, extending from the chest to the knees, and changed every hour. He had a sitz-bath of one hour's duration twice a day, at first tepid water, then the chill taken off, and lastly quite cold. On the third day, he had a sitz-bath, in water of the temperature of 40° Fahrenheit, fresh water being supplied every ten minutes; and changed six times; this completed the cure, and he made his appearance on the hills the same day.

DYSENTERY.

This disease is characterized by a violent and painful griping of the bowels, pressing and frequent desire to go to stool, little or nothing being voided in most instances, in many, small quantities of blood, and is generally accompanied with fever. Its average duration is from seven to fourteen days, but frequently longer.

The nature of the accompanying fever determines the danger or otherwise; the proper guidance and subduing of the fever become the principal object. Ample explanations have been given under the proper head as to this. Two or three sitz-baths daily, of thirty to sixty minutes, must not be omitted; temperature of water according to circumstances. Injections are useful too.

The greatest caution must here be exercised in the quantity of water taken, as it may easily be overdone and become injurious to the proper action of the stomach and bowels. Small quantities only must be taken, and not too cold.

CHOLERA.

This is by no means a new disease, but has long been known in Europe, generally breaking out during the months of August and September, when, with hot days, the nights are cold. It breaks out unexpectedly with violent vomiting and diarrhœa. This mild form of the disease is called the European cholera.

The Asiatic or epidemic cholera is more malignant, and has spread to Europe since 1817. It breaks out either suddenly, or with preceding symptoms, which are a sensation of heaviness at the heart, loss of appetite, restless nights, general relaxation and looseness; this may continue for a few days. Diarrhœa and vomiting occur at the same time; a fluid resembling

ricewater being evacuated without any effort, in large quantities. This causes a suppression of all the other excretions and secretions, the body becomes emaciated in a short space of time, the eyes and cheeks hollow, the voice tremulous, the temperature of the body sinks considerably, the extremities and the tongue become ice cold, spasms and convulsions set in, and dissolution puts an end to the sufferings, sometimes after three or four hours, and in some cases after three or four days. When the violence of the symptoms abates, and the regular secretions and excretions recommence, recovery may be anticipated.

The cause of the disease lies in the relaxation of those nerves of the abdomen and cavity of the chest, which promote digestion, the circulation of the blood, and the development of heat. In consequence of this relaxation, the blood becomes decomposed in the body, being separated into watery and solid parts, the former being evacuated by vomiting and diarrhoea, and the latter remaining in the vessels in the shape of a dark, clammy, viscous mass. All the symptoms are easily accounted for by this.

When the cholera raged some few years ago in Germany, Priessnitz saved a great many from death in Gräfenberg; he did not lose a single case. In slight cases, tepid sitz-baths, of long duration—up to two hours—were sufficient, with constant rubbing of the abdomen and lower extremities; cold water being drunk in small quantities; injections aided the cure. In more serious cases, where con-

vulsions and paralysis had already supervened, the patient was put into a half-bath and rubbed until the body got warm and steamed. After being dried, and resting a while, the patient was wrapped in wet sheets and sweated in them. Besides this, frequent tepid injections and sitz-baths, of an hour and a half long, cold water being of course slowly administered all the while.

Diet should be very strict; fish—eels particularly—fruit, salads, and fresh beer are injurious; it should be light and nutritious; cleanliness must be particularly observed, fresh air inhaled, dwellings and bedrooms well ventilated.

Dr. Casper, in Berlin, was also very successful in curing cholera; his plan was this:—the patient, if his skin be dry and withered, is placed in a dry tub; if soft, with a clammy perspiration, in a lukewarm water bath, the water reaching up to the navel. Then four to five pailsful of quite cold water are thrown over head, chest, and back, downwards; at the same time, two pailsful of cold water are thrown horizontally against the chest from the end of the bath. Every thing must be done quickly, and the patient then put to bed; the bath being repeated in three or four hours. In the interval, ice-cold bandages are placed on chest and abdomen, and renewed when warm; the head is covered similarly with ice-cold compresses, to prevent an access of nervous fever, which often succeeds an attack of cholera. Cold water for drink, by which the disposition to vomit is much diminished, but increased by warm drink. Frequent baths and frictions will

diminish, if not always prevent, the extension of the ravages of this epidemic.

CONSTIPATION.

This will yield to proper treatment, and should in no case be neglected, if a train of fatal diseases is to be avoided. Appropriate, light food, plenty of fresh air and exercise, and water drinking will do much to relieve it. In more obstinate cases fresh water clysters, and the stimulating bandage round the waist, will be useful. With people of weak nerves, the injections may not act, when they must, after a few trials, be discontinued, as the parts must not be irritated. Repeated friction of the abdomen in sitz-baths of short duration may then be taken, and the organism strengthened. The douche will likewise be useful.

COLIC.

Colic is a cutting, contracting, more or less violent pain in the region of the navel. The cause should be discovered first, thus, whether it is spasmodic, bilious, flatulent, &c. The treatment should be local: during the paroxysm, sitz-baths of an hour to an hour and a half, in cold or tepid water, must be used until relief is obtained; the abdomen, loins, calves of legs, and soles of

feet, must be well rubbed the while with wet hands, and plenty of water drunk. After the sitz-baths an injection, then to bed; when warmed, an ablution. In obstinate cases, more general treatment must be adopted.

CARDIALGIA.

This is a burning, cutting pain in the pit of the stomach, thence spreading over the neighbouring parts, often causing heart-burn and inclination to vomit, or a plentiful discharge of clear lymph from the mouth. The access is of short or long duration, and the causes numerous. *Plentiful drinking of cold water in small quantities*, added to a well regulated living, with the use of half-baths, will be effectual in ordinary cases.

INCONTINENCE OF URINE.

Children are often subject to this disorder during the night, and are frequently subjected to punishment for it by ignorant parents, whilst it arises from a want of tone in the secreting vessels; and, therefore, in lieu of punishment, the proper remedy should be applied. A due physical education, frequent cold washings, &c., will be a preventive of the evil. When it occurs in more mature age, it argues weakness and relaxation of the

bladder, which sitz-baths of ten, fifteen, to twenty minutes, frequent washing and rubbing, particularly of the abdomen and loins, neck, and occiput, with wet hands, and bandages in the regions of the bladder and kidneys, will remedy. In obstinate cases, full-baths and douches must be resorted to.

STRICTURE.

This dangerous malady must be treated variously, according to the patient's case. In chronic cases, the whole course must be submitted to. I witnessed one remarkable cure at Gräfenberg, which will be found under the proper head at the end of this volume.

III. BILIOUS COMPLAINTS.

LIVER DISEASES.

Many people from hereditary causes, a sedentary life, or faulty diet, are subject to hardenings of the liver, which in its turn causes piles, hypochondriasis, gout, jaundice, gallstones, &c. A yellowish colour in the face, tympanitic abdomen, flatulency, constipation, and low spirits, are pretty sure symptoms of a liver disease. Daily drinking of cold water, exercise, and simple diet, will do much in acute cases, to overcome, or at all events,

to check the disease. Chronic cases require vigorous treatment, and some time, to be subdued.

JAUNDICE.

Known by the yellow colour of the eye and face, and by dark yellow coloured urine. Acute cases will yield to the treatment indicated above, chronic forms of both diseases will require profuse sweating in dry blankets, and wet sheets, full-baths, compresses over the liver, douche, &c. The treatment requires much modification according to the invalid's symptoms.

IV. DISEASES OF THE MUCOUS GLANDS.

When these complaints have become chronic and of long standing, they will require much patience and perseverance, if a Water-cure is attempted. Even the acute forms are slower in being cured than most other diseases.

CATARRH.

Persons subject to catarrhal affections are particularly enjoined to observe the dietetic rules as to water, and thus guard themselves against the fluctuations of tem-

perature. There are two species of catarrh, the one is the common cold in head or chest, the other is called influenza.

In the first, known by every body, stimulating bandages round the neck, and on the chest, or forehead, according to the seat of the cold, daily washings, bathing, and friction, general and local, will effect a cure in a brief space of time. In cases of rheum, sniffing up water into the nostrils, and then ejecting it; in cough, frequent gargling with cold water, and sole-baths of fifteen to twenty minutes, are beneficial.

In more violent cases, a wet sheet from the throat to the knees is applied to restore suppressed perspiration, particularly to the affected organs; wet compresses are at the same time applied to the neck, chest and back, and are changed, when warm: after perspiration has broken out, an ablution, and gentle exercise should be taken.

If the throat is inflamed or swollen, cold water is to be taken as low down into the swallow as possible, and ejected when warm, *without gargling*; the bandages should be cooling at first, afterwards warming and more stimulating.

If the invalid is feverish, has sleepless and restless nights, he should be wrapped up over night in a wet sheet, well wrung out, and covered over with blankets, &c.: changing the sheet occasionally is necessary.

INFLUENZA.

In addition to fulness in the head, heavy and lachrymose eyes, with frequent sneezing, rheum, and hoarseness, which are the characteristics of common catarrh, the influenza, which is a more violent and epidemic form of catarrh, is accompanied with a high degree of fever, corporeal and mental relaxation and sickness. In itself it is not dangerous, but is decidedly epidemic and has destroyed many lives, particularly in the years 1831-32-33 and 37. It breaks out suddenly and spreads rapidly.

The treatment is essentially the same as in catarrh, but the sheets must be changed frequently. To allay the concomitant inflammation of the eyes, eye-baths and frequent covering of these organs with wet bandages are recommended, also stimulating compresses to the neck, and occiput baths of from ten to fifteen minutes' duration.

HOOPING COUGH.

Most children are subject to this disease, which is contagious: it sets in with difficulty of breathing, thirst, a quick pulse, and other feverish symptoms, succeeded by hoarseness, cough and difficulty of expectoration.

These symptoms continue a fortnight or longer, when the disease assumes its characteristic form, namely, a

convulsive, strangulating cough, returning in fits which terminate by vomiting.

The treatment, with a due regard to the infantile age, will be much the same as in the last case. The child must perspire in wet sheets,—then be bathed in tepid water, and wear stimulating bandages round the chest and neck; must drink, before breakfast particularly, of water that has stood a little while corked up; quite fresh or cold water being apt to irritate the already excited organs. In violent attacks of whooping cough, rubbing well the stomach, chest, neck, and soles of feet with wet hands is very serviceable.

The bowels must be kept in due order, water clysters applied, if constipated. Fresh air must be inhaled, the children being duly guarded against catching cold.

LES FLUEURS BLANCHES.

In acute cases, when caused by excitement, excessive hemorrhage, &c., sitz-baths of ten or fifteen minutes in tepid water will be necessary, added to general cold ablutions morning and evening, with a stimulating bandage round the abdomen. In more obstinate cases, injections of tepid water may be made after the sitz-baths, but not during the period of menstruation. The sitz-baths must, during that period, also be very cautiously resorted to.

Chronic cases, originating in a faulty admixture of the

secretions, will require more general treatment, in order to promote a due circulation of the fluids.

GONORRHŒA, GLEET, ETC.

Gonorrhœa will yield to two tepid sitz-baths daily of half-an-hour each, with friction of the abdomen, and plentiful drinking of cold water,—all excitement and exciting food being avoided;—frequent washing of the parts is also necessary, and a general ablution in the morning will facilitate the cure.

Gleet of long standing will require more energetic treatment, sweating and full baths, douches, and short sitz-baths. Water drinking and diet as above. Involuntary emissions and impotence,—unfortunately too prevalent, require a very strict diet, daily cold ablutions with frictions. A sitz-bath of five or ten minutes in the forenoon, and one, at least three hours before going to bed; wet compresses on the neck; also short occiput baths, and an avoidance of all excitement. Heavy suppers should be eschewed, and fatiguing exercise taken. A few douche baths will exercise a beneficial effect, but caution in their use is recommended.

SECTION V.

Cachexia.

Cachectic symptoms indicate chronic diseases, caused by a vicious admixture of the solids and fluids of the body, without any primary febrile, or nervous affection. The gradual accumulation of morbid matter in various parts of the organism, obstructs the performance of the functions of the individual organ, and by degrees, of the whole system.

The active agency of water re-establishes the proper equilibrium and admixture of the fluids, but the most rigid diet must be adhered to, not only during the treatment, but for a long time after a cure has been effected, if a relapse and a more dangerous attack is to be prevented. The various species of cachexiæ require especial treatment.

GOUT AND RHEUMATISM.

Gout is a disease deeply rooted in the digestive apparatus, disturbances in which frequently precede the full formation of it for years. It consists in a violent pain in the joints, and attacks all parts of the body; and is caused by the deposition and accumulation of calcareous particles in the parts affected. Gout is not dangerous in itself, nay, frequently even serves to equalize existing irregularities in the body; but when the system is not

strong enough to throw the gouty substances to the surface, it gives rise to serious diseases, and when it suddenly recedes upon the inner organs, it becomes dangerous.

During an attack of gout, a very spare diet should be adopted; animal food, spices, and wine, discarded; medicines are of little or no avail; they are, indeed, more apt to disturb the regular course of the attack.

Occasional attacks of gout might be termed acute; but as they so soon become chronic, the treatment may be comprised under one head, requiring vigorous applications—revulsionary treatment—a total change of the admixture of the fluids of the body.

To subdue the fever, which generally accompanies these attacks, wet sheets are used at first: they raise the activity of the skin, and promote the morbid humours to the surface. This is effected and supported by the constant wearing of compresses on the affected parts and round the abdomen, by frequent half-baths in tepid water; the whole body, with the exception of the afflicted parts, being well rubbed. The duration of the baths may be extended to fifteen minutes. Water drinking, in small quantities at first, must not be omitted; occasional clysters applied; as much rest as possible is particularly desirable in inflammation of the lower extremities, of the knees, ancles, &c. When critical appearances, in the shape of perspiration, eruptions, tumours, or diarrhoea, manifest themselves, the treatment—unless violent fever enjoins a

moderation thereof, or a necessity for the application of the wet sheet—must be carried through by plentiful sweating and baths, compresses, and where possible, douches, in order to move the morbid matter from its hiding place, and carry it off by the above means.

When the inflammatory stage has abated, the patient must begin gradually to take more exercise, and increase his allowance of water.

When the matter has collected in the joints, and caused a stiffness and paralysis of single organs, I know of no other remedy for a restoration than a persevering water treatment, which, of course, must be applied according to circumstances—strength, age of patient, &c., and will, in very old cases, require time and perseverance, and great caution in graduating it from mild to more powerful means.

In fixed rheumatic pains, derivative baths are often necessary, and stimulating bandages round the parts, which must, moreover, be rubbed frequently in the course of the day from thirty to sixty minutes, with wet hands, so as to promote the circulation in those parts.

In douching, the afflicted organs should not be exposed to the stream, unless they are quite free from pain and inflammation.

The older and more obstinate the malady, the less seldom is it brought to an issue by crises in the form of tumours on the skin, but more by perspiration, urine, and diarrhoea, particularly with weaker persons.

We have the examples of Hippocrates, Galen,

Sanctorius, Floyer, Hahn, Gremmler, &c., for the application of cold water in gout, by ablutions, &c. We recommend the utmost caution, for by a *sudden* application of *cold* water to the gouty parts, they may, for a while, be relieved, but, in the end, paralysed; it is only by the systematic treatment that permanent relief can be hoped for.

SCROFULA AND RICKETS.

Scrofula is peculiar to children, particularly such as are born of weakly parents, and rests on a weakness of the glandular system. General relaxation, combined with fair complexion, light hair, fine skin, a late development of the teeth, which easily get black and fall out, disposition to cough and cold, are its characteristics. In advanced stages, there are tumours on the neck, in the armpits and groin, small and without pain at first, but gradually becoming hard, large, inflamed, and ending in suppuration. These are some of the minor evils; a host of more vitally injurious consequences are brought in its train, which gradually lead to dissolution, namely, inflammation of the eyes, nose, and joints, cardialgia, &c., &c. Frequently, on the approach of puberty, under favourable outward influences, the disease is satisfactorily subdued. Among the causes are injudicious diet, where the scrofulous inclination exists, particularly heavy fari-

naceous food, want of exercise and fresh air, damp dwellings, and uncleanness.

Proper dietetic observances are, at all events, more useful than medicinal; leguminous vegetables and potatoes are to be avoided; in their stead, animal food and bread, not too new. Confectionery must be repudiated, also tea, coffee, wine, &c.; a little very light beer occasionally would do no harm, but water is the best, internally and externally applied.

Children are cured by the Priessnitz method; gentle and short perspirations in dry blanket or wet sheets, baths and washings in tepid water, compresses on the abdomen, back, chest, and all suffering or threatened organs: plenty of air and fresh water will accomplish it; older children may take a sitz-bath of twenty minutes. These means, with the proper diet, will be found to perform wonders, even in cases where inflammation of the eyes, suppuration of the parts, caries of the bones, and affections of the spine have already supervened.

In scrofulous inflammation of the eyes, cooling compresses are applied, at the same time stimulating ones on the neck to act as a derivative; occiput baths, of ten to fifteen minutes' duration, are employed for the same purpose.

In scrofulous inflammation of the ears, wet pieces of linen are worn in them night and day, a handkerchief being tied over the ears: they must be washed often, and the adjacent parts rubbed well; head-baths,

sides and occiput, of five to fifteen minutes, and frequent injections into the ears, are useful. Sea bathing is particularly beneficial for scrofulous subjects.

What we stated above appertains strictly to *ricketts*, known by a swelling, softening, and distortion of the bones. The dietetic observances must here, too, be strictly enjoined, not only as regards food, but also water.

SYPHILIS.

Many of the Gräfenberg patients are syphilitic—mercurial ones,—some that had been reduced to the verge of the grave, and scarcely able to walk. With such, of course, the treatment has to be applied in the mildest forms; indeed, sometimes only dietetically for some weeks. This alludes particularly to such as suffer from secondary symptoms; such patients mostly have little warmth, and too great a shock might become injurious. For primary symptoms, sweating twice a day, as long as the patient can bear it without getting fatigued, preferably in wet sheets, (being safer than the blanket,) and pieces of wet linen placed on the eruptions, with plentiful drinking of cold water, and exercise in the fresh air without fatigue. Daily, two or three sitz-baths, of sixty to eighty minutes, first, in tepid water; with a mild, not too nourishing, cooling diet, avoiding all sour, salty, heating, and flatulent food and drink.

In secondary symptoms, profuse sweating will be

essential for a radical cure; of course, it must be adapted to the patient's strength, and not by any means overdone. To all critical appearances, the utmost attention must be paid, and the treatment regulated accordingly. The crises in these diseases are often truly violent and of excruciating pain; they appear, frequently, at the lower extremities in the shape of ulcers, and on other parts of the body as eruptions—all of a syphilitic character. Old forgotten wounds will, under such circumstances, frequently make their appearance, attended with great agony. The utmost caution and discretion must be exercised during the whole progress of the treatment.

The open and painful parts must be carefully guarded against the fall of the douche, which is used during the treatment, if the patient be pretty robust: likewise, against cold. They must, therefore, be well covered whilst douching and when in the full bath, also in the sweating blanket.

ELEPHANTIASIS.

This disease mostly affects the feet. The legs of people so affected become scaly, rough, and in its advanced stages, very large like the legs of an elephant. Some cases of cure are spoken of as having been effected by Priessnitz. The treatment is vigorous; sweating in dry blankets twice a day, followed by cold water baths, plentiful drinking of cold water, stimulating bandages

round the stomach and round the diseased leg. Occasional sitz-baths are also taken. The crises are violent, and discharge much fœtid matter. During their appearance, the sweating is modified, and the blanket replaced by the wet sheets. The douche is discontinued, sitz-baths increased in number and duration, the bandages more frequently changed, and occasional derivative baths taken.

GRAVEL AND STONE IN THE BLADDER.

In its origin the disease may be checked by proper hydrotherapeutic treatment: and when in its advanced stages a surgical operation becomes necessary, it will be much facilitated by such treatment. This will, of course, vary considerably according to the accompanying symptoms. Where violent pain exists about the region of the kidneys and the bladder, soothing compresses must be applied on the parts, derivative foot-baths of twenty to thirty minutes, and similar sitz-baths of fifty to sixty minutes. The ejection of gravel is much facilitated by tepid half-baths and friction of the whole body, particularly of the back, thighs, and regions of the kidneys and bladder.

The half-baths should be continued until the pain has abated. If these proceedings cause feverish symptoms, the soothing treatment must be employed for some days, namely, wet sheets, changed more or less

frequently according to circumstances, and after a gentle perspiration, a tepid half-bath.

Gravel has been cured in six weeks by water drinking only.

Diet should be nourishing and simple, plenty of cold water taken, and not too fatiguing exercise.

WORMS.

Dietetic regimen is certainly the principal consideration in this disease, worms originating in weakness, aided by a faulty admixture of the fluids; nothing is so well calculated to destroy the tendency to the disease as a proper application of the hydrotherapeutic treatment. Cold water always acting more effectually and quicker in children than in adults, will speedily effect the desired end. Simple and spare diet, an avoidance of all flatulent, heavy, and fat nourishment, daily repeated washing and bathing of the whole body, plentiful drinking of cold water, and plenty of stirring exercise in the open air, frequent clysters—particularly for ascarides—stimulating bandages round the abdomen—carefully applied so as to prevent the child catching cold—will soon expel the intruders.

Should there be a scrofulous tendency, the treatment must be adapted accordingly.

If the so-called worm fever sets in, the wet sheets must be put in requisition.

HYDROPHOBIA.

Hydrophobia is caused by the bites of mad animals. It is indicated by spasmodic convulsions of the throat, inability to swallow, and an abhorrence of liquids. The data are too uncertain to form a fixed rule for water treatment.

Priessnitz is stated to have made some experiments with mad dogs, and succeeded in restoring them. He had the animals tied fast, and cold water poured over them several times, by which the paroxysms were increased wofully; notwithstanding this, the ablutions were repeated, until after a violent cold shiver the symptoms abated. Abundant frothy saliva then flowed from the mouths of the animals; perspiration followed, and was kept up by coverings; milk which was put before them they eagerly swallowed. Another bath followed the perspiration, and the cure was effected; the animals eating freely and drinking fresh water.

This would argue a necessity for great firmness, as in case of being alarmed by the increasing symptoms, and desisting from the treatment, the result might have proved very different.

In cases of bites of mad dogs, after cutting out, or cauterising the wound, the applications of stimulating wet bandages might possibly be advantageous, aided by general treatment. So many means have been ineffectually tried, that the hydrotherapeutic treatment certainly merits a trial.

LOCKED-JAW.

As to locked-jaw, I could receive no authentic information at Gräfenberg: the disease arises from a cachectic state of the body, and is frequently caused by very slight local injury, such as cutting, scratching, or wounding a finger. A few days after such accident, sometimes a day or two after, symptoms are manifested by slight stiffness in the back part of the neck, which gradually increases and renders the moving of the head painful and difficult; swallowing is impeded, and a great tightness perceived about the chest, with shooting pains in the back; the jaws become stiff, and the teeth at last set together so closely as not to admit of the least opening. According to the direction the spasmodic affections take, the disorder increases in violence, and assumes more alarming forms, the eyes becoming fixed, face hideously distorted, &c. Most cases prove fatal under the usual medical treatment. The hydrotherapeutic plan should be tried: after the local irritation is subdued by wet bandages, a profuse perspiration in the blanket should be promoted, succeeded by a half-bath and much friction, until relief is obtained. The inference as to the result, judging from other diseases treated, I should say, is favourable.

DROPSY.

This disease is very prevalent among us, and carries off many victims; it may be interesting to trace its origin. In all the cavities of the body, and in the innumerable cellular structures, there is an infinite number of capillary vessels, which constantly exhale a vapoury fluid, whereby the friction of the organs against each other is prevented, and the performance of their functions facilitated. Corresponding to these there are absorbing vessels which imbibe this serum or secretion, and carry it back into the circulation; the vapoury fluid is condensed into water, and the *accumulation* of this causes dropsy; it has different names according to the different parts of the body affected. In every dropsical subject, the urine flows sparingly, the evaporation by the skin is impeded, and the alvine excretions are irregular.

It will thus be quite evident that the drinking of water cannot aggravate dropsical tendencies, as some are led to suppose; but that, in as far as water is a powerful solvent, diluting and attenuating the fluids, and thus facilitating their due circulation, it aids in restoring the faulty action of the vessels, mostly brought about by other diseases, and checks the dropsical tendency by removing the causes, namely, increasing the secretions from the kidneys, from the skin, and the intestines: nothing is better able to do this than water.

Where dropsy is chronic, little can be hoped for from the water treatment; but in acute cases, when a total change in the admixture of the fluids may yet be brought about, it will prove effectual by raising the activity of the various functions of the body, and particularly of the skin, thereby diminishing vicious humours and forming healthy secretions.

Sweating in dry blankets or wet sheets, followed by short, strengthening, full-baths; douches, frequent sitz-baths, stimulating bandages round the stomach and suffering parts; frequent rubbing of the latter with wet hands, plentiful drinking of cold water and enjoyment of fresh air; and, where necessary, frequent clysters, will have to be employed.

CONSUMPTION.

This disease in its advanced stages, as we stated elsewhere, has little to hope for from the water treatment; more, however, can be said of incipient consumption, where judicious treatment may arrest the progress of the disease. Often as we have repeated the necessity of great caution in the application of cold water, it must be doubly enjoined here; for, where the lungs are already deeply compromised, death may be accelerated by injudicious treatment.

A mild and discreet water diet, adopted in youth, or during the first developement of the disease, will check

the tendency; but in no disease is the risk of doing too much so great as in the one under consideration. Frequent washings of the chest and abdomen, with soothing bandages applied round these parts, added to a cool, light diet, with an avoidance of corporeal and mental excitement, should be commenced with. Gradually washings of the whole body succeed, and, after a while, foot, sitz, and half-baths are added; and it is only when all symptoms have disappeared, and the tendency has been fully suppressed, that full-baths and douches may be resorted to; but the fullest conviction should be arrived at of the state of the invalid, before these powerful remedies are employed.

From what we have stated, it will be evident how imperative it is to be satisfied regarding the actual progress of the disease—the liability to err being very great—in order to be able to judge as to the policy of the application of the water treatment. In some cases, Priessnitz resorts to the following expedient. He has the patient put into a tepid sitz-bath in the morning, from the bed, covering the other parts of the body carefully, and keeping him in it thirty or forty minutes: after which the patient takes a little moderate exercise and returns to bed. If a feverish state then sets in; which, however, requires a practised eye to discern, it is a sure sign of the disease having gained ground, and from the degree of fever, a competent observer will be able to judge correctly as to the extent of its ravages. This deserves to be carefully regarded, as giving the

diagnosis of the disease, long before the hectic fever demonstrates its rapid progress.

SECTION VI.

Diseases of the Nervous System.

Priessnitz is rather loth to receive patients suffering from severe nervous affections; as the cure is frequently protracted, and where sufficient time and perseverance cannot be employed, if the water treatment is suddenly discontinued, and improper treatment afterwards pursued, the consequences may be serious.

Many diseases are denominated nervous, purely nervous, with which the nervous system—the animal functions, namely, the external and internal senses, the involuntary action of the muscles, &c.,—has little to do; but the causes being difficult to define, the general, significant, and yet often unmeaning, term of nervous affection, “nervous weakness,” is applied.

There are few, perhaps no diseases, by which the nervous system is not more or less affected. Either chronic nervous weakness prevents a recovery, or the disorders act prejudicially on the functions of the nervous system, and prevent the free working of the vital power. Chronic nervous weakness, on the other hand, arises from long standing greater or minor disorders of

other organs of the body, obstructing the free activity of the nervous system, and gradually relaxing it. When this weakness is very considerable, it becomes interwoven with every disease, which thus assumes more or less of a nervous character. Thus, concluding nervous disorders to be a secondary state, or consequence of other diseases, we may infer that the cure can only be a work of time.

Experience has proved that most nervous disorders originate in weakened digestive organs, at least most sufferers from nervous complaints have these functions much debilitated, and recover where success attends the endeavour to strengthen these parts. In the treatment of nervous diseases, therefore, the organism must be strengthened, and the activity of its functions raised; but as the consequences of *over exciting* the nerves may be very detrimental, the most scrupulous graduation is necessary. Sweating, cold bathing, douching, &c., can therefore not be entertained, but tepid baths, short cold ablutions, foot and sitz-baths, soothing, mildly strengthening, wet sheets, and cooling bandages must be employed.

Where the nervous weakness is great, quite cold water must be administered with the utmost caution, for it has happened that such patients have, though seemingly enjoying the cold baths and douches in the commencement, gradually sunk under increasing lassitude; too much caloric having been withdrawn from their bodies.

All appearances during the treatment must therefore be zealously watched.

In cases where the nervous system is not so deeply affected, where some degree of strength actually exists, success may be anticipated—a due regard being always paid to the invalid's strength, modifying the applications accordingly—for as there is generally a proportionately small developement of heat in such cases, care must be taken to give time for the proper reaction, and *never* to undertake a bath, an ablution, a clyster, &c., until the feeling of cold, however trifling, caused by a previous application, has quite yielded to a due feeling of warmth. We impress this particularly on our readers, and for the same reason also, enjoin caution in the quantity of water drank, to proportion it to the power of generating warmth in the body, and by no means to overdo it.

The diet should be light, nutritious, but not exciting or heating: all warm, relaxing, and heating drink should be avoided, and particularly tea. Sea-baths are excellent preparations, as also auxiliaries to the cure, and particularly as an after cure, but we recommend strict attention to the rules in the first part of this volume, and a due regard to the state of the invalid.

SPASMS IN THE CHEST AND NIGHTMARE.

These complaints occur at short or long intervals, and consist of a contracting pain in the chest, with a

sense of suffocation. When organic defects of the lungs, of the heart, or other important organs are the cause, a radical cure of course cannot be expected, but a proper water diet may check the virulence of the disease.

In persons subject to nightmare, heavy and late suppers should be avoided, and foot-baths, acting as a derivative, of thirty minutes, taken at bed time. If the invalid awakes from anxious dreams, cold washings of the chest, drinking cold water, with warming bandages applied round the chest and stomach, during the rest of the night,—in more violent cases, derivative foot and sitz-baths,—are to be recommended.

In sudden fits of spasms in the chest, foot-baths, reaching to the middle of the calves of the legs, or half-baths should be taken, the feet being well rubbed, the chest washed with cold water, and covered with warming bandages ; after which a clyster is applied, and the patient put to bed, and when warmed, if the fits have been very violent, two or three wet sheets are used, in which the patient remains until warmed, or until he perspires gently, according to circumstances, and then he is bathed in a half-bath. If after having been to bed, there is a calm sleep, it should not be interrupted, but if sleep be uneasy, if the breathing be convulsive, the foot-baths should be immediately repeated, and when the attack is subdued, a wet sheet applied.

Spasmodic affections of the chest in children are treated similarly, but the applications modified to suit their age. Clysters are said to take excellent effect

with children in such cases. The bandages round the neck and chest must be carefully changed, hands and feet rubbed well, and fresh water, at first in small quantities, administered.

PARALYSIS.

The loss of feeling or motion, or of both, in any part of the body, is called paralysis: it arises either suddenly through a fit of apoplexy, or gradually through a variety of diseases, a sense of numbness, coldness and paleness, and occasionally slight convulsive twitches preceding it. Generally one side of the body is attacked, but not unfrequently does it seize the lower extremities, or the arms only, sometimes one side of the face, one eyelid, the tongue, or muscles of deglutition, &c. Palsy does not threaten immediate danger, and if it has not continued too long—if disorganisation of the part has not taken place—if there be still some sensibility in it—much may be hoped for from the hydrotherapeutic treatment. This must be adapted to the strength of the invalid, and never be over-hurried; there is danger in doing so. Wet sheets should be commenced with, mild perspiration, (profuse in otherwise healthy persons,) frequent stimulating bandages round the affected parts, and round the abdomen, water drinking, clysters, sometimes also local baths of thirty to sixty minutes and longer, aided by much friction, compresses on the occiput, neck,

and spine ; frequent vigorous rubbing of the spine with wet hands, and when improvement sets in, the douche, added to proper diet and plenty of exercise, will do wonders, sometimes in desperate cases, as has been demonstrated by the cures of Priessnitz and others. The critical appearances are always violent in such cases: many and frequent eruptions, disappearing and returning with renewed strength, considerable tumours, violent diarrhœa, feverish appearances, and hemorrhages occupy much of the invalid's patience.

At such times the wet sheets and bandages, local, derivative, and strengthening baths, and clysters are extensively used.

APOPLEXY.

Apoplexy consists of the sudden suppression of the activity of the brain and nerves, characterized by unconsciousness, loss of sensibility and power of motion—respiration and the circulation of the blood being interrupted. Plethoric people, of short build, short neck, and broad shoulders, are apoplectic subjects: such should pay the strictest regard to a proper dietetic regimen, in order to steer clear of the attacks, the consequences of which are fatal in most cases.

In cases of apoplexy the half-bath must be resorted to, two men rubbing well the feet, temples, spine from the occiput downwards, the region of the pit of the

stomach, &c. When the fit is over, clysters must be applied, also stimulating bandages on the spine, back of the head and over the stomach: wet sheets follow, and when warmed therein, a tepid half-bath.

Perseverance and uninterrupted activity must be exercised by the presiding medical man: where there is the least symptom of life and warmth, even where venesection produces no blood, the friction should be continued, until the lungs and blood vessels resume their functions and the skin begins to steam, and not desisted from until the body actually assumes a death-like coldness.

When recovered, the after cure must be suited to the individual, and dietetic observances strictly observed.

CONVULSIONS.

Half-baths, in tepid water, will be necessary, with friction of the whole body, particularly of the back, loins and feet, and occasionally pouring over the patient water of similar temperature: the patient remaining in the bath until all appearances cease, which generally is the case after a violent cold shiver has set in. Priessnitz states the case of a woman who was kept in the bath nine hours, constantly rubbed by a couple of women, when the cold shiver set in, and she recovered; it is advisable to administer a little cold water during the

bath, if practicable. The subsequent treatment depends on circumstances, and when the fits return, the half-bath must be again resorted to; the exertion being great, the after treatment should tend to strengthen the patient.

EPILEPSY.

Priessnitz is said to have effected some cures of epilepsy, but he does not consider the disease unconditionally curable. In the purely nervous forms of epilepsy—caused by excesses of all sorts, by excessive mental exertions added to nightly watchings, by fright, or other commotions of the mind, by the sight of an epileptic subject, &c.,—a favourable result may be expected; by no means, however, where organic defects of the brain exist, or complications of other incurable diseases, such as organic defects of the lungs, heart, &c.: an alleviation of sufferings by a judicious water treatment is all that can be effected.

In the favourable cases, the treatment should tend to the strengthening of the nervous system: the cause of the disease should be discovered, its removal be the principal aim, and the treatment regulated accordingly. Fits are said to have been prevented by the constant application of wet compresses on the head, changed every two or three minutes, one compress remaining in the water, whilst the other is on the head: this would apply principally to comparatively strong persons; weakly and

enervated subjects should not have quite cold fomentations in the commencement, but gradually colder ones.

ST. VITUS'S DANCE.

This disease is incident to youth, and consists in convulsive spasms in the arms and legs: the disorder is not of a dangerous kind, and in most cases will yield to proper dietetic observances, without attempting too irritating a treatment. Sea-baths are particularly useful in this, as in all spasmodic affections.

HYPOCHONDRIASIS AND HYSTERIA.

Hypochondriasis originates in a chronic disease of the abdomen, caused by costiveness, sufferings, and excesses of all kinds, which by neglect or bad treatment gradually so much depresses the nervous system, that the disease is considered purely nervous, and generally treated as such, but which, as it seems to me, can only be cured by removing the cause. The disease appertains principally to the male sex, and is characterized by a morbid anxiety of the patient for the state of his health, the person delighting in various medicinal experiments for its improvement.

Hysteria appertains chiefly to the female sex, and may also be said to originate in other diseases, the

nervous system—being much more excitable in the female—gradually becoming depressed, and thus assuming even more of a purely nervous character than hypochondriasis.

In the treatment of both diseases, therefore, the object is to strengthen the nervous system, the abdominal organs and their functions.

In Gräfenberg and other continental institutions, we see numberless hypochondriacs and hysterical females of weakly constitutions, gain new life by a few months' residence there.

Premising that an avoidance of mental commotions, and strict, but not too sparing diet, are unconditional points, we proceed with the general treatment which of course must be carefully adapted to the individual.

Sitz-baths, of thirty to sixty minutes, constant wearing of stimulating bandages round the abdomen, frequent clysters, plentiful drinking of cold water and frequent gargling with the same, particularly in the morning, much exercise in the open air, cold washings at the commencement, afterwards gentle perspirations in wet sheets, and a very moderate use of the douche, will slowly, but surely lead to health. The treatment should be gradual, so as not to be exposed to the chance of being deceived by the stimulating influence which applications of cold water, if carried to the full extent, generally have, and which therefore should not be made use of to such an extent, until the patient is well inured to the element.

Hysteria must of course be treated with a most careful regard to the delicate frame of the sufferer, and particularly to the frequent necessity of changing, or modifying the various applications, such as sitz-baths, half-baths, and full baths, during menstruation or disturbances therein.

Spasmodic hysterical fits yield in a few minutes to foot-baths, the soles of the feet, face, region of the pit of the stomach, being rubbed well with fresh water, the palms of the hands of the patient being rubbed against each other. When the fits are over, a clyster is applied; then—if other circumstances do not interdict it—a sitz-bath, in tepid water, at the same time cooling compresses on the head and chest, when necessary; wet sheets may, if required, be substituted for sitz-baths, a half-bath succeeding the gentle perspiration or warming in the sheet, as the case may be. The treatment should be continued for a while to prevent a relapse.

MENTAL DISEASES.

Diseases of the mind are caused by over excitement or blunting of the faculties, produced by a variety of circumstances. Water is the best beverage for persons thus afflicted; it quiets and soothes the hot blood of the raging, and attenuates the thick fluids of the melancholy. The manifold outward applications are

likewise highly serviceable, particularly cold ablutions, while the patient sits in a lukewarm bath.

Horn relates a great many cases cured by these simple, but wonderfully efficacious, means. Washing the head with cold water, or placing wet cold bandages on the same—washing the whole body with cold water is beneficial in its consequences. Douche baths, full baths, and sudden immersions in cold water, are particularly useful in all mental diseases.

SCALDING, BURNING, ETC.

Immediately after a scalding or burning, put the affected part in cold water, and keep it there until the pain and heat subsides, or place linen, steeped in water, on the part, changing it, however, as soon as it gets warm; if the pain returns, the immersions are repeated; and when the skin is blistered, must be continued until all pain is withdrawn; the blisters are then carefully pricked with a fine needle, and after the discharge, wet bandages applied.

CHILBLAINS, ETC.

Numbness, occasioned by cold, is remedied by rubbing the part with ice-cold water, until the natural colour returns; the stimulating bandage should then be applied.

Chilblains should be washed frequently with ice-cold water, and kept in it for a few minutes, several times daily, after which rub the parts dry; a cure is by these means effected in a few days.

STINGS OF INSECTS.

Stings of bees, wasps, gnats, &c., are best cured by repeated applications of cold wet bandages, to be renewed frequently; of course the stings, when left behind, should be extracted.

BRUISES, ETC.

Cold wet bandages are the best remedy for all bruises, &c., caused by pressure, or other mechanical influences, as also in dislocations and sprains; they are then much preferable to warm and spirituous fomentations, in allaying and checking inflammation.

WOUNDS.

Wounds of all sorts, particularly from contusions, &c., are best healed by cold wet bandages, to stop the bleeding, to allay the inflammation, and with it the pain and swelling, to moderate the discharge, and prevent an unsightly scar; in a word, to heal the wound in the quickest and safest manner.

PART VI.

DIET, AIR, EXERCISE, CASES, ETC.

DIET, AIR, EXERCISE, ETC.

LIFE exhausts the powers from which it proceeds, and decomposes and destroys the organism in which it reigns; it can, therefore, only be maintained by a restitution of what is lost; this is effected by nourishment—in the shape of food or drink, which plays the most important part in the economy of life. In another part of this work I have had occasion to speak of the beverages in use, of their beneficial and detrimental tendency; it now remains for me briefly to allude to the other important point, namely, food.

ANIMAL FOOD.

Dr. Cheyne has observed that animal food (and artificial liquors) was not intended for human creatures, who neither have those strong organs fit for digesting it, (as birds and beasts of prey), nor naturally such voracious appetites; but, as we are not likely to discard animal food from our tables, and as its nourishing properties are well known, our aim should be to simplify the preparation of it as much as possible, paying due

regard to our constitution, habits, &c. Food in general should be of a kind to be easily assimilated to (taken up as a part of) our bodies, easily digested, and nutritious. It is a well-known fact that the nourishing property of food and its digestibility do not always go hand in hand; every one should, therefore, judge of his own capabilities in that respect.

Animal food is the most nourishing, and tolerably digestible, particularly if of young animals; and is therefore very proper for adults. Children under six years of age should have no animal food at all. The meat of mammalious animals is best adapted for man; birds are next in order; fish should be eaten moderately, and more rarely.

We must also have some regard as to the exciting power of the food; for which reason lobsters, crabs, &c., should not be indulged in too much.

Animals living in the open air are more healthy, and yield better meat, than those fed in stables; the latter yield a soft meat, but, on account of the exuberance of fat, it is injurious—fat pork particularly.

Salt meat is too exciting, and smoked assumes a nature quite foreign to the human organism. *Simple roasting or boiling* is the best way of preparing meat.

VEGETABLE FOOD.

Vegetables have less nourishing properties than animal food; but they moderate the process of life, and

afford it a more quiet and even developement. It is as with atmospheric air : were we to inhale pure oxygen, life would burn the brighter, but be the sooner extinguished ; by its admixture with nitrogen, however, the process of life is checked, moderated, and maintained longer : for this reason we should always take vegetable and animal food conjointly.

The various sorts of *cabbages* contain vegetable fibre, water, little saccharine matter, mucus or gluten : they nourish very little, are hard of digestion, and produce flatulency ; they are also liable to become putrified sooner than any other vegetable, and should therefore be used soon after cutting. Weak stomachs should avoid them.

Fresh fruits contain saccharine matter, vegetable mucus, starch, and citric acid. They are moderately nourishing, and by their attenuating properties facilitate and promote the customary excretions. Their use is thus salubrious, but persons who suffer from acidity of the stomach, and whose digestive organs are weak, should avoid taking them in any quantity.

Saccharine roots, such as carrots, are beneficial for the healthy ; they are less fit for weakly, flatulent persons. *Farinaceous roots*, such as potatoes, are nutritious and excellent for adults taking plenty of exercise ; children and persons of sedentary habits should use them sparingly ; children of scrofulous tendency should avoid them.

Almonds, nuts, and similar productions, contain much

gluten, starch, and oil, which make them very nutritious, but difficult of digestion: they are, therefore, only fit for unimpaired digestive organs.

Leguminous vegetables, composed of vegetable fibre and mucus, starch, &c., are very nutritious, but require a powerful digestive apparatus. Eaten with the husks they cause flatulency, colic, &c. Green pulse have less of the above-named component parts, but more water and saccharine matter; are less nourishing, but more easily digested than when quite ripe.

Farinaceous food. Flour is composed of gluten, starch, and saccharine matter: by the first-named component parts, it becomes particularly nutritious; flour made of Indian corn, barley and rice, has no gluten. Wheaten flour is the best and most nourishing, and has the best taste; but it depends on the preparation and ingredients combined with it, such as milk, fat, eggs, sugar, &c. If fermented, farinaceous food becomes more digestible and less flatulent; unfermented, with the above ingredients, it is highly nutritive, and very suitable for healthy persons, and such as have much corporeal exercise; but in children and persons of sedentary habits, it is apt to produce a series of disorders, if too much indulged in.

Rye bread, in connexion with other nourishing and digestible food, is adapted for a healthy and strong stomach; weakly persons and children should take small portions only, it being apt to cause acidity, diarrhœa, &c.

Barley is very nutritious and mucilaginous: a decoction of barley is an excellent drink in all inflammatory diseases and affections of the chest. Barley water with gum, is a useful diluent and demulcent, in dysury and strangury. The ancients used a decoction of barley in acute diseases, and as an aliment.

Oats, though less nourishing than rice and wheat, are yet nutritious and of easy digestion. Oats form the chief bread in Scotland and Ireland, and some of the northern counties of England. Gruel made with the flour, namely oatmeal, digests easily, has a soft mucilaginous quality, and is used for drink and food in fevers, coughs, hoarseness, &c.

Cheese when prepared from rich milk, and well made, is very nutritious in small quantities, but when hard and ill prepared, mostly indigestible, especially for weak stomachs.

Fresh butter is nourishing and relaxing, but readily becomes sour, and generally speaking agrees with few stomachs, being hard of digestion, if taken in large quantities, particularly when heated. Rancid butter is one of the most unwholesome and indigestible of all foods.

Spices (containing ethereal oil, and sometimes an acrid principle) might aid digestion, if used in extreme moderation, with fat and glutinous aliments: abused, they excite the nerves and cause inflammation; in time, weakness of the digestive organs, and by degrees of the whole organism.

I will now briefly consider the remaining dietetic agents: air, exercise, sleep, &c.

That vast expanse of *air* by which we are surrounded, and which, in spite of all influences, retains its nature, is the most important and essential to our existence. Changes of air contribute greatly to our health, or to the engendering of diseases, which will be manifest by viewing its composition, already mentioned in another place: generally twenty parts oxygen and eighty parts nitrogen. The nearer the air approaches to these component parts, the purer it is, and the better for health; hence the disastrous consequences and diseases arising from closely inhabited dwellings, where the air becomes filled with the exhalations of the inhabitants, and the oxygen soon destroyed. The atmospheric air, loaded with electricity, or deficient of it, elastic, heavy, or light; filled with vapoury or watery particles, or too dry; subjected to a constant change of temperature; containing so many causes influencing our health, depends too little on our will to adapt it to our purposes; but what we are enabled to do, is to resist its influences as much as possible: we must not become effeminate, but endeavour to steel our bodies, so as to bear its changes without detriment. It is therefore necessary that our dwellings and rooms should be high and lofty, open to the light and sun, and fresh air admitted every day. Cleanliness and frequent ventilation of their dwellings will enable the humblest of our fellow creatures to ward off many noxious influences.

Clothing should neither be too cold nor too warm, but adapted to the season: warm clothing should particularly be avoided in youth, as it prevents the due evaporation by the skin, and exposes the wearer to be influenced prejudicially by the atmospheric changes. Flannel next to the skin is therefore to be avoided, particularly by young, strong, and healthy persons: it weakens the skin, and thus opens the door to all inimical influences. The well known rule, to keep the head cool and the feet warm, should not be lost sight of; a warm covering for the head prevents the due evaporation, causes congestion, &c.

Exercise must of course not be omitted: life is a perpetual motion and change; all nature is a constant movement into time and space. Regular exercise in the open air promotes the due circulation of the blood, prevents its congesting in individual parts, strengthens and maintains the activity of the organs, and by assisting in quickly assimilating the food taken into the body, aids digestion, and stimulates the appetite. Nothing tends more to shorten life than constant confinement in close rooms; the circulation is checked; digestion impeded, breathing oppressed, and hypochondriasis, piles, hysteria, &c., are the result.

Exercise will also fit us for the due enjoyment of those hours devoted by nature to the restoration of our powers, mental and bodily, namely:—

Sleep. The proper hours should be devoted to rest. Day is intended for the various occupations of life—

night for refreshing our powers and fitting them for renewed exertions of the morrow.

“ Early to bed and early to rise,
Makes man healthy, wealthy, and wise ;”

is an old proverb, but none the worse for being so. The Germans say :—

“ Die Morgenstunde hat Gold in Munde.”

Mattresses should be used to sleep upon, and the covering should not be too warm, which is particularly prejudicial to children and young persons. If the sleep is to be refreshing, an early and light supper only should be taken, in order not to overload the stomach—which, by-the-by, should never be done—and thus cause disturbed rest, anxious dreams, nightmare, &c.

HINTS FOR PERSONS UNDERGOING THE WATER-CURE.

A few general remarks for the guidance of those who undergo the Water-cure may not be uninteresting.

The first point of importance is the diet, the necessity of observing which, in health and disease, I have endeavoured to impress upon my readers. The great end of the water treatment is to strengthen the various functions of the body, so as to enable them to overcome the diseased action of individual organs, and restore the

harmonious working of the whole organism. To accomplish this, and restore the lost power, a moderately nourishing diet is essential, but simple, natural, and moderate food should absolutely be adhered to. Abstinence from heating dishes and heating drink is a *sine qua non*—a condition, without which it is vain to expect a cure. Take a sufficiency of food, but do not overload the stomach by indulging to the full extent the appetite, which does not fail to be whetted to a high degree by the sudorific process, bathing, walking, &c.; rather leave off with an appetite, if the cure is to progress favourably; for the afternoon douches and sitz-baths would not have their due effect upon a full stomach, and this would even exercise an unfavourable influence upon the sweating of the next morning. Flatulent vegetables, such as peas, beans, &c., should be avoided; potatoes, farinaceous food, cheese and new-baked bread, taken with the utmost abstemiousness.

Acid and fat aliments are particularly to be eschewed by dyspeptic persons. Fresh and preserved fruit in moderation is beneficial. Spices are quite unsuitable to the cure; and eggs and butter should be taken in limited quantities only. For drink, milk, and water as a general rule. At all events, plenty of cold water must be taken in the course of the treatment. As some stomachs are unaccustomed to this, they must begin with small quantities. In Gräfenberg, those moderately used to water drinking take ten or twelve glasses, (five or six pints,) a-day. The greater portion of this is

taken in the morning between the first bath—after the shiver consequent on this has yielded to the due reaction—and breakfast; exercise being taken during this time, if at all possible, out of doors, or in doors by wood-sawing, &c.

No food should be taken until the water is quite digested; for this reason, a pause is made in drinking an hour or so before dinner, but is resumed during that meal according to pleasure. The quantity of water to be taken increases gradually with increasing strength; and twenty or thirty glasses per diem is seldom exceeded in Gräfenberg. Gargling frequently in the morning strengthens the organs of deglutition much, and solves and carries off a large quantity of mucus. Indeed, this is a good preparatory step for those quite unaccustomed to water drinking.

Water drinking should not be overdone; an excess of it, by its low temperature extracting too much caloric from the body, and its specific gravity in the same case, being apt to molest the digestive organs and prevent the due fulfilment of their functions. As a general rule, water should never be taken until the cold consequent on its previous application has passed, nor in such quantities at a time as to cause a shivering; if this occurs it must be overcome by exercise. The same applies to baths which, moreover, must never be taken on a full stomach.

Exercise is an essential requisite in order to promote a due circulation of the fluids. Patience and persever-

ance must be recommended, at the same time with an injunction not to over-hurry the cure:—it is better to do too little than too much in all cases. Freedom from care, cheerfulness of spirits, and an avoidance of all commotions and excitements of mind and body, are necessary. Over-indulgence in sleep is prejudicial; morning, moreover, is the best time for sweating and bathing.

Persons intending to visit an establishment will do well to prepare themselves at home as much as possible, by drinking water, taking ablutions, &c. The most proper time to commence is spring, when, if necessary, it can be continued throughout the year. Being under the hands of professional men, the appearances of fever, crises, &c., during the progress of the cure, should never alarm the patient, as it is a part of the cure, and is frequently purposely brought about when the vital power has attained sufficient strength to struggle with the disease. The treatment is then generally modified, but a sudden breaking off all operations might prove as injurious as a continued powerful action on the organism. After the cure is completed, it will be necessary, in order to obviate the recurrence of a necessity for a future treatment, to adhere to water diet for a length of time, and in many cases during life.

CASES.

BEFORE proceeding to the relation of a few cases, selected from among numerous others witnessed by myself, I deem it not amiss to state my own, as exhibiting good and valid reasons for travelling some thousand miles, to seek the advice of one whom I have heard denominated by some, a non-professional quack.

At the age of three years I had the misfortune to fall down a flight of stairs, and injure my right knee joint. A medical man was called in, and he pronounced it to be nothing but a bruise which would soon get well. To effect this, he sent a bottle of *stimulating embrocation*, with directions to well rub the joint with it night and morning; no laying up, no rest, it did not require it,—it was *nothing* but a bruise. After three weeks, it became evident that I began to limp, as I could not walk flat on my foot, and that it was something more than a *bruise*. The doctor, on being sent for, again examined the leg, the result of which was, another *stimulating embrocation of increased strength*, with directions to rub the part well with it, three times daily, and to make me march about, *or* I should have a stiff knee. Having a young mother to watch over me, my father being from home, and our residence in the country, the doctor's injunctions were rigidly complied with, until my system became

so much excited by his *embrocation and good advice*, that a severe fever set in, which very nearly proved fatal to me; the joint inflamed rapidly and to such an intensity, that I was given over, that is, no hopes of recovery were anticipated. Extra advice was sought, consultations took place with the first medical men from Manchester, Liverpool, and Chester; their decision was, that my leg *must be cut off*, or that I should die. They were asked whether the operation would ensure my life: *probably* it would, but if any delay ensued, *death was inevitable*. My kind parent wisely forbade the operation, and after my remaining six weeks in bed, *free* from the embrocation, I gradually recovered—to the astonishment of the doctors—but with increased lameness, to *remedy* which, I was supplied with crutches. The consequence of this vile treatment was, that my leg contracted, became stiff and fixed, forming a right angle with the thigh. This was my unfortunate situation at seven years of age.

About this period, there lived a middle-aged man in Preston, Lancashire, who had been a wounded soldier, disabled for service in consequence, and who afterwards had cured himself by his own peculiar treatment, which he was also pursuing in other cases, and with which he assured he could greatly relieve me of the deformity. It was determined that I should submit to it, and I well remember his first application; for, having suffered so severely while under the doctor's hands, I became exceedingly jealous of any interference with my leg.

The good man spoke to me kindly and encouragingly, placed me on a low stool, and examined my knee; after this, he steeped flannel in a decoction of herbs, and, when wrung out, placed it as hot as I could bear it, round the limb, changing the flannel as often as it cooled: this treatment lasted upwards of two hours, and was continued pretty regularly for some weeks, when I was permitted to go and return alone; this, as the sequel will show, was imprudent, for I doubt not but the restoration of the use of my limb was materially protracted in consequence.

In addition to the hot fomentations, my doctor now attached a small weight of about two pounds to my foot, by means of a strap, and made me stand on my sound leg, (holding up by a rope, attached to the ceiling,) swinging the other leg with the weight, to and fro, as well as I was able. This caused me considerable pain at first, but a rapid improvement soon became manifest by the kind and correct treatment; it was, however, too much for a child, tortured as I had been, and I fancied I was being cruelly treated: the effect of this was that I began to absent myself, attending only occasionally. The weight attached to the foot was gradually increased, and, as the cure progressed, my doctor resorted to another measure in furtherance of the object in view, by adding to the prescribed remedies, a long oval hollow tin which he procured after his own design, and which he placed under the joint: to this tin was attached a broad strong band, with leathern straps and buckles; the

band he buckled tight over the knee. This produced still greater pain, which induced me to follow out my truant tricks; nevertheless the cure progressed rapidly, as I was made to wear the tin, day and night; it was strapped tighter as the cure progressed. I walked with the fore-part of my foot on the ground, the heel nearly touching also, after nine months of this excellent, correct, and scientific treatment.

At this period we took up our residence in London, which prevented my cure being completed, as I am satisfied it would have been. Since that time I have been affected with a slight shortening of the limb from contraction at the knee joint, with nearly complete ankylosis; but this accidental malformation never inconvenienced me, as I could, without fatigue, walk twenty miles daily, and perform arduous duties.

I now arrive at my present ailment, which suddenly arose five years since, whilst attending my late poor mother for ten days and nights, after an operation of the breast for supposed malignant tumour, which, however, turned out to be nothing but a harmless one, and which would have sloughed away, had it been left, as the excellent and worthy surgeon who operated afterwards admitted. It is needless to say that two of the first medical men of the day saw her, and perfectly concurred as to the propriety of operating, although at the advanced age of 72; she died in consequence, on the tenth day.

Perhaps I got out of health from anxiety pending

the result of the operation, and might have taken cold as well, for I was suddenly deprived of the use of my unfortunate leg, and could not take a step without great difficulty. I was, in consequence, obliged to keep the house for three months, using either sticks or crutches, if I desired to move about. I sought the advice of the heads of the faculty, and pursued their prescriptions with rigid exactness, to little or no purpose. I then resolved to take change of air, believing the constitution to be at fault, and accordingly visited Ramsgate in the month of October, walking with the assistance of two sticks. In a fortnight's time, I improved so much, that I could take tolerable exercise with one stick. The weather setting in cold and wet, I returned home and continued medical treatment, with, however, little or no benefit. In the following May, I again went to Ramsgate, and met with the same beneficial result; but my practice not permitting a long absence, a speedy return to town became necessary. I then began to suffer in the joint occasionally very much, looked pallid, and expectorated blood on rising in the morning. This circumstance startled me, and, apprehensive of the worst consequences, I determined on relinquishing my practice, and residing permanently at Ramsgate. Since that time, I have enjoyed excellent health, but always suffered, more or less, in my knee.

My lameness appears to arise from chronic rheumatism of the joint (arthrodynia). I had tried every

consistent means to remove it, but without effect: at this time, I fortunately read Captain Claridge's book on the Water-cure.

The late Sir Astley Cooper very candidly states in his lectures, that some diseases of the knee-joint are very difficult to cure, that persons had come to him and found no relief whatever from his treatment, after having had the advice of the heads of the profession, without benefit—that such cases he was in the habit of recommending to Mr. Grover, of Bath, an intelligent general practitioner, who got them well. Sir Astley Cooper also mentions in his lectures that he sponged his body over with cold water, night and morning, with the most marked benefit, that although he went from the heated anatomical theatre, or lecture room, and remained about the hospital yard, in silk stockings and shoes, and lightly clad, he never took cold, which he attributed to the ablutions. These considerations, together with the remarks of many continental medical men, as evidenced by Captain Claridge, induced me to visit Gräfenberg, and submit to the Water-cure.

After having fully stated my case to Priessnitz, and answered his questions as to my general state of health, I was, at 5 o'clock the next morning, awakened by the bath servant, and wrapped up in a wet sheet, (as described in the 4th part of this work.) I had a slight shiver of about three minutes, when I began to recover my warmth, soon after which I felt so perfectly com-

fortable and composed, that I fell asleep. About six o'clock, I was again awakened by the baddiener, who was accompanied by Priessnitz. On emerging from the sheet, Priessnitz examined me very attentively from head to foot, feeling my skin, and desiring me to take a few steps; the servant then threw a sheet dripping with water over my head, and rubbed me with it briskly for five minutes. Priessnitz again examined my skin, and then placed a wet bandage, covered with a dry one, on my knee. The above process was repeated three times daily during my stay at Gräfenberg, at five in the morning, at eleven in the forenoon, and five o'clock in the afternoon; in addition, the whole of my diseased limb was enveloped in a wet and dry bandage, on retiring for the night.

Priessnitz expressed himself confident of being able to effect a radical cure; but, from the long standing of the malady, at the same time stated, that two or three years might elapse before it could be effected. This announcement by no means disappointed me, and I continued the treatment with rigid exactness during my stay at Gräfenberg, until I was compelled to quit in consequence of the severity of the weather,—snow storms, and the slippery state of the roads and walks, preventing my taking exercise out of doors for weeks together. I much regretted this circumstance, for I felt confident of a favourable result, could I have remained the required time. I had suffered incessantly for five years previously, and after a short time of the

treatment all pain had abated. A few days before my departure from Gräfenberg, a crisis broke out beneath the diseased joint,—an open ulcer free from pain, which commenced discharging, when I experienced considerable strength in the limb, being then able to walk about the house for four hours without fatigue, and without my walking-stick, which had not been the case for five years previously. The approach of the time for my departure prevented my continuing the treatment, in consequence of which the wound healed in about a week, when my former weakness of the joint returned, but *without the pain*.

Since my return home I have devoted all my spare time to the completion of this treatise, in order to contribute to the benefit of my fellow creatures, so that I have been unable to continue the treatment, but shall now forthwith recur to it in my own establishment.

It may not be out of place to add the case of Mr. Oswald, Prussian Consul at Hamburgh, who informed me that he had been crippled for years in one of his legs, from rheumatism; that he had sought the best continental advice—the Berlin doctors among the number—and at length was radically cured at Gräfenberg, after a stay there of two years and a half. On the day I had the pleasure of seeing him, nine months had elapsed since his return from Gräfenberg.

CASE 1. *Decline.*

A rich Hamburgh merchant had been declining in

health for ten years, without experiencing the slightest benefit from the means resorted to by the faculty. He had, in addition to this, sought relief from the most celebrated mineral springs on the Continent, for a considerable time, with no better success. Indeed, the latter seemed but to aggravate his disease. At length, tired out, as a dernier ressort he went to Gräfenberg, to try the effect of the cold-water cure, which had begun to excite considerable attention in Germany at that time. When he arrived there, he was in such a debilitated state, that he could scarcely stand; he had the appearance of a living skeleton, and was affected with caries of the vertebræ, weak digestion, excessive exhaustion, night sweats, slow fever, great constipation, and thirst. In this state he commenced the treatment, and, in the course of a very short time, evinced symptoms of considerable improvement; his strength increased as the fever diminished, and his bowels became more regular in their required functions; his appetite increased, his thirst became less, and he was enabled to take daily exercise, which materially assisted in his restoration. Thus he went on, increasing in strength and health, which was quite re-established at the expiration of two years. To commemorate his gratitude to Priessnitz, he built a new ship, and christened her the name of his preserver—Priessnitz.

CASE 2. *Debility.*

A married English lady, under the Water treat-

ment, during my stay at Gräfenberg, for general debility, informed me that she had been constantly complaining of illness for the last twenty years, having suffered severely from indigestion, nausea, sickness, and pains in the back and loins. Medicines failed in affording her relief; she therefore had, under proper advice, tried travelling, change of scene, &c., but with no alleviation of symptoms, until she was induced to submit herself to the water treatment. She commenced forthwith; a violent critical fever set in shortly afterwards, causing delirium, &c., which continued for a few days, after which she began to improve rapidly. Crises made their appearance twice after this, in the form of ulcers in the legs, which relieved her considerably from her sufferings, and tended greatly to assist in strengthening her system. She remained four months on the establishment, and said she had never been so well for the long time specified, and that she had now done with medicines for ever.

This lady's husband was likewise under the water treatment for a variety of complaints at the same time, and had experienced great benefit. They both spoke in the highest praise of the Water-cure.

CASE 3. *Asthma.*

A middle-aged English gentleman had been afflicted for years with asthma and spasms, always under the doctor's care, taking the prescribed medicines, and hot brandy and water as remedies. He suffered so

severely and so frequently from an over-excited state of the bronchial glands, without finding anything but a temporary relief, that upon reading Captain Claridge's book, he determined to pay a visit to Gräfenberg, and submit to the water treatment.

A residence of two months at Gräfenberg completely restored him to health. During the cure he repeatedly discharged from the mouth large quantities of phlegm. I afterwards heard regarding this case, on my return home, from the conductor of one of the royal post mails, whose attention was called to my sweating blanket, which I used as a wrapper for my legs, and which led to some conversation on the subject of the Water-cure. The conductor spoke of many cures which had been effected to his knowledge, and among others he also related the above, stating that when the gentleman was on his way to Gräfenberg, the cough was so severe, the constriction and the difficulty of breathing so great, that he feared he would have been suffocated; and on the gentleman's returning the same road two months later, he was delighted to find him quite well, without once coughing during the whole journey.

The conductors on the Continent are well-informed men, and many of them have served as officers in the army.

CASE 4. *Scrofula.*

A Polish gentleman, resident at Gnesen, twenty-two years of age, presenting the strumous diathesis—under treatment during my residence at Gräfenberg, for scro-

fula of the nose—informed me that he had been affected generally with this disease from birth, but more particularly about the neck. He had been continually under medical treatment without avail. The last two years, whilst under treatment, his eyes and nose became so seriously diseased, that it was believed they would be totally destroyed; the cartilage of his nose was rapidly ulcerating; he was nearly blind, and suffered the most intense agony. The various external and internal applications seemed but to aggravate the affection. Matters went on thus, until he became a perfectly disgusting object, both to himself and others, the discharging matter covering his face, and emitting a most offensive odour. He was sent to Gräfenberg in a very exhausted state, and had been there seven months under the Water-cure, when I first saw him. The ulcers, which are always so difficult to heal in this complaint, were perfectly well. He appeared in good health, and felt quite well and happy. There, however, remained some little disfigurement of the nose, in consequence of the destruction of some portion of the cartilage.

CASE 5. *Cancer of the Stomach.*

The heading of this case may perhaps be considered incorrect, as the disease seldom succumbs to medical treatment. This, however, I shall not dispute, as the Water-cure placed it beyond my power to examine the body after death, so that I could not exhibit the exact

pathological condition of that viscus; nevertheless, I believe it to be right, from the same opinion having been given by other medical men.

An Austrian gentleman, of about thirty years of age, came to Gräfenberg, during my stay there, to be cured of general debility, great exhaustion and vomiting after food, which had completely emaciated him. He had been getting in this deplorable state many months, and was at length told that he was past recovery. Having nothing to expect from the aid of medicine, he determined to give the Water treatment a trial. For the last six months previous to his arrival at Gräfenberg, he had always endured much pain in the stomach, chiefly occasioned by taking food, and this was continued more or less until he vomited, when his acute sufferings somewhat abated. He sought relief in abstemiousness, subsisting on diet of the lightest kind, notwithstanding which, the vomiting continued, and he began himself to despair.

Mild treatment was adopted at Gräfenberg; vomiting and the usual pains were not in the least alleviated; indeed, the vomiting rather increased, and frequently occurred whilst undergoing the requisite operations. Soon, however, more favourable symptoms were evinced. In six months, vomiting ceased altogether, with much less pain; an occasional douche tended to restore his lost strength; his pain decreased daily, and health increased in the same ratio. His appetite was good, and mind cheerful. I left him in the establishment, in a fair way of a radical cure.

CASE 6. *Syphilis.*

The subject of this case, a Bohemian gentleman, resident in Vienna, appeared to have been affected with two distinct diseases—piles and syphilis of six years' standing. He had been under the care of the most skilful medical men, who salivated him to such an extent, and so reduced him by their medicines, that he could not walk fifty yards without the greatest exertion and fatigue. In this state he arrived at Gräfenberg, encased in flannel and thick wrappers, in order to prevent his catching cold, under the advice of his physicians. He was suffering with great thirst, nausea, fever, continued pain at the back of the head, pains in the limbs, eruptions, costiveness, and excessive debility.

Under the Water treatment he improved daily, and to such an extent, that in two months he could walk six miles with comparative ease; and in December last, in severe frosty weather, he walked about with one coat on, namely, a pilot of light texture. His flannel wrappers and superfluous clothing had been discarded soon after reaching Gräfenberg. At the period of my departure he had been four months at Gräfenberg. The piles yielded to a regular action of the bowels, although he had been troubled with them for some years.

It is a remarkable fact that after the wet sheet baths, which formed part of the treatment of this case, the water wrung from the sheets always had a milky consistency and a fetid smell,

CASE 7. *Rheumatism.*

A Russian officer, thirty-five years of age, for a long time affected with chronic rheumatism of the head and feet, sought relief at Gräfenberg. He suffered mostly at night from the rheumatic pains. After submitting to the treatment for ten weeks, (sitz-baths of long duration forming one of the principal applications,) he was one day alarmed at finding a considerable flow of blood—to the amount of about a pint, which he ascertained by measuring the blood coagulated in the bath—to have taken place from the rectum whilst in the sitz-bath. He soon ascertained that this was a critical appearance. The treatment was slightly altered, and after the lapse of a few days a similar flow of blood occurred, and recurred at short intervals a third and fourth time, when marked relief followed these sanguineous evacuations. This gentleman was accustomed to indulge his appetite to the fullest extent, which I believe retarded his cure; he is, nevertheless, in a fair way of recovery.

CASE 8. *Liver Disease.*

An Austrian professional gentleman—compelled to relinquish his avocations in consequence of the severity of his disease—came to seek health on the far-famed mountain.

His medical attendants had told him that he was suffering under a multiplicity of organic affections,

namely, the liver, spleen, &c., and that there was no hope of recovery—that mitigation of pain was all he might expect. The latter intelligence he received with agreeable sensation, since his case was deemed hopeless. He, however, decided on undergoing the Water treatment at Gräfenberg, although this was attended with considerable inconvenience to him. On his arrival at Gräfenberg, he was pale, with a dropsical tendency, much jaundiced, and suffering greatly from gastric irritation. When I quitted Gräfenberg, he had been under treatment seventeen weeks, was free from pain, jaundiced colour giving place to a more healthy hue, appetite good, and on the whole progressing favourably towards a restoration to health.

CASE 9. *Psoriasis Diffusa.*

This case was one of the most inveterate I have ever witnessed. The patient, an English gentleman, aged sixty years, from Boulogne, had been afflicted with this unpleasant disease incessantly, for twenty-six years. He informed me that he had eagerly sought both English and foreign medical advice, but to little or no avail, and that his past sufferings had been so great that he should have been almost tempted to commit suicide, were it not for the consideration of his young family, which alone deterred him, for he could procure no relief for his sufferings, and was completely wretched. His medical advisers had pronounced him to have a complication of disorders—besides the skin affection—namely,

of the liver, spleen, and stomach. He, therefore, on reading Captain Claridge's book, determined to proceed to Gräfenberg, in spite of the expostulations of his medical and other friends.

I saw him soon after his arrival, looking very ill and very excitable, covered with a scaly eruption of irregular form over parts of the body, and lower extremities especially, of a brownish red colour, with, in some parts, desquamation, beneath which the skin appeared of a deep red: the cuticle in other parts appeared natural. At the commencement of the Water treatment, he was placed in wet sheets two or three times daily, and the relief afforded was so soothing and agreeable, that he actually disliked getting out of them when the time arrived: he looked forward to the periods of being wrapped up in them again with pleasure.

There was a singular circumstance connected with this case: the patient had been affected with red gravel for eighteen years, which occasionally was very painful and troublesome to him: in six weeks under the Water-cure he was perfectly relieved of this ailment and has had no relapse. The skin disease is also progressing towards a cure, and although Priessnitz told him it would take two years to cure him, he nevertheless expresses his happiness and joy at the intelligence, and at the rapid improvement in his general health. He says, nothing should induce him to leave the place, the relief afforded being *so exquisitely great*. This gentleman has arranged for his family to join him

at Gräfenberg, his stay in this place being likely to be protracted.

CASE 10. *Skin Disease.*

An English gentleman-farmer came to Gräfenberg, during my residence there, to undergo the Water treatment for an eruption of the skin, covering nearly the whole body, of twenty years' standing. The eruption resembled very much the appearance of psoriasis guttata, which I have no doubt it was, considering the symptoms in connexion therewith.

He took apartments in Freiwaldau, and sent for Priessnitz, who examined him, and gave directions how to proceed. In answer to the question, as to the probable time required to effect a cure, Priessnitz stated two years to be necessary. This alarmed the farmer, as he could not devote so much time to the treatment.

Nevertheless, as the process which had been recommended by Priessnitz for a commencement was simple, namely, perspirations in wet sheets, followed by ablutions, the farmer thought he might as well try its effects. He pursued it without deviation for eight weeks, at the same time strictly observing a most rigid diet—he absolutely took nothing but bread and water, three times daily—at the expiration of which time he declared himself quite cured. He left Gräfenberg at the same time I did, looking as hale and hearty as any man need look.

Previous to his undergoing the Water treatment, he

had not perspired for years, whilst in the course of it, perspiration was speedily promoted by water drinking and the wet sheets. From the short time devoted to the treatment, I apprehend that this gentleman will be liable to a recurrence of his complaint.

CASE 11. *Purpura Simplex.*

The subject of this case is an Hanoverian officer, about fifty years of age. He had an eruption of thirty years' standing in the breast, arms, legs, and back of the neck—having the appearance of petechiæ—in consequence of the retrocession of measles, with which he was affected at that period. He suffered from pains in the limbs, great thirst, loss of appetite, nervous twitchings, and diarrhœa which produced from ten to twelve motions daily for the last six years. Medicine afforded him no assistance, consequently he placed himself under the Water treatment, soon after which, fever set in for a fortnight, causing loss of sleep and delirium. Two crises made their appearance then, and continued nine weeks, during five of which the patient was compelled to keep his bed: this was succeeded by returning strength and good appetite.

The diarrhœa ceased entirely on the fifth day of the treatment, the nervous twitchings and pains altogether ceased on the appearance of the crises.

He left after a stay of five months and a half, looking fresh and vigorous, and feeling perfectly well and comfortable.

CASE 12. *Gravel.*

A Russian officer had suffered severely from acute nephritic paroxysms for some years, without receiving much benefit from his medical advisers, so that he determined on undergoing the Water treatment. When he arrived at Gräfenberg, the urgency and difficulty to pass water was so great, that he voided pure blood, whenever he made the attempt. The pain and irritation consequent thereon, together with the loss of blood, &c., blanched his skin, and gave him such a haggard look, that he was dubbed, "the Ghost," by some of his jocose and more happy fellow patients, on his arrival at the establishment. After submitting to the treatment for three weeks, he voided considerable quantities of red gravel, the blood ceased to pass, and the symptoms of disease greatly diminished; in nine months he was perfectly recovered.

CASE 13. *Stricture.*

The subject of this affection was an Hungarian advocate, about thirty-five years of age, who for two years had been unable to pass his water in a full stream. He had been under surgical treatment, and most severely punished by the frequent introduction of bougies and catheters, but with very slight symptoms of improvement. The frequent desire to discharge the contents of the bladder became so urgent, and the suffering so great, that he was strongly induced to visit Gräfenberg, for the pur-

pose of undergoing the Water treatment, though without the slightest hope that he should find relief.

In this state he arrived at Gräfenberg, having a hard callous thickening of the lining membrane, forming a firm stricture, situate about three quarters of an inch from the membranous portion of the urethra. For the first week he experienced great difficulty in voiding his water: a high state of fever had set in, the patient having caught the small pox on his journey, and being covered from head to foot with the eruption on the third day. To the wonder of all, he was well and out on the tenth day. He now began to pass his water with greater facility, in a larger stream, and with less pain; and continued rapidly improving for the next six months, after which period the false membrane sloughed away in three distinct portions at three several times, when he passed his water in a full stream without pain, and has so continued to do up to the tenth month of the treatment. He remained at Gräfenberg on my departure from thence.

CASE 14. *Hypochondriasis.*

A Prussian gentleman, labouring under deranged digestion, and a morbid state of feelings and ideas consequent thereon, which he had endured for years, travelling from physician to physician, from country to country, without being benefited, was at length induced to accompany a friend who intended setting out for the far-famed temple of health with a view of remedying

an obstinate constipation. The hypochondriac remained under treatment twelve months, and his gradual improvement was visible to every one. When I saw him, after he had been there about ten months, he had assumed a cheerful appearance, quick and active gait, and indeed was one of the most lively persons in the place, whilst on his arrival he was the very picture of melancholy.

His friend had departed after a sojourn of three months, perfectly cured.

CASE 15. *Diseased Leg.*

A Prussian officer received a severe contusion of the right leg, from a large piece of timber accidentally falling upon it. He placed himself under surgical treatment, and after continuing it for some time, instead of being relieved, was startled by the announcement that mortification was supervening, and that immediate amputation had become necessary. The patient firmly refused to submit to the operation, but determined on making the best of his way to Gräfenberg, where he spent three years, and was rewarded with a thorough restoration of his limb to health and life: he was actually one of the best dancers in the place.

CASE 16. *Hysteria.*

The subject of this case was an Austrian lady, about fifty years of age, rather corpulently inclined. She had been severely and frequently affected with hysterical

attacks, the consequence of impaired digestion, which brought her to a state bordering on hypochondriasis. For the last few months previous to submitting to the Water-cure, she had been particularly subject to violent and frequent fits. These continued for the first fortnight or three weeks of the Water treatment, after which she gradually recovered, and was quite restored to health in three months. She was highly grateful for the change in her health—indeed her expressions of delight and thanks to her benefactor knew no bounds.

CASE 17. *Heart Disease.*

The patient was a young Russian gentleman, connected with one of the richest merchants in Odessa. Excesses and excitements tending to affect the action of the heart materially, had caused an enlargement of this organ. He experienced great exhaustion, difficulty of breathing, and other sufferings, from which he had in vain endeavoured to be relieved by most rigid medical treatment. He had been reduced almost to a skeleton, and his frame was perfectly attenuated.

In this state he sought relief from the Water-cure, and found it to his inexpressible delight, after four months' treatment, which enabled him to ascend and descend the mountains with as little fatigue as more robust patients.

CASE 18. *Insanity.*

This gentleman, a Prussian, had been affected with

mania for several years, marked by violent passions and false conceptions, frequently mistaking his best friends for his foes, and becoming exceedingly violent, without any assignable cause; so much so, indeed, as often to strike them, when not duly restrained or prevented.

The chief causes of his malady, I believe, were, an over-imaginative mind, and habits of intoxication. He had been placed under confinement at times; but the attacks would recur periodically.

A kind friend undertook to watch his progress under the Water treatment, which seemed, indeed, to have effected wonders for the invalid. The paroxysms were considerably abated after some months' cautious treatment, although a great deal of excitability remained when I left Gräfenberg. I consider him in a fair way of perfect recovery.

CASE 19. *Constipation.*

A Prussian general officer, accustomed to high living, had been afflicted for twelve years with costiveness, which his medical advisers only succeeded in relieving temporarily. The evil grew upon him, and his mind was becoming easily excited; trivial causes tended to annoy him, and he began to be displeased with himself and others. He sought and found perfect relief by a stay of some months at Gräfenberg.

CASE 20. *Diseased Elbow.*

A young Polish nobleman, whilst racing, was thrown

from his horse, which had taken fright, and came in contact with the ground upon his elbow. Intense inflammation and pain ensued; his numerous medical attendants all concurred in the opinion that amputation was the only chance of saving his life, which they considered was endangered by the accident.

He declined the operation, but desired them to use their best means, without removing the limb. They accordingly continued to treat him for nine months; in the mean time several pieces of bone exfoliated from the elbow-joint.

At this period he determined on being conveyed to Gräfenberg, with the arm swollen to three times its natural size, the agony being intense. Two months of the treatment relieved him from all pain, and the arm was reduced to its normal size. He is also able to make a slight use of the hand of the diseased arm. This gentleman remained at Gräfenberg at the time of my departure. Priessnitz says that he will recover the proper use of the limb, but that it will require a year or two to accomplish this.

CASE 21. *Nervous Affection.*

I witnessed another remarkable case in the person of a Prussian lady of some distinction. She told me that she had been seriously indisposed, and suffered a variety of pains, particularly about the region of the heart, for more than twelve months previous to her sojourn at Gräfenberg, brought on through the death of an attached

friend. Her symptoms had been such that her medical attendants were induced to consider her case as one of organic disease of the heart, in consequence of her always feeling great pain in that organ. I am inclined to consider it a disease of the mind, caused by the severe shock she received. She said that at times the most gloomy thoughts entered her mind, and it was only by her naturally strong intellect she was enabled to overcome them; at repeated and frequent intervals, however, desponding ideas totally unnerved her. She had placed herself under medical treatment, but finding no permanent relief, resolved upon submitting to the Water-cure. During the first four months of her residence at Gräfenberg she scarcely perceived any difference in her health, but after the lapse of about that period, two crises made their appearance, one on the left shoulder, the other on the right leg, both of which discharged profusely. From that time she experienced considerable relief, and entertained sanguine hopes of recovery. She went on improving almost daily, and now, about six months since her commencement of the water campaign, she appears quite well, eats well, sleeps well, takes long walks, and says she feels quite happy and cheerful.

CASE 22. *Bleeding Piles.*

A Polish gentleman had been affected with hemorrhoids, and experienced much suffering from frequent attacks of heat, inflammation, and pain of the mucous membrane of the lower bowels for five years. He had

lost flesh, and become extremely debilitated in consequence: he was very costive, and always dreaded a motion, on account of the acute, cutting pain he endured at the time.

Laxative medicines, leeches, washes, fomentations, injections, &c., had been resorted to from time to time, but with only a temporary relief; distension and tumefaction of the parts always seemed to succeed any operations, so that the patient suffered more than before from increased irritation and straining at the time of going to stool. Purgatives of a gentle kind were frequently administered, yet these seemed but to torment him the more.

In this wretched state he eagerly came in search of Priessnitz, although he suffered most acutely in the attempt, and was compelled to rest nightly on the road.

After reaching his destination, and submitting to Priessnitz's treatment for three weeks, he was delighted to find great regularity in the action of the bowels, with little or no pain. He went on improving rapidly, assuming a healthy and robust appearance, and expressed himself in extatic terms as to the beneficial effects of the treatment.

CASE 23. *Gout.*

An English gentleman, a bon vivant, fifty years of age, of sanguine temperament, and inclined to corpulency, had been subject to gouty attacks for the last fifteen years. He suffered excruciating pains in both

hands and wrists, and the left foot, to such a degree, that he was compelled to keep the house for many months at a time. This induced him, after trying in vain to obtain ease, to visit Gräfenberg for the purpose of undergoing the Water-cure. At this period the parts became particularly swollen, painful, knotty, and somewhat disfigured in appearance. He was immediately subjected to the treatment, and, to his utter astonishment, was quite freed from all pain in one week, without any return of it at all, although he remained on the establishment for twelve months, when he was perfectly restored.

In his sweating blankets, sheets, and sitz-baths, after each time of using them, for the first six months, there were usually concretions of a chalky kind; afterwards this disappeared altogether, and the patient enjoyed excellent health. He told me he had been a great wine drinker, having taken one or two bottles daily for many years, and that he never meant to touch it again, having lost all taste for it.

CASE 24. *Fistula.*

The subject of this case was an Hungarian nobleman of high rank, who had suffered some years with a discharge from a fistulous opening in the rectum, and had become very thin and weak in consequence.

He had undergone an operation, but without any relief, neither had he experienced any benefit from the medical treatment employed. He began at length to

despair of his life, when he was persuaded to submit to the Water-cure, the result of which was, after a treatment of three years, that he quitted the establishment perfectly cured, having regained his lost health and strength.

In closing these cases, I regret that the limits appor-
tioned for this work necessarily compel me to leave
out many more of an equally interesting character.

HYDROTHERAPEUTIC ESTABLISHMENTS.

THE progress of these institutions in this country is satisfactory, and will soon be as rapid as on the Continent; a list of the Continental institutions we subjoin, adding such as are in operation, or in the course of being formed, in England.

Austrian Silesia.

1. Gräfenberg, the parent establishment.—Vincent Priessnitz.
2. Freiwaldau, an hour distant from Gräfenberg.
3. Karlsbrunn, between Freiwaldau, Jägerndorff, and Freidenthal, by Dr. Malik.
4. Weidenau, near Neisse, by Dr. Fröhlich.

Lower Austria.

5. Kaltenleutgeben, five miles from Vienna, by Mr. Emmel, surgeon.
6. Laale, two miles from the last named establishment, by Dr. Granichstädten, (named several times in the course of this work.)

Upper Austria.

7. Micheldorf, by Dr. Pflichtenheld.

Bohemia.

8. Kuchelbad, near Prague.—Dr. Kanzler.
9. Elisenbad, near Chrudim.—Dr. Weidenhoffer.
10. Dobrawitz, an hour's distance from Jungbunzlau.

Dr. Schmidt.

11. Leitmeritz.—Lauda, surgeon.
12. Turnan.—Dr. Schlechta.
13. Kosten, near Töplitz.
14. Tiefenbach.—Windler, surgeon.
15. Friedland.
16. Geltschberg, near Lewin.—Dr. Mayer.
17. Trübau, near Leitomischl.—Dr. Ribiczka.

Moravia.

18. Czernahora, near Olmütz.
19. Sulowitz, near Brünn.
20. Roznau, near Prerau.
21. Budischan, near Iglau.
22. Great Ullersdorf, superintended by a medical man.

Hungary and Transylvania.

23. Pesth.—Dr. Oestreicher.
24. Ofen.
25. Kaschau.—Dr. Steiner.
26. Schmecks.—Dr. Posewitz.
27. Hodritz, near Schemnitz.—Dr. Stary.
28. Bartfeld, near Eperies.—Dr. Horvath.

29. Füred.—Dr. Adler.
30. Dezs.—Vajna, surgeon.
31. Hermannstadt.—Dr. Mühlich.
32. Borszek.
33. Carlowitz.—Dr. Pricsics.
34. Luncanit.—Dr. Buchwald.

Illyria.

35. Trieste.—Dr. Angeli.
36. Klagenfurt.—Dr. Burger.

Tyrol.

37. Mühlau.—Fritz, doctor and military surgeon.
38. Ulten, near Meran.

Prussia.

39. Berlin.—There are two establishments, directed by Mr. Beck and Dr. Moser.

40. Marienberg, near Boppard by Coblentz, on the Rhine.—Dr. Schmitz, and Dr. Mayo, late senior surgeon of the Middlesex Hospital, London.

41. Köthen, near Freyenwalde.—Falkenstein.
42. Bromberg, Posen.—Dr. Barchewitz.
43. Gorziskowo, near Bromberg.—Dr. Strigelius.
44. Obernigk, near Breslau.—Dr. Werner.
45. Alt-Scheiting.—Dr. Bürkner.
46. Wüstewaltersdorf.—Dr. Senftner.
47. Kunersdorf.—Dr. Meyer.
48. Camenz.—Dr. Starke.

49. Freyenwalde.—Voigt.
50. Kunzendorf.—Dr. Niederführ.
51. Elbing.—Dr. Heussner.
52. Czarkow.—Dr. Kunze.
53. Samland.
54. Laubachthal.
55. Kleinbantken.
56. Gräfenberg, near Düsseldorf, on the Rhine.
57. Marienwerder.—Dr. Heydenhain.

Bavaria.

58. Erlenstegen, near Nürnberg.—Dr. Rungaldier.
 59. Alexandersbad.—Dr. Fikenscher.
 60. Streitberg, (birth-place of Professor Oertel),
between Erlangen and Bairuth.
 61. Schäftlarn.—Dr. Hagn.
 62. Schallershof.—Fleischman.
 63. Bernheim.—Dr. Weik.
 64. Five hours from Munich, on Lake Starnberg.—
Dr. Schnizlein.
 65. Ansbach.—Dr. Oertel.
- Several more forming in and near Munich.

Saxony.

66. In "Saxon Switzerland," two miles from the fortress Königstein, under the immediate patronage of the royal family, who have a palace near there, and under the direction of Drs. Hoch and Ehrlich.

67. On Lake Priessnitz, near Dresden.—Dr. Ruschpler.
68. Kreischa, near Dresden.—Dr. Stecher.
69. Freyberg.—Dr. Ettmüller.
70. Strehlen.—Dr. Herzog.
71. Liebenstein, near Meinungen.—Dr. Martini, (formerly of the Elgersburg establishment.)
72. Blankenburg.—Dr. Fritzsche.
73. Hohenstein.—Dr. Vogel.
74. Reuss-Ebersdorf.—Dr. Fränkel.
75. Reuss-Lobenstein.

Saxe-Gotha.

76. Elgersburg, directed by Dr. Piutti, aided by Professor Munde; it is supported by the reigning Duke Ernst.

Saxe-Weimar.

77. Ilmenau, at the government's expense.—Dr. Fitzler.

Wurtemberg.

78. Ulm.—Dr. Bentsch.
79. Göppingen.—Drs. Palm and Landerer.
80. Kennenburg.—Dr. Steudel.
81. Rungenthal, near Stuttgart.
82. Gaildorf.

Baden.

83. Hubbad.—Dr. Strauss.

Hesse-Cassel.

84. Cassel.—Mr. Rausch.
85. Wolfsanger.—Dr. Schnackenburg.

Brunswick.

86. Brunswick.—Dr. Mühlenbein.
87. Harzberg.—Dr. Struve.

Nassau.

88. Kronthal.—Dr. Küster.

Hanover.

89. Minden.—Dr. Rosenbach.

Switzerland.

90. Righi.—Dr. Kreiser.
91. Hausen.—Dr. Brunner.

Poland.

92. Warsaw.—Dr. Sauvan.

Russia.

93. St. Petersburg. Three, under the direction of Dr. Harder, Dr. Rennes, and Baron Chabot.

94. Moscow.—

Livonia, Kiew, and Lithuania, have each an establishment. The Russian government is having an hospital built for military patients—a Water-cure establishment—sixty wersts from Petersburg.

Belgium.

95. Warrem, near Liège.—Dr. Henrard.
 96. Uccle, near Brussels.—Dr. Thielemann.
 97. Bergheim, a suburb of Antwerp.—Director unknown to the author.

France.

98. Paris.—Drs. Engel and Behrend.
 Dr. Baldon is forming one near Paris.

In Italy a physician who has been at Gräfenberg is forming an establishment between Milan and Como.

There are more establishments forming in various parts of the Continent: the above list extends to the end of 1842.

Great success has also attended the few opened in this country in the cures effected there. The following are now in operation:—

England.

1. Harrow on the Hill.
2. Stanstead Bury House, Hertford.—Dr. Graham.
3. Great Malvern.—Dr. Wilson.
4. Ramsgate, Spencer House.—Dr. Smethurst.

In Liverpool, Leeds, Cheltenham, Bath, &c., establishments are forming.

FINIS.

