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Balbirnie, John, 1810-1895.
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Publication/Creation

London : C. Mitchell, 1856.

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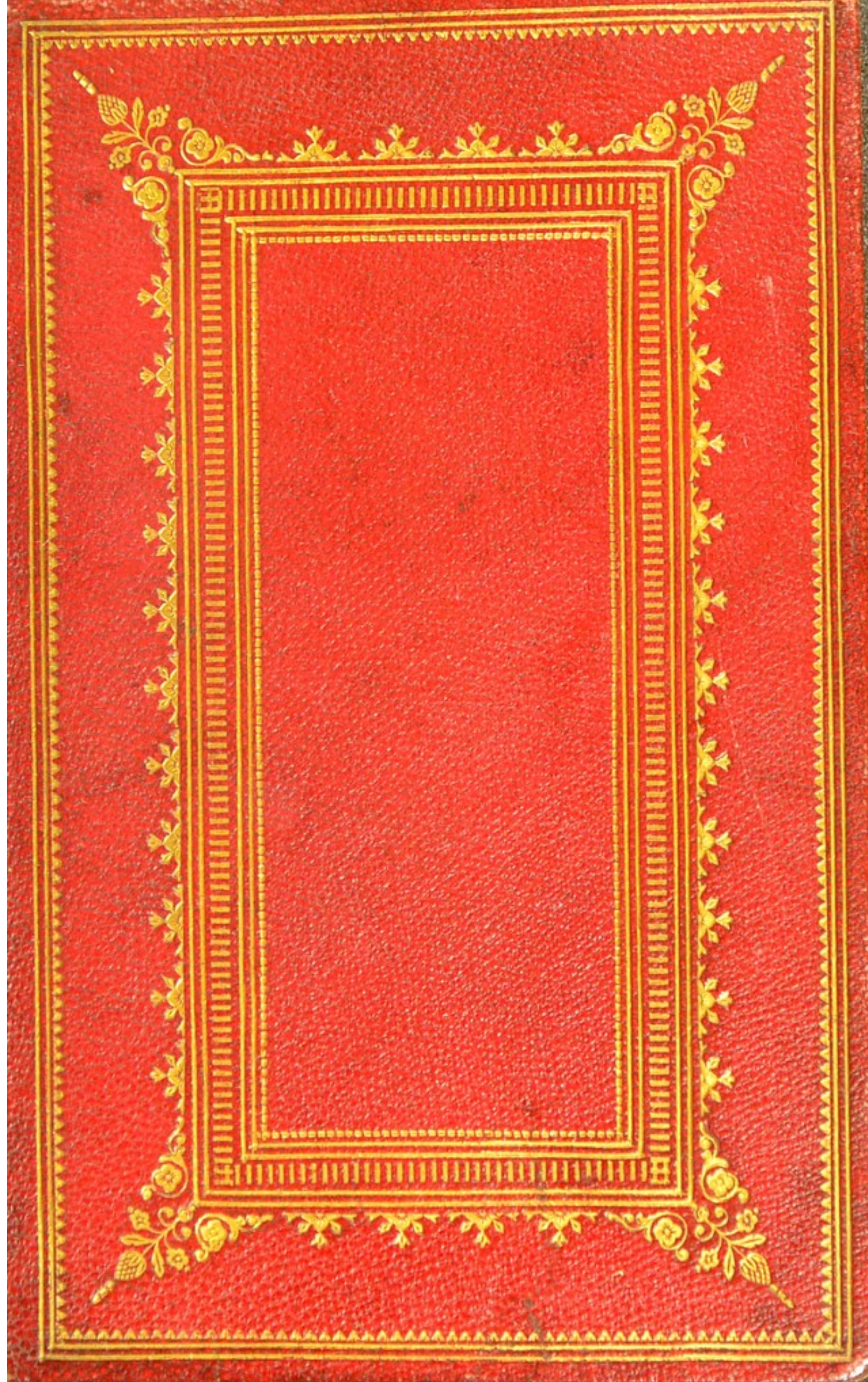
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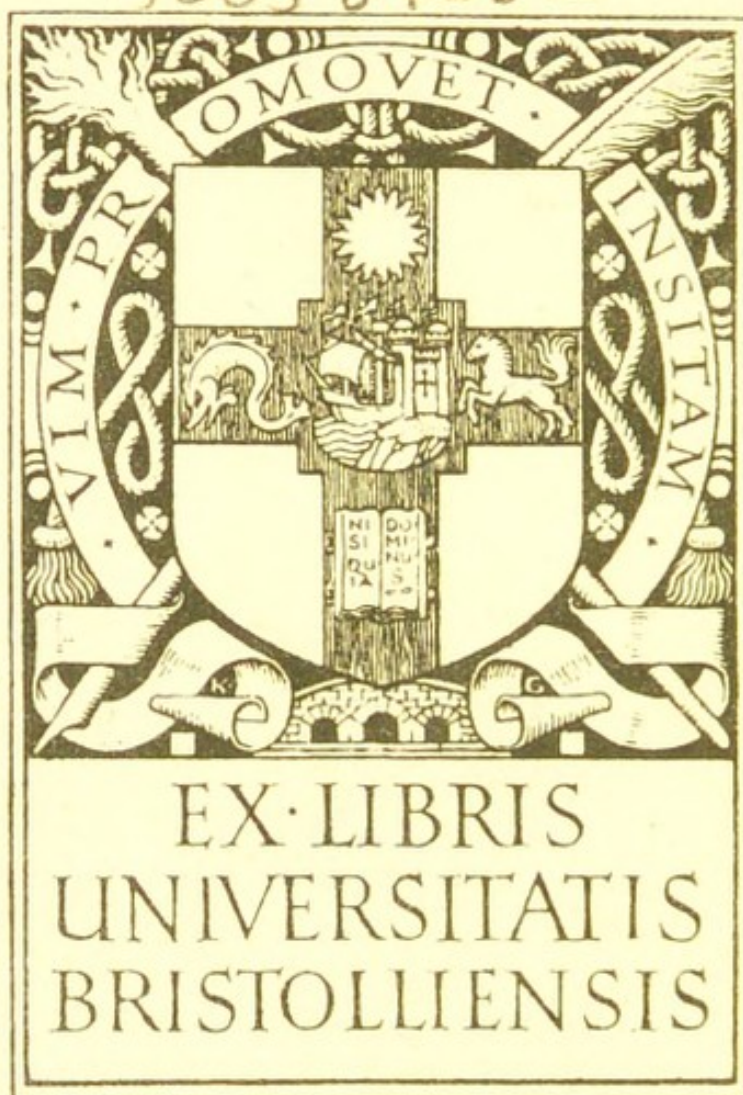
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THE
PHILOSOPHY OF MINERAL WATERS :
WITH THEIR
MEDICINAL APPLICATIONS.

BY
JOHN BALBIRNIE, M.A., M.D.

AUTHOR OF
" THE WATER-CURE IN CONSUMPTION," " THE SIMPLE TREATMENT OF
DISEASE CONTRASTED WITH MEDICINAL ABUSES,"
" THE PATHOLOGY AND TREATMENT OF THE DISEASES OF WOMEN," &c.

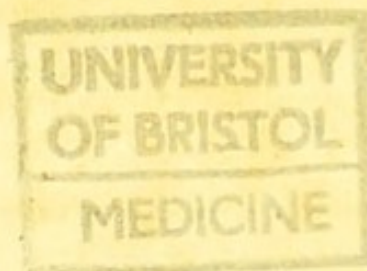
" Most blessed water ! neither tongue can tell
The blessedness thereof, no heart can think,
Save only those to whom it has been given
To taste of that divinest gift of Heaven."

SOUTHEY.



LONDON :
C. MITCHELL, RED LION COURT, FLEET STREET.
MDCCCLVI.

EDINBURGH:
PRINTED BY BALLANTYNE AND COMPANY,
PAUL'S WORK.



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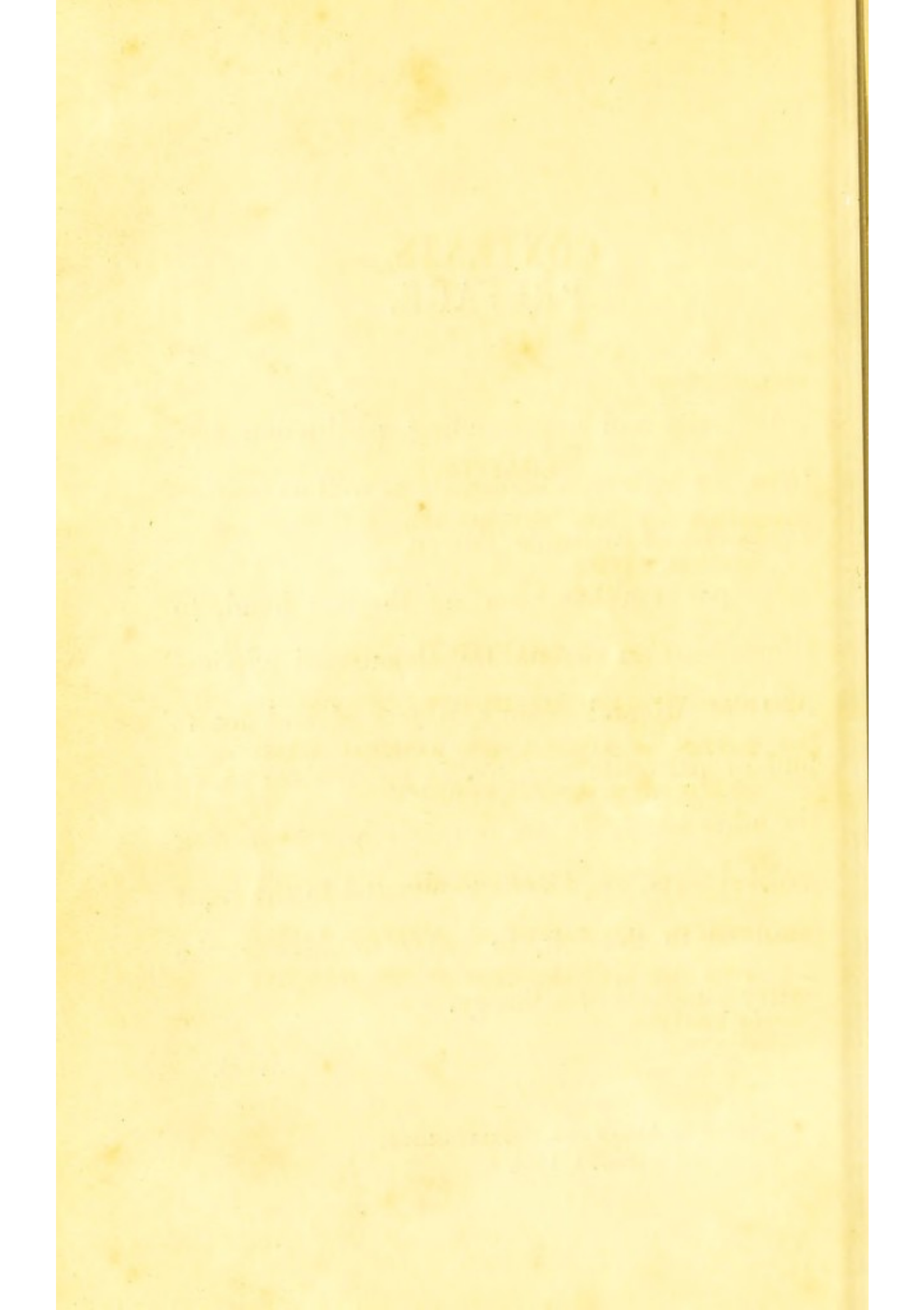
PREFACE.

THIS brief and unpretending production contains, we believe, a legitimate as well as *original* exposition of scientific TRUTH.

As our aim has been, on the one hand, to throw light on the nature, action, and applicability of Mineral Waters *in general*, and not to puff or patronise any spa *in particular*; so, on the other hand, we are not conscious of having garbled facts, or of having deviated to the right hand or to the left, in order to answer the paltry purposes of a theory.

J. B.

BRIDGE OF ALLAN SPA, STIRLINGSHIRE,
Aug. 1, 1856.



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THE
JOURNAL OF
THE
AMERICAN MEDICAL ASSOCIATION
PUBLISHED WEEKLY
CHICAGO, ILL., U.S.A.

Subscription prices: Five dollars per annum in advance. Single copies, fifteen cents. Payment in advance. Orders, notices, and communications should be addressed to the Editor, JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 535 N. Dearborn St., Chicago, Ill. Entered as second-class matter, May 2, 1917, under Post Office No. 384, at Chicago, Ill., under special agreement of Post Office and General Delivery. Accepted for mailing at special rate of postage provided for in Act of October 3, 1917, authorized on July 16, 1918. Postage paid at Chicago, Ill. POSTMASTER: Send address changes to JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 535 N. Dearborn St., Chicago, Ill. 60610. Copyright, 1918, by American Medical Association. Printed at the Chicago Press, Chicago, Ill.

THE
PHILOSOPHY OF MINERAL WATERS.

INTRODUCTION.

“Felix qui potuit rerum cognoscere causas !”

HAS the Creator made aught in vain? Are curious, thoughtful, and beneficent provisions in Nature not providential arrangements? If so, do they exist to no end? Are rich stores of Heaven's bounties produced without profit, without purpose, and simply for waste?—scattered, as it were, from the Almighty Hand in mere idle play, or for vain, bootless display—a gratuitous, uncalled-for exhibition of His infinite power and prodigality of resource? We believe far otherwise of Divine Wisdom—darkly as we can read His works, feebly as we can comprehend His ways. The parts of creation which have been yet explored too manifestly abound with proofs of design—of the nice adaptation of means to ends—of a significant accordance between the qualities of natural objects and the wants of man

on earth—to allow us to admit blind Chance or brute Power as presiding Genii in our globe. To MIND the authority over MATTER is given—to extract its uses, to extort its secrets. To man,

————— “A being of large discourse,
Looking before and after,”

it is permitted to subject the whole realm of Nature to his dominion—to make all things serve his pleasure or his purpose. To him the heaven above, and the earth beneath, and the waters under the earth, teem with blessings, according as his sagacity develops their treasures.

The designs and intents of Deity in His works have not received, in time past, the study they deserved; and man, to his cost, has missed the lessons, and failed of the blessings, they were fraught with. Happily, the present age, perceiving the error, and feeling the penalty, of neglecting the natural laws and constitution of things, is at length beginning to *inquire* and *act* in the right direction. As practical results of a right understanding of these laws, whether they refer to the things of Nature or the affairs of Art, we have, on the one hand, a PUBLIC HEALTH ACT; and, on the other, THE ABOLITION OF FISCAL AND COMMERCIAL RESTRICTIONS. Heaven has not been hard and capricious to man; but man has been untrue, unjust

to himself—his own foe through every stage of life, through every grade of society, and through every period of history; and all by the wilful infraction of written laws, or the ignorant breach of unwritten ones. To *both* attach the same high sanctions and motives. *Both* are manifestations of the Divine mind and intent to man, which he cannot neglect and go unpunished, which he cannot observe and go unrewarded. Such is the constitution of things in this mundane creation! But apart from all mere utilitarian views or directly selfish aims, the study in question is, in a sort, a *duty of natural religion*—one which, in its purifying and elevating influences, as well as in the pleasure of discovered truth, is second only to those of Revealed Religion itself.

CHAPTER I.

EXPOSITION OF THE NATURE AND ACTION OF MINERAL WATERS.

THESE remarks, it is hoped, will not be irrelevant to the discussion of the question, "WHAT ARE THE DESIGN AND USE OF MINERAL WATERS?" Setting aside all former experience, and arguing the question, for the present,

on theoretical grounds alone, the answer can only be a philosophical one, *i. e.*, can only be obtained *by interrogating Nature herself*—by investigating the chemical constitution and physiological action of spa waters—by shewing the identity of their inorganic constituents with those of the fluids of man—by tracing the affinities they have with vital operations, and the influences they exert on the living organism—and, lastly, by demonstrating the definite and appropriate relation that obtains between the essential elements of mineral waters, and the condition and requirements of the human fluids and framework in disease. On all these grounds—the only just and solid grounds of Therapeutics*—will it be made manifest, beyond all possibility of contradiction, that spa waters are the most rational and feasible adjuncts of scientific medical treatment.

Some data towards satisfactory conclusions on these points will perhaps be gathered from the following series of observations :—

I. Chemical researches prove that the healthy condition of the animal frame depends on the reception of certain nutrient or reparative principles identical in composition with the elementary constituents of the blood.

* That branch of physic that concerns itself with the means and agents used in healing.

II. These reparative principles, or elements of nutrition, are composed of ORGANIC MATTER, WATER, and MINERAL or *inorganic* ingredients. They comprise the materials that go to form *muscle, membrane, integument, ligament, nerve, brain, bone*,—the constituents of *sweat, saliva, tears, mucus, bile, gastric and pancreatic juices, abdominal and renal secretions, &c.* All these are drawn from the blood, as the common store-house; and they are supplied to the blood, chiefly through the digestive organs, in the shape of ALIMENTARY SUBSTANCES.

III. The animal economy cannot *create* the constituents of the blood—the “raw materials” of organised tissues or structure. It only allots their destination, and imparts their *form*—selecting the respective elementary principles from the circulating mass, and depositing them in their proper places—fibrine and albumen for muscle and membrane, lime for bones, phosphorus for brain, &c.

IV. The *organic* as well as the *inorganic* component principles of the living fabric exist ready-formed in nature. The *organic* elements are contained in vegetable and animal *fibrine, albumen, caseine, &c.* The *inorganic* constituents in human blood are SALT, SODA, LIME, POTASS, MAGNESIA, SULPHUR, PHOSPHORUS, IRON.

V. The active ingredients to which mineral waters owe their efficacy as remedies are these identical inorganic constituents of human blood and structures just named, viz. : salt, soda, lime, potass, magnesia, sulphur, phosphorus, iron ! How significant a fact is this to the reflective mind ! How extraordinary a coincidence, *if it be mere coincidence !* These *inorganic* constituents of organised structure, it behoves to supply, in their measure, equally with the *organic* principles before named, to rebuild the daily-wasting animal fabric, or to repair the ravages of disease. The ordinary dietetic substances contain the *fibrine, albumen, fatty, oily, colouring, and extractive matters* of our body, but do not always contain in proportion, often entirely want, the inorganic elements.

VI. MINERAL WATERS, THEREFORE, AS PRESENTING THE INORGANIC CONSTITUENTS NECESSARY FOR THE WANTS OF THE ANIMAL ECONOMY BOTH IN HEALTH AND DISEASE, COME LEGITIMATELY UNDER THE HEAD OF ALIMENTARY SUBSTANCES. Such they are to all intents and purposes. This is their peculiar characteristic and excelling feature as medicines. This distinction can never be merged or obliterated. It has only to be duly recognised and insisted on in physic and dietetics (as it will doubtless be

henceforth) to separate, by an eternal, impassable barrier, the true medicaments of Nature from the spurious inventions of Art—the pure creature of God from the impure creation of man.

VII. The converse of the last proposition is never to be forgotten, as it is never to be refuted, viz.: THE RIVAL PRODUCTS OF THE APOTHECARIES' ART ARE DISTINGUISHED FROM THE MEDICINES OF NATURE'S LABORATORY, BY BEING SUBSTANCES FOREIGN TO MAN'S COMPOSITION, INCAPABLE OF ASSIMILATION, AND UNFIT FOR NUTRITION! What more is necessary to constitute them *poisons*? What heavier anathema could be written upon them? what juster? Can the profession disprove this damning charge?

VIII. What is required in the state of disease is to introduce the "building materials" of the body in such shape as that they will be appropriated at the least expense to the reparative functions. For it is the peculiarity of the diseased condition of the body, that it cannot suit the supply to the demand. It is limited by the digestive and assimilative ability, which is usually weak—and this generally in proportion to the disease. Hence the necessity of a rigid diet of easily digested, but nutritive, food *in chronic maladies*; and often—as in the height of *acute diseases*—for the temporary withdrawal of food altogether.

IX. This want of the diseased organism is precisely met in the case of mineral waters. The proximate principles of the animal structure held in mineral waters, are in the form of *dilute solutions*—homœopathic solutions, if you like—a form of all others the best adapted to facilitate their introduction into the economy, without imposing much organic or functional labour, further than simple absorption.

X. *The inorganic principles of the corporeal fabric are elaborated deep in the bowels of the earth.* THE ORGANIC ELEMENTS ARE GATHERED FROM ITS SURFACE. This makes an essential difference between the nature and affinities of the two sorts of corporeal constituents. The former, in virtue of their origin and *metalloid bases*, are charged with peculiar and potent *electro-magnetic* properties.

XI. The active constituents of mineral waters have a very significant relation to the wants of the human body in disease; inasmuch as the chemical analysis of morbid fluids has revealed, as a principal fact, *a deficiency in the composition of the blood in respect to the identical inorganic constituents found in mineral waters.* The researches of M. Donné, and others, prove this very *telling* fact. Morbid excretions profusely drain the inorganic elements of the body. Hence

one source of the utility of mineral waters in such cases.

XII. It is therefore a legitimate *indication*, and a feasible *means*, of medical treatment, to supply to the blood, according to its condition and requirements, these inorganic materials thus made to hand and diluted by Nature—in order to the healthy re-constitution of the body—to enable it to repair, with the least expenditure of vital power, the devastations of disease, as well as the daily waste from the ceaseless operations of the organism.

XIII. It is a principle of transcendental chemistry, that man and the higher orders of animals have no power to compound the proximate principles of their frame and fluids, but must obtain them ready formed. Not to make the most, however, of this principle—admitting it to be a doubtful one—admitting that, under certain circumstances, they *can* and *do* elaborate their proximate principles from their elements introduced into the system—it must nevertheless be at a bootless waste of functional and organic power. This, at all events, then, is clear, that it is an immense saving of vital energy—of digestive and assimilative labour—to introduce the raw materials of the tissues, fully formed, at once, if possible.

XIV. In all cases of disease,* the digestive and assimilative organs partake more or less in the general impairment of the frame. In the more *animal* species of mankind, this alimentary disorder is the result of alimentary abuses. In the more intellectual and self-denying, it is the result of cerebral irritation—the necessary consequence of the competitions and collisions of rapidly-advancing society. Whether, therefore, this digestive malady be *primary* or *secondary*, it is a principle of equal importance, in order to recovery, TO SPARE THE DIGESTIVE ORGANS ALL GRATUITOUS LABOUR. This is a leading indication of philosophic practice—an indispensable condition of successful treatment. Yet how flagrantly is this sound principle violated every day by the meddlesomeness of drug-medication!—in the heaps of *trash*, in the shape of pills, powders, potions, &c., continually forced into the revolting stomach, under all sorts of pretexts—in the case of spa waters, under plea of aiding their efficacy, preparing for their recep-

* We speak here, of course, of *chronic* diseases. In the *acute* stage of disease, digestion is suspended, or nearly so—and *this with the most beneficent intents*. The *final* cause of FEVER, and the *true theory of its action*, are very inadequately comprehended, even by the best pathologists of the day. Had the great Broussais perceived these clearly, it would have saved half his labour in proving that the “essential” fevers of his opponents were “essential” humbug.

tion, &c. We hesitate not to affirm, that this practice—which is at best purely empirical, and unsupported by any solid scientific reasoning—neutralises the effects of the spas in a host of cases—always postpones, and often baffles, cure.

XV. The *abuse* of alimentary substances—their introduction into the system over and above its normal wants—is guarded against by a wise provision of Nature. In virtue of a *Law of Absorption*, whose object is to limit the introduction of alimentary substances to the actual requirements of the organism, or pretty nearly so, substances received in excess are rejected either (1st.) by the alimentary canal upwards or downwards; or (2d.) withdrawn from the current of the circulation in the shape of cellular deposit—fat; or (3d.) the more fluid portion is excreted by the kidneys; or (4th.) eliminated by the skin. *This law holds equally good in the case of alimentary principles held in solution in mineral waters.* Introduced above the wants of the system, their ingredients are not absorbed: they remain in the stomach and embarrass its actions—a salutary hint to desist ingurgitating that which it refuses any longer to receive or to appropriate; or they pass into the bowels, and so find exit.

XVI. It is this beautiful provision of Nature

that endows mineral waters with their unquestioned virtue in the most embarrassing exigency of daily medical practice—*obstructed abdominal secretions*. What portion of the ingredients of the waters is in excess above the normal wants of the system is retained on the lining of the stomach and bowels—absorption only taking up the more aqueous portion. These solid matters stimulate the nervous and muscular fibrillæ of the coats of the intestines, causing their contractions, and provoking their secretions. This is the only medicinal “Peristaltic Persuader” sanctioned by Nature and true science. If no others had ever been given, medicinal men would have wanted four-fifths of their practice. In this we speak *under* the mark. Happy those who have least listened to the voice of the seductive drug “charmer!”

XVII. PHARMACY, or the art of drug-making and compounding, is pernicious in its ingenuity. Its preparations are discountenanced by the true philosophy of healing, as at once an impediment to the means of Art, and an interference with the processes of Nature. It is not at all improbable—if not a certain fact—that, in innumerable cases, the *debris* of drugs introduced by allopathic courses forms new compounds with the animal tissues—preventing those

organic transformations necessary to health, and creating the seeds of those anomalous non-descript ailments of over-drugged sufferers that equally set skill and patience at defiance.

The foregoing exposition of the nature and action of Mineral Waters, taken in connexion with the condition and requirements of man's body in disease, exhibits strong *a priori* grounds for their applicability and feasibility as natural and rational allies of scientific medical practice.

CHAPTER II.

APPLICABILITY AND FEASIBILITY OF MINERAL WATERS AS NATURAL AND RATIONAL ALLIES OF SCIENTIFIC MEDICAL PRACTICE.

THE advantages of mineral waters, as legitimate helps in building up the body from the state of disease, may be briefly summed up as follow :—

1st. They are fitted, by their chemical constitution, to contribute to the formation of various parts of organised structure—notably, to repair the waste of the inorganic elements of the body, constantly drained away by the secretions of the bowels, kidneys, and skin.

2d. They introduce *directly* to the blood constituents in which it is palpably deficient in disease.

3d. They tend to dilute the blood of patients of plethoric and gross habit, by the large amount of pure bland fluid they contain, and by the drain of extraneous matters the augmented secretions effect.

4th. They tend to thicken and enrich the blood of nervous, debilitated, and anæmic patients, and persons of lymphatic temperament, by imparting the iron and other ingredients in which such blood is notably deficient. Hence their well-established efficacy in the treatment of HYPOCHONDRIASIS and CHLOROSIS, (*pales couleurs*, or green sickness).

5th. By their anti-septic or anti-putrescent properties—by the amount of *chlorides* and other salts they contain—they have a well-marked and well-made-out tendency to correct that unhealthy constitution of the humours which lies at the foundation of those diseases termed “malignant”—not very unaptly characterised by the old writers as “diseases of putridity,” as SCROFULA, CACHEXIA (vitiating habit of body), MORBID GROWTHS AND TUMOURS OF VARIOUS NAMES AND SEAT, FOUL AND INDOLENT ULCERS, AND CUTANEOUS ERUPTIONS, CHRONIC CONSTITUTIONAL DISCHARGES AND DRAINS.

6th. From the quantity of *alkaline* ingredients spa waters contain, they are eminently calculated to fulfil an obvious therapeutical indication in diseases characterised by acid perspirations, &c.

7th. By the activity they give to the absorbents, and the great excreting organs of the body, mineral waters are peculiarly adapted to aid the removal of morbid accumulations of fluid from the system, as DROPSIES of various kinds.

8th. They tend to strengthen the stomach, and promote a healthy flow of gastric juice, by their secretory stimulus of its minute glands, and their general astringent effect on its relaxed coats and languid nerves.

9th. Besides the stimulant effect on the coats of the stomach of the *ingredients* of mineral waters, they have also, *when taken cold*, a powerful tonic effect, in virtue of their temperature alone. They excite a reaction in the stomach coats precisely similar to that produced on the skin after contact with cold water. The result of this is a brisker circulation in the tissues in question, a healthier secretion of gastric juice, and the dissipation of sanguineous congestions, which are the *fons malorum* in stomach complaints.

10th. By the large amount of carbonic acid they contain, they introduce a supply of oxygen to the system supplementary to that of the lungs, skin, and salivary glands. In this respect, they are calculated to render material help in the oxygenation of the waste and carbonaceous matters of the body. They thus subserve the functions of animal heat, and those incessant transformations of the body's particles, which are at once the measure of its power and the source of its health.

11th. By the peculiar action of spa waters on the bowels, they are admirably fitted to unload accumulations and to provoke healthy secretions. In this way they are great adjuvants in the treatment of "BILIARY DISORDERS," so called,—in JAUNDICE—in CONSTIPATION, &c. &c.

12th. They are a substitute for blood-letting in *sthenic* or "acute" diseases.

13th. They are "alteratives" and "clarifiants"—cleansing the delicate canals and reservoirs of those superfluous matters that obstruct the ebb and flow of the vital currents and embarrass the prime actions of the organism.*

* The well-merited boast of the WATER-CURE is the *radical* remedying of the faulty constitution of the fluids and solids—the clarification of surcharged humours—the sweeping out, in short, of long-accumulated filth, obstructing the highways and the by-ways of the living economy. The canals, pipes, and reservoirs

14th. Mineral waters are “revulsives,” “derivatives,” or “counter-stimulants,” in diseases of plethora, in cases of local congestion and determination of blood, in affections of the head, in asthma and heart disease, and in cutaneous eruptions.

15th. They are excitants of UTERINE INERTIA (“female disorder”), both in virtue of their secretory stimulus *locally*, as well as by their power of invigorating the digestive organs and improving the quality of the blood.*

of the animal structure may be fitly compared to the streets, lanes, and courts of a teeming city. These corporeal *thoroughfares*—from the large intestinal tube, and the capacious main blood-pipe, down to the smallest veins, arteries, and capillaries—go daily through a process of *rinsing*—are literally *scoured out*—by the copious use of water, within and without. *Pari passu*, wholesome nourishment and pure air are poured in. Secretion and excretion, being thus stimulated to great activity, are enabled to liberate and eliminate morbid elements, effete materials, crudities, and impurities of all sorts lodging in the organism. Great is the power of the nervous system, we admit, but without purified passages, and without cleansed and healthy blood, in vain will it be either stimulated or soothed, flogged or coaxed, to do its work.

* The diseases incidental to women are confessedly difficult of cure in great towns. The reason of this is, that the facilities for *constitutional* treatment are wanting; and the merely *local* treatment becomes all in all, or next to it. Now the latter, without the former, will never accomplish radical cures. This constitutional treatment can only be fully enforced at water establishments, or “watering places.” Exercise, quiet, distraction from affairs, scenery, air, baths and mineral waters, are the primary elements of cure. Hence spas have long been the favourite resort

16th. They serve a valuable purpose as astringent injections in certain relaxed states of the mucous passages, as in leucorrhœa, gonorrhœa, fistulous sores, and openings, &c., &c.

17th. As an alterative after *protracted mercurial courses*, and to purify the system generally by slow and gradual but well-established changes in the condition of the fluids, mineral waters have long been highly commended.

18th. As charged with peculiar *electro-magnetic* properties, mineral waters are capable of exercising potent electrical affinities and influences on the living electrical machine—man's body. The utility of mineral waters is so manifest and manifold, that certain "heads of the profession," distinguished for genius, learning, and observation, hesitate not to attribute a great share of their admitted efficacy purely and solely to *their power of modifying the electrical states of the body*. That they do not influence the functions solely in virtue of their ponderable contents, is evident from the smallness of the dose of nature's admixture necessary for specific ends, and the largeness of the dose of the same of this class of patients, and their reputation on this score has not been undeserved. For this field of practice they promise to become more celebrated than ever, because the lights of modern science put us now in a condition to apply a much more skilful *local* medication to these maladies than in times gone by.

ingredients for the same purposes, when imitated by the hand of art.

Lastly. It is indispensable to remark, that in order to the most salutary operation of spa waters, four cardinal rules of practice must be observed. The common neglect in this country of the first three of these rules we believe to be grand errors in the administration of mineral waters, and diminish to the lowest point the real curative results they would otherwise accomplish.

First Rule. They should be drunk of their own natural temperature, or slightly warmed, and fresh as they are drawn from the spring; and the earlier in the morning the better.

Second Rule. They should be unsophisticated by admixtures and solutions, which alter entirely their relative proportions and properties, and therefore mask and mar their real virtues.

Third Rule. They should uniformly be combined with active excitement of the cutaneous functions by baths, perspirations, &c., infinitely modified according to case and constitution, as the speediest, safest, and surest means of dissipating inward congestions, which are the *fons et origo mali* in all diseases, chronic and acute.

Fourth Rule. Much and varied out-door

exercise, according to the strength, malady, season of the year, &c.; with very strict regulation of the habits, hours, diet, and regimen.

The nature and constitution of mineral waters, therefore, being known, and the condition and requirements of the diseased body being known, it becomes a legitimate problem to apply the teachings of science to the practice of art. The regulation of the *doses*, *kinds*, and *times* of the remedy, according to individual cases and constitutions, must be taught by obvious philosophical deductions, eked out by the suggestions of experience. In such a way only shall we attain unto the enlightened and successful use of mineral waters, as sure, safe, and efficacious auxiliaries of medical treatment.

CHAPTER III.

THEORETICAL ACCORDANCE OF MINERAL WATERS
WITH THE AIMS AND ENDS OF THE TRUE ART
OF HEALING.

A DEVELOPMENT of the simple philosophy of DISEASE and CURE, we believe, will prove to a demonstration, that mineral waters are the most legitimate *medicinal* aids to the *vis medicatrix*

naturæ, or the inherent curative power possessed by the living organism ; to exalt and regulate which curative power is the alpha and omega of medical art.

Throughout the wide realm of nature nothing exists by itself, of itself, and for itself. The Great Uncreated One alone is self-existent and independent. Everything is created in reference to other things—ministering to them, and being ministered unto in turn. The *parts* of creation hold a fixed and appropriate relation to the *whole*, and the whole to the parts. Among the most conspicuous relations of things are *antecedence* and *subsequence*, or *cause* and *effect*, and *means* to *ends*. The sole business of philosophy is to trace these relations, and to identify means with ends, the best to the best. Of these inquiries, perhaps the most difficult and curious—certainly the most noble and useful—are the relations of the living body with the objects of the world around, and their reciprocal influences. For in these are to be sought at once the source of man's diseases and the means of his restoration.

Each organ of the body is constituted with reference to the reception of certain organic stimuli, which are, so to speak, the appropriate *pabulum* of its functions—at once the impulse to act, and the object to be acted on. For

example: the eye is adapted for the impingement of the rays of light; the ear for the reception of the undulations of sound; the nose for odours; the palate for tastes; the heart, arteries, and veins, for blood; the lungs for air; the stomach for food; the bladder for water, &c.

DISEASE and CURE, in their ultimate elements, are simple correlative terms. Disease, or derangement of the animal system, is produced either by the excess or defect of its natural stimuli, or by the introduction of unnatural stimuli. The result is, to *lower* or *pervert* vital action—at first creating FUNCTIONAL DISTURBANCE, the unchecked persistance of which degenerates into ORGANIC DISEASE.

Now, as regards recovery from these states, the *bane* must philosophically suggest the *antidote*. To retrace the steps which led *into* disease is the only legitimate way *out* of it. The errors that impaired the tone, power, and purity of the body are to be eschewed; and a right course, as regards the injured organism, is to be pursued. In short, the indispensable condition of the cure of man's corporeal as of his spiritual maladies is, *to cease to do evil*, and *to learn to do well*. On this plain showing, therefore, CURE, to be feasible philosophy, and valid in fact, must consist in *the due adaptation and application*, espe-

cially to the great reparative functions of the economy, of their natural and healthy stimuli. This is the fundamental idea, and should be the unique curative aim, of a true art or science of healing. This *beau idéal* of a medicinal system is one only realised in that which, for want of a better name, is called "the water cure," more strictly, the "hygienic, or physiologic cure;" for its "means and appliances" are exclusively of the class of simple natural agents, among which *we* include mineral waters. The fundamental idea, the unique aim, of this mode of cure, is to adapt and apply their appropriate stimuli, notably, to the *great absorbing and excreting surfaces* of the body, which are three:—

1st. THE ALIMENTARY ABSORBING AND EXCRETING SURFACE—by the imbibition of the pure constituents of the body in the shape of wholesome diet and drink.

2d. THE PULMONARY ABSORBING AND EXCRETING SURFACE—by the inhalation of pure air.

3d. THE CUTANEOUS ABSORBING AND EXCRETING SURFACE—by the action of cold and heat, by the administration of baths, fomentations, and ablutions of all sorts.

The accomplishment of these aims includes regular exercise and repose of mind as indispensable conditions.

Such is the *theory* of a perfect and perfectly efficacious system of medical treatment. Such are the principles, agencies, ends, and operations of the simplest and most successful medical practice the world has ever seen. They embrace every scientific indication and every legitimate effort the physician can propose to himself. The praise must be conceded to it of simplicity and comprehensiveness of aim, and an equal simplicity and comprehensiveness of agency. This is the foundation of its philosophic soundness as a theory, and the source of its unprecedented achievements as a practice.

THE REMEDY OF THE IMPAIRED ORGANISM LIES IN THE ORGANIC ENERGIES THEMSELVES. Cure is to be sought, not in agency *extrinsic* and *alien* to the animal economy, but in means that are one and identical with it—that are part and parcel of its own constitution. Homœopathy and Allopathy both invoke this extrinsic and alien agency; and so far, therefore, only attain unto chance, fortuitous, and occasional cures—as seeking help in the wrong quarter, and trusting to that which is not to be depended upon—“keeping the promise to the ear—breaking it to the hope.” But it is the peculiar boast and indestructible excellence of the simple mode we have essayed feebly, but truthfully, to ex-

pound—that it seeks alone to develop and augment the natural powers of the organism by the judicious application of their own normal stimuli.

From the preceding argument it logically follows, that mineral waters, as charged with many of the chief constituents of human blood, and as supplying its elementary wants both in health and disease, come under the head of legitimate organic stimuli; and therefore, if properly administered, are fitted to be valuable agents in the treatment of disease.

This is not the time or place for a practical dissertation on spa waters. This may appear, if there is encouragement so to do. In the meantime, let it suffice to have put the whole question on a basis of science and common sense that will defy overturning. In our defence of the subject, we have borrowed no aid from any preceding writer; for the current treatises on mineral waters, it must be confessed, are very far behind the progress of the times.

—————“ All this is true as it is strange ;
Nay, it is ten times true ; for Truth is Truth
To the end of Reckoning.”—*Measure for Measure.*

THE END.

THE SCOTTISH GRÆFENBERG.

BRIDGE OF ALLAN WATER-CURE ESTABLISHMENT, STIRLINGSHIRE.

DR BALBIRNIE

Offers Patients all the comforts of a first-class Hotel at from Three to Four Guineas per week, including Board, Lodging, and Treatment. Bath Attendant, 4s. to 5s. Consultation or Entrance Fee, 10s. 6d. to 21s.

Patients are requested to bring one pair blankets, two sheets, and a few towels for Bathing Purposes.

Bridge of Allan possesses unrivalled advantages for Hydro-pathic Treatment. Situated at the western termination of the Ochil Hills, and with a southern exposure, in a rich central district, it enjoys a happy mean of climate, and commands prospects of surpassing beauty, variety, and extent. The whole region around is classic soil, invested with the enduring interest of historical and poetical associations. Its views embrace the fine chain of the Western Grampians, with the towering summits of Ben Lomond, Ben Ledi, Ben Venue, &c., the picturesque castle and town of Stirling, and the windings of the rivers Forth, Teith, and Allan. The celebrated Trossachs, Loch Katrine, Loch Lomond, Loch Drunkaye, &c., and the other beautiful scenery of the "Lady of the Lake," and likewise the gardens at Drummond Castle, Castle Campbell, the Rumbling Bridge, the Falls of the Devon, the Devil's Mill, the Fields of Bannockburn, Sheriffmuir, and many other interesting localities, are all within an easy ride.

Bridge of Allan is one of the stations of the Scottish Central Railway, and is in direct and constant communication with all parts of the United Kingdom. By rail London can be reached in thirteen hours, and Edinburgh and Glasgow in an hour and a-half.

Works by Dr Balbirnie.

I. THE WATER-CURE in CONSUMPTION and SCROFULA : an Exposition of the Question of their Curability. Illustrated by 147 Authenticated Cases of Cure, some of them in the Last Stage. 8vo, price 15s. London : LONGMAN & Co. Glasgow : GEORGE GALLIE.

“ This book will be considered, both in the profession and out of it, the standard book on the subject.”—*Sheffield Free Press*.

“ Dr Balbirnie has written a very elaborate, a very able, and a very interesting book on the ‘ Water Cure in Consumption and Scrofula,’—a book which the public may read with profit, and the profession with interest. The work throughout exhibits the candour, no less than the ability, of a philosophic physician.”—*The Leader*.

“ Dr Balbirnie, in this large and handsome volume, has addressed himself with great energy to a task that is at once intensely difficult and immensely important. The volume, which is written both for the intelligent portion of the public, and for the medical faculty, displays considerable literary ability, as well as much professional knowledge and philosophical insight. It gathers within itself almost everything valuable in fact or suggestion that has been published on the subject of our English disease, and fairly grapples with the theory of its origin and nature. We can scarcely do justice to this clever book, rich in suggestive thought,” &c.—*The Alliance*.

“ A more able, convincing, and talented defence of the water treatment could not have been penned. We never read a volume more thoroughly bearing the impress of common sense—it is, in fact, THE BOOK on the subject.”—*York Herald*.

“ A remarkable book—thorough and comprehensive treatment of the subject—a book like the present is by no means an everyday addition to our library table ; it is a *bonâ fide* work. Dr Balbirnie opens a bright gleam of hope to the view of patients who have been taught to regard their malady as incurable.”—*Worcestershire Chronicle*.

“ Dr Balbirnie’s work is one much wanted, and will help in a great measure to remove the atmosphere of quackery which has gathered round the water-cure system, to lay open the scientific principles on which it is based, and the benefits which its skilful use may confer. As a medical treatise, it is clear and full—methodical in construction, and cautious in tone.”—*Newcastle Chronicle*.

“ The toil of years is concentrated in its pages, and a work of extraordinary merit has been the result.”—*Preston Chronicle*.

“ Dr Balbirnie writes like a man of science and a scholar.”—*Bath and Cheltenham Gazette*.

“ The water cure must gain in professional respect by the sensible and scientific mode in which Dr Balbirnie has discussed the subject.”—*Berrow's Worcester Journal*.

“ It records faithfully the opinions and practice of a man not more eminent by his extensive acquaintance with the subject than by his great success.”—*Liverpool Courier*.

“ We have seldom perused a more valuable or interesting work, and by far the best we have seen on the subject, and deserving a place in the library of every family.”—*Ipswich Express*.

“ An able and well-reasoned composition—lucid in arrangement, practical in suggestion, and characterised by a tone so modest and temperate as to enlist in its favour the sympathies of every unprejudiced reader.”—*Aris's Birmingham Gazette*.

“ There is a bluff plain-spokenness about the doctor's method—we are speaking of his literary characteristics—which wins our sympathy, and obliges us to feel we are in honest hands, whilst the treatment of the subject shews that they are able ones.”—*Eddowes's Shrewsbury Journal*.

“ This book is the furthest in the world from quackery, and may be read with pleasure as well as profit by all.”—*Bristol Mirror*.

“ This is emphatically THE BOOK on the philosophy of the water cure, especially in reference to two of the most formidable diseases to which humanity is subject.”—*Blackburn Standard*.

“ Dr Balbirnie's great literary taste, intellectual endowments, and sound practical experience, well qualified him for the task he has so ably accomplished—the best attempt hitherto made thoroughly to sift the question of the curability of consumption.”—*Leamington Spa Courier*.

II. THE SIMPLE TREATMENT of DISEASE, CONTRASTED with MEDICINAL ABUSES; or, the Why and Wherefore of the Water-Cure. DARTON & Co., Holborn, London.

“ This is the most eloquent, comprehensive, and scientific defence of the water cure that has yet appeared in any language.”—*Dr Wilson, of Malvern*.

“ It would be useless to give a long review, since we intend every one of our readers to purchase and peruse for themselves. We have no hesitation in pronouncing this Essay to be at once the most philosophical and original work which has been published on the water cure.”—*Truth-Seeker Magazine*, No. 3, Vol. I. (New Series.)

“ We have read this valuable work with intense interest and much profit. These are certainly the words of ‘truth and soberness’—the words of a clear, careful, and comprehensive thinker, who has the benevolence and laudable courage to proclaim his convictions for the benefit of his fellow-man in the face of inveterate prejudice, which is likely to reward his philanthropy in the usual manner. The *matter* of the work is of the highest order, and the *manner* is suited to that.

The truths are uttered in such a manner, that conjointly they form an harmonious and profound system; whilst separately they can be quoted and applied without suffering materially from being taken from the body to which they belong. These are attributes which are rarely combined, but which give a work of this description great additional value. The connexion and harmony render it easy to be understood, and make it at the same time delightful to the lovers of wisdom; and the aphoristic quality renders it easy of application and communication."—*Alexander Currie, M.D., in the Vegetarian Organ.*

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*From the "LONDON MEDICAL AND SURGICAL JOURNAL,"
September 1836.*

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