



The Journal
OF THE
British Homeopathic Society

NEW SERIES

VOL. X.

SESSION 1901-1902

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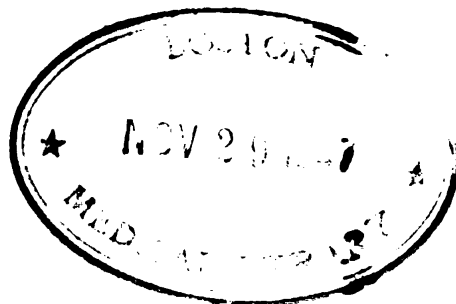
London :

JOHN BALE, SONS & DANIELSSON, LTD.

OXFORD HOUSE

83-89, GREAT TITCHFIELD STREET, OXFORD STREET, W.

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1902



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JOURNAL
OF THE
British Homœopathic Society

No. 1.

JANUARY, 1902.

VOL. X.

*All communications and exchanges to be sent to DR. HUGHES,
Northfield, Albury, Guildford.*

HOMŒOPATHY: ITS POLITY AND POLICY.
BEING THE PRESIDENTIAL ADDRESS DELIVERED BEFORE
THE SOCIETY AT THE FIRST MEETING OF THE SESSION,
1901-1902.

BY GEORGE BURFORD, M.B. AND M.C.
President of the Society.

PART I.

**The Scientific Basis of Homœopathy: its relation to the
cognate Medical Development of the Century.**

Fellows and Members of the British Homœopathic
Society:

Introductory. It is in no conventional mood that I
express my sincere thanks to you for the
honour I have received at your hands in being inducted into
the President's chair. In receiving the dignity which your
suffrages have conferred upon me, I am conscious that it
represents the most responsible post which the constitution
of this Society provides. For the British Homœopathic

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Society is propagandist as well as scientific; and in this two-fold function the position of President is that of no mere ornamental figure-head, but deserves a more vigorous personality than I can place at your service. Yet the spirit of responsibility is strong upon me. In inheriting the mantle of my predecessors I desire that I may fall not one whit behind them in the influences normally emanating from the chair; nor be one iota less potent in defending the dignity and amplifying the sphere of influence of this learned body.

In this public duty I have had many illustrious exemplars. In the list of my predecessors, with their executive colleagues, are some of the brightest names in the galaxy of professional Homœopathy in Great Britain. Their memory is an honoured memory among us; much of their life work is resuscitated in ours. Nor are their pioneer labours to be lightly valued, when we remember that their work was maliciously vilified by various organs of the Press, both professional and lay; when social and professional ostracism, keener than the serpent's tooth, was then not tempered by an enlightened public opinion; when criminal process was threatened, nay, even invoked, to terrorise the practitioner of Homœopathy; for under such and similar malignant influences our predecessors lived and moved and had their being. Well may we keep their memories green, and accord to their spirits still a place in our councils!

Not only is there with us the abiding influence of the British Homœopaths of the past, as moulding the Homœopathy of to-day; captain and chief of us, there is always in our meetings the unseen but pervading influence of Samuel Hahnemann, the perpetual president of every Homœopathic Society throughout the world; whose *magnum opus* is the pabulum and the inspiration of the daily practice of our art.

"So many minds their orbs have girt with beams,
Though one did fling the fire."

Alone in Germany, the land of its birth, and America the land of its adoption, is the national value of the work of Hahnemann recognised by public statue. "Peace hath its

victories no less renowned than war," and while "the first captain of the age" was effecting a temporary alteration of the map of Europe to the accompaniment of artillery music and the death groans of multitudes, the first physician of the age was peacefully and permanently restricting the bounds of disease, and widening the area of alleviation and cure. The first lies under the gorgeous dome of the Invalides; the second reposes in a modest corner of Père Lachaise. Truly, the world recognises not its greatest benefactors.

Our History and Its Import. Having discharged the injunction "Let us now praise famous men," we may fitly address ourselves to a review of their work and ours, and in tracing the evolution of Homœopathy during the past century, we may note the lines of development and the streams of tendency which have characterised it. Perchance, also, this may provide for us certain lessons in statesmanship, and enable us clearly to see the moulding influence of the *Zeit-Geist*—the "Spirit of the Age"—on the unfolding of our activities.

THE PREPARATION, IN TIME, FOR THE DISCOVERY OF THE NATURAL LAW OF SIMILARS.

Antecedent Unreadiness. A century ago—that period of '*Sturm und Drang*' when much beside medical beliefs was in the melting-pot—a century ago saw formulated the first great generalisation in the history of medicine. Until then the sneer of Sir W. Hamilton, "Has medicine made any progress since the time of Hippocrates?" was fully warranted. But at last came the hour and the man. Scarcely possible was this discovery during the period of Greek culture, for the deductive—the academic—method was the great instrument of early medical investigation. Nor before the time of Bacon, whose "*Novum Organum*" gave the inductive method its rightful pre-eminence in the investigation of Natural Law. Due preparation in Time was necessary ere the mediæval spirit of the age, expressing itself in *Credo*, could be displaced by the modern afflatus, that of *Scio*, in the realm of medicine.

**The Hour
and
the Man.**

But now I say the hour had come and also the man. Of the fulness of his intellectual equipment and the fitness of his personal preparation Hahnemann's biography is sufficiently informing. A striking parallel is obvious between the course of his earlier gropings for truth, and those of the immortal Herr Teufelsdröckh. Like the hero of Sartor, Hahnemann had tried and found wanting the arid formulas of the day. Alteratives, absorbents, adjuvants, &c., said he in effect, the use of these is mere guess-work where the issues of life and death are involved; often they do not abate but actually add to the parlous state of the patient—I will have none of them. This was his Everlasting No: and from that he passed to the Centre of Indifference. He gave up, as in duty bound, the active practice of medicine, and betook himself to literary work to keep the wolf from the door.

**Preliminary
Mental
Discipline.**

To know, however, that we don't know, is the necessary precursor of the incoming of knowledge. This preliminary discipline cleared the mental outlook, dispersed the mirage and the refractions of scholastic doctrines, and brought our founder for the first time face to face with the teachings of nature.

**"Lux in
Tenebris."**

Hereupon follows the stage of "*Lux in Tenebris*," the "Everlasting Yea." While translating a foreign work dealing with medicines, he was struck with the parallelism between the symptoms worked by Cinchona and those of the disease—ague—it was employed to cure.

Truly wonderful is it that an author can write down, clearly and in detail, the essential facts which go to the making of a discovery, and yet be blind as to their import! Wonderful, rather, it might be, if the history of science were not full of such instances of intellectual blindness.

But what Cullen missed, probably from unfitting training and inadequate personal preparation, Hahnemann saw. Pondering on this germ-idea, this suggestive parallelism, the intellectual equipment of Hahnemann served him well: he

perceived in this the promise and the potency of better things. Adopting the Baconian method of experiment, he tried the drug on himself—proved it, as we should say : and from that hour the Homœopathic law took shape and form. Based on the true inductive methods of observation and experiment, this law has been continuously verified, until now it ranks as an induction of widest and most general value.

Verification of the Homœopathic Law. What is the criterion of a natural law—of an inductive generalisation—and how does our law withstand the test ?

The criterion of a law of nature is that it is capable of—is that it receives—continuous verification in positive results from all workers who apply it in practice. By this stringent test the law of similars thoroughly abides. In all races, at all times, the cancelling of disease processes by drug processes, on the basis of their parallelism, can be verified by any competent worker.

The Foundation of Homœopathy. This, then, is the scientific basis of Homœopathy: a natural law fixed and persistent: a part of the cosmic order.

From the time of its framing it has needed no re-statement: the increasing years have only emphasised its exact correspondence with the facts it was formulated to represent. Moreover, this was the only inductive law on which Homœopathic practice was begun a hundred years ago; to-day it is the only inductive law which the science of Homœopathy hitherto knows.

The *scientific* foundation of Homœopathy is thus conterminous with the law of similars: the *art* of Homœopathic practice is built up from the results of this law's practical application to the treatment of disease, co-ordinating all other branches of medical knowledge.

The Science and the Art of Homœopathy. Now this academic distinction between the science of Homœopathy, which is its basis, and the art of Homœopathy, which is its practice, is one of historical importance. The art of Homœopathic practice is the living, expanding, varying part of the Homœopathic organism: it is

the sum total of our century's work in the treatment of disease : the product of many men and many experiences.

Now when Hahnemann began, like Descartes, his work with a single new principle, he not only opened an entirely new source of wealth in the treatment of disease : he also laid the foundation by his personal work of the co-ordination of this new law with all cognate branches of knowledge. For the fitting-in of the Homœopathic law to the facts of disease and of life, has since then been the work of not one man, but of many.

THE CENTURY'S VARIOUS PROGRESS IN THE ART OF HOMŒOPATHIC PRACTICE.

How clearly has the history, or as I prefer to call it, the evolution of Homœopathy, during this century regarded this distinction ! The scientific basis or root-truth of Homœopathy has remained unchanged ; the applied science or practice of Homœopathy has been developed in various directions, in differing amplitudes, at several times. The principal new departures of Homœopathic practice were, out of the wealth of his personal knowledge and experience, made by Hahnemann. But much further expansion and development have accrued as the issue of the century's work. The varied phenomena of the differential dose have been traced and recorded, until now we have definite spheres of influence ascribed to the high potency, the low potency, the single dose, and frequent or infrequent repetition. But the basic law of dose, unifying all the facts, still remains unknown ; and probably will only come to the light of day when further data accrue from collateral discoveries and a more extended application of the law of similars.

The Utilisation of Clinical Pathology. How large and fertile a field has been tilled in the inclusion of Clinical Pathology in the data of Homœopathic Practice during this century ! In using this decried term Pathology I do not mean the vague speculations of the Humoralists, on which Hahnemann poured so much scorn, but the actual knowledge of the physical

basis of disease as observed at the bedside. The three typical instances of Albuminuria, Chlorosis, Hæmorrhage—all clinical symptoms—will remind you how much the resources of Homœopathic practice have been increased by a collateral knowledge of disease processes.

Diagnostic Methods of Precision. So also those methods of precision which have enriched diagnosis during this century have been utilised for the educing of further powers from the Homœopathic armoury.

The use of the thermometer—of the sphygmograph—of the stethoscope—of the microscope—*et hoc genus omne*—these are now applied to condition and qualify the detail and the succession of homœopathic therapy. And the results—is not our latter-day literature one great storehouse of the issues of their intelligent use?

Objective Proving-Work. Of New Provings, the introduction of instrumental observations has opened a new section in their conduct and amplified the total results. Of the utility of this course

notable instances from general practice could be cited. Within the last year or two the power of gelsemium in massive dose to actually cause pyrexia has been demonstrated; and there is still a great field for original work in the investigation of those physiological perturbations due to drug proving, and their parallelism with those due to disease.

The Multiple Practical Adjustments of Homœopathy. It is ever to me a cogent proof of the fundamental accord of Homœopathy with the processes of nature that it should lend itself to such various adjustment in practice. The wielder of high potencies, passing beyond the range of material sub-division, attains such success as justifies his belief in the efficacy of his weapons. The prescribers of low potencies or material doses, recalling Hahnemann's earlier practice, deal with the most various and the most dangerous of diseased conditions, *cito tuto et jucunde*.

So, too, the Physicians who prescribe, utilising a pathological warrant; and those who, eschewing this, select

their remedies on the sublimated and refined basis of subjective symptoms, alike find their diverse application of the Homœopathic law of supreme use and value. The crises and the convalescences of Surgery, the extra-therapeutic processes instituted by air and altitude, moist heat and cold, each allow the fertile infitting of the law of similars.

Thus various are the powers of applied Homœopathy, whether evoked by material or by immaterial dose, whether obtained by pathological or subjective approach, whether utilised *solus* or laid under contribution by extraneous agencies.

THE ACCORD OF TENDENCIES IN HOMŒOPATHIC DEVELOPMENT WITH BIOLOGICAL FIRST PRINCIPLES.

Note that it is in entire accord with Biological first principles that an organism like the Homœopathic body should expand, modify its structure, divide, specialise its functions, and be reacted on by its environment. These are laws of life that are bodied forth all along the chain of existence from the lowest to the highest forms. In the Protozoa each unit is a duplicate of its fellow: there is no organisation, no organic union, and consequently no progress. In certain of the Cœlenterata, the individuals by a common base become organically attached: different parts are specialised for different functions, and all are reciprocally affected by the activity of each. This is a higher type of organism, and its functions are correspondingly better performed.

Whereas in the vertebrates the laws of life have evolved their most perfect and finished product. Each part of the organism exists for the welfare of the others; parts are specialised, functions are distributed, work is co-ordinated. And the high grade of this type of organism is entirely dependent on the various development of the parts, their reciprocity of working, and the relation of these to influences from without, moulding and fashioning their nature.

**The Biological
First Principles
of a Society.**

The next step is an important one. To the distinguished author of the Synthetic Philosophy we owe the clear and convincing demonstration that the principles of plan in an individual organism and in a society of men are identical. This reading of Biological Laws into the construction of a Society has for us an important significance. There is an "orderly progress from simplicity to complexity": "a functional inter-dependence of parts": a perpetual removal and replacement of parts, joined with a continual integrity of the whole: and "the highest societies, like the highest organisms, exhibit these in the greatest degree." The body-politic thus tends to "increase in bulk, in completeness of structure, and in functional activity."

These are the prime Biological factors in a normal Society.

THE DEDUCIBLE LESSONS IN STATESMANSHIP.

I have not invited you to listen to these prelections solely for their academic interest. You will have rightly divined that their import is more vital for us than merely that of scientific curiosity. In this Biological parable, then, we may find not only a parallel but an exemplar—a clear natural mirror wherein we can trace the normal influences which make for our prosperity, and the abnormal deviations which make for our undoing.

**Free and Various
Development.**

The first lesson we deduce is that diversity in development is characteristic of a healthy progress. The Homœopathic organism, to be a flourishing organism, must have differentiation among its members. Our gifts and our talents, diverse in nature, are equally diverse in issue. Deriving our vigour from the parent stock, our lines of action within the range of Homœopathy need be no more parallel than the radii of a circle. The ægis of Homœopathy is sufficiently broad to include all who, owing allegiance to the central truth, seek lines of development of their own. For

the potentialities of the Homœopathic law are larger than the interpretation of any one man.

Wherefore let us adopt to the full the Carlylean maxim of "Tools to the man who can use them." To some it is given to be masters in high dilution work, to others to beat their music out with potencies of a lower grade; this one can utilise a pathological warrant for prescribing, another requires the sublimated material of subjective symptoms; but—no member of the body has warrant to say to another, "I have no need of thee"; or to the remaining parts, "Stand by, I am the whole."

**The Vital
Necessity of
Organic Union.**

The second great lesson our Biological model bodies forth is that for Continuity of Development we must preserve our Continuity of Attachment to the common base. This is a double-sided truth: it demands alike allegiance to our fundamental natural law, and also fraternity among us, its followers.

With regard to allegiance to the paramountcy of the Homœopathic law. This law is not an idea, which in the course of mental development can be outgrown: it is a persistent truth, bound up with the order of nature. Now we require to keep this ever before us in our individual evolution. The history of Homœopathy contains many instances where men of original bent, imbued with the free spirit which Homœopathy favours, have lost their footing on the solid ground of nature; devising empirical procedures for themselves, in which emasculated Homœopathy played but a bedraggled part.

Now my chief practical test of the *ignis fatuus* nature of such work is the practical inability of these men to form a school. What you cannot teach is useless to the world at large: what is not referable to first principles is too crude for assimilation by others. The jejune following of these lost minds is like that of the Ancient Mariner, who, having drifted aimlessly on a wide, wide sea, had only a perforce listener to share his tale of novelty.

This second lesson is equally applicable to detachment from our fraternity, from our corporate organisation.

Union in our Corporate Life. It is not good for a man to be alone. Isolation and ostracism in our professional work require the renewal of strength and encouragement from the assembling of ourselves together. Like the fabled Antæus, who wearied by his toils descended to his mother earth, deriving new vigour and fresh life from the contact: so we in these our meetings gain an invigoration and a rejuvenescence which is not measured by the formal procedures of the evening.

Wise was the dictum of one of the thinkers of the age who said that sometimes "the whole was greater than its parts"; but never was paradox more true when applied to the actions of men. As an oratorio is infinitely greater in effect than the sum of its independent notes, or an epic more potent than the total of the words which compose it, so is a band of men infinitely greater in moral weight and practical effect than any isolated strivings of independent units.

We are, each and all, members of the Homœopathic organism. It behoves each and all of us, deriving vigour from the parent stock, to grow, by every means in our power. Our polity is not that of a Procrustes' bed—lopping or lengthening to produce an artificial similarity—but that of a liberal *régime* requiring and encouraging in all the free development of their natural ability.

The final lesson our Biological parallel affords is implied in the two preceding: it is the inter-dependence of all the members of the organism.

The Necessity of Reciprocity. We are an intellectual democracy: the necessities of our life and progress require a division of labour, a division of labour in which each and all must play their part. Every member of this or any other organism has his specific share in the welfare of the whole; this is a personal responsibility from which none are exempt.

I repeat—every individual member has his own individual return to make to the common source from which he continually draws. Our powers are as various as the requirements of our purposes; and in the beneficent scheme of Nature, none—no, not one—has been left without his talent

for the use of others. Think of the vast stores of clinical experience—that treasure beyond price—which long years have brought to our *patres conscripti*; think of the complex, the difficult clinical cases, engineered back to health and strength in the daily practice of our *confrères*; think of the special experience with special medicines—of the results not embodied in the text-books—and note the disparity between the mass of Homœopathic practice and the molecule of Homœopathic record !

THE RELATION OF HOMŒOPATHY TO THE GENERAL MEDICAL PROGRESS OF THE CENTURY.

The ultimate, most important lesson in Statesmanship is that we look beyond our therapeutic province, and note the progress of the world, the areas won from darkness to light, in the sphere of general medical knowledge since the time of Hahnemann. It is necessary for us to define our relation to cognate branches of the healing art that we may hold our lawful precedence in the treatment of disease.

I lay it down as a canon of practice that there is no fact in the knowledge of human life, and particularly no influence which makes for health and vigour, but is germane to the treatment of disease. The multiplicity of influences which derange the organism is only paralleled by the multiplicity of influences which favourably react upon it.

I have already spoken of the law of similars, like all other natural laws, as in-fitting and related with other conditions in the scheme of things. It is one of its credentials that, operative in its own sphere, it is linked with other and collateral laws in Nature's unity of plan.

It is by no means unlikely that, outside of drug action, many influences which tend to cure do so by virtue of their relation with the law of similars.

Our position is that the law of similars is a natural law; well and good; we know that Nature cannot contradict herself. But when we find ultra-therapeutic methods

The Law of Similars and its Parallels.

of cure—such as the physical agencies of light; of the application of moist heat and cold; of altitude, aeration and exercise—when we find these methods, in defined bodily conditions, effecting curative changes, we are compelled to think of their action as either by similars, or as operating in the same plane by related or parallel methods.

An Ample View of the Sphere of "Similia." The whole drift of scientific progress is to provide for us a larger reading of the operation of the law of similars. It will thus effect our emancipation from a too exclusive narrowing to materials in bottles as the limit of our *Materia Medica*. The parallel of Newton's three Laws of Motion suggests that if all phenomena of cure cannot be expressed strictly in terms of similars, certain associated laws will express the relation and the dependence of all other curative processes.

Therapeutic Parallels of "Similia." And now let us approach the subject from the present and practical side. The century has been rich in the development of various non-therapeutic curative agencies. The specific power of these, in fitting cases, to cure *cito tuto et jucunde*, is often greater than we can command from the sphere of drugs. In the open-air treatment for fitting cases of phthisis, in the Weir-Mitchell plan for selected cases of neurasthenia, in the chosen applications of moist heat and cold, and I perhaps may add in the Finsen treatment for lupus, we witness a dependence of plan and in proper cases a certainty of result that implies a qualitative relation between agent and cure. Now unless we are prepared to assert at once that these are delusions—mere *simulacra*—works of darkness from their father the devil—we are bound from their proven efficacy to find a logical place for them in our practice.

Some of the most alert minds among us, recognising that nature is greater than any formula, have long impressed and adopted into their service all extra-therapeutic resource, finding, as their reward, that the law of similars plus extraneous measures often evolve better results in conjunction than either separately.

My tentative explanation of this is that they are all, therapeutic and non-therapeutic alike, influences working on the same plane: and that an ampler and more developed Homœopathy of the future will include all under the dominion of Similia.

The Varying Values of Remedial Measures. Nor have we any kind of warrant, either historical or scientific, to take the phases of disease, and finally and for all time to allot to them this or that curative measure, as necessarily and for ever the fittest. The values of curative measures are too fluctuating, the constant additions to them are too important to allow any finality in their appropriation to this or that morbid state. Witness the entire revolution wrought by aseptic surgery in daily practice—the wholesale detachment of morbid growths from the medical to the surgical side; *e.g.*, ovarian tumours rightly treated medically when surgery was lethal, now rightly treated surgically when this is safe.

The Progressive Changes in applied Homœopathy. Parallel with these changes is the perpetual internal redistribution that has gone on within the four corners of Homœopathy itself. The exclusive dieting and *régime* of the early days has fallen out. The globule has largely gone by the board. There has been a marked oscillation in the direction of low dilutions, and a minor place, rightly or wrongly, assigned to subjective symptoms. Old provings have been rectified; new provings have been added. The scope of the treatment of chronic disease by drugs alone has greatly narrowed in the century's advance; and finally the irruption of Bacteriology into the Homœopathic domain as exemplified in the use of Bacterial products, diphtheritic, tubercular, and others, is to the reflective mind the most far-reaching of the portents of our future.

Thus the progressive changes proceeding during the century within the circle of Homœopathy; the enormous development of the accessory powers of the healing art, including surgery, without that circle: and the reciprocal relations which these two circles of influence have upon

each other, render necessary a restatement of our position in the light and by the aid of all our knowledge since the time of Hahnemann.

A RESTATEMENT OF THE HOMŒOPATHIC POSITION.

We are practitioners of the healing art in general, and specialists in medicine.

All the influences of Nature and the resources of Art are at our discriminating service in the restoration and maintenance of health.

We recognise the Law of Similars as the impregnable basis of the science of medicine, as the only natural law of general application which medical research has hitherto evolved.

We recognise that the realm of disease is at present much greater than the province of medicine: and while placing the practice of medicine in the forefront, we find for preventive, palliative, and radical measures each their fitting place, in the adjustment of the resources of the healing art to the necessities of the patient.

As the law of similars is a law of nature, its working is linked with all other measures which enhance the *vis medicatrix naturæ*. Some of these (*e.g.*, the selected application of moist heat and cold) are virtually wider applications of the law of similars itself.

Other measures (*e.g.*, vaccination and the employment of antitoxins) are influences on the same plane and parallel to those of the law of similars.

Other measures again, such as the radical ones of surgery, are those whose scope finds fitting place for the co-operation of Homœopathically-chosen remedies.

Following from this:—*A Homœopathic practitioner is one who recognises the Law of Similars as the natural law of the Science of Medicine. To this rule of practice he super-adds the widest developments of medical learning and experience, all co-operative in the art of healing the sick.*

Justification for the "Restatement." This position, gentlemen, I take to be sufficiently broad and sufficiently ample to encircle all those diversities in development from a common centre which Homœopathy, as a living and moving cause, possesses and expects.

It brings and keeps us in touch with all new knowledge, all developments of progress, that are germane to the object of our profession ; it is the specific gospel of " Tools to the man who can use them," working from the Homœopathic centre ; it preserves due balance and proportion in our choice of means, since Homœopathy was made for man, and not man for Homœopathy.

It lays no embargo on the free course of Homœopathy, but favours its unlimited expansion : and finally it gives place and position to our science of medicine, defines its working relations, and co-ordinates it with all other facts of nature in the art of healing.

On these and other considerations I hold this to be a timely re-statement of our position as Homœopaths : a re-statement just to the genius of Homœopathy, which is progressive and reforming ; just to the many workers in the many-sided cause of human health ; and just to those sick and afflicted who confide to us their deepest physical interests in the great crises of human life.

Part II.

The Expansion of Homœopathy : the Immediate Institution of a Twentieth Century Fund.

AND now, Gentlemen, I trust I have carried your assent with me in my exposition of the organic development of Homœopathy.

"All Available Knowledge is our Province." We have reviewed our progress, we have re-stated our position in the light of the century's development, and we find neither our intellectual position isolated, nor our progress indefinite.

All available knowledge is our province; we advance with its expansion, we amend with its rectification, we consolidate with its development. This position is an ideal one; nothing less will satisfy us as professors of the healing art.

But while thus broad is our declared polity, our policy is necessarily affected by the re-action of external agencies upon us. Ringed by prejudice, circled by dislike, we are by compulsion a self-contained body, charged with the prime functions of all individual bodies—of protection, of nutrition, of expansion. Because we may not pronounce the negative shibboleth of *nescio*, we, having passed out of the Slough of Despond, are subjected to a policy of isolation and starvation—as though the history of mankind was not replete with proofs of the fatuous inutility of such procedure!

**Our
Self-contained
Position.**

Through some such discipline most new developments have to pass. Braced and stimulated by these chill attentions, alike in our corporate life and our daily practice, we have risen beyond the need of any begrudged assistance. The experience has been severe but salutary. It has developed our self-reliance and our resource; it has made of the Homœopathic body not a stunted organism, but one with constantly new centres of development. It has shaped a policy for us scarcely of our own choosing; in brief, the epoch is that of the conversion of our faith from a passive bond into an active force.

**Our Systematic
Expansion.**

But for our faith to be a force, there must be added to it the resources of civilisation. A policy of expectation, that the great world of its own initiative will one day suddenly acclaim our merits—this is a policy of drift, and will neither achieve nor deserve success. I hold it disloyal to the faith that is in us that we should be content with any subordinate sphere of influence in public life, or acquiesce in any ignoring of our professional status, or subserviently refresh ourselves with the crumbs contemptuously allowed to Lazarus. But “who would be free, himself

must strike the blow"; and the time is now ripe for a blow in the direction of expansion.

THE PROPOSED PLAN OF CAMPAIGN : ITS THREE MAIN DIVISIONS.

The Education of the Laity. Our systematic expansion is a duty we owe to mankind. By expansion I mean our progressive growth in all practicable directions. Chiefly these directions are (1) as regards laymen, the revival of a diffusion of knowledge concerning the cardinal points of Homœopathy. Certainly of late there has been a generalised renewal of public interest in the healing art, of which ambulance classes and the unique popularity of trained nursing may serve as indications. I would advocate the freest circulation of a selection of the tracts of the Homœopathic League, and in particular the late Dr. Burnett's "Fifty Reasons for being a Homœopath," a particularly striking *brochure*. The laity in these days is far too intelligent and too discriminating to be calmly passed by on the other side. We have, in fact, *to continuously educate our party*.

The Enlightenment of the Profession. Next, as regards the Profession. I have been amazed to find, in conversation with men of light and leading among the Allopaths, how abysmal was their lack of knowledge of the actual principles and practice of Homœopathy. I am disposed to collate this with the widespread ignorance on the part of the Profession of the existence even of classical Homœopathic literature. It remains for us to drive home in an effective way a correct acquaintance with the tenets of Homœopathy. I could scarcely wish any more effective plan than that a copy of "Sharp's Tracts" or "Hughes' Pharmacodynamics" should be systematically supplied to every recent graduate. It is at the plastic period of life, before hostages have been given to fortune, that the choice between the two paths has to be made. Now, during this medical *wanderjahr*, now is the

golden opportunity, now is the effective period for seed-sowing.

The fully-crystallised Profession must be approached in other ways. Here, again, ignorance of our tenets and our work is the prime difficulty: I would wish each medical library throughout the kingdom to become possessed of a copy of "Clarke's *Materia Medica*." Much unethical stealing of our thunder might thus be checked; for the prime fount of many empirical tips, involving the single remedy, in small dose, for the specified disease, could be recognised and further explored. But I am not sanguine of considerably influencing so conservative a body as the profession at large by argumentative methods. Theologians distinguish a condition defined as invincible ignorance; I believe it is not without parallel in other than the theological sphere. Rather do I hold that our most potent force lies, and will lie, in the securing of a fair recognition by the State; in the chartered right to educate and examine in our doctrine and practice; and in the insistent removal of the blockade which excludes us from military and naval appointments, Government commission work, the advisory State posts, or any public duty for which our members may be severally fit.

When we are a recognised power in the Commonwealth, the policy of bad manners and supercilious superiority will have had its day, and cease to be. This achievement requires the expansion of our organisation; which at present is not properly equipped for the work before it.

The Expansion of our own Organisation.

Finally, then, of expansion as concerning ourselves. It is an excellent discipline for a society, as well as an individual, to institute self-examination, and to scrutinise the results without fear or favour.

Our Defects in Teaching and Training.

I ask then—What academic attractions or advantages do we offer to the abler graduates to seriously take up the study of Homœopathy? Other than the somewhat narrow circle of resident appointments, I reply, None of consequence. At present we do not undertake to systemati-

cally teach the *Materia Medica* we are sedulously urging the neophyte to spare no pains in acquiring. Here, as elsewhere, pressure follows the course of least resistance; the frequency of such study depends on the facility with which it can be brought about.

Nor, this Rubicon passed, do we offer any financial aid or assistance for the post-graduate pursuit of special studies at home or abroad—such study, in fact, as is the mental necessity and the delight of the abler graduates to cultivate. For it is the influx of the abler among our younger *confrères* which we require. I say the abler of them, for the practice of Homœopathic medicine is a pre-eminently difficult art to acquire; nor is it given to all to be masters in this art; and as the grade of Homœopathy depends on the gifts of its adherents, we wish the best for our converts.

Further, we offer them no countenance in the undertaking of original research in the collateral branches of medical science—research which gives distinction and value to any initiating society. The gifts of all are not in the direction of general practice; and as our art is many-sided, so also, due proportion being observed, should be our contributions to it.

So much for our peculiar methods in the attraction of recruits to our ranks. Next, let us take stock of our up-to-date work in drug-proving—that peculiar institution of Homœopathy—well worth the best work of our best men.

Our Drug-Proving in Abeyance. *Of course*, with an unerring eye for the essential, we are unostentatiously working this our exclusive treasurefield with thoroughness, increasing our methods of investigation, adding to our therapeutic resources, and establishing proportional values in the discovered detail.

Candidly, as regards the encouragement of work on new provings, I say at once we are in a culpable condition of lethargy and apathy. The initiation of valuable proving work, by Mr. Wilkinson of Windsor, was allowed to pass with merely jejune compliments; which possibly were received without emotion, as scarcely recouping him for the material outlay his investigations actually involved. In the

early part of the current year, Dr. Charles Wheeler, in a private letter under cover to myself, to certain members of the profession, and later in a published communication, made certain practical propositions as to the resumption of proving research, but on modern lines. Here our recent tale of published proving-agenda abruptly ends; and we still await, with exemplary patience, provings of new drugs; provings, by analytical research methods, of old drugs; provings of drugs on the feminine organism, *ad hoc*; as well as further investigations in drug-proving on special organs for the advancement of special work.

**Our Minimised
Activity in
other Original
Research.**

Next, as concerning original research in a wider sphere. We are not only Homœopathic Physicians, we are members of a liberal profession; and we owe it to ourselves to add to the body of technical knowlegde on which we have been nurtured. Since the palmy days of Dudgeon with the sphygmograph, Drysdale with his researches on protoplasm, Harrison Blackley with his scholarly work on hay fever, and I may here add Galley Blackley too, all too little has been contributed from our ranks to the sum of human knowledge other than therapeutic. It is not that we have not the original workers—the past has disproved that: nor that we lack sympathy with such research; for our appreciation of the more recent work of Percy Wilde on the hand and Hayward on ventilation implies that the achievements of these colleagues shed a reflected lustre on ourselves.

Is it not rather that we have drifted more or less into a narrowing channel of work, and in our zeal for the essential and paramount subject, are in danger of being affected by some of the defects of Specialism? The culture of the physician requires science as well as practice; this Society is compelled, by the illiberal prejudices of others, to be to its members a microcosm of the various ramifications of the healing art; and we require the collateral research of our original workers in extra-therapeutic territory to keep our culture sufficiently broad, and to maintain our proper and specific work at an academic level.

To the statesman, or to the dignitary of commerce, with genius for dealing with the affairs of men, our pervading weakness would seem to be the entire disproportion between our functions and the powers we have to discharge them. In other words, that our chief let and hindrance is our present poverty of material resource.

The "Imperial Revenues" of the Old School. Consider for a moment the almost imperial revenues which orthodox medicine administers for the purposes of education and examination. Each teaching centre apart from students' fees has an endowment, in some instances rivalling nearly the taxation of a Province in magnitude.

Each of the examining bodies, and all that appertains to them, as museums, libraries, laboratories, endowed lectureships, each is a focus of wealth, which supplies for us an insistent moral.

Over and above these, such substantial accessories as Government subsidies for Colonial expeditions, the endowment of research by great City companies, the stimulus of high Professional lectureships in accordance with the wishes—and wills—of pious founders—these add to the solid financial positions which many a great mercantile institution might envy.

Our Poverty of Material Resource. And we? Gentlemen, it is not customary for a good business house to disclose the detail of a somewhat slender financial basis.

The moral of all this is writ large for us. We cannot make bricks without straw; we cannot turn out good work without fitting tools; it is time our Sisyphus-like labour came to an end. Unless our house is to be built on the sands we must have a permanent and abiding foundation, on which a superstructure of medical educative function can be built. That foundation is only to be laid by a very substantial addition to our present limited resources; and this addition I propose should be made through the immediate institution of a Twentieth Century Fund of some magnitude.

Now we have looked our defects in the face, with a desire for amendment, we are, at least, ethically solvent.

THE NEW DEPARTURES REQUISITE FOR OUR WELL-BEING
AND PROGRESS.

The Springs of Action. What is our clear course to avoid being thrust into a backwater in the world's progress? What does it behove us, as custodians of a great truth for the world, to set about?

I lay down for our constructive policy two principles :
(1) That all our efforts should be knit together, in one orderly scheme of development, ever tending to larger ends.
(2) That we shall best commence by utilising the centres of Homœopathic activity, already in existence, for further developments.

The Endowment of a Lectureship of Materia Medica. First and foremost, as a *sine quâ non* of progress, is the systematic teaching of the Homœopathic Materia Medica. I propose the institution of a Lectureship in Materia Medica, involving the delivery of a full systematic course of lectures on the Homœopathic Materia Medica each year. I propose that this course be held in successive years in the cities of London, Liverpool, and Birmingham ; for here are three University towns, each with its annual quota of medical graduates, and in each of these towns we have a fully equipped Homœopathic Hospital to supply the clinical element. I would propose that the lectureship be held by different men in different years, and that the course should always include the latest work and the newest remedies.

In this scheme we broaden the basis of Homœopathic progress, by making the Provinces participators in the revival. We maintain the sense of freshness, by making the course only once in three years in either of these towns, and by changing the personality of the Lecturers. And we ensure the value and general interest of the course, by causing it to include the newest and the most developed work.

The Financing of Drug-provings. Quite as essential for the restoration of Homœopathy from the stationary to the progressive, is the re-commencement of Provings. Here I must acknowledge the collaboration of my friend and coadjutor, Dr. Chas. Wheeler, who, as already intimated, has worked out the question in practical detail. He, and I with him, regard the most profitable method of drug-proving as desirably freed from the interruption of extraneous duty, and conducted with the full resources of a Clinical Institution.

[Dr. Wheeler suggests that the provings should be carried out under the competent superintendence of a committee of Physicians, and advises that the authorities of the principal hospitals be approached with a view to obtaining a bed for the temporary use of a resident voluntary prover. He further suggests that resident medical officers, at the conclusion of their term of office, might be invited to participate in provings; and that a solatium of £50 be paid to a prover for the thorough proving of a drug. The provings would be carried out in all the detail, subjective and analytic, that modern research requires; and no proving would be accepted for a less period than a month.]

The Institution of Scholarships. Now for a hitherto unconsidered item in the expansion of British Homœopathy. What have we to offer in the way of professional prizes, or special opportunities for further academic distinction, to the abler among recent graduates?

My scheme is that two travelling scholarships, worth £50 each, be instituted to enable the holders to pursue special studies to greater advantage abroad. I would limit the tenancy of these scholarships to past residents in our British Homœopathic Hospitals, and would, by letters commendatory from the Society, introduce the holders to the available Homœopaths of distinction. From personal experience I can speak of the immense advantage a period of foreign training such as this would permanently confer. The duration of each scholarship would be three months.

**Subsidies for
Original
Research.**

On the same plane as this attractive projection, I regard the institution of subsidies and honours for original research in medical art and science as of prime necessity, unless our intellect is to be starved. In this representative Society, excluded from other societies, it is not possible, even were it wise, to whittle down our medical interests entirely to those of *Materia Medica* and Therapeutics, paramount though these be. There are some among you whose intellect, taking a wider sweep, finds congenial employ in working at the causes of disease; the physical and the chemical manifestations of disease; and these enquiries are as germane to the practice of medicine, as the study of symptoms or the knowledge of drugs.

**The
Encouragement of
Cottage Hospital
Work.**

Next, in order to ensure the widest participation in this extensive plan, I would propose that those most deserving institutions, our Cottage Hospitals, should receive a reasonable share of support. To encourage the work, the essential work, they unostentatiously carry on, I consider a grant of £50 per annum from such a fund might be made to that hospital which shows an annual record of the best work. I do not mean the most work, but the best, taking all the circumstances into account.

**OUR FINANCIAL BASIS: A TWENTIETH CENTURY FUND
NECESSARY.**

Now for expansion such as this we require the sinews of war.

**The Twentieth
Century Fund.**

I propose, then, the institution of a "Twentieth Century Trust Fund" for the placing on a permanent footing of the necessary developments in the teaching, the research work, and the hospital extension, connected with Homœopathy in Great Britain.

A Trust Fund of £10,000. I propose that the Fund should consist of sufficient moneys to allow the annual disbursement of some £300 for these purposes. Capitalised, this represents the sum of £10,000, and the acquirement of this is accordingly the intent of the Twentieth Century Fund.

The success of the great religious bodies, in organising similar schemes, is an indication of what can be accomplished in this way by enthusiasm in a good cause.

The executive of the Trust—and I regard this as a prime element of success in administration—should consist of a mixed Board of eminent laymen, and representatives nominated by the British Homœopathic Society. The great philanthropic scheme now being administered in Scotland has such a mixed executive; and I believe the plan to be well devised.

Concerning the most important section—the raising of the fund.

Considering the importance of the issues, the claims of scientific progress and of human welfare, I can conceive no better legacy to mankind than that one of the Princes of finance should deal with this necessity once and for all. To such in the first place should our appeal be made. Ample precedent exists for such an endowment and such an appeal. The dimensions of the recent donation for the furtherance of University education in Scotland and the endowment of research, vastly exceed those of our relatively modest desideratum. I recall, also, how some years ago a Pathological Chair was lacking in one of the Scotch Universities. The necessity was diligently proclaimed for some years, till finally a single individual—the late Sir Erasmus Wilson — donated the lump sum of £10,000 required. Again, more recently, one of the great British houses of finance has, it is reported, intimated its intention of subscribing £20,000 to the crusade against Tuberculosis. It is needless to labour this point; let those who can influence the springs of action in high places, persist until success crowns their endeavours.

**Or,
Ten Benefactions
of a
Thousand Pounds.**

An alternate plan of procedure lies in the splitting up of the fund into its constituent parts, each being endowed by a separate donor according to his choice. Ten Benefactions of a thousand pounds, even if their obtaining occupied as many years, would place Academic Homœopathy on a *permanent* footing of strength and usefulness. Had this been done five and twenty years ago, and had the Academic side of Homœopathy been administered conjointly by a lay and professional executive, our expansion would have been simultaneous with that of modern surgery, which has revolutionised the old conditions of medical practice. These Sibylline books we must have for our existence ; what ten thousand pounds will now effect may require twenty thousand pounds in another twenty years, if we drift into a backwater ; may, indeed, be then unable to reinstate a lost cause.

Vox Populi. In place of the fund as Annual Income, we may view it in the light of Annual Subscription. It may well be where the deepest human interests are concerned, that *vox populi* is better than awaiting the extensive benefactions of the princely few. If each member of the British Homœopathic Society would interest his patients to the modest extent of a three-guinea subscription per annum, we should be provided with the financial sinews of war for our undertaking. This brings it within the scope of most of our patients to have part and lot in the matter, and to ensure by active interest the wider diffusion of the benefits they themselves have enjoyed. Yet the tendency should ever be to form an increasing fund, as a nucleus of income ; it converts the annual into the perpetual, and allows continuity of plan and purpose.

**Our
Paramount
Duty.** Now, Gentlemen, this safeguarding of the position of Homœopathy is a paramount duty laid upon this day and generation. We owe it to our past—to those Pioneers who, breaking new ground, felt the stress and strain, the heat and burden of the day to a degree of which we, protected by an informed public opinion, personally

know little. We owe it to them that our heritage, alike of truth and constancy, is not shorn nor its hopes dimmed by any malfeasance among us. They did their duty; it is for us to do ours.

We owe it to our present—to those sturdily living isolated lives amid the ostracism and the misconstruction of their fellows—we owe it to these, battling for the true, the just, that their detachment shall be the veritable Historical Bridge between the past neglect and the future general acceptance of the Homœopathic law. This is my reading of the true import of their position; and that in the light of history, which reverses so many contemporary verdicts, they will be honoured as the intrepid workers, in advance of their time, for the maintenance of the light that shone in darkness. And we owe it to our future that each of us, in our day and generation, leave truth advanced, and the world bettered for our lifework on this planet.

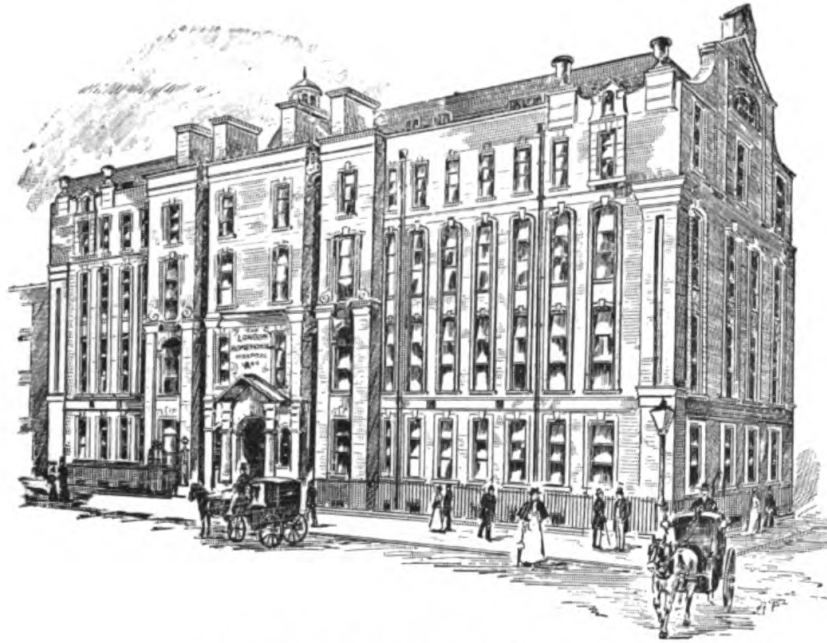
George Eliot finely tells us that “To the Sentinel the hour of Duty is Regal.” Gentlemen, we are the Sentinels, this is our hour of Duty, and the opportunity truly is Regal!

PART III.

The Clinical Institutions of Homœopathy; their Prime Importance in its Progress and Permanence.

What Homœopathy Owes to its Hospitals. Now, having probed the shortcomings of present-day Academic Homœopathy with beneficent intent, let us review the Clinical or Hospital side. Our Homœopathy owes much to its chief Homœopathic hospitals. These have been the centres from whence, once and again, British Homœopathy has renewed its youth. They have acted as *alma mater* to an annual succession of Residents. They have raised Homœopathy from a comparatively private cult to the level of a public branch of a liberal profession.

But there are other prominent and important services which all our hospitals, both Provincial and Central, have



LONDON HOMŒOPATHIC HOSPITAL.

contributed in common to our cause. They constitute the chief link between ourselves and the intelligent laity who are interested in the welfare of humanity and the progress of our special science. Here may I say this intelligent laity is the final court of appeal to which we in England can come. It is they who provide us a true criterion of our value or otherwise, for, as Socrates well puts it in Plato's *Republic*, the healing art does not exist for the benefit of the healing art. Through the middle ground of hospitals, then, we maintain alliance between ourselves, the profession, and they, the interested laity, who are the back-bone of our progress and the secular arbiters of our future.

More than this, the combined Homœopathic hospitalate constitutes the chief outward and visible sign of our national establishment.

The outward and visible sign of Homœopathy.

In all times, for all new movements, there is early felt the necessity for some concrete indication of the cause, some embodiment in bricks and mortar of its life and purpose; a centre to which men's eyes turn

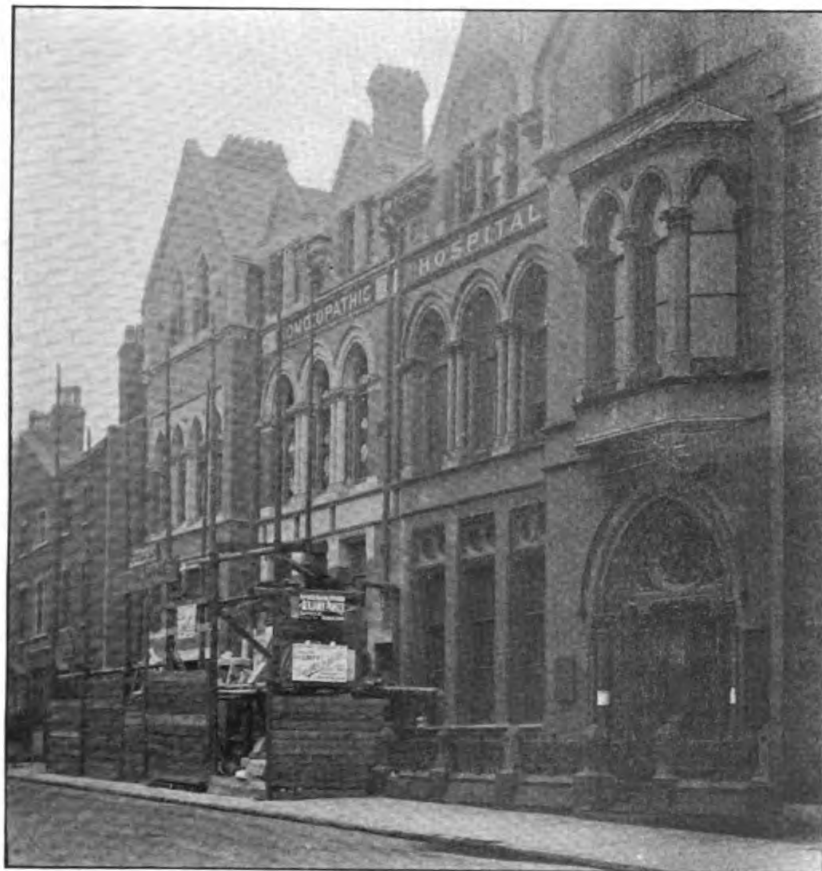


THE LIVERPOOL HOMŒOPATHIC HOSPITAL.

for a knowledge of its work and worth. This our hospitals have afforded; they have given their *imprimatur* to the establishment of Homœopathy; they constitute us a force to be reckoned with. They are taken by others as a measure of our importance, and may yet afford us a basis for parliamentary protection. I do not suppose that our Argus-eyed critics of the General Medical Council are any more tolerantly disposed to us than at the passing of the first Medical Act, when a timely personal interference of the late Lord Ebury, so long the chairman of this Hospital Board, was effectual in inserting a protective clause to which we owe at this day our possible existence as a separate body. Nor can we doubt in the event of another parliamentary crisis that weighty influences emanating from this and other of our hospitals will be used with vigour and with effect in the protection of our technical rights.

“Homœopathy is practically what our Hospitals make it.”

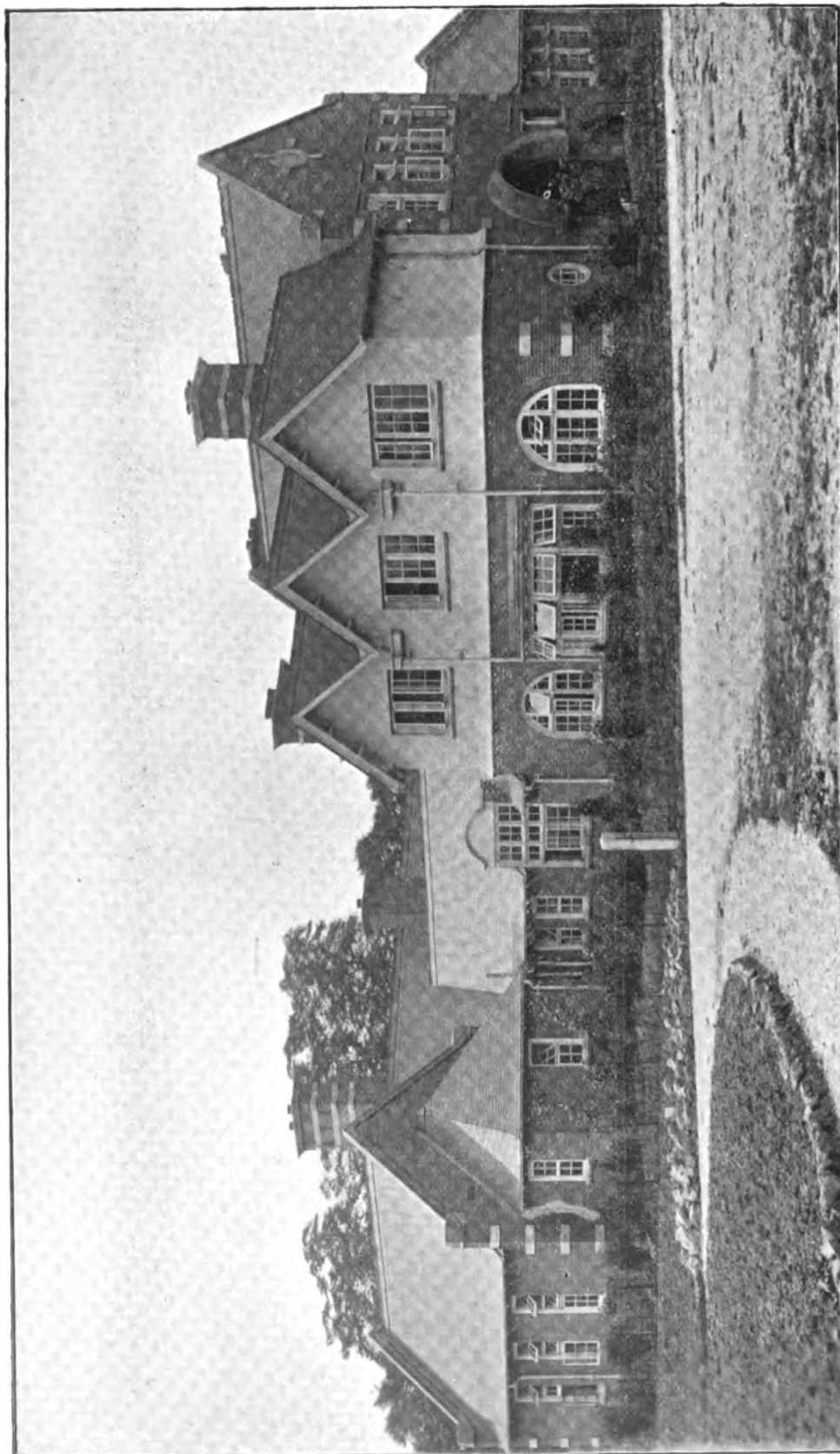
After some years of experience and observation with regard to our Hospitals, central and provincial, I have formed the deduction which I now present to you as fully warranted by the facts :



THE BIRMINGHAM HOMŒOPATHIC HOSPITAL.

“That our Homœopathy is practically what our hospitals make it.” I entirely subscribe to this dogma in its many-sided aspects.

Neither Homœopathy nor any other domain of medicine can resist the onward impulse which its institutions, when progressive, impart to it. Neither Homœopathy nor any other cause can escape the retrograde influence which its institutions if becalmed exert upon it. For the widest influence of these institutions is not upon themselves, it is upon the whole of us: their product is the labour of our best men in their public work: they are the recognised head and front of our aggregate existence.



THE BROMLEY HOMOEOPATHIC HOSPITAL.



THE TUNBRIDGE WELLS HOMŒOPATHIC HOSPITAL.

The Educative force of Hospitals on the Residents. We have only to behold the similar influence of the Hospitals of the old school on its adherents, to fathom the abiding effects of our central Hospitals upon ourselves. Year by year these our institutions have received a ceaseless stream of Residents, who make their exodus familiar with the points of view, the modes of work, the standards of procedure current among us. There is no similar creative influence in our body that will compare with this in persistence and effect.

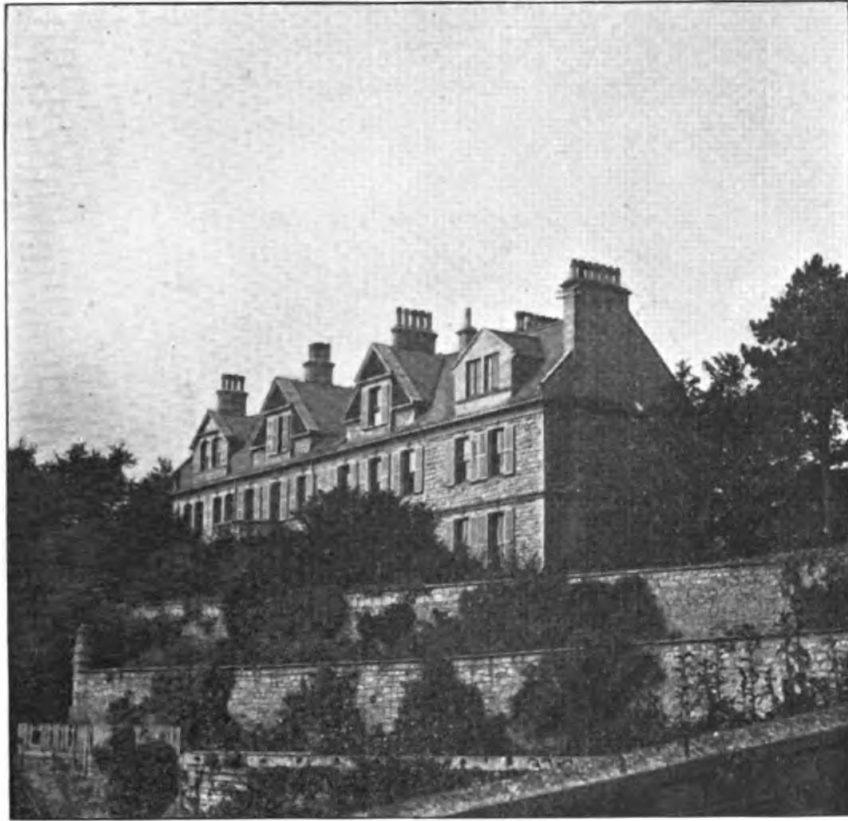


THE BUCHANAN HOMŒOPATHIC HOSPITAL, ST. LEONARDS.

**The Educative
Value of
Hospitals for
the Staff.**

Here let me speak also of the high educative influence of Hospital work upon Hospital men. It is a mental discipline of supreme value, and a conspicuous element in the elevating influence of Hospitals on Homœopathy

Beside the reciprocal advantage of consultation and co-operation, the specific individual value of hospital work to the participant is immeasurable. It allows repeated and prolonged comparative observations to be made; it provides opportunity wherewith each may strengthen his weak points and amplify his strong ones; and the sense of confidence that ensues from work stretching over long years, carefully done, and as carefully recorded, is a "gift of the gods" to those who possess it. I have permitted myself to think that much of the nebulous product of sundry professional theorists would have been obviated by the wholesome training of systematic hospital experience.



THE LANSDOWN HOSPITAL, BATH.

To return, I need not dwell upon the obvious influence our Central Hospitals have as a constructive force on Homœopathy. I wish to emphasise the growing and further-to-be-developed values of our Cottage Hospitals as a force still in great measure to be exploited.

**Our Provincial
Hospitals: their
Work and
Worth.**

I am sure I only express your views and mine when I speak of the special and peculiar services our Provincial Hospitals have rendered to Homœopathy: under no conditions of ease, with limited co-operation, with critics galore, with trained-nursing difficulties, and the perennial incubus of ways and means. Yet how steadfast the courage and how gratifying the success which has encountered all these! I scarcely know of an instance where a Cottage Homœopathic Hospital



THE DEVON AND CORNWALL HOMŒOPATHIC HOSPITAL.

once established has been allowed to lapse—rather has the history been one of unexpected expansion, from strength to strength. The *Bromley Hospital* has doubled its size, and is now a typical instance of what a Cottage Hospital should be. I have never, in this country or abroad, seen a better example of an up to date clinical institution. The *Lansdown Hospital* at Bath, beautiful for situation, has recently added to its well-known sphere of usefulness a wing for the indoor treatment of the sick poor. *Tunbridge*



THE HAHNEMANN CONVALESCENT HOME, BOURNEMOUTH.

Wells Homœopathic Hospital has within recent years doubled in extent, and now in point of requests for admission is more popular than the General Hospital there. The *Plymouth Homœopathic Hospital*, in keeping with the times, has within the last ten years translated itself to a better site, doubled or trebled in extent, and has received as many as 500 accident cases during the year—a sure sign of the respect in which its work is held !

It is invidious to choose ; but I must allow the signal successes of the Leaf Hospital at Eastbourne, the Buchanan Hospital at St. Leonards, the Hahnemann Convalescent Home, virtually a Hospital, at Bournemouth, to speak for themselves. They, like the others, need no praise ; their value is attested by their success.

All honour, I say, to the energy and the perseverance of our Provincial Hospital Colleagues !



THE LEAF HOMŒOPATHIC HOSPITAL, EASTBOURNE.

**The Local
Impetus of a
Homœopathic
Hospital.**

Consider now the material advantages which accrue to Homœopathy and to its professional sponsors when a Cottage Hospital is added to the Homœopathic resources of a town.

It is a valuable practical centre for the self-diffusion of knowledge concerning Homœopathic practice; the best modern equivalent for the public lectures and the personal propagandism of our predecessors.

It provides an enduring bond of union between professional and lay Homœopathy, a common ground for

co-operation, a re-inforcement of private Homœopathy by a public and prominent interest.

It provides opportunity and stimulates action in those who are well-disposed to the endeavours of Homœopathy in the cause of humanity. As in this world it is that which moves that alone causes movement in others, the initiative must be taken, the enterprise begun, before the magnetism of advance can draw.

One of the most munificent contributors to the Homœopathic cause was attracted to us, not primarily from our principles, but from the good work done at our London Hospital.

The Import of Cottage Hospitals for Homœopathy.

A survey of the subject convinces me that in the further development of Cottage Hospitals we may regain much of the practical influence we as a public body undoubtedly have let slip. We have not kept in touch with the altered requirements of the age. Public interest has largely turned from academic questions of " 'pathy "—from internal differences regarding medical first principles—and is now occupied with nursing and nurses, with hospital appeals and hospital funds; and this is now the iron for us to strike, this is the timely interest for us to develop.

Theoretically, then, from the educative influence hospital work exerts on our views and our culture: practically, from the heightened public value this gives to our position, I urge the further and considerable extension of Cottage Hospitals among us as the best means of solving some of the most difficult problems of our Homœopathic position.

A Personal Statement.

Many of these present problems press for solution. Let one of our most valued provincial colleagues take up the story:—

" I am," said he, " I am alone in Homœopathic practice in this town and county. My practice is good in quantity and quality. I note, however, that its sources are slowly changing. A quarter of a century ago my predecessor, during his day's work, might drive round to a dozen country houses, see and treat and give directions for each case, and

perhaps not be able to renew his visit for a week. But so highly was Homœopathy valued as against the Allopathy of his time that the patients were content to wait, and continue his directions until his next visit. Little loyalty of this kind exists among their descendants. An improved Allopathy, both medical and surgical—or altered circumstances—or both—cause the services of some nearer practitioner to be obtained—my advice being either sought at my own house, or only in critical cases and special conditions at the patient's home.

“Again, the scope of Homœopathic practice has had to be much widened to include such advances as the open air treatment for tubercle, &c. With regard to this, though my results from *phosph.* and *arsen. iod.* have been very good, yet the saving of time and the finality which mark the former method, give it a high place in practice. So with other accessories, such as the various forms of treatment by exercises, massage, &c.”

My friend then dwells with point on the isolation—the boycotting—he experiences from his allopathic *confrères* in the town. “In a critical medical case presenting problems in diagnosis, I am denied any confirmation in consultation by others; or in a surgical case any kind of co-operation for the patient's welfare; nor in the commonest courtesies of medical life, such as the giving of anæsthetics, or obstetric assistance, is any aid willingly or cheerfully given.

“But chiefly the developments of aseptic surgery have practically revolutionised the detail of daily practice. The slower results of therapeutic measures are critically compared with the dramatic issues of some operation; and cases pass into local surgical hands, great care being taken to prevent their coming my way again. Or should I deem surgical interference requisite, my surgical *confrères* dare not meet me in prior consultation, or receive any assistance from me at operation, or allow me my proper place in the conduct of the after treatment. When in time past they have done so, pressure brought to bear upon them has resulted in a shame-faced intimation that they cannot repeat it.”

Passim, such a state of matters depicted here is a disgrace to our civilisation, a shame to our profession, a blow to humanity. Such conduct as this calls aloud for the ban of a General Medical Council as conduct infamous in a professional or any other sense. That history will so denominate it I have no doubt, for the most elementary ethics condemn this immoral sacrifice of patients to prejudices.

Perhaps Socrates was a little wrong, when he said that the healing art does not exist for the benefit of the healing art.

Provincial Homœopathy and its Difficulties.

But to return. The limitations of the professional standing of our colleagues in the provinces, as realised from the foregoing and other statements, are traceable to two causes :—

(1) Isolation in professional work; (2) inadequate methods in expansion. To one or both of these drawbacks the special difficulties of our provincial colleagues may be ascribed.

Isolation and its Issues.

Isolation as a Homœopath, ostracism as a Physician, are, so far as I can read the signs of the times, likely to be more acutely felt in the future than in the immediate past. So much has the healing art extended in late years, covering much other ground than the merely therapeutic, so great development in obstetrics, in surgical work, in special knowledge, in accessory treatment has been made, that a general practitioner, be he Homœopath or Allopath, must of necessity fall back on the co-operation of other professional aid, where four hands can acquit themselves better than two, and two personalities work more advantageously than one. Strained was the situation often enough in days gone by, when therapeutics was for us the chief and predominant element in practice; but in times present, when to accurate prescribing the years have added so much of accurate diagnosis and accessory treatment, the situation may often become impossible. Already our younger *confrères*, finding the drift of things, are displaying a notable tendency not to settle beyond the easy reach of colleagues, and an available

hospital. I only cite what is an obvious new development ; it is impossible to misread the facts ; we have to reckon with them. Anticipating our future, I foresee a drawing in of our outposts, and a concentration of our numbers round our chief centre.

The process has already begun : it will have the most considerable effect on the future of Homœopathy unless another movement goes on at the same time. It will ultimately convert Homœopathy into a form of specialism—and our future is then a closed circle—unless a compensatory movement at which I have hinted is set on foot. This is the old policy of widespread settlement, but with the new adaptation of abandoned isolation, of development in localities which allow the alliance or easy co-operation of two or more Homœopaths, and the establishment of a Cottage Hospital, linked with one of the central ones, in every possible locality.

It is to this we necessarily come ; this is the coping stone of our progress, without which our efforts are loose as a rope of sand.

**The Dispensary a
"Halfway House."**

Dispensaries have been the backbone of Homœopathic expansion, public and private alike, in times past ; but in these days, wherever two or three of our colleagues are gathered together, the Dispensary constitutes but a half-way house to the Cottage Hospital. This latter is the fuller expression of the same necessity for expansion, for growth, which originated the Dispensary ; this, sufficient in time gone by, has had its usefulness enormously increased by the addition of an In-patient section. Moreover, many of our dispensaries are hopelessly outrivalled now by the gigantic dimensions of Benefit Institutions and other Allopathic combines.

On public and private grounds alike, where a useful Dispensary has paved the way, and the co-operation of two or more colleagues can be ensured, the most ordinary business instincts point to the Cottage Hospital, as the necessary security against that backwater into which arrested development by compulsion drifts.

**Homœopathic
Nursing a
Factor in
Progress.**

Then, again, expansion by utilising the increasing power of homœopathically trained nursing, is with us a too limited force. What this development has wrought in the larger hospital centres is incalculable; our private nursing is eagerly accepted by princes of the blood royal, by titled allopaths, and other notabilities: and in our provincial Hospitals also, where two or more trained nurses are available, similar appreciation is shown. As to the value of the propagandism of these assistants of ours, practical experience is emphatic, and a Cottage Hospital, however small, training one or more nurses for private work, is a tower of strength for local Homœopathy.

**The Expansion
of our
Clinical Work.**

Gentlemen, all roads lead to Rome; and however we study the disabilities of our position, we find their removal to be bound up with a fuller expansion of our clinical work. Further, the form of clinical expansion that is most prolific in result, that which the majority can judge for themselves, is represented by the Cottage Hospital. Whether we ponder on the total change in point of view from which the community regards medical matters—how doctrine is considered less and less, and demonstrated result more and more; or whether we see the necessity of finding the best form for the co-operation of an interested public wishful to aid, but desirous of a practical object for their sympathy; or whether we consider the imperious necessity felt by all of us for consolidation, for advance, for expansion; the response in each is the same. Some augmentation of the clinical side of Homœopathy, abreast of the progress and advance of the age, visible and patent to all men; and this for us, taking advantage of the chief public interest in medical matters of the present time, is, undoubtedly, the Hospital interest.

Realisable Ideals.

Before leaving this topic, one on which my convictions are definite, my aspirations considerable, and from which I can with difficulty detach myself, I should like to sketch my realisable ideal, as supplying form and shape to the preceding.

If each of our three Central Hospitals would allot to itself a wide circle of influence, these three circles embracing the whole country :

If each Central Hospital were to assist and advise, and encourage by professional co-operation, the institution and the growth of Cottage Hospitals in all available centres throughout its province :

If each Cottage Hospital, thus knit in professional bonds to its metropolitan, could know that it was not isolated and alone, but its welfare an object of interest to its fellows :

And if in all localities where two or three or more of our colleagues reside, a determined push was made for a Cottage Hospital, on the previous basis of a good dispensary :

Then I should know that we should have the best Hospital Organisation in England, the firmest assurance of the prospect of a widening Homœopathic future, a fraternity of institutions knit in the bonds of a common sympathy, a foundation, well and truly laid, of that larger Homœopathy which we labour to build, but shall not be able to finish.

Gentlemen, this is a wholly practicable issue ; it remains with yourselves and myself to make it actual.

EPILOGUE.

Cui bono? Now, in fine, do I catch the undertone of any pessimistic critic.—“*Cui bono?*” Where is the sense of proportion in all this? Is it expectable that we can ever be more than a mollifying influence, a remnant, an Adullamite cave? Is this not rivetting our chains, confirming our isolation, burning our boats? Where is the evidence of the acceptance of our century’s work, to any great degree, by the rising generation? Are we not

mistaken about our mission, ploughing the lonely furrow, perpetuating a useless martyrdom ?

Reassurance. My friends, it is not so. The permanent influences of value in this world have ever been cradled in isolation, nurtured in neglect, trained in obscurity. These are the tests of their persistence. It has yet to be received as a criterion of truth that it should represent the belief of the majority. Majorities are usually wrong; and what crusade against vested interests, the prejudice of tradition, the bias of education, could ever be carried on in such half-hearted spirit—"Go into the world, proclaim your new truth, make clear its nature and results, and give it all up if the majority does not with one accord believe you and your mission ?"

About our future? The future does not rest with us: forces beyond our range control the "is to be"; nor is it given to any man, however gifted, to forecast the development of national questions or public movements.

Even if by any misfeasance of our own this Homœopathic body were to lose its cause and its mission, the principle would still remain; that is bound up with the facts of nature, eternal as the hills.

Circuitous Progress against Resistance. The clear vision of James Hinton—one of the finer products of Guy's—long ago saw that progress against resistance is never in a straight line—it is circuitous, spiral. I hold that there is every evidence that the medical spirit of the age—among the allopaths—is unconsciously drifting to the full cognisance of the Homœopathic law, though by indirect and devious routes. I hold that were we to abdicate our position, turn our back upon our distinctive principle, forget our Homœopathy, that at no distant date the law of similars would be rediscovered, though possibly in a different way, approached from a different standpoint, and associated with other sets of facts.

A "Historical Bridge." Wherefore I say that if we are to have any share in that ultimate recognition—a triumph of truth after we are dead and gone—that we must maintain an unbroken succession

between the past and the future. This is to me the true ethical import of our position to-day. All our members, singly and collectively, constitute a Historical Bridge in the history of medical science, the special value of which will only be fully seen when its work is done. This bridge is the connection in time between the discovery and the complete recognition of the Homœopathic law. This continuative mission it is which is our solace and encouragement amid the misunderstanding, the attributed motive, the supercilious hypercriticism of those who swim with the stream.

Advance Homœopathy! Our supreme function then at present is to develop and to transmit that aspect of medical truth which *we* have clearly seen.

It is this historical necessity which each embodies, this ethical inspiration which each receives, which dignifies our work, ennobles our endeavours, and fortifies our endurance. The monotonous and weary daily toil, thus viewed, rises into "an ampler ether, a diviner air"; there is every inducement to quit ourselves like men, for our place is in history. There are those yet among us, in a green and honoured old age, whose reminiscences of work and achievements are for us a liberal education. These have lived their life, spent their vigour, poured out their personality, in the maintenance and advancement of that doctrine they transmit to us, enriched by their experience, splendid by their devotion. Some are with us to-night; some in the sere and yellow leaf, bound by the chains of infirmity, are with us in spirit, and as we take up the burden they lay down, we think of each of these in the inspiring sentiment of the poet of nature.

"This is the happy warrior, this is he
That every man at arms would wish to be."

When our time comes to retire from the dust of strife, to moderate our activities, to put off the panoply of conflict, let us be assured that we have never lost sight of our *terminus ad quem*, the acceptance of that truth pregnant with so beneficent issues to the human race.

When the grass is green over our heads, and our historic personalities are merely nebulous recollections, may

our descendants know that we have given to them an ample and a developed heritage, and not an etiolated and decadent remnant. But to-day for you and me, there is, as stimulus, the noble apophthegm of Lessing, "Truth I will have, and I will have no other!"

AUXILIARY RESOURCES.

*A Presidential Address.*¹

BY ALFRED E. HAWKES, M.D.BRUX.

GENTLEMEN,—I cannot sufficiently thank you for again electing me to this post, and I need not refrain from saying how gratifying it is to me to commence my fifteenth year as a medical officer of the Hahnemann Hospital, and my thirtieth year as a Liverpool practitioner, under such pleasing auspices.

Presidential addresses may be said to be epidemic at this season of the year.

The echoes of one, addressed to the homœopathic practitioners of these islands—which, however, will surely be read by many beyond the seas—prefaced by the weighty utterances of the Vice-President,² had scarcely died away, when we were summoned to the gathering of the British Homœopathic Society to listen to the important suggestions of the President, Dr. Burford. I regret that so few assembled here, and that only one of our number journeyed thither.

Four days ago a local Society, devoted to literature and philosophy, commenced its session, and as the able³ exposition of Jeremy Bentham's work and influence was proceeding, and the long list of triumphs due to his genius was being read, one hoped that a similar reason for the apathy now existing was not true of homœopathy, viz.,

¹ Delivered to the Liverpool Branch, October 10, 1901.

² Address to the British Homœopathic Congress, by Dr. George Clifton, J.P.

³ Address by Rev. E. A. Wesley, M.A.

exhaustion due to an exhausted programme. For with us much, in truth, remains to be done; and it devolves upon us to do it.

Yesterday yet another Presidential Address¹ was delivered in my hearing in Edinburgh, the burden of which was that for the work of modern life habitual retreat was essential, and that no one can keep on giving unless he keeps receiving. This surely obtains in other walks of life than that of the theologian.

And now it devolves upon us to inaugurate the forty-fifth session of our local Society, which I trust may be no less prosperous than its predecessors.

As I have said, we have lately been engaged, so to speak, in discussing imperial affairs; to-night we descend to the more common-place duties of a city council, assisted by our ever welcome friends from beyond the Mersey, and from the banks of the Irwell, and other centres of homœopathic activity.

I cannot follow my friend and predecessor in giving you a paper full of scientific lore—a paper² which reminded me that a third of a century ago I myself was surrounded by Ruhmkorff's coils, platinum dishes, and Nesler's solutions.

One curious coincidence comes to my mind. Then it was my frequent duty to estimate the strength of a permanganate of potash solution, for volumetric purposes, with oxalic acid. Now it is from time to time my lot to bleach my skin purposely stained by the same potash salt by means of the same acid. All of you could tell a similar story; and whether we have left behind a past which, while yet in the future, promised better things than have come to us, or whether, as some are optimistic enough to say, these are the halcyon days; we are now banded together, few essaying to disturb us, and alas! few demanding admission to our coterie, not so much to increase the tenets of general science as to further the cause of the science of therapeutics. I should, however, be doing scant justice to this branch of the British Homœopathic Society if I did not refer to some of

¹ Address by Rev. Alexander Maclaren, D.D.

² An unpublished Address on Electricity, by R. Gordon Smith, M.B.

the extra-professional diversions of at least some of its members.

One has just vacated the chair of the Society above referred to,¹ not before he had given to the world, however, a booklet which will serve to reveal the mind of a master to those who must needs run while they read. Two others imbued with scientific instinct are working at a treatise of more than local interest, and are teaching us that between our own estuary and the sands of Dee a cultivated area exists for those with cultivated minds to wander over and explore. Happy guides! happy explorers!

We await the half-promised results of my predecessor's efforts at the bedside, where he has found electrical methods so helpful. So much preparation will surely bear fruit, and I am sure he could not find a better garner than we are prepared to make for him, if he will only entrust us with his experiences.

Another colleague has braved the difficulties of poesy and siren-like has bidden others venture.

We may smile at his recipe anent the making of a poet, and run over the pathogenesis of nitro-glycerine, but I purpose making use of his words as incentives to ourselves—as the still somewhat despised custodians of what we believe to be a therapeutic truth—to greater efforts, coupling them with the equally memorable suggestions of Dr. Goldsbrough, which all who were at the recent Congress dinner will call to mind. Dr. Goldsbrough's demand that we should give our best to the work we have in hand, so that it may represent the best that can be done, and Dr. Charles Hayward's appeal—not to us alone—to use our reason as a heaven-sent gift, may well inspire us with courage according to our convictions.

“Wilfred”²

Weigh well in Reason's scales each word and tale
No matter whence it comes. For Reason is
The only attribute which raises man
Above the brute creation. 'Tis heaven's best gift,
And if we may not use it—why the gift?

¹ Liverpool Literary and Philosophical Society.

² [Extract from the speech of the dying King Wilfred—“Wilfred,” Act 3. Scene 2].

For I do rather think that if man hath
 This almost more than human attribute—
 Whose light eye pierces deeper, deeper still
 Into the great unknown—as spread the rays
 Of science-luming lamp, and use it not,
 'Tis blasphemy against the power that gives. . . .”

It hardly needs utterances such as these to keep us working to the utmost of our powers, whatever it may cost us, in the direction many of us have followed for several years. Our judgment has led us out of the beaten track, not, indeed, into some by-path meadow, easy to walk in but treacherous withal, but into a region where guide-posts are numerous enough, and into which others have preceded us, but where difficulties abound. It is here, separated from the main body of the medical army, we have to carry on the strife, and it is in this region that we are besought by Dr. Goldsbrough to seek to *the* best. But I would remind you that we live in no ordinary times. Others are at work besides ourselves, and perhaps with more diligence. We live and pursue our calling during a period when it can be said that the mortality of placenta prævia has been reduced to 1.45 per cent., as I gather from a paper by Dr. Smyly, ex-Master of the Rotunda Hospital, published in the *Medical Press and Circular*, May 22, 1901.

In the *Lancet* of September 14, 1901, Dr. William Duncan states that, since he has adopted the method of administering strychnine hypodermically “in order to avert shock and heart failure,” he has “performed eighty-two consecutive hysterectomies without a death.”

These excellent results do not exceed, to be sure, those recently reported by our friends Drs. Burford and Johnstone, but they go to accentuate the statement already made, and to show that in order to keep abreast with those who differ from us we must strain every nerve. At times the question forces itself upon my attention as to whether our friends of the other school are approaching our method, or whether some of us are adopting theirs the more rapidly.

In a recent number of the *North American Journal of Homœopathy*, an able paper appeared on the use of strychn-

nine in labour, the dose recommended being not small; and in the same journal a paper on transfusion appeared, which would almost seem to render obsolete much that has hitherto been found necessary in the treatment of shock and other effects of post-partum and other hæmorrhages.

In another field the use of digitaline gives us pause. I have recently used it in a case of tachycardia, where the pulse in a man past middle life exceeded 160 beats per minute, where œdema of the extremities existed, and where congestion of the lung accompanied by hæmoptysis, which was very free, caused much anxiety. He is now attending to his business and was out when I last called. I have not found any other preparation of digitalis effectual here.

I am unable after glancing over Allen's pathogenesis of digitaline to say whether this effect can be credited to homœopathy, but I refer to the case to show that our ordinary remedies may at times need re-inforcing.

I have referred to the literary energy of many of our number. Is it too much to ask that we should this winter turn our attention with greater ardour to the one distinctive feature of our work, viz., *Materia Medica*? We must of necessity, as far as in us lies, keep abreast of what is being done in the adjoining camp.

Bleeding, blistering, and salivation are not now carried on as they were. Professor (now Sir William) Gairdner, however, used to urge us to see to it that we did not miss the opportunity when a case needing venesection presented itself.¹

We cannot ignore the results that Dr. Caton is obtaining in the Royal Infirmary here from the use of small blisters applied over the heart in endocarditis.

I do not say that we need to imitate him for one moment. I am more than pleased with our remedies in this sphere. It is, moreover, well to bear in mind that neither canth. nor naja has hitherto enabled us to dispense with prolonged rest in this disorder.

We do not salivate now, but I would urge those of you who have need of such a hint, not to give too little mercury

¹ Vide *Glas. Med. Jour.*, November, 1901.

to the pregnant woman if you wish to avert pemphigus neo-natorum, where such a malady threatens. You may not always be able to undo the mischief thus wrought by omission, by a long course of kali hydriod. in small doses, as I am succeeding in doing in a case just now under observation.

It would be out of place here to say much of methods of cure and aids to diagnosis which have no bearing on homœopathy. We here congratulate ourselves in that we do not now have to go far afield to obtain skiagraphs, as Dr. Charles Hayward can tell you, but the following case may show that in another malady we have to use extra medicinal means and resort to outside help. Some years ago Dr. John Hayward removed a tubercular gland from a little patient's neck for me. A brother had died of phthisis, but the family were otherwise healthy. The wound did not heal kindly, and presently lupus vulgaris slowly spread from the cicatrix over the neck, cheek, and chin. Change of air, cod-liver oil, and a variety of medicines made no impression, and a friend, well known to you all, is—he tells me—at my instigation slowly removing the disfigurement. I trust the bacillus has not got into regions where the rays my friend is employing will not reach it. So we have to call all kinds of resources to our aid. These I have purposely mentioned are available to all medical practitioners who choose to make use of them. I have not yet referred to expectant methods, we have too much faith in our remedies ever—if I mistake not—to purposely leave any disorder to get well of itself.

I gather from a source which is quite reliable, that perhaps the best place in which to watch cases get well with a maximum of space and attention, and a minimum of physic, is a modern fever-hospital. Now the disease of all others—under the circumstance in which I see it—requiring care and resource is scarlet fever. To be sure, we are not now allowed to treat, as I have done, five cases of scarlet fever in the front room of a court tenement, but we seldom have all the space we desire.

Notwithstanding that I have had exceptional results, I am told that ailanthus, merc. cyan., crotal., and arsen., can

be dispensed with, and that a large ward and careful nursing are all-sufficient in the great majority of cases.

And these remarks also apply to typhoid. I have not time to go into statistics, nor would it serve my present purpose to do so, but I may remark that on one occasion our results in this hospital showed 29 successive cases without a death, but the preceding death and those immediately subsequent would have altered the ratio.

What, then, is the inference to be drawn from all this? I think it is that we must look to our weapons. All this is not cited to show that we are in the habit of going to our friends of the other side when we get into difficulties. It is cited to show that under certain circumstances it is due to ourselves to know when to go. We believe that they with great advantage could use our methods. Some do so openly, others do so without acknowledgment. My own view is that the time has come when we, by acknowledging certain weaknesses in our system, as at present understood by us, may not only pave the way for more careful re-consideration of our position for ourselves, but that our opponents would be thus induced to lay more stress upon those advantages of our system which are obvious, and one may say constant. We cannot compete with ergotin subcutaneously injected with any drug known to me, when we must by drug action produce contraction of the uterus. We cannot compete with croton oil when we want by drug action to produce a speedy evacuation of the bowels.

Can they subdue inopportune uterine contraction with anything so surely as we can with ergot in small doses?

Do we, or they, know anything better than a dilution of croton oil for the watery gushing diarrhoea, say, of childhood? I think here our crypto friends can help us. They can get to closer quarters with our opponents than we. Let them look upon this as part of their mission, and we will not cry to them to "come over and help us," but rather constrain them to remain that each may work in his own province.

But is not this immoral on their part; is it not almost compounding a misdemeanour on our part? I think not. What is our own position—what are our aims—self-

aggrandisement? Then some of us have missed our way. No! the men we heard so much of last month have handed on to us a sacred trust. It cost them much to introduce its terms—it costs us little to maintain them. For us it remains to see to it that the formula we use shall be of use to others.

My contention is this, that if we as members of this branch are not adding to the stability of the medical art, and if we are not contributing to the general welfare of our fellow-practitioners, and through them to the public good, we have lost our way, and must retrace our steps.

We are constantly being told that our *Materia Medica* is imperfect, just as we used to be told that our *Jahr* was “nonsense made difficult.” Shall we not see to it, we who can point to so many on our own staff of literary ability, that we do more than treat all the organs of the body with our more or less special knowledge, viz., that we record our work, give our reasons and boldly ask for recognition *pro tanto*, as the Scotch preliminary regulations say. It is a lamentable fact that recruits of late have hardly kept pace with the removals from the list of our society's membership. We cannot hope in our day that homœopathy shall take the stand it does in North America. But if we were to band ourselves together, and devote ourselves to that portion of the science, viz., that of therapeutics, which we claim a special interest in, I think we could do something to place homœopathy on a better footing.

My plan is this. I do not ask you to prove medicines just now; we have done something in that way, but not much. We all profess to use homœopathic medicines, some of us do so almost exclusively. We are led to the remedy we use by various means. Some use a repertory, others frequently consult the *Materia Medica*. Some act synthetically, we all aim at the same result. In some spheres there is no difficulty, provings abound and experiences have been recorded. In other cases there may be much difficulty; a mere hint, a fragmentary proving is all we have to work with. I contend that it would be of the greatest value if each of us reported from time to time what we had been doing. One should

come and tell us that a certain ear symptom yielded to a drug. Another that he had differentiated between one drug and another in a certain eye condition. Another that apis seemed better than ruta in certain bladder conditions. If these results were obtained and recorded by men who were known to be careful and reliable observers, I am sure a practice of medicine which we should greatly value would soon be got together.

I show you a card from the Editor of the "Encyclopedia of Pure Materia Medica," with verifications from Drs. Dunham and Lippe.

I am saying no disrespectful word about these heroes of the medical art, but these verifications are not enough for me. I must know under what circumstances the drugs were used, why they were selected; and if I know these, to me essential particulars, and if, above all, I see the initials of a man whose practice I know, and whose good faith I am sure of, I would value that observation, even if it had but a faint pathogenetic basis, as much as I should value a proving. I must guard myself by saying that, in the absence of some attempt at a pathogenetic reason for its use, I, like so many, would discard it, as it would be a clinical symptom and no more.

Will you allow me, in view of a recent discussion, to refer to domestic homœopathy? On reaching the house of a patient, at the commencement of an illness, we are almost invariably informed of the measures that have been adopted pending our arrival, before we are asked what more is to be done. Personally I have always striven that the most homœopathic remedy discoverable shall have been given, and I am happiest when I can recommend a continuation of the medicinal treatment. To that end many of my patients keep a medicine chest by them so that I may know if they telephone what medicines they have at hand. The selection of thirty-six is ample enough for the requirements of a household. The attenuations are such as may be safely entrusted to the amateur, and in the hands of the observant in process of time each bottle comes to have a clinical value in the eyes of its owner.

During the controversy referred to, the question of the potency to be used by the laity was discussed. I have attempted to settle the question for my own circle, but I do not think I should be alarmed if I heard of a pilule of the matrix strength being administered to anyone, for, as Mr. Isaac Thompson tells us—and a more scientific observer we do not need, nor could we find one if we did—"the most of mother tincture that any given quantity of pilules is capable of absorbing would render them, bulk for bulk, equal to half the strength of our first decimal." "Twenty-five pills of the usual size absorb one drop of mother tincture." It would require six pilules to contain a dose of aconite for a child of one year old according to allopathic posology. . . .

I know much may be said against this method, but for myself I would rather be told that my patient had begun the cure of his complaint with a homœopathic remedy I had taught him how to use, than that I should be asked to prescribe for symptoms masked by the administration of chlorodyne and similar preparations.

My remarks are before you. I must ask you to look upon them as a call to arms—arms we have successfully carried on many a well-fought day—rather than as incentives to look to resources which may at times serve our purpose, but which at a critical moment, with a few exceptions, but ill compare with our more precise methods.

ENERGY, IN ITS RELATION TO DRUGS AND DRUG ACTION.¹

BY PERCY WILDE, M.D.,

Physician to the Lansdown Hospital, Bath.

INTRODUCTION.

OUR modern text-books on therapeutics contain the result of much patient study and observation; they present us with a large number of facts respecting the effects of

¹ Presented to the Section of Materia Medica and Therapeutics, Nov. 7, 1901.

drugs both upon the human body and upon animals, but yet they do not enable us to answer the elementary question—How do drugs produce their action?

“We know that some drugs act chemically.” Sir Lauder Brunton tells us, “It is probable that other drugs do the same.”¹

This appears to be an insufficient basis on which to build either a science of therapeutics or a science of pharmacology.

Unless we know the nature of drug action, we have no laws to guide us in discussing such action, it leaves an open door for any kind of speculative theory, without the means of checking it, and it gives us nothing by which we can group our knowledge or add to it by induction. Therapeutics under such conditions must remain a mass of disjointed facts, only to be regarded as true, until proof is afforded to the contrary.

In order that we may obtain a clearer knowledge of the action of drugs, we may take the statement “All drugs act chemically” as a working hypothesis. We shall thus bring their action under the physical laws which govern the act of chemical combination, and also of those which arise out of the nature of energy itself.

ENERGY.

We know that energy is produced whenever matter acts upon matter. That the form this energy will take will vary with the conditions which have led to its production. But whatever form it takes it is capable of being transformed into any other form. We know that it is indestructible, that it only disappears in one form to reappear in another. That it may be imprisoned for thousands of years and then come forth with all the exuberance of youth, and pursue its course as if time had no existence.

We turn the handle of a static machine and convert vital energy into mechanical motion, mechanical motion into heat, heat into electricity, electricity into light. We bring

¹ “Pharmacology, Therapeutics and Materia Medica.” Sir T. Lauder Brunton.

the current in contact with the human body, and set free vital energy again.

Each form in which energy presents itself has been made the subject of special study. Careful observation led to the recognition that there were certain regularities in the conditions under which its phenomena took place.

It became possible to establish laws, and upon these laws to build up sciences, each having a language and a method of its own for expressing the effects of that particular form of energy it was founded to study.

The progress of each of these sciences was hindered by the conception that each form of energy was a separate entity and had an existence distinct from other forms of energy. Thus heat was regarded as an imponderable body, distinct from light, which was supposed to consist of particles of a corpuscular form. Electricity was regarded as a fluid, and chemical change was supposed to be due to the presence or absence of "phlogiston." Physiology was delayed by the idea that vital energy was a distinct force peculiar to living things, and not transformable into chemical or physical energy or *vice versa*. This view is not held at the present moment by any biologist, and its discussion here has not been considered necessary.

It is only within the past thirty years that those engaged in special sciences have recognised that the phenomena they studied were only different forms of the phenomena observed in other departments, all being due to the same force in another shape. That the study of the one was helpful to the study of the other, and that all could be represented in the language of physics. That when this was done the explanation of the processes became much simplified, and the nature of the phenomena more comprehensible.

Assuming that the energy of drugs is due to chemical combination with protoplasm, the place of therapeutics amongst the sciences, which are based on the study of energy, is very definite. It represents the study of the action of one inconstant form of matter on another form of matter which is constant. The inconstant form of matter

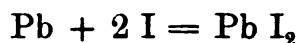
is any element or combination of elements; the constant form of matter is living protoplasm.¹

CHEMICAL COMBINATION. •

There are two conditions necessary to an act of chemical combination. The first is that the two matters must be in such a physical form as to admit of combination. The second is that there shall exist an affinity between the two matters. In respect to the second of these conditions, the affinity of protoplasm for matter is so wide that we can practically take it that the second condition will be fulfilled if the first is arrived at.

By this I do not mean to imply that all protoplasm will combine with all matter, on the contrary, we know that special forms of protoplasm have selective affinities for different matters, but for our present purpose we may take it as a general rule that matter will combine with one form of protoplasm or another providing that it is presented in a suitable physical form.

In order to study the nature of a chemical combination we may take a simple formula.



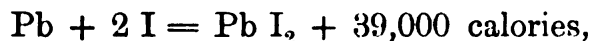
This means that if 206·9 grammes of lead are combined with 253·8 grammes of iodine they will make 460·7 grammes of iodide of lead. You will observe that this combination involves only a simple addition sum. The weight of iodide of lead produced is the weight of its two components added together. This gives us the first law, viz.—*That the act of chemical combination involves neither loss nor gain of weight.*

But the chemist's formula gives us no information about the second law, viz.—*That when two substances enter into*

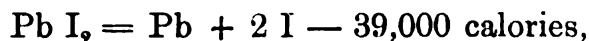
¹ Formerly we regarded the cell as the physiological unit, but we now speak of protoplasm, which forms the contents of the cell, as constituting the site of all the activities of the body. Protoplasm consists of molecules possessing more than a thousand atoms. The greater the number of atoms in the molecule the less its stability, and especially is this the case with molecules containing nitrogen. Molecules of protoplasm can be regarded as in a constant state of chemical change, and the various functions of the body are due to the physical and chemical changes taking place in protoplasm. It is composed of C, H, O, N, and a few atoms of sulphur and phosphorus.

combination, energy is set free. Now as it is upon this energy that we depend for all our vital processes it is even more important to us than the knowledge of the product which results from the combination.

It is found that when the stated weights of lead and iodine combine together there is produced energy, which measured in terms of heat amounts to 39,000 calories. A calorie being that amount of heat which is necessary to raise one kilogramme of water 1° C, or, converted into mechanical force, is competent to raise 1 kilogramme to a height of 425 metres. You will observe therefore the enormous amount of energy represented by 39,000 calories. We may then write the formula:—



Or we may write it in another form:—



which represents that the iodide of lead possesses less energy to the amount of 39,000 calories, than the lead and iodine of which it is composed, although the weight of these substances has remained unchanged.

This is of course due to the fact that energy, being imponderable, cannot be measured by weight. Thus when we eat a pound of bread, we pass one pound of excreta, and although we have probably absorbed energy from the bread to the extent of some 12,000 calories, there is nothing to account for this in the weight of the excreta passed.

From this we may formulate a third law, viz.:—*Addition of energy or its loss does not influence the weight of matter.*

In discussing therapeutic questions this imponderability of energy is often forgotten.

We are so accustomed to measure the energy of drugs by weight, to say that 2 drachms have twice the power of 1 drachm, that 20 grains will possess 2,000 times the energy of $\frac{1}{100}$ part of a grain, that we are apt to forget that such statements are not scientific facts but only *inferences*. The inference may be usually correct, but it is also open to serious error. This may be illustrated by a simple mechanical experiment:—

If a brick weighing 1 pound is allowed to fall from a height of 50 feet it will give out an amount of energy which is expressed in weight by 50 foot pounds. That is to say it will do mechanical work to this amount.

Now if before we drop this brick we reduce it to fine powder, it will gently float to the ground, yielding no mechanical energy at all.

If we take $\frac{1}{10}$ part of the brick and allow it to fall in its solid state it will yield 5 pounds of mechanical energy.

It is easy to compare these two last experiments to show that $\frac{1}{10}$ part of the brick is capable of yielding more energy than the whole brick. If we express this result in respect to some therapeutic reaction we should be met by the statement that "the thing is impossible; the part cannot be greater than its whole."

The difficulty arises because we are using weight as a measure of energy without making sure that the two things we are comparing are in the same physical state.

One-tenth part of the brick in its solid state will do more mechanical work than the whole brick in a state of powder.

The paradox arises from the fact that while the brick is in its solid state, the friction of the air during its fall is such an infinitesimal factor that we can afford to disregard it, but when the brick is in powder the friction of the air is so great that it uses up all the available energy. This gives us the fourth law:—*Weight can only be used as a measure of energy in respect to quantities of the same substance in precisely the same physical state.*

In all discussions respecting any mechanical work we can only bring into our calculations the amount of energy *available*, not the amount of energy which *exists*.

Thus the electrician, in calculating the amount of coal he requires to supply a certain quantity of electricity, does not base his figures upon the amount of energy which the coal possesses, but on the amount of that energy which he can utilise, which is only a small percentage.

We can express this as our fifth law by saying—*only the available, not the existent, energy can be considered in relation to mechanical work.*

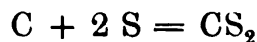
To revert to our formula—you will have noticed that the iodide of lead has lost energy to the amount of 39,000 calories, yet you know that iodide of lead is medicinally much more energetic than the metal lead itself.

If we take mercury, which is medicinally inert in its metallic state, we know that it becomes enormously active when it is combined with chlorine to form the perchloride of mercury. Yet the mercury in the perchloride of mercury has lost an enormous amount of energy during the act of combination. Or we may take charcoal and sulphur, which are comparatively inert substances, by their combination we form the disulphide of carbon, which is a very powerful poison. Again there has been a loss of a large amount of energy, both by the carbon and the sulphur, during the act of combination.

If we ask how it happens that from two comparatively inert substances we can form an active poison? We shall probably be told that it is the result of "*chemical combination.*"

It is one of the advantages of the physical method that it does not permit us to explain anything by the use of a phrase. Such expressions as "chemical combination," and "vital reaction" teach us nothing. When we see energy we ought to be able to explain whence it comes and where it goes.

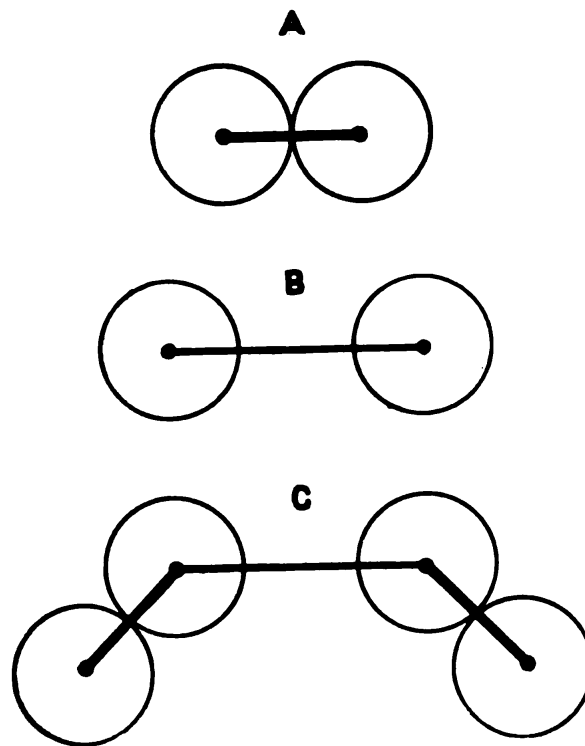
If we express the formation of carbon disulphide by the formula



it conveys the impression that charcoal and sulphur are capable of uniting to form carbon disulphide. But they do not possess the capacity to do so, because the cohesion of their atoms offers a physical obstacle. This cohesion must be overcome, and this act of mechanical work requires the use of energy from some outside source, as neither carbon nor sulphur have sufficient available energy to do the work for themselves.

If it had been the question of the combination of an acid with a metal, the acid would have supplied the energy

because it possesses sufficient available free energy to do the work. In the case of carbon and sulphur we supply the necessary energy in the form of heat. By it we overcome the cohesion between the atoms, and this act represents a large amount of mechanical work. Now while heat has separated the atoms, it has not destroyed their affinity for one another, and if the heat became dissipated this affinity would cause them to become re-associated. But they meet



with atoms of carbon, and the force of attraction to these atoms is greater than the force of attraction to one another, and overcomes, but does not destroy, that attraction. As a result they are prevented from re-associating, and the work done by the heat remains as a permanent factor in the combination, and exists as potential energy.

This may be easier understood by reference to the diagram. It represents ("A") two discs joined closely together by a piece of elastic to represent two atoms in a state of cohesion.

We can represent the effect of heat by pulling these two discs asunder ("B"), this stretches the elastic which represents the force compelling them to cohere again, and which is not destroyed. Now this force will come into operation directly we release the two discs, such release would represent the dissipation of the heat, the force which holds them asunder ("A").

But if, while they are separated they become fixed to other two discs ("C"), which will hold them with so much force that it overcomes the power of the elastic to draw them together again, it is evident that the work done in separating them remains as a permanent quality of the new substance, and we speak of the acquired energy as *potential energy*.

Potential energy is that force which matter gains by its position independently of its chemical nature. Thus if we have a stick weighing one pound, and we throw it into the air, and it lodges in the branches of a tree twenty feet from the ground, that stick has gained a potential energy of twenty foot pounds. It will give out this energy when it falls to the ground, and being energy it may be converted into any other kind of energy.

The energy used in throwing the stick into the air corresponds to the energy employed in separating the atoms of sulphur, and as they are not allowed to fall back into their original position they are like the stick in the tree, endowed with potential energy.

It is by similiar processes that plants and vegetables obtain potential energy direct from the radiant heat of the sun. This energy may be stored up for thousands of years as potential energy and then come back to us as a chemical energy converted into heat as we sit before a coal fire.

The electrical storage battery or accumulator presents us with a still more beautiful example of the way in which energy can be converted into potential energy, stored up for a time and then given out as we want it.

But although potential energy has been gained by the carbon disulphide after the fashion I have described, this does not of itself constitute the cause of its great chemical activity.

If we go back to our stick which we left up a tree—we had to use considerable effort to get it there, but now it is there, charged with potential energy, we may be able to release it by the slightest touch or the force of a gale of wind might have to be experienced before it was dislodged. In the first place it would correspond to carbon disulphide, the molecule of which is very unstable, and in the second place it would correspond to the molecule of water, which is very stable.

The more stable the molecule the less its chemical activity and *vice versa*.

From this we may formulate a sixth law and one which is of maximum importance to the study of therapeutics:—
*The chemical activity of a drug is not a measure of the amount of energy it contains, but of the amount of energy required to set free this energy.*¹

Thus we have seen that the metal mercury contains more energy than the same quantity of mercury in the perchloride, yet while the metal is inert the perchloride is an active poison. We can explain this by saying that while the energy required to set free the energy of the metal is enormous, that required to set free the energy of mercury in the perchloride is so slight that protoplasm itself can accomplish it without the intervention of the digestive organs. In the perchloride the work of separating the atoms is already accomplished and that work remains as an integral portion of the drug in the form of potential energy.

It will be seen that in every act of chemical combination *free* energy must come from somewhere. It may be from an outside source, or it may be contained in either of the parties to the combination. This fact is of enormous importance in understanding the nature of drug action.

The human body possesses an elaborate digestive system for setting free the energy of substances introduced into the stomach, or of placing them in such a position that they may

¹ This law will explain the unreliability of chemical analysis as a test of the value of foods. Thus starch and wood have the same chemical formula and contain the same amount of energy. The one is a food and the other not, because while the digestive organs can set free the energy of starch they cannot do so in the case of wood.

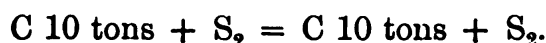
be able to combine with protoplasm; but this digestive system, regarded as a force, has strictly limited powers. We may speak of this force, for convenience, as "body energy." We may say that when the energy necessary to set free the energy of a substance exceeds that of the body energy, such substance cannot combine with protoplasm and become a source of energy. When we speak of a substance being *inert* we mean that it is in such a physical state that it cannot influence the condition of the body, but the habit of thought is such that this inertia comes to be regarded as a quality of the substance itself, and not of its physical state.

Thus an infinitesimal dose of charcoal would appear to the unscientific mind as wholly unreasonable, because charcoal is such a very "inert" substance.

We have just been discussing the influence of an atom of carbon in converting a comparatively inert substance into a very poisonous one. If we expressed that atom in terms of weight, we should have to use millions of billions to express the fraction of the grain that is represented. Yet the atom possesses greater chemical activity than any quantity we can mention of crude carbon. This may be expressed in a formula as follows:—



That is to say that a chemical combination takes place, and a definite amount of energy is produced:—



In this case no chemical combination takes place and no energy is produced.

It follows, therefore, that $\frac{1}{10000000000}$ grain of carbon in its free state is a greater source of energy than 10 tons of the crude substance.

It may be said that I am comparing a positive with a negative, and the two terms are not comparable. This is perfectly true; but this mistake has been made, in the reverse direction, so often by physicians of the highest eminence and presumed scientific attainments, that it seems necessary to put the fallacy in such terms as will render its repetition ridiculous.

It appears to be accepted as a general principle in therapeutics that if a substance can be administered freely without producing any injurious effects, then under no circumstances can a minute dose of this substance exercise a therapeutic effect. A moment's reflection is sufficient to destroy this fallacy.

The element which the whole human race absorb most freely is nitrogen. In the atmosphere it acts as an inert diluent of oxygen. But if we combine a minute fraction of a grain of nitrogen with glycerine, another harmless substance, and place it on the tongue, it will produce a profound physiological effect. If we ask what it is that gives dynamite and gunpowder their explosive powers, the answer is *nitrogen*. There is no chemical difference in nitrogen as it exists in the air and as it exists in dynamite. Why does not the quantity we absorb at each inspiration rend and tear us asunder? The energy is there. In a single minute we absorb enough to kill a dozen people. *It is because we do not possess the energy to set this energy free.*

It is common in scientific works to state that nitrogen in its "free" state is chemically inactive. This is not accurate. Nitrogen is only inactive because it exists in the air in the form of molecules. It is only when these molecules are split up and it becomes "free" that its energy is released. It is for the same reason that hydrogen and oxygen do not combine, when mixed, to form water. They exist as molecules, and some form of energy is necessary to break up these molecules before they can combine.

So far we have only referred to substances whose physical activity in one form or another is a known quantity. Let us take another example of inertia, say, the stone by the roadside. This stone, since the days of creation, has never moved except as the result of some force applied to it. It represents the antithesis of what we call "Life." But the physicist, who takes broader views of life than the vitalistic school used to do, will tell us that this stone is a mass of vibrating atoms. It may be compared with a crowd of human beings inside a ring fence struggling and pushing against one another, but unable to pass beyond its limits.

These atoms receive the energy for their movement from the sun, and towards noonday their struggles become more fierce ; at night, when Nature sleeps, these atoms also have their period of quiescence, and they give back the energy they have received during the day. This may seem like the fancy of the physicist, but ask the engineer who is laying the railway line why he does not join the rails neatly, end to end, instead of leaving gaps between them. He will tell us that the struggle of the atoms is a very real thing, that the forces brought to bear upon the iron rail would, in spite of the heavy bolts he uses, be great enough to buckle it up, and cause a serious accident, and so he leaves a little playground for them between each rail. These little gaps between the rails all over the world ought to remind us that inertia does not exist.

Suppose, now, we break off a piece of this stone, and reduce it to fine powder, and give a small quantity as a medicine. We shall probably find that it is inert. Now, if we take another small quantity and put it into a bottle with some weak acid, and cork it carefully, in a few seconds the cork will be blown out with explosive violence. If we replace it the same thing will occur again and again.

Now, suppose that the human body had been able to convey this powder to the protoplasmic cells, and these cells had been able to set free its energy, the effect would be as disastrous as that of the strongest poison. It is the incapacity of the body to set free the energy of the powdered stone which makes it inert—not the lack of energy in the stone itself. I emphasise this fact because of the exceeding frequency of error of thought on this point.

TRITURATION.

If we could powder any substance sufficiently finely until it existed in something approaching its atomic state, it would possess enormous chemical activity. We have proof of this in the explosions which occur in coal mines from the existence in its atmosphere of finely powdered coal. But if we try to produce this fine powder we find that there are limits to the operation. After a time the powder will

become sticky, and as fast as we break it down it will re-cohere. To carry the process further we must introduce another substance, which we will call the triturant; by gradually increasing the quantity of this substance, the size of the particle can be reduced indefinitely. But as this would entail dealing with an enormous bulk of powder, it is usual to take definite proportions of 1 in 10, or 1 in 100, and take one part of the first triturate to mix with nine parts or ninety-nine parts of the triturant, to make the second triturate, and so on. As a result we shall have a number of definite triturates, in each of which the particles will have been reduced in size ten times, or 100 times, according to the scale adopted.

I do not know of any work which deals with the physical changes in the substance under these conditions, and I have therefore made a number of experiments with a view to obtaining some knowledge of the subject. I shall only describe those which bear directly upon the particular subject we are considering. I selected indigo as one of the subjects of experiment because of its insolubility. It is absolutely insoluble in water and alcohol, but will dissolve in the strongest sulphuric acid, weaker solutions of which have no effect upon it. It contains a red colouring matter, indigo carmine, which is soluble in spirit. I used for my triturant powdered glass, also on account of its insolubility.

I first triturated down one part of indigo with ninety-nine parts of glass by weight. The triturate consisted of a homogenous blue powder. Some of this powder was placed in one ounce of rectified spirit and vigorously shaken. After some hours, when the suspended particles had quite subsided, I found that while the indigo carmine had dissolved and given a red solution, none of the indigo itself had dissolved, and the sediment at the bottom of the bottle was the same perfectly homogenous blue powder which I had put there.

Now, it may occur to you that this fact is of considerable importance, because if the triturate had been a simple mechanical mixture, which it would be generally accepted to be, I ought to have had, first, a white sediment due to

the fact that powdered glass is heavier than indigo and would fall to the bottom first, and then a blue layer due to the indigo, which, being very light, remains suspended in the fluid for a long time. It is evident that in this triturate a condition of cohesion has been set up between each particle of glass and each particle of indigo, so that the triturate represents an organic structure which can only be broken down by the use of some other form of energy.

It will be observed that the mechanical force used in separating one particle from another remains in the trituration as a permanent factor, because the cohesion of the particles to the glass overcomes their attraction to one another. The mechanical conditions are precisely akin to those we have observed in the case of chemical combination, and may be explained by the same diagram. The forces at work are not of the same magnitude, but it can be demonstrated that these forces increase as the size of the particle diminishes. It will also be observed that the chemical nature of the substance remains unchanged, and that while energy has been gained none has been given out.

As both indigo and glass are insoluble, the solvent power of spirit would represent a very weak force brought to bear against their cohesion. I therefore tried the effect of triturating glass with a soluble substance. I used for the purpose aniline violet, with which you are familiar as a dye and which is very soluble in water. I made a triturate of this with powdered glass, the strength being 1-10,000. This produced a pale violet-coloured powder, 20 grains of which were mixed with half an ounce of water and well shaken. When it had subsided I found that none of the aniline had dissolved in the water. It has now been in the bottle with the water for three months, and no solution has taken place.

You will observe, then, that the cohesion produced in this triturate is strong enough to overcome the solvent power of water. It illustrates in an almost diagrammatic way the simple manner in which energy may be locked up. For if you take the colouring properties of the aniline to represent energy, that energy is not set free, because the water has not sufficient power to release it.

I next made a similar preparation in which I used spirit of wine instead of water as the solvent. In this case the spirit dissolves the aniline, and gives a pale violet solution. This gives us a rough idea of the strength of the cohesive force; it is stronger than the solvent power of water and weaker than that of spirit.

To return to our experiments with indigo. The failure of spirit to dissolve indigo is due to the fact that it does not possess sufficient power to overcome its cohesion. It occurred to me that if my deductions were correct, I should be able, by adding more potential energy to the triturate by a continuation of the process, be able to supply the energy which was needed, and the indigo would dissolve in the spirit. I therefore made a series of triturates representing 1-1,000, 1-10,000, 1-100,000 of indigo and glass.

Owing to the cohesion between the glass and indigo, it was necessary to use some form of energy to overcome this cohesion before solution was possible. I therefore boiled the triturate of 1-1,000 with spirit, and thus endeavoured to obtain a solution. But by no amount of boiling could I accomplish this, neither could I separate the indigo from the glass. By this and other experiments with triturates I demonstrated that the cohesive power of particles increases as their size diminishes. When I treated the triturate of 1-100,000 in the same manner I obtained the solution of pure indigo, which I show you here. You will observe that it is of an emerald green colour. It is interesting to observe that an ordinary tincture made from indigo will give a brilliant red, that the particles of indigo are a deep blue, that the triturate 1-1,000 mixed with spirit will give no colour, because the indigo does not dissolve and the indigo carmine is too dilute to be visible, and a solution of indigo in spirit is a beautiful green. It constitutes, therefore, quite an object lesson in the changes which take place in the qualities of a substance by alteration of its physical state, independently of any change in chemical constitution.

If we ask any chemist to make a solution of pure indigo and spirit, he will tell us that the thing is *physically* impossible. He will be perfectly right in that statement—I

say this, although I have just shown you a solution of pure indigo in spirit.

The use of language is to express facts:—Indigo is insoluble in spirit in *all* proportions. Indigo plus a considerable amount of potential energy is soluble in spirit. The same is true of other insoluble substances, it is the lack of potential energy which renders them insoluble, just as it is the lack of potential energy which renders substances chemically inactive. Supply this physical defect and we give them the quality they did not previously possess. It is the failure to recognise that change of quality accompanies change of physical state which has produced so much confusion of thought on therapeutic questions.

Difficulties of a similar character occurred when chemical science was in the course of evolution. Two chemists discovered two substances of identical chemical formula, but each was claimed to possess different properties. They did not engage in the altercation which we specially associate with differences of opinion on therapeutic matters, but tried to discover the source of error, because it seemed highly improbable that both statements should be true. But they found no source of error; on the contrary they discovered fresh instances of the same phenomenon, and they called it isomerism. They studied it and found that it was of the greatest value in building up the laws of modern chemical science. From the study of isomerism we have learned that it is not the *quality* of the atoms in the molecule which gives it its properties, but the *position* of the atoms.

As Ostwald¹ says, "one and the same atom, according to its position in the molecule, exercises perfectly different actions." Chemists have got over the difficulty which would arise from substances identical in composition, but different in quality, by giving them different names. We can hardly do the same in respect to triturates of crude substances, but it is important that we shall be able in some way to distinguish between them.

When we have triturated a substance, using one part to

¹ "Outlines of General Chemistry." By Wilhelm Ostwald, Professor of Chemistry at the University of Leipzig, p. 384.

ninety-nine parts of the triturant, and made a triturate of 1-100, I think we may call this the first centesimal potency. The word centesimal means that the particles are reduced one hundred times in size ; the word potency means that it has gained a corresponding amount of potential energy. We make the next triturate with one part of the first centesimal potency to ninety-nine grains of the triturant, and this may be called the second centesimal potency, and so on. Now, it will be found on examination that this second centesimal potency contains never less than the number of particles of the substance in the first centesimal, but they are reduced 10,000 times in size. The same thing is true during all other dilutions until the molecule is reached. It is also true that the number of particles of the substance is never less than the number of particles in the triturant, in any dilution, until its molecule is reached.

A triturate of 1-100 of aniline and glass will give coloured solution with water, because the particles of aniline are in excess of the triturant. A 1-10,000 triturate is required to hold all the particles in cohesion and prevent solution. In no properly made triturate is it possible to separate a particle of the triturant which does not contain a particle of the substance in a state of cohesion. Such experiments are best conducted with colouring matters such as aniline, because the colour is visible to the naked eye in triturants of 1-100,000, whereas the most powerful microscope will only show a particle of 1-100,000 part of an inch as a barely visible point, and particles attain this size in triturates of 1-1,000.

SOLUTIONS.

It might be reasonably thought that when a substance is soluble, or has been brought to a state of solution, then no further barrier would exist to prevent its free action upon protoplasm. But the study of the physics of solution does not support this idea. If we take, for example, the sulphate of magnesia we find that when administered in a state of solution it acts as a purgative. This action is not due to any act of chemical combination on the part of the

drug, but to the fact that it acts as a physical mass, having a higher specific gravity than the fluids in the blood-vessels, and, by the law of osmosis, attracts fluids to itself.

The physical qualities which make a concentrated solution of sulphate of magnesia a purgative are those which would render its absorption impossible. The larger the dose and the greater the concentration the greater will be the purgative effect of sulphate of magnesia. If we want this salt to obtain access to the circulation it is very obvious that we must dilute it very freely until we have overcome the physical causes which prevent its absorption. Even when we have accomplished this, there may be need for further dilution before we can place it in a condition in which it is free to enter into combination with protoplasm. When this condition was obtained we should not find sulphate of magnesia acting as a purgative, but exerting some influence of an altogether different kind, because the purgative action is not a quality of the drug, but a quality of its physical state, and has therefore no connection with the properties inherent in the substance itself.

I have every sympathy with those who find it difficult to conceive that some infinitely dilute solution can possess properties of an active character, which are not possessed by the stronger dilution. But in working out any scientific problem we are not disturbed by such factors as the possibility or the probability of a certain result; we must follow out our results to their logical conclusion, only taking care that there is no error in our calculations. Now we have come, by a series of deductions, to the conclusion that in order to obtain the full chemical activity of sulphate of magnesia we must employ it in a very extreme state of dilution. Others, working in a different department of science and on altogether different grounds, have arrived at precisely the same conclusion, and have provided us with the means to clearly demonstrate the fact.

Chiefly from the study of the influence of dissolved substances on osmotic pressure, vapour pressure, and the freezing point, chemists have proved that a saline solution such as chloride of potassium has nearly twice as many

molecules in it as it should have, and consequently greater chemical activity. The conclusion was, therefore, forced upon chemists that in such solutions the salt does not exist in its molecular form—chloride of potassium—but splits up into sub-molecules or ions, chlorine and potassium.

Electricians, working in an entirely different way, have arrived at the same conclusions. In electrical language, a saline solution is an electrolyte, that is to say, it possesses the power of conveying electricity at the expense of its own "ions." It can be proved that the molecule does not possess the power of conveying electricity; it is only the free "ions." The quantity of electricity which will pass through a given solution is always exactly proportional to the number of free "ions" it contains.

A solution, therefore, containing a large number of "ions" has greater electric conductivity than one which contains fewer "ions." Now, as Professor Ostwald states,¹ "electrolytes are precisely the most active substances. The connection between the two properties is very intimate—so close, in fact, that from the chemical activity we can determine the electric conductivity, and *vice versa*." It will be seen, therefore, that when we know the electric conductivity of a solution we have a ready means of determining its exact chemical activity.

The following table represents the results of experiments conducted by Kohlrausch and recorded by Ostwald (p. 281):—

Dilution.	KCl.	LiCl.	$\frac{1}{2}$ BaCl ₂ .	$\frac{1}{2}$ K ₂ SO ₄ .	$\frac{1}{2}$ MgSO ₄ .	HCl.	HNO ₃ .	$\frac{1}{2}$ H ₂ SO ₄ .	$\frac{1}{2}$ H ₃ PO ₄ .	C ₂ H ₄ O ₂ .	KOH.	NH ₄ OH.
1 Litre	91.5	59.1	65.8	67.2	27.0	278.0	277.0	188.9	29.0	1.2	171.8	0.84
10 Litres	104.7	77.5	86.1	89.7	47.4	324.4	322.5	208.4	43.0	4.3	198.6	3.1
100 "	114.7	87.5	100.6	109.8	71.5	341.6	339.5	285.5	79.0	13.2	212.4	9.2
1,000 "	119.3	92.1	109.2	120.7	93.5	345.5	342.7	331.6	96.8	38.0	214.0	26.0
10,000 "	120.9	94.3	112.6	124.9	103.4							
50,000 "	121.7	95.5	114.4	126.6	105.2							
100,000 "	121.6	96.5	114.2	127.5	105.6							

¹ *Op. Cit.*, p. 274.

The experiments were conducted upon salts, acids, and bases. The figures of the most extreme dilution to which the substance was carried, whether it is 100,000 litres or 1,000 litres, are always considerably greater than those of the strong solution, represented by the first litre. These figures represent three things: actually they give us the quantity of electricity which the solution was capable of conducting; inferentially, they give us the exact proportion between the number of free "ions" in the first solution and in its various dilutions, and therefore the relative of chemical activity. You will observe, for instance, that sulphate of magnesia is more chemically active in a dilution of 100,000 litres than it is in any previous state. It will be remembered also that we are dealing with a class of molecules which break down more readily than those of most substances, and which would be called "good conductors." As Professor Ostwald says (p. 279): "In the case of *bad* conductors, even at the extremest dilution accessible to measurement, the molecular conductivity is still far removed from limit." It is only by such experiments which give us indisputable physical evidence that brooks no denial, that the human mind can conceive the enormous amount of dilution which a substance must suffer before its full atomic energy is set free.

The method adopted of using so many litres of water to obtain a dilution prevented the experiments being carried on as far as they should have been. It is hardly necessary to say that by following the method we adopted with triturates, a dilution equal to millions of litres could be obtained by the use of very little water.

It appears to be sometimes supposed that by mixing a certain quantity of a substance with a huge volume of water a solution is made. This is not accurate. We know that such substances exert a great deal of pressure on the solvent, and that diffusion takes place, but owing to the enormous amount of friction to be overcome, this is so exceedingly slow that it is impracticable. It is necessary to constantly bring fresh portions of the solvent into contact with the substance. This can be done by stirring or succussion.

We have seen that the particles, when small enough to enter into a state of solution, possess enormous power of cohesion, either with one another or with some other body. I think it is impossible, therefore, to consider the particles in a solution in any other way but as in cohesion with the molecules of water.

I have not seen this view expressed, but it is obvious that if there was not some force holding them apart they would undergo cohesion and fall out of solution by their increased weight. It is obvious, also, that in every case of solution, the solvent must have sufficient power to overcome the cohesion of the particles of the substance. From the colour of dyes, such as aniline solutions, it is clear that what is held in solution are particles of the substance; if they were split up into their "ions" the colour would disappear.

The physical condition of a strong solution is therefore a number of minute particles held in a state of cohesion by the molecules of the solvent. These particles are in themselves masses of molecules. A perfect solution is obtained when each particle in the solution is not too great for the cohesive power of each molecule of the solvent. When we dilute the solution we have fresh molecules of the solvent with their powers of attraction unsatisfied. This causes a further breaking down of its particles until equilibrium is again attained, that is to say, until the burden on each molecule of the solvent is equalised.

As we add fresh water the same process goes on until we can imagine each molecule of the solvent only holds one molecule of the substance. Now, during each of these processes, if carried on the centesimal scale, the size of the particle or molecular mass is diminished one hundred times, and we have precisely the same physical condition at work which existed in the trituration. The attraction of one particle of the substance to another particle of the substance, which increases as their size diminishes, is overcome by a superior force. The mechanical work done remains in the solution as potential energy, as in the case of chemical combination in the trituration.

There are physical methods open to us by which it is possible to determine the exact degree of dilution when a substance will exhibit its maximum chemical energy. It is from these that we can soon hope to be in a position to obtain further knowledge of the subject. If we start with the idea that weight is a measure of energy, we shall see in each act of dilution something which only diminishes the weight of the substance in any given quantity of solution. If we start with the true conception that the energy of the substance is locked up by the cohesion of the atoms, we shall see in each dilution the action of forces brought to bear upon the substance to break up the cohesion and set free that energy. We shall also see in the act of dilution a method of accumulating potential energy.

We now find ourselves in contact with a definite physical law, and I do not think that we should be right to assume that this is a particular law which only applies to the study of therapeutics.

If we walk into the country in early spring we see evidences of the energy of organic life on all sides of us. The leaf-bud unfolding on the tree, the herbaceous plant pushing its shoots through the ground. It has probably never occurred to us that not one of these plants, from the tallest poplar tree to the weed by the roadside, possesses the power to dissociate from the soil the enormous stores of energy it contains, that they would all perish unless some other form of energy came to their aid. By the action of rain the soil is submitted to repeated acts of dilution; as a result of each dilution the organic and inorganic substances contained in the soil are raised to a higher state of potential energy, until at last they reach the stage when their energy becomes available as a source of nutriment to the plant.

In the potential energy gained by the soil by repeated acts of dilution, we have the basis of the vital energy of both plant and animal life. Without this beginning the whole of the subsequent forces, such as the radiant heat of the sun, which enables the plant to store up potential energy, could not come into operation. We are forced to the conclusion, therefore, that the *potential energy developed by dilution is the primary source of all vital energy.*

Let us suppose, for the moment, that the opposite state of things prevailed; that the plant could set free the energy of the soil by its own act; the result would be equivalent to trying to grow a plant in a soil saturated with some chemical fertiliser. The first act of dilution would then set free an enormous quantity of ready made nourishment, energy of which the plant could avail itself, of which it *would* avail itself, and die—in consequence.

Let us suppose that the human body possessed the power to set free the energy of inorganic substances; then the mineral matter contained in a glass of ordinary drinking water would act as a poison, and cause grave constitutional effects. It is a necessary natural law that energy can only be set free as the result of energy, and it is necessary to the protection of the life of all living things that they should derive their energy from the action of forces outside their own organisms.

PARTICLES.

We started with the hypothesis that “all drugs act chemically,” but it is now evident that this hypothesis is not supported by the facts we have considered. It will explain the action of some drugs, such as nitro-glycerine, nitrite of amyl, cyanogen, and perchloride of mercury, which possess the property of chemically combining with protoplasm before admission to the body. I think further investigation will show that such drugs have three chief characteristics:—

- (1) They consist of molecules in an unstable condition, and which require very little energy to break them down.
- (2) They are capable of producing physiological action or symptoms in very minute doses, larger doses being destructive.
- (3) The action which follows their administration is not divisible into primary and secondary stages of an opposite character, which is a general characteristic of other drugs.

We are forced to the general conclusion that drugs which do not possess the property of chemical combination with protoplasm at the time of admission to the body, either

do not obtain that power, or obtain it in only a very slight degree, after admission. We have to explain, therefore, how it happens that drugs which cannot act chemically *do* produce very powerful and very rapid effects. If we examine the body of a person who has died from chronic poisoning, we shall find in the tissues, in the organs, and often even in the bones, particles of the poison in an unaltered state. We know also that many drugs, after producing physiological actions within the body, are eliminated chemically unchanged.

Now, we must conclude that these drugs produce their action by the physical stimulation of their particles, or we must fall back upon the view put forward by Sir Thomas Lauder Brunton, in his work on Pharmacology and Therapeutics (p. 3), who says: "In these cases when the drug is eliminated from the body apparently unaltered, it is probable that it has entered into various chemical combinations within the body while circulating in the blood or present in the tissues."

I am afraid this statement puts too severe a strain upon our imagination—that a drug can undergo chemical combination with another substance, set free its energy, and then reconstitute itself into its original form, as if nothing had happened, is not explainable by any known physical or chemical processes with which we are acquainted.

As we are forced to the conclusion that the action of the larger proportion of drugs is due to the physical action of their particles, it may be as well to give some brief attention to the physical capacities of particles. By particles I mean molecules acting in the mass. We have already seen that particles possess the property of attraction and cohesion, and that such properties constitute definite forces. We can demonstrate that this property, practically commencing at zero, with the larger particles, steadily *increases* as the size of the particle *diminishes*. We also know that particles possess the property of passing through filters, and can invade the tissues and organs of the body. This power also *increases* as the size of the particle *diminishes*. We can speak of this as the *penetrating power of the drug*. We can

observe the action of particles on dead tissues by the use of staining reagents for microscopic specimens.

We observe that the particle will stain certain parts of a cell or a tissue, and leave others unchanged, and that each staining reagent has its own peculiarities in this respect. It is clear, then, that particles possess, in common with atoms, the power of *selective affinity*. It will be observed that this selective affinity of the particle is not accompanied by chemical change, as otherwise the colour of the staining reagent would disappear.

We can next study the action of staining reagents upon living protoplasm. It is known that living protoplasm is very difficult to stain.¹ The particles of the staining reagent collect around the cell and in its interstitial fluids. In some experiments by Dr. Sheridan Delépine² it was found that while in this position they excited the cells, so that the stain was discharged after a short time. I think, with these facts before us, there is no room to doubt that drugs have the physical capacity to produce action by the irritation of their particles, quite apart from the act of chemical combination. Not only is this view possible, but it affords an explanation of many drug phenomena which have never yet been satisfactorily accounted for, and which would remain inexplicable if we were restricted to the view that "all drugs act chemically."

There are two factors to be remembered in considering the sphere of action of any drug:—

(1) Its *selective affinity*. This affinity will be exercised upon the same cells and tissues whether it acts by the irritation of its particles or by chemical combination.

(2) Its *penetrating power*. This power determines the area of its action. If the drug consists of coarse particles of low penetrative power, its effects will be exhibited only in the intestinal canal. If by repeated dosage, or other causes, the drug remains long in the intestines, it may, through the action of the digestive processes, attain full or fuller pene-

¹ Most protoplasmic cells are covered with a semi-permeable membrane, through which no particle can pass.

² Quoted by Sir Lauder Brunton, Introduction to Modern Therapeutics, p. 9.

trative power, and be able to exercise its full selective affinity.

This may explain the fact that toxicologists always give us one set of symptoms under acute poisoning and another set under chronic poisoning—the difference being due to the different range of penetrating power of the same drug. In respect to the action which takes place when the drug reaches the tissue or cells for which it has selective affinity, we can understand that the presence of particles in the interstitial fluids of the cell in large quantities may cause a temporary abeyance of function, and thus give rise to symptoms of a “primary sedative” character. Increase of dose would then give increased loss of function, whereas, if chemical combination took place, we should expect to find some kind of energy produced. But more commonly we should expect that the particles would arouse the cell to activity, due to efforts to repel the invader, and this activity would be represented by symptoms. The particles cannot supply energy, they only draw upon the resources of the protoplasmic cell itself, and as we know that the energy stored up in the cell is of a limited amount, we should expect such efforts to be followed by exhaustion, with the result that the secondary symptoms would be of an opposite character to those previously produced.

We know that we can produce these effects in the physiological laboratory upon any kind of cell and by any sort of mechanical stimulus, and in such experiments the question of chemical combination does not arise. We have seen that the larger proportion of drugs cannot combine with protoplasm, unless their cohesion has been overcome by repeated acts of dilution. When given in this state we should not produce the symptoms due to irritation of protoplasm, neither, unless the dilution was given in such a form that its chemical combination produced an *excess* of energy, shall we expect to see symptoms produced as a result of the chemical combination.

It cannot be too clearly remembered that neither normal stimulation of protoplasmic cells, nor the normal chemical combination by which they receive their energy, produces

symptoms. From this it follows that when we meet with symptoms due to drug action, we can infer the exhaustion of certain cells. When we meet with similar symptoms in disease, we can infer the exhaustion of the same cells.

What, then, is the proper remedy to restore this exhaustion?

It may be argued—it has been argued by myself amongst others—that a small dose of the same remedy which is known to exhaust the cells, will act as the proper stimulus. But this small dose can only act as a stimulus—that is, like a whip to the flagging horse. It may be all that is required, but it does not restore energy. I did not understand this before I commenced this investigation. The answer I should give now is that the same drug may be used, because it has selective affinity for the exhausted cell; but it must be given in such a physical form that it possesses a definite amount of potential energy, and is capable of entering into chemical combination with protoplasm, and thus becoming a source of energy.

I think this law may be made clearer by reducing it to an equation:—

If $D = \text{Drug}$, $P = \text{Protoplasm}$, 5 and 10 = Units of Energy, $a b c = \text{Symptoms}$, then the effect of a drug on the healthy human being may be expressed thus, assuming that normal protoplasm possess 10 units of energy—

$$D + P_{10} = P_5 + a b c - D.$$

Thus the protoplasm has lost 5 units of energy in freeing itself from the drug, and this loss of energy is represented by the symptoms $a b c$.

Now in a case of disease we have the condition $P_5 + a b c$, that is, a loss of energy of protoplasm accompanied by symptoms. If we now give the drug in such a form that it contains 5 units of potential energy, D_5 , this will be, by combination, transferred to the protoplasm, and raise it from P_5 to P_{10} , with the result that the symptoms $a b c$ disappear, then

$$P_5 + a b c + D_5 = P_{10} - a b c - D_5.$$

Now, it may be said that in order to do this we must most often carry our drug to a condition of extreme dilution, so that we give not merely a small dose, but an *infinitesimal* one. But may I ask to what property of the dose can the word "infinitesimal" be applied? *Does it refer to the number of "ions" in the dilution?* If so, it is erroneous, because experiments on electrolytic conduction prove that the opposite is the case, the dilution containing more "ions" than the strong solution.

Does it refer to the quantity of energy in the dilution? This would be equally incorrect, because our object in diluting the non-active chemical body is to set its energy free.

Does it refer to the weight of the substance in the dilution? It would be as reasonable to compare the weight of the electric current which stimulates a muscle to contraction with the *weight* of the galvanic cell which supplies the current. Apart from weight, the galvanic cell contains millions of times the energy of the current which causes the contraction of the muscle.

Let us suppose it possible that the whole of this could be liberated at a single moment, the result would not be to cause contraction of the muscle, but its annihilation. But it would not alter the weight of the galvanic cell, because energy, being imponderable, cannot be measured by weight.

We know from the action of chemically active drugs, such as cyanogen and nitro-glycerine, how very small is the amount of energy required to cause destructive effects upon protoplasm; the amount of energy, therefore, required to increase the energy of protoplasm must be infinitely smaller. We have to dilute the chemically active drug before it can be used medicinally in order to diminish its chemical activity, we have to dilute the non-chemically active drug in order to set free its energy and render it more active; the physics of solution explain the paradox.

If we wish to produce symptoms and physiological action we shall, of course, select those forms of drugs which act by the physical stimulation of their particles. We may use the coarser form of particles when we want to limit the action

of the drug to the intestine, and take steps to ensure greater penetrative power, by dilution or otherwise, when we wish to secure action upon the deeper tissues. We must adapt the tools to the end we have in view, but let us strive to distinguish between results due to the irritant action of particles and those due to drugs acting as a source of energy. The first is a "drug action," and a drug action may be necessary; the latter is a remedy. The aim of therapeutics is to use *remedies*.

Gentlemen, I am afraid that I have strained your patience to the utmost, but I have only touched the threshold of a great subject.

Dr. DUDGEON remarked that he did not think that the phenomena of medicinal action were to be explained by chemistry. The attempt had been frequently made, but, to his mind, it was never successful. Protoplasm, which was everywhere present in living animals and vegetables, possessed the distinguishing and characteristic property, vitality, or irritability as it used to be called. It responded to the action of stimuli, but, if chemically acted on, ceased to be protoplasm and consequently lost its peculiar property of vitality. Chemical action on the protoplasm was only thinkable of acids, alkalies and salts in material quantities; but it was unthinkable in the case of the infinitesimal doses of homœopathic medicines, which were neither acids, alkalies or salts. When the protoplasm was acted on by its appropriate stimuli it still remained the vitality-endowed protoplasm, but when it entered into chemical combination with anything it was destroyed as protoplasm and became a mere chemical compound. The doctrine of vitality was lucidly and convincingly set forth in our late colleague Dr. Drysdale's work, "The Protoplasmic Theory of Life."

Dr. HUGHES said as medical men their whole life was spent in studying the action of drugs, and if some coherent and lucid theory of that action could be obtained it would greatly satisfy their minds, even if it did not help their patients. The subject was so vast that he felt unable to discuss the paper. The members would need to look up the past literature on the subject, and not only to study Drysdale's "Protoplasmic Theory of Life," but his great series of papers in the BRITISH JOURNAL OF HOMŒOPATHY, first, upon the nature of force and energy, and, secondly,

upon life and the equivalence of force. They also needed to consider the arguments of Dr. Proctor in examining into the theory of dynamisation, which also appeared in one of the later volumes of the BRITISH JOURNAL OF HOMŒOPATHY. All the theories which had been set forth by competent men as to the action of drugs must be considered, and then compared with the views of Dr. Wilde. He thanked and praised the author for his paper, and suggested that the next *Materia Medica* evening should be devoted to a further discussion of the subject, as by that time they would be able to consider Dr. Wilde's essay in print.

Dr. McLACHLAN referred to the different chemical theories held by the two opposite schools on the subject. One school held what was called the ionic-dissociation theory, the other being known as the association or hydrate theory: in the latter everything is said to depend upon the formation of hydrates. The electrical conductivity theory was only applicable to substances at infinite dilution, whereas the hydrate theory was only applicable to strong solutions. In that way the two theories might be made to harmonise.

Dr. HAYWARD joined in admiration of the scientific and practical character of the paper, and endorsed Dr. Wilde's statement that all energy resulted from the action of matter on matter. He maintained that energy is not a separate something capable of being transferred from one body to another: it is not a free substance to be handled and dealt with as a separate body. There is no medicinal energy apart from the molecules of the medicinal substance; no separate medicinal power, energy or spirit to be transferred to any attenuating medium. The only medicinal power is the peculiar activity or motion innate in the molecules of the substance, and which is derived from the motion innate in the atoms of primitive matter, and produced by the union of the molecules that make up the substance, a kind of *tertium quid* motion or activity. The object of attenuating medicines is to reduce their particles to the minutest dimensions, if possible to the very molecules, in order that they may mingle with the molecules forming the tissues; up to this attenuation is wise and beneficial, but further attenuating tends to break up the molecules and so to destroy the medicine. In vegetable and animal substances the medicinal power depends upon the molecules of protoplasm, and upon their being as nature made them; these molecules are very unstable and very easily broken up, and their peculiar power destroyed. If the molecules of belladonna, for instance, be broken up by the attenuating process,

the medicine belladonna will be destroyed ; there is no separate belladonna energy or spirit to be transferred to the attenuating medium. So with chemical compounds, such as sulphate of magnesia ; if their molecules be broken up what remains is not sulphate of magnesia.

Mr. JAMES JOHNSTONE thought the author had brought forward the subject at a most opportune moment. A discussion on "Energy and its relation to Dynamization" had not taken place in the Society for a very long time, during which very marked advances had been made in physiology and chemistry. Any one dipping into the literature of physiology and chemistry at the present moment would find that there were a great many facts in those sciences to support their tenets included under *similia similibus curantur*. He supported Dr. Hughes' suggestion that the discussion should be adjourned to the next Materia Medica meeting, when the members would have had an opportunity to read and carefully study the author's admirable paper, and at the same time to make themselves *au courant* with literature in other branches which might shed light on the subject. The most recent work upon animal physiology and vital physiology was "General Physiology," by Max Verworn (Macmillan & Co.), Professor of Physiology at Jena. This work has been translated into English, and was a wonderful revelation of what was going on in nature. A point of particular interest in it was the way in which various stimuli acted upon individual cells, and he had no doubt that the explanation of the minute doses used in homœopathy would be found in the sensitiveness of small atoms of protoplasm to minute stimuli. Another suggestive book was "What is Life?" by F. Hovenden (Chapman & Hall), who had also written another work "What is Heat and what is Electricity?" These opened up new ideas as to the nature of molecules, atoms, and the fluid in which they were bathed, *i.e.*, ether. He thought Dr. Wilde's paper tended to the idea that the attenuation of homœopathic medicines was an effort to reduce the medicinal substance to its simplest elements of molecules and possibly of atoms. Workers in modern research, particularly physicists, such as Lord Kelvin and Clerk Maxwell, had computed the sizes of molecules and atoms : according to their view if a substance was attenuated after the manner of the homœopathic pharmacopœia, the 12th, 14th or 15th centesimal attenuations would cease to contain any molecules or atoms of the original substance.

Dr. MADDEN had a strong recollection that the question of evidence of drugs in trituration had been examined, so far as it

could be done microscopically, in respect of the trituration of aurum metallicum, with the result that after 3x or 3c, he was not sure which, there was no further diminution of particles; they were simply a little more widely scattered. If that were so of aurum metallicum, was it not likely that the same result would be obtained with other drugs?

Dr. PULLAR said he had long been convinced that the data on which our method is based would ultimately be found to be in complete accord with the results of scientific research in its highest development, and with the demonstrable laws of molecular physics. The paper was valuable inasmuch as it was a praiseworthy effort to bring into line with that department of science the work in which they were engaged, for the author had clearly set forth facts bearing on the problems from the point of view of the physicist. When approaching the problems of therapeutics, however, it might be well to remind them of the words of Cicero (in relation to another matter), namely, that it is enough if we understand *what* is done although we are ignorant *how* it is done. Some were content to regard therapeutics from such a standpoint. Knowing, as they did, the phenomena and the significance of the clinical facts, they could perhaps afford—not to ignore—but, for the present at any rate, to leave unanswered some of the abstruse questions of physics involved. In the past, good work had been done in connection with the philosophy of our therapeutic method; and one had only to go through the BRITISH JOURNAL OF HOMŒOPATHY to discover that the results of recent physical research had been, as it were, foreshadowed, although this philosophy had not found its complete expression, the problems having been approached rather from the practical side. Facts were, of course, desirable but were somewhat out of reach in this department; and consequently they had to work on knowledge that was to a certain extent derived merely from experience. He agreed with much that Dr. Hayward had said concerning the phenomena of molecular physics. Everything in nature was reducible to motion and changes of motion, the human organism in its life being no exception. That system of motions which constituted the organism, presented in its actual state a natural oscillating equilibrium normal in health and perturbed in disease, what Grauvogl termed “physiological and pathological equivalence.” The whole subject indeed was on the highest plane, whilst the popular conceptions of medicine were on an extremely low one. It was to him a strange anomaly that the refined conceptions of Homœopathy should apparently be so crudely gauged by the exponents of “scientific” medication.

Dr. GOLDSBROUGH thought the Society ought to hail every effort made to bring their knowledge of different aspects of therapeutics into some co-ordinate relationship, and he considered the author of the paper had done that from the standpoints of physics and chemistry, a very large and wide field with which they constantly had to deal. But the question of physics and chemistry applied to the effects of the action of drugs was quite a different matter, it seemed to him, from that which the author had brought forward, and it raised the deepest problem they had to solve, the nature of life in relation to physical and chemical phenomena. Although he was a follower of Dr. Drysdale and his protoplasmic theory, he could not agree with Dr. Drysdale that that theory excluded the question of the transformation and equivalence of force as constituting part of the whole of life. It seemed to him that the protoplasmic theory included that and went a step further. He had not time to indicate this further step, but would say that when the action and effects of drugs were under consideration it should be remembered that the physical, chemical and biological phenomena were not mutually exclusive. They had to be considered separately but were essential parts of one whole. The author's valuable paper suggested that in all symptoms there must be a physical and chemical result, but seemed to wish to water down the distinctively vital element, and thus dispose of the laws of development, growth, reproduction and the law of return to health or *vis medicatrix naturæ*; an exclusion of real factors in organic nature, to which he (Dr. Goldsbrough) could not agree.

Dr. BEALE said the author had stated that before a drug could have any specific action on the cells of the body it must be reduced by dilution for the liberation of its energy. If that were so, how was it that, frequently, crude drugs, when introduced into the body, produced a pathogenesis of a specific character, and how was it that that specific pathogenesis was related directly to the curative effect of drugs when given in disease? If the drug required to be diluted before it could be assimilated by the cell, how was it that the drug in the more attenuated form had a curative effect, and that that curative effect was related to a pathogenetic effect produced by a drug which was not presented to the cell, according to the author, in an assimilable state?

Dr. JAGIELSKI thought that, on the argument of the paper, unless they excluded from the diet of patients foods which were known to contain infinitesimal quantities of poisons to the individual life, they would not be able to obtain results even from homœopathic remedies.

Dr. BURFORD (from the Chair), in thanking Dr. Wilde for his paper, thought the appreciation exhibited by the members had amply rewarded him for the immense amount of care and trouble he had devoted to its preparation. It was a good thing that papers of such a kind were prepared, received, and discussed at the Society. The paper was a chapter in molecular physics. It had always seemed to him, so far as protoplasm went, that homœopaths had more facts to bring to bear with regard to its molecular physics than anybody else. Those who had followed the teaching of Hahnemann in giving high preparations of inert crude remedies—such as lycopodium, sulphur, or charcoal—and had observed their effects on disease, *i.e.*, the results educed from the interaction of those physical substances and protoplasm, would have an immense amount of light to throw on the intimate processes of disease when the proper time came for their consideration. He was surprised to find that no mention had been made, either by the author or the succeeding speakers, of the fundamental doctrine enunciated by Herbert Spencer, styled “the multiplication of effects.” It appeared in a chapter of Spencer’s “First Principles,” and would well bear re-reading before the discussion was completed. It seemed to him to explain, quite as much as the author’s arguments, the action of the small dose on the protoplasmic units of the body. The suggestion that the paper should be discussed at a future meeting was a unique and well-deserved compliment to Dr. Wilde.

Dr. PERCY WILDE, in reply to the question put by Dr. Madden, said that under the microscope, with the highest powers, a diameter of one hundred thousandth part of an inch was the limit of visibility. This would represent a coarse particle which might easily be obtained at the third decimal trituration. The microscope was, therefore, very little use in such investigations, as diameters of millionths and billionths of an inch had to be dealt with. He had estimated the number of molecules in a grain of aniline violet, and he found that the number could not be less than five hundred million billion. This showed how one might go on dividing and sub-dividing the particles, and making dilutions, before the molecule was reached, and then the molecule might possess a considerable number of atoms. The number of atoms in a grain of any substance involves enormous figures. Dr. Madden had asked how he proved the number of particles. This was a very simple question. If one tried on triturating aniline, or any other colouring matter, with such a substance as glass, it would be found that at no stage was it

possible to separate a particle of glass which had not a particle of aniline in adhesion with it. In the lower dilution, such as at 1x, 2x and 3x of aniline, it would be found that the triturate coloured water because the particles of aniline were in *excess* of the particles of the triturate. In the 4x triturate equilibrium existed between the particles of the aniline and the triturant, and no solution of the aniline took place, and this equilibrium continued when prepared in higher potencies. In reply to the remarks of Drs. Dudgeon and Hayward, Dr. Wilde said that they represented the teaching of the vitalistic school, and that he thought had died a natural death some thirty years ago. The vitalistic school drew a distinction between vital energy and all forms of physical energy, and claimed that the laws which governed one did not apply to the other. Now every substance had inherent properties, and the inherent properties of an inorganic substance were different from those of a vital germ. This could be admitted. But both depended for the exhibition of these inherent properties on the same physical force. The vitalistic school never explained anything, they merely invented phrases. They could never tell you the difference between an egg and a chicken. The physicist found no difficulty in the matter. He could express it in a formula thus :—

$$1 \text{ egg} + (104^{\circ} \text{ F.} \times 21 \text{ days}) = 1 \text{ chicken.}$$

This gave the precise equivalent of energy necessary to convert the egg into the chicken : anything more or less would not produce the result. In the same manner, all vital processes were capable of being expressed in exact physical terms, because the energy required for such processes, and the energy given out as a result, was not peculiar to vital processes, but a force which was convertible into any other form of force. This law was recognised by every physiologist at the present moment and it seemed unnecessary to discuss it further. In respect to the question as to whether chemical combination took place in protoplasm and whether such chemical combination will be destructive, he could only say that every vital process depended upon such an act of chemical combination. The molecule of protoplasm contained about 1,000 atoms, and was the most unstable of all molecules and possessed wider chemical affinities. Of course it was easy to produce destructive chemical effects on protoplasm by means of drugs, but the whole mechanism of the body was designed to prevent such results ; the number of drugs which could produce immediate effect on the human body, outside the intestinal canal,

was limited because of this mechanism. If crude substances possessed the power of exhibiting their energy on living protoplasm, the vast majority of drugs would be violent poisons. It was by the processes of trituration and dilution that we overcame the obstacles to the chemical combination of drugs with protoplasm and also released the energy which was previously locked up.

THE BEGINNINGS OF DISEASE AND THE ATTENUATING OF MEDICINES.¹

BY JOHN W. HAYWARD, M.D.

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THE beginnings of disease are, of course, of importance to us as physicians, because without beginnings there would not be any diseases, and without disease there would be but little occupation for us. Nevertheless, it is our pride to prevent the beginnings of disease and to annihilate them.

We invent and design sanitary measures, and take much trouble to persuade the public to adopt them; and we prove medicines and study diseases for the purpose of prevention and cure: all this to our own financial disadvantage; benevolent philanthropists, are we not? The members of what other profession would try so hard to do away with the necessity for their being employed?

The attenuating of medicines also is of interest to us, because much of their medicinal power results from this process.

But what are the beginnings of disease? and where do they occur? and what are the objects and advantages of attenuating our medicines?

Diseases begin, we will all agree, in the protoplasm of the body. And protoplasm, we all know, is a semi-fluid, tenacious, glairy substance, in appearance, consistence, and composition resembling white of egg. It forms the living

¹ Presented to the Liverpool Branch, Nov. 14, 1901.

part of every organ and tissue of the body ; is, indeed, the only living part, and therefore the only part in which disease can either begin or exist. It is an extremely complex organic body ; indeed, is the most complex substance known, and possessed of the most complex activities ; and is therefore also the most unstable of substances. It is composed of molecules, each of which is made up of billions of billions of the atoms of matter, being constructed of the organic albuminoids, proteids and ferments, as well as compound mineral salts. Of albumen alone the estimated number of atoms in one one-thousandth of an inch sphere is at least one hundred and thirty billions !

Now the molecules of protoplasm go to construct the so-called cells, and the cells to build up the organs and tissues of the body. These cells perform their functions and then break up and disappear, and are replaced by successors : these successors, of course, receive their character and constitution from their progenitors, whether of high or low quality, and whether healthy or unhealthy.

Protoplasm is made out of the food : the digestive organs, with their extensive system of glands, by a very long and complex series of bio-chemical operations, elaborate food into the semi-fluid milk-like substance, chyle ; the lymphatic glands and vessels and the lungs, by another long and very complex series of similar operations, elaborate the chyle into blood. The blood, thus elaborated up to nearly, but not quite, the composition and structure of protoplasm, is carried by the blood vessels to the ultimate or innermost recesses of the body, and there brought into contact with the living cells of the organs and tissues : these appropriate it as pabulum and raise it to the same degree of development as themselves, that is, to protoplasm, make it into protoplasm, into living matter, not by communicating to it any living principle, any "principle of life," but by producing a slight alteration in the arrangement or number of the molecules of its albuminoids, proteids or ferments or other constituents, and so effecting an alteration and development in its peculiar activities—starting the so-called "vital actions."

It is by the cells that the blood is elaborated into protoplasm; the molecules of the blood plasma are drawn into the interior, towards the centre, of the cell, and there and thence are elaborated outwards through the granules and nucleus to the cell substance. During this process they receive the last touch which completes their development into protoplasm. Anterior to the nucleus they have not yet become perfect protoplasm, and at the cell wall they have ceased to be protoplasm, have become cellulose.

Protoplasm is not all of one uniform composition and quality; it cannot be so, because it has to serve many different purposes. The quality of the protoplasm of animals must differ from that of plants, must be of a higher type, because it has to serve higher functions. The protoplasm of the nerves of animals must be of a higher type than that of the muscles, because it has to serve the higher function of sensation; that of the organs of the senses must be of a higher type than that of the nerves, because it has to serve the higher functions of smell, hearing, sight, &c.; and that of the organ of the mind—the gray matter of the cerebral hemispheres—must be of a still higher, indeed of the highest type, because it has to serve the highest of all functions, viz., those of conscious mind. Also, and for the same reason, the protoplasm of one organ or tissue must differ from that of every other organ or tissue. These differences cause the different properties, powers, and affinities of the different organs and tissues, not only for different functions but for different poisons and medicines; they depend, in all probability, on differences in the number or arrangement of the molecules or atoms; but these are much too subtle for our detection. Nature works here with such infinitesimal quantities that we cannot detect, cannot even imagine the quantities or the arrangements. There are no drachms, scruples or grains here, nor tenths, nor hundredths, nor even thousandths of a grain. Nature works not with these but with molecules and atoms; and, according to the latest science, even “fragments of atoms.” It is here, however, amongst these infinitesimal quantities and inconceivable arrangements that all vital processes have their

origin and all diseases begin. And here it is we must seek the source of health and the beginning of disease.

Diseases begin perhaps in the very innermost part of the cells of the organs and tissues, primarily amongst the molecules and atoms, during or before the formation of the nucleus, perhaps by the misappropriation of one or more molecules of the pabulum, or by the appropriation of one or more unsuitable or inimical molecules, for instance, molecules of some of the poisons, such as the ptomaines, serpent venoms, aconitine, atropine, arsenic, lead, mercury, iodine, phosphorus, &c. It is quite reasonable to suppose that a few molecules of one of these, getting into the cell along with the pabulum, will derange the molecular formation and growth of the cell; perhaps by combining with its proper molecules or interfering with the normal formation of the nucleus, and thereby of the protoplasm, and so with the building-up of the organs and tissues, by producing excess or deficiency or malformation in the cells. Excessive appropriation would likely produce hypertrophied (giant) cells; defective appropriation give rise to defective cells; and such morbid cells, naturally tending to continue and produce their like, would prolong the disease.

From excessive appropriation may arise such diseases as glandular enlargements, benign tumours, simple hypertrophies, adenoids, polypi, warts, piles, &c. From inimical appropriation such diseases as lupus, cancer, epitheliomas, eczema, psoriasis, cataract, atheroma, fatty degeneration, and even inflammations and fevers. And from defective appropriation such diseases as rickets, osteomalacia, marasmus, gangrene, general and topical defective nutrition, and so on. Perhaps pimples, styes, boils, carbuncles, and the like have their origin primarily in perversion or death of one or more of the cells of the skin or other tissue. Blood cells also must, of course, be subject to the risk of similar excessive, defective and mal-appropriation, and perhaps more so than other cells and before them; and they will, of course, tend to transmit their malformation to the tissues which are formed out of the blood.

These mal-appropriations may also be brought about by

nervous and mental influences, as well as by what may be contained in the blood or pabulum; for instance, when irritation or pressure near the root of a nerve produces spasm, atrophy, or degeneration of the part served by that nerve; when anger produces jaundice, and when fright produces diarrhoea or constipation, or arrests or alters the secretion of milk or saliva, or blanches the hair.

The starting point of disease may then be very deeply-seated and infinitesimally small. It is, therefore, not to be wondered at that the beginnings of disease so commonly escape notice and are so rarely treated. Unfortunately morbid processes have generally made considerable progress before they have arrested notice sufficiently to compel attention. They may perhaps have given rise to slight general feelings of discomfort, perhaps more mental than bodily; some disinclination for usual duties; some irritability or crossness of temper; slight chills or heats; slight tinglings or pains; neuralgia, vertigo, &c., &c., or other slight symptoms originating in the tissue in which the morbid process is beginning; for example: in the tongue or lip a little hardness or slight pain may indicate the beginning of epithelioma; in the mamma the beginning of cancer; slight burning and itching in a patch of skin may indicate the beginning of eczema; slightly coloured or blurred vision may indicate the beginning of glaucoma or disease of the retina; slight crossness of temper or slight squinting or sleepiness may indicate threatening meningitis or convulsions in an infant, or hemiplegia in an adult; slight pain on swallowing may indicate threatening quinsy; a little dry hawking may indicate the beginning of laryngitis or bronchitis; slight stitches about the chest may indicate the beginning of pleurisy; slight headache and vertigo may indicate sunstroke, and so on; and other examples will occur to each of us.

Nor are these slight symptoms without interest for us, because they are paralleled by a large proportion of the symptoms of our provings. They are extremely useful in practice, being the "contingent" of Drysdale, the "idiodynamic" of Madden.

Seeing then that the beginnings of disease take place among the molecules that go to form the nascent cells of the organs and tissues, it is not to be wondered at that infinitesimal quantities of medicine are sufficient to arrest the early stage of diseases. Nor need we refuse to believe in the efficacy of the high attenuations of our medicines, even the 30th centesimal, nor in the therapeutic power of mental influences.

Up to recently science taught that the division of matter could not be carried beyond what was equivalent to our 18th centesimal, because at or before that the ultimate division of matter, the very atoms, were reached, and that further attenuation would merely separate the molecules and atoms further away from one another, and make it probable that any particular drop, grain, drachm, or even ounce, would be absolutely destitute of even a molecule or atom of the medicine. But the modern study of electricity and magnetism and of the X- and cathode rays has led scientists to believe in the existence of "fragments of atoms"; how many fragments from one atom has not yet been determined. In our 30th attenuation, therefore, medicinal matter may really be present, as we know curative power is.

We have here a scientific reason why the high attenuations may be therapeutically effective; indeed, why they may be, in cases in which there is very close symptomatic resemblance, even more effective than gross preparations.

The object in view in the attenuating process is to reduce the particles of medicines to extremely minute dimensions, indeed, to the very molecules, so that they may mingle with the molecules and atoms that are forming the cells of the organs and tissues, and so be in a position to correct any faulty formation. If the molecules of the medicine be as large as the molecules of the tissues they cannot penetrate the molecule or mingle with its forming elements, and can therefore act only from without. There is, therefore, real advantage in attenuating to a certain degree, especially mineral substances.

In the attenuating process it is of course necessary to

bear in mind the constitution of the substance being attenuated; that is, whether it is a simple chemical element, a compound mineral salt, or the organised substance of a plant or animal, because these will not all bear attenuation to the same extent; prolonged attenuation tending to break up the molecules into their constituent elements. If the molecules themselves be broken up by the attenuating process, the peculiar property of the substance will be destroyed, and there will remain in the attenuating vehicle only the constituent elements, which will of course have very different properties from those of the original substance. Of animal and vegetable substances the efficient molecules are those of protoplasm, and these are extremely unstable and very easily broken up, and, compared with the molecules of the chemical elements, they are large and soon arrived at, perhaps much before reaching the 30th attenuation. Probably not much beyond the 30th the molecules of the salts, and even of the chemical elements themselves, may be arrived at, and all the advantages of attenuation procured, making it unnecessary and unwise to proceed further. Ultimately, indeed, the molecules of even the chemical elements may perhaps be broken up, leaving only the medicinally indifferent substance, the primitive matter. It is certainly not wise to proceed so far as the 30th with vegetable and animal substances, because their properties depend upon their protoplasm, the molecules of which are in all probability broken up before reaching the 30th attenuation. Having reached the molecules, why should any one wish to proceed further? There is really nothing to be gained by doing so.

All medicinal power depends upon the peculiar motion in the molecules and atoms of the substance. The atoms of primitive matter have *innate* motion—attraction and repulsion. These keep the atoms in constant motion. These attractions and repulsions have been called “the affections,” “the loves and hates of the atoms,” and it is supposed that by their selecting and uniting with one another they have formed the various chemical elements; that, for instance, two of the atoms became attracted to one another,

and united and formed the substance named hydrogen, and endowed it with a motion compounded of those of the two atoms, making a *tertium quid* motion. Also that four of the atoms in like manner made phosphorus, with a quaternary motion or property, and that six atoms similarly formed sulphur, with a sextuple motion or property; that another number formed oxygen, and another nitrogen, and so on with all the so-called chemical elements. The elements themselves also select and unite with each other, making both compound molecules and compound motions; for instance, hydrogen and oxygen unite and form water; phosphorus and oxygen unite and make phosphoric acid; sulphur and oxygen unite and make sulphuric acid, and so on; and each and all of the different substances have their own peculiar motions, producing their own peculiar properties. It is the peculiar motions in the constituent molecules that give to each substance its peculiar medicinal properties. The properties are inherent in the molecules, there is no medicinal power apart from the molecules of the substance, there is no medicinal energy or "spirit" as some transcendentalists imagine. Of course there is no medicinal spirit in the atoms of primitive matter, nor is any "spirit" created by uniting the atoms into molecules. The special properties of substances are produced by the peculiar combination of the atoms and molecules, and these properties are retained only as long as the molecules and atoms remain in that peculiar combination. When the molecules of any particular medicine are broken up, the peculiar medicinal power disappears altogether. The properties of phosphorus result from the combined motions of the four atoms which form its peculiar molecules; breaking up the union of the atoms by excessive attenuation causes the substance phosphorus to disappear, not that the phosphorus "spirit" has been transferred to the vehicle, as some high dilutionists maintain, but because the molecular arrangement of matter showing itself as phosphorus has been destroyed. Nor is it possible to transfer the motion of the atoms themselves, the motion of any atom is absolutely innate in the atom itself. Neither can the supposed surrounding ethereal medium be

transferred, this halo is an absolutely inseparable part of the atom itself, and therefore cannot be transferred to anything.

From the very structure of medicinal substances, therefore, it follows that a certain degree of attenuation may be beneficial, but that excessive attenuation is not only unwise, but may absolutely destroy the medicine, and therefore should not be countenanced in our body, or by any reasonable man.

In conclusion allow me to repeat:—that both healthy and diseased processes take place in the protoplasm of the body; that all medicinal power resides in the molecules of the medicinal substance, depending upon the special molecular and atomic motions inherent in these molecules; that the molecules of protoplasm are very easily broken up, and their medicinal power destroyed; that the molecular motions of one organ or tissue and of one medicinal substance differ from those of every other tissue and medicine, and so therefore do the susceptibility of the tissues and the special power of the medicines,—both being dependent upon the specific affinities; that vital changes in both health and disease take place amongst the molecules and atoms; that medicines should be so prepared that their molecules may mingle with the molecules that are forming the tissues; that the object of attenuating medicines is to enable their particles so to mingle; that attenuating for this purpose has the support of the science of the present day; that the attenuations up to the 30th centesimal probably include all the advantages to be derived from the attenuating process; that attenuating beyond this may break up the molecules and destroy the medicinal power, and that to transfer a “medicinal spirit” to any attenuating vehicle is utterly impossible.

THE "TWENTIETH CENTURY TRUST FUND"
FOR THE EXTENSION OF HOMŒOPATHY IN
GREAT BRITAIN.

THIS important movement, reported in our present issue as initiated by the British Homœopathic Society, has since been under consideration by the Western Counties Therapeutic Society, and also by the Liverpool Branch of the British Homœopathic Society.

At a meeting of the former society, held at Bristol on October 28, under the Presidency of Dr. Eubulus Williams, the scheme as sketched out by the President of the British Homœopathic Society was presented and discussed. Drs. Byres Moir, Johnstone, Neatby and Burford, Mr. Knox Shaw and Mr. Dudley Wright, attended from London, and the most cordial and attentive consideration of their statements was given by the local members present. It was felt that a new departure had been taken in British Homœopathy, and the spirit of active goodwill generally manifested by the members in their remarks was pronounced.

At Liverpool, on November 8, a meeting of the Liverpool Branch of the British Homœopathic Society was held at the Hahnemann Hospital, under the presidency of Dr. Hawkes, to hear and discuss the detail of the above plan of campaign. Drs. Byres Moir, and Burford, Mr. Knox Shaw and Mr. Dudley Wright attended as an informal deputation from the parent society. A very acute and careful discussion of the general scheme was carried on, several valuable criticisms and suggestions were made, and the plan considered from various aspects. The opinion was unanimous that a movement of this character was absolutely necessary, while the exact detail of procedure might require re-modelling; and the hearty desire for movement in this direction was indicated by Dr. Peter Stuart intimating a subscription of £100 during the course of the meeting.

The Council of the British Homœopathic Society has

designated, as an interim Executive Committee, the President, Dr. Byres Moir, and Mr. Knox Shaw.

The authorities of the London Homœopathic Hospital have intimated their desire to actively co-operate in the working out of the scheme. Captain Cundy, the Vice-Chairman of the Board of Management, has generously offered to contribute £250 to the Fund.

Through the initiative of Dr. Madden and Dr. Spencer Cox, the consent has been obtained of R. W. Perks, Esq., M.P., to join an Advisory Board when the organisation is being completed.

The Treasurer (Dr. Byres Moir) has already received notice of intended subscriptions amounting to several hundred pounds, and each member of the British Homœopathic Society will have received a special communication from the Executive Committee, inviting the influential co-operation of all professional men and laymen alike, who feel an interest in the success of the endeavour.

SOCIETY NEWS.

NEW MEMBERS.

At the meeting in November, Octavia Margaret Sophia Lewin, M.B., B.Sc.Lond., of Wimpole Street, London, and Percy Alexander Ross, M.R.C.S., L.R.C.P., of the London Homœopathic Hospital, were elected members of the Society.

At the meeting in December, Stephen Francis Smith, M.R.C.S., L.S.A., of 291, Romford Road, Essex, and Adam Crawford White, M.B., C.M.Glasg., of 31, Union Street, Oldham, were elected members of the Society.

PUBLIC SERVICE IN INDIA.

The *London Gazette* of Nov. 9, 1901, contained the announcement that the Kaisar-I-Hind medal for public service in India had been awarded to Major Herbert Edward Deane, R.A.M.C. Major Deane is a member of the Society, and his work, abstracts of which have previously appeared in the Journal, has consisted mainly in researches concerned with the prevention and cure of plague.

SUMMARY OF PHARMACODYNAMICS AND
THERAPEUTICS.

"GATHER UP THE FRAGMENTS, THAT NOTHING BE LOST."

SEPTEMBER—OCTOBER, 1901.

PHARMACODYNAMICS.

Acidum nitricum.—A boy, whose parents are healthy, weighed at birth 8 pounds, was fat and apparently well. After two weeks he only weighed 6 pounds. He cried little, was almost always asleep and seemed never to be hungry. The mother's milk was plentiful, but the child became always weaker; he could not or would not suck properly. Skin cool and greasy. The mother continued to suckle him, but gave him for two weeks diluted cream in addition. But the child did not grow; after another fortnight he only weighed 5 pounds. He lay with eyes closed, but when roused he would open his eyes, and he would still swallow. Silicea and arsenicum and other remedies caused no change. On account of the great emaciation, and suspecting syphilis (though the father denied having ever had syphilis), he got acidum nitricum. This medicine had a good effect in a few days. The child grew gradually stronger, increased in weight, and was quite cured. For the first year he got nothing but his mother's milk, the cream was left off soon after commencing the acid. nitr. He is now five years old, a fine healthy child.—*A. h. Z.*, cxliii., 14.

Acidum picricum.—Struck with the healing power of picric acid in burns, Dr. N. W. Yale has tried it in erosions of the cervix uteri, and has had excellent results. The acid is used dry, its crystals being dusted on a pledget of cotton-wool introduced by applicator forceps and held against the ulcerated part.—*Hahn. Monthly*, October.

Actæa racemosa.—A writer in the *Charlotte Medical Journal* for September, speaks of the frequency with which acute rheumatism in children is followed by chorea, and *vice-versâ*. Either sequels, he says, may be prevented by the persistent administration of *cimicifuga* for three or four months after the primary attack.

Argentum nitricum.—Dr. A. L. Fisher reports three cases illustrating the power of *argentum nitricum*, even in high dilution, over upper abdominal affections brought on by undue mental exertion.—*Indian Hom. Review*, July, p. 86.

Atropine.—The *Hahnemannian Monthly* of September contains two more cases in which atropine, injected subcutaneously in doses from a milligramme upwards, overcame an intestinal obstruction which was threatening life.

Crocus.—The eye-symptoms of this drug, which are rather striking, have hitherto been utilised only in asthenopia. Dr. F. W. Payne, however, relates two cases in which they were present: one of threatened glaucoma in the only remaining eye of a heavy smoker; the other of embolism of the *arteria centralis retinæ*, in which vision cleared up very satisfactorily under the use of the drug.—*Calcutta Journ. of Medicine*, July, p. 293.

Eupion in Cramp of Calves.—A man, aged 62, of dry, gouty constitution, for years under treatment for chronic pneumonia, with a cavern at the base of the right lung posteriorly, complained that every night he had to get up frequently on account of cramp in the calves, very painful, and which were only allayed by rubbing the painful parts and walking about the room. Owing to this and his sleepless nights thereby caused, his disease increased. He got eupion 30, a dose three times a day. From the first night the cramps ceased, and he slept well, and his general health improved so that he lived till he was 75, but continued to cough and expectorate, yet had no return of the cramps. He died of inflammation of the bladder in consequence of a chill.—Van den Berghe, *A. h. Z.*, cxlii., 200.

A man, aged 42, asthmatic, thin, who had several attacks of gout in the joints, some of which involved his lungs and heart, complained of painful attacks of cramp in calves at night. He had to get up, compress and rub his calves and legs, and walk about before he could lie down again. He could get little or no

sleep, and dreaded the cramp more than his most painful fits of gout. Eupion 30 cured these cramps the next day permanently. It is remarkable that sulphur 200, which cured his asthma magically, had no effect on the cramps.—*Ibid.*, p. 201.

Mrs. B., aged 50, full-blooded and otherwise healthy, had pains in lumbar region, worse at night. She got aconite 30 which soon relieved the pain, but it returned after a few days, and in addition she had very painful cramps in the legs at night. They began in the lumbar region and extended down the legs to the soles of her feet, but were worst in the calves. Rubbing and walking about relieved her, but they recurred several times in the night. Eupion 30 by the following day removed the pains in back and cramps.—*Ibid.*

A young lady, aged 21, had for three months pains in stomach and bowels, especially after meals. The pains extended into the back. At night she suffered from very violent pains in the legs, especially the calves, so that she had to get up three or four times in the night and rub her legs and walk about. Eupion 30, three times a day for two days, removed these pains completely. She had a relapse two months afterwards, which was cured in a few days by eupion 30.—*Ibid.*

Hamamelis.—Dr. Stillman Bailey was attending a case of confluent smallpox, in which a complication of profuse intestinal hæmorrhage caused grave anxiety. One night the patient swallowed by mistake a whole tumblerful of Pond's extract, which, instead of hurting him, stopped the loss of blood immediately, and initiated a rapid convalescence.—*Clinique*, October, p. 556.

Kalmia.—Dr. Cartier relates three cases in which kalmia had a happy effect on the lightning pains of locomotor ataxy. He gave the 6th dil.—*Revue hom. Française*, October.

Nux moschata.—After a shot-wound of the brain, during the second week of the patient's illness he complained of intense pain in the head. Belladonna and arnica did nothing for him, and morphia and atropine failed to relieve. Dr. White carefully studied the case symptomatically, and found that the pain was only relieved when the nurse applied both hands to the head and pressed with all her weight. Nux moschata, 2 and 3, was administered thereupon, and quickly cured the patient. Dr. White does not find this modality in his repertories [how, then, did he arrive at the choice of the remedy?—Eds.], and thinks it deserving of notice.—*Hahn. Monthly*, October, p. 667.

Pyrogenium.—(1) A lady had been confined eight weeks previously, and had been attacked by fever when the infant was born. She had been under the care of three physicians. She was extremely emaciated. Temperature from 39·5° to 40° C. Abdomen distended, painful to pressure, anorexia, very weak, great mental depression. Sacculated peritonitis was diagnosed. I felt the tumour extending above the navel; the posterior wall of the vagina was pushed downwards. She got pyrogenium 6x, hepar 30, and merc. cor. 30 in succession, one every day for three days. Improvement immediately set in, the fever declined, appetite returned, thirst abated, defæcation and micturition less painful. Later, silicea 30 and china 6 were given. Nine months afterwards I had an opportunity to examine the patient. She had got strong, and felt better than before her confinement. The tumour had quite disappeared, and the only thing that remained was some tension in the vagina and parametria.

(2) My sister-in-law was confined last year. Fever ensued, and her husband sent me a report of her state along with some urine. She had copious fœtid discharge, burning pain during micturition, burning in abdomen, constipation, great anxiety. The urine was olive coloured and showed albumen. I prescribed tuberculin 1,000, pyrogenium 6x, arsenicum 100, one dose every other day. After eight days the urine was clear, albumen less, abdominal pains relieved. After three weeks she could go about her household duties. Urine free from albumen.

(3) A girl, aged 20, of loose character, was taken ill, after an intramenstrual coitus, with acute metritis and perimetritis, vomiting of bilious matter, great pain during micturition and defæcation. Abdomen very tender to touch. The previously merry girl had become sad and anxious, and felt very ill. On account of albuminuria with bloated face she had previously been under treatment. She got first a dose of tuberculin 1,200, then bryonia 10x and merc. corr. 10x in alternation, but without any good effect. The temperature remained at 39° C. Pulse 130. The tenderness of the abdomen only had diminished. On the fourth day she got a dose of pyrogenium 6x, with speedy good effect on the fever, pulse and pains. The merc. corr. 10x was discontinued, because it always brought back the pains. Instead she got merc. corr. 30. She is now up all day, and is as merry as before.—*A. h. Z.*, cxliiii., 40.

Silicea.—(1) A stout peasant woman, mother of several children, has suffered for nearly two years from a tiresome tickling

feeling at the back of the tongue. She feels as if a thread or a hair hung from the tongue down into the throat, which causes her to hawk continually. She had been treated by several doctors with gargles, which did no good. Nothing could be seen on examining mouth and throat. The patient had always enjoyed perfect health until the last three years. Then for the first time she became subject to headaches, which lasted for twenty-four hours, and always recurred at longer or shorter intervals. These headaches always commenced in the occiput and spread to the forehead, and most relief was obtained from keeping the head warm. Two years ago the affection of the tongue began, and from that time the headaches ceased. Silicea 30, morning and evening for eight days, was prescribed, and she was to report herself in a fortnight. She then said that she was better. The disagreeable sensation was still there, but confined to the tongue, and not in the throat, so that she did not require to hawk. Silicea 30 was repeated, a drop every morning. Some days after this the sensation on the tongue became much aggravated and extended to its tip. She then got better every day, and in a fortnight was quite cured of it, nor did the headaches return.

(2) An iron-turner, aged 26, short and strong, but looking decidedly ill, had suffered for eighteen months from sleeplessness. He slept well until after midnight, then he had uneasy dreams which woke him about 2 or 3 o'clock, after which he could not sleep. Two years ago he had hæmaturia from renal calculus, which was removed. Four years ago he had gonorrhœa. He has dull pain in renal region. Bowels rather costive. Appetite good, but he feels very weak. February 3rd he got selenium 6 without result. 10th.—Condition the same. He complains also of shooting pains under left scapula when he coughs. Apex of right lung suspicious. Kali carb. 30. 24th.—Sleeplessness as before. Asked if he had headaches, he said that he had sometimes, but not very often, headache which always came from the nape and spread over head to forehead. He was ordered to take coffea 6x for a week, and if it did not cure his sleeplessness, to take the following week silicea 30 three times a day. March 10th.—Patient came and said that the first medicine did no good, but after the first day of the silicea he slept for three successive nights and had had no headache. After these three days the sleeplessness returned. Sulphur 30 was given three times a day for three days; then after four days interval the silicea was repeated, which caused a rapid and permanent cure.—Boesser, *Zeitsch. d. Berlin Ver.*, xx., 132-4.

Spigelia.—Dr. W. E. Leonard writes: “Just after an attack of valvular inflammation, before there is any compensatory enlargement, when there is a tremulous sensation in the chest, an annoying undulating or purring sensation, either on sitting up or lying down, the radial pulse not being synchronous with the heart beat—conditions made worse by the least motion, with dyspnœa, anxiety, and stitches in cardiac region; pulse irregular, strong but slow, the heart-beats being often audible and visible through the clothing. Here the action of spigelia is to rapidly regulate and strengthen the heart's action, a result often corroborated in my experience.”—*Minneapolis Hom. Magazine*, October.

Sulphur.—A bright little girl, aged 9, was taken suddenly ill one summer evening. The case was diagnosed as acute meningitis. Fever rose rapidly to 105° F.; headache as rapidly increased in severity; vomiting, constipation, small weak pulse, delirium. Matters kept growing worse, despite all I could do. When I saw her on the evening of the fifth day she was unconscious; temperature 104·2°; pupils dilated and unequal; twitching of facial muscles; respiration difficult; patient bathed in cold sweat. I put fifteen drops of sulphur 30 in half a glass of water, and gave a teaspoonful every quarter of an hour. After the third dose she began to breathe easier, and when I left her at the end of two hours she was in a peaceful slumber. Next morning I found an eruption all over the face; temperature 99·4°; patient bright and wanting something to eat. She made an extremely rapid recovery. No other remedy was administered afterwards.—S. G. A. Brown, *Hom. Recorder*, September, p. 404.

An old-school practitioner writes an article on sulphur which might well come from the pen of a homœopathist. Among other things he commends it for promoting the growth of hair. A drachm of “milk of sulphur” is to be triturated well with ten drops of oil of bergamot and two drachms of glycerine, and a pint of rosewater added. This is to be applied with a soft sponge once daily.—*Charlotte Med. Journal*, October, p. 447.

Thallium.—Buschke (*Berl. klin. Wochenschrift*, No. 53, 1900), following up the observation of Giovanni that patients to whom he was administering the acetate of thallium became affected with alopecia,¹ has studied the effect of small doses of the drug on mice, given in their food. The result of its administration was that the hair came out on different parts of the body. This effect was not due to any appreciable action of the drug on the skin,

¹ See vol. vi., p. 398.

but, in Buschke's opinion, to certain disturbances affecting the nervous system after a trophic manner.—*Calcutta Journal of Medicine*, May, p. 193.

Thyroidin.—Dr. Ley had a patient of 37, who, since she was 21, had been subject to severe attacks of asthma, and in addition laboured under ciliary blepharitis and obstinate constipation. During her pregnancies, of which she had had two, all these troubles disappeared. Remembering that the thyroid normally enlarged during the gravid state, Dr. Ley treated this patient with small doses of tablets made from the gland. The result was surprising; all the troubles vanished, and for three years, up to the time of report, she had enjoyed perfect health.—*L'Art Médical*, October, p. 299.

Titanium.—The giddiness, with vertical hemiopia, experienced by Dr. Sharp while proving titanium has not yet been utilised in practice. An Indian practitioner, however, reports a case of severe vertigo with this concomitant, in which the metal, given in small doses of the mother tincture (?), proved rapidly curative.—*Monthly Hom. Review*, September, p. 524.

Tuberculin.—"Goetz, in the *Wochenschrift*, ascribes the failure of the tuberculin treatment, and the consequent discredit into which it has fallen, to the fact that when the substance was first introduced, it was recklessly used in too large doses and in wholly unsuitable cases. He himself has continued its use for ten years, and has obtained gratifying results by giving it in very small doses till tolerance was established. Out of 175 cases of phthisis treated in this way 125 are to be regarded as cured, the average length of treatment being 198 days. The injections are made twice a week, starting with a dose of grm. 0·0001 of the old tuberculin. This may have to be reduced to grm. 0·00001, or to be replaced by the new preparation, which is weaker, before tolerance is established. The injections must never be practised while fever is present. Carried out in this way the treatment is safe, and cures, as manifested by the recession of physical signs and disappearance of tubercle bacilli, are regularly observed."—*Med. Century*, October, p. 313.

THERAPEUTICS.

Aneurism.—Nothing more has been heard of the administration of gelatine *per os*; but in subcutaneous injection it is making its mark as a promoter of coagulation in aneurismal sacs.

L'Art Médical for September gives an account of a communication to the Académie de Médecine from M. Lancereaux, the inventor of the method, which shows a striking proportion of successes. About 5 grammes are injected at a time.

Dysmenorrhœa.—A case of this trouble of two years' standing is reported as cured after a two months' course of oxalate of cerium 30. [Dr. Chakravati states that the characteristic features which led him to choose the drug were that the "patient was fleshy, flabby and robust, with scanty discharges, pains ameliorated by a thorough establishment of menses," as given by Dr. Allen in his provings of the drug. Will he be good enough to state where these provings are to be found (they are not in Dr. T. F. Allen's "Encyclopædia") and whether—as his language would imply—the patient became "fleshy, flabby and robust" during her provings of the drug?—Eds.]—*Monthly Hom. Review*, September, p. 524.

Catarrh of Stomach.—A woman, aged 37, complained that since her uterus had been curetted after a miscarriage, six months ago, she had always suffered from gastric affection. She had pains in left hypochondrium and epigastric region immediately after eating, no matter what food. Sometimes the stomach could retain no food, but vomited it all up. Tongue always furred; she complained of bitter eructations; she preferred sour things; the bowels were irregular and unsatisfactory; sometimes diarrhœa followed by constipation. There was flatulence and rumbling. Before the gastric irritation was developed she had nervous attacks, with great irritability of temper, and soon became quite hypochondriacal. She got nux vomica 3 every four hours, and half a tumbler of hot water with a few drops of lemon-juice. This cured her.—Halbert, *A. h. Z.*, cxliiii., 124.

Hereditary Progressive Muscle-Atrophy.—This is a disease which has only been observed during the last three or four years, and has hitherto always been fatal. It begins in the legs and proceeds upwards; the child loses all power of movement, until death ensues by paralysis of the respiratory apparatus. The case I had was a boy of 1½ years old, who for some time had lost his walking power. The arms also were already considerably paralysed. Professor F. had given an absolutely unfavourable prognosis. I gave phosphorus 8x, which in six weeks completely cured the child. What led me to give phosphorus was the fact that this was a nerve-remedy and also that there was a peculiar

discoloration of the skin, and likewise the profuse perspiration of the little patient.—Gisevius II., *Berlin. Zeitschrift*, xx., 266.

Influenza, Bronchitis, Pneumonia.—A glove-maker, aged 35, of muscular frame, who said he had always enjoyed good health, though since a child he had had a heart affection which prevented him becoming a soldier, and for about ten years was subject to psoriasis, for which he had been frequently treated. For the last two weeks he had suffered from catarrh and cough; for the last eight days he had much chilliness, little appetite, felt ill, but continued at his work. On June 1 he felt so poorly that he kept his bed, and vomited. June 2.—I found him in bed; rather feverish; he coughed occasionally and expectorated some white mucus. He complained of headache, weakness, aching under right scapula, which went round to the front of the chest. Tongue furred, bowels constipated. Râles and whistling over a great part of thorax. There was much psoriasis over chest, lower limbs and arms. He had been taking sulphur baths for this; the last bath, eight days ago, made him feel rather ill. The febrile bronchial catarrh was accompanied by affection of gastric and intestinal mucous membrane—one of the common forms of influenza. He got bryonia 6, four times a day. June 3.—Profuse sweat, but he slept in spite of thunder. Temperature high; pulse 80. June 4.—A restless night. In the morning, fever increased; face red. He complained of shooting pain in left temple, aggravated by coughing and drinking water. Bowels open twice; wanted food. At noon fell asleep, but woke worse. Continued bryonia. Fifth evening, temperature 39.4° C. Headache increased, a violent jerking shooting in left temporal region, from above downwards, in front of and sometimes in the ear, not relieved by cold or warm applications. The pain under right scapula to right side of chest increased and has become shooting. On a space here the size of a hand observed respiratory murmur and crepitation; no dulness on percussion. Breathing short, rapid; face red. He lies easiest on left side. He got chelidonium 3 every two hours and a warm fomentation to chest. June 6.—Temperature 40° at 10 a.m.; pulse 100, strong and full; dyspnoea increased. The patient slept till midnight; the pains somewhat relieved. More frequent cough with rusty expectoration. Percussion-sound dull over affected part. June 7.—Temperature 40° at 10 a.m.; pulse 120. A sleepless night; no stool; frequent discharge of dark-coloured urine. Sputum scanty, partly rusty, partly bloody. Extreme dyspnoea. Pain in temple still troublesome, the whole scalp painful to touch. Evening.—

Temperature 40.2°; face, especially nose, very red. But he felt hungry and got milk. Ferrum phos. 6th trit. alternately with chelid. every two hours. June 8.—Slept occasionally at night; had copious epistaxis from right nostril. Temperature 38.5° at 10 a.m.; pulse 80; moist on lower extremities and face. A copious stool. Feels better. June 9.—Temperature 36°; pulse 80; breathing not quite free. Sputum coctum with streaks of blood. Urine orange coloured. Skin moist, knees cool. June 10.—Temperature 36.4°. Sleep good and refreshing; perspiration, Sputum coctum, easy and copious. Appetite good. June 12.—Temperature normal; functions in good order. Convalescent. Psoriasis, pale during the disease, itching and desquamation gone. But this did not last.—Mossa, *A. h. Z.*, cxliii., 1.

Pemphigus.—In an epidemic of this disease, when the broken bullæ discharged an ichorous fluid which produced rawness wherever it touched, so that children picked at the spots till they bled, Dr. Boger found arum triphyllum very useful.—*Hahn. Monthly*, October, p. 66.

Rhagades.—Dr. Bourzutchky speaks very highly of petroleum when eczema attacks the hands, causing rhagades. In proof of its homœopathicity he cites a case in which a servant was advised to drink coal oil for stomach-ache, and, being benefited thereby, continued to take it. In consequence of this eczematous fissures appeared on her hands.—*Hahn. Monthly*, October, p. 663.

JOURNAL
OF THE
British Homœopathic Society

No. 2.

APRIL, 1902.

VOL. X.

*All communications and exchanges to be sent to DR. HUGHES,
Northfield, Albury, Guildford.*

THE HISTORY AND GROWTH OF THE PHILLIPS'
MEMORIAL HOMŒOPATHIC HOSPITAL,
BROMLEY, KENT.¹

BY EDWARD M. MADDEN, M.B. EDIN., M.R.C.S. ENG.,

Physician to the Hospital.

LIKE every other homœopathic hospital in this country, I believe, the one at Bromley is the direct outcome and completion of a successful dispensary; and as we have many of the latter scattered over the length and breadth of the land which could easily be developed in the same way, and since I believe, with Dr. Burford, that nothing would do more for the spread and strengthening of homœopathy in this country than the multiplication of such hospitals, I am in hopes that a short history of our own inception and growth may be an encouragement to others elsewhere to emulate or surpass us.

The Bromley Dispensary dates as far back as 1866, when it was started by the late Dr. Orlando Jones, and it was

¹ Presented to the section of Surgery and Gynæcology, Dec. 3, 1901.

carried on by him very successfully at the shop of the local homœopathic chemist, the arrangement being the usual one, that patients could buy a ticket at one shilling entitling them to advice and a week's supply of medicine, and that subscribers received similar tickets to give away to those who could not afford to pay for themselves. When the late Dr. Robert Edward Phillips, in 1874, succeeded to Dr. Jones, he continued the dispensary on the same lines, attending twice a week at the chemist's shop, but added to it the visiting of poor patients at their own homes at two shillings and sixpence a visit (to include medicine). In 1886 the dispensary was removed from the chemist's shop and was held at a small institute rented from and adjoining to the Congregational Chapel. Here the doctor and the chemist attended at the same hours as before. And here I may perhaps be allowed to remark that this attachment of the dispensary to a chapel is an arrangement not to be encouraged; for although it was managed by a lay committee representing all sections of religious opinion, the notion prevailed in the town for a very long time, and is, in fact, still not quite eradicated, that it was in some way an appendage to the chapel, and that the Homœopathic Hospital is an institution appealing principally to Nonconformists, and managed by them.

I have mentioned that the dispensary was, as all good dispensaries should be, under the management of a committee composed of laymen and the doctor; and it only remains to be said that the surplus funds were annually voted as an honorarium to the doctor. How successful it was can be judged from the fact that in 1886 the honorarium Dr. Phillips received, after paying all expenses, was £80, the total number of patients seen being over 3,400.

Here then we have a flourishing dispensary, in the working of which a good many people, besides the patients, took an appreciative and active participation; and it is not surprising that Dr. Phillips, though singlehanded in his practice, should have felt the need from time to time of a cottage hospital into which he could send his worst cases to continue under his own treatment, instead of being

obliged to send them to the allopathic cottage hospital, where he could not follow them.

And that he did feel this need is made evident by the fact that at the time of his early death, in 1888, there had already been collected the nucleus of a fund for starting a homœopathic cottage hospital amounting to £170.

This, then, was the state of affairs in Bromley when on Dr. Phillips' death I succeeded him in practice, and finding that Dr. Phillips' memory was held by his former patients in quite exceptional affection and respect, I had no difficulty in persuading the committee of the dispensary to push forward the cottage hospital scheme as a worthy and permanent memorial to him, and hence the name by which it has always been known. Already, by the end of May, 1889, the committee had collected a sum of £558 wherewith to start the hospital, and were able to announce that they had taken a short lease of a semi-detached house in a suitable and central position at a rent of £38 a year, and accepted a builder's estimate of £97 for the necessary alterations and repairs. This included a bath and a complete hot-water system and new cisterns, and renovating the drains, w.c.'s, &c., &c. Naturally this estimate was added to as the work proceeded, in accordance with the inevitable law governing such matters, and the sum actually paid for "alterations and repairs" was £116 16s. 6d. The total cost of furnishing and fitting up came to £146, but it should be added that one generous supporter furnished one bedroom entirely at her own cost, amounting to not quite £20. And a further sum of £24 was expended on surgical instruments and appliances.

It will be seen that the total establishment expenses were well under £300, and for this we had two wards, each containing two adult beds and one child's cot, besides on the basement floor a large waiting-hall and a good double kitchen. On the first floor was a sitting-room (used also as out-patient consulting room) and a dispensary; while above the wards there were bedrooms for the nurse-matron, the one general servant, and Dr. Thomas, who had now joined me in the private practice, and who, for the first few years of

his practising in Bromley, lived in the Hospital and acted as its resident house surgeon.

This small Hospital was opened in August, 1899, and henceforth the dispensary was held at the Hospital, becoming, in fact, its out-patient department, I having agreed with the committee that as soon as the Hospital was opened our services in future should be purely honorary, and all profits arising from the out-patient and home-visiting departments should be passed over to the credit of the Hospital.

At this time, also, the system of charging 2s. 6d. a visit to the poor at their homes was altered to charging 2s. 6d. for a week's attendance, however many visits were needed—a change which very soon resulted in a large extension of this branch of our work, enabling us thus to attend acute cases on dispensary cards, and in many instances this has been a fruitful field for yielding suitable cases for admission to the wards. All in-patients who could afford it were expected to pay a small sum weekly—varying from 3s. 6d. to 10s.—towards their maintenance, as well as getting an in-patient letter from a subscriber; but we were allowed to have one bed free, at the discretion of the medical officer admitting the patient. During the five months between the opening of the Hospital and the end of the year, we took in eighteen patients, among whom three operations were required. Our subscription list for this year was exactly 100 guineas, the payments to the dispensary £66, and the payments of the in-patients £13 4s. 6d.

It is not easy to give the exact expenditure on maintenance for these five months, as the accounts combine the establishment expenses with that of maintenance during the opening months; but during 1890—our first complete year—the total expenditure was £384; we had had fifty patients in the wards, among whom there were nineteen operations, all of whom made good recoveries, among the most interesting of which was a successful perineorrhaphy.

The next year, 1891, witnessed our first movement of expansion, which our success and the demand for admission into the wards seemed to justify, and the generosity of our

supporters made possible; for we now rented the adjoining semi-detached villa, made communicating doorways where suitable, furnished the second house so far as we needed it for hospital purposes, and now nearly doubled our accommodation, not quite, because one of the new rooms was now devoted to the reception of a single patient—whether a private patient or a case for special operation—and this is a feature to which we should like to call special attention, as it enables us to offer our patients all, or more than all, the advantages of a private nursing home under our own immediate supervision, while at the same time materially adding to the income of the Hospital, as well as giving such patients as have been treated there a very special personal interest in the institution. The total expense of this addition to the Hospital, including the structural alterations already referred to, the fitting-up of a mortuary in the basement and the new furniture required, was only £165 10s.; our rent was increased to £75, and our total annual expenditure was £555.

It was in this year that we first had the advantage of the assistance of Dr. Burford in the performance of special gynecological operations, an assistance we have had the need to ask for repeatedly since, and which has been always ungrudgingly given on his part, though it was not until two years later that we had the pleasure of officially appointing a consulting staff, consisting of Dr. Dyce Brown, Mr. Knox Shaw, and Dr. Burford, to each and all of whom we have frequently appealed for help in cases of special difficulty, and never in vain. The first case on which Dr. Burford operated was a notable one of abdominal hysterectomy on a girl of 15, on account of complete congenital occlusion of the vagina, in consequence of which the uterus was becoming steadily larger and more painful, due to retained menstrual fluid; the operation was a severe and prolonged one, and the after-attendance one of considerable anxiety, but the final result was a complete recovery.

We were now a very fairly well established cottage hospital with seven adult beds and three children's cots, besides the dispensary and home-visiting departments, all

worked from the one centre, and under a large committee, on which the medical staff have always been active workers, and between whom and the rest of the committee there has always been the most cordial co-operation.

But already in 1893 we began to agitate to collect a building fund, wherewith, in the first place, to buy the leasehold and freehold of our existing premises, and with a distant hope of one day being able to replace them by a modern cottage hospital, designed and built *ad hoc*.

It would be too long a story to take you step by step along the road which has led to our present Hospital, and as an example to others it would be of comparatively little use, for the successful issue must be reached by different roads in different neighbourhoods; but there are few, if any, districts where the establishing of an hospital would be at all suitable, where there are not one or two, and often five or six wealthy and philanthropic patients who, if they see that the doctors are in earnest about it and that their money will be well spent, will give you a handsome sum to head the list of every subscription started to fulfil this object; and when once the project has got so far as to be practically an assured success, others flock in to fill up the lists to the required amount.

This, at least, has been our experience at Bromley, and having a very generous and enthusiastic supporter in the person of our late Chairman of committee, and the rest of the committee backing him up with great good will, both in the way of giving and asking for help, we have been able to collect a sum of money we should have thought quite impossible had it been suggested at the first.

Most of our money was obtained by direct donations, many of them in large amounts, and, as is always the case, the same names loom large in every renewed effort. But besides this, we have not hesitated to make use of bazaars, sales of work, charity balls, and, by no means last or least, of an annual concert, which, for the last ten years, has brought us substantial profits every year, and which, beginning in a comparatively small way—the performers being mostly amateurs or the lesser professional stars, and for

which we charged correspondingly modest prices for seats—has now grown to be generally acknowledged as the best local concert of the year, at which we have the help of the leading professional artistes in England, and for which we charge the highest prices, and at the same time get the fullest hall, of any local entertainments, our average profits of late years having exceeded £80 a year, and this year having reached the £100.

Briefly, then, we were enabled to buy both the leasehold and freehold of our original Hospital in 1895, at a cost of £1,800, and henceforth stood rent free, while going steadily on to collect funds for the fulfilment of our ambition to build a new hospital. In 1897 the committee took advantage of the Diamond Jubilee of Her late Majesty to appeal to their friends to celebrate this event by contributions towards our building fund, an appeal resulting in no less a sum than £2,860 being given during this year. Our first intention had been to build on our original site, but in 1897 an ideal site for such an hospital was for the first time offered to the public for building on, being situated within a stone's throw of the market place and town hall, while yet being in a kind of backwater out of the traffic, and immediately adjoining a public pleasure garden, which could never be built upon. We therefore, after much negotiation, secured this site, in consequence of which we had to considerably enlarge our plans for the new building, and prepare ourselves for collecting yet another large sum to complete it. As usual, however, boldness, when in a good cause, has been rewarded, and although our new Hospital, in its present complete state, has cost in round figures £8,000, we are something less than £300 in debt in respect to it, while we have still our old premises to be realised when a favourable opportunity offers.

Dr. Wynne Thomas will show on the screen some lantern slides from photos he has taken of the Hospital, which will give you a better idea than any words could do alone of its completeness and convenience for hospital work, for which we are inclined to claim that, up to the present time, it is as nearly an ideal cottage hospital as can be found in England, if indeed its equal can be found at all.

If, therefore, starting in the small way we began only twelve years ago, and with only the *clientèle* of two medical men to appeal to for support, we have been able to attain such success, it is not any too much to say that, as Dr. Burford said in his introductory address at the beginning of the session, wherever there are two or more medical men practising homœopathy, it only needs them to energise and to work together to enable them to start a small hospital, with the certainty of success, and with mutual advantage, not only to their own practice and reputations, but with the greatest possible advantage towards the spreading of a knowledge and appreciation of homœopathy.

DESCRIPTION OF LANTERN SLIDES OF THE HOMŒOPATHIC HOSPITAL, BROMLEY.

BY H. WYNNE THOMAS, M.R.C.S.ENG., L.R.C.P.LOND.

Surgeon to the Hospital.

(1) *The Old Hospital.*—Two semi-detached villas, the one with the curtains on the right was the house where the hospital was first started, and at that time in the other house was held a day school, but I never knew there to be more than five pupils, three little girls and two little boys; evidences of that school still remain from the over-turning of ink pots on to the floor. The gentleman and lady who presided over that educational establishment within twelve months of our taking the next house disappeared one holiday time and left no address.

The rooms with the double windows were the women's wards, facing west, the male and private wards were at the back; the room with the curtain was the consulting room, the corresponding room in the other house the matron's sitting-room; the patients' waiting-room was in the basement; they came up the kitchen stairs and waited three at a time in the hall, after seeing the doctor passed through folding doors to the back room which was used as the



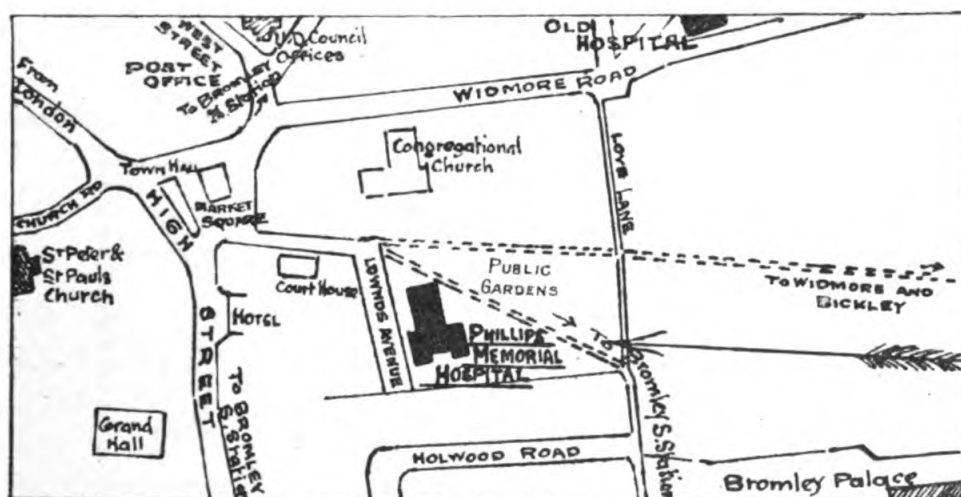
THE OLD HOSPITAL.

dispensary, and out through a small green-house at the back. The buildings stand on a triangular piece of land with a garden in front, tapering off to a point forming the corner of two roads.

(2) *A Rough Plan of the New Hospital*, showing its relative position to the Public Gardens and centre of the town of Bromley.

The High Street is the main artery of the town, being the road from London to Tunbridge.

The Town Hall stands in the Market Place, where still a market is held every Thursday.

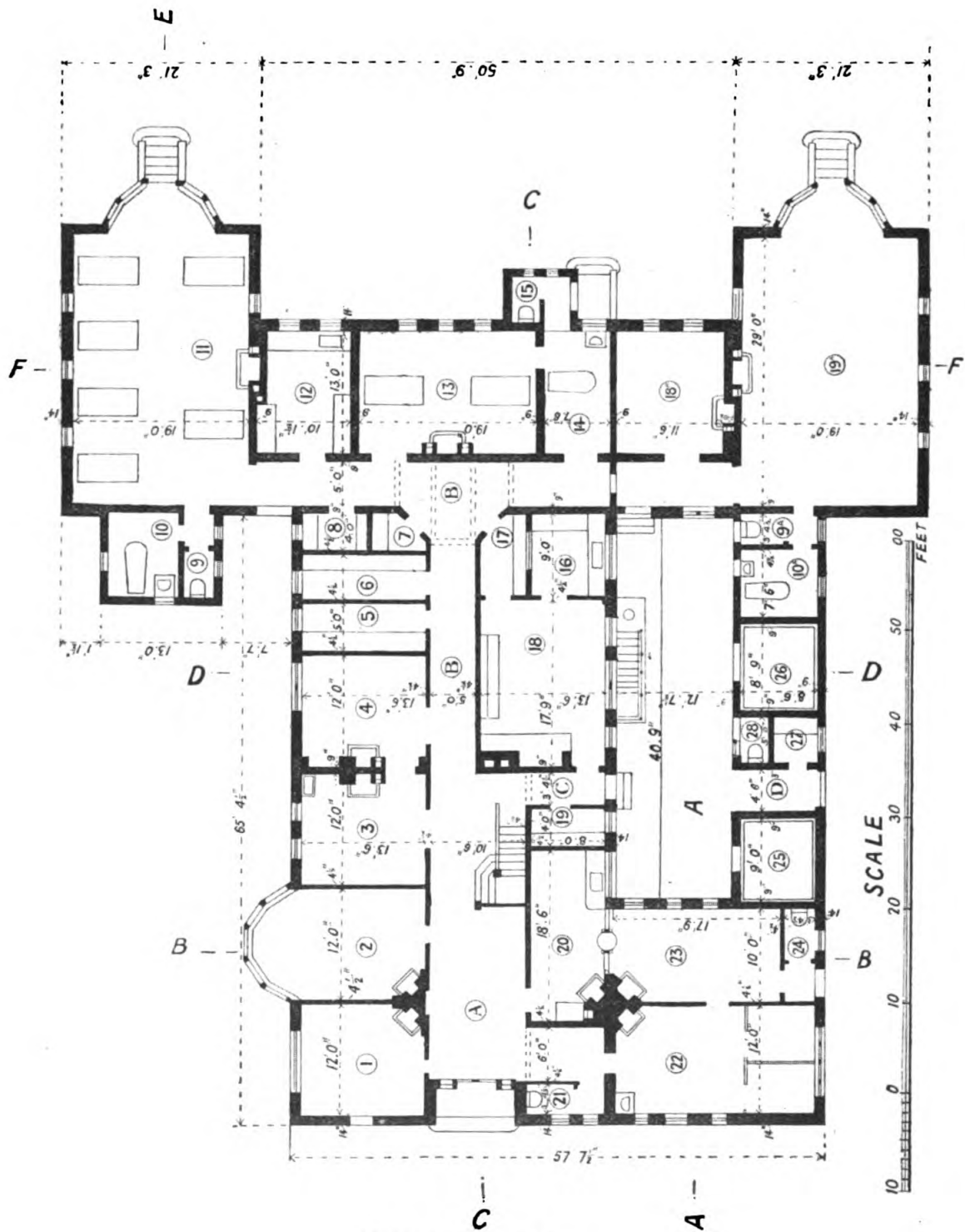


ROAD PLAN SHOWING THE SITUATION OF THE HOSPITAL.

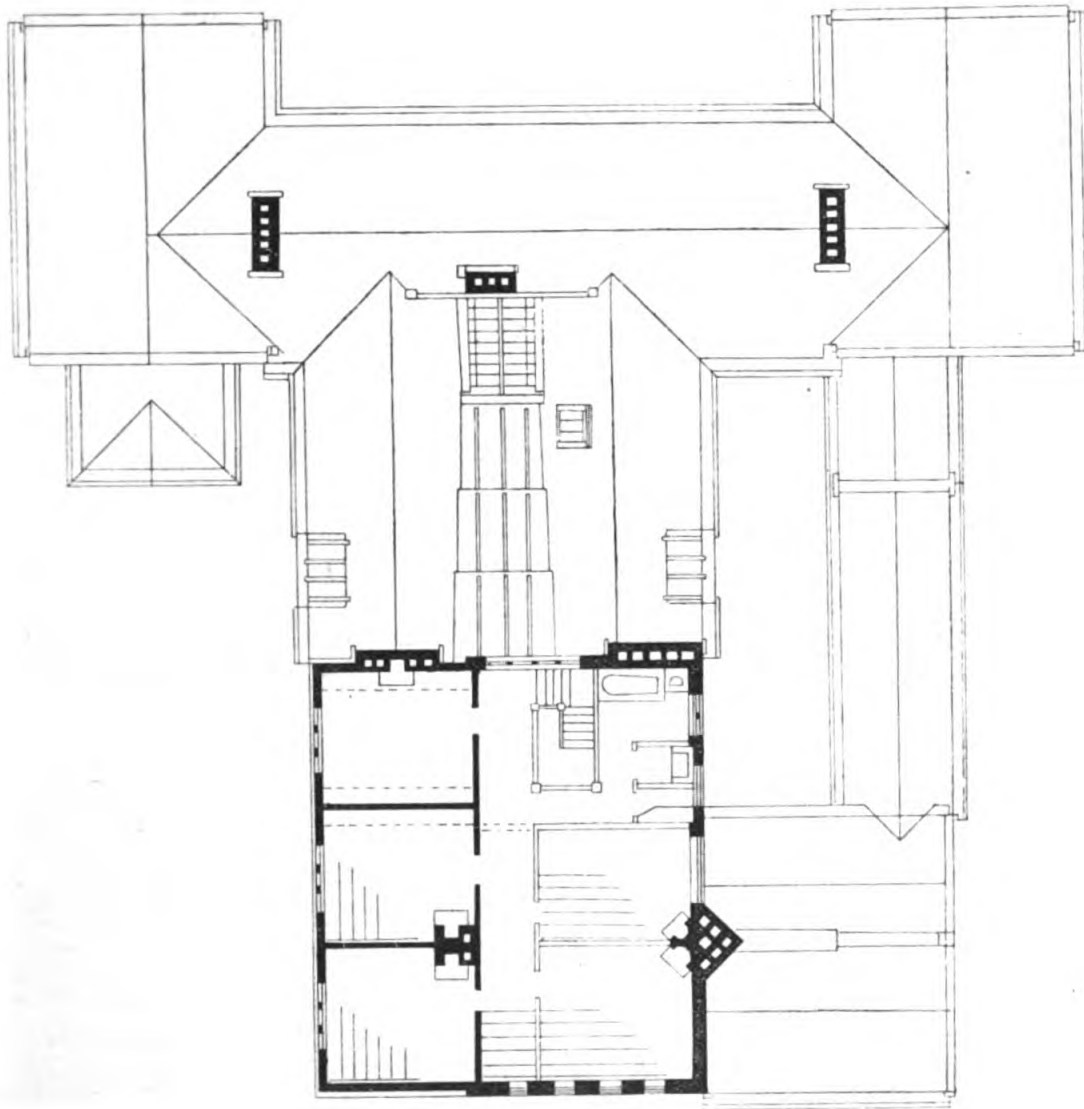
Established 1889. Enlarged 1891. Newly erected 1899.

The Dispensary was established in 1866, and Re-organised in 1875; in 1889 the present Memorial Joint Hospital and Dispensary was instituted in its stead.

From the Market Place is a narrow lane leading past the Law Court to the Public Gardens and Lownds Avenue, a *cul-de-sac*. On the left side, or west side, is land on which some day small villas will be built, but which at present is waste land. On the right, or east side of the Avenue, is placed the Hospital, standing in its own grounds of about two-thirds of an acre; to the east still are the gardens, comprising about two and a half acres of land nicely laid out with turf, flower beds and shrubs, with seats here and



GROUND FLOOR PLAN.



FIRST FLOOR PLAN.

KEY TO ARCHITECT'S PLAN.

Ground Floor.

- | | |
|---|--------------------------------|
| 1. Matron's sitting room. | 16. Scullery. |
| 2. Board room and nurses' sitting room. | 17. Service. |
| 3. Anæsthetic or surgical ward. | 18. Kitchen. |
| 4. Operating theatre. | 18A. Private ward. |
| 5, 6. Stores. | 19. Pantry. |
| 7. Patients' clothes. | 19A. Children's ward—six beds. |
| 8. Nurses' sink. | 20. Dispensary. |
| 9, 10. Bath room and w.c. | 21. w.c. |
| 9A, 10A. Bath room and w.c. | 22. Consulting room. |
| 11. Women's ward—six beds. | 23. Waiting room. |
| 12. Nurses' kitchen. | 24. w.c. |
| 13. Men's ward—three beds. | 25. Mortuary. |
| 14, 15. Bath room and w.c. | 26. Coals. |

First Floor.

Nurses' and servants' bedrooms.

there ; still further to the east stretch green fields belonging to Bromley Palace, the residence of the Lord of the Manor, and formerly for many centuries in the possession of the bishops of Rochester.

(3) *Architects' Plan of the Hospital.*—As illustrated.

Wards all on ground floor and facing south ; an ambulance can be wheeled in from the street right up to the bedside. Entering by the main door, on right are the consulting room for out-patients, dispensary and kitchen ; on left, matron's room, board room, and nurses' sitting room, special ward for anæsthetising patients or special operation case, operating theatre, store cupboard. At end of main corridor is a smaller one at right angles, opening into large women's ward, on left at the end ; also opening out is nurse's kitchen, male ward, bath room, private ward, and at the other end is the children's ward.

The children's ward and private ward are represented much paler on screen, the reason being that when we began to build we thought of leaving these two wards till a future time, but as the funds came in better than we expected, we were persuaded to complete the whole scheme, though at present the children's ward is not yet opened.

The first floor consists of nurses' and servants' bedrooms.

(4) *The Entrance from Lownds Avenue.*—The low building to the right is the out-patients' room and waiting room.

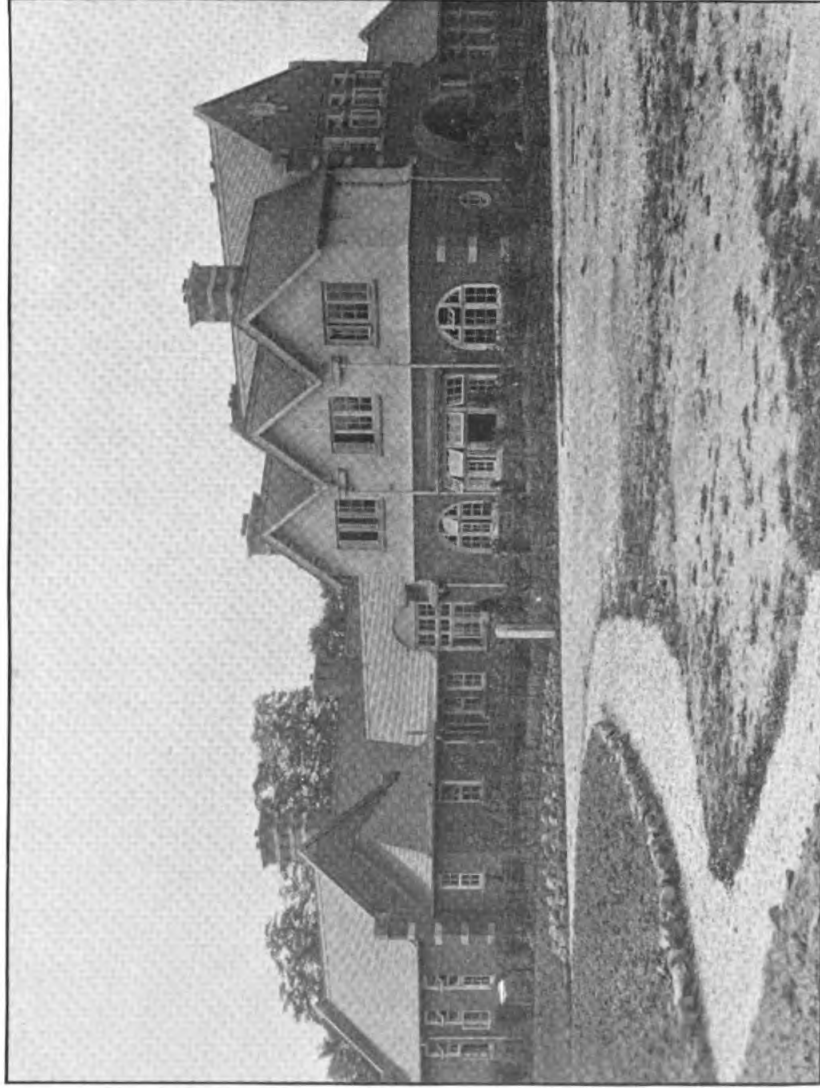
The building is of red brick with stone facings and red tiled roof.

(5) *North-East View from the Public Gardens.*—Three nurses' bedrooms over the matron's sitting room on the right, board room in the centre and operation ward to the left, beyond is the theatre with the tall window, on the extreme left the women's ward and its bath room.

(6) *East side from the Public Gardens.*

(7) *South-East View from the Public Gardens.*

(8) *South View from Hospital Grounds.*—Women's ward to the right ; two small windows, ward kitchen, three longer windows, male ward, then men's w.c. and bath room, then two windows of private ward, and on the extreme left the children's ward.



THE NEW HOSPITAL.

(9) *Open-air Shelter*, which can be moved round to face the sun, or shelter from wind; this was purchased with the proceeds of a cake and apron sale, got up by Mrs. Madden, in the summer.

(10) *View of Main Corridor from Front Door*.—Floor covered with cork felt carpet, all wood work white paint, walls covered with high art paper of a greenish-yellow colour, with points of scarlet; the corridors and wards are all heated with hot water pipes.

(11) *The Board Room*, cork felt carpet with oriental rug, light oak table and chairs, window seat pale blue cretonne, window curtains of green taffeta.

(12) *Operating Theatre*.—Walls of Parian cement, painted white; floor of tarazzo; operating table of iron enamelled white, is adjustable to any angle; chairs enamelled iron; tables enamelled iron with plate glass tops; pedal wash basin, with knee action waste; nurse's sink with Birkfeld filters; moveable electric light over table, with three lamps arranged, two on one circuit and one on a separate circuit; all corners are rounded, and a tap with a hose for swilling the place down.

(13) *End Corridor*, opening at each end into the two large wards.

(14) *Female Ward of Six Beds*.—Walls painted reddish paint with pine deal flooring, polished; red taffeta curtains and red blinds; white marble top table; electric light over each bed, with green silk shades; light oak lockers with white glass tops; the ward opens out into the garden, and at the opposite end is the bath room.

(15) *The Same Ward* from the other end, looking south.

(16) *A Bath Room*, of which there are three, one to each large ward; tarazzo floor; white porcelain baths with extra large taps, so that they can be filled in very short time, tiles reddish-pink and pale green paint above, yellow or green brass towel rail through which passes hot water for drying towels and wash basin.

(17) *View Looking East across Public Gardens*.

(18) *The Nursing Staff*, consisting of matron, staff nurse, and two probationers.

(19) *Photograph of the late Dr. Phillips*, in memory of whom the hospital was erected.

Dr. Phillips never had his photograph taken, but a patient who knew him well, after his death drew a sketch in pencil of him from memory, and it is a photo of this sketch which I am, fortunate enough to show you to-night. I never saw him myself, but perhaps some of you present knew him in days gone by and can tell if it is a good likeness of him.

THE FOUNDING OF A COTTAGE HOSPITAL.¹

BY C. KNOX SHAW.

Senior Surgeon to the London Homœopathic Hospital; Consulting Surgeon to the Buchanan Hospital, St. Leonards, &c., &c.

It might be thought that for once we were taking for the subject of the evening's consideration, one outside the range of the Society's work, but our sphere is catholic, all-embracing. The principles of homœopathy are not advanced and extended by the study of drug action alone; there is a practical method of bringing our knowledge of homœopathic therapeutics to bear upon the sick and suffering which is at least worthy of some thought. I therefore acceded to the urgent request of our President to place some of my experience at the disposal of the members of the Society. I do this the more willingly because I feel that, next to a thorough knowledge of therapeutics, we can most surely advance homœopathy by providing the amplest means for its practical application. I am entirely in accord with the view expressed by the President in his introductory address, that the formation of dispensaries and cottage hospitals is an important factor in the development of homœopathy.

Wherever two or three members of this Society are gathered together, there there should be a small hospital. Its influence is manifold: it makes an abiding and powerful

¹ Presented to the Section of Surgery and Gynæcology, December 3, 1901.

impression upon the status of homœopathy in the town in which it exists; it stimulates public confidence in the medical officers attached to it; and it excites a cordial and fraternal feeling amongst the medical officers themselves. The necessary co-operation on neutral ground fosters that friendly professional spirit one to another, which does so much to lessen the cares and anxieties of professional life. There is much that is irksome and distasteful in general practice, but the opportunities of getting a little hospital practice, where one can become a student again, and watch, under favourable circumstances, the progress of disease, or undertake special forms of treatment, adds very materially to the interest of one's professional life. I know that my interest in my work has been increased tenfold by the opportunities I have had, during practically the whole of my professional life, of being associated with a hospital.

It is a duty we owe to the poor that we should supplement our dispensaries by providing hospitals where homœopathy is recognised. Should their case be unable to be treated at home, these patients have to go to the general public hospital, or to the infirmary, excellent institutions in their way, but lacking in one very important element in the treatment of disease.

It has often struck me that wherever there is a good hospital, there homœopathy flourishes. Hospitals have this important effect, too—that to carry them on successfully there must be two or more homœopathic practitioners. On many occasions have I urged upon isolated homœopaths the extreme importance of encouraging a colleague to settle in their town; not to look upon him as a rival, but as a partner in the development of the public recognition of homœopathy; one whose advent will tend to ultimately increase, and not diminish, his practice. Isolation is a suicidal policy, both as regards the practitioner and his practice. Isolation leads to a want of confidence by the public, for it feels that, in an emergency, the necessary help may not be readily forthcoming. Loyal co-operation restores public confidence, and so increases the homœopathic *clientèle*. It cannot be necessary to labour this point, though it is an important

one, but a misconception of its bearing and an unworthy apprehension that another will enjoy the advantage that we desire for ourselves, often causes us to throw obstacles in the way of our obtaining the co-operation of a professional colleague.

But my immediate object is not to discuss the ethical side of the question, but to show that there is no insuperable difficulty in forming a cottage hospital. If it can be done by one, it can by another. We have just heard the story of the Phillips' Memorial Hospital; the one I have to tell of is of an older date, having been in existence just over twenty years. It was one of the earliest homœopathic cottage hospitals in the country. There were, or had been, hospitals in London, Birmingham, Manchester, and Bath, but the only one of similar size was that founded by the late Dr. Dunn in Doncaster. I will give you briefly the mode of inception and progress of the Buchanan Hospital, and from these facts we may be able to draw some useful conclusions for our guidance in starting a cottage hospital.

At the close of the year 1880 a cheque for £200 was presented to me by a philanthropic lady to enable me to hire a room to nurse cases from the ophthalmic department of the Hastings and St. Leonards Homœopathic Dispensary. The receipt of this cheque started the idea of founding a small hospital. The suggestion was mentioned to a few friends, and being favourably received, a circular letter was sent to a number of people, of all stations in life, known to be interested in homœopathy, inviting them to a drawing-room meeting, where the proposal was discussed.

It had previously been found that a small house of eight rooms could be rented for £40 a year, into which it was proposed to put seven beds for patients. The meeting was much interested in the project, one present promising to find the rent, another some of the beds, another some of the linen, another the crockery, and so on. A committee was formed, and in a few weeks the hospital was started. We found an excellent nurse from the London Homœopathic Hospital, and had one general servant, getting in occasional

extra nursing and assistance as required. In addition to the gifts mentioned above, the committee spent £133 in fitting up and furnishing the little house. From the start the principle of patient's payment was instituted, the sum contributed by the patient or friends ranging from three shillings and sixpence to seven shillings per week. These payments are a little troublesome to arrange satisfactorily, and require someone with considerable local knowledge to apportion fairly, but they encourage self-help and minimise the pauperisation of the patient. During the first nine months the hospital was open (April 11 to December 31, 1881), forty patients were admitted at a total cost of £185, towards which the patients themselves contributed £32. During the following year sixty-four in-patients were treated at a cost of £323, towards which the patients contributed £72. In 1883 seventy patients were admitted at a cost of £295, towards which the patients contributed £90. It will thus be seen that a small hospital, having seven beds, capable of passing seventy patients through its wards, can be maintained at a cost of about £320, exclusive of rent. The hospital had not been in existence a year before its supporters became so impressed with its usefulness and possibilities as to determine to build a specially designed one, which was opened, free of all debt, in 1884. The land for this was given us, and so materially lessened the cost of the hospital. The building itself cost £3,100; the architect's fee, laying out of the grounds, and the extra furnishing required for a larger hospital, brought the total up to about £3,500. This amount would probably be exceeded now, as I understand the price of building materials has increased in recent years. The new hospital contained eighteen beds and three private wards of one bed each, the latter substantially assisting in the expenses, in 1900 accounting for £171 of income. The cost of running such a hospital, passing 225 patients through in the year, is about £1,100 to £1,200. In designing the hospital originally no out-patient department was constructed, as the Hastings and St. Leonards Homœopathic Dispensary took the place of such a department. But in

the course of years it was felt to be imperative that an out-patient department attached to the hospital should be provided. About three years ago a suitable building was built in the grounds at a cost of £1,000. This is a very great acquisition to the hospital. When first starting the hospital most valuable information was obtained from Sir Henry Burdett's book on "Cottage Hospitals," and I would advise anyone contemplating originating a hospital to consult this work. There will be found there most useful hints on administration, keeping of accounts, formation of rules, &c., &c., as well as plans and sketches of many of the most prominent cottage hospitals.

The initiative of founding a cottage hospital will, in most instances, come from the medical men. Once let those in a town agree upon its necessity, and a long step has been taken towards its foundation. If the matter is first privately discussed, and promises of help are forthcoming, a meeting of all likely to be interested should be called in the drawing room of the most influential person obtainable. Before the meeting the promoters should have arrived at some conclusion as to the kind of hospital that is wanted. It may be advisable to move cautiously by commencing in a small house; if so, some suitable place should be in view. All details should, as far as possible, be prepared beforehand, nothing left to the happy inspiration of the moment. At the meeting promises of help should be sought for, and a committee formed. A working committee, not an ornamental one, should be striven after.

A great deal depends upon the selection of the secretary, and I feel strongly that he should not be one of the medical officers. Look around well before a decision is made. As soon as the committee is formed, canvassing for funds should be promptly and energetically carried out. Very careful consideration must be given to the rules, and here Burdett's book is very helpful. Too much care cannot be expended upon the choice of a matron or head nurse. She can do so much to make the hospital popular; and in a small hospital, without a resident medical officer, a great responsibility is thrown upon her. There are many ways of arriving at the

same end, and in founding a hospital there will be diverse views as to the best means to pursue; but if the promoters will assiduously cultivate that nice perception and skilful discernment called by Tennyson "the graceful tact," they will smooth away difficulties, and finally reach the goal of their ambition.

The PRESIDENT thought the Society was greatly indebted to the authors for giving such a valuable evening on what might be called the politics of homœopathy. Apart from the material service which they had rendered to the members and to the cause by their information, 'it had been a matter of exceeding interest to listen to the personal experiences of their colleagues, who, without assistance from any other homœopathic body, had achieved the brilliant results described in the papers. "What man has done that man can do;" and he left the moral of the papers to be drawn by those whom it most affected. The question might be discussed from various standpoints. First, there was the valuable educational influence that hospital work exercised on medical men practising in the hospital. Secondly, there was the important element of nursing which a hospital could bring to bear in the interests of homœopathy by the training of nurses. Thirdly, the cottage hospitals were of considerable importance in meeting that ostracism and isolation of which he had occasion to speak in his presidential address. Their spread would prevent the gradual centralisation of homœopaths in a few big towns and the squeezing of the practitioners out of the country districts. The cottage hospital also had the advantage of offering a common meeting ground for the lay and professional homœopathy of the district, a most invaluable element in the establishment of homœopathy, and one in which the cottage hospital of the future would play an increasingly important part. Finally, the cottage hospital had the advantage of preventing the depletion of surgical and other cases from general practice, which, in the absence of the assistance which a hospital afforded, had now in provincial practices often to be turned over to the other sect.

Dr. NICHOLSON (Bristol) said the papers were of particular interest to those who had in contemplation the starting of similar hospitals. For some time past the homœopaths of Bristol had felt they were not doing all that was required in

their city. A wave of enthusiasm which had been latent in the homœopathic body had been set going, in the first place by the President's Address and also by the British Homœopathic Society, of which he thought advantage ought to be taken. He hoped it would soon be at the flood tide, and bring prosperity to the cause in the West. It was nearly fifty years since the late Dr. Black first opened a dispensary in Bristol, and homœopathic practitioners had steadily followed on the same lines ever since, the dispensary from time to time having been considerably enlarged. It was now felt that something more ought to be done, but the practitioners had hesitated a long time before taking a further step. There were a great many things which had prevented them making a start. In the first place they had considered whether general practitioners could afford to give any time beyond that devoted to dispensary work to regular hospital duty, and whether it afforded sufficient opportunity of increased skill either in diagnosis or treatment. Was it not likely also that at the end of a year, after enthusiasm had subsided a little, interest might flag in a hospital which had a small number of beds, and therefore necessarily a small number of cases, and was there the opportunity for that specialisation which now seemed imperative in medical work, particularly in surgery? While he was abroad last year he visited an exceedingly well-arranged hospital, and complimented the chief physician on what he saw, but also remarked that there were a good many empty beds. "Well," was the reply, "it is true we have very little doing now, and so much the better for me." That indicated there was a flagging interest in the undertaking, which might overtake English practitioners in a similar scheme. In Bristol there were four men working at a scheme, but if there were only a dozen beds there would not be sufficient work to occupy the attention of each man, and if they took turns of six months each he thought the interest would flag. Would the starting of such a hospital improve the relations of the homœopaths with the other medical men in the town? In Bristol the relations were by no means cordial, but at any rate they were friendly with men of the other school, and a certain amount of co-operation was obtained, but there might be some disturbance of the ordinary friendly feeling if such a hospital were started. The greatest lion in the path was the difficulty of obtaining the necessary funds to start a small hospital. In Bristol a place had already been decided upon for the hospital but as yet arrangements had not been made to overcome the

financial difficulty. He would particularly like to know whether it was proper for medical men to go round begging; it seemed more desirable to him that the work should be done from a committee if possible. It would also interest him to know how far advertising was proper and justifiable in such a case. The dispensary had been advertised to a certain extent, and he believed that little good had been done by the advertisements. Advertisements he believed were perfectly justifiable and legitimate for obtaining funds. He was pleased to hear from the authors that those patients who were able to afford it contributed to their support while in hospital, thus relieving, to some extent, the financial burden. In the Bristol dispensary patients either had to get a note from a subscriber or pay two the Medical Mission Dispensary with a very large out-patient shillings a month. There was a flourishing institution called department, with an attendance of about 100 on three days a week. About a dozen ladies were employed there who were more or less under training for attending to patients. Bristol being a very religious place, he feared difficulties might arise with regard to the religious question? He would like to know how much liberty might be allowed for religious addresses and whether they should be confined within strict limits.

Dr. HENRY MASON (Leicester), after expressing his extreme indebtedness to the authors of the papers, said that for the last two or three years he had been endeavouring to form a Cottage Hospital in Leicester, on the lines indicated in them. Fourteen years ago a dispensary was started, the patients paying two shillings and sixpence a month for personal attendance, or seven and sixpence for home visiting. The dispensary was worked with a colleague for four or five years, and on the retirement of this gentleman, he (Dr. Mason) had worked the concern for six years himself. About six years ago a small cottage was taken which allowed for the possibility of having one bed for an indoor patient. For this bed a charge was made of from twenty-five to thirty shillings a week in order to cover nursing and other expenses. For the first three or four years there were only occasional patients, but during the last twelve months it had rarely been unoccupied, notwithstanding the charge, which had never been less than twenty-five shillings a week, and the fact that the patients could have gone to a first class hospital in the immediate proximity perfectly free. Nearly all the cases had been operative ones, but he had not felt justified in undertaking abdominal operations, which were per-

formed in a neighbouring institution. carried on by the Wesley Deaconesses, where a free bed was occasionally available. The income amounted to about £200, subscriptions yielding about £20, and the patients £180, of this about £130 was swallowed up in expenses, the balance apportioned to the medical officers. About three years ago Dr. Capper joined him in the work of the dispensary and he ought also to acknowledge the great help rendered by Dr. Clifton in the initiation of the Dispensary and as consulting Physician. The influence of dispensaries and hospitals in medical practice could not but be beneficial. Their work being exposed to public survey and criticism was likely to be more thorough, methodical and accurate, and therefore would be more successful and likely to have more scientific value.

Dr. SEARSON (Brighton), said the papers had been a source of inspiration to him and had made him hope that the results which Drs. Madden and Thomas had been able to achieve in Bromley with a population of twenty-five thousand might be repeated in the towns of Brighton and Hove with a population of nearly two hundred thousand. The position of affairs in Brighton at the present time was peculiar. There were two dispensaries there but no cottage hospital. The dispensary in Middle Street was very old, having been established about sixty years. The honoured names of the late Dr. Madden, Dr. Hilbers and Dr. Hughes had been connected with it. About twenty years ago a second dispensary was started in Richmond Place, a fair amount of money being raised with which the freehold of the property was bought, a good building erected, and useful work was being done. When he went to Brighton over two years ago negotiations were proceeding with the object of amalgamating the two dispensaries, which were unsuccessful. The more recently established dispensary thought there were financial difficulties in the way in connection with Middle Street. The Middle Street dispensary, with which he was connected, endeavoured to remove that difficulty by raising more money. Last year over £50 was collected in addition to the ordinary income, and a well known patron of homœopathy offered to contribute £50 a year for five years if the amalgamation could be brought about. Thus armed they again approached the other in the statement that the trust deeds of the Richmond Place dispensary made it impossible to entertain the question of amalgamation. He thought it was deplorable that two institutions working for the same object should exist under separate manage-

ment in one town, and he should cordially welcome any effort that could be made to promote the amalgamation. It would be admitted that the difficulties could not be met by any one individual. He agreed with Mr. Knox Shaw that medical men could not, owing to their peculiar circumstances, pose as taking a very great organising interest in such work; they could do a great deal to foster and promote friendly feeling and stimulate the energy of others, but it was difficult to do the organising work. He felt that if there was a central board in London composed of such men as the President, Mr. Knox Shaw and others who were known to possess tact and judgment and influence, who could appeal to the men in the locality and place before them the great desirability of amalgamation with the probability of such an amalgamation paving the way to a Cottage Hospital, it might tend to remedy the present state of things. Dr. Searson would be delighted to co-operate with any members to bring about such a desirable result.

Dr. ROBERSON DAY said attention had been chiefly directed to suburban and provincial hospitals, but he was particularly interested in the district constituting greater London. When it was considered that London with its enormous population had only one homœopathic hospital, it seemed about time that an endeavour was made, not to establish other hospitals in London, but out-patient's departments in various crowded parts of the metropolis, which should be distinctly affiliated with the hospital. They could be worked by medical men resident in the locality on the lines of provident dispensaries, the tariff being arranged accordingly on the same scales. It was a well-known fact that before long the London Homœopathic Hospital would be enlarged. Increased accommodation would then be available for patients, and with such out departments of the hospital in various parts of the city, accommodation could be provided for the severer cases in the hospital. He thought the Society should go so far as to recommend that the Board of the hospital should take the matter up seriously. It was too much to expect medical men always to organise and initiate such institutions. Such enormous districts as Walthamstow, parts of the East-End and the south of London could be tapped, from which, even now, a large number of out-patients were drawn. Such a scheme would immensely increase the popularity of homœopathy, and tend to spread the method of cure which they all had so much at heart.

Dr. WILLS (Bath), thought that the building up of a large

hospital from a Cottage Hospital was the most advantageous method. He considered that an illustration of the disadvantages attending the opposite method was seen to some extent in the history of the Hahnemann Hospital, Liverpool, where the medical Staff and Committee were called upon suddenly to undertake the heavy responsibility of a fairly large hospital without previous experience of hospital organisation, added to which the Nursing Staff was necessarily composed of a number of nurses from various hospitals, many of whom had no interest in homœopathy, the hospital, or each other. To blend these very mixed elements and secure harmonious working had been very hard work, and there was great credit due to the Staff that any fiasco had been avoided. In the case of the Hahnemann Hospital too the public had hardly time to interest themselves in it, and for a while the idea seemed rather prevalent that Mr. Tate's generous gift to Liverpool was independent of the sinews of war.

The inference seemed to be that gradual growth was most advantageous both for the staff who worked the hospital and for the public who supported it. Probably it was best for a hospital to commence as a dispensary, for which if possible a house should be obtained on a site adapted to future developments. A single bed and nurse could be obtained to start with and others added as the demand and funds justified. It was a great advantage even in a dispensary to have nurses at hand in case of emergency to assist in surgical dressing, &c. The building up of a Nursing Institute side by side with the Hospital should not be lost sight of, and would prove a source of income to the hospital and enable homœopathic practitioners to secure nurses for private patients on whom they could rely for loyalty and efficiency, instead of having to trust to unknown nurses from outside institutions. Good nurses were a most valuable advertisement to a hospital and would interest private patients in the institution. Hospitals were invariably a tax on those who worked them and should be studiously avoided by arm-chair practitioners, but probably few medical men who had once experienced their many compensating advantages would allow themselves to be deprived of these without a determined effort to secure them.

Dr. BODMAN thought the examples of Bromley and St. Leonards Cottage Hospitals ought to be a great encouragement to practitioners who helped to make a start in the founding of such hospitals. The great drawback in Bristol was the want

of enthusiasm among the laity. The Children's Hospital in Bristol had been practically carried to a successful conclusion through the energy of one particular man, but among the homœopaths he did not know of any such person who would support such an institution. He quite agreed with the authors of the papers in the advantages which would accrue to the medical men as well as to the cause of homœopathy by the practical work of hospitals. He did not think there would be any difficulty in the working of a homœopathic hospital in Bristol if the necessary help was forthcoming. He would like to know at what rate private patients paid, and how the medical man's fees were arranged.

Dr. GOLDSBROUGH said: In the opening of a Cottage Hospital practitioners need have no fear with regard to success in the development of special branches; indeed, he believed the advancement of homœopathy lay largely in the cultivation of special branches of medicine as well as of operative procedure. He began to look into the question of possibilities in Neurological therapeutics, and at the end of five or six years he was still continuing the work in the out-patient department, and with three beds in the wards, with more and more interest every day. He hoped to be able to show by-and-by some certain degree of success in the endeavour. He hoped in course of time when the Hospital Reports were again published, to give an account of all the cases he had treated in the neurological out-patient department. He thought every case that came under observation should be recorded before any results could be arrived at which would be of value.

Dr. MADDEN, in reply, thanked the members for the cordial way in which the papers had been received. In reply to Dr. Bodman, in the Bromley Cottage Hospital and any other hospital where there were private wards, the patients were treated exactly as if they were at a nursing home. The patients paid for their board, lodging and nursing, and the operation and medical fee were exactly the same as if they were attended at their own homes. He was most interested in Dr. Searson's remarks about the position in Brighton, and sincerely hoped his efforts would result in amalgamating the two dispensaries, and in that way enable a hospital to be started. The body which was most likely, outside their own members, to help them was the Executive Committee of the Federation of Homœopathic Hospitals, of which the President and Mr. Knox Shaw and himself were members; they would be most pleased to

assist Dr. Searson in every way they could. He would like to encourage Dr. Mason of Leicester to commence a larger hospital, and as an encouragement mentioned the fact that while Dr. Mason had been hesitating, because he did not see his way clear to the funds, a gentleman who a few years ago was living in Leicester and no doubt would have been only too glad to help them, had now migrated into his (Dr. Madden's) neighbourhood, and without being asked had presented £100 to the building fund of the Bromley Hospital. In reply to Drs. Nicholson and Bodman, he thought medical men should make a start themselves; it was of no use to wait for the laity. Once the thing was started then a drawing-room meeting should be held, and the concern would be established on a thoroughly sound footing.

Dr. WYNNE THOMAS, in reply, bore out the President's remarks that Cottage Hospitals were becoming more important in the upholding of homœopathy and for the good of the practitioners who practised homœopathy. If a man practising homœopathy tried to cure tumours, cancers, ulcers, &c., with homœopathic remedies only, the patients would soon become impatient and go to a hospital where an operation could be performed. The public were now realising that even serious operations could be performed with very little risk, and rather than continue taking medicine for a long time, with only a chance of a cure, they would go to a surgeon who would perform the operation at once and have done with it, and remove the disease. Unless the practitioner had a hospital to which he could send his patients he would lose a great many cases altogether.

The PRESIDENT thought the interest manifested, the account of the results achieved, and the encouragement given to all from what had been heard that evening, fully justified the course taken by the officials of the Society in bringing the subject forward for an evening's debate. After hearing what the authors had been able to accomplish in their respective spheres of influence, unaided by any assistance from without, and with no special advantages, it gave homœopaths every reason to be exceedingly thankful that they had such an amount of initiative, energy, and success in their ranks. There was no reason why the example of Bromley and St. Leonards should not be initiated by ten or a dozen centres in Great Britain, which ought to have homœopathic cottage hospitals and which now had not, and he hoped they would take the undesirability of their situation into immediate consideration, and rid themselves of that defect.

NEURASTHENIA AND ITS TREATMENT BY
HOMŒOPATHIC MEDICATION.¹

BY JOHN W. ELLIS, M.B., Ch.B. (VIC.), F.E.S.

Honorary Medical Officer to the Hahnemann Hospital, Liverpool.

NOT only is neurasthenia the subject upon which I have decided to address you to-night, but this disordered condition of the nervous system is, in a great measure, responsible for my being here at all, for, when I received the intimation that the Section of Medicine and Pathology was desirous of hearing my voice among you, I was away on the Yorkshire moors doing my best to get rid of an attack of neurasthenia. Now had my mental condition not been in the state that I shall have to describe to you later on as characteristic of nervous exhaustion, I should have immediately replied to decline the invitation on the grounds—which would have been strictly true—that I had not anything of special medical interest occupying my mind at the time; but, acting up to the principle so generally followed by neurasthenics of never doing to-day what can be put off until to-morrow (a symptom not necessarily pathognomonic of neurasthenia), I postponed my reply so long that I felt, at last, it would show a great lack of courtesy if I did not find something to talk about to-night since I had not left the secretary of the section sufficient time to provide a substitute. And so it comes to pass that I, a provincial practitioner, have the temerity to appear before an audience of London medical men to offer you my opinions on the treatment of a condition of the nervous system common enough in the less enervating environment of the North, but which must be infinitely more prevalent amid the social and professional excitement of the metropolis. But lest you

¹ Presented to the Section of General Medicine and Pathology, Jan. 2, 1902.

should think it presumptuous in me to attempt to meet you on your own ground, let me, at the outset, assure you that I am here to-night less as an exponent than as a learner, and my motive in bringing this subject before you is that I may gain from your more extended experience, some help to the better treatment of a nervous disease that is almost as disconcerting to the physician who has to treat it as it is tedious and worrying for the patient to bear.

I know that men of light and leading in the profession—the late Dr. Drysdale among the number—have objected to the use (to patients at least) of the word neurasthenia, which, they say, is a high sounding, new-fangled term, that means no more than the older and more generally understood “nervous debility,” and to such an objection I would reply that I prefer the newer word just because the old phrase is more generally understood, for the designation “nervous debility” is so frequently used in connection with quack advertisements of a particularly objectionable character that this general understanding in the minds of the laity usually connects the words “nervous debility” with certain impure suggestions equally conspicuous in the said advertisements. And it has happened to myself (before I came to years of professional discretion, shall I say?) that my use of the expression “nervous debility” as a diagnosis has evidently conveyed to a sensitive patient (and sufferers from this class of disease are usually abnormally sensitive in such matters) an idea that I attributed his illness to some of the moral delinquencies just alluded to, a suspicion which cannot but be as painful to a large proportion of the patients who consult us as it would be unfounded, and one, too, which is very likely to shake the patient’s confidence in his doctor at a time when confidence is of the highest importance in the treatment. Therefore, when speaking to patients with neurasthenia, I never use the term nervous debility.

The various phases of what was formerly described as “nervous debility” or “nervous exhaustion” have been carefully studied and minutely described by Dr. G. M. Beard of the United States, and he, I believe, was the coiner

of the word neurasthenia, and his monograph on the subject appears to have formed the basis of most of what has since been written about this form of nerve disturbance. Essentially a disease of civilised life, it is more especially among the professional classes that we meet with the greatest number of sufferers — among literary men and women, artists, lawyers, doctors, teachers, and business men whose transactions require mental rather than bodily labour. And though men are more liable to neurasthenia than women, this is only, or chiefly, because of the preponderance of brain-workers among the former sex, for the condition is frequent enough among women teachers; and, while nervous exhaustion takes on a more typical form in men than in women, it is frequently overlooked in the latter sex from its liability to be confounded with organic disease of the reproductive organs, or with hysteria, with which it has much affinity, and from which it is at times distinguishable only with difficulty.

Essentially a fatigue of nerve cells, neurasthenia usually results from some physical or, more frequently, mental overwork, and especially if this be combined with depressing influences, such as anxiety and worry, or over-indulgence in such nerve stimulants as alcohol, and, perhaps, even more often, though less suspected, tea and tobacco. Over-excitement of the sexual organs is a frequent cause of nervous exhaustion, but we must not forget that in many cases sexual irritability may be a consequence, and not necessarily the cause, of the condition. And while neurasthenia may follow any exhausting illness, during the last few years our attention has been directed to the frequency with which it succeeds an attack of influenza, a sequence easy to understand when we bear in mind how the influenza poison seems to specially select the central nervous system for its attack. Occasionally neurasthenia comes on suddenly, as when it follows some intense emotion of a depressing character, but usually the onset is very insidious.

Although neurasthenia may occur (in those of the healthiest antecedents and most robust constitution, after a period of severe mental strain) in a large proportion of our

patients we find a family history of neurosis, and in such cases the disease is usually more severe and less amenable to treatment.

A characteristic feature of neurasthenia is the variety and protean character of its symptoms, the disease often changing its type during the one or in subsequent attacks. We scarcely ever see two cases alike, and though many organs may show indications of functional disturbance it is more usual for small combinations of symptoms to be complained of. So various are the symptoms that may appear in a series of cases of nervous exhaustion that special terms have been employed to describe these varieties, and so frequently do the symptoms simulate serious organic disease that one cannot be too careful in one's diagnosis; and it may be worth while to briefly recapitulate the more important of these symptoms, more especially with a view to their treatment by homœopathically selected remedies.

Quite three-fourths of the patients who come to us with neurasthenia complain of headache or of some form of mental disturbance. The headache is usually characteristic; not the intense pain with flashes of light and vomiting of migraine, but more usually a dull, wearying pain, or still more frequently a sense of weight or pressure rather than of actual pain, having for its seat the occiput, from whence it frequently extends down the neck to the shoulders and arm, or down the back; or the vertex may be the part attacked, with a feeling as though the head were compressed by a tight-fitting cap, or encircled with an iron band. One of my patients, a highly-intelligent professional man, used to liken his sensation to that of the brain being drawn out of the top of the head (one is sometimes inclined to ridicule the odd descriptions applied by provers in recording the symptoms ascribed to drug action, but they are quite paralleled by the quaint observations of some neurasthenics). Along with the pain or pressure, or sometimes without such accompaniment, there may be throbbing or beating in the top or back of the head, or a sensation as though the occiput were gripped with a strong hand. There is usually more or less hyperæsthesia of the scalp, which may become so tender

that brushing the hair may be painful, and there is often a sensation of crawling, prickling, or numbness in these parts. Other patients complain of muscular twitchings, sometimes confined to the posterior belly of the occipito-frontalis, at others involving the muscles of the neck and jerking the head backwards or to one side. These head symptoms have this in common: they are invariably brought on or made worse by any attempt at mental occupation or by emotion, and are usually relieved by rest and food.

Long ago Trousseau referred in his clinical lectures to the occasional substitution of vertigo in place of headache in persons who had been subject to periodical attacks of the latter, and from personal experience I would suggest the probability of these cases being essentially neurasthenic in character, for vertigo is at times a prominent symptom of nervous exhaustion, with or without accompanying headache, though usually attended, at least, with a sensation of fulness of the head. The vertigo complained of is usually of a mild character, slight giddiness of momentary duration, or at times the sensation is likened to that of being in a boat in a choppy sea. Occasionally there may be a feeling as though surrounding objects were being whirled around one, or as though the ground opened or receded on placing the foot down in walking; while more rarely the symptoms may be so acute, even to the presence of nausea and vomiting, with tinnitus, as to simulate disease involving the semi-circular canals. My own experience of vertigo has been of a varied kind, the most characteristic form being that on raising my head from the pillow, while otherwise feeling quite free from annoyance, the head would be suddenly jerked backwards with such violence as though from a blow, and the attack would be attended by distinct nausea and at times by vomiting.

The mental condition of patients with neurasthenia is often wretched in the extreme. Often even before the onset of more prominent symptoms such as headache, some failure of mental power may be noticed. Often forgetfulness of names of familiar persons is an early symptom, while later on in the disease the memory seems to be more particularly a blank for occurrences that have taken place during the

illness. Along with loss of memory there is some difficulty in concentrating the attention on any work that may be in hand, the mind constantly wanders, is distracted by trivialities, and as the neurasthenic state progresses there is loss of will-power, an inability to come to a decision even in the simplest matters of every-day life, and the patient so loses confidence in himself that he cannot bring himself to perform even such simple actions as writing an ordinary letter. Those engaged in literary work find a difficulty in giving expression to their ideas, either because the thought itself is vague and uncertain or because they cannot seize upon the exact word wanted. This word-forgetfulness occasionally takes the singular form of the substitution in writing of one letter for another of similar sound, a "d" for "t," for instance; or there may be a transposition of ideas, so that what is said or written may be the exact opposite of what was intended, a condition to which the term "heterophemia" has been applied.

The annoyance of finding themselves incapable of undertaking mental labour that was formerly easy causes fretfulness and irritability of temper, and despondency that at times almost borders upon melancholia; and there may be a state of mind not far removed from monomania, as, for instance, a dread of being in a closed place, like a church or theatre (claustrophobia); of being in an open space (agoraphobia), or of associating with one's fellow creatures; while others torment themselves about their state of health and believe themselves to be suffering from heart disease or impending paralysis. The main difference between these forms of neurasthenia and insanity lies in the fact that while in mental aberration patients cannot be reasoned out of their ideas—that is, they are possessed of delusions—in nervous exhaustion they will invariably admit that their fears are groundless, but they are deficient in self-control. And we may note, too, that in patients with neurasthenia who believe themselves to be suffering from serious disease there is an absence of the hopefulness that is so frequent an accompaniment of real organic disease.

Insomnia is another frequent symptom in sufferers from

nervous exhaustion, and one which materially influences the prognosis, for if we add to the passive want of a period for rest and reparation of nerve tissue, the active state of mental excitement during the period of night wakefulness, we have a powerful factor acting against the restoration of the patient to health. In neurasthenia

“ Sleep that knits up the ravelled sleeve of care
The death of each day's life, sore labour's bath,
Balm of hurt minds, great nature's second course,
Chief nourisher in life's feast,”

is as necessary as in actual mental disease. Insomnia may take one of two forms: either an inability to sleep at all until the early hours of the morning, or, more frequently, the patient goes to sleep easily, awakes about 2 a.m., and lies awake with the mind in a state of great activity until 6 or 7 a.m., then falls into a heavy sleep, often full of horrible dreams, to awake an hour or two later feeling more tired than when he went to bed. This latter form of sleeplessness is a frequent result of undue indulgence (and sometimes of *any* indulgence) in tea, coffee, or tobacco. Insomnia is not always present in neurasthenia, but there may be such an amount of nocturnal cerebral activity as to cause, at any rate what seems to the patient to be, a night full of dreams, generally of a horrible character, with a feeling of exhaustion on awakening as bad as is described by those with more pronounced wakefulness.

Neurasthenic patients frequently suffer from some affection of the eyes. The retina is in a condition of exalted sensibility to light, so that attempts to use the eyes for reading or writing soon cause fatigue, accompanied by aching in the eye-balls, heaviness of the lids and congested conjunctivæ, with a constant burning or sensation of sand in the eyes. In these cases the only pathological change observable by the aid of the ophthalmoscope is, at most, a slightly dilated condition of the vessels of the fundus oculi.

Just as the eyes are over-sensitive to light, so the auditory centres are in a condition of hyperæsthesia, and such slight noises as the rustling of silk or of paper cause distress. Tinnitus of various kinds may be present. Some persons

complain of a feeling of distension of the drum of the ear, especially after food, or from any excitement, while others experience a sudden sensation as of an explosion in the head, which sometimes awakens them from sleep. Connected, too, with the condition of the auditory apparatus is pulsation, synchronous with the heart-beats, that is very annoying to some patients, who, like those with palpitation, complain of never being able, as it were, to get away from the consciousness of having a heart.

I have already referred to the frequency with which complaint is made of pain extending from the head to the neck, shoulders, and back, but there is often in patients suffering from nervous exhaustion considerable pain in the spinal region alone without any accompanying head symptoms, and it has been usual to refer to such cases as spinal irritation or rachialgia. The pain may extend the whole length of the spinal column or it may be localised in the cervical or sacral, less frequently in the dorsal or lumbar, region, while many cases of coccygodynia are certainly neurasthenic. These spinal pains are invariably made worse by movement, and there is usually such a degree of hyperæsthesia of the surface that the skin becomes exquisitely sensitive to the slightest pressure of the clothing or of the finger or hot sponge, and there is usually a certain amount of numbness and tingling. The pain often extends from the spine to the extremities, but more frequently there is a feeling of numbness, tingling, or prickling in one arm or hand (rarely in both at the same time), and we frequently notice a tendency in the upper extremities for the numbness to affect the area of distribution of the ulnar nerve. Pruritis and urticaria are occasionally present in these patients, and are usually very intractable, and sometimes we may find areas of hyperæsthesia analogous to the similarly distributed patches of anæsthesia met with in hysteria.

Next in order of frequency to headaches and insomnia we find neurasthenic patients suffering from various forms of circulatory disturbance, more especially palpitation and and loss of vaso-motor tone. The palpitation, unlike that of organic heart disease, is not usually provoked by a moderate

degree of physical exertion, but it, together with dyspnoea which so usually accompanies it, is immediately brought on by the slightest emotion or the lightest meal, and it is in such patients that we most frequently meet with the complaint of excessive consciousness of the possession of a heart, and they frequently describe sensations as though the heart was grasped in a strong hand, or as if it turned over occasionally. Palpitation may be attended by a feeling of faintness, but actual syncope is, in my experience, far from common, and, indeed, faintness is more usually accompanied by flushing of the face than by pallor. I suspect that this feeling of impending syncope is often the result of some degree of tachycardia, a symptom that is almost pathognomonic of neurasthenia. With or without palpitation there may be pain in the cardiac region, and as this pain, when severe, may extend down the left arm, and is accompanied by a feeling of suffocation, there is always room for a suspicion of angina pectoris, which, I believe, is frequently a neurosis, quite independent of cardiac disease. The vaso-motor system is markedly depressed in most cases of neurasthenia, as witness the soft flabby pulse, collapsing too suddenly during the diastole, the cold and often clammy hands and feet, the easily-produced perspiration, and the frequency of localised blushing, such for instance as the familiar flushing of the head, face and neck after meals. The patient may be conscious of throbbing of the abdominal aorta, a symptom that gives rise to much discomfort, and which may lead one to suspect the presence of aneurism, just as the visibly throbbing carotid arteries, together with the collapsing pulse and cardiac distress, may simulate aortic incompetency.

Many sufferers from nervous exhaustion complain of indigestion, by which they usually mean a feeling of fulness and discomfort after food, and the epigastric region may be distended and so sensitive to pressure that the clothing has to be loosened. Actual severe pain in the epigastric region is not common in these cases, nor is there usually much nausea or vomiting. The appetite is good, sometimes even voracious, but digestion is usually slow and gaseous eructa-

tions and borborygmi frequent. The tongue is generally broad, pale, and flabby, clean, or with a slight creamy fur; and usually indented by pressure against the teeth. The muscular tone of the stomach is so deficient as to lead, in severe cases, to actual dilatation of that viscus. As an accompaniment of the slow digestion there is much mental and physical torpor, often somnolency, after meals, and the ingestion of food is very apt to produce a feeling of fulness in the head, with distension of the ears, and the flushing of the face already alluded to.

In the male sex, more especially, in neurasthenia, there is usually more attention paid to the genito-urinary apparatus than is desirable, and the slightest deviation from the normal of either function is looked upon with interest, if not with anxiety, by many of these patients. We need not be surprised at the presence of a certain amount of bladder irritability when we remember the intimate sympathy between this viscus and the central nervous system, and a small trace of albumen may be constantly present in the urine without giving rise to anxiety on the part of the medical attendant. From the same cause sexual excitement is more easily produced, leading often to natural or unnatural methods of relief at the expense of further exhaustion of the nervous system, so that what was at first but a symptom of localised nerve weakness may become in the end a very important obstacle to its cure. I have already referred to the intimate connection in the lay mind between the term nervous debility and sexual abuses, and miserable indeed is the lot of some of these patients who imagine themselves to be suffering from spermatorrhœa and all the other dreadful disorders so freely described in quack hand-bills and advertisements. In the other sex neurasthenia may be a result of ovarian or uterine suffering, but I believe a large proportion of the cases met with in general practice of pelvic congestion with backache and leucorrhœa are simply localised manifestations of a general diminution of nerve force.

An early symptom to attract attention in many cases of neurasthenia is muscular feebleness, quite out of all propor-

tion to the amount of work done ; indeed, at times, especially in cases where spinal symptoms predominate, the loss of power may be so great as to preclude all kinds of locomotion. Rarely this paretic condition is so pronounced as to simulate true organic paralysis, but it differs in its clinical features from that due to disease or destruction of nerve cells by not being attended by more atrophy of the muscles than is accounted for by disuse, and also by the fact that, as a general rule, the reflexes are exaggerated in neurasthenia. And while loss of power is a prominent symptom, an appearance of increased muscular activity is by no means uncommon. I refer to the twitching of the muscles of the neck, the fibrillary contraction of those of the face, the eyelids especially, the "fidgets" and restlessness of the legs, the slight trembling of the hands in the morning, and the cramps which so frequently affect the legs, all symptoms indicative of a condition of exaggerated sensibility of the motor nerve cells to intra- or extra-corporeal sensory stimuli.

The order of sequence of the symptoms of neurasthenia is somewhat as follows:—

The earlier symptoms noticed are muscular feebleness, insomnia, slight indications of digestive and cardiac disturbance, such as fulness, palpitation, and flushing after meals. Then follow head symptoms, tenderness of the scalp often preceding actual headache. The so-called second stage is characterised by a continuance of the symptoms already mentioned with the addition of failure of the mental powers and irritability of temper ; while a third stage has been described, to which fortunately very few patients ever attain, where the mental depression is so marked as to border upon melancholia, and in which dyspeptic troubles have become so severe as to threaten death from starvation.

I commenced my reference to the symptoms of neurasthenia by remarking upon their protean character in the same patient, and the following case is so markedly illustrative of the tendency to mutability of symptoms that I have thought it not without interest to bring it before you, though you will doubtless all be familiar with similar examples.

Miss F., who is the principal of a boarding-school in the country, came under my observation about ten years ago complaining, after a life of fair general health, of slight dysmenorrhœa, which symptom was steadily improved by a course of *Viburnum opulus*. She then began to complain of occipital headache, the pain extending down the spine to the shoulder and right arm, the hand becoming so numb that she could scarcely write. During the administration of *Ferrum phosph.* these symptoms gradually disappeared, and then she experienced prickling and numbness of both malar bones, which did not last more than a week or ten days, but was replaced by vertigo, nausea, and pain in the epigastric region. This latter became so severe that she consulted a celebrated Leeds surgeon, who advised an exploratory incision. Instead of this, however, she came to Liverpool, and, suspecting the symptoms to be purely neurotic, I gave her *Picric acid*. After a few days the pain, vertigo and nausea had quite left her and she remained well for some months. Then she got a chill, which was followed by a return of the occipital headache and severe vertigo, which symptoms soon disappeared after a short course of *Cocculus*. A few months later, after a more than usually prolonged menstrual period, she began to complain of pain in the cardiac region, so severe as to make the pressure of the clothing almost unbearable, and with a pulse (when I saw her) of 108. A few days of *Cactus* and this trouble was gone, but she almost immediately had return of the nausea and vertigo, which was again quickly put right with *Cocculus*. This was a few weeks ago, and I am wondering what her next manifestation of neurasthenia will be.

THE MEDICINAL TREATMENT OF NEURASTHENIA.

I have felt it desirable to occupy so much of the time at my disposal with a consideration of the symptoms of neurasthenia, because we must all recognise the necessity for a full and complete picture of the diseased condition if we are to expect success from medical treatment applied according to the principles of our school.

“Medicines are of little avail. Strychnia in full doses is often beneficial.” Such is the dictum of Professor Osler, one of the foremost teachers of medicine in the United States, where nervous exhaustion is so frequent as to have

received the name of "American nervousness." Does this pessimistic view of the treatment of neurasthenia represent the experience of the practitioners of the homœopathic school? I think not. When I look back upon my own cases of neurasthenia, of which for the last ten years I have kept careful notes, I really feel that, were it only for the treatment of this class of disorder alone, both my patients and myself have much to be thankful for, in that I have followed the teaching of Hahnemann; for though the treatment of nervous exhaustion by homœopathic medication is not by any means so completely successful as one could wish, yet it compares very favourably indeed, in my hands, with that of my pre-homœopathic days, when, following the lines of present-day general treatment, I dosed my patients with strychnia or nux vomica, or with one or other of the largely advertised preparations of phosphorus or the hypophosphites, quite oblivious of the fact that by over-stimulating weakened nerve-cells with such powerful drugs I was undoing with one hand what I might have accomplished with the other by rest and other details of hygienic treatment.

No drug causes symptoms which so closely resemble those of neurasthenia as *Picric acid*, and a study of the narratives of provers of this substance, such as are detailed in the "Cyclopædia of Drug Pathogenesis" (i., 61, *et seq.*), gives us a distinct picture of nervous exaltation with succeeding exhaustion. With remarkable uniformity provers taking the drug in doses of the 1st decimal to the 5th centesimal dilution complain of such symptoms as the following: dull, heavy headache, with vertigo on rising; heaviness in the head, with disinclination for mental and physical work, which developed into throbbing headache, chiefly right occipital; frontal headache and vertigo, with fulness as though the head would fly apart, greatly increased by motion and study: dull headache from right temple to the occiput with formication in the temporal and parietal regions; throbbing pain in the occiput, with inability to concentrate attention on his work. Notice how the head symptoms appear to be concentrated in the occiput. Sensory symptoms are frequently complained of, as tingling,

prickling, and numbness of the lips, hands, and feet; burning sensation in the scalp and down the spine; with a variety of aches and pains in the head and extremities. Among the eye symptoms there are flashes of light and sensation of heat and dryness, with heaviness of the lids and distinct conjunctival congestion; while tinnitus was found to occur with some regularity in the experiments of Parisel. Insomnia was frequent, and there was unanimity in complaint of muscular weakness, with tiredness and disinclination for exertion. Twitchings of the muscles occurred in several of the provers, sexual irritation was a marked and troublesome feature, several experimenters had diuresis, and one, after a few ten-drop doses of the 1st decimal dilution, experienced oppression in the epigastrium, palpitation with irregular pulse, and beating in the temporal arteries. Experiments on animals show that the action of the drug centres in the nervous system, for the legs are very quickly weakened, especially the hind ones, and there may be ataxic gait due to twitching and spasms, which gradually progresses to complete paralysis, and a *post-mortem* examination shows the central nervous system to be in a pulpy, degenerated condition.

Could any drug present a more distinct picture of gradually increasing nervous irritability and debility such as is met with in neurasthenia? And in the whole of our *materia medica* I have not found any medicine to give such generally successful results as picric acid in the treatment of this disorder. We must, however, bear in mind how exquisitely sensitive these debilitated nerve cells are to the medicinal *similimum*, and care must be taken not to give the drug in too low dilution. I have seen marked increase of the head symptoms and troublesome sexual irritability produced by a few doses of the 3rd centesimal dilution, and now I never give it in lower dilution than the 6th centesimal.

I have already, in a paper read before the Liverpool branch of this Society and printed in our Transactions for 1899, called attention to the similarity between many of the symptoms produced by small and continued doses of *Oxalic acid* and those of neurasthenia, remarking the "aversion to

mental and physical exertion, the muscular prostration, headache variously located, and sensation of heat in the head, the dyspeptic symptoms, the sexual excitement, the palpitation, the pain and weakness in the back, the numbness and tingling in the extremities, the easily-produced perspiration, and the restless sleep with unpleasant dreams—all common symptoms in sufferers from neurasthenia and all prominent in the provings of oxalic acid" (*loc. cit.*). To these remarks I appended short notes of several cases of neurasthenia in which oxalic acid had proved useful, and further experience of the drug has only confirmed the opinion I then expressed as to its probable value in the treatment of this form of nervous disorder, and though I find it difficult to differentiate between the indications for picric and oxalic acids, I am inclined to think that the more the mental powers are benumbed and the greater the condition of sexual excitement, the more likely will picric acid be useful, while oxalic acid is, perhaps, more suitable to the cases where pain is a more prominent symptom (as in spinal neurasthenia) and where the stress of the attack falls upon the digestive rather than the sexual functions. I find the best results from oxalic acid given in the 3rd decimal dilution, which rarely causes a slight but temporary exaggeration of the symptoms.

Perhaps the next generally useful medicine in this form of disease is *Phosphoric acid*, which, while it produces a condition closely resembling neurasthenia, seems to be particularly indicated when vaso-motor depression is marked, where we have a soft, too easily compressible and jerky pulse, with clammy hands and feet, and where the slightest physical (or even mental) exertion causes sweating. These symptoms are distinctly traceable in its provings, especially in one by Dr. Woodward (*Cycl.*, i., 60), in whom the drug in doses of the 1st decimal dilution caused dull occipital headache with hazy vision and mental depression, sexual excitement with palpitation, increased frequency of pulse, oppression of the breathing, cramps in the hand and leg, and aching in the lumbar spine, with profuse sweating on exertion. Dr. Hughes ("Pharmacodynamics") remarks

that phosphoric acid is to nervous debility what iron is to anæmia, and it is particularly adapted to that condition of nervous exhaustion which is so liable to remain after an attack of influenza. In neurasthenia due to sexual excesses, too, it is remarkably useful, and frequency of micturition, which is a symptom particularly marked in these cases, seems to be a special indication for phosphoric acid. I usually give it in the 1st decimal dilution (= ac. phos. dil. B. P.).

Phosphorus is a drug of which I have had very little experience in its homœopathic application to cases of neurasthenia. While an undoubted stimulant of the central nervous system, it does not present in its pathogenesis (at least in the narrative provings in the Cyclopædia) anything like so complete a picture of nervous prostration as do the substances already mentioned. Among a multitude of symptoms which I fear must be attributed to expectant attention on the part of provers may be found: heaviness of the head, with headache of uncertain character and mental dulness. Vertigo appears to be a prominent and troublesome symptom (one prover had "persistent vertigo as though intoxicated, with heaviness and confusion of the head"; another describes "staggering gait"); numbness and formication of the extremities are recorded; and one prover had considerable sensitiveness to pressure on the spine between the scapulæ. Tinnitus with palpitation was occasionally experienced, and insomnia from mental excitement and sexual irritability were more frequently observed. On the whole, I should be inclined to reserve phosphorus for those cases in which vertigo is a prominent symptom, especially if combined with that state of the cerebral vessels in which the patient is never free from consciousness of the pulse, or, as one of my patients describes it, "of knocking in the head." It will probably also be found useful in cases of neurasthenia where sexual irritability is a marked feature of the disorder.

The *Iron* salts have a decided influence in depressing the tone of the vaso-motor system, as is evidenced by the flushing of the face and the throbbing fulness of the head,

where every beat of the heart is distinctly felt (or heard); and when we remember, too, that the primary stimulation of the mental and bodily faculties was followed, in the majority of provers, by a corresponding condition of muscular enfeeblement, with weariness and weight of the limbs and disinclination for mental and physical exertion, we may well expect iron preparations to be useful in some forms of neurasthenia. So they are, in my experience, but I believe the applicability of ferrum is chiefly limited to those cases where head symptoms predominate, with a tendency to congestion of the vessels of the head, and, in women, where a similar condition occurs in the pelvic organs, leading to backache, hæmorrhoids, bladder irritability, and leucorrhœa or menorrhagia. In such cases I have used the phosphate (and more recently the picrate) of iron with advantage, in doses of the 3rd decimal or 3rd centesimal dilution.

These, then, in my experience, are the most reliable medicines for the general treatment of neurasthenia: picric acid, oxalic acid, phosphoric acid, phosphorus, and the phosphate and picrate of iron; but there are three others that deserve a place in this category, though on a somewhat lower standpoint. These are the *oxide* and *phosphide of zinc* and *silica*. The zinc salts referred to appear to have a pathogenetic action somewhat like that of phosphoric acid producing an exhausted condition of the nervous system, with little precedent exaltation, and they are probably not of much use where nerve irritability is a marked feature, though in the chronic headaches of overworked business and professional men and women they are often particularly serviceable. Localised coldness seems to be a characteristic symptom indicating the zinc preparations, and I well remember a gentleman who became neurasthenic from long-sustained business worries, whose very frequent symptom of a feeling as though a quantity of cold porridge was lying behind the sternum, was completely and permanently cured by the oxide of zinc, 2nd centesimal, after many other drugs had been tried and found wanting.

Silica has a somewhat similar curative action in chronic headaches from brain-fag, but is particularly applicable for

the troublesome and the very persistent aching of the neck muscles and occiput, from which so many neurasthenics suffer, for which, however, oxalic or picric acid generally suffices.

But besides these drugs useful in the general treatment of nervous exhaustion, there are several that are distinctly efficacious in the various complications or particular phases of neurasthenia. Such, for instance, are cactus, spigelia, and nitroglycerine, on account of their power of controlling the nervous supply of the circulatory organs. *Cactus* I have found answer admirably, over and over again, in doses of the 1st decimal and the 1st centesimal dilutions, for the palpitation and abnormal sensations about the heart, with rapid pulse, whether attended by pain or not. These symptoms are well marked in its pathogenesis, and we may note the very characteristic symptom, almost pathognomonic of cactus, the sensation as though the heart were grasped by the hand, which I do not think I have ever failed to cure with this drug. *Spigelia* is, I believe, more applicable in proportion as pain radiating to the arm is a characteristic feature; and in one patient in particular, where there was in addition the symptom that has been considered a "key-note" for spigelia--pain shooting from the nape or occiput to the forehead and eye-balls, especially the left, the drug acted like magic, both this symptom and the cardiac pain and distress disappearing almost from the first dose of the 3rd decimal dilution.

Notwithstanding the frequent use and undoubted value of *nitroglycerine* (glonoin) in attacks of angina pectoris, the relief obtained depends entirely upon the physiological effect of the drug, and cannot be claimed for homœopathy; but in cases where there is marked relaxation of the vaso-motor system, such as is frequent in neurasthenia, where the flaccid vessels become over-filled and pulsate violently in obedience to the accelerated action of the heart, then we have a condition in which the use of this drug is not only homœopathic but eminently curative. Nitroglycerine, in dilutions of not less than the 3rd centesimal, is frequently indicated and is often markedly beneficial in tachycardia,

though it might be worth while remembering the greatly increased cardiac action which results from feeding with thyroid extract, and which would probably be found useful, in small doses, in the treatment of this condition, when not associated with the other symptoms of Graves' disease.

I have already referred to the influence of phosphorus (inter alia) in producing vertigo, but I believe the drug *par excellence* for this symptom is *Cocculus*, and I have seen the best results in neurasthenic vertigo from its administration in the 3rd decimal and 3rd centesimal dilutions; and the nearer the vertigo approaches in character that present in sea-sickness, or in some nervous patients by riding in a carriage or travelling by rail, the more perfectly will the drug fit the case.

Actæa (Cimicifuga) I have frequently found of service in patients with neurasthenia where muscular exhaustion was a prominent symptom, with much pain about the cervical region, with inability to hold up the head for any length of time, or when there is a constant attempt to get rid of the feeling of fatigue or aching by drawing the head backwards upon the spine. Whenever, too, there is asthenopia with hyperæsthesia of the retina, we may give actæa with expectation of relief of the symptoms. In the sexual sphere, at least in women, the drug has analogies with ferrum, and we must not forget, in this connection, that "key-note" symptom of actæa, infra-mammary pain, which so frequently accompanies congestion or irritation of the pelvic organs, such as is so frequently present in women suffering from nervous prostration. In another form of muscular disturbance I have found *cuprum metallicum* and *cuprum aceticum* of great service. I allude, of course, to those cases where muscular spasm is a marked feature of the case, spasm which may vary from the fibrillary flickering of the eyelids to severe and persistent cramps. Both preparations should, I think, be given in fairly high dilution—the 6th or 12th centesimal, if we are to get the best results from their administration.

There remains to be considered in connection with the medicinal treatment of neurasthenia that very important

accompaniment of many cases, insomnia, an accompaniment which, working in a vicious circle, is as often a cause as a consequence of the disorder, and one of the most difficult to treat satisfactorily of all the protean manifestations of nervous exhaustion. Such, at least, is my experience, and though it may be possible at times to quell the nervous excitement which produces insomnia by the administration of such drugs as coffee, nux vomica or gelsemium, I have usually found it better, in any bad case of insomnia, to ensure the patient a few nights of sound sleep by the aid of hypnotics, of which I prefer bromidia in dram doses, and then, when once some control has been obtained over the over-wrought nerve cells we may replace the physiological hypnotic by a homœopathically selected remedy with advantage.

These, then, gentlemen, are the medicines with which I have been in the habit of treating the principal forms and symptoms of neurasthenia, but it follows as a matter of course that a *repertoire* so complete as ours will contain many drugs that will prove useful against some of the out-of-the-way symptoms of nervous exhaustion, and indeed, to quote an observation of Dr. Worcester, the writer of the article on Neurasthenia in "Arndt's System of Medicine," "there is hardly a remedy in our materia medica that may not be useful at one time or another."

I have confined myself in these remarks entirely to the medicinal treatment of this class of nerve disorder, because I believe it is here that we who practice homœopathically have such a distinct advantage over the practitioners of the old school, who rely so largely in the treatment of nervous exhaustion upon general and hygienic measures, such as rest, massage, baths, electricity, &c., all of which are equally at our disposal, but which, though always useful and absolutely necessary, are, in my opinion, greatly supplemented by the powers we possess in homœopathically selected medicines.

Dr. GOLDSBROUGH thanked the author for having treated the subject of Neurasthenia in such an exhaustive manner.

On account of its protean manifestations there was a very great difficulty in systematising knowledge by anything like generalisation, or by pathological reference. As far as was known there was no pathology of neurasthenia; no organic lesion had been discovered, and therefore there was no pathological groundwork from which to proceed. But there were two generalisations which might form some sort of guide in estimating the value of symptoms. He believed a discrimination of symptoms to be very important, especially when the allied nature of neurasthenia and hysteria was considered. All hysterics were really neurasthenic, but all neurasthenics were not hysterical. Hysteria consisted primarily of a peculiarly morbidly mental appreciation on the part of the patient, of his own bodily states, and the great difficulty in practice was to distinguish the mental appreciation on the part of the patient of his own bodily states, a discrimination which medical practitioners ought to form of them. This having first been attempted, the two generalisations on neurasthenia of value, were that of increased irritability of the nervous system in whatever sphere it might be affected, and a diminished functional value, *i.e.*, a weakness in result. If those principles were applied in any particular physiological sphere in which the symptoms were present it would be found a good guide in selecting medicines, always provided that the genuine neurasthenia had been distinguished from the hysterical state. The increased irritability and weakness were combined and showed themselves in the sensory sphere in exaggeration of the normal sensory functions described by the author. He agreed that picric acid was probably the best homœopathic medicine for genuine neurasthenia, but he should be inclined to go to a higher dilution than the author mentioned. He had heard neurasthenic patients complain of aggravation of their condition from the sixth dilution; and he never thought of prescribing picric acid in this disorder in lower than the twelfth dilution. He thought picric acid and phosphoric acid covered the ground to the exclusion of oxalic acid. He had used oxalic acid on several occasions, but had not obtained the result from it which he had hoped after reading the paper which Dr. Ellis contributed to the Liverpool Branch of the Society. He (Dr. Goldsbrough) would include under phosphoric acid an increased irritability in a very marked way of both brain and spinal cord conditions, especially in the sexual sphere. He believed irritability was a distinct indication for phosphoric acid in the higher dilutions up as far as the third

or the sixth. He agreed with the author that the 1x dilution of phosphoric acid was suitable in the cases cited, but where finer effects of the drug were required higher dilutions should be used. He had not used phosphorus much in such cases. Pulsation was a very striking symptom, and one which troubled the patient greatly. Two drugs seemed particularly indicated for that symptom, one valerian and the other digitalis. If the two conditions for the two drugs could be discriminated very good results would be obtained. He had never used valerian in men, but had used it often in neurasthenic women, especially if the symptoms of pulsation through the neck and up into the head, which seemed to come from the pelvic organs, were tormenting symptoms. He used valerian in the first centesimal or third decimal dilution. He believed zincum was indicated in states where there was great mental torpor. The author had not mentioned several other drugs which were useful in neurasthenia, such as argentum nitricum, aurum and anacardium. There were cases of neurasthenia which distinctly resulted from abnormal sexual irritation, in which he had found anacardium useful, in those cases when the patient was particularly self-conscious and constantly feeling that he was going to do something wrong, or that someone or something was haunting him. He would also suggest cicuta, which had served him extremely well in local spasms in conditions which one could only attribute to a neurasthenic state. Lastly, he wished to make some remarks on the treatment of insomnia. He agreed with the author that hypnotics could not be altogether dispensed with. He had not used bromidia, he had a strong objection to using mixtures of drugs in any case, so he generally kept to single drugs, and he believed they could discriminate a good deal in the use of hypnotics as to which would be the better in particular cases. For example, where the neurasthenic condition followed from pelvic symptoms he believed bromide of potassium stood above everything else, but it must not be given in very large doses. When the mental sphere was particularly excited he believed hyoscine was specially indicated. He had been treating a lady for about nine months for a tormenting continuation of thoughts which prevented sleep, and hyoscine had been particularly valuable in her case. Trional and sulphonal were fairly safe if not continued too long, but after the use of hypnotics the ordinary homœopathic remedies, such as belladonna, chamomilla, gelsemium and actea, were useful.

Dr. DUDGEON said the literal meaning of neurasthenia was nervous debility, but the term was used by Dr. Ellis to include many other disorders, which in former times we should have called nervous excitement, hysteria, cerebral irritation, congestion, &c. Those different affections described by Dr. Ellis were not made more easily understood or treated by being slumped together under one common denominator. They had to be described separately and treated specially, so that the inclusion of them all in the one word neurasthenia seemed superfluous and misleading. The word neurasthenia reminds one disagreeably of the crude pathological doctrine of John Brown, with its *sthenia* and *asthenia*, which had such a disastrous effect on the therapeutics of his day. The non-medical public seem to have adopted the word, for it is no rarity to meet with patients who tell you, when you ask them what's the matter, that they have neurasthenia, and they are quite astonished that you can't immediately give them a remedy for their disease which they have adequately described by that wonderful word. There is a great tendency nowadays to refer diseases to the nerves which formerly were believed to belong to quite other parts of the organism. Some time ago a patient came to see him suffering from chronic urticaria. He said his doctor in Brighton had treated him for some weeks without benefit, and had advised him to consult a London skin specialist. He went to this great man, who asked him what was the matter. On being told that he had urticaria, the dermatologist exclaimed, "Go away, you are not a case for me, I am a skin doctor." "Well," said the patient, "is not mine a skin disease?" "No, nothing of the sort, yours is a nervous disease, and I don't treat such cases. Good morning." So he came to the speaker, who did not mind what the disease was called according to the latest pathological fad, but gave him the medicine homœopathically indicated, and he rapidly recovered. Diseases were frequently called nervous and treated as such which were not that at all. A gentleman who had a very annoying pain in the hypochondrium, apparently intercostal neuralgia, consulted many home and foreign doctors, one of whom persuaded him that his disease was nervous—possibly neurasthenia. He was treated in a Weir-Mitchell establishment for six weeks without benefit. He came under the speaker's care two or three weeks ago. He found that though his stomach was weak, he was an enormous eater; he told him to eat little and seldom and prescribed lycopodium; he saw the patient a few days

ago; he said he was quite well and that he ate very sparingly. In conclusion, he was struck with the masterly description Dr. Ellis had given of the various diseases he had included under the name of neurasthenia, and he congratulated him on the well-merited success of his treatment.

Dr. DYCE BROWN agreed with the author in many of the ways in which he treated neurasthenia, but there were a few points on which he held a different view. Dr. Goldsbrough had correctly remarked that neurasthenia was a disease of nervous exhaustion which showed itself by an extreme amount of irritability and great excitement. Very often there was a quick pulse and palpitation, and an increased temperature, not from any inflammatory state, catarrh or local condition, but from the state of extreme nervous excitability. There were practically two stages, first the state of extreme nervous excitability, and secondly, when that stage passed off, the feeling of weakness and exhaustion of the nerves. The treatment required in the two stages was quite different. In the first stage not only absolute rest but medicines which tended to allay extreme nervous excitement were required. His favourite prescription in such a case was to keep the patient in bed for a week. Patients very often thought they were doing the best for themselves by taking long walks, thus fatiguing themselves and doing a great deal of harm. That, however, was one of the most prominent in the symptoms of the complaint, a desire to be always "on the go." This symptom must be treated by insisting upon the patient having absolute rest. He then found that aconite and belladonna given in alternation in the third centesimal dilution had a beautiful effect, in a short time quieting the nerves wonderfully, especially where there was an increased temperature. Actæa was also a very valuable remedy in such cases; it quieted the whole of the nervous system, promoted sleep and removed headaches. If given for a week or ten days it was of great advantage to the patient. Gelsemium was also of considerable value. The rest having been obtained the second stage was entered upon, the patient lost the extreme excitability, irritability and restlessness, and then another class of medicines came in, such as picric acid, ferrum picricum, ignatia, phosphoric acid and nitric acid. He had often prescribed oxalic acid, but had been disappointed with the results. Argentum nitricum and anacardium were also beneficial, the latter especially when the acute stage of the disease had passed and where the symptoms resulted in a

general feeling of tiredness and disinclination for exertion. In the final stage, strychnia was of great value in strengthening the patient's nervous system and digestion. He never prescribed hypnotics for insomnia. He tried them years ago, and came to the conclusion that where the ordinary homœopathic medicines which suited the whole case did not relieve the insomnia quickly, the ordinary allopathic hypnotics did not do any better. In his experience bromide of potassium and morphia produced more excitement and depression afterwards than made up for any short sleep which they produced. One of the most valuable and beneficial remedies was a wet compress on the abdomen at night, which relieved headache and promoted sleep most markedly, and was one of the most valuable adjuncts in the treatment of neurasthenia. A spirit compress down the spine was another valuable remedy.

Mr. DUDLEY WRIGHT said he had recently recovered from an acute attack of neurasthenia of a toxic character. For fifteen years he had smoked cigarettes, cigars and pipes, more particularly cigarettes, and during the greater part of that time he inhaled everything that he smoked; it was therefore not surprising that at the end of that time he had a certain amount of toxæmia, which manifested itself in a severe attack of neurasthenia. In recalling the past he could easily see how the disease had been going on for some years. He did not consider that his temper was ever very good, but he was quite certain that great irritability of temper was a first sign that something was going wrong. In the second place a curious symptom occurred at night; as he was dropping off to sleep he heard peculiar sounds, and as often as not his own or somebody else's name called, or a word spoken. He took belladonna, but it produced no improvement. The symptoms increased, and not only occurred at night on dropping off to sleep, but during the day, if he was tired. He also noticed that in speaking he clipped his words, and that when writing he dropped out whole syllables in different words. It was peculiar that he had a dread of telling anything about the matter to anybody. As the symptoms did not decrease he went away in September for a few weeks holiday, in order to get plenty of exercise, with the result that after tramping about with a heavy gun, shooting in wet fields, he made himself very much worse. He decided that a different form of treatment was necessary and went to Cornwall and rested, with a good result. He still did not know it was the smoking which was causing all his trouble, and at

the time he was smoking more than usual. His symptoms again increased, very bad tremors coming on. He came back to London and consulted Dr. Goldsbrough, who advised him to go for a prolonged rest, which he did. He gave up smoking after a time, and found that the other symptoms began to amend. While the disease lasted he had a dread of being alone. One particular symptom of the insomnia was that occasionally he appeared to receive a severe blow on the back of the head which made him feel sick, this would occur on dropping off to sleep, and kept waking him up. All the symptoms were very much worse after food; his stomach became dilated, hyperchloridia came on, and he constantly vomited up stuff so acid that it put his teeth "on edge" for three or four hours at a time. His vaso-motor symptoms were very marked indeed. His pulse was as soft as it could be; the slightest thing brought on flushing; the mere stroking of his face by his hand produced a bright scarlet flush, urticaria and dermatographia were often present. He quite agreed with Dr. Dyce Brown that the treatment for neurasthenia was rest in bed. It was the very worst plan of treatment in the early stages to send a patient away to get exercise in the open air. Hot applications to the spine were also a great relief. Medicines according to his experience should be given only the highest dilutions. He had found that hypnotics were as poisons to him; bromidia and chloral gave him very restless sleep, and made him very much worse the next day; phosphoric acid upset him altogether. The only hypnotic that did him any good was aconite 3x. alternated with belladonna 1x. Finally he gave up taking medicines altogether and made up his mind to get out of town every night, and it was the fresh country air with gentle exercise which completed his cure. He believed fresh air and exercise were excellent when patients had reached a certain point, but in the earlier stages the very best thing was to put them in bed and keep them there.

Dr. BLACKLEY thought there could be no doubt that heredity played a very important part in the genesis of neurasthenia, certain families and races being particularly prone to it. He himself had noticed it very frequently in Jews, whose nervous organisation was undoubtedly of a high order; they were also gluttons for work and would frequently go on night and day until any particular task was accomplished; usually with the inevitable reaction to follow. The author had not mentioned that the symptoms were always worse in the morning. If the

patient did not wake at two o'clock he always did at four or five, and if he got up he felt limp; the only remedy was for the patient to go to bed again, and if he could not sleep, to take something very simple, such as a little milk, when he might go to sleep again. The symptoms of oxaluria and phosphaturia were very prevalent in neurasthenic patients. By those symptoms he had been able not only to determine the exact condition of the patient but the requisite remedy. For insomnia pure and simple he had adopted what might be called a dietetic and not a medicinal remedy, cocoa; if a patient woke up at two in the morning he persuaded him to have at his bedside a Clarke's Food warmer with a half-pint of cocoa already over it. Times without number he had seen a man drink his cocoa, go to sleep within a quarter of an hour, and sleep for three or four hours, the beneficial effect of which was very considerable. He had been very forcibly struck at times with the loss of memory which was apparently a parallel condition to the want of muscular power; it was a loss of the voluntary power of recalling things which were perfectly well-known; anyone who had had an attack of neurasthenia knew that he could not call to mind at a moment's notice the very simplest things which he knew perfectly well. Judging by what the author and other speakers had said he was rather a heretic in the matter of remedies, because he had used strychnine a good deal in the treatment of neurasthenia, not in allopathic doses but small doses, *i.e.*, in the third or fourth decimal. Of the many preparations of strychnine he liked phosphate the best, and believed the small doses were perfectly hœmœopathic to the condition. The increased irritability, the increase of the reflexes, the paralysis and other symptoms were thoroughly characteristic of strychnine. He entirely agreed with Dr. Dyce Brown's and Mr. Dudley Wright's remarks with regard to rest; he had made it a standing rule to persuade patients first of all to go to bed and then to choose the most relaxing spot they could think of in the whole of the three kingdoms, where sleep was a chronic condition; the more sleepy they felt the better they became. He had had one very bad attack of neurasthenia which lasted many weeks, and he found the greatest possible benefit from an alternating hot and cold douche to the spine. Nothing outside of medicine had done him so much good, and he had seen it do just as much good to other patients.

Dr. ROBERSON DAY said he had found ignatia an exceedingly valuable remedy in all cases of neurasthenia. One of the

worst cases he ever saw was in a young man, about thirty years of age who had been exceedingly worried by business and much responsibility, who was suffering from very severe neurasthenia. Nothing did him so much good as ignatia in the first decimal dilution. He also had paralysis of the limbs and general symptoms of fear and terror. In two other cases one of the great symptoms was the fear of being alone, mentioned by Mr. Wright, and especially going out alone, and in all those cases ignatia was a most valuable remedy. With regard to muscular development it was not his opinion that all neurasthenics were wanting in nutrition, one patient was an ardent tennis player and athletic. There could be no doubt that influenza had largely added to the disease. Most patients had previously had one or more attacks of influenza, which seemed very frequently to leave neurasthenia as one of its many sequels. He had found that the application of belladonna liniment to the spine had been invaluable, following the use of the constant current of a battery to the spine which made the skin more receptive to the belladonna.

Dr. STONHAM said that Dr. Goldsbrough had dilated on the necessity of distinguishing between neurasthenia and hysteria. There was one other disease often mistaken for neurasthenia, namely, gouty conditions where there were stomach symptoms. From a disordered digestion in a gouty subject a great many symptoms of neurasthenia were obtained, such as loss of memory, debility, and especially the miserable, depressed feeling. Headaches, various pains about the back of the neck, and disturbances of the sexual function occurred in patients whose blood was too full of uric acid, and who required careful diet more than anything else. Picric acid was good not only for such gouty conditions, but for neurasthenia. The author had mentioned oxalic acid as a remedy with which most of those who had taken part in the discussion had not had any success. Through reading Dr. Ellis' previous paper, he gave oxalic acid in the case of a young girl about 25, who had marked neurasthenic symptoms in every respect, whose especial symptom was a very severe pain in the hip, the patient promptly getting well. The case, however, was an illustration of the caution necessary in the matter of dilution. He gave her 2x, under which she got perfectly well of the hip pain, but had a burning sensation in the throat and tongue which had not yet disappeared.

Dr. JAGIELSKI corroborated Dr. Dyce Brown's and Dr. Blackley's statements that cold douches and cold applications

were excellent remedies for the treatment of neurasthenia. Electricity was also a valuable remedy. From the discussion which had taken place he thought there was a great weakness in the nomenclature of the disease.

Dr. ELLIS, after thanking the members for the kind reception given to his paper, in reply to Dr. Goldsborough said he had no experience of valerian. Digitalis, the other medicine Dr. Goldsborough recommended for pulsation, he had always looked upon as a drug which primarily caused high tension. In the majority of cases neurasthenia produced low tension, so that he looked upon the pulsation caused by digitalis as different from the pulsation obtained in the majority of cases of neurasthenia. He had prescribed anacardium over and over again in nervous diseases but it had been a complete failure, and he had never seen any good result from it. He had frequently given aurum where the mental depression corresponded to the condition caused by the drug. He had given a good many of the other medicines mentioned in the discussion but thought they were not of sufficient interest to bring before the Society in comparison with those he had mentioned. He had used argentum nitricum more especially where there was gastric pain. He had the greatest faith in hyoscine as a hypnotic, usually finding it most suitable in organic disease of the nervous system. In regard to Dr. Dudgeon's remark that neurasthenia apparently included a number of diseases, he took exception to neurasthenia being called a disease. It was scarcely a disease or an entity, but a condition of the nervous system marked by irritability along with debility; the two went together. Dr. Dyce Brown had suggested there were two stages, one of excitability followed by the second stage of debility. In his experience there were not two stages, the two running side by side. A weak nervous system was an irritable one also. Of course there might be variations in the amount of actual debility. Several speakers had referred to the differentiation between hysteria and neurasthenia, and he thought the case mentioned by Dr. Day where ignatia was found so beneficial must be put down distinctly to hysteria. There was a difference between the two. In reply to Dr. Moir, he did not think vaso-motor constriction was noticed as a rule in such cases. Mr. Wright's personal history was extremely interesting and coincided with his own experience in regard to cigarette smoking. He had been a small smoker for many years, but for at least two years had noticed that even one or two cigarettes were very apt

to produce headache, especially Egyptian cigarettes, which he believed were dosed with opium. It was after using Egyptian cigarettes in small quantities that his symptoms of neurasthenia became most marked. He had experienced, in exactly the same manner as Mr. Wright, various sounds when going to sleep. He had referred to hereditary influence in his paper where he stated that the cases in which there was a marked neurotic family history were more difficult to treat. It was quite true that the symptoms were usually worse in the morning. With regard to cocoa for insomnia he had found that that form of insomnia in which the patient woke at two o'clock in the morning was better treated by food than by any drugs. He had never looked upon strychnine as a useful drug in ordinary cases of neurasthenia, for the same reason that he disagreed with the use of digitalis in regard to pulsation. The characteristic of strychnine was rather to produce high tension. That indicated the point of differentiation between gouty symptoms, where there was usually a high tension pulse, and neurasthenia.

OUR RELATION TO PATHOLOGY.¹

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PATHOLOGY is not a science which deals with the essential nature of disease, nor is physiology one that deals with the essential nature of health, for the very simple reason that the essential nature of these things, like that of life itself, can never be discovered. What then do we mean by the term pathology? We mean, we can only mean, the science, or rather the study, of the functions of the organism when they have become changed or perverted by those modifications of life which we call disease. Health is life in perfection, as we know it; disease is imperfect life, with many grades and variations of that lapse from the high standard of life we term health. Just as physiology, which

¹ Presented to the Liverpool Branch. January 9, 1902.

has to do with the healthy functions, corresponds with pathology, so anatomy corresponds with morbid or pathological anatomy, and what is frequently termed surgical pathology. Pathological anatomy is strictly speaking not pathology, just as anatomy is not physiology; but owing to structural change being the result of disease just as much as perverted function is the result of disease, the study of structural morbid change has become included in pathology.

A century ago pathology, as we know it, did not exist. Not only the illustrious John Hunter, but everybody else, except the small and despised, though ever increasing, band of disciples of our noble teacher, Samuel Hahnemann, regarded, for instance, inflammation "as a process in which the normal acts of nutrition (says Erichsen), though altered and perverted, were more active than in health." How could they be normal acts if altered and perverted? A diseased process meant in fact, to the men who despised Hahnemann, an excess of life, more active nutrition, and, at least locally, greater vitality. Owing to the "Cellular Pathology" of Virchow, this view held ground, in spite of the teachings of Paget and Lister, until Cohnheim in 1867 demonstrated the migration of the leucocytes, and thus accounted for the appearance of new cells in the acutely inflamed area. Thus the truth has been established that inflammation is lowered vitality, an approach, in fact, towards death in the injured tissue. It is true that we do have pathological processes going on where the acts of nutrition are perverted and altered, but these should be regarded as abnormal acts of nutrition, certainly not "normal," as stated in "Erichsen's Surgery," where the author apologises for John Hunter's misconception. We have very active processes going on in the formation of new growths; but these, again, are the active processes of disease, they have nothing to do with health. Fresh facts having been brought to light, and fresh truths depending on these facts having been taught, of late years pathology has made great strides, and to-day we are, as regards all medical science other than that ill-formed stunted branch, "orthodox" therapeutics, in a very different position from what our predecessors were in the

days of Hahnemann. Why is this branch in the old school so stunted? Why do our "orthodox" brethren suffer so sadly from therapeutic paralysis? Surgery has made great strides; hygiene can to a great extent prevent disease, and when it has not gone too far hygienic measures are even sufficient to effect a cure; but when medicines are administered, either singly or in mixtures, by "orthodox" practitioners, how is it they are not given with confidence, and in a scientific manner? The answer is obvious to us all: their therapeutics is the only branch of medicine upon which the light of scientific knowledge, in spite of vain pharmacological efforts, has never shone; and that light never will shine until physicians universally admit the truth of nature's great law, *similia similibus curantur*.

The honest acknowledgment of therapeutic impotence on the part of the best of the leading men in the old school has given rise to several serio-comic episodes. There is a story told of a celebrated neurologist in London, I will not vouch for its truth, but it is as follows:—"A doctor brought up from the country a lady to consult this great man about her nerves. The case turned out to be an exceedingly interesting one, and both doctor and consultant were very enthusiastic about it. Hour after hour went by, and the poor lady sat fidgeting, obliged to listen to a long and learned discussion concerning the pathology of her case. Just as others find out to their horror that they possess a liver, so this unhappy lady learnt that she was in possession of such dreadful things as neuroglia and ganglionic cells. She heard much about axis cylinders and the sheath of Schwann, but never a word was said about a remedy for it all. At last, in despair, she timidly ventured to hint how was she to get cured? "Oh yes," said her doctor, "what about treatment, Sir?" "Ah! to be sure, treatment; send her into the country, give her plenty of fresh air," said the great man. "But we have just come up from the country," said the doctor, "Oh, then," said Sir ——, "take her back again." Would not consultant and doctor have both forgotten such a trifle(?) as treatment if the poor patient herself had not reminded them of it? If they had been homœo-

pathists, the pathogenesis of the corresponding drug would have roused an equal enthusiasm with the pathology of the disease. What a pity prejudice against Hahnemann has kept such giants in pathology such pigmies in therapeutics. The uninitiated laity, at least the majority of them, have a sort of fixed idea, altogether a wrong one, that if the doctor only knows what is the matter, he is in a sure way of curing his patient; that all depends, in fact, upon a correct diagnosis, provided the disease does not belong to a very large class the allopaths have arbitrarily pronounced incurable. Supposing "Dr. A." has dosed "Mr. J. B." with pailsful of physic, and the patient is no better for it all, "Mr. J. B." and his friends will almost invariably attribute the want of success to their belief that "the doctor does not understand the case." It is always an erroneous diagnosis that is blamed, not the horrible mixtures of many medicines. We, in the profession, know better; we know the truth, that a physician is, as often as not, perfectly correct in his diagnosis, and yet may be more helpless than a babe as far as a real cure is concerned, for a babe could not do harm and he can; his horrible mixtures generally do. He has a most perfect knowledge of his patient's prison walls, but is as helpless as his patient in the means of escape. It is quite pathetic, the anxious demand there is for a diagnosis.

The question is rarely asked, "Can you cure me?" but often it is, "What am I suffering from?" If you give the thing a name the patient and his friends are comparatively happy. Even although the name is an ugly one, their anxiety is relieved; they, as they think, know the worst. A knowledge of pathology on our part is, therefore, of service to us on this account. It is also of great importance to us in doing our duty to the State when we have to name correctly diseases for the purpose of notification and for the public health. A knowledge of pathology is very essential for prognosis, although this may be largely modified by our confidence in the properly indicated homœopathic remedy. Dr. Carroll Dunham, in his book on "Homœopathy, the Science of Therapeutics," cites several very striking instances in which a knowledge of pathology, apart

altogether from therapeutics, is of vast importance to the physician. They are cases drawn from the records of actual practice. He writes:—"A physician is called in haste to an elderly person whose only intelligible complaint is of great anguish in the præcordia, and which appears, by its violence, to endanger his life. If he be in immediate danger of death, the state of his affairs renders it desirable that his family should be informed of the fact and how long he will probably live. The prognosis is demanded, and its correctness is a matter of great importance. The medical man must rely on his knowledge of pathology for a conclusion respecting the nature, cause, and probable termination of the disease. With this, if it be a fatal case, the function of the physician ends. Yet how important may this function be to the survivors! Here is no question of therapeutics. It is merely a problem in the natural history of disease, which the physician regards just as a naturalist would a problem in physics, and just as if the idea of curing disease had never entered the head of man. Again, he is called to a man who lies in an epileptiform convulsion. It is well known that convulsions may arise from the most various proximate causes. They may result from physical irritation of the nervous centres, or of the extremities of the nerve filaments, and in this case they will cease to recur so soon as the cause of irritation is removed; or, on the other hand, from modification of the vital functions, such as are beyond our observation and which we can only reach by the action of specific agents. The first problem before the physician is to determine, by a study of the phenomena which the patient presents, to which of these great classes the case before him belongs. It is indispensable to determine this question, because the treatment of the case may depend directly upon it; in the former case it may be mechanical or hygienic, in the latter it must be therapeutic. He determines, we will suppose, in the case before us, that the convulsion is eccentric in its origin and reflex in its nature, and he sees reasons for suspecting that it depends on some cause of irritation in a nerve filament of the lower extremity. He seeks in the history of the case, and by a

physical examination, for this irritating cause, and discovers that the patient had, years ago, received a gunshot wound in the thigh. There is no evidence that the ball was ever extracted. A close examination seems to confirm the conjecture that it still lies imbedded in the muscles of the thigh." (The Röntgen rays now-a-days would reveal it.) An exploratory operation is performed, and the bullet is actually found lying upon a branch of the sciatic nerve. It is removed, and the patient has no more convulsions." This occurred in the practice of a distinguished surgeon in America. "The physician's knowledge of pathology," Carroll Dunham continues, "enabled him to discriminate between the varieties of convulsions as to their proximate causes; his acquaintance with physiology familiarised him with the phenomena of reflex nervous action, and enabled him to detect the seat of the irritation, and finally his dexterity in practical surgery, placed it in his power to cure the patient of a dreadful malady. But in this case from beginning to end therapeutics was not called into play."

Pathology, therefore, is clearly shown to be of immense importance to us as practical physicians and surgeons, so long as we keep the application of our pathological knowledge within well-defined limits. Pathology may be a chart, but it can never become a compass. It behoves us as homœopaths to remember our guiding law, *Similia Similibus Curantur*," and not admit pathology as a basis in drug prescribing, *i.e.*, therapeutics. The folly of this is the folly of so-called "rational" medicine; a folly which, like that of alchemy, is always aiming to accomplish that which can never be accomplished. "Rational" medicine, which seeks in pathology a basis of therapeutics, errs, not in observing pathological facts, but in evolving questionable theories. There is a theory for every disease in particular, and there are theories of the cause and essential nature of disease in general. We have to-day the microbe or germ theory of disease, and a bacillus is looked for that will correspond to every ill that flesh is heir to. To-morrow we shall have some other theory. Granting that these little microscopic wonders are intimately connected with disease,

they will never, I am certain, be found to constitute the essential nature of it. One form of bacillus may produce cholera, just as eating pork may produce a so-called "bilious attack," but the bilious attack is not the pork, and the cholera is not the bacillus. The bacillus and the pork are both merely stimuli, reacting upon the living body and bringing about that modification of life we know as disease. In the same way intestinal worms are not the disease, they are only the concomitants of certain diseased conditions favourable to their environment. Supposing, for instance, in our treatment of consumption we regard the tubercle bacillus as the essential fact, and our efforts are directed towards killing this bacillus, or, at least, neutralising the poisonous products of its life activity. We dose our patient with antiseptics, we saturate him with iodoform and kreosote, we even inject Koch's wonderful fluid, and yet our patient grows worse and worse, and sinks into the grave before our eyes; our knowledge of his bacilli has in no way helped us to save his life. Our treatment was on a pathological basis, and yet quite unsuccessful. The tubercle bacillus is quite an old friend (or enemy) of the pathologist; and yet to-day the little thing is as defiant as ever, and, what is more, all his brother bacilli belonging to other diseases are equally defiant and un-get-at-able. Whatever they may say about antitoxins, I think our friends the allopaths will at least admit that by a frontal attack with *drugs* they can neither kill the tubercle bacillus nor any other bacillus. We are to-day falling back upon hygiene, we rejoice that we have the comfort of a certain measure of success in the open-air treatment of consumption; but fresh air alone is not always sufficient, the obstinate little bacillus will still go on living, although fresh air is by far the best "blood purifier."

Our knowledge of pathology also may assist us when we find it necessary to resort wisely and judiciously to what are strictly palliative measures. It is important sometimes to bail out the water, although it is still more important, of course, to plug up the leak of our sinking ship. Pathology may indicate to us that there is a leak, and may further indicate that immediate palliative measures are necessary;

but therapeutics based on pathology will never stop that leak. The real cure can only be achieved by obeying our natural law, and it matters not to us what is the essential nature of disease, our natural law we find is enough for that essential nature. We are perfectly satisfied with *similia similibus curantur*.

The great double of pathology and natural disease is pathogenesis and artificial disease. Although our drug pictures do not depend upon the production of structural changes, it would be very hard on the provers if they did, yet there is no doubt that drugs produce similar changes in medicinal disease to those of natural disease. Many of our polychrests, such as arsenic, bryonia, belladonna, phosphorus, &c., which are given to patients suffering from inflammatory conditions, are well known to cause inflammation in both healthy men and animals. We all know what grand remedies bryonia and phosphorus are in pneumonia, and the lungs of dogs poisoned with bryonia are found inflamed, also the lungs of persons poisoned by phosphorus are found hepatised.¹

These facts do not establish in the slightest degree pathology as a basis of therapeutics, they only show that the truth of the homœopathic law is evidenced in the ultimate results of both natural and medicinal disease. We are not guided by evidence of pathological changes in giving our medicines; we always hope to get our patients under us long before there are any pathological changes; but when there are such changes or the approach to them indicated by what we call objective symptoms, they are, to us, often all the more indication for a certain drug.

But this is not always so, and subjective symptoms are the true pathognomonic ones, and of most value when clearly indicating a drug. For instance, in gastritis arsenic may be at once thought of, because it produces acute gastritis, and is known to be exquisitely homœopathic to the condition; and yet, as in a case of mine lately, another drug, which may or may not cause the same pathological changes,

¹ According to Dr. Kaspar, of Vienna, the phosphorus pathogenesis is a perfect picture of erethistic typhus (cerebral and abdominal).

may be more clearly indicated by the subjective symptoms. My case of chronic gastritis was scarcely benefited at all by arsenic, but she revealed to me later well-defined symptoms of lachesis, and lachesis immediately cured her.

We are to endeavour intelligently to grasp the pathological condition as a great help to us in our knowing what we are doing; but we can also, because of our knowledge of homœopathy, make use chiefly and very successfully of those experiences and mere sensations our patients tell us about, the subjective symptoms so useless to, and so despised by, our allopathic and pathology-theorising brethren.

Pathology may be to a great extent a chart, *i.e.*, the facts not the theories, but it cannot be our compass; the law of similars is our compass, and our helm by which we pilot our patient back to health is the pathogenesis of our drugs; the symptoms in disease point to the corresponding pathogenetic effect of the drug, which, *ipso facto* becomes a remedy. A bias against the law of similars in studying medicine, is like trying to understand chemistry and yet rejecting the law of chemical affinity and definite proportion. In his book "The Science of Therapeutics," page 12, Dr. Carroll Dunham gives a tabular statement which clearly shows the nature of therapeutics as a science and its harmony with other natural sciences; for every inductive natural science (he says) consists *elementarily of two series of independent phenomena, connected by the formula of their general relation.*

THERAPEUTICS.

Morbid Functions and Organs, or, Pathology and Pathological Anatomy, or, Sick Phenomena.	} Therapeutic Law.	{ Toxic Functions and Organs, or, Pathogenesis and Pathogenetic Anatomy, or, Drug Phenomena.
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PHYSICS.

Phenomena of the Sun, as regards Volume and Density.	} Law of Attraction.	{ Phenomena of the Earth, as regards Volume and Density.
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CHEMISTRY.

Properties of Potassa.	} Law of Chemical Affinity and Defi- nite Proportion.	{ Properties of Sulphuric Acid.
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OPTICS.

Properties of the Lumin- ous Body.	} Law of the Diffusion of Light.	{ Properties of the Light- receiving Body.
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Further on in his book, page 16, Dr. Dunham says: "By all means investigate and theorize, but do it as studying the science of pathology, not that of therapeutics, and avoid most carefully making these theories, which can be at best no more than temporary aids to the observation and grouping of phenomena, the basis of a practical science. If, however, they throw light on the study of phenomena, render our observations of them more keen and more exact, or afford us connecting-links between isolated groups of phenomena—and they will do all this—they will render valuable *indirect* aid to the science of therapeutics, just as similar investigations of light have advanced our knowledge of optics." On page 28 he says: "The advances in pathology, great as they have been, have not altered the relation which the phenomena of natural disease bear to those of drug disease. These phenomena respectively, whether rudely apprehended or clearly and fully understood in all their relations and interdependencies, still bear the same relation to each other expressed by the law *similia similibus curantur*. And we can imagine no possible development of the sciences of pathology and pathogenesis which could alter this relation." On page 31 he says: "We are able to get a complete picture of the morbid symptoms only by an orderly and methodical investigation; and such an investigation is possible to those alone who are familiar with the relations and sequences of morbid phenomena—that is to say with pathology. A simple reference to practical experience will prove this. A patient complains of pain in her left hypochondrium, distress and faintness in the epigastrium, vertigo and various symptoms of dyspepsia, but never thinks of mentioning—perhaps is unconscious of—certain evidences of uterine disease, to which the attention of the physician is instantly directed through his knowledge of the connection and sequence of symptoms. So of the connection of certain kinds of vomiting with diseases of the brain or of the kidneys, &c., &c. Clearly, then, physiology and pathology are quite indispensable to the physician, and they speak with little thought who affirm that these sciences are of no value to the homœopathist and are disregarded by him." Again he says on page 33:—

“Pathology, restricted to its proper sphere, is an indispensable auxiliary to the study of the subject of therapeutics. It may be further subservient in enabling the physician to group the symptoms of a case in such a way as more readily to marshal and retain them in memory. Nor is generalisation of this kind at all repugnant to the letter or spirit of Hahnemann’s method, or of homœopathic science. The generalisation to which Hahnemann objected was to that of disease in general upon nosological hypotheses made on theoretical grounds, and then applied *à priori* to individual cases.” On page 89 he says:—“When we cast aside all endeavour to base a method of treatment upon a theory of disease; when we give over all attempts to discover the inscrutable, essential nature and cause of diseases, and confine our observations to the phenomena of morbid action, whether these be material or functional, then we can take into account the pathological processes, as well as the pathologico-anatomical results. We are then in a condition to give due weight to the peculiarities of each individual case of disease, to study *it*, as under other circumstances groups are studied, and to give due attention to the modifying *idiosyncrasies* of the *individual*.” On page 112, Dunham sums up the relation of pathology to therapeutics in these words:—“Physiology and pathology themselves teach us that the science of pathology can, in no sense, serve as a basis or foundation of the science of therapeutics. They show us that whereas pathology is the science of disease based on a theory of observed morbid processes, therapeutics, when truly regarded, is a science of cure, based on a theory of cure, and resting on a foundation of experiment. Although not the basis of therapeutics, pathology must yet be a most important instrument in the practical application of Medical Science.”

In conclusion, we all know that Hahnemann strongly insisted that the entire organism of the patient should be examined in every possible way, and that the “totality of the symptoms” should be made the basis of the prescription; nay, that the constitutional general symptoms are often more conclusive as to the proper treatment than the more

obvious local symptoms. Dunham calls attention to this, and, quoting an old-school authority, who says practically the same thing, he concludes in these words:—"Those of our school who insist on pathology as a *basis* of therapeutics, who look upon the single objective symptom and its nearest organic origin as the subject for treatment, and who deride the notion of prescribing upon the totality of the symptoms, and claim to be more than mere symptom-coverers, in that they discover and aim to remove the *cause* of the disease,—these colleagues are as false in their pathology, according to the highest old-school authority, as they are faithless to the doctrines and impotent as to the successes of the Homœopathic School."

SOLUTION, AND ITS ASSOCIATED PHENOMENA.¹

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It was thought well that I should give a short paper, not by way of opening the discussion which has been announced to take place on Dr. Wilde's paper on "Energy,"² I would particularly wish you to understand, but rather by way of amplifying a small part of Dr. Wilde's paper. I would further ask you to bear in mind that my paper will not require a separate discussion, but it is to be understood to be merely a part of Dr. Wilde's, so that on its conclusion you may at once plunge into the discussion of the larger paper.

We must clearly distinguish between "hypothesis" and "facts." The value of an hypothesis depends on the one hand on its *convenience*, and on the other on the *comprehensiveness* of the image it represents. A hypothesis can neither be proved nor disproved, and is merely a tool which is thrown aside when no longer serviceable. It would no

¹ Presented to the Section of Materia Medica and Therapeutics, Feb. 6, 1902.

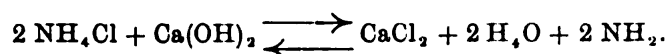
² See the Journal for Jan., 1902, p. 56.

doubt be an interesting topic to the physical chemist (or perhaps I ought to say the *metaphysical* chemist) to inquire whether matter is infinitely divisible or not. But to this query such an one would make reply, that the infinite cannot in any form be the subject of experiment, and as chemistry is an experimental science, it deals with things that can be measured, weighed or numbered. At the same time I may point out that he talks very glibly about "infinite" dilution, which is by no means infinite so far as we are concerned, since it represents a dilution somewhere between our 5x and 6x. However, as you know, the chemist assumes that matter is *not* infinitely divisible, and this assumption is supported by a remarkable law discovered by Dalton in 1808, viz., the law of combination in multiple proportions, which he deduced from three sets of compound—

- (a) Carbonic acid (CO₂) and carbonic oxide (CO).
- (b) Marsh gas (CH₄), olefiant gas (C₂H₄).
- (c) The three gaseous oxides of nitrogen (N₂O, NO and NO₂).

But be it remembered that the atomic hypothesis is merely a mode of picturing to ourselves what we know of the behaviour of substances (*i.e.* of picturing phenomena). "What the real nature of matter is, is to us a matter of complete ignorance, as it is of complete indifference" (Ostwald).

To revert for a moment to the divisibility of matter, I will bring before your notice a point that has always been a source of trouble and wonder to me. Let me write a simple and well known chemical equation.



In passing, I would ask your attention to a point which until lately has not been sufficiently insisted upon, viz., that chemical equilibrium results when the velocities of the opposite reactions have become equal, in other words the equilibrium is *dynamic* not *static*, and hence now-a-days it is common to speak of "reversible reactions" or "balanced actions," the final equilibrium being conditioned by the "co-efficient of affinity" (K) (which includes the chemical

nature of the substances, their state of aggregation, the temperature and many other variables) and the *masses* of the reacting substances.

Now NH_3 is called a *molecule* of ammonia, and its volume is 22.33 litres; this volume represents a bulk rather less than a cubic foot, but no great error will result for our present purpose if, for the sake of convenience, we regard it as a cubic foot. Now suppose we have a cube of this size made of something, say of the consistence of turnip, then with a moderately sharp carving knife we can easily divide it into its 1,728 cubic inches. Each of these could again be easily divided, using $\frac{1}{8}$ inch as our measure, into 4,096 parts, or even, with a little care, and using $\frac{1}{32}$ inch as the measure, into its 32,768 parts, *i.e.*, from one cubic inch, and from the whole 1728 cubic inches we could thus get 56,623,104 parts, and that, too, without any instrument of precision more refined than an ordinary carving knife. It takes very little imagination to picture to ourselves that our molecule of ammonia might become fixed and rigid in the space it occupies and be divided into this multitude of parts.

To go one step further: a single grain of musk in this room would, as far as human investigation and measurement can tell, fill it with odoriferous particles for years, and that, too, without apparently losing in weight, or at any rate the loss in weight would be so small that it could not be detected by the most delicate balance in existence. I do not know the number of cubic feet in this room, but let us call it 10,000; and each cubic foot with its quota of odoriferous particles is capable of being divided like our cubic foot of ammonia gas. I often think that as chemists our knowledge of atoms and molecules are exceedingly vague, and that if ever they are to be cleared up homœopathy will do it.

In the case of the molecules of some elements, such as hydrogen and oxygen, we can easily prove that they consist of *more than one* atom, but that is as far as it is safe to go; we have not the least idea how many are actually present. There may be ten, or ten million of millions for

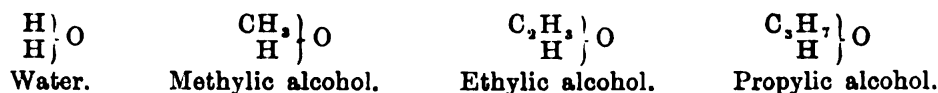
all we can tell. Further, the question is not of the slightest importance to the chemist, however important it may be to the practitioners of scientific medicine. On the other hand, the molecules of most of the *metals* contain only *one* atom. In regard to mercury this fact has been known for a very long time, and recent investigations have shown that it is also true of almost all the other metals, *i.e.*, the molecular weight is identical with the atomic weight; the same is true of the recently discovered elements, such as argon and helium.

In discussing the questions relating to the phenomena of solution, the following facts among others should be noted.

(1) Any solid is not soluble in *all* liquids, *e.g.*, common salt is readily and abundantly soluble in water, less so in alcohol, and not at all in oils. No liquid is capable of taking up every kind of solid, at any rate not in amounts easily appreciable, though water most nearly, of all liquids, deserves the name of *universal* solvent; and probably it dissolves most substances more or less, *e.g.*, it dissolves even flint in appreciable quantities, and the authorities of Sheffield some years ago made use of this fact to protect themselves from the dangers of lead poisoning, by passing their water through a filter bed of flints.

Again, alcohol dissolves many carbonaceous substances, such as resins, phenols, and acids, which are but very slightly dissolved by water. Ether and benzine dissolve freely fats and solid hydrocarbons. Carbon disulphide again dissolves no salts, but takes up many carbonaceous substances, and is the best solvent for common sulphur; phosphorus trichloride and tribromide readily dissolve phosphorus. Fluid mercury dissolves many metals, but no other kind of substance. We see, therefore, that solubility is often dependent in some degree upon the existence of a similarity of composition between the solvent and the substance dissolved; in fact, the rule is "*Similia similibus solvuntur*" — a rule which is freely used with the best results in investigating unknown organic substances. This rule is further illustrated in the fact that salts containing

water of crystallisation are almost always easily soluble in water; indeed, such compounds may be regarded as closely resembling water itself. A molecule of Epsom salts may be considered as consisting of eight water molecules, in which one molecule is replaced by MgSO_4 . Again, the lower terms of the various series of alcohols and carbon acids show considerable similarity to water in their general behaviour. Take the lower members of the ethylic alcohols, and we see that they may be regarded as consisting of the elements of water, having one atom of hydrogen replaced by a hydrocarbon group thus:—



These are miscible with water in all proportions.

Again, to take the first member of the aromatic series, we find that the solubility in water increases as the amount of the water residue (OH) present in the molecule increases, *e.g.* :—

Benzine (C_6H_6)	..	..	..	insoluble.
Phenol [$\text{C}_6\text{H}_5(\text{OH})$]	..	..	..	slightly soluble.
Pyrocatechin	$\left\{ \begin{array}{l} \text{C}_6\text{H}_4(\text{OH})_2 \end{array} \right.$	..	..	easily soluble.
Resorcin		..	..
Quinol		..	..
Pyrogallol, $\text{C}_6\text{H}_3(\text{OH})_3$	..	..	..	still more soluble.

Amido-benzine, or aniline, is also slightly soluble in water.

(2) Again the solubility of a substance usually increases with rise of temperature, *i.e.*, a hot liquid dissolves more than a cold one. This is very marked, for example, in the case of potassium chlorate, which I may point out is also a very fusible salt, though fusibility does not necessarily imply solubility, since sodium chloride is very soluble in water but very infusible, whereas silver chloride is very fusible, but very insoluble. But notice that solutions of some salts saturated in the cold are partly precipitated when the solution is heated to boiling, *e.g.*, calcium sulphate, sodium sulphate, and the calcium salt of ordinary butyric (ethylacetic) acid, whereas the calcium salt of isobutyric (di-methyl acetic

acid, follows the ordinary rule: the latter acid is found in the root of the *arnica montana*.

(3) When a solid dissolves in a liquid there is always a rise or fall of temperature in the mass. A fall of temperature is noted when such solids as sodium chloride and potassium nitrate are dissolved in water, probably owing to the change from the solid to the liquid state, and freezing mixtures such as salt and snow, sodium sulphate and strong hydrochloric acid act by liquefying. On the other hand, when dry calcium chloride or sodium sulphate or sodium carbonate dissolves in water heat is produced, due partly at least to the chemical combination of the substance with a portion of the water.

(4) The volume of the solution is always *less* than the sum of the volumes of the solid and solvent, with the exception of some ammonium salts, in which case it is greater.

(5) When a solid is dissolved in a volatile liquid, the evaporation of the liquid is impeded, the pressure of the escaping vapour is reduced, and the boiling point raised, *e.g.*, a saturated solution of sodium chloride under the pressure of the atmosphere boils at 108° C.

(6) Metallic salts which are capable of forming crystalline compounds with water often exhibit a variety of colours, according to the amount of water in which they are dissolved.

(a) Cupric sulphate:—					
CuSO ₄	..	..	..	..	white.
CuSO ₄ .5 H ₂ O	..	..	..	..	blue.
(b) Cupric bromide:—					
CuBr ₂	..	..	..	..	black.
CuBr ₂ .2 H ₂ O	..	..	..	..	blue.
(c) Cobalt chloride:—					
CoCl ₂	..	..	..	..	blue.
CoCl ₂ .2 H ₂ O	..	..	..	..	indigo-blue.
CoCl ₂ .4 H ₂ O	..	..	..	..	reddish violet.
CoCl ₂ .6 H ₂ O	..	..	..	..	red.

To account for these and other phenomena connected with solution there are two chief classes of theories:—

(1) Those which assume that a solution is formed as the result of chemical combination between the solid and the solvent, and

(2) Those which explain the phenomenon by the adhesion of the solid to the liquid and the mechanical intermixture of the two kinds of molecules.

The further question arises, what is it which causes molecules of a solid or liquid to mix with water molecules in a solution? The partisans of the "hydrate" theory refer all the phenomena of solution to the formation of successive definite chemical compounds between the solvent and the substance dissolved. But this theory is now generally abandoned in favour of a Kinetic theory which takes into account other facts to which we must now for a few minutes turn our attention.

For our present purpose the solvent may be supposed not to influence the dissolved substance at all, so that when once the substance is dissolved we may neglect the solvent altogether, especially as we are dealing with very dilute solutions. If we confine our attention to the dissolved molecules in dilute solutions, it will be observed that the condition presents a close analogy to the *gaseous* state. The dissolved molecules are not within the range of each other's attraction, as are the molecules of solids or liquids, but are comparatively widely sundered, and only encounter one another occasionally, just as in the case of gases. Now this similarity of state might lead us to suspect some analogy between the behaviour of dissolved substances in dilute solution, and of substances in the gaseous state. Such an analogy in fact exists, but it was only in 1887 that Van't Hoff succeeded in showing how close and far-reaching the analogy really is. This he did by introducing the conception of *osmotic pressure*, which in solution corresponds to gaseous pressure in gases and vapours, the pressure being caused by the bombardment of the molecules of the dissolved substance. Osmotic pressure may be regarded as the driving force in solutions; the resistance which the water offers to the movement of the dissolved substance is enormous, and is probably due to the smallness of the dissolved particles, just as a very fine powder may take many days to settle, while the same weight of substance in the compact form would fall to the ground in as

many seconds. This pressure is always present, and in the case of the ordinary re-agent bottles of the laboratory is something like 50 atmospheres. The force required to drive one grain of hydrogen as *ion* through water at the rate of 1 c.m. per second, is said to be equal to about 320,000 tons weight.

In the second half of the century before last a certain Abbé Nollet described an experiment to the effect that if a glass vessel is filled with spirits of wine, and the opening is tightly covered with a bladder, and the whole then immersed in water, the contents of the vessel increase so that the bladder is expanded and is sometimes burst. This was forgotten till 1815, when a certain gentleman, called Parrot, took up the question, and showed that all miscible liquids tend to wander into each other, and that the presence of a membrane as used by Nollet was not a necessary condition. Again the subject was forgotten, and was re-discovered a third time by N. W. Fischer, in Germany, in 1822, and for a fourth time by Dutrochet, in France, in 1827. The next important epoch in this interesting history was the *attempt* by Moritz Traube, in 1867, to form, artificially, a truly semi-permeable membrane by precipitating certain metallic substances. An animal membrane is not truly "semi-permeable" as it allows a very small passage outward of the dissolved substance. Pfeffer, in 1877, was the first to solve the problem. He took an unglazed porous cell and coated it with a gelatinous precipitate of copper ferrocyanide, by filling it with a 3 per cent. solution of potassium, and immersing the whole cell in a 3 per cent. solution of cupric sulphate. In 1887, as I said, we have the final link in the chain in the person of Van't Hoff, who, however, is better known in the field of stereochemistry from his work on "The Arrangement of Atoms in Space." So much for the history of osmosis; as to the facts we can only give the very baldest outline.

If a solution of a salt or of sugar is placed in a bladder, enclosed in a porous pot which prevents the bladder from stretching, and a glass tube being attached to the neck of the bladder, it will be seen on immersing the whole in

water that the liquid rises in the tube above the level of the liquid outside. A process something like this is continually going on in living animal and vegetable cells, the walls of which form "semi-permeable" membranes. The rise of the liquid in the tube indicates the existence of a pressure in the solution, as I have already said, called the "osmotic" pressure, and due to the impacts of the molecules of the dissolved substances. A slight modification of the experiment will permit of the measurement of the amount of this pressure, in a rough way, in solutions of different substances and different strengths of the same substance. In practice, however, this pressure is never determined, as it is a difficult and inconvenient magnitude to measure, but instead we either estimate the rise of the boiling point, or the depression of the freezing point, both of which are proportional to the osmotic pressure of the solution and can be very easily determined. The water, then, passes inwards till the pressure of water on both sides of the membrane is the same, while inside there is the additional pressure of the dissolved substance. These facts are explained by the hypothesis that a substance in solution consists of very small moving particles, which behave as though they were in the gaseous state. It is, in fact, found that the laws which regulate osmotic pressure have the same form as the laws of Boyle, Gay-Lussac, or Charles, and of Avogadro, which relate to gases.

(1) Boyle's law.

(a) *As to gases.*—When the temperature of a quantity of gas is kept constant, the volume which the gas occupies varies *inversely* as the pressure.

(b) *As to a substance of solution.*—When the temperature is kept constant the osmotic pressure is proportional to the strength of the solution, and by the strength of the solution is meant the amount of substance in unit volume; if we double or treble the amount of sugar the osmotic pressure will be doubled or trebled, *i.e.*, it is directly proportional to the *concentration* (which here corresponds to *density* in gases), it is *inversely* proportional to the volume of the solution containing a given quantity of the dissolved substance.

(2) Gay-Lussac, or Charles' law.

(a) *As to gases.*—When the pressure to which a quantity of gas is subjected is kept constant, the volume which the gas occupies varies *directly* as the *absolute* temperature.

(b) *As to a substance in solution.*—In this case the osmotic pressure is proportional to the absolute temperature, if the volume is kept constant; or the volume of the solution containing a fixed quantity of dissolved substance is proportional to the absolute temperature if the osmotic pressure is kept constant. Changes of pressure for given changes of temperature may be calculated by using the same co-efficient, namely, $\frac{1}{273}$, or .00366, just as in the case of gases.

(3) Avogadro's law.

(a) *As to gases.*—Equal volumes of gases, under the same conditions of pressure and temperature, contain the same number of *integral particles*—nowadays we say “the same number of molecules.”

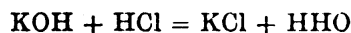
(b) *As to a substance in solution.*—We have seen therefore that up to this point a solid or a liquid dissolved in a liquid behaves as though it existed as a gas in a space equal to that occupied by the solution. Now, when different solutions are compared, it is found that the osmotic pressure is generally the same when the solutions contain in equal volumes quantities of dissolved substances *proportional* to their molecular weight, *i.e.*, that such solutions contain the same number of molecules. The osmotic pressure of any given solution is thus equal to the gaseous pressure which the dissolved substance would exert were it contained as a gas in the volume occupied by the solution at the temperature of the experiment. Sugar cannot actually be obtained as a gas, but, by making use of Avogadro's law, we may calculate what pressure it would exert, under given conditions, if it could be gasified. Hence, therefore, osmotic pressures and gaseous pressures are both regulated by Avogadro's law. These laws are only strictly true for *dilute* solutions, and consequently for moderate osmotic pressures, in the same way as the laws for gaseous substances are only strictly true for moderate gaseous pressures.

There is, however, one very important class of exceptions to the above rules, viz., salts, strong acids, and strong bases, in aqueous solution, in other words *electrolytes*, e.g., sulphuric acid, sodium chloride, potassium chloride, &c. This important group gives *twice* the osmotic pressure one would expect from general chemical analogies. So also if we attempt to determine their molecular weights, either by the freezing-point or boiling-point method, the numbers obtained are only about one-half as large as they ought to be. Those facts only received an adequate explanation by Arrhenius, in 1887, in the now famous *Ionic Dissociation Theory*.

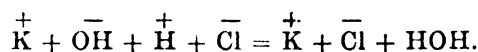
A hypothesis relating to the mechanism of electrolysis was devised by Grotthus in 1805, and since that time has been very generally accepted. Each molecule of the electrolyte is made up of two parts, one having a charge of positive, the other of negative electricity, in virtue of which these constituents are united together. Disruption of the end molecules alone occur, and this is followed by a change of partners throughout the length of the chain. In this hypothesis it is assumed that the current itself splits up the electrolyte. But this would involve some transformation of energy; but it has been shown by very exact experiments that no work is done by the current in splitting up a compound in the solution. Hence Clausius and Williamson, in 1857, assumed that there must be always some free *ions* in the solution at any given time. They assumed that the *ions* are continually changing partners in consequence of molecular encounters, somewhat after the manner of the couples in a barn dance, or perhaps a better simile would be a Donnybrook fair, where the simple and very effective rule is adopted, "Wherever you see a head, hit it," so here it seems to be wherever you see a molecule, knock it into ions, and in this way ions are supposed to be produced. The electricity then seizes on these *momentarily* free atoms and thus obtains vehicles for its transport. This theory was satisfactory so far as the mere explanation of the conductivity went, but many other phenomena could not be explained by it. It was only in 1887 that Clausius' idea was developed and brought into a quantitative form by Arrhenius. On his

theory not a small proportion of, *e.g.*, the sodium chloride is split up into sodium and chloride ions, but almost all the salt, and in very dilute solutions all. Here there is no exchanging of partners, but the ions are free, and stay so permanently. The free ions are said to have enormous electrical charges: it is said that free uncharged sodium at once decomposes water. Charged sodium ions do not. Similarly a chlorine atom charged with one unit of negative electricity is something very different from ordinary chlorine gas, Cl_2 , which is not charged. I hope you will think of these things the next time you put a pinch of salt into your soup, and take care of the enormous electrical charges when you sup the same. At the same time many other facts seem to be in harmony with the ionic dissociation theory. For instance, it is found that the properties of dilute salt solutions are *additive, i.e.*, seem to be made up as the sum of two components, one due to the metal, and the other to the salt radical—the explanations being that in this theory the metal and the salt radical lead an independent existence in the solutions.

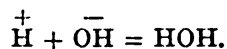
To give one example of an equation written according to the dissociation theory, let us take the neutralisation of potassium hydroxide by hydrochloric acid, both in aqueous solution, the interaction is not



but



But this equation contains useless terms, which appear on both sides of it. Striking these out we have left



This shows that neutralisation in dilute solution consists merely in the formation of water from the ions hydroxyl and hydrogen, which cannot exist in the presence of each other, but immediately unite to form water. The view put forward here is borne out by the fact that the heat evolution, the change of volume, and other phenomena attendant on the chemical action, are the same in amount for the neutralisation of equivalent quantities of all strong bases

by all strong acids. This view is also supported by spectroscopic observations :—

In 1857 Gladstone observed that a particular base or acid in aqueous solution has the same effect on the rays of light, no matter whatever other acid or base they may be combined with.

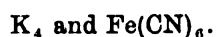
In 1872 someone—I forget who—discovered that the complex molecule of acetate of uranium shows the same absorption spectrum as the nitrate or chloride.

Still later Euan has shown that the absorption spectra of copper chloride, nitrate and sulphate, though they differ in concentrated solution, in very dilute solution they become practically identical.

An absorption band in the red is the absolute property of copper, and is seen in all its salts. In other words, the salts all dissociate in copper ions and Cl, SO₄ and NO₃ ions, as the case may be.

The opponents of this theory say that it is merely the dualistic hypothesis of Berzelius dished up in a slightly changed and decorated form.

The ionic theory is also supported by some purely chemical facts in the domain of analytical chemistry. Silver nitrate, for example, is a reagent for chlorine; all the metallic chlorides and similar compounds give a precipitate of silver chloride. But this is not the case with all compounds containing chlorine; the presence of chlorine in potassium chlorate, mono-chlor acetic acid, or in chloroform is not indicated by silver nitrate at all, *i.e.*, it only precipitates “ionic” chlorine. In potassium chlorate the ions are K and ClO₃, and in mono-chlor acetic acid CH₃ClCOO and H; where the chlorine merely forms a part of a complex ion, then it will not be precipitated by silver nitrate at all. Again, iron compounds give with ammonium sulphide a black precipitate of iron sulphide; but the iron in potassium ferro-cyanide remains quite unaffected in the presence of ammonium sulphide. Here the ions are



Again, this ionic theory has upset one's ideas of “strong” and “weak” as applied to acids. A “strong” acid is one

which is more completely dissociated into its ions than a "weak" acid. On this view, hydrochloric acid is a much stronger acid than sulphuric, in the proportion of 100 to 68. The ionic hypothesis further leads to the remarkable conclusion that when, as I have already pointed out, an acid is supposed to neutralise a base, no salt is formed, but only water, which can scarcely be called an electrolyte at all.

Before sitting down I must refer to the work of H. de Vries, carried out for physiological purposes about 1884 and again in 1889. Pringsheim, in 1854, made the observation that the protoplasmic contents of an organic cell contract into a spherical mass when the cell is brought into concentrated salt solutions. The cause is found in the fact that the protoplasm is covered with a fine membrane, which possesses, most markedly, the property of "semi-permeability." If, therefore, the exterior solution has a greater osmotic pressure than the protoplasmic contents of the cell, the cell contents will be compressed more or less, according as the difference between the pressure is greater or less. If the osmotic pressure of the exterior liquid is equal to, or less than, that of the cell contents, the protoplasm will maintain its form and cling closely to the cell wall. By the dilution of salt solutions it is possible to find that concentration in which the osmotic pressure just equals that of the cell contents; and if two or more solutions are thus prepared, so that they are all in osmotic equilibrium with the cell contents, then such solutions possess equal osmotic pressures, or, to use a term introduced by de Vries, the solutions are *isotonic*, and in such cases it is found that these solutions contain quantities of the salts proportional to their molecular weights. For this purpose the cells of the epidermis on the under side of the midrib of the leaves of *Tradescantia discolor* are used.

About 1890 Donders and Hamburger carried out similar experiments, but they employed red-blood corpuscles in place of cells of plants. The experiments were conducted at 0° and 34°, and the numbers obtained showed that solutions which were isotonic at the lower temperature, were isotonic

also at the higher temperature. When the corpuscles are placed in a solution of a lower osmotic pressure than their own, the water passes into the corpuscle, and the hæmoglobin passes out and tinges the fluid. But if the outside solution has a higher osmotic pressure, water is abstracted from the corpuscles, which shrivel and sink, while the solution retains its original colour. But if the solution be isotonic, the corpuscles undergo no visible alteration in shape or size. Hence, in cases where it may be deemed advisable to inject a saline solution into the blood vessels, *e.g.*, in cases of great loss of blood, it is important that the solution used should be "isotonic" with the contents of the red blood corpuscles.

I would further suggest that we should prescribe, and that chemists should store our medicines in the dry state—globules, pilules, &c. To understand the necessity for this, let me give you an idea of the mode of purifying the water used in conductivity experiments—not to speak of the purification of the substance experimented with.

We start with ordinary distilled water: this is re-distilled with a few crystals of potassium permanganate, and a few c.c. of concentrated sulphuric acid. During this operation a slow current of purified hydrogen is passed through the water, and it is wise to keep the condensation somewhat imperfect to prevent any ammonia gas from being re-dissolved in the cool water. It is further advisable to reject the first and the last fifths of the distillate.

The intermediate portion is then distilled over pure barium hydrate to remove any sulphuric acid. On the day before any conductivity experiments are made, it should be distilled a third time, this time in a platinum still with a condensing tube and receiver of the same material, again with imperfect condensation and rejection of the first and last portions of the distillate. The extraordinary thing is that after one or two litres of water have been thus distilled for the fourth time a very distinct deposit of crystalline silica will be formed on the still, and the liquid left in the still is quite milky from the presence of silica in suspension.

Finally, a few hours before commencing a series of experiments, it is well to freeze the water in small vessels so as to obtain a hollow tube of ice. The central core of water is poured off and the ice rapidly melted, and now you have fairly pure water; but even yet it does not approach the degree of purity of the water used by Kohlrausch in his experiments. To get *pure* water is probably the most difficult problem in the whole field of chemistry.

It will be evident from the above that medicines kept for any length of time in glass bottles in watery or dilute spirituous solution will be saturated with silica, so that whatever else we give we always give silica. This seems to me as objectionable as the use of "tabloids" in which "talc," &c., has been mixed with the triturated sugar of milk to give cohesiveness.

[The paper was illustrated with diagrams showing Grotthus' hypothesis (to explain electrolysis): the effect of water, dilute alcohol, and dilute acetic acid on the red-blood corpuscles (corpuscles swell up and become spherical, while the hæmoglobin is discharged); the effect of a weak solution, one-half per cent. of tannic acid, or of boric acid two per cent., on human red-blood corpuscles (the hæmoglobin is extravasated in the form of a bud, which then ruptures); the effect of strong solutions of common salt or sugar, and shocks of induced electricity on human red-blood corpuscles (they become spinous, like a horse chestnut, or crenated). Drawings were also shown illustrating de Vries' work in connection with plasmolysis.]

Dr. PERCY WILDE said he did not intend his paper on "Energy in its Relation to Drugs and Drug Action" to be a mere academic contribution to science. He read it with a distinct and practical object. The homœopathic school were pledged to the belief that drugs obtained greater activity by trituration and dilution. On that account the homœopathic school had been persecuted, and described as either knaves or fools. That was the position taken up by the Royal College

of Physicians as representing the medical profession. For the last hundred years homœopathic practitioners had been experimenting with high dilutions and infinitesimal doses, and had accumulated overwhelming clinical evidence in favour of their action upon the body; but the Royal College of Physicians said in effect, "We will not believe in your results or make experiments because you are dealing with a physical impossibility." On a question of medicine or clinical research the opinion of the Royal College had very great weight, but on a question of physical impossibility or of physics they carried no weight whatever, therefore, if the homœopathic school could take this subject out of the region of therapeutics and medicine and bring it into the realms of pure physics and chemistry, the judgment could be obtained of scientific men who would approach the subject from the physical standpoint without prejudice and give a fair judgment upon it. He therefore purposely excluded clinical experience from consideration in his paper, although the results of the homœopathic school would have been most helpful to him in proving his conclusions. Scientific professors were very chary in giving an opinion on any subject which was not in their own department. He had sent a copy of his paper to a very distinguished physicist who was professor at the Royal College of Science, examiner of the University of London, and a member of the Committee of the Royal Society, and had received a private letter in reply of a very complimentary character, and expressing the opinion that his conclusions were correct. This he considered of enormous importance to the homœopathic school. He thought effort should be made by the Society for the purpose of comparing the physical teachings and methods of the homœopathic school with modern scientific teaching. He believed if that were done they would obtain the approval of eminent scientists who would give an opinion on a subject on which they were qualified to speak. His view had always been that once a written statement was obtained showing their scientific position in scientific terms, support would be forthcoming from the leading scientists. Homœopaths would then be able to go to the Medical Council, complain of the present teaching of therapeutics, point out where it was scientifically wrong, and insist that the Council should teach more modern chemical and physical knowledge, which was necessary for the understanding of the action of drugs. He hoped the newly formed Twentieth Century Fund would help them in carrying out that object, and at the proper time he would

propose that a committee should be formed to deal with the whole subject, and put it on a practical basis.

Dr. MOLSON said that he was glad to find that his experiments accorded with Dr. Wilde's assertion, viz., that the more medicinal substances were subjected to trituration or dilution the better they acted. The "British Homœopathic Pharmacopœia" directs that the preparation of the first decimal trituration should occupy one hour, and all subsequent triturations forty minutes. Hence the sixth decimal would be completed in four hours and twenty minutes. In the Companion to the "British Homœopathic Pharmacopœia," Mr. Ashwell says that triturations are not usually carried beyond this attenuation, and directions are then given for converting triturations into tinctures. He (Dr. Molson) had submitted a large number of crude substances to prolonged trituration. In the case of *natrum muriaticum* he reached the thirtieth decimal trituration in eighty-eight stages, each stage lasting one hour. The increase in the number of manipulations was due to the fact that he had interposed two stages between each pair of decimals. Thus between 1x and 2x he made two triturations, viz., 1 in 25 and 1 in 50; between 2x and 3x two more, viz., 1 in 250 and 1 in 500, and so onwards in the same proportions throughout the series. The labour had been great but the results were most gratifying. This preparation entirely removed a morbid craving for salt which had existed in a woman for five years. Within a week after taking the remedy, although she placed the salt upon her plate by force of habit, it remained untouched. He had supplied Dr. Burford with a sample of this trituration, and he also had received striking evidence of its value. The destination of the dose was a microscopical object—the cell. The dose must be sufficiently penetrative and dissociated to reach its destination. This object was attained by trituration. A useful illustration of this process was to be found in the solid, liquid and vaporous forms of water. In ice the molecules were relatively close to each other and could only be moved *en bloc*. In water they had much more liberty and were freely movable in part or in bulk, while in steam, though attraction still existed, repulsion predominated, and the combined collisions and collusions of the molecules frequently sufficed to rend in pieces the containing vessel. It is obvious that there is a certain amount of molecular activity in ice (as its temperature is 273 degrees above absolute zero), more in water, and most in steam, but the reduction of ice to water and of water to

steam by the application of heat implied no chemical change. With the withdrawal of the heat the steam returned to water and the water to ice. Taking the ice to represent the crude medicinal substance, the water corresponds to the lower triturations and the steam to the higher ones.

The heat force which temporarily separated and held apart the molecules of water finds its counterpart (in the triturations) in the solid wedge of sugar of milk which we insert between the medicinal molecules; for, when we have reached the twelfth decimal trituration there are a billion molecules of sugar of milk minus one interposed between any two molecules of the medicine. Clearly this implies potential energy in the trituration, which must appear as kinetic energy in the patient. As Dr. Wilde had said, "Potential energy is that force which matter gains by its position independently of its chemical nature." There was no ground for the theory that the sugar of milk in the triturations became dynamised.

Dr. Molson thought Dr. Wilde's experiments not conclusive. In Experiment 1 the homogeneity of colour in the "blue powder" was more apparent than real, and the microscope would probably have revealed the presence of particles of glass and indigo just as the microscopical examination of apparently homogeneous red blood shewed the corpuscles suspended in the almost colourless serum. He had not been able to perceive that there was any chemical change. The "cohesion" of which Dr. Wilde spoke would be better described by adhesion, for, if small shot and chalk were rubbed together the cohering particles of chalk would adhere to the shot and give the latter the appearance of the former. This adherence implies no change in either substance, and for like reasons the triturated indigo and glass must be regarded as a mechanical mixture and not as "an organic structure." Experiment 2 must be seen in the light of Experiment 5, for, if the soluble indigo-carmine was found to be insoluble in 1-1,000 (the reason assigned being that it was "too dilute to be visible") it was not a matter of surprise that the aniline-violet was invisible when there was only the one-five-thousandth part of a grain dissolved in half an ounce of water. Experiments 1, 4 and 5 showed three colours, viz., red, blue and green. The red of Experiment 1 was due to the 1-100 solution of indigo-carmine; the blue in Experiment 1 and 4 to the undissolved indigo; the green of Experiment 5 was due to the blending of the red-yellow of the carmine with the indigo-blue, which at this

stage of dilution was soluble. Hence the changes noted were only those of mechanical mixtures.

Again, Dr. Wilde's view of plant life was contrary to the conceptions of all agricultural chemists. They believe that the plant rootlets secrete an acid which is in every respect akin to citric acid, and Dr. McLachlan had alluded to an acid which is found at the root of the arnica plant. This "rootlet" acid dissolves the inorganic salts which are in the soil and enables the plant to appropriate and assimilate these liquefied mineral substances. While admitting what Dr. Wilde said as to the solvent action of the fertilising rain we must also recognise the not less important functions of the plant. Every seed possesses a stock of latent energy which may be developed in a suitable soil, but this energy is not derived from its environment. The environment is inorganic and dead. The plant is organic and vital. Neither factor must be overlooked. Professor Loeb and others have lately drawn attention to the action of calcium, potassium and sodium salts on cell life. They found that the peculiar qualities of each tissue are partly due to the presence of the ions of these elements in definite proportions, and that by changing these proportions we can impart to a tissue properties which it does not ordinarily possess. Thus the ions of Na. increase muscular contraction, while those of Ca. diminish or inhibit such contraction. For example, Dr. Molson had found that calcium superphosphate in the twelfth decimal trituration induced the most distressing cardiac dyspnoea, but this symptom was entirely removed by combining with this remedy an equal quantity of the same potency of citric acid. In view of the risk attendant upon the administration of the salts of calcium to patients suffering from calcified arteries, this hints as to the solvent action of citric acid drawn from Professor Frankland's researches in agricultural chemistry was suggestive and opportune. In any case the citric acid could do no harm. Dr. Wilde had shewn in his paper the special interest attached to the investigations of Kohlrausch and Ostwald and their bearing upon the question of the development of latent drug powers by dilution. Not less interesting was the recent discovery of radio-active bodies. Some years ago, a faint picture of a coin was observed upon a sheet of white paper which had been near to, but not in contact with, the coin. Monsieur Seguin suggested that the image or spirit-photograph was due to the radiation of minute particles from the coin. His hypothesis was treated with

derision, but was subsequently endorsed by Professor Becquerel, whose recent lecture at the Royal Institution was the official announcement in England of the wonderful discoveries already made in this new realm of science. Among these are two new elements of great importance and rarity, viz., radium and polonium. These substances emit several kinds of rays, some of which have X-ray properties of great intensity. The minute size of these emission particles, their infinite number and powers, furnish collateral and experimental evidence from the physicist's standpoint of the value of infinitesimals.

Dr. DUDGEON said that ever since the promulgation of homœopathy many attempts had been made to explain the *rationale* of the homœopathic cure. Hahnemann himself tried his hand at this work, in fact, he offered several different explanations, but he took good care to say that he did not attach any great value to them. Since then the number of attempts to excogitate a satisfactory and scientific theory of drug action has been enormous. In a little book he had written nearly fifty years ago, but which he hardly expected many of his audience were acquainted with, he had given an account of many of these theories, but the only point on which the authors agreed was in contemptuously rejecting the theories of their brother theorists. Since the introduction of homœopathy into this country, several attempts had been made to give a scientific explanation of drug-action, notably by Samuel Brown, Dr. Drysdale, Dr. Hughes, and he regretted to say, by himself. But the only result of the laudable efforts to obtain harmony was to reveal incurable discord. Dr. McLachlan's paper contained much, no doubt, valuable information respecting chemical equivalents, molecules and atoms, but though he (Dr. Dudgeon) had listened attentively with his best ear he had not heard a word about homœopathy from beginning to end. He trusted none of Dr. Burford's Twentieth Century Fund would be devoted to the publication of such eminently contentious subjects for the purpose of influencing scientific objectors to homœopathy, and he hoped that the meetings of the Society would be hereafter more occupied with practical homœopathy than with theoretical discussions.

Dr. JAGIELSKI said there were many instances in which the higher dilutions of drugs produced an exactly opposite effect to the lower.

Dr. GOLDSBROUGH said he wished to emphasise that homœopaths had to maintain their ground as homœopaths against physical and chemical explanations of the effects of their

medicines. In his opinion such explanations were valuable in their own sphere, but did not cover the whole ground from a scientific point of view. He drew attention to the central point of the previous discussion, which as therapeutists they had to consider, which was stated very clearly on that occasion by Dr. Beale. As far as he could gather Drs. Wilde and McLachlan suggested that the energy of a drug was developed by trituration or solution, without reference to the question of health and disease. But as therapeutists they had to deal with another set of conditions which were not directly concerned with the physical and chemical aspects of the drug action, but conditions pertaining entirely to the difference between health and disease. Dr. Beale said on the previous occasion "The author had stated that before a drug could have any specific action on the cells of the body it must be reduced by dilution for the liberation of its energy. If that were so, how was it that frequently crude drugs, when introduced into the body, produced a pathogenesis of a specific character?" How was it that drugs given in the crude form produced symptoms? What was the nature of the energy of that particular crude drug which produced those symptoms? What was the difference between the state of the crude drug and the state of the diluted drug in its power to produce symptoms? Dr. Beale continued, "How was it that the specific pathogenesis was related directly to the *curative* effects of drugs when given in disease? That was the crucial point homœopaths had to consider. How was it that the *difference in dilution* was important when a drug was administered in disease compared with the effects of the drug when administered in health? How was it that the drug in the more attenuated form had a curative effect, and that that curative effect was related to a pathogenic effect produced by a drug which was not presented to the cell, according to the author, in an assimilable state? As a suggested reply to these questions it seemed to him (Dr. Goldsbrough) that if homœopaths were to develop their therapeutics they must proceed, not primarily along chemical and physical lines, but along physiological lines. If they persevered in their researches into physiology the time would come when they would receive their proper scientific recognition. Two or three points had been suggested to him in that connection by Dr. McLachlan's paper. The laws of solution brought forward had impressed him more and more with the fact that they must keep to the distinction between the effects in health and the effects in disease, and compare those

together before they could expect to get an understanding of the effects of drugs as remedies, the dilution then being a matter of experience. With regard to the isotonic solutions and the effects on the vegetable and animal cells referred to, those effects were very gross compared to the effects obtained from the proving of the drugs. For instance, the physical variations giving rise to subjective symptoms, on which reliance was very often placed, must of necessity be very much finer and possess a quality which was absolutely inconceivable by the senses. He did not wish to discourage Dr. Wilde's proposal but did not consider it of primary importance.

Dr. NEATBY said that after hearing Dr. Dudgeon's remarks he felt bound to convey to the authors of the papers that he did not think the meeting would be in sympathy with the view which had been expressed, albeit in such a genial way. He was sure that to spread a knowledge of what homœopaths believed to be the truth in therapeutics among the profession, some scientific demonstration was wanted of the position they took up. If an intelligible and scientific explanation of our known facts were afforded the method would be looked into much more readily, and once looked into the practical value and truth of the method was perfectly obvious.

Dr. LAMBERT asked Dr. Wilde for an explanation of an apparent discrepancy in his experiments, in that in one experiment, indigo, an insoluble substance, became soluble after trituration with glass to the fifth potency, whereas aniline, a soluble substance, became insoluble.

Dr. WILDE said the aniline triturate became insoluble at 4x. With the indigo solution he had to use heat to overcome the cohesion between the indigo and the glass. Anywhere below 1 in 10,000 some of the aniline dissolved in water because there was aniline in excess. The aniline simply became insoluble because it was in a state of adhesion with the glass, the water not having sufficient energy to break up that adhesion.

Dr. LAMBERT asked the author what ground he had for stating that he did not think one could attach any value to triturations of metals with sugar of milk. That statement was contrary to all homœopathic experience, all their triturations being made with sugar of milk.

Dr. WILDE replied that the statement did not represent his views. It was more a question of the pestle and mortar. More satisfactory results would be obtained with metals if better machinery was used. He had to get a special machine made.

Dr. LAMBERT added that with regard to the action of

medicines, Dr. Wilde seemed to put it all down to a chemical process of some kind, thus leaving out of account the very important factor of the individual susceptibility of patients. There were certain patients who could not take certain drugs, even in high potencies. One had to take into account that drugs had not only a selective affinity for certain tissues of the body, but that certain patients were much more susceptible to the action of certain drugs than other patients; and he thought this subject was outside the region of chemical or physical experiment and explanation.

Dr. McLACHLAN, in reply, said that, to a certain extent, he agreed with Dr. Dudgeon, but he always thought that knowledge could never be lost, so long as it was real knowledge. An ordinary British workman could use gunpowder though he knew nothing whatever about its composition; at the same time if he were a British workman he would try to find out what it was made of because it would be a satisfaction to him to know.

Dr. WILDE, in reply, said there was a little misunderstanding with regard to the question of the indigo. A trituration of indigo and glass when mixed with water retained its homogeneous blue colour, because each particle of indigo was in a state of cohesion with a particle of glass. If the trituration had been merely a mechanical mixture of glass and indigo, the glass would fall to the bottom and the indigo being the lighter would settle above it. Dr. Wilde referred to the two diagrams explaining this point. He proved that a trituration was not a mechanical mixture but an organic structure containing potential energy. With regard to Dr. Goldsbrough's remarks, he heard Dr. Beale speak at the last meeting, and replied to him by referring him to the paper. The last portion of the paper dealt with the whole question, where he explained the difference between the action of the particle and the action of the ion. The particle had selective affinity as much as the ion or the atom. That was the principle proved by the experiments. The particle had selective affinity, but it could not invade the protoplasmic cell, being kept out by the membrane with which the organic cell was covered. All it could do was to irritate the outside of the cell. The selective affinity was exactly the same, therefore the effect produced was that of stimulation of the cell, *i.e.*, it caused the cell to part with some of its energy, whereas the ion invaded the cell and entered into chemical combination, producing energy. His paper had nothing to do with questions of health and disease; he was speaking of physical things in physical terms.

SOCIETY NEWS.**NEW MEMBERS.**

At the meeting in January the following gentlemen were elected members of the Society:—Arthur Avent, L.R.C.P., F.R.C.S.Edin., L.F.P.S.Glasg., L.S.A.Lond., of the Towers, Hampstead Road, Handsworth; Henry Arthur Clifton Harris, M.R.C.S., L.R.C.P.Lond., of the London Homœopathic Hospital, W.C.; and Austin Edward Reynolds, M.R.C.S., L.R.C.P.Lond., L.S.A., of Highcroft, Shepherd's Hill, Highgate, N.

TWENTIETH CENTURY FUND.

The preliminary work in connection with the above fund is now nearly finished. The Executive Committee have completed the list of the Grand Committee, and a pamphlet indicating the aims and necessities of the movement has been published, which, together with a circular letter, is now being distributed to the lay and professional friends of Homœopathy. The response to the invitation to form the Grand Committee has been a very hearty one; and, as the list given below shows, it is representative, from the professional side, of all that is best in Homœopathy. A conference of the lay and professional friends of the cause will be held in the last week in April in some well-recognised centre, but the final arrangements for this meeting have yet to be completed. It is anticipated that the chairman will have a satisfactory and encouraging statement to make regarding promises of subscriptions.

The following is a list of the Grand Committee:—

The Earl Cawdor.	R. W. Perks, Esq., M.P.
The Earl of Dysart.	W. H. Trapmann, Esq.
Captain Cundy.	George Burford, M.B.
Sir Henry Tyler.	Byres Moir, M.D.
Colonel J. Clifton Brown.	C. Knox Shaw, M.R.C.S.
J. P. Stilwell, Esq., J.P.	D. Dyce Brown, M.A., M.D.
J. W. Hayward, M.D.	F. Layton Orr, M.D.
P. Stuart, L.R.C.P.	J. P. Harper, M.D.
Dudley Wright, F.R.C.S.	C. E. Waddington, L.R.C.P.
J. Hervey Bodman, M.D.	A. Midgley Cash, M.D.
Washington Epps, L.R.C.P.	S. H. Ramsbotham, M.D.
H. Nankivell, M.D.	F. Neild, M.D.
Richard Hughes, M.D.	Edith Neild, M.B.
G. F. Goldsbrough, M.D.	R. E. Dudgeon, M.D.
J. Galley Blackley, M.B.	T. W. Burwood, L.R.C.P.

- A. E. Hawkes, M.D.
 W. Cash Reed, M.D.
 E. A. Neatby, M.D.
 Percy Wilde, M.D.
 J. Johnstone, M.B., F.R.C.S., D.P.H.
 E. M. Madden, M.B.
 W. Spencer Cox, M.D.
 T. D. Nicholson, M.D.
 A. C. Clifton, M.D.
 George Clifton, L.R.C.P.
 J. Roberson Day, M.D.
 Arthur A. Beale, M.B.
 Eugene Cronin, M.D.
 C. E. Wheeler, M.D., B.Sc.
 J. Searson, M.D.
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DEATH OF DR. RICHARD HUGHES.

It is with the greatest regret the Council of the Society announce the death of Dr. Richard Hughes, which occurred suddenly in Dublin on the 3rd instant. At the time of his death Dr. Hughes had in his possession some of the sheets of this number of the Journal, and had partially completed their revision for the press.

SUMMARY OF PHARMACODYNAMICS AND THERAPEUTICS.

"GATHER UP THE FRAGMENTS, THAT NOTHING BE LOST."

NOVEMBER, 1901—JANUARY, 1902.

PHARMACODYNAMICS.

Aconite.—In an article on aconite Dr. Sands Mills says that it is used so generally in acute conditions that it is often lost sight of in chronic diseases where it might be indicated. He has found it of much value in chronic rheumatism, where it will often give much comfort. Here he always uses the 30th.—*N. Amer. Jour. of Hom.*, November, p. 664.

Adonis.—A young physician, an epileptic, was directed to take adonis vernalis in three-drop doses. He stated, having taken the remedy for some time, that each time, almost immediately after taking it, he felt chilly, and then had a severe chill; it seemed as though the teeth were on edge, the same sensation as would be caused in suddenly rasping a file, or running the finger along the B-string of a violin and at the same time drawing the bow over it. An aura would invariably come on about two minutes after taking the medicine. He was directed to continue it in half-drop doses, but the results were the same.—Arndt, *Pacific Coast Journ. of Hom.*, January, p. 23.

Dr. Chamberlain finds adonis the best and safest heart tonic. He gives fractional doses of the mother tincture or first decimal dilution.—*Ibid.*, November.

Anacardium.—Dr. J. H. MacCallum reports a proving of this drug on himself. It so affected him that he was obliged to discontinue after a trial of a week or so. He mentioned, as prominent symptoms experienced, "a desire to do things, but a complete inability to accomplish what was desired; on lying

down at night a great fear that some terrible calamity was going to befall him ; on rising in the morning a heavy stupor or besotted feeling overpowered him."—*Hahn. Monthly*, December, App., p. 169.

Antipyrin.—Dr. A. Robin calls attention to a new drawback to antipyrin. When the drug is given in doses of 60 grains per diem for a period of from ten to fifteen days (!) albuminuria sets in about the twelfth day, even in cases where the kidneys were previously perfectly healthy. The albuminuria disappears rapidly on withdrawal of the drug. In patients already suffering from albuminuria Dr. Robin has repeatedly found that the amount of albumen is increased by antipyrin.—*Revista Homœopatica*, July.

Antitoxin.—At the recent meeting of the Medical Society of Paris Hospitals the antitoxin treatment of diphtheria has again been discussed. Variot failed to agree with Voisin and Guinon as to the good results to be obtained from the use of anti-diphtheritic serum employed prophylactically. Barbier and Lobligeois discussed the prolonged, recurring, and relapsing forms of diphtheria. In severe epidemics, ordinary doses of antitoxin seem to have but little effect. Either the disease is not benefited, though not necessarily made worse, or temporary relief follows the injection, with a recurrence of symptoms later. Relapses frequently occurred in the recent epidemic at the Trousseau Hospital. . . . Very large doses of antitoxin were injected when tracheo-bronchitis occurred, or with the signs of gross intoxication. Yet death followed, even though 105 c.c. of serum had been injected.—*Pacific Coast Journ. of Hom.*, January, p. 24.

Arsenicum iodatum.—Dr. Snader, from his experiences, confirms the British estimate of the iodide of arsenic in phthisis, when the symptoms are moderate in degree and tardy in rate of progress. He praises it also for the senile heart ; for bronchitis with a dyspnœa disproportionate to the amount of inflammation ; and in pleural effusion, after bryonia and sulphur.—*Hahn. Monthly*, January.

Atropine.—*A propos* of recent experiences with atropine in intestinal obstruction, Dr. Pritchard reports a case in which fœcal vomiting and other symptoms threatened a fatal issue, but where, after two hypodermics, one of gr. $\frac{1}{50}$, the other of gr. $\frac{1}{100}$, a gall-stone as large as a walnut passed, and the patient, though weak, was happy. He lost 15lbs. during his illness.—*Hahn. Monthly*, November, p. 703.

In the January No. of the same journal Dr. S. G. A. Brown relates two more cases having a like happy issue. Here a hypodermic of gr. $\frac{1}{50}$ was given at once, followed by gr. $\frac{1}{75}$ per os every four hours after. He calculates that the patient took gr. $\frac{1}{3}$ in sixteen hours, yet no deleterious results were exhibited.

Calotropis.—An Indian practitioner relates a well-marked case of pneumonic phthisis in which calotropis gigantea ix, persistently given for several months, with an occasional dose of sulphur 30, restored general health and effected complete disappearance of the physical signs.—*Hom. World*, December, p. 544.

Coca.—The power of this drug to cause tinnitus aurum has hardly been utilised therapeutically. A case is recorded where this was one feature of neurasthenia, with accompanying deafness, and both troubles yielded with fair rapidity to coca 3x.—*Ibid*, p. 546.

Cratægus.—Dr. Dyce Brown says that, in the cases in which he has employed this drug, the results have been most satisfactory. He mentioned the case of a lady of 70, of a nervous temperament, who had from various causes got into a weak state. Her heart had been examined some time before, and was healthy. At this time Dr. Brown found a loud aortic as well as a mitral bruit, and the heart was markedly dilated, the apex beating considerably outside the normal line. Under cratægus, in a fortnight's time there was a marked improvement in the symptoms, and the bruits were less distinct. A month more of the medicine completely removed all the distressing symptoms; the bruits were practically gone, and the heart had regained its normal size and position. (Dr. Edward Madden spoke of having had similar favourable experience with the drug.)—*Monthly Hom. Review*, November, p. 655.

Eupion.—This product of the distillation of wood-tar has found little employment among us; but Dr. Hawkes, of Liverpool, says that there is no remedy he uses so often in chronic tubal disease, nor one with which he is so well satisfied. "Burning in the right ovary" and "gushing leucorrhœa" are the pathogenetic symptoms which have led him to it.—*Ibid.*, p. 665.

Gnaphalium.—Dr. Cartier finds this medicine, given in drop doses of the tincture, effective in other rheumatisms besides

sciatica. Pains in the joints as if they lacked oil; chronic muscular rheumatism of the back and neck, the rheumatic form of neurasthenia—these are the conditions in which he has cause to praise it.—*Revue Hom. Française*, November.

Infinitesimals.—Dr. Jousset has been experimenting after the manner of Nageli, using triturations of argentum metallicum to medicate the fluid in which lived an *aspergillus niger*. The conclusion is that, taking the vitality of the plant in mere water as represented by 16, its medication reduces this from 10, when the 6th trituration is used, to 1 when it is the 1st.—*L'Art Médical*, January.

Iodoform.—Dr. Sigmund Raue advocates the proving of medicines, in minute doses, on children. He tried iodoform in this way (3x trit.), and found it produce—besides depression and loss of appetite—looseness of the bowels, the stools containing undigested food and greenish mucus; also irritability of temper. Since this he has used it with gratifying results in subacute and chronic diarrhoeas occurring in children of scrofulous and tuberculous constitutions.—*Clinique*, December, p. 640.

Kali carbonicum.—A woman, aged 50, has suffered for ten years from rheumatism. She was incapable of working, could not go upstairs, had to get out of bed for two or three hours at night owing to the pains. Kali carb. 2x cured her in six weeks.—*A. h. Z.*, cxliii., 206.

Lachnanthes.—*A propos* of the late discussion as to the virtues of lachnanthes in phthisis, the *British Medical Journal* appositely recalls the statements contained in Darwin's "Origin of Species" (6th ed., p. 9), that pigs which eat the root of this plant have their bones coloured pink and their hoofs drop off; but that this latter consequence does not happen when the pig is of the black variety.—*Hom. World*, November, p. 490.

Phaseolus.—Dr. Kraft writes that this medicine, introduced by Dr. A. M. Cusking, has proved a god-send in his heart cases, and outranks anything on his shelves or office drawers.—*Amer. Homœopathist*, November 1, p. 343 (see also *Hom. Recorder*, January, p. 47).

Dr. A. L. Blackwood sends a case to the *Clinique* for January (p. 44) confirming this experience.

Phosphorus.—Jacob W., aged 41, came to consult me. In the beginning of May he had an attack of diphtheria, which he

got over without medical treatment. Four weeks afterwards he had paralysis of the vocal cords and soft palate, with the usual characteristic symptoms. Treatment by electricity, which had a good effect on the paralytic condition. But then there occurred other symptoms which remained unaltered till he came under my treatment on August 21. *Status presens*.—He came into my room with a slow unsteady gait, every step seemed to be performed with difficulty. He complained of great weakness of arms and legs, frequent weak feeling in the heart with palpitation. He was unable to go up the stairs in his house without assistance. He had a disagreeable furry feeling in arms and legs, formication in the hands and soles. There was great loss of motor power in muscles of arms and legs. Heart's sounds clear but very weak, pulse 90. He got phosphorus 5 three times a day for two days, then no medicine for one day, and so on. On September 25, the nurse, who had attended him since May, reported that immediately after commencing the medicine the furry feeling and formication ceased and the walking power soon returned. He can work, and three weeks after commencing the treatment he was able to plough an acre, and the heart symptoms were completely removed.—Stiegele, *A. h. Z.*, cxliii., 183.

Plumbum.—Drs. White and Pepper have ascertained that the change induced in the blood by lead is a granular degeneration of the red corpuscles.—*Hahn. Monthly*, December, p. 775.

Sabal serrulata.—A girl, aged 13, wetted her bed constantly. After the ordinary remedies had been employed without benefit she got sabal ser. This medicine completely cured her. She never had a relapse.—*A. h. Z.*, cxliii., 14.

Thuja.—Mrs. W., aged 32, came to me with a brownish-looking ulcer on upper lip, very painful. Her mother had been operated on for epithelioma of the face; she feared this was the same. I began treatment with well-indicated remedies, but in six weeks the face, up to the eyes and down to the clavicle, involving tongue, was a brownish-looking, uneven, swollen mass, threatening suppuration, with horrible foetor. She lived on milk, taken through a tube through the opening of a fallen tooth. I then began with thuja θ , 20 drops four times a day, and 1 part to 4 of water externally. Improvement began at once, and in four months no more was left than a dent the size of a match-head on the lip. Three months after this the same trouble broke out on the labium majus, received the same treatment with thuja

and no more has shown since, now seven years.—Peterman, *Hom. Recorder*, November, p. 494.

James Moreau Brown reports a case of papilloma of the larynx, in which the application of thuja caused such shrinking of the growth, after partial removal by operation, that further operation was abandoned and the thuja only applied, with the result of complete disappearance of the growth. In addition, the author knows of several cases of a recurrent type in which the growths have entirely disappeared under the use of thuja, with no evidence of recurrence after several years.—*Med. Century*, December, p. 355.

An old gonorrhœic of 56, cachectic, had a swelling on his hard palate. It seemed syphilitic, but he had never had a chancre. It was increasing in size. Thuja 3, night and morning, caused gain of flesh and vigour, and a complete disappearance of the growth.—*Hom. World*, January, p. 14.

Trillium.—Dr. Hawkes relates a case of menorrhagia of long standing, occurring in a young girl, where, after failure of ordinary remedies, trillium 1x and 2x brought complete and lasting success.—*Monthly Hom. Rev.*, November, p. 674.

Vanadium.—Dr. G. Sieffert, in the *Allg. hom. Zeitung* of September, 1901, reviews the provings of ammonium vanadicum made upon animals by John Priestley, which conclusively demonstrate that this substance is capable of rapidly producing a fatty degeneration of the liver.—*Hahn. Monthly*, November, p. 731.

Zincum.—*Risus morbosus chronicus.*—A tutor, of leucophlegmatic temperament, subject to attacks of vertigo and constipation, had for several months been subject to periodical fits of involuntary, irrepressible loud laughter, which he could not restrain even in the presence of persons of rank and position. The fits of laughter recurred several times a day, and the severe shaking they gave to the organs of chest and abdomen caused congestion of the head and brain, that led to a fear of apoplectic seizure, to which he showed a tendency. A dose of belladonna 6 every morning caused for four weeks a considerable improvement but not a perfect cure. He then got 1 gr. zinc. oxyd. 1st trit. twice a day. In fourteen days he was cured of his fits of laughter, and the constipation which had lasted so long was also removed.—*Alschul, A. h. Z.*, cxliii., 177.

Chronic cephalalgia.—A man, aged 50, had suffered for six months from very violent headache in the top of the head, which

gradually became so severe that it impaired his memory and thinking power. It began in the morning on awaking, and lasted till evening, increasing till midnight and then declining. Tongue coated, stool hard. All remedies he had taken were useless. After 15 grains of magnesia usta the tongue got clean and the bowels more regular, but the headache continued as before. On January 24 he got zinc. acet. 3, a dose every hour. January 27.—The pain less but lasted as long: zinc. acet. 11 six times a day. February 2.—The attacks of headache lasted only half an hour, and were slight. Medicine continued. February 9.—Headache gone, and the mental condition normal.—Kissel, *ib.*, 179.

Cephalalgia, with impaired mental powers, stupefaction and stammering.—A man, aged 50, suffered for two years from violent headache, which began in the morning and lasted till evening. During the height of the pain he stammered, the eyes became dull, the lids were half closed, he could not speak but stuttered incomprehensible words and moaned continually. After the attack he appeared stupefied, and fell asleep immediately. Tongue thickly coated yellow, stool hard and rare, pulse small and thin. After 15 grains of magnesia usta the tongue became cleaner, he passed several stools, the urine was turbid, acid, headache unaltered. He then got zinc. acet. 7, a dose every hour. After two days the pain lasted only two hours, after three days only one hour, the urine became clear. He now got smaller doses of zinc, and was quite cured in fourteen days.—*Ibid.*

Cephalalgia, with loss of mental power.—A girl, aged 24, stout, menses regular, suffered for four years from pressure and tearing pain in occiput, shooting pain in right eye, tearing and shooting alternately in ears and teeth. Every year the headaches increased in intensity until the mental powers suffered. Belladonna 30 removed the pain in the eye, but only slightly relieved the other symptoms. Zinc. 30 cured her completely in thirteen days.—Ruckert, *ibid.*

Cephalalgia periodica.—A man, aged 19, with pale complexion, who had strained his eyes in the manufacture of fine astronomical instruments, had influenza four weeks ago in which the nasal mucous membrane was severely affected. The coryza was at first very fluent, now the discharge is thick and viscid. For a week past, during which the catarrh had extended to the frontal sinus, has had headache in fits, which lasted from 10 a.m. till 4 p.m., after which he felt quite well. The pain, which was throbbing synchronous with the pulse, begins in the occiput and spreads over the crown to the forehead. Appetite good, bowels

rather constipated, tongue coated white (he had drunk much milk). During the attack he lies in bed with the eyes closed, as the pain is increased by opening them. When he is well covered he perspires. Sleeps on the whole well, but does not feel refreshed when he wakes in the morning. September 7.—He got zinc. met. 6th trit. night and morning. September 8.—The attack came on later in the afternoon, and lasted only a short time. September 9.—Had no attack, only some dull aching in the head, especially on reading and going upstairs. September 10.—Feels so well that he has gone to his work. He continued the medicine for a few days and has had no return of his headache.—Mossa, *ibid.*

Cephalalgia chronica.—A young woman, aged 25, with normal menstruation, yellow complexion and sunken cheeks, consulted the doctor on July 5 on account of headache from which she had suffered for three months. The pain is situated in the middle of her head, begins in the morning on waking and lasts till the evening, when it ceases. It is always attended by nausea, and the patient noticed that since it occurred the hair has fallen off greatly. Tongue thickly coated, taste and appetite bad, stool hard, urine normal. She got a dose of magn. usta. July 6.—Tongue clean, bowels opened several times, but headache unaltered. She now got 6 decigrammes of zinc. acet. July 7.—Pain less but lasted as long. Rep. July 8.—No attack of headache but some compression of head. She thought she was well and ceased attending. But on August 8 she returned and said that for some days past the headache had returned just as before. She got 24 centigrammes of zinc. acet. August 9.—Attack as long but not so severe. Rep. August 10.—Attack as severe and as long as ever. She now got 6 decigr. August 11.—Attack shorter and slighter, 72 centigr. August 12.—No attack of headache, 1 gr. zinc. acet. After this no more headache.—Kissel, *ibid.*

Cephalalgia chronica.—A married lady, with scanty menses, but robust, had suffered from girlhood from attacks of headache which generally lasted fourteen to fifteen days, and was worse during menses. After this she had intermission for fourteen days. The attacks came on every day, began with frontal headache of a compressive character, accompanied by redness of conjunctiva and skin of forehead. When the pain is at its worst, the thoughts become confused and she has hallucinations. Falls asleep after the attack. Pulsatilla was given first for five weeks on account of the scanty menstruation, but it did no good. Then for nine weeks belladonna, under which the attacks occurred less

frequently and were not so violent, but sometimes they acquired their former intensity. There occurred also new symptoms, drowsiness and vomiting. She now got for sixteen days every evening 6 centigr. of zinc. sulph. 4x trit. In four weeks the improvement was so great that the headaches only occurred during the menstrual period and were more moderate. After taking the medicine for six weeks, with pauses of eight days, the patient was completely cured.—Arnold, *ibid.*, 180.

Cephalalgia after otitis media.—A young lady, who was nursing her second child, was attacked, the beginning of March, by a severe influenza, during which the right ear was affected by otitis media, with perforation of the drum-head and purulent discharge. On March 3 I found her in bed, in high fever, with violent pain in right ear, which was also very tender to touch. The pain spread over right side of face. Hearing was nearly lost in that ear. Hepar sulph. 6th twice a day. March 7.—Discharge diminished, fever in the morning. Cont. March 10.—Feels better, discharge less. March 18.—Recurrence of shooting pains in right ear, discharge of blood and foetid pus, then of watery matter. Asafœtida 18th twice a day. March 25.—After a loud crash in the right ear there was a discharge of foetid pus, after which the hearing improved somewhat. She complains of a dull pain in right side of head. Silica 6 twice a day. The fever ceased, the appetite returned; she got stronger and could resume her household duties. But there remained the dull pain and tinnitus. She returned at the beginning of May, and said on two mornings she had had severe attacks of vertigo. On the second attack she had fallen down. The menstruation was always profuse and painful, and she had often had bleeding from piles. The hearing of the right ear was good. She got zinc. met., 6th trit., night and morning. The next menstruation was more moderate and painless. The dull headache had ceased. Now and then she had slight vertigo, but that soon ceased. Hearing of both ears equally good.—Mossa, *ibid.*, 181.

THERAPEUTICS.

Astigmatism.—Dr. Leach reports two cases of astigmatism, apparently spasmodic, where glasses brought no help, but where eserine 6 once daily gave rapid relief.—*Minn. Hom. Mag.*, November, p. 335.

Cataract.—The *Indian Homœopathic Review* reports the case of a young man, of robust constitution and health, who, early in October, 1899, hurt his right eye. The inflammation which set in subsided, but the sight was not restored. The oculist of the Calcutta Medical College Hospital said he had traumatic cataract, which would have to be operated on. Dr. Salzer prescribed naphthalin 6x morning and evening. A week later he seemed somewhat better. The medicine was stopped for three days, and taken again for six days, once daily. He continued thus with the remedy for two months, when the cataract was considered perfectly cured and his sight restored.—*Hom. World*, January, p. 14.

Chorea.—A girl, aged 10, had for three weeks choreic movements, tossing and twisting; the right arm and right leg were almost useless, so that she could neither write nor sew, nor use her hand when eating. When walking the right arm hung loosely down, and the right leg dragged. She got first gelsemium and then zincum, but after six weeks there was no improvement. She then got calc. carb. 6x every four hours. Improvement soon followed, and after continuing the medicine she was quite cured.—*Mossa, A. h. Z.*, cxliii., 206.

Convulsions.—When these occur or threaten in whooping-cough, Dr. Tooker has come to regard cuprum metallicum as nearly specific. He uses the 3x, giving it intercurrently with the other remedies.—*N. A. Journ. of Hom.*, January.

Cutaneous Disease.—Dr. Dearborn contributes to the January number of the *North American Journal of Homœopathy* some instructive cases of skin disease recovering under homœopathic medication. The first is one of symmetrical patchy scleroderma, greatly benefited by rhus 1x; the second of pompholyx, where bufo and natrum sulphuricum, both in the 6x, cured; the third, of ichthyosis hystrix beginning after vaccination, where thuja 3x was the remedy; the fourth, acute erythema multiforme, recovering under antipyrin 3x; the seventh was a prurigo of ten years standing, in a child of 12, cured by sulphur 6x alone in five months; the eighth was purpura simplex, making a rapid recovery under phosphorus.

Diabetes insipidus.—Dr. Berlin reports a well-marked case of this malady, in which rapid cure followed the administration of lycopodium 30. The patient had been drinking six to eight

quarts in twenty-four hours, and discharging a corresponding quantity of urine.—*Hom. Recorder*, January.

Dysentery.—Richmond, from his experience in a South African hospital, found the ipecacuanha treatment was not so satisfactory as to spare him the looking further afield for a remedy; and he thinks he has found one in sulphur. "In every case treated with this drug a cure resulted, and there seemed to be little or no tendency to relapses or chronic conditions of alternating diarrhœa and constipation. Twenty grains of sublimed sulphur combined with five grains of Dover's powder were ordered every four hours; and as a result the patients became much more comfortable, diarrhœa and the distressing tenesmus were relieved at once, and as a rule the passage of blood and mucus stopped within two days."—*Lancet*, November 23.

Erysipelas.—Mrs. G., aged 36, was attacked by fever and violent headache. On the third day these symptoms had almost disappeared and the patient was about to get up when suddenly erysipelas of the face came on. She had last year a severe attack of vesicular erysipelas of face with violent nervous symptoms. The severity of the attack and its long duration under allopathic treatment caused the doctor to apprehend serious consequences should she have another attack. She was consequently very much afraid that she might die in this attack. In three or four hours the whole face from the neck to the border of the hairy scalp was much swollen and red. The disease gradually spread in another hour to the hairy scalp. The heart's action was weak and intermitting. Prescription: Apis 4x every hour. The patient begged me to allow her to use some ichthyol ointment, which she had used in the former attack. I unwillingly consented, but found that whenever the ointment was applied vesicles appeared, but none came when the ointment was not applied. She had no delirium as in the previous attack, nor did the hair fall out nearly so much. The duration of the attack, too, was much shorter.—Schumacher, *A. h. Z.*, cxliv., 71.

Fistula.—Dr. Majumdar reports an undoubted case of complete fistula in ano, where, led by the symptom of involuntary emission of urine when coughing, he gave causticum 12 every morning for a week. This initiated an improvement which went on to complete recovery.—*Indian Hom. Review*, Sept., p. 125.

Leprosy.—Mr. Jonathan Hutchinson, in the *Indian Medical Record* of Oct. 31, 1900, reports two cases of anæsthetic leprosy which recovered after an extended treatment, which consisted only in small doses of arsenic, a liberal diet, and abstinence from fish.—*N. Engl. Med. Gazette*, Dec., p. 592.

Tinnitus Aurium.—In a discussion on the treatment of this trouble at the Société Française d'Homœopathie, Dr. Tessier spoke strongly in favour of aconitine, which he gives in the 3x trituration; and mentions that Davasse highly esteemed cocculus. Dr. Edmund Picdvache mentions that in Russia monkshood is a popular remedy for noises in the ears.—*Revue hom. Française*, Jan.

JOURNAL
OF THE
British Homœopathic Society

No. 3.

JULY, 1902.

VOL. X.

*All communications and exchanges to be sent to
DR. GOLDSBROUGH, 32, Weymouth Street, London, W.*

URINARY CALCULI: THEIR FORMATION CON-
SIDERED FROM THE PREVENTATIVE
POINT OF VIEW¹.

BY DUDLEY D'A. WRIGHT, F.R.C.S.ENG.

*Assistant Surgeon and Surgeon for Diseases of the Throat and Ear at the
London Homœopathic Hospital.*

IN matters medical, as in many things else with which we have to deal in the daily routine of life, we are too apt to take things very much as we find them. To no pathological incident does this more truly apply than to the presence of a stone in one or other of the excretory ducts of the body. A stone is found; very well, it is there, and it must be got rid of; such usually is the train of thought. Rarely is the question asked how it chanced to come. We too often stand in the position of the man to whom

“A primrose by the river's brim
A yellow primrose was to him,
And it was nothing more.”

How is it that, though every one of us here to-night is daily excreting quantities of uric acid and other urinary con-

¹ Presented to the Section of Surgery and Gynæcology, March 6, 1902.

stituents—some of them not very soluble bodies, be it remarked—and yet few of us, fortunately, have, or, let us hope, are likely to have, the discomfort and risk of forming a stone in our kidneys or bladder? I cannot say that we are in a position to give a complete answer to this question, but I hope to-night to place before you certain data concerning the circumstances under which calculus formation becomes a possibility, and which may enable you to frame in your own minds an answer very nearly approaching the truth.

In order to clear the ground, I will enunciate what is really a self-evident fact, though often left unheeded, viz. : that the starting-point of every stone is a nucleus ; and that, given a knowledge of the laws which govern the formation of nuclei, the prevention of calculus becomes a practical possibility.

Furthermore, it is obvious that, given a pre-formed nucleus, and a knowledge of the forces which conduce to the further coalescence of the particles which go to make up a growing calculus, we can, by hindering the action of these forces—interposing a stumbling-block, as it were—render the further formation of stone an impossibility.

THE PHYSICAL FACTORS.

Let us see what is known regarding the physical factors of stone growth.

In 1851 Rainey demonstrated a mode of making artificial calculi by a process he termed molecular coalescence. He showed that the salts contained in a solution could be made to cohere in the presence of a certain strength of gum arabic. He found that certain conditions were essential for the production of a nucleus, which having once appeared, the further increase in size by the coalescence of fresh particles was easily brought about by anything which tended to precipitate the salts contained in the solution.

These experiments of Rainey were confirmed and extended by Ord and Vandyke Carter. These observers showed that, so far as urinary calculi were concerned, the

presence of a colloid substance was essential in determining a concretion. This colloid body might be mucus, albumen, or blood. One of these, or, perhaps in rare instances, some similar body, is necessary. As Ord graphically puts it, "The pebbles of the concrete would not hold together without the cement to bind them and to act on their surface. To make calculi of uric acid without colloids would be as hopeless a task as making ropes of sea sand."

THE PHYSIOLOGY OF STONE FORMATION.

I would now draw your attention to certain points bearing on what I will call the physiological side of stone formation; and I use the term in its very broadest sense, desiring to indicate thereby my belief that though, having regard to its outcome, stone formation is rightly considered a pathological incident, in its inception we have to deal with, in most instances, especially in the case of uric acid concretions, a truly physiological process. Indeed, in this latter instance one might almost suggest that it was a case of reversion to the habits of our reptilian ancestors, who secreted the bulk of their urine in the form of almost solid uric acid.

I think that we may dismiss from our view to-night all the rarer calculi, such as those formed of cystine, xanthin and uric oxide, and concentrate our investigation within the sphere of the commoner ones. Of these, uric acid or its salts and oxalate of lime are by far the most important, for it is out of one or other of these two that the nucleus of the greater number of calculi is formed. Of the other components of nuclei we have to reckon with phosphate of lime—so rare that in the College of Surgeons Museum there does not exist a single stone having this substance for its nucleus—carbonate lime, which, though *the* calculus of herbivora, is nevertheless very rare in man; and, lastly, the triple phosphates, which likewise hardly ever form the nucleus of a stone.

Their importance demands a special consideration for uric acid and oxalate of lime.

I.—*Uric Acid and the Urates.*

Of the well-known uric acid I will remind you that in crystallising it has a marked affinity for urinary pigment. It forms with it more or less of a chemical combination, and the amount of pigment appears to influence the shape of the crystals. Now, it is a generally recognised fact that the appearance of crystals of uric acid in the urine is no certain index of its excess or otherwise. The formation of the crystals is very largely dependent upon the quality and general condition of the urine. With a normal excretion of uric acid there may be an abundant deposit of crystals, and a large excess may be unattended by any crystalline deposit. The question, then, what effects the formation of these crystals, and causes their precipitation, is a most weighty one.

Uric acid is a most insoluble substance; 15 grains of it require for their solution about 14 pints of water, at the temperature of the body, and yet urine often contains 30 grains dissolved in so small an amount as 6 ounces. Sir W. Roberts formed the theory of the hypothetical quadriurates to account for this, but later research has thrown much doubt upon the correctness of his view, and seems to point to the belief that the uric acid exists in the urine as acid sodium urate, and that it becomes deposited owing to a decomposition taking place between the sodium salt and the acid phosphate of soda which is always present.

Conflicting theories such as these only serve to emphasise our ignorance, and we may as well admit at once that we have at present no definite explanation forthcoming for this deposit of uric acid.

Much the same may be said of the crystalline urates of ammonia and soda. We know, however, that they are at times passed in their crystalline form in the urine during the febrile attacks to which children are liable, in which case it is probably brought about by a deficiency of the solvent—the urine being in a concentrated condition in such attacks; and inasmuch as these crystals, from their shape (hedgehog form), are liable to irritate the tubules of the kidneys, and

possibly cause some exudation of albuminous material, we may in this way explain the frequent occurrence of these urate stones in children and infants.

The amorphous urates are common enough as a deposit in urine which has cooled, but being so readily soluble in warm urine they do not easily form the starting-point of a calculus. Amorphous bodies rarely do, since they cohere with difficulty until a nucleus has been formed of some crystalline body, and then they are deposited around it with tolerable readiness.

II.—*Oxalic Acid.*

This body in the urine crystallises in the form of rhomboids or needles ; when pure it is in plates. If oxalic acid be added to lime in an ordinary medium, small crystals are formed ; if, on the other hand, a small quantity of albumen or mucin be present, large crystals form. In oxalate calculi the nucleus is usually one large crystal, which is a fact of some significance, and there is much evidence to support the view that mucin or albumen form the binding medium for the nucleus of oxalate stones.

The older theory of the oxalic acid diathesis is not supported by the latest investigations, the results of which have been summarised by Dr. Helen Baldwin as follows :—

(1) As varying amounts of calcium oxalate may be held in solution in the urine, conclusions based upon the presence or number of calcium oxalate crystals found therein are of no real value as an indication of the quantity of oxalic acid present.

(2) An ordinary mixed diet regularly contains traces of oxalic acid and its salts.

(3) A portion of the oxalic acid ingested with the food may be absorbed and reappear in the urine.

(4) The normal daily excretion of oxalic acid in the urine fluctuates with the amount taken in the food.

(5) In health no oxalic acid, or only a trace, is formed in the body ; but that present in the urine has been ingested with the food.

(6) In certain clinical disturbances which are associated

with the absence of free hydrochloric acid from the gastric juice, oxalic acid is formed in the organism.

(7) This formation in the organism is connected with fermentative activity in the alimentary canal. The prolonged feeding of dogs with excessive quantities of glucose, together with meat, leads eventually to a state of oxaluria. This experimental oxaluria is associated with a mucous gastritis, and with absence of HCl in the gastric contents. The oxaluria and accompanying gastritis are referable to fermentation induced by excessive feeding with sugar, and this fermentation is associated with the formation of oxalic acid in the gastric contents.

(8) The symptoms attributed to an oxalic acid diathesis, with the exception of those due to local irritation in the genito-urinary tract, do not appear to be due to the presence in the system of soluble oxalates, but are more likely to depend on other products of fermentation and putrefaction.

These conclusions throw some light upon those cases of melancholia associated with oxaluria, in which so much benefit accrues from large doses of nitro-hydrochloric acid. It is probable that the acid acts by preventing fermentation in the alimentary canal, and aids the gastric juice in properly dealing with the food, by acting as a substitute of the absent hydrochloric acid.

III.—*Phosphatic Concretions.*

The only salts of phosphoric acid I will ask you to consider are the phosphate of lime and the ammonio-magnesium or triple phosphate. The former is nearly always deposited in an amorphous condition, and, in accordance with what I have already said, but rarely constitutes the nucleus of a stone, frequently, however, forming thick layers on an oxalate or uric acid nucleus. The triple salt is of course crystalline, but is so rarely present until ammoniacal decomposition has set in, that we seldom meet with it as a component of a calculus until cystitis has supervened, and then it is the chief ingredient of the subsequently deposited layers. A combination of the triple and calcic phosphate occurs, forming the "fusible calculus."

The question of phosphatic deposit is so intimately associated with that of the phosphatic diathesis that the two may well be considered together.

Dr. Prout promulgated the theory of the phosphatic diathesis. The constant passage of phosphates in the urine he associated with a particular condition of ill-health accompanied by much nervous exhaustion, and he brought forward cases in support of his notion. Sir William Roberts was his chief opponent; and, in summing up his judgment on the subject, says: "The phosphatic diathesis of Prout is simply ammoniacal urine."

It is highly probable that Roberts erred as much in one direction as Prout did in the other. Jonathan Hutchinson, whom I think we may class as an impartial and highly reliable observer, says:—

"Those who deny that there is any proof that phosphates are ever secreted in excess in connection with long persistent derangements of the general health (the phosphatic diathesis) have to meet the following facts.

"(1) Undoubtedly there are cases in which, for years together, but with variations in quantity, white sand appears abundantly in the urine, there being no indication of disease of the kidney or bladder. This white sand consists of mixed phosphates, and is attended by an alkaline reaction of the urine.

"(2) Next, there are undoubtedly, in all collections of calculi, specimens which consist of white amorphous phosphates, in some cases with a small nucleus of some other substance, but in others with indications that the nucleus is also of the same salt. There are also numerous specimens showing thick layers of dense phosphates intervening between layers of uric acid or oxalate of lime. The character of phosphatic deposits as thus met with differs from that of the mortar-like incrustations met with as a consequence of cystitis from the presence of an irritating stone, in being much more dense and compact.

"Not infrequently in phosphatic calculi, or in layers met with under such circumstances, there is some admixture of urates with the earthy salts. The clinical history of the

cases in which the white sand appears in the urine is quite consonant with the admixture or alternation referred to. Those who pass white sand often appear to be in good health, or are liable only to dyspepsia, much as are those who pass uric acid; and, in some, the deposit can be produced almost at will by indulgence in wines or articles of food, just as that of uric acid can in others. There is, therefore, nothing to excite surprise that the two salts, apparently so opposite in their significance, should occasionally alternate, being in turn the results of modifications in assimilation not wholly unconnected. Dr. Prout laid probably too much stress on nervous exhaustion as an accompaniment of his phosphatic diathesis, and hence misled subsequent investigators, who have easily proved that excessive wear of the nervous system is by no means always attended by increase of the excretion of phosphates. The fact is that the white sand cases are by no means always attended by debility; whilst, as is well known, uric acid dyspepsia is in its turn occasionally attended by marked debility, and may be produced by overwork or anxiety."

The following quotation from Dr. Carter, of Liverpool, on phosphaturia, form a very fitting context to the foregoing remarks.

"Patients are frequently much concerned at observing a turbidity of the urine when first passed. I have known such urine to be passed for many weeks together. The turbidity seldom affects that which is passed the first thing in the morning. But the urine at other times of the day is alkaline or neutral, coated often by a greasy film, and throws down a dense deposit, usually of amorphous phosphates. The turbidity is greatest at the end of micturition, and the malady is usually cured by care in diet and the use of pepsin and nitro-muriatic acid. In two cases this condition was caused by taking oatmeal. In one—a medical man—frequent micturition was complained of. The urine was acid when first passed, but quickly decomposed, and showed an abundant deposit of phosphates. Oatmeal was stopped, and the symptoms rapidly improved, and on resumption of the oatmeal they returned. In another case oatmeal was ordered experimentally, and similar results were produced."

We have, then, abundant evidence that particular forms of diet, and certain disturbances in the alimentary canal causing fermentation of its contents, are potent agents in producing deposits of both oxalates and phosphates in the urine of otherwise healthy subjects. And not many will deny that in some instances a similar rôle is played in the case of uric acid.

It is, further, highly probable that with the digestive disturbances above alluded to there is a tendency to excessive production of mucus, both by the intestinal and respiratory mucous membrane, and possibly also by the urinary tract, though I can adduce no direct evidence on this latter point. If we are, however, correct in assuming this, we have present two of the most important precursors of stone formation, and in the case of oxalate of lime we have a further instrument in the blood or albumen exuded as a result of the passage of the irritating crystals through the urinary channels.

RACE AND LOCALITY FACTORS.

No consideration of the causation of calculous disorders would be complete without some notice being taken of their relationship to race and locality.

As regards the former, the only point which stands out prominently is the surprising rarity of stone in negroes, a fact for which no adequate explanation has been advanced. When we consider the relationship to locality we are at once struck by the conflicting nature of the facts revealed. In India, stone is in each case common, especially in the hill districts. In China it is exceedingly rare, except in Canton, which, indeed, has a special stone hospital.

In Europe, it is very rare in Norway, Sweden, Denmark, Iceland, the greater part of Germany, and the whole of Russia except Moscow. In Switzerland it is also rare. It is common in France, Italy, and Holland. In the Western hemisphere, it is apparently rare except in Canada, the city of Boston, and probably also a part of Brazil.

As regards the British Isles, it is very rare in Ireland,

being in fact unknown among the poorer classes. In Cork, only thirteen operations occurred in eighteen years, and in Dublin not more than five per annum are performed. In Scotland and England stone is common, and in the latter country is especially common in Norfolk and East Yorkshire. It is a peculiar fact that the population of these parts is to a great extent derived from the Scandinavian countries, where stone is almost unknown; and the population of Belfast, the city of Ireland most nearly free from stone, is probably the one in which the Scotch element is largest, and yet in Scotland stone is abundant. It is also interesting to note that in Ireland gout is common and in Scotland comparatively rare.

How can we explain these diverse facts? It is doubtful whether they can all be put down to the result of the action of one cause; certainly we are not in a position at present to account for them in this way. As I have previously indicated, there is more than one factor of stone-formation, and it is possible that in each locality one or other is brought into play by local conditions.

Thus, in certain districts, the abundance or scarcity of good fresh water may readily be preventive, or the reverse, of a predisposition to calculus. Some people, and even nations, are more prone to free libations of water. The Americans as a body drink much more water than we do, for instance; and this may possibly explain their freedom from stone. It is noticeable that cider-drinking communities are particularly free from calculous disorders, and this may be brought about by the diuretic effect and the soothing action of this beverage on the alimentary and urinary tract.

The abundance, or the reverse, of common salt in any particular district appears to have an intimate connection with this part of our subject. I will here enumerate the chief facts relative to this question.

First with regard to the action of salt on the urine:—

(1) Bence Jones showed that urate of ammonia is made more soluble in urine by the addition of a moderate quantity of sodium chloride. It should be remembered, at the same

time, that not a few authorities hold that uric acid exists in the urine in the first instance as urate of ammonia.

(2) Max Grueber, of Gratz, proved by experiments on dogs that a meal rich in sodium chloride, given after several days of meals free from salt, caused the urine to become intensely alkaline. Also that if a saltless diet be persisted in for some time the urine becomes no longer alkaline during digestion.

(3) The free use of salt increases thirst, which leads to larger quantities of water being taken, and by diluting the urine may further reduce the tendency to calculous formation.

(4) The presence of salt greatly increases the solubility of uric acid (Plowright).

(5) By keeping the colloids equally diffused, salt tends to prevent the crystalline solids of the urine from agglomerating into calculi.

In addition to the above, the following points are worthy of notice.

(1) There exists in Norfolk a district (Marshland) in which calculus is much less common than in other parts of Norfolk. In this district, the water supply contains a large amount of salt. (Dr. Plowright, *Medical Times and Gazette*, October 10, 1885.)

(2) Calculus was relatively more common in Norfolk during the period of the salt tax than before or after (*ibid.*).

(3) The disease is rare amongst sailors, who consume much salt.

(4) It is more common amongst children of the poor, who consume less salt than those of the upper and middle classes.

(5) The disease is common in India, where salt is taxed.

As mentioned above, the natives of India are very prone to calculus. The connection between this fact and the use of common salt is indicated by the following: The food of the natives consists almost entirely of cereals and leguminosæ. These substances, with the exception of rice, are very rich in potassium salts; and, as Bunge has shown, foodstuffs containing much potassium cause a copious excretion of

soda salts in the urine, and create a natural craving for sodium chloride. Hence vegetarians and herbivorous animals are great salt-consumers.

Owing to the salt tax the natives of India have mostly to go without this condiment, though, as vegetarians, they most require it. This does not, however, apply to exclusive rice feeders; and it has been found that where practically the whole population of a district feeds on rice, calculus disappears; *e.g.*, in Assam.¹

PREVENTATIVE TREATMENT.

My remarks on this head will be very brief. Much of the foregoing will supply suggestions as to the line of treatment most suitable. We have seen that in all cases of lithiasis there is a tendency to excess in the urine of some constituent which is not easily soluble. It might be argued from this that it is our first duty to get rid of this substance as early as possible. Personally I do not believe this to be either possible in most instances, or even desirable, except so far as this excretion can be directly traced to some dietetic error. In many instances the excretion in question is probably an indication of an effort of nature to get rid of some deleterious substance, and this effort should be assisted rather than hindered. This can be done in more ways than one, but chiefly by increasing the solvent. Fresh, or, better still, distilled water, copiously taken, will do more towards effecting a thorough clearance than anything else. And this should be particularly insisted on in the case of children, who habitually pass far more solids in their urine, in proportion to their size, than adults. Hard waters should be scrupulously avoided, for it has been found that they tend to increase the outpouring of mucus from the urinary tract.

In cases of oxaluria such articles of diet as rhubarb, spinach, and cocoa should be avoided; but more particularly should any fermentation in the stomach or intestines be

¹ For further details on this interesting point see an abstract of a paper by Surgeon-Captain Roberts in the *Lancet*, February 9, 1895, read at the Indian Medical Congress.

corrected, for we have seen that this is as much as anything else the cause of oxaluria.

There is abundant evidence to show that the free use of common salt tends to prevent the formation of calculi, both by increasing the solvent and hindering the formation of colloids.

Mucus, and other bodies which favour molecular coalescence, should be got rid of. Turpentine and glycerine are both efficient agents in this direction, the latter particularly in the case of uric acid deposits.

When ammoniacal decomposition has taken place in the bladder that viscus should of course receive attention, and daily washing out be instituted. The administration twice daily of 7 grains of urotropin will often help much to clear the urine of septic elements; and that drug, according to Reginald Harrison, is also beneficial in cases where amorphous phosphates are constantly passed without decomposition of the urine.

Dr. DUDGEON considered that oatmeal was an excellent diuretic. He had noticed that the taking of a plateful of oatmeal porridge in the morning for breakfast would very soon be followed by a large flow of water. Rhubarb (not the root, but what was served at table) caused a deposition of oxalate of lime in the urine.

Dr. BEALE said that with regard to the formation of stone and the excessive secretion of phosphates and of uric acid, he had often been able to associate these with mental conditions. It was a curious thing that Mr. Wright should have mentioned those two substances as being related to one another in their method of deposit and action. He (Dr. Beale) believed that the types of mentality associated with those excretions were variable. The type of mentality associated with the phosphatic deposit was associated with depression, especially in women. Uric acid, on the other hand, was generally found in the irascible temperament, or irritability which was very often associated with the gouty man. With regard to the relief of gall-stones, he felt positive that he had been able to remove them in some cases, and in other cases to relieve the symptoms very much, by the simple drinking of large quantities of lemon water. At Camberwell, years ago, he had a patient who was constantly having biliary

colic at regular intervals, and who, after following his advice to drink lemon water and continuing it for some time, improved under the treatment, and some years after she told him that she was free from attacks. A patient in Wiltshire told him a little time ago that he was suffering from calculus in the gall bladder, and more than one doctor had told him that his only chance of recovery was to have a surgical operation. He suggested to the patient the same treatment in combination with the Salisbury diet. When the treatment began the patient was a horrible dyspeptic, his life was a misery, and he was constantly having pain in the region affected. He had since had two letters from him reporting that he was not only free from pain, but was quite careless now with regard to what he ate, and that he had not needed to pay a visit to the surgeon.

Dr. STONHAM asked a question concerning the kind of calculi which was present in the case of the natives of India. A vegetarian diet was accompanied by a deficient quantity of uric acid in the urine. How could it be explained that those people who naturally had a less quantity of uric acid in the urine should yet be subject to calculi?

Mr. DUDLEY WRIGHT, in reply to Dr. Stonham, said that the majority of stones in the Bombay Museum contained a nucleus of oxalate, which of course would be expected to be present in vegetable feeders to a great extent. He believed that the actual proportion was nearly three-fourths.

Mr. WYNNE THOMAS, in thanking Mr. Wright for his very interesting paper, said he was specially interested in phosphaturia because it was a condition which he had himself suffered from for about fifteen or twenty years on and off. At one time his father took him in hand and tried several remedies, and as he did not make any very great progress he was put under the care of a medical friend. It was supposed that in his case the ailment was due to his working up for an examination, and he was told to take more exercise. He had always been fond of athletics. When he was at school he was always in the football team, and in the summer he used to play at tennis and cycle, and so on. Therefore it did not seem to him that it was a question simply of exercise. He noticed that the water had always been very clear the first thing in the morning, but sometimes by midday there was a very thick deposit of amorphous phosphate; but towards evening it had generally been better, and perhaps by bedtime the deposit had quite disappeared. If he had gone in for any very active exercise, the exercise had invariably been followed the next day by a heavy deposit of urates.

With regard to medical treatment, he for some time took a course of nitro-hydrochloric acid, and afterwards a long course of phosphoric acid, but with little effect. He did not think that depression had anything to with the matter.

Dr. RAMSBOTHAM said he was in the West Riding of Yorkshire, and he did not think that calculi were quite so prevalent there as in the East Riding. He thought he noticed that Mr. Dudley Wright associated oatmeal with the formation of calculi, while Dr. Dudgeon had told them that oatmeal acted as a beneficial diuretic. He was at one with Dr. Beale in the view that the more fluid there was taken the less liability there was to the formation of biliary calculi; but he did not find it necessary to add lemon juice to the water, though it would appear to be something analogous to the giving of nitro-muriatic acid, which had been favourably spoken of by Mr. Dudley Wright.

Mr. DUDLEY WRIGHT, in reply, said the question might well be asked, How far was the success of the taking of lemon water in biliary calculi by Dr. Beale's patient due to the extra amount of fluid which he was thus taking? Possibly also the patient was giving up alcohol at the same time. Was that so?

Dr. BEALE: He had not taken it.

Mr. DUDLEY WRIGHT said that he did not wish to dispute for a moment that lemon water would be good in biliary colic, but more particularly was plain water good for it. There were certain forms of dyspepsia in which lemon water would be really harmful. Plain water had not that effect. Therefore it was better to order plain water unless lemon water was indicated. The patient would be taking citric acid in lemon water, and therefore the lemon water should only be prescribed in cases in which citric acid was indicated. Mr. Wynne Thomas's remarks with regard to his own case were interesting. It seemed that phosphaturia and the secretion of urates more or less alternated. The urates deposited in the urine were no guide as to the amount of uric acid which had been excreted. After exercise, and especially exercise in cold weather, urates were almost always precipitated in the urine. Urates would very commonly be precipitated under those circumstances, and it was not a surprising thing that Mr. Wynne Thomas should notice that phosphaturia should not be present in the morning. The urine which was first passed in the morning was always acid except in very unusual cases. That was on account of the long rest, sleep, and the long fasting. Rest, sleep, and fasting were three factors which always produced an acid urine, and under those circumstances, if the urine was at all acid,

it was impossible for phosphates to be deposited. But directly the patient took breakfast, the urine became alkaline. Some patients had got more phosphates in their systems than other patients, and excreted them, but that did not mean necessarily that they were in any way ill. The only trouble which the phosphates might possibly cause was, given the nucleus of a stone in the bladder, there might be a deposit of phosphates on it, and a phosphatic calculus might be formed. But people who passed phosphates often lived a very long time and were very healthy. In the majority of instances they had to look, both in the case of oxalates and of phosphates, to the digestive tract. Instead of being properly used up to repair the body in one way or another, these salts were excreted as such, and possibly at the same time the metabolism of the tissues was not quite what it should be.

THE HIGH FREQUENCY CURRENT.

BY JAMES THORNHILL ASHTON, M.B., C.M. (EDIN.)¹

Medical Officer, Electrotherapeutic and X-Ray Department, London Homœopathic Hospital.

MR. PRESIDENT AND GENTLEMEN,—Having been invited to read a short paper on a subject connected with electricity, I beg to be allowed to introduce to your notice the latest form of electrical current now being used as a therapeutic remedy. Electrical treatment as a rule does not produce the immediate and often radical transformations—I had almost said sleight-of-hand effects—which we are accustomed to expect from the surgeon's knife, but if used with patience and care, the results obtained are at least as conservative (of tissues which it is often desirable to retain as natural looking and useful). The action of the current about which I have to speak to you seems to me to be comparable to what you are all familiar with and always hope to obtain from the majority of the articles you include in your *Materia Medica*, and which you prescribe according to the law of similars. I mean that the high frequency

¹ Presented to the section of Surgery and Gynæcology, March 6, 1902.

current is one of high potency and small quantity, and that it seems to act by restoring the natural combative powers of the vital tissues, and thus enables them to overcome and remove the causes of disease.

THE HISTORY OF THE CURRENT.

From a pure physicist's point of view the history of my subject might be traced in its origin through a long line of noble ancestry of world-wide repute, of which I will mention the names of Oersted, Faraday, Maxwell, Young, Lord Kelvin, Helmholtz, Hertz, Tesla and Elihu Thompson. But it is to Professor D'Arsonval, of the College of France, that we owe the honour of having introduced the high frequency current to the medical profession as another form of electricity likely to be valuable as a remedy in various forms of disease.

In 1888 Professor D'Arsonval foresaw, from researches he had then made as a biologist, that alternating currents might be sent through the bodies of animals without their perception, *if the said current consisted of oscillations of sufficient rapidity*. The methods he used at that time were not entirely to his satisfaction, but in 1890 he succeeded in effecting his object by employing the apparatus used by Professor Hertz.

In 1891, from America, the researches of Tesla, a disciple of Edison, were made known on the physical effects of high frequency currents. In 1892 Dr. Bordier, of Lyons, reproduced Tesla's experiment before the Physical Society of France, and soon after this Professor Elihu Thompson repeated these experiments and simplified Tesla's apparatus. Up to the present time the methods used by Professor D'Arsonval and what is called the Tesla apparatus seem most likely to be retained. I shall describe them further at a later period.

THE CHARACTER OF THE CURRENT.

The character of the current:—The high frequency current is an induced oscillating one of the alternating type in that it travels through the conductors in both

directions. The current is usually produced by the aid of a large Rhumkórf coil such as is used for X-ray work. The coil may be excited either by the (1) alternating current or (2) the direct current (from the street mains), or (3) by current from accumulators. It is also produced without a coil by connecting the conductor of a static machine to the apparatus. It is important that the generating current be *rapidly* interrupted, and it must be suited to the condensers used.

THE APPARATUS.

I now show you (1) Oudin's resonator, and (2) the German modification of D'Arsonval's apparatus. The apparatus, as you see, consists essentially of two Leyden jars, having their inner metallic lining connected with the source of energy, with an adjustable spark gap between their knobs. The outer metallic coverings of the jars are connected to a helix of copper wire, which we will call the primary helix. The current can be taken from this primary helix by conductors for application to the patient. But a second helix is usually attached to the primary one, and current can then be taken from the free end of the second helix, which is much stronger in its effect than that of the primary. An idea of the enormous rate of the oscillations of the current may be given when I say that it is estimated that an ordinary Leyden jar discharges at the rate of millions of periods per second.

Tesla's apparatus differs from the so-called D'Arsonval's in that Tesla connected the secondary terminals of the induction coil to a helix of thick wire of few turns, which he enclosed in a glass tube round which a second helix was wound, the insulation between the two (helices) being further insured by immersing both in a bath of oil, by which very high tension currents could be produced. The effect can be produced without the oil.

The Leyden jars, when fully charged, discharge themselves across the spark gap, and at the same time induce the oscillating current in their outer coatings, which is discharged through the primary and secondary helices.

PROFESSOR D'ARSONVAL'S EXPERIMENTS.

I shall now describe *Professor D'Arsonval's experiments*. He applied the current in two ways. (1) Direct, *i.e.*, to the skin of a living animal, and found that no sensation or muscular contraction was produced, and even when the current was as strong as 3,000 milliampères, only a feeling of warmth was produced; yet the same circuit made an incandescent lamp glow, from which he inferred that the quantity of current passing was considerable, and we know that a street current of far less number of alternations would have caused death.

(2) By the second method, he applied the current by placing an animal inside the solenoid through which the high frequency currents were passed, without producing pain; but if continued for a sufficient time vascularisation of the skin and sweating are produced. The arterial pressure as shown by a manometer fell several centimetres. Professor D'Arsonval advanced the hypothesis (in 1890-91) that the absence of sensation and muscular contraction must be either due to (1) diffusion of the current over the surface of the body with little penetration, as in static electricity, or (2) that nerves sensory or motor can be only adapted to respond to the vibrations of limited range of rapidity.

Dr. Hedley, of the London Hospital, has shown that, by reducing the size of the electrode, a point is reached when a distinct sensation is perceived, and from this he argues that the rapidity of the alternations cannot be the only factor accounting for the absence of sensation, as it (the rapidity) is the same in both large and small electrodes. Dr. Bordier, of Lyons, has shown that an analgesic condition is produced, lasting twenty or more minutes, even to galvanic and faradic currents, unless the latter are stronger than usual. Professor D'Arsonval found that an animal, enclosed in a solenoid, inhaled more oxygen and exhaled more CO₂, without elevation of temperature, and that the respirations were increased. The effect on man is similar to that produced by violent exercise, such as mountain-climbing or cycling, but without fatigue.

In 1896 Messieurs D'Arsonval and Charrin published, in the *Revue Internationale*, a report on the action of high frequency currents on the toxins of microbes. To the two extremities of a small solenoid they attached platinum points, which they immersed in a U-shaped tube, containing the toxin of diphtheria. The chemical action is negligible, as the current is alternating and the platinum unaffected. The temperature was kept at 18° C. to prevent action by heat. After electrifying the toxin thus for a quarter of an hour, they injected two and a half cc. each into three guinea-pigs, and also some of the same toxin, not electrified, into three others, as controls. The three controls died in twenty, twenty-four and twenty-six hours, during which time the other three had not been even unwell. The high frequency current had destroyed the toxicity of the diphtheria poison, not by chemical action, but by molecular disturbance. On another occasion they injected three guinea-pigs with half a cc. of diphtheritic toxin, which had seven days previously had two and a half cc. of electrified toxin. They also injected three other "controls."

The "controls" died on the second and third days. One of those with electrified toxin died on the seventh day. The other two lived. These animals were inoculated to test the attenuation of the electrified toxin.

MM. D'Arsonval and Charrin have also treated the pyocyanic bacillus with the high frequency current by the autoconduction method, and state that the bacillus was killed after half an hour's application.

The bacillus is evidently affected by the action of the current on the mass of the medium, and each particle is influenced like a circuit closed on itself. *No other electric current gives this result.*

This leads us to believe that in the near future the toxin may be attenuated in the living organism directly by the aid of high frequency currents without injuriously affecting the patient.

THE APPARATUS AND MODE OF APPLICATION.

(1) Oudin's modification of the D'Arsonval apparatus, and (2) the German modification of it.

THE HIGH FREQUENCY CURRENT

The advantages this form of current has over others are: (1) Beneficial effect on the system generally. (2) No burns or pain, except by careless sparking. (3) Electrodes easily sterilised, being of metal or glass. (4) No insulation or protective masks necessary. (5) No irksome position of patient, or long applications. (6) Can be applied to large surfaces.

CASES.

(1) I show four cases I have had under treatment, two of lupus and two of varicose veins. The following is a list of cases for which the high frequency current is specially suitable as a remedy. In diseases due to failure or perversion of nutrition, such as gout and rheumatism (chronic and acute), arthritis, neuralgia, neurasthenia, chorea, obesity, diabetes and skin diseases, tubercle in its various forms, lithiasis, varicose veins, congestive hyperplasias (uterine), in blenorrhagia and its complications, in sphincteralgias hæmorrhoids. "It is," says Apostoli, "a medicament of the cells, a powerful modifier of general nutrition, which it increases and regulates at the same time."

(2) I would also refer those interested to the cases reported in the French medical journals, where they will see ample proof of the success of this form of treatment.

LITERATURE.

- (1) Dr. Bordier, of Lyons, in the *Archives d'Electricité Medicale*.
- (2) Dr. Doumer, of Lille, ditto, ditto.
- (3) Dr. Oudin, of Paris, ditto, ditto.
- (4) Dr. Bergonie, of Bordeaux, ditto, ditto.
- (5) Dr. Debedat, of Bordeaux, ditto, ditto.
- (6) Dr. Eulenberg, of Berlin, ditto, ditto.

NOTES ON ECTOPIC PREGNANCY AND OTHER SUBJECTS.¹

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SYLLABUS.

(1) Salpingitis of puberty; differential diagnosis; pathology; "abdominal crises" (the four or five diseases in which this occurs); prognosis; treatment; conclusions.

(2) The sign manual of ectopic pregnancy; sketch of subject; hydrostatics of condition.

(3) Case in which there was entire absence of intra-pelvic sexual apparatus; illustration; drawing; diagram [not published].

Before commencing my paper it is but fair to state that some portion of the first section appeared in substance in the *Homœopathic Review* of November, 1900.

Further experience of these cases seemed to warrant a somewhat copious reference to this paper, as forming a workable basis for the present sketch.

CATARRHAL SALPINGITIS OF PUBERTY.

Symptoms and Signs.

Case 1.—A young lady of 13½, a rather tall blonde, was taken suddenly ill with symptoms somewhat perplexing. Her previous health had been good, and she inherited a rheumatic but not a tubercular tendency. A ride on her bicycle was followed by unusual lassitude, and in the course of a few hours she began to vomit and to complain of pain located in the right groin. The knees were drawn up, the abdomen moderately tympanitic, and the tongue had a white coat. Temperature 102°, pulse rapid and full and sometimes dicrotic.

¹ Presented to the Liverpool Branch, March 13, 1902.

I should observe that the catamenia had not yet appeared. Such was the picture one evening, and the same with slight modification met the eye on the following morning, though the vomiting was absent now, and it did not recur throughout the illness.

For nearly three weeks the symptoms above narrated continued with but slight and fitful variation. Generally, a little improvement in the morning, but a return to the *status quo* at night. At the end of this period, whilst lying in a sunny window wrapped in blankets, a gentle perspiration occurred, and the patient began slowly, but definitely and progressively, to convalesce.

During the twenty months which have elapsed since recovery from this illness, the patient has had two similar attacks, one lasting about two days, the second about a fortnight. The first occurred after a bicycle ride, the second a week after a ride on horseback. During previous rides she had been conscious of pain, hence there would appear to be a distinct relation between cause and effect.

At the present time she is in her usual health, which is fair but not robust. It should be noted that in these attacks the pain is always referred to a point immediately above and in the centre of Poupert's ligament. This part is very tender on even light pressure, and long after the other symptoms have passed away it remains the site of a certain conscious tenderness.

Diagnosis.

The diagnosis resolves itself into a consideration of the following:—(1) Simple pelvic cellulitis; (2) simple pelvic peritonitis or a combination of these two; (3) appendicitis; (4) tubercular peritonitis; (5) hæmatoma of broad ligament; (6) catarrhal salpingitis; (7) rheumatism; (8) injury to psoas muscle.

Pathology.

Under this head it will, I think, be best to discuss briefly the diseases indicated by above headings. The last two may, I think, be cashiered, as being too nebulous to

admit of practical consideration. They may, of course, have played some part, but at the best it must be an insignificant part, in the rôle of symptoms.

As regards No. 1.—This was undoubtedly present, as will be apparent later on.

As regards No. 2.—From the character of the pain and its sudden onset, and especially in view of the vomiting, I have no doubt this was present in definite degree. But peritonitis is a secondary disease, and it is conservative in character—two characteristics which will be emphasised later on in the right place.

With regard to No. 3.—Appendicitis could hardly occur with its phenomena in the locality indicated unless some pre-existing disease of the part concerned had altered its position in the abdominal cavity, and of this there was an entire absence of evidence. Pain manufactured at McBurney's point could hardly give tenderness in the groin and none at its site. It is true, however, that the sympathetic nervous system is sometimes found to be, as it were, singularly obtuse in its interpretation of pain, or poorly discriminating would perhaps be a more legitimate term to use. Markedly is this the case in ovarian and renal diseases.

For the lesion to be, as indicated by *No. 4*, essentially *tubercular*, it would be necessary to establish at least a phthisical history, and this is entirely absent in the case under review. Moreover, one would look for evidence of tubercular mischief elsewhere, and there is none.

Thus, *Nos. 5 and 6*, by a process of exclusion, remain to be faced. I have for years been much impressed, on a careful scrutiny of abdominal sections occurring in the practice of others, both at home and abroad, as well as of such as have fallen to my own share, that the amount of disease of the adnexa is often entirely disproportionate to the degree of pain complained of, also to the degree of incapacity for an active life, and, moreover, to the *apparent* magnitude of the lesion. The latter is often much greater than the most careful examination conducted bimanually would lead one to suppose. That such should be the case admits of explana-

tion in great measure, but to enter into this would carry us too far afield from the main issues of the present sketch. I mention the above merely to indicate that the absence of phlegmon in the broad ligament, as ascertained by examination per rectum, and inability to find by the same channel evidence of tortuosity of the Fallopian tube, is no evidence that either the one or the other, or even both, do not exist. Equally pertinent to the inquiry re *hæmatoma* are the facts just mentioned regarding tubal mischief, viz., that its variations are extraordinary, as regards pain, degree of invalidism, and extent of disease. Broadly speaking, the tangible pathology of *hæmatoma* varies within the limits of a minute hæmorrhage and an enormous hæmatocele.

As regards No. 6.—I detailed just now a group of symptoms (fever, pain, vomiting, and collapse) which occurred in one case. These symptoms, taken together, constitute what is known as an *abdominal crisis*, and this is, I think, the crux of the whole situation, and, taken in conjunction with the rest of the history, is, I believe, pathognomonic of the disease under review.

May I call to your notice four types of disease, very diverse in character, in which I have seen instances, sometimes recurrent, of an “abdominal crisis?” And before referring to them let me just again recall the essential criteria of this condition. They are sudden, violent, localised pain in the abdomen, accompanied by vomiting, fever, a rapid pulse, sometimes syncope, and always more or less collapse.

The types of disease in which this is observed are:—
(1) Twisted ovarian cystoma; (2) early ectopic gestation; (3) gonorrhœal parametritis; (4) purulent salpingitis; and perhaps one should include perforating gastric ulcer.

The diagnosis of each of these there is no time to go into. The last (No. 4) is the only one which shall detain us. When the fimbriated extremity of a Fallopian tube, distended with pus, sheds what has been aptly termed a “tear” of pus into the peritoneal cavity, the conditions favourable to the formation of an abscess are set up, peritoneal inflammation being, of course, the initial one. Thus the symptoms just narrated occur. Such, then, is an “abdominal crisis.”

So much, then, for just a sketch of the pathology, which has been incorporated with a consideration of the differential diagnosis.

Ætiology.

Before coming to prognosis, a reference to the *ætiology* should find a place at this point. As to the *predisposing* causes, they appear to be intimately associated with changes incident to the inception of puberty, and thus the disease appears at that period of life indicative of early adolescence. A frequent and perhaps invariable accompaniment is leucorrhœa, and this is, as some think, the essential factor of the disease. Personally I am not, so far, convinced that this is the case. As to *exciting* causes, they point to traumatism, induced by such causes as bicycle and perhaps horseback riding. This may appear rather too wholesale a condemnation of such healthy exercises for the young female adolescent; I can only say again that, in one of the four cases which have formed the basis of my remarks, the symptoms have appeared on two or three occasions after bicycle riding, and on the third occasion there is strong presumptive evidence that it arose in consequence of a ride on horseback, whilst in another case altogether it indisputably did so.

Prognosis.

Is favourable as a rule. The conditions which would make it otherwise are, I presume, a tubercular tendency, or the necessity from force of circumstances to continue what would tend to perpetuate traumatism, as the occupations of some of the erroneously-called "lower classes."

Treatment.

Is not surgical. The remedies naturally fall to such as have an elective affinity for the structures involved, and depend largely upon the degree of precision in diagnosis which is attainable. They are essentially acon., bell., and, *facile princeps*, arsen., nux vom., merc. cor., arsen. iod. conspicuously, and cod liver oil. If the condition failed to

resolve under treatment, and a more or less chronic pelvic suppuration was engendered, I should use such remedies as the silicates of lime, soda, or potash, or possibly the silicate of calcium, and the fluo-silicate of potassium.

Conclusions.

To sum up the foregoing, I would venture to suggest that in some at least of these cases we have a traumatic hæmatoma of broad ligament, either alone or coupled (which is perhaps more likely) with a salpingitis, sometimes catarrhal, sometimes purulent, and that, alone or in conjunction, they set up the symptoms known as a "peritoneal crisis."

Such, then, are the conclusions which I submit as justifiable in consideration of the four cases to which I have referred, though giving details only of one, the most typical. The conclusions are incomplete, perhaps because various hiatuses exist which at present one cannot bridge over. If one could, there would be less room for assumption and more for assertion. To be dogmatic, however, in matters medical, is neither wise nor prudent.

THE SIGN-MANUAL OF ECTOPIC PREGNANCY.

I do not propose to enter at all fully into the general signs of this condition, my object being to dwell only upon one, perhaps the most important of them. In order to do this, however, it will be necessary just to glance at some of the other accompaniments of this unfortunate accident.

As I happen to have seen a fairly large number of cases of extra-uterine pregnancy, it has naturally followed that the signs and symptoms have come to arrange themselves in some sort of order, as regards priority of importance, in one's mind.

Perhaps the first point which strikes one when listening, in the case of a multipara, to the more recent menstrual history, is that, in spite of its vagaries, there is at least the *suggestion* of pregnancy. The stopping of a "period" by a week or two is suggestive. The subsequent hæmorrhage

is significant. The grouping of signs is unusual, and several may be absent. I hope I shall not be accused of levity in saying that it has sometimes reminded me of Grossmith's setting of "Three Blind Mice" according to Mozart, Beethoven, Handel, Mendelssohn, &c. Though infinitely varied as to its musical setting, the air is still "Three Blind Mice," and runs through the whole, but in this case unmistakably.

Having then pregnancy in view, enquiry is made as to any pre-pregnant pelvic condition which may throw light upon the present state of things, and especially as to any history of tubal lesion. If such exist, we have presumptive evidence that it may be of such a nature as to have interfered with the normal descent of the ovum from the Graafian follicle along the tube to the uterine cavity; in short, we seek for some evidence of mechanical obstruction of the tube, be it within or without. Leaving out of consideration the subjective symptoms which are common more or less to all cases of pregnancy, we look for additional objective signs, especially for the presence of a tumour felt in one or other fornix. Such a tumour is exceedingly significant; it is distinct from the uterus, and may be extremely hard, or soft and sensitive, to the touch. There is also a most characteristic sign to which reference has already been made in another connection, viz., the history of one or more "abdominal crises."

The pain of this is agonising, and generally occurs after exertion. Before coming, however, to the "sign-manual," as I have ventured to call it, I should like to give some better idea of a typical case than the foregoing disjointed statements taken from various cases I have seen probably convey, and one which I came across the other day in the *Medical Review of Reviews*, Nov., 1901, strikes me as particularly apt and instructive. It runs as follows:—

"A fine, healthy-looking woman, aged 20, married only a few months, was suddenly seized with rather sharp pains in the abdomen, similar to those of intestinal colic. She vomited her dinner, which she had taken an hour or two before. She had menstruated twelve days before, quite naturally as far as she

knew. Her medical attendant gave her a hypodermic injection of morphia, and advised her to remain in bed until his return a little later. Not long afterwards he was visited by the husband, who announced that his wife was better and that there was no necessity for his return. Early in the evening she complained of feeling rather weak and faint, and he was again sent for, and becoming anxious the writer saw her in consultation. She was faint and collapsed, and the pulse was small and weak and thready, the temperature sub-normal, the extremities were cold, and a cold grey appearance had spread over the face. Careful enquiry elicited that the pain had become localised in the left iliac region. Vaginal examination revealed nothing. Laparotomy was performed. The abdomen was full of blood. There was a rent in the left tube, from which the blood was flowing. The ovum, about the size of a bean, was found on the anterior surface of the broad ligament, between that structure and the bladder. After removal of the tube the abdomen was filled with salt solution and closed. Intravenous saline solutions were freely used, but she was too exsanguine to react, and died some four or five hours later. Thus in very early rupture the only symptoms are often sudden abdominal pain, confined for the most part to one or other iliac region, symptoms of shock, and hæmorrhage."

I have only incidentally referred to the general signs and symptoms of ectopic pregnancy, partly because there was not time to do more, but chiefly because I wish to concentrate our view upon one point, the keystone of the situation. Therefore I will ask you to imagine the object of examination for the moment to be the os uteri, exposed to view with a Sim's speculum.

Blood is seen issuing from it, of a certain colour and consistency, and possessing certain other characteristics. An artist has indicated these in the painting before us, and, I think you will agree with me, with success. Leaving the characteristics of the discharge for a moment, however, I would remark that it has seemed to me that the uterine hæmorrhage incident to ectopic pregnancy is more of the nature of a uterine *leak*, with occasional gushes of bright red blood, than menstruation. All of us who have done much in the way of emptying a uterus after an abortion will have been struck with the fact that there is a certain

odour which is characteristic of the condition present, and one which is found in its full intensity in labour at full term. In ectopic pregnancy this odour is, I believe, absent.

I have stated that the uterine discharge is a leak, and now remark that it is dark in colour, that it is thickish, and that it has a mucous tenacity. To be more exact in point of colour, the blood should be described as brown or brownish-red. It has aptly been compared to what is known to cabinet-makers as "dragon's blood," being that kind of colouring material for cheap furniture, more or less like mahogany—chiefly less—and hailing mainly, I believe, from the metropolis. In consistency the blood is of a mucous tenacity, as stated, or varnish-like. The grouping of these characteristics of the blood discharge in ectopic pregnancy I have ventured to call the *sign-manual* of that condition.

In conclusion, a reference to the hydro-dynamics of the hæmorrhage ought to be made and one other point considered, viz., whether any other condition than that under consideration yields a sanguinary discharge similar or identical to that described. In regard to the hydro-dynamics. When a hæmatoma of the Fallopian tube or other structure of the broad ligament exists, the blood is squeezed by the distended sac along the tube, and escapes at the uterine extremity of the latter. It sometimes happens that hæmorrhage from the uterus having been present, ceases more or less abruptly, but this must not deceive one, for it may be due to one of three causes, viz., (a) the sealing up of the uterine end of tube by an organised blood clot; (b) to cicatricial tissue there; (c) to mechanical torsion of the tube itself, resulting in obliteration of its lumen. When the hæmatoma is opened, and the contents (blood-clots, ovum and decidua) find exit, the bleeding from the uterus of course ceases for obvious reasons.

Since writing the above, it has occurred to me that an exception as to the characteristic hæmorrhage described above should perhaps be made in favour of one type of case which comes before us, viz., in chronic pelvic abscess. I

have noticed that the type of menstruation which occurs in this condition bears some sort of a resemblance to that which obtains in ectopic pregnancy. In the former, however, the attendant signs and symptoms are different, and the ætiology is of course entirely dissimilar.

CASE IN WHICH THERE WAS AN ENTIRE ABSENCE OF
INTRAPELVIC SEXUAL APPARATUS.

In fine, I wish to bring before your notice a very remarkable case in which there is an entire absence of the internal generative organs. The patient, a single woman of about 25, came to the out-patient department of this Hospital, complaining of dysuria. A cursory examination revealed a urethritis, associated with a condition of parts which at the time was noted as extraordinary, and full investigation determined upon at a future period. Subsequently an acute abscess of Bartolini's gland supervened, which in the intervals of attendance gave so much distress that the patient had to seek outside help. Ultimately she was referred by the doctor to one of the hospitals—I forget which—for treatment for "hæmorrhoids and fissure of the anus." That neither of these, however, existed will be apparent in the sequel.

Preferring, however, to come to us for a recurrence of treatment, she again presented herself. A leucorrhœa being extremely copious and irritating, the patient was placed under an anæsthetic for local treatment. This consisted in thoroughly scrubbing the vagina, or rather the short cul de sac to be referred to immediately, with $\frac{1}{1000}$ perchloride solution, the scrubbing being carried out with a toothbrush—a very efficient method of dealing with such cases, especially in view of the way in which the rugæ of vagina harbour the morbid secretion.

The following notes were taken on this occasion:—

There is an almost entire absence of pubic hair, the external appearance of pudendum being therefore infantile, except that at the lower commissure of the vulval cleft there are brown concentric furrows. These surround the fourchette, and indicate, according to some authorities, that the morphology of the parts, *though* nulliparous, is not virginal.

On separating the labia majora a normal clitoris and meatus urinarius are exposed, and below the latter, in place of a normal vagina, is a cul de sac about two inches in depth, lined throughout with a perfectly smooth mucous membrane. I submit that this may represent the persistent uro-genital canal, deepened by attempts at coitus. Below, occupying the raphé of perinæum, is a reddish or reddish-blue projecting body, shaped like a roof ridge, and extending backwards so as to overlap the anus, and on lifting up the tent-like free end a cavity is disclosed. The lower wall of this is torn, and whether when complete it formed the entrance to a separate canal, or was only a diverticulum of the rectum, is not clear. The finger can be passed along this cloaca, which is lined by lumpy, mucous-membrane-like carunculæ myrtiformes, to the lower wall of the vaginal cul de sac, and though not entering the latter is only separated from it by mucous membrane. The direction of this cloaca is at right angles to the vaginal cul de sac, and terminates at a point about an inch within the latter.

A thorough examination per rectum, bimanually, reveals no vestige whatever of uterus or adnexa, the only structure to be felt being something of a band-like character, which probably represents morphologically the broad ligament. This examination with negative result was made the more complete by placing a sound in the bladder, whilst the fingers explored the rectum, all that intervened between the one and the other being the wall of the bladder.

The Clinical Research reported no gonococci in the specimen of urethral secretion sent after the swabbing referred to had been carried out. Anal condylomata were subsequently removed by the cautery, and the patient discharged with remedies directed to the syphilitic contagion.

I am indebted to Dr. Lucas Hughes for an excellent drawing, which illustrates this condition.

THE HAND AS AN INDICATOR OF DISEASE.¹

BY J. MURRAY MOORE, M.D. EDIN., M.R.C.S., F.R.G.S.

THE human hand, that exquisitely-constructed instrument of man's will, is not only characteristic of race, habit, occupation and mental temperament, but also is a useful indicator of actual or latent disease.

Professor Goodsir, of Edinburgh, used to assert that man could be absolutely differentiated from the highest quadruped by his unique power of grasping a spherical object. Man's two muscles, the *opponens pollicis* and *opponens minimi digiti*, are wanting in the anthropoid apes.

Guided by thought and controlled by the newly-discovered centres in the brain-cortex, the hand, by means of its forty-three muscles and thirty-one joints (including those of the forearm), performs its feats of strength and of delicate manipulation; executes its artistic marvels; deceives the quickest eye with its tricks of prestidigitation, and records the immortal thoughts of genius.

Although racial and family resemblances in hands are very marked, yet no two pairs of hands are exactly alike. As Tennyson says,

"No compound of this earthly ball
Is like another, all in all,"

and recently the most trustworthy and perfect identification of criminals has been found in their finger prints.

Throughout the nations whose ordinary salutation is accompanied with a shake-hands it is conventional to regard a hearty grasp and shake as a sign of cordial friendship, and a cold, flabby touch as that of dislike or indifference. But the physician looks at the manner of the hand-shake, not from the ethical, but from a physiological or pathological standpoint. In his logical mind, nervous hurry, extreme shyness, absence of mind, and muscular weakness are not mistaken

¹ Presented to the Liverpool Branch, April 10, 1902.

for aversion or indifference. His trained eye and touch learns much from even a casual and hasty hand-grasp.

My friend and teacher, Dr. Joseph Bell, of Edinburgh, acquired such an admirable facility in accurately naming the occupations of his dispensary patients by their hands, dress and gestures, that his distinguished pupil, Dr. Conan Doyle, has made him famous in romance as the original of Sherlock Holmes, the "champion detective" of fiction. As that remarkable man would say, "It is the merest elementary knowledge, my dear Watson, to note the pricked and blackened left forefinger of the seamstress; the pyrogallic acid stains of the photographer; the flattened finger-tip of the bricklayer; the groove on the right mid finger of the copying amanuensis; the corns on the *right* thumb and index and inside the *left* fingers of the coachman; and on *all* the finger-tips of the harpist and the violin-player; the yellow stain on the left thumb and index of the devotee of cigarettes and the thickened palm of the white-handed 'gentleman' who plays tennis or cricket." The greater power and refinement of touch of the *right* hand is associated with the greater weight of the *left* cerebral hemisphere over that of the right; for it is now pretty certain that the centre for writing and movements of careful adaptation are in that hemisphere, controlling the right hand. But left-handedness exists, and is usually hereditary. Therefore I am of opinion that right-handedness is an acquired habit, derived from long inherited training, despite Weissman's theory; and that *all* infants should be trained to be ambidextrous. Notice that the infant's *first* attempts to grasp a desired object are made with *both hands*.

The act of shaking hands gives us a certain amount of information as to temperature, muscularity, colour, texture, deformities, state of the nervous and circulatory systems, &c. Here are a few of the conditions. The hand is dry in cancer, in diabetes, in cirrhosis of the kidneys, in paralytic dementia; it is dry and hot in fevers; dry, hot, and emaciated in advanced phthisis. The palms of women during menstruation are moist; and of both men, women, and children during excitement or fatiguing exertion. When one hand

is persistently hot and the other cold, the cause is probably gout, lead-poisoning, or sub-clavian aneurism. The hand is cold in anæmia, starvation, and feeble heart; a cold and clammy hand in a youth often indicates the habit of self-abuse. The hand may become cold, clammy and tremulous from dyspepsia, melancholia, hysteria, terror or apprehension of danger, or by the abuse of tea, tobacco or alcohol.

A dry and wrinkled skin is normal in old age; the centenarians I have interviewed invariably showed it. But up to the age of 55 such a condition is a sign of disease in one or other organ of the body. In the first and second stages of phthisis pulmonalis there is a greasy smoothness of the hand which, in my experience, is almost pathognomonic. Emaciation of the hands and a smooth, satin-like texture of the cuticle are induced by vaso-motor ataxia, neuritis, or a latent tuberculosis.

The colour of the hands varies from hour to hour, according to causes within or without the organism. Their normal colours are so changing that we cannot pronounce every person with even constantly blue and cold hands to be a sufferer from mitral disease or a patent Eustachian valve. But if clubbing of the finger-tips is associated with a constant purplish tint of the skin, we may assume that either congenital mitral disease of the heart or Marie's disease No. 2 (of which more anon) exists. Defective aeration of the blood, scurvy, Raynaud's disease, cause the hands to be purplish even in warm weather. Purple spots on the hands may be due to genuine purpura hæmorrhagica, to septicæmia, measles, syphilis, or the pathogenetic action of arnica, quinine, phosphorus, tincture of benzoin, or potassium-iodide. Brown spots on the back of the hands, which do not disappear on pressure, are seen in scurvy, syphilis, carcinoma, Addison's disease, Graves' disease, and arsenical poisoning. Yellowish-red papules on the elbow or the back of the hands may be the *xanthoma diabeticorum*, first described by Dr. Addison; and the urine should be daily tested for sugar.

Diagnosis of a case of coma, where one is called in casually to a patient whose illness is unknown to the prac-

titioner, may be aided by these indications : the existence of yellow spots upon the back of the hand, and on the forearm, would favour the diagnosis of diabetic coma, but purple maculæ on the same tracts of skin would show that the coma was uræmic in its causation.

The general shape of the fingers of a hand are characteristic of certain types of temperament. The long hand, with long, slender fingers and oval, narrow nails, points to an artistic or imaginative or intensitive character. Our friend and colleague, Dr. W. Tod Helmuth, of New York, has a hand of this type, but strong, supple and muscular, in fact, the ideal hand of the born operator. He is also a poet, occasionally.¹ The majority of men have the short, square hand, with spatulate finger-tips, indicating practical thought, logic, and mechanical dexterity. The typical inventor's hand is a blend of these two types. In two instances I have predicted artistic talent by the shapes of the hands and fingers, when the subjects were unaware of it. Both individuals cultivated this latent talent with success in after life.

The colour, form, texture, and modifications of the nails give such useful information that I trust you will allow me to dwell in some detail upon them. The matrix of the finger-nail is a tract of the cutis vera, consisting of rows of highly-vascular papillæ, arranged longitudinally along the finger, which secrete the solid but translucent horny nail-cells. The whiteness of the lunule is an opacity due to the special thickness at this point of the cells of the rete Malpighii. The normal nail grows forward from the lunule at the rate of about one millimetre per week, and is of uniform thickness throughout. In the course of a year the ten fingers produce about two grammes of nail substance. Through the transparent part of the nail changes in the blood and in the finger-pulp can be observed. Stephen Mackenzie suggests that by squeezing the finger-tip, and thus partly emptying the capillaries of the sub-ungual matrix, we can form a rough estimate of the proportion of

¹ While this paper was passing through the press, the sad news came that our valued colleague died on May 14, aged 69, after a very short illness.

red corpuscles in the blood by watching the greater or less intensity of blanching of the nail. In surgical injuries where a nail is destroyed, a complete new one grows in 126 days if the age of the subject is 21, in 159 days if he is 31, in 144 days if he is 67. These are Edward Blake's observations.¹ In established gout the nail becomes thin, in psoriasis thick. Fevers and intra-cranial hæmorrhages arrest the growth of the nail and leave transverse markings. True paralysis of centric origin visibly affects the nail-growth, while the various pseudo-paralyses of hysteria leave it unaffected; therefore the nails help us here in diagnosis.

The nails are pale in anæmia, hectic fever, and anasarca; yellow in jaundice; grey in serious internal disease; purple in cyanosis; livid in ague and in Raynaud's disease. Boisson, of France, made the interesting discovery that the colour of the nails in a person suffering from ague foretells an attack. A peculiar slate-grey discolouration of the finger-nails appears *before the rigor*, increases during the cold stage, attains its maximum during the hot stage, and then slowly disappears. Each attack is heralded by a *prodroma* of this greyness of the nails. This observation fits in with the recent discovery of the cause of ague, namely, the filiform protozoon, whose greatest activity of multiplication is going on during the attack. The hæmatin of the blood-corpuscles having been destroyed and converted into melanin would explain the grey appearance of the nails.

Whereas ribbed nails, which are normal in the anthropoid apes, are a sign of disease in man, being found in some cases of goitre, of rheumatoid arthritis, and of toxic or septic neuritis, all continued fevers leave transverse furrows on the nails, caused by arrested growth.

The old clinical rule that eczema selects the flexor and psoriasis the extensor surfaces meets an exception in the fingers. For psoriasis attacks the skin under and near the free end of the nail, but eczema the skin fringing the lunule. Gout gives rise to a ruddy raised line in the same locality.

¹ I wish to express my warmest acknowledgments to Dr. Edward Blake for his admirable monograph on the hand, and would commend it as a valuable modern text-book on the subject. The full title of the work is, "On the Study of the Hand for the Indications of General and Local Disease." By Edward Blake, M.D. (London: Henry J. Glaishier, Wigmore Street, W.)

Chancre, which is rare on the finger, usually locates itself on the side of the nail-fold where a crack or hang-nail has previously existed.

We have also to note the peculiar enlargement of the proximal phalangeal joint asserted by Dr. Bouchard to be associated with dilatation of the stomach.

The bad habit of biting the finger-nails, so frequently found in nervous children, is not devoid of a certain clinical significance.

The habit has been observed to be prevalent in the children of gouty parentage, who are neurotic above the average. Dr. Blake shrewdly remarks, "I have observed that their fingers are not irritable because they are bitten, but they are picked or bitten because they are irritable." His suggestion of the local application of flexile collodion containing ichthyol (gr. x. to the $\frac{3}{4}$ i.), to remove the irritation of the terminal nerve-filaments, is admirable.

Nail-biting associated with bulimia, cravings for strange articles of food, &c., often indicates intestinal worms. In schools the habit spreads by imitation, like yawning, coughing, chorea, stammering, and the like.

It is between the ages of 12 and 14 that this habit is most prevalent, and it is more frequent among girls than boys; in some schools, states *Health*, even to one-half the number of girls attending. Dr. Bertillon, the eminent anthropometrist, is of opinion that this habit is an indication of the first stage of nervous degeneration, and is, when hereditary, associated even with moral depravity. The most incorrigible pupils were found to be nail-biters. Poverty, involving scanty and innutritious food, apparently conduced to the habit.

Further investigations are needed before we can safely generalise on this subject.

Cleanliness of the finger-nails is an axiom with modern surgeons, and one element in their operative successes. The elaborate directions given to the operating surgeon on page 15 of "Heath's Minor Surgery" almost excite a smile.

Yet we cannot be too particular, though I do not suppose

we can all imitate the self-denial of our worthy president, who goes through the coldest winter without wearing gloves, lest they should introduce bacteria into the female ward or the lying-in chamber. Doubtless "finger-nails are sinners," as Blake says, "in the way of disease-convection." By their malign agency the tubercle bacillus is conveyed from an itching nostril to a cutaneous gland or to an eyelid, thus setting up lupus vulgaris. Or, from a scalp affected with seborrhœa, the nail carries the staphylococcus bacillus to a simple *acne punctata*, converting it into the more complex *acne pustulosa*.

Ringworm, scabies, and almost all other parasitic skin diseases are thus disseminated.

In my experience among the working and lower middle classes, nail-brushes are as scarce as water-filters. Warts on the fingers are auto-infective, and form a convenient nest for bacteria. The pigmented wart may in later life degenerate into epithelioma. Therefore warts should be got rid of, wherever found.

Panaris, or whitlow, is a disease often, perhaps always, induced by primary or secondary contagion. For example, it is now ascertained that "laundress's whitlow" is caused, not by the chemical action of hydrated soda, but by a pathogenic *staphylococcus* from soiled linen lodging under the finger-nail and setting up inflammation. Dr. Garré's experiments upon himself prove that *staphylococcus pyogenes aureus* requires no breach of surface, but only a slight chafing of the skin, to enter the blood. This may explain the frequency of boils and carbuncles on the nape of the neck, just at the spot where the collar-stud or the edge of the stiff collar excites friction. Painless whitlow is characteristic of that very serious spinal disease, syringomyelia (cavities in the spinal cord).

Painless whitlow is also an essential feature of what is called Morvan's disease, where the inflammation at the ends of the fingers is followed by necrosis of the distal phalanges. *Post-mortem* examination reveals hyperplasia of the connective tissue of the posterior horns and columns of the gray matter of the spinal cord, and of the peripheral nerves themselves.

Several other diseases, elaborately named, such as acrosphacelus, or digital gangrene, anæsthetic leprosy, and others, are attended with whitlow followed by gangrene.

In my own experience, a severe whitlow of the middle finger has permanently lowered the vitality and thermic sensibility of the digital pulp.

The multiform swellings, deformities and contractions of the joints of the hands produced by scrofula, syphilis, gout and rheumatism, must now be noticed. Dr. E. Long Fox, in his admirable article in "Wright's Manual for 1891," on "The Hand in Nervous Disease," asserts that the contractions of arthritis are in reality neuroses. His explanation of this theory seems reasonable. The contraction is at first spasmodic, but later becomes permanent from abnormalities due to long continuance in one position. The articular affection reflexly irritates the spinal centre, sometimes causing exaltation of the properties of the nerve-cells, and so stimulating to contraction, sometimes causing depression of their power—"amyotrophic paralysis"—sometimes both at once. The extensors of the affected joints are mainly affected.

In the example shown here of indirect paralysis of the flexor sublimis digitorum from gout, it should be observed that the extensor muscles of the thumb, index and distal phalanges of the middle and ring fingers, are unbalanced by the flexors, but that the flexores profundi of the three outer fingers are unaffected. Such a condition of the right hand renders it useless, of course. This next drawing shows a disease first described by Dupuytren, a contraction of the palmar fascia. The posture of the hand resembles that produced by paralysis of the long extensor muscle of the fingers.

The cause may be traumatic, from habitual occupation, as in coachmen and huntsmen; or it may be congenital and hereditary, when the contraction is usually confined to the little or ring finger, and must not be mistaken for a contraction of a flexor tendon.

Based on this neurosal theory of the contraction of joints, we, as homœopaths, might think of ignatia, strychnine,

physostigma, and other drugs producing tonic contraction, as suitable remedies for these most intractable cases.

In the differential diagnosis of the pathology of finger-joint contractions it is useful to bear in mind these points.

(a) Rheumatic arthritis is usually bilateral and symmetrical.

(b) In rheumatic gout the joints thus altered are bilateral but not symmetrical—for instance, the right knee and the left ankle may be diseased.

(c) True gout is unilateral, showing a marked preference for the great toe and for the middle finger. It is curious that the thumb, with a more extensive blood-supply than any other digit, almost always escapes the attacks of rheumatism, and usually of gout also. Scrofulous enlargements of joints are multiple, irregularly distributed, and the fingers are more slender than normal, whereas exostoses are unilateral and invade the phalanges only.

In recent times three important diseases affecting the whole body and the hands most characteristically have been described, one by Dr. W. M. Ord in 1882 and the other two by Dr. Pierre Marie, of Paris, in 1886 and 1890. These are named myxœdema, acromegaly, and pulmonary hypertrophic osteo-arthropathy.

Their interest to me, in this paper, consists in the fact that a differential diagnosis between them could be made by the appearance of the fingers alone.

Myxœdema is so named from the Greek *μυξα*, mucus, and *οιδημα*, swelling. It consists chiefly of a general infiltration of the mucous membranes and the subcutaneous tissue of the body by a jelly-like, mucin-yielding dropsy, accompanied by an atrophy of the thyroid gland. The hands are conspicuously altered early in the disease. They lose their normal shape and become "spade-like," the fingers look almost like sausages, the nails being brittle and distorted and the sense of touch greatly impaired. The skin is everywhere thickened, dry, rough and translucent; the hair falls off and the teeth decay. Both comprehension of ideas and speech become slower and slower, going on to a state of mental degeneration resembling cretinism.

I once met an old lady, of feeble mind, almost an imbecile, whose hand had a peculiar soft, woolly feeling, and who gave no responsive muscular movement on shaking hands. She was not at all myxœdematous. The explanation of this feature is to be found in Blake's book. He quotes Dr. Langdon Down, who describes this "woolly hand" as identical with the condition of the hands in cretinism and in infantile myxœdema. It is worth while here to quote Dr. Shuttleworth's testimony to the value of the macinal symptoms in mental degenerates. He says, "In every-day work of diagnosing feeble-minded children for special instruction under the London School Board, I find that not only the form of the fingers, but that of the hand generally, the habitual attitude, and the manual myotonus or its absence, are of great service in determining the mental state."

In acromegaly, so called from the enlargement of all the extremities, the hand becomes broadened and, as it were, thick set, the fingers uniformly enlarged from the growth of the bones, while the finger-tips are narrowed and the nails become brittle, short, flat and overlapped by the skin. All the bones of the face are enlarged, the tongue also; the intelligence is *not* below the normal; there is no subcutaneous swelling. Now I have a double illustration in order to show the curious resemblance between a typical acromegalous hand and that of a gorilla. It suggests that in this disease, as in certain low forms of mental deficiency or degeneration, there is a reversal to a primitive ancestry, far more remote than we can trace—an "atavistic return" of which we are not proud.

The second disease, discovered by Pierre Marie, and named by him pulmonary or pneumonic hypertrophic osteoarthropathy, is really only a species of acromegaly associated with tubercular or simple chronic pneumonia. The hand and fingers differ from those of both myxœdema and acromegaly, by the enlargement of the terminal phalanges, and the peculiar curvature of the broadened nails, which gives the peculiar form called "the Hippocratic finger." There is no enlargement of the face, nor of the tongue. The thymus gland persists during adult life, and the thyroid is often atrophied.

Before entering upon a brief review of the neuroses of the hands—cramps, chorea, tremors, spasmodic contractions, anæsthesiæ, paræsthesiæ, hyperæsthesia, &c.—it will be useful to look at this diagram of the latest discoveries in cerebral physiology, namely, the motor area of the brain in monkeys, as ascertained by Drs. Beevor and Horsley. Their investigations are useful for our purpose, because it is now established that the *functional relations* of the human cortex cerebri are identical with those of the higher quadrumana ; thus, the motor centres which govern the hand-like paw of the monkey are in the same relative position to the analogous centres of the human brain.

Of the three large areas into which the surface of each cerebral hemisphere is divided, namely, prefrontal, central, and occipito-parietal, the first and third are *sensory*, and the second entirely *motor*. This *motor area* is limited in front by a line drawn at right angles to the pre-central sulcus ; below by the fissure of Sylvius, behind by the intraparietal sulcus ; and internally (for we are looking at the outside of the left *hemisphere only*) by the calloso-marginal fissure. We see it divided here by coloured patches into sub-regions for the upper and lower extremities, for the head and eyes, and for the face and mouth. You will notice that the leg-region is at the top of the hemisphere, crossing the fissure of Rolando ; while the arm-region, *larger in extent*, is below this, and is even more differentiated, inasmuch as we find six motor-centres, viz., for shoulder, elbow, wrist, fingers, index finger, and thumb. By these results of scientific observation we are now able, as we never were heretofore, to *localise cerebral disease by observing the limb or digit affected with morbid neurosis of any kind or degree*.

Take a recent example. Dr. Goldsbrough, reporting an interesting case of epilepsy, cured by *cicuta virosa*, in the April *M.H.R.*, describes the paroxysm as “commencing with the twitching of the ring and little fingers of the right hand, which became flexed ; then the hand, the forearm, and the arm were flexed ; and lastly the head became drawn round to the right, upon which he lost consciousness.” (I condense the description.) Well acquainted with these

researches, Dr. Goldsbrough diagnosed the cause of this epilepsy to be "a functional instability of the motor centre on the *left* side of the cortex, which governs the fingers of the *right* hand, induced by toxæmia from former malarial or dysenteric affection." For it had been ascertained that the patient, a man of thirty years of age, had suffered in Africa from several attacks of malarial fever, and from one of dysentery. Even had the cerebral lesion been organic—a tumour or gummatous nodule, for example—a fact which the absence of monoplegia of the right arm between the paroxysms rendered improbable, these same results of Beevor and Horsley would have informed the operating surgeon precisely where to trephine the cranium. In true epilepsy the *aura* usually starts from the arm, rarely from the trunk; whereas in epileptiform hysteria and allied paroxysms the *aura* starts from the dorsal region (E. Blake). I need not detail the nerve-supply of the upper extremity; it is in man more ample in proportion to bulk than that of the lower. Of all its nerve-trunks the musculo-spiral is the most frequently affected by paralysis. With the various pareses and paralyzes of the medium and ulnar trunks, such as the wrist-drop of lead poisoning, you are all familiar.

Progressive muscular atrophy starts in the ball of the thumb; it is bilateral, often symmetrical, and accompanied by fibrillary twitchings and coldness of the hands. That intermittent deadness and coldness of the left hand which is so common must not be always taken as absolute evidence of valvular heart disease or of aneurism. It may arise from excess of tea-drinking, or of smoking, or from taking strychnine or digitalis, or as a sequela of influenza, or from the habit many persons have of uncovering the left arm during the night, or it may be the commencement of acromegaly. Neuritis affecting the hand is attended with the usual pain, tingling, numbness, and tenderness of the nerve-trunks characteristic of the disease, combined with the impairment or loss of motile power, and eventual muscular atrophy, which differentiate neuritis from neuralgia.

In gouty neuritis the colour of the skin is changed,

becoming ruddy. In tetany, which is a disease of rickety children, the fingers are closely flexed and the thumbs adducted, but the muscles respond readily to the faradic electric current.

Of tremors of the hand there are a large variety. I shall avail myself of Dr. Blake's admirable summary, in part, for I have not seen any classification of tremors anywhere so clear and complete. Senile tremors of the hand or head should scarcely be regarded as "abnormal," for they result from the "normal" degeneration of the cerebro-spinal arteries from atheroma. The conductivity of the nerve-trunks is also lessened in old age.

We may note the following points for comparative diagnosis :—

(1) In paralysis agitans (not a strictly accurate but a well-known name) the tremors are small, fine, rhythmical, vibrating, so Drs. Wolfenden and Dawson Williams state, at the rate of 10·2 to 10·4 *per second*, and they are "non-intentional," *i.e.*, they cease during muscular co-ordination for action. From the irregular jerks of chorea they are distinguished by their rhythm.

(2) The tremors of disseminated sclerosis of the spinal cord are both rhythmical and "intentional," and are accompanied by nystagmus, vertigo, and difficulties of speech.

(3) Tremors caused by metallic poisoning—lead, arsenic, mercury, zinc, &c.—are small, rhythmical and intentional, and are associated with the other signs characteristic of the toxic effect of the particular metal.

(4) Nervine tremors may be due to the abuse of morphia, cocaine, alcohol, tea, tobacco. Of these I notice the three chief varieties : (a) alcoholic tremors are fine, rhythmical, intentional, worst in hands, tongue, and upper lip; dyspepsia, insomnia, irascibility, or mental depression are present; (b) tea-tremors are accompanied by pallor of the face, palpitation, flatulent dyspepsia, and too frequent micturition; (c) tobacco-tremors (of which I see many examples daily) are fine, irregular, subject to control of the will, and associated with insomnia, starting of the legs at night, amblyopia and

anal irritation. When called upon to treat these morbid phenomena I use our invaluable polychrest nux vomica, and often its allied comrade, ignatia. I have come to regard nux as the most perfect antidote in our Materia Medica to all the poisonous effects of tobacco.

The various cramps and spasmodic contractions of the manual organ can only be briefly treated here.

Among what are termed "occupation neuroses," there are writer's cramp—the most common cramps caused by sewing, by milking, by cobbling, by smith's work, by telegraphy, by piano and violin playing, and many other pursuits either industrial or recreative.

In one case of tailor's cramp, Dr. Vivian Poore found the median nerve distinctly tender. Among his 300 cases there occurred one case of aortic aneurism, and one of paralysis of the serratus magnus muscle; therefore we must be very careful in our diagnosis of such patients, and we must not forget that *left-handedness* is sometimes overlooked.

In writer's cramp or Scrivener's palsy, the interossei, lumbricales, thenar muscles, flexors of the thumb, index and middle fingers, and the flexor carpi radialis, are affected with a kind of paresis, or with spasm. Dr. V. Poore finds that the muscles which are subjected to prolonged strain—the muscles of *pen-prehension*, in fact, are more often affected with this disease than are those of *pen-movement*—what we may call the "writing and drawing muscles." The power of *fine* but not of coarse movement is lost.

There would be less "writer's cramp" in this country if children were taught at school to grasp the penholder correctly, and if the penholder was always *thicker* at the base, so as to form a more rotund and substantial object for the thumb, index, and mid-finger to rest upon. Typewriters ought to be cheaper and more widely used. Doubtless in some cases the nervous strain of composing the subject-matter of the writing is excessive, and a disturbance of the co-ordinating centre for writing (visible speech) in the cerebral cortex causes or aggravates the paresis or spasm. The mere physical labour, also, of writing several hours a day

is great. Let me present it in this way. It has been calculated that in ordinary-sized, legible, careful writing an average of sixteen curves, lines, and turns of the pen is necessary for the correct transcription of words. Anyone can verify this for himself. You will find that it takes ten distinct strokes and curves to write the simple "and," twelve strokes, &c., to write "eleven," and twenty-four to write "constant." Well, this involves *many* co-ordinated muscular movements, accompanied with katabolism of nerve-tissue. As a rapid writer can put down thirty words per minute, he makes an average of eight curves or lines *per second*, in an hour 28,800, and in five hours (his day's work, perhaps) no less than 144,000. And furthermore, the *linear distance traversed* by his facile pen is not inconsiderable. At the above-mentioned rate of thirty words to the minute his pen travels $16\frac{1}{2}$ feet in one minute, 220 yards in forty minutes, and in five hours and a half his pen will have traversed one mile and fifty-five yards.

I think it is a striking testimony to the power, endurance, and flexibility of the trained hand that, though subjected daily, weekly and for years to this great physical strain, there are so few cases among clerks, copyists, and the like, of this disease.

To enable victims of this disorder to continue their occupations—often an absolute necessity—Professor Nüssbaum, of Vienna, has invented a mechanical contrivance which I here exhibit. He calls it a "bracelet." It consists of a hard vulcanite band, into which the thumb and all the fingers except the little finger are slipped; a penholder is screwed into a groove on the top, and the whole hand is laid flat on the paper. Then writing is performed by the fingers and thumb confined in the band moving along the surface and keeping the pen-point upon it. Thus the pen-movement is conducted by the extensor and abductor muscles, which directly antagonise the paralytic or spastic flexors and adductors. Electro-massage—very gentle currents—being used at first is, I have found, the best treatment locally. Dr. Blake advises, in addition, the inunction of cold cream medicated by phosphorised oil and liquor thyroidei (p. 59 of

his monograph). As the muscles gradually regain their power we order graduated exercises for them, and the use of a large cork penholder.

I have for years past studied the handwriting of my patients for diagnostic purposes, and have found it useful many times. In some cases omission of words, aberrations of spelling, unfinished words or terminal strokes—all or any of these may prove the earliest indications of brain disease.¹

ÆSCULUS HIPPOCASTANUM—ITS CHEMISTRY, PHARMACY AND HISTORY.

BY GEORGE BLACK, M.B., C.M., EDIN.

NOMENCLATURE.

Æsculus Hippocastanum, L.; Horse-Chestnut. Nat. Order :
Sapindaceæ.

CHEMISTRY.

“The seeds contain a considerable amount of nourishment, which is rendered unavailable because of the intensely bitter and narcotic principle with which they are charged. Common horse-chestnuts are used in Switzerland for fattening sheep: they are eaten eagerly by deer, horses and oxen. Starch prepared from them is superior to that of wheat, and excels as an article of diet that of the potato.

“Paste prepared from them is preferable to any other, not only because of possessing great tenacity, but also from the fact that no moths or vermin will attack anything cemented with it.

“The poison in the nut is removed by a process of prolonged cooking.

¹ The reading of this paper was illustrated by copies of a number of drawings (for which I am indebted to my son) from the works cited in the text, particularly that of Dr. Edward Blake, to whom here again I would make my acknowledgments.

“The young leaves are aromatic, and have been used instead of hops in brewing beer.

“The roots contain mucilaginous and saponaceous matter, which is thought to be poisonous.

“Active and poisonous properties prevail in the roots, seeds, bark and foliage. The bark has little odour, but an astringent and bitter though not disagreeable taste. It contains, among other ingredients, bitter extractive and tannin, and imparts its virtues to boiling water. Its active constituent is supposed to be tannin, hence it has been employed in tanning.

“The powdered kernel, snuffed up the nostrils, produces sneezing.

“The bark contains an active principle termed *Æsculin*, which is prepared from a strong hydro-alcoholic tincture, by distilling off the alcohol and setting the residue in a cool place for some time. It appears as a white powder, which is formed of minute acicular crystals, having a bitter taste; no odour; soluble in $12\frac{1}{2}$ parts water at 212° F., and in 672 parts at 50° F.; partially soluble in alcohol; insoluble in ether. It is coloured red and then yellow by hydrochloric acid.”—(“Hale’s New Remedies.—Symptomatology,” Fourth Edition, pp. 21-22.)

PHARMACY.

Homœopathic Preparations.—Tincture of the fresh kernel, corresponding in strength with proof spirit. Process I.—Trituration of the dry kernel.

Dispensing forms.— ϕ and upwards, tincture-trituration, pilules or globules, or 1x to 3, trituration. Average loss of moisture, 45 per cent.

External Use.—Glyceroles, salves, cerates, &c. As a lotion, $\bar{5}$ i. of mother tincture to $\bar{3}$ viij. of water.—(Hale.)

HISTORY.

“The horse-chestnut is a highly ornamental tree, and is greatly admired for its majestic proportions and for the beauty of its flowers and foliage. It grows rapidly, and

often attains a height of 40 or 50 feet. It is a native of Middle Asia, but flourishes well in the temperate climates of both hemispheres. Its genus comprises about twelve known species. The genus *Æsculus*, however, is incomparably the finest, and is the only one found in the Northern States, and this, even, is not indigenous in New England. It was introduced into Europe nearly three centuries ago by Baron Ungnad, ambassador of the Ottoman Porte, who, in the year 1576, sent the seeds of the common horse-chestnut to Clausius at Vienna. It is now extensively cultivated as an ornamental tree in Europe as well as in America."—(Hale.)

"The name *Æsculus* was originally applied to a species of oak, also to a tree which bore esculent fruit, and probably is derived from *esca*—food.

"It was transferred to this genus by Linnæus, to the exclusion of the earlier and more appropriate name of 'hippocastanum' (horse-chestnut), on account of the resemblance of the large seeds to chestnuts, and because the Turks often grind them into a coarse flour, which is mixed with other food and given to horses which are broken-winded.

"In the language of flowers this tree symbolises luxury.

"Its inflorescence surpasses that of almost all our native trees; the huge clusters of gay blossoms which every spring are distributed with such luxuriance and profusion over the surface of the foliage and at the extremity of the branches gives the whole tree the aspect rather of some monster flower than of an ordinary tree of the largest size."

PATHOGENETIC SUMMARY.

According to Hale, *Æsculus hippocastanum* acts on the spinal cord, mucous membrane of the alimentary canal, especially the lower portion, the liver and portal system; but the region most constantly and strongly affected by the horse-chestnut is that of the *rectum* and *anus*. "The rectal symptoms are characteristic, and consist of very disagreeable sensations—of dryness, soreness, constriction, fulness, and a feeling as if sticks, splinters, gravel, or other foreign irritating substance were there.

“ We find also,” he says, “ a feeling of fulness, with protrusion and a desire to strain (tenesmus). A characteristic condition is usually present which differentiates between this medicine and other pile remedies, namely, the *absence of actual constipation*. In nearly every case the stools are too frequent and soft, sometimes quite loose, pale or dark, and rarely, if ever, large, dry, or scybalous. In this respect it resembles aloes.

“ The pains in the back which attend its rectal symptoms are quite notable. They are sometimes shooting or cutting, but usually consist of a lameness as if strained, extending to the hips or legs, or an aching and weakness aggravated by walking, stooping, or any movement. Like *Rhus*, its pain and stiffness often go off after continued motion.”—(Hale.)

“ It has caused a dark red congestion of the fauces, with dryness and soreness similar to that which is set up in the rectum.”—(Hughes.)

Provings of *Æsculus hippocastanum*.

In the *Cyclopædia of Drug Pathogenesis*, vol. 1, pp. 130-136, are thirteen provings of *Æsculus hippocastanum*, nine by males and four by females. The results are such as have been already outlined, and will be referred to in detail in the following section.

MATERIA MEDICA, THERAPEUTICS AND CLINICAL CASES.

MENTAL.

* Confusion⁶, depression⁸, weakness of memory, irritability², distressful and exciting dreams, I. 134, 9, *b*.

CLINICAL.

Cannot recognise what she sees; knows not where she is or whence come objects about her; dazed on waking (I. 132, 4); much depression, weary and low-spirited (I. 134, 9, *b*.); memory and power of attention weak; mind confused and temper very irritable; felt dull, gloomy and despondent; mind clearing, but weak, and disinclined to study (I. 135, 10); distressful and exciting dreams. Miserably cross and disinclined for any labour (I. 136, 12).

* The small figures refer to the frequency with which each symptom is recorded in the “Cyclopædia of Drug Pathogenesis.”

Head.

Fulness^s, heaviness, giddiness^s, dull frontal aching.

Feeling as if a board were on the head; aching in forehead as if from cold in the head (I. 132, 3); sensation in head as if intoxicated; heat in head; headache over left eye (I. 132, 6); formication in front of temple (I. 133, 8); dull frontal headache; great constriction of skin of forehead; congestion of head; anterior part of head feels light, posterior heavy and dull; head tight and full as in catarrh (I. 135, 10); supra-orbital aching, fulness in head; severe headache as if head would split; general headache as if head would split (I. 135, 11); general headache with fulness in upper part (I. 136, 12); very annoying vertigo all afternoon (I. 136, 12); headache and vertigo as before, dull pains here and there; confusion in head and giddiness (I. 136, 13); flushes of heat from occiput to shoulders on surface (I. 136, 13); stupefying feeling in head.

Summary.—Confused, dull, aching pain, as from a cold.

Eyes.

I. *Eyelids.*—Twitching^s.

II. *Eyeballs.*—Weight, heat, smarting, soreness, burning, stinging (coldness), lachrymation.

III. *Vision.*—Flickering. (Vision clearer than usual.) Weight in the eyes; heat in the eyes; lachrymation; quivering of lids; flickering before the eyes; vision clearer than usual; jerking in right eye; twitching of muscles under left eye; smarting of eyes; lids twitch; balls sore; right eye pains when near light; burning, stinging, deep in left orbit, as if pain surrounded ball of eye, with feeling of coldness in eye.

Summary.—Burning heat as if from a cold.

Nose.

The provers experienced a dry^s, hot^s, burning sensation in the nose, with sensitiveness of the mucous membrane, tendency to sneeze, and much fluent coryza^s.

Dry feeling and sensation of heat in nose, especially

point, as when coryza is supervening; fluent coryza; thin mucus from nose; burning in nostrils; formication; disposition to sneeze; shooting pain in nose; feeling in nose as after a pinch of snuff; twisting sensation in front of nose; sensitiveness of nasal mucous membrane to respired air, which causes a feeling of coldness in the nose; nose stuffy as from catarrh, with sneezing; symptoms of catarrh.

Summary.—Severe fluent coryza.

Therapeutics.—The powdered kernel snuffed up the nostrils produces sneezing.

Clinical Cases.—It has been used with advantage as a sternutatory in complaints of the head and eyes.

Ears.

Burning (I. 136, 13).

Face.

Flying heat in left side of face; burning in left cheek (I. 131, 1).

Mouth.

Perversions of taste were experienced, namely:—like aloes; sweetish; metallic²; bitter burning; flat and slimy; there were smarting and soreness of the tongue, with yellow coating; dryness of the mouth and salivation³.

Tasted like aloes; sweetish taste; flow of water into mouth³; bitter, burning taste astringing the mouth and gullet; metallic taste; soreness of tip of tongue; tongue much coated yellow; sweet, flat, slimy taste in mouth; mouth and pharynx irritated; mouth dry; want of control over tongue, which feels swollen; dryness in soft palate; thick yellow phlegm in mouth; tongue coated yellow; coppery taste with increased saliva.

Summary.—Increased flow of saliva.

Throat.

Uneasiness, stiffness, aching, dryness¹, roughness², irritation, rawness², scraping³, tickling, burning³, constriction⁴, pressure, excoriation, frequent swallowing, cough, formication,

shooting. On examination the fauces were observed to be dark and congested⁴.

Contractive pain in the throat. Violent burning in the throat, with raw feeling there. Thin mucus from the throat. Scraping and tickling feeling in the throat, exciting cough. Pressure in pit of throat, as if something hard stuck there which needed expulsion. Whole throat was excoriated and constricted, burning like fire on swallowing. Formication in fauces. Constant shooting. Mucus in throat excites cough. Inclination to swallow. Tickling in larynx. Constant desire to swallow. Dryness; stiffness of throat on swallowing. Dryness and roughness, as from taking cold, followed by secretion of mucus. Fauces feel dry and constricted, with dry, hacking cough. Fauces dark and congested (looked at them), with constant aching. Pharynx feels irritated. Sharp, darting pains affected trachea, producing tickling cough. Uneasiness in fauces. Acute febrile tonsillitis. Dry and swollen throat. Burning in throat and palate.

Therapeutics.—Catarrhal inflammations, with aching; heat, dryness, rawness, followed by dry, hacking cough, then expectoration of mucus. On examination fauces dark and congested.

Clinical Cases.—Case of chronic cough, with emaciation, which had long been treated without effect, was cured by Buchmann by the daily administration of as much powdered chestnut as would lie on the point of a knife.

Hahnemann says: "We can, from the morbid effects which the bark is able to produce, form a just estimate of its medicinal powers.

"The sole phenomenon we know belonging to it is that it produces a constrictive feeling in the chest. It will accordingly be found useful in (periodical¹) spasmodic asthma."

Stomach.

Nausea¹³, frequent eructations⁸ of wind with water, in one preceded by flying heat, retching, burning⁴, cutting, vomiting, aching, and rumbling², sense of fulness, of gnawing and emptiness; pain.

At each eructation desire to go to stool; eructations giving relief. Pain from pit of stomach to right lobe of liver. Fluttering sensation in pit of stomach.

Summary.—Eructations, nausea.

Abdomen.

Gripping, cramp-like pain in epigastric, umbilical, hypogastric and hypochondriac² regions. Aching in right hypochondrium; right hypochondrium tender, later full; faintness at epigastrium; heat and soreness and severe gripping pain. Cramps in the bowels. Pains in the umbilical and hypogastric regions. Pain extending from the bowels to the small of the back. Pains in the abdomen, alternating with pain in the chest. Pain in the hypochondria through to the back, especially on inspiring. Pressing downwards in the abdomen. Weakness of the bowels. Congested feeling in upper abdomen, later over the surface in general. Tenderness of abdomen. Distension of abdomen.

Summary.—Colic, cramp, constriction.

Clinical.—Case of gastralgia accompanied by jaundice, recorded by Dr. Turrel, case 371 in the *Journal of Homœopathic Clinics* for 1871, in which he says: "After prescribing bry., puls., carbo. veg., nux. and ipecac., the jaundice was as bad as ever, urine and stools being characteristic of it. Æsc. 12 prescribed, three drops in half glass of water, a teaspoonful every three hours. In three days the urine became more copious, of less intense colour, and by the following day all sediment had disappeared." The stools which resulted after enemata of milk and beef-tea are described as in hard, grey masses at first, but after the Æsc. to be copious, black, consistent, and passed without injections. There had been a good deal of epigastric tenderness, with cramps radiating to right hypochondrium and kidneys, and contusive pain in right shoulder, which all ceased after the Æsc.

Case 387, also by Dr. Turrel. Jaundice, with scanty and dark urine and constipation, in a child three years old. In

two days after Æsc. hip. 24 had been given, the jaundice had passed off and the urine was clear.

Anus and Stools.

The most characteristic symptoms are dryness, heat, itching, and fulness in the anus and rectum³, accompanied by stiffness of the skin and adjacent cellular tissue. There is great soreness of the anus², accompanied by expulsion of flatus², with or without griping. Although in the case of several of the provers there was a tendency to looseness⁵, the majority suffered from constipation¹¹, straining at stool and protrusion of hæmorrhoids. After two hours, two moderate stools and the symptoms disappear.

Within half an hour three moderate stools, urging to stool ending in a fourth evacuation. Soft and liquid motions, preceded by griping; four loose stools; stool of mixed character, with raw feeling in the anus. Several thin stools. Diarrhœa of the ingesta. Usual stool did not occur. Almost constant urging to stool, with very slight evacuation. Sensation as if mucous membrane of rectum were thickened, obstructing the passage of fæces; dryness of passage coincided, ending in moist secretion. Soreness, with feeling as if something would pass off. Feeling as if rectum were filled with small stitches. Straining, with sensation as if rectum would protrude. Soreness and increased secretion of mucus; tenesmus; no stool for two days. Hard and dry stool, followed by colicky pain in umbilicus and severe cutting in anus. Dry, hard, and knotty stool, voided with great difficulty. Prolapse of anus. Great desire for stool; first part black and soft and hard; second of natural consistence, but white as milk, followed by severe bearing-down pains in the anus. Stool of natural consistence, but very white. Stool soft and mushy. No stool. Burning, pressure, fulness, and itching at anus, with some heat. Stools very costive. Ineffectual attempt at stool in evening. After great fulness and pressure, and with much straining and shivering, expulsion of about eight inches of fæces like a rope; solid, knotty, first half dark, second light in colour. Sphincter seemed

unable to contract—about half-inch protrusion which he had to put up. No stool. Hard stool, with usual effects at anus. Small stool, thin, watery, light coloured, with some tenesmus. Hæmorrhoids like ground nuts of purple colour, very painful, and with sensation of burning, in one who never had piles before. Rather difficult stool. Slight soreness, aching, and fulness in the rectum. Uneasiness in stomach and anus. Constriction of rectum. Copious soft stool, followed by burning and feeling of swelling and constriction in the rectum. Difficult hard stool, followed by burning and sense of constriction in the rectum.

Summary.—Diarrhœa, burning, constriction, pressure, tenesmus, and itching in the rectum.

Clinical Cases.—Buchmann says he has heard, from persons on whom he could rely, of the rapid cure of a chronic diarrhœa, in which many remedies had in vain been used, by a single dose of powdered horse-chestnut.

Dr. H. M. Payne was subject for several years to occasional attacks of hæmorrhoids, attended with little hæmorrhage, although considerable pain, aching, swelling, and rigid hardness of the rectum. The paroxysms usually accompanied constipation. The pain commenced about an hour after evacuation, and continued from two to six hours. After ten grains of the crude nut, finely pulverised, were placed in a half-ounce vial of alcohol and water in equal parts, ten or twelve drops were taken nearly every evening for about five weeks, commencing August 11, 1860. The piles were uniformly relieved after three or four doses.

Dr. J. C. Raymond had been suffering from hæmorrhoids for ten or twelve days. Bowels constipated. Severe pain in tumours, making it very unpleasant to stand or walk. Nausea, loss of appetite, furred tongue, sensation of fulness about navel, flatulent pains in bowels, very dark stools.

On morning of June 13, 1860, 200 pellets of 6th attenuation were taken, and continued for several mornings, by which time the piles were entirely relieved and the other symptoms had disappeared.

He experienced an irritation of the throat and œsophagus.

Dr. L. B. Wells, of Utica, employed this remedy in all

cases of hæmorrhoids occurring in his practice during two years, and generally with very good results.

There is an interesting case reported by Dr. Hughes in the 23rd volume of the *British Journal of Homœopathy*. There was a history of long-standing constipation, relief being obtained only about once a week. At first there was but small protrusion and little pain, but between 25 and 34 years of age the pain became intense, and she could neither sit, stand, nor lie, kneeling being the only possible position. The pain lasted for many weeks in the winter; in summer it was always better. The pain is described as like a knife sawing backwards and forwards, and "almost a martyrdom for agony."

Bell., puls., acon., and mercurius were taken without benefit, and external applications employed, which gave a little relief.

In November of 1864, Dr. Hughes was consulted, and prescribed æsculus hip. 2, three drops in a wineglassful of water morning and evening. At the end of a week she reported herself as a degree better, after another better still, and so on for a month, by which time her condition was greatly improved. She then took the medicine intermittently when she experienced pain, but was recommended by Dr. Hughes to take it regularly, by doing which he hoped to effect a cure. At page 485 is an additional note regarding this case, in which the patient wrote to say that after taking the medicine for another month she felt she might fairly call herself well.

In the same journal and the same volume, page 347, two cases of hæmorrhoids are reported as cured by æsculus.

(1) Mrs. H., a German woman, mother of four children, had hæmorrhoids for twelve years. Nux gave some relief. They were always troublesome during pregnancy. A small vial of æsculus hip. cured her.

(2) Mrs. W., mother of five children, robust and energetic, thought hæmorrhoids to be *part of her being*. She could neither sit nor lie with ease; when they bled she obtained some relief. Cured by æsculus hipp. Globules were saturated in the tincture, and she took four, four times a day for a week.

Two more cases are reported by Dr. Hughes at page 485 of the same journal and same volume. In the one, Richard S., aged 20, the piles had lasted a week, bowels rather costive, no bleeding. Æsculus 3 ordered, nine drops in three ounces of water, a dessert-spoonful three times a day. In about thirty-six hours all symptoms of piles had vanished.

In the other, a female aged 60, a martyr to hæmorrhoids, each attack lasting from six to ten months, during which she could rarely leave the recumbent posture. Dr. Hughes says : " On May 22, when called to see her, I found her in bed, suffering intensely from several large piles, which seemed quite to block up the rectum.

" The bowels had been confined for several days in the preceding week, and on the 20th the old hæmorrhoidal symptoms had supervened and were increasing in intensity. There was little or no bleeding. She anticipated many weeks of suffering. I gave her a drop of æsculus 3 every four hours. Next morning there was improvement rather than the reverse. On the 24th she was decidedly better, the bowels acting comfortably. On the 25th she was well, and about the house."

It may be well to give here Dr. Hughes' differentiation of the drug.

" When the piles are only secondary," he says, " to portal or other intra-abdominal congestion, it will probably be inferior to nux and sulphur. When they are associated with symptoms of varicosis elsewhere, and bleed much, hamamelis will be a better remedy ; but when the only connected symptoms or appreciable cause is constipation, and there is much pain but little bleeding, æsculus seems pretty likely to cure."

At page 673 of the same journal and same volume, a case of *anal distress* is recorded, the symptoms being " intolerable burning, itching, stinging pain at the anus, with a feeling of fulness which could only be quieted by rubbing or by pressure, the symptoms being only experienced while walking. Duration three years. Never had piles, but mucous membrane slightly injected ; bowels inclined to be costive, but moved every day. Nux vomica did something

to relieve the constipation. Hamamelis made matters worse; æsculus cured."

In his study of this drug Dr. Dyce Brown says, *M.H.R.*, vol. xx., p. 276, "The part of the intestine chiefly or almost alone affected is the rectum, in which we note prominently a state of constipation, with tendency to the production and frequently the actual production of piles."

Dr. Wright, of Brooklyn, N.Y., says, "My success with æsculus in hæmorrhoids has been such that I now rely entirely upon it in the treatment of all cases, and *it rarely disappoints me.*"

Dr. Cuthbert, of Pittsburgh, says, *N. Am. Journal of Homœopathy*, vol. xii., p. 416, "It is now some eight years since I became acquainted with the curative power of horse-chestnut in hæmorrhoids. My attention was first directed to it by a lady who had found great relief by carrying one of the nuts in her pocket after her disease had withstood the *most heroic treatment of allopathic physicians.* He mentions the case of a man, aged 37, a mechanic, to whom he gave one dose of æsculus (the nut) in the third potency.

Genito-urinary.

The characteristics here are scanty, hot, high-coloured urine; increased frequency of urination². Shoots in the orifice of the urethra:—Some urgency to micturition. Leucorrhœa: Urine frequent and hot, urine dark with some little sediment, urine very high-coloured. Desire to pass water, but little at a time. Urine scanty, dark brown, no sediment.

At page 108, vol. iv., of the *Journal of Homœopathic Clinics*, Guernsey gives the following as a key-note:—"Leucorrhœa, with lameness in the back, across the sacro-iliac articulations, and hence great fatigue from walking, because that part of the back gives out from walking even a little way."

At page 155 of the same volume, Dr. J. C. Morgan gives "Uterine pains running down" among the "Therapeutic Hints."

Respiratory.

Tightness of the chest⁴, pain, stitches, burning, sense of rawness, hoarseness, cough, hawking of thick⁵, afterwards watery, mucus.

Tightness of the chest; hot feeling in the chest, with cold risings; hawking of thick mucus, afterwards watery. Short cough, increased by swallowing and breathing deeply. Violent burning in the chest, with raw feeling there and throughout the nasal cavity. Voice became hoarse; speaking brought on cough; pains in right scapula and left side of chest, increased by inspiring. Sudden stitches throughout the chest; raw feeling in the chest; pain in the chest as if a stone lay on the precordia, increased by deep inspiration; twitching from chest to left shoulder; pains in sternum, as if a piece were torn out of the chest; pain in the chest, alternating with pains in the abdomen; sensation as if air breathed in were colder; on right side of the chest feels lung moving painfully up and down; laboured breathing; periodical tightness in precordia with laboured breathing—later, twisting there; stitches in left side; shooting pains in the sternum; burning in the mammæ. Constrictive pain about precordia; pain in the shoulders and neck, with pricking sensation; dull, heavy pain in the back of the neck; soreness of the neck, with pricking sensation; congested feeling in the chest; heat in the thorax.

Heart.

Palpitation², with great anxiety; neuralgic pain in the heart, arresting breathing; pulse hard and frequent.

Back.

Dull, aching pain in small of back, aggravated by motion²; back always aching³; pain in sacrum. Pains in small of back; tearing pain in back, right side and shoulders; shooting in back, right side above hip, deeply seated; dull aching in small of back, aggravated by motion; back always aching; backache on first rising, becomes easier on moving about; pain in sacrum and hips produced by

movement; continued pain in the back, with pricking sensations; great pain in sacro-lumbar region; lameness and weariness in small of back; lameness of back.

Summary.—Pains and lameness in the small of the back.

Speaking of this drug, Guernsey says: "Pain across the sacro-iliac symphysis more or less constant, with a feeling as if the back would give way at that point, causing great fatigue when walking. This symptom is common to both sexes, but in uterine displacements may be regarded as a key-note."

Neck.

Cervical glands slightly enlarged and tender to touch; dull, heavy pain in back of neck; soreness with pricking sensation; lameness; weariness in nucha.

Extremities.

Burning in the palms, and soles of the feet; aching, stiffness of the joints; sense of heaviness, tearing and jerking².

Upper.—Left arm and hand become strikingly warmer, and feel as if swollen and heavier, burning in palms; tearing and jerking in right arm, which felt paralysed and useless; limbs heavy, joints stiff; dull aching in left elbow.

Lower.—Burning in soles of feet; aching in knees; legs ache; feet swollen after ordinary walk; limbs heavy; joints stiff.

General Pains.

Constrictive pains in various parts. Internal burning; flying, neuralgic pains; slight pains here and there; whole body heavy; weak, sore and painful on motion; itching of whole body, especially around waist; sore all over on awaking.

Skin.

Dry and hot, but sensitive to cold.

Generalities.

Febrile Symptoms.—Rigors³; heat in the whole body³; general prostration, feverish; hands hot and dry; pulse soft and weak; flushes of heat over body.

General Weakness.—Feels very weak and extremely ill²; totters when she walks; has pale, miserable appearance; feels like to faint; tottering gait; general malaise.

Sleep.

Yawning and stupefying sleepiness⁴. Slept well; weariness⁵; falls asleep when sitting; slept soundly²; slept well; at night distressful and exciting dreams; on awaking feels sore all over. Yawning and stretching were followed by chilly sensations, especially when riding in cool air; had been very drowsy all day, and now went to sleep; languor.

Clinical and General Summary.

According to Hale, *æsculus hippocastanum* is a polychrest having a wide range of action, the central point of which is the *liver and portal system*.

It is analogous in its effects to aloes, collinsonia, nux vomica, sulphur and podophyllum. It is not as poisonous as its indigenous relative, the *æsculus glabra* or buckeye. The nut, in addition to being used in Europe to fatten cattle, as has been already stated, is often eaten with impunity by children.

Dr. Hale has found it of most service in the following disorders:—*Congestion of the liver*, when accompanied by piles. Symptoms—aching, pinching pains in right hypochondrium, aggravated by walking. The pain extends up between the shoulders.

Constipation, when there is present a hard, knotty, dry condition of the stools, which are *white* (if black or brown, knotty and hard, he prefers nux vomica).

Hæmorrhoids.—The tumours are protruding or internal, usually purple, hard and very sore (not raw as in aloes, but a bruised feeling), with aching, burning, *rarely bleeding*.

According to the same authority, a characteristic condition is the *absence of actual constipation*, in which respect he says it resembles aloes.

I cannot make out from the provings that “in nearly every case the stools are too frequent and soft, sometimes quite loose,” and his own statement about its use in constipation seems to contradict this.

It is true that several of the provers have these symptoms, but others complain of "no stool for two days; hard and dry stool; dry, hard and knotty stool; stools very costive," and so on, so that there is no reason why the presence of constipation need be any barrier to our employment of this remedy, as it occurs more frequently, perhaps, in the provings than the alternative condition of looseness.

It is evident that Dr. Hughes differs from Hale in this matter, for he says, "When the only connected symptoms or appreciable cause is constipation, *æsculus* is indicated." They both agree, however, that "when there is much pain but little bleeding, *æsculus* seems likely to cure."

The *pains in the back* which attend its rectal symptoms are quite notable. In this connection, Dr. Guernsey recommends it for a *backache occurring during pregnancy*, when the pain is in the sacro-iliac symphysis and prevents walking because "that part of her back gives out, compelling her to sit down."

Dr. Hale has prescribed it with good results in slight cases of *fissure of the anus*, also in incipient *stricture of the rectum*. In *prolapsus ani* he considers it compares favourably with nitric acid, podophyllum and mercury, which he considers it resembles in its pathological action.

Occasionally it may be found useful in *headache* attended by constipation or piles. The pain is mostly confined to the occipital region, and is dull and pressing, or it is a bruised, stupefying aching, with a sensation of heat.

It has been recommended for *influenza*, and many of its symptoms bear a strong resemblance to those caused by a cold affecting the nose and throat.

Dr. Buchmann says he cured a *chronic cough with emaciation*. The symptoms point to a laryngeal origin, and it may be found useful in catarrhal laryngitis.

Dr. Meyhoffer says it was of great service in a case of pharyngo-laryngitis follicularis, with considerable catarrhal inflammation of the lining membrane of the throat and larynx, complicated with piles and the most obstinate costiveness of long standing. It not only restored the muscular contraction of the intestinal tube, but also greatly relieved the laryngeal

irritation : cough and expectoration diminished speedily and the signs of congestion in the affected parts diminished rapidly.

In several cases of *pain about the heart* in hæmorrhoidal subjects it seemed to be of decided benefit.

Dr. Neidhard says : “ In a case of *curvature of the spine* the pains were entirely cured by æsculus.”

Its action on the venous system and mucous membranes is undoubted.

Drs. Hale and Hart look upon æsculus as primarily homœopathic to portal and intra-abdominal congestions, and constipation as secondary.

Dr. Hart regards throbbing in the abdominal *and pelvic cavities*, especially the latter, as a key-note to the employment of this remedy, although this does not appear in the pathogenesis.

He looks upon it as specially indicated in all active intra-abdominal and pelvic congestions. He says he has prescribed it with invariable success in all cases of congestion and inflammation of the neck of the uterus attended with the above-mentioned symptoms.

One drop of æsculus 6x three or four times a day, has cured in his hands, he says, the most inveterate cases of inflamed cervix uteri when not complicated with ulceration, and has greatly relieved and sometimes cured similar cases attended with retroversion, prolapsus, ulceration, enlargement and induration, when characterised by great tenderness, heat, and throbbing.

Case.—“ Mrs. C., aged 22, a small, delicate blonde, had suffered during the last five years with congestive dysmenorrhœa. Eight months ago she was thrown from a carriage, since which time she has been under both allopathic and homœopathic treatment for retroversion and prolapsus of the uterus. Growing worse under the treatment to which she was subjected at Denver City, she was brought to me for advice, with the following result :—

“ September 8.—Semi-paralysed condition of the right lower extremity ; muscles sore and contracted ; has to be carried, being totally unable to walk ; face flushed and eyes

sparkling; bowels obstinately constipated; occasional nausea and vomiting; skin hot and dry; patient complains of great weakness and pain in the back, cephalalgia, and constant throbbing behind the pubis. A digital vaginal examination shows retroversion and enlargement of the fundus, with great tenderness, heat, and swelling of the cervix uteri, the vessels of which pulsate with great violence. Ordered patient to lie constantly on the face and left side, to use cold vaginal injections three times a day, and to take *æsculus* 6x one globule every two hours until the throbbing ceases, after which it is to be taken twice a day.

“September 12.—Throbbing ceased. Continued treatment.

“October 1.—Patient greatly improved and able to walk.

“November 1.—Patient dismissed cured.”

Generalities.

A French preparation of horse-chestnut oil, known as “Genevoix’s Antarthritic,” was used as an external application with success by many European physicians in the treatment of gout, rheumatism, and neuralgia.

Dr. NEATBY said he hoped he should not appear disloyal to the memory of their late colleague, Dr. Hughes, when he said that one of the first things he did on receiving that part of *The Cyclopædia* which contained *æsculus* was to schematise it, and from that he learned a great deal. *Æsculus* is an extremely interesting and important drug. It seemed to him to act on both ends of the alimentary canal. There were a number of symptoms, such as dryness of the throat and irritating cough, which occurred in people who were liable to piles. These symptoms also occurred in gouty subjects, and he had seen good results follow the administration of *æsculus* in gouty people who suffered sometimes from gout and sometimes from piles. He thought it resembled *sepia* in a good many ways. There was nothing very active in the proving, except perhaps the coryza, and that was caused pretty often. He had frequently used *æsculus* in gouty subjects for the beginning of a cold in the head and sneezing, and if it was administered frequently it gave as good results as any single homœopathic remedy he knew. Dr. Black had laid a good deal of stress on the

backache caused by *æsculus*. He (Dr. Neatby) had seen it do good when a certain amount of uterine displacement was present, chiefly prolapsus. The indication was irritating leucorrhœa, and an excoriated feeling about the rectum. A feeling of excoriation within the rectum was also an indication for *sepia*. It resembled *rhus* also. The backache was often relieved by moving, or perhaps he ought to say there was great stiffness on first rising. In his experience this pain was more particularly on each side of the sacral region than in the middle, and there was also a dragging pain in the groin which went perhaps with the prolapsus.

Dr. CLARKE said that Dr. Black had brought together a very large amount of valuable information regarding *æsculus hippocastanum*. He (Dr. Clarke) thought *æsculus* a good example of the class of remedy which had got into certain grooves in their use through being tacked on to the names of diseases. Mention piles, and *æsculus* was at once thought of; mention anything else, and it was not. But *æsculus* was a remedy capable of all-round work. It had been said that chestnuts were useful for fattening sheep. He had a patient in whose case *æsculus*, he considered, was indicated, and under the use of the drug the patient fattened during a period of over six months. There was one feature of the action of *æsculus* that Dr. Black mentioned, but did not lay much stress on, and that was the aggravation by walking. That in his (the speaker's) experience was the grand key-note for the drug. It did not much matter what the symptom was so long as it was an *æsculus* symptom and aggravated by walking; the drug could then be given with a great deal of confidence. The backaches of *æsculus* were noteworthy, and it would cure a great many of them if the conditions were in order.

Dr. BLACKLEY drew attention to the resemblance which existed between *æsculus* and cinchona-bark, or rather between *æsculin*, the active principle of *æsculus*, and quinine, which it resembled very much both physically and chemically. Quinine in a dilute solution, as probably they all knew, had the property of fluorescing: *æsculin* did exactly the same, but more powerfully. He could remember when he was a student, many years ago, seeing experiments made with a solution of the two with the spectrum, and the effects with *æsculin* were singularly beautiful. Since then he had often wondered whether the two medicines did not resemble each other in their pathogenetic effects. Quinine certainly had a powerful effect upon the liver, as well as a considerable effect upon the rectum, so much so that one of his first teachers in homœopathy directed his attention very strongly to

its value in pruritus and congested conditions of the rectum, very similar, in fact, to those which Dr. Black had portrayed so very vividly as characteristic of *æsculus*. It was always interesting to compare the physiological action of bodies whose chemical constitution was similar.

Dr. ROBERSON DAY mentioned the habit of carrying horse-chestnuts in the pocket for piles. He remembered years ago prescribing *æsculus* to a gentleman who wanted to know what he was giving him. Of course he told him, and the patient replied, "That is very strange, because I have heard if you carry a horse-chestnut in your pocket it always cures your piles." So he supposed there was something more than coincidence in the matter. He was reminded of having socks sprinkled with flowers of sulphur for rheumatism, and copper plates round the body for the prevention of cholera.

Mr. WRIGHT said *æsculus* was a very common prescription for hæmorrhoids, both with himself and those who were working with him in the out-patient room of the hospital, and, as Dr. Neatby said, it was very often associated with throat troubles. He submitted that the troubles which it caused were largely due to paralysis of the muscular tissues of the veins, and he believed that many of the symptoms of the rectum, the throat, and the nose were due to that effect. Very often the throat conditions occurred without the accompanying hæmorrhoids, but it was very common for them to occur together. In the case of the rectum, he thought that the paresis often extended to the muscular coat, which in that part of the bowels was intimately associated with the veins. Higher up the veins did not come into so close a relationship with the muscles of the intestine.

Dr. BLACK, in reply, was much obliged for the kind attention given to his long paper. Having been asked by Dr. Hughes to give a paper on hydrocotyle, he found, on looking up the subject, that he could do little with it, and wrote Dr. Lambert asking him if he thought he might be allowed to read a paper on *æsculus* instead, as Dr. Ord had previously requested him to make a study of this drug upon the lines adopted by him in his monograph on Kali bichromicum, and having already acquired some material in that connection, he (the speaker) undertook to put together the paper that he had just read. For an excellent summary of the drug he referred members to Dr. Dyce Brown's article on *æsculus*, which was one of the best studies of the drug with which he was acquainted. It showed how it affected the mucous membrane throughout the body, that of the pharynx,

the stomach, and the bowels, and the indications for its action seemed to be such conditions as you would get in coryza, laryngeal catarrh, cases where there was a tendency, from gastric irritation, to jaundice, and, particularly, cases of constipation with a sense of fulness and throbbing about the rectum, and with that condition of backache which had already been referred to. Reference had been made to the action of *æsculus* in intermittent fevers, but what connection there might be between *æsculin* and quinine he really did not know. He was also glad to hear the suggestion with reference to its action on the nervous system. He thought that was a matter they might very well bear in mind, and perhaps it would lead to some good in the future.

THE LATE DR. RICHARD HUGHES.

At the Meeting of the Society on the 10th of April the death of Dr. Hughes was announced as having taken place suddenly in Dublin on the 3rd instant.

Dr. DUDGEON, in moving a vote of sympathy and condolence with the family of Dr. Hughes, said: Mr. President and Gentlemen: To-day homœopathists throughout the world are holding high festival in commemoration of the birth of the founder of homœopathy, but we in England have no desire for such festivals. We have been to-day down in the country to bury the greatest of Hahnemann's disciples, who was at the same time a member of our Society. Dr. Hughes was well beloved by every member of the Society. I do not think that he had one single enemy—he was incapable of making enemies. He was the most amiable man I ever met with. I never heard him express an evil thought about any man whatever, and I have known him intimately for more than a quarter of a century. His works you all know. They are handbooks, manuals, found all over the homœopathic world. They have been translated into many languages, and they are as well known abroad as they are to us. The amount of his literary work

was something quite extraordinary. Even when he was at his last moments his pockets were full of proof sheets which he was correcting for a new edition of his work on therapeutics. I am sure that every one of us feels the loss of Dr. Hughes as a personal bereavement to himself. His family feel his loss most bitterly. His widow, who has been blind for many years, and his children, are thus objects of great commiseration to all of us, and I would propose that the Society send their condolences to them upon the sad loss they have sustained, and which we have sustained too. Dr. Hughes' works were in such universal requisition, and his amiable character was so well known and appreciated, that I need not say more, because he was known to you all.

Dr. J. H. CLARKE, in seconding the motion that Dr. Dudgeon had made, said: I do not think that I can add anything to what you have heard from Dr. Dudgeon. It is most likely that, with the exception of Dr. Dudgeon, almost everyone in this room owes it to Dr. Hughes that we are in this room. It is from Dr. Hughes' works that we have been able to get a practical knowledge of homœopathic science that we can apply at the bedside. Until Dr. Hughes' works were available the study and practice of homœopathy was only to be obtained through a very severe process of study and application. Dr. Hughes made it possible for us to get to work at once while we were acquiring the higher methods in homœopathy. It may be said that for the last thirty-five years he has dominated the homœopathic world. What the Society will be now he is removed it is impossible at present to say.

Dr. ROBERSON DAY, Vice-President (in the Chair), said: I feel sure that there are many who would have liked to be present with us to-night. Some of you know that our President is absent on a holiday, and probably in ignorance of the loss which we as a body have sustained. I hold in my hand a letter from another old friend of our Society, who, through illness and advancing years, is prevented from being present, I allude to Dr. Pope. He wishes the President to read his brief tribute to the memory of one whom we all esteemed.

Monkton,
Near Ramsgate.

April 9, 1902.

DEAR MR. PRESIDENT,

As, without doubt, you will, at the meeting of our Society to-morrow evening, move the adoption of a resolution of condolence with Mrs. Hughes and her family, on the sudden removal by death of our highly-esteemed and widely-loved colleague, Dr. Richard Hughes, amid many tokens of appreciation from members who will be present, I would much like to take part in such expression of regard; and as my being at the meeting is, I regret to say, a physical impossibility, I would ask you to allow me to put in writing an expression of my very sincere and earnest esteem for our departed colleague.

As a man, and as a physician, Dr. Hughes has been for many years an honour to the profession of medicine, and especially so to that section of it practising homœopathically.

In all things, and under all circumstances, Dr. Hughes was essentially a Christian gentleman, a man of wide and varied learning, while throughout his whole career he was a constant and industrious student. To us he was an authority on all matters concerning the *Materia Medica*, cultivated after the manner of Hahnemann, without a rival, either here or elsewhere. No one, indeed, has done such an amount of valuable work in promoting the sound and accurate cultivation of the *Materia Medica* as Dr. Hughes has accomplished during the last forty years. His interest in this branch of study was maintained to the last day of his life. His earnestness and zeal in sustaining the purity and accuracy of our symptom lists appeared in print only three days before he was removed from amongst us.

How much we are indebted to Dr. Hughes for his life of work for medicine, and especially in that which he performed for that department which is concerned with *Materia Medica*, I doubt if we shall ever realise with any approach to fulness.

Sorrowing with Dr. Hughes' family and with my friends and colleagues in the Society,

I am, yours truly,

ALFRED POPE.

I am sure that we all would like to add a tribute to the memory of such a great man, and I may say that there are

others who have expressed their regret at not being present. My own acquaintance with Dr. Hughes dated from the earliest time when I knew anything of homœopathy. In fact, while I was studying, I remember Dr. Ringer, in his class, quoting Dr. Richard Hughes, of Brighton, as an authority on *Materia Medica*. Ever since I have been connected with the Society Dr. Hughes has been known to me as one of the most genial and pleasant of men. I think that Dr. Pope has rightly described him in those words in which he spoke of him as a Christian gentleman.

The resolution was carried in solemn silence.

Dr. MADDEN said : I have asked to be allowed to propose a resolution, as the oldest personal friend of Dr. Hughes. I knew him when I was a little boy, 40 years ago ; and since my first acquaintance with him, I have never looked upon him otherwise than as a very dear friend. The resolution I wish to lay before you is that the public expression of our loss shall not stop at words, but shall take a more substantial and permanent form ; and that we should appoint a committee of some of the members of our body to act with others as a committee to form a Hughes Memorial Fund, to be dealt with as may be afterwards decided. When I was at Albury to-day, attending the funeral, I met many of Dr. Hughes' old patients and friends who are not medical men, and we spoke together on this subject, and I find that it is a very widely-felt desire that some such memorial should be got up, and that they, as well as his medical friends, should be allowed to participate in it. It is also not unreasonable to expect that his admirers and those who have benefited by his works on the other side of the Atlantic should wish that their names and subscriptions should be associated with ours. I think that we cannot help feeling that not only has our Society and our body in this country sustained the irreparable loss of his departure from among us, but that we have benefited in every way as homœopathic practitioners from his works, and that we owe it, not only to his honour, but to our own honour and the honour of the Society, that whatever we can do to honour his name publicly, and to erect a suitable memorial to him, we ought to do. I beg, sir, to

move that this Society desires to express the opinion that a Hughes Memorial Fund should be got up, and that two or three members of this Society should be appointed as members of a committee to act with others to carry the thing to a conclusion.

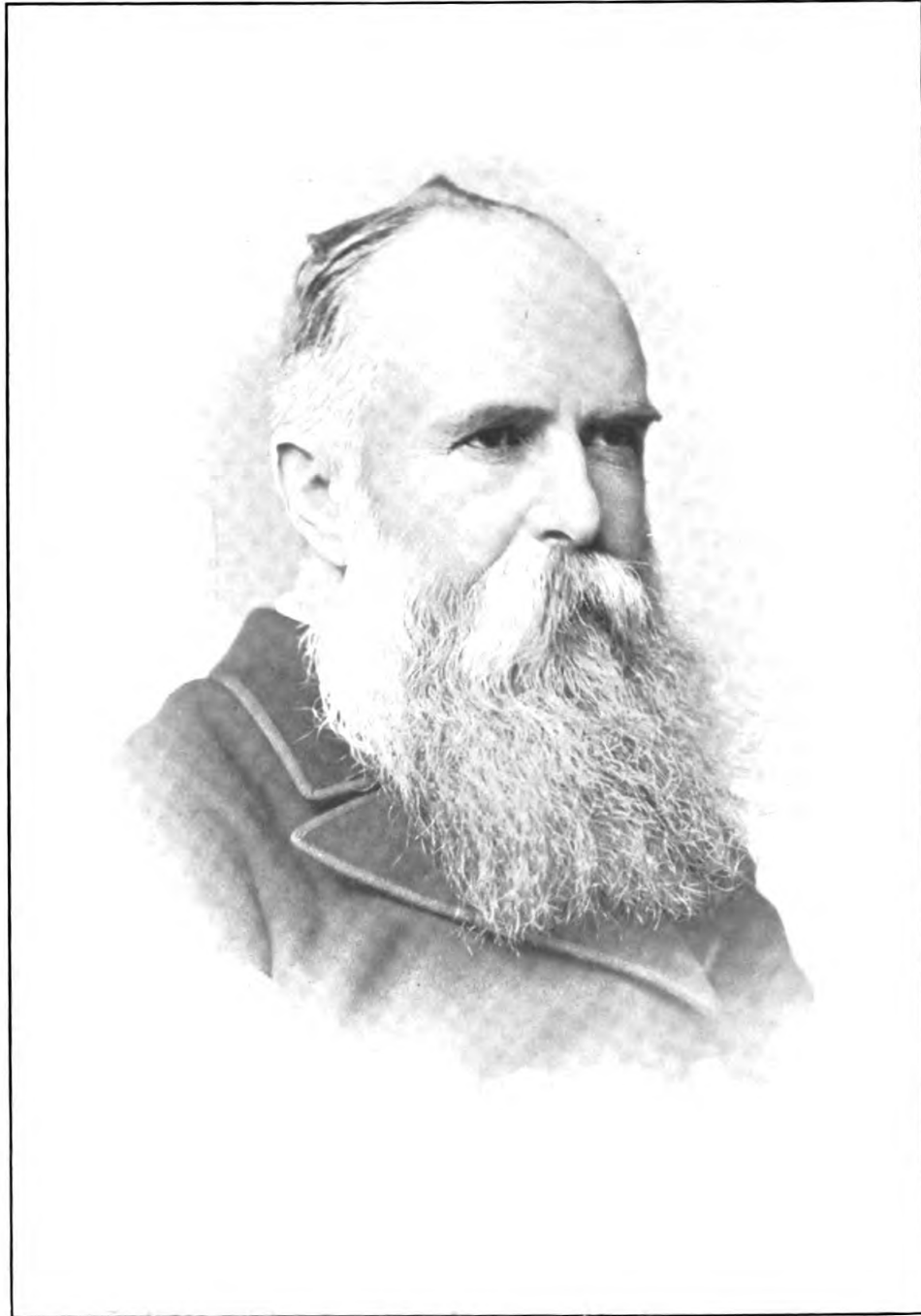
Dr. GOLDSBROUGH: I value it as a privilege to be allowed to second this resolution, especially as I have been somewhat intimately associated with our departed friend during the past three years in the editorship of the Journal of the Society. I feel that he shed a brilliant light, as far as homœopathy was concerned, over the *Materia Medica*—a light that we have all probably seen and benefited by, and have benefited by in a way we cannot well measure. It is a light which others who come after us will not have the opportunity of enjoying as much as we did, and it seems to me a most fitting thing, and I know that it will seem so to the Society, that we should institute at this moment some fitting memorial to our friend Dr. Hughes. I am very glad that Dr. Madden's resolution has a wide and comprehensive character. There is no doubt that Dr. Hughes' work is known not only over all the English-speaking world, but all over the world where homœopathic practice is known; and there is no reason, it would seem, why everyone who has shared in the value of his work should not have an opportunity of contributing to this memorial. The most fitting place for the memorial is the country of his birth and the associations in which he worked. Therefore it should come from this very spot—the spot where we have been accustomed to meet him and hear him speak, the spot from which we miss him to-night, and from which we shall miss him a great deal more hereafter than we can really now say.

Dr. SEARSON: As the one who succeeds to Dr. Hughes' practice, who knows very intimately the feeling of his patients at Brighton, I am glad that this suggestion has assumed such a comprehensive form as to take in the co-operation of his own Brighton patients. I am sure that many of them will be very pleased to have the opportunity of joining in it. I feel, in common with the other members

of this Society, that I am labouring under a sense of very great personal loss in consequence of Dr. Hughes' death. I have had the opportunity during the past three years of meeting him very intimately in his own house, and also in my own house, and I have seen Dr. Hughes there under many different conditions. I never met a man who was so really what he seemed to be, and that, as Dr. Pope's letter describes him, a Christian gentleman. For my own part, I feel, and shall always feel, that it has been a great pride and a great honour and privilege to have been allowed to be associated with Dr. Hughes in his lifetime, and should be happy to co-operate in any memorial movement of the kind proposed.

Dr. ROBERSON DAY: I am here, gentlemen, in a somewhat dual capacity. In the absence of the President, I am in the chair, and I am also, according to our advertised programme, the reader of a paper. On such an occasion as this any formal paper should be postponed and our meeting adjourned with the business that has already been done. I therefore move this as a next resolution.

Mr. KNOX-SHAW: I should like to second that proposal. I think that it is only a fitting mark of respect for our late distinguished member that we should, after the necessary business of the evening has been done, adjourn out of respect to his memory. I should like to take this opportunity of saying that there is no man that I know of who has been more encouraging and more kind and thoughtful in my association with the members of the Society than Dr. Richard Hughes. He was one of my predecessors in the secretaryship for many years, and when, at the commencement of my secretaryship, I ventured on some reorganisation of the Society, I was encouraged very much indeed by the kind words and sympathy expressed to me by Dr. Hughes. It was mainly through his encouragement that we were able so far to bring the new proposals to a successful issue. I believe that Dr. Hughes' work in connection with the Society followed him to Dublin. The Journal of the Society, which was about to be issued in a few days from his death, was undergoing at his hands its final revision. I feel that the



members of the Society here will not think that the evening has been misspent in having considered for a few moments the life of so distinguished a man, and that the least we can do is to adjourn the meeting in respect to his memory.

ALTHOUGH considerable reference has been made to the late Dr. Hughes in the monthly homœopathic journals, it will not be out of place, in the JOURNAL OF THE BRITISH HOMŒOPATHIC SOCIETY, that his work and influence in direct connection with the Society should be placed on record with somewhat fuller detail than elsewhere. Dr. Hughes was elected a member of the Society in 1861, and from the date of his election until his death his interest in the welfare of the Society never flagged. He was almost constantly present at the meetings, and rarely missed an opportunity of contributing to the discussions, and, as will be seen below, notwithstanding his enormous literary labours outside, the papers he read were by no means few, and never lacking in literary, scientific, or practical value. His presence among the fellows and members had a personal charm which was wielded by few, his voice was gentle, but carried weight in its tones, and the matter of his thought revealed the knowledge and character of the man. The spontaneously-expressed feelings published with this notice indicate that he will be seriously missed.

It is well known that the life work of Dr. Hughes consisted very largely in the study and development of the homœopathic Materia Medica. The attitude of mind by which this work was approached, and the general features of its result, are illustrated in Dr. Hughes' connection with the Society from first to last. His first paper was read in 1862, a year after election, and in the twenty-sixth year of his age. The title of the paper was, "*On the indications afforded by physiology and pathology for the selection of homœopathic medicines, and on the need of a scientific pathogenesis and the means for its attainment*" ("Annals," vol. ii., p. 137), and

it is very remarkable that this title expresses now, after forty years, as far as it can be judged, a fair estimate of what Dr. Hughes has always endeavoured to accomplish in the realm of *Materia Medica*. His aim is so well known to the homœopathic world that it scarcely needs repetition. He believed in a science of drug action and effects, as well as in a science of health and disease, and he endeavoured all along to bring these into line and to show their analogy and co-ordinated relationship. With what success remains even yet to be seen; the work is not complete. But if anyone wishes to understand the present position of pathogenetic science, a re-reading of the first paper of Hughes will well repay him to-day. For brilliancy of perspective, logical exposition, and literary charm, it has not been surpassed by any of Dr. Hughes' more recent contributions to the Society's proceedings. It is needless to say that the contents of a paper bearing such a title would be much in advance of its day in the early sixties of the last century. This is evidenced by an editorial note placed at the head of the paper as published in the "Annals," which deserves quotation in its entirety. "The Editing Committee, whilst inserting with pleasure this paper into the pages of the 'Annals,' as the production of a young and ingenious practitioner, must beg to guard themselves against being supposed to coincide with his views. They feel persuaded that wider experience and maturer thought will convince Dr. Hughes of the soundness both of Hahnemann's doctrines and of his practical rules for the selection and administration of remedies.—F.F.Q., J.R.R., S.Y."

It is a safe statement that the reading of this paper was the inauguration of the science of drug pathogenesis as distinguished from the collection of facts which had previously constituted the *Materia Medica*. It is possible that in the paper its author went too far in his estimate of the value of physiology and pathology as indications for the selection of remedies. But forty years after it can be seen that he was not wrong in theory, but that physiology and pathology had neither then nor since advanced sufficiently to cover within their realm of facts a generalisation as wide as that which by logical necessity lay behind the rule of practice, *Similia*

similibus curantur. Hughes sighted the far-off goal, and started upon the road for its attainment. His subsequent work has done much to lay a foundation for the future. He has left a legacy of co-ordinated fact for the present generation to work upon, and an example of the spirit in which the work is to be done. This spirit is well shown in the following quotations from his first paper.

“It would appear that if the science of pharmacology is to make much way through the present century, we must be the workers. And such a science must speedily make its appearance if we are help our brethren and they to help us [a reference to the old school], if, out of the good things peculiar to each party, a new art of healing, higher than anything yet seen in this world, is to be born and flourish.” (“Annals,” vol. ii., p. 145.)

“The time has come for us to set our hands to the great work of inaugurating a science of pharmacology by the rules sketched out.” (*Ibid.* p. 191.)

In association with the late Dr. Madden, the author of these remarks had already begun the work of collecting and co-ordinating the facts of drug action (*British Journal of Homœopathy*, 1861), but he felt the greatness of the task, as is witnessed by this eloquent passage: “No one man, or two men, can hope to accomplish the gigantic task of constructing a scientific pharmacology, but a body of men working together may do much towards this end. Even then it must be an unfinished work, and many succeeding generations must throw their stones on the cairn before the pile can be completed.” (“Annals,” vol. ii., p. 196.)

The first work issued by Dr. Hughes was a private but very successful venture, the “Manual of Pharmacodynamics.” This was published in 1867, and was followed later by the “Manual of Therapeutics.” In the meantime he had become one of the editors of the *British Journal of Homœopathy*, to which he personally contributed several papers every year until 1872. After that his contributions to that journal were fewer. These statements are needed as side-lights to his subsequent work in connection with the Society.

The following is a list of his papers read at the Society's meetings and published in the "Annals":—

"The Chemical Treatment of Disease" ("Annals," vol. iv.); "On Bronchitis" (vol. v.); "An Account of Fifty Cases of Diphtheria" (vol. vi.); "On the Action of Belladonna on the Urinary Organs" (*ibid.*); "On the Therapeutic Action of Serpent Venom" (*ibid.*); "On the Re-proving of Sepia" (vol. viii.); "On Aconite in Neuralgia" (*ibid.*); "Some Cases of Chronic Intestinal Disorder" (*ibid.*); "Further Considerations Relative to Local Applications" (vol. ix.); "A History of the British Homœopathic Society" (1844–1879), with Suggestions for its Future" (*ibid.*); "Two Anomalous Cases of Chronic Arsenical Poisoning" (*ibid.*); "On the Use of Nosodes in Homœopathic Practice" (Journal, vol. vi.); "Davos Therapeutically Considered" (*ibid.*, vol. viii.).

In 1879 he became Secretary of the Society in succession to the late Dr. Drury, which office he held until 1884. He was Vice-President in 1885-6 and President in 1887. His Presidential Address is published in the "Annals" (vol. xi.).

But his most conspicuous and public work in connection with the *Materia Medica* found its culmination on its initiation and publication by the Society of the "Cyclopædia of Drug Pathogenesy." The inception of this work had evidently been in Hughes' mind for many years, as may be proved by a number of side references to the need for such a work which occur in his writings from time to time. The initial suggestion for the work, however, is due to the late Dr. Yeldham as well as Dr. Hughes, and it is interesting to note, in connection with the advance of thought, that the initials S. Y. in the editorial note above quoted are those of Dr. Yeldham. Yeldham read a paper at the Congress of 1880 urging action towards an improvement in the *Materia Medica*. At the ensuing session of the Society resolutions were passed at the instance of Yeldham and Hughes that the work should be undertaken. After several specimen medicines had been presented for approval, the plan of the "Cyclopædia" as published was agreed upon. The four thick volumes are practically the work of Dr. Hughes himself,

although as regards some of the drugs, others were associated with him as helpers. The "Cyclopædia" consists of a collection in a chronological order of their occurrence in the case of each drug, of the facts of drug pathogenesis carefully edited and arranged under the grouping of provings, poisonings, and experiments on animals. Without question this work represents the total fact knowledge of genuine drug effects up to the date of publication. Dr. Hughes not infrequently referred to this work as "The Materia Medica of the Future." A subsequent estimate of its value, however, suggests that it is a collection of material upon which the Materia Medica of the future will be built as upon its foundation. Hahnemann laid the broad concrete foundation-stones of the cairn; his early followers collected many minor stones, which it has been the province of Hughes to collect and polish and lay in their place in the pile. The pile is not complete. Will it ever be? An affirmative answer seems impossible. But it is something to have done a true piece of master-building. If Hughes' early forecast is to be fulfilled, and we can anticipate the advance of physiology and pathology in a co-ordination of the facts of life with those of chemistry and physics, so that a generalisation thereupon for the scientific explanation of the rule *similia* may be formed, the Materia Medica of the future, constituted by the labours of the past, will be built by a re-proving of many drugs according to the most modern methods, and an elucidation of the symptoms of those already known, according to the knowledge then acquired.

It must not be forgotten that although his work on the Materia Medica may be described as the life work of Dr. Hughes, in no part of his career, except quite at the end, was he disengaged from the active practice of his profession. To carry on a practice for the means of living, and yet to do a life work of more than forty years outside and beyond it, seems indeed remarkable. In it there is illustrated a splendid unity of purpose throughout, and when Hughes' sincerity and clearness of conviction and wide and comprehensive knowledge are remembered, and his other personal qualities, he is seen to have possessed the features of

character to which the voice of history has attached, with unanimity, the quality of greatness. Future generations alone will be able to form a true estimate of the value of his actual work.

When, in 1892, the British Homœopathic Society was reorganised, and this Journal established, Dr. Hughes accepted the post of Editor. Since that date, until the last, he never failed in the revision of a single sheet. The Summary of Pharmacodynamics and Therapeutics, given in each part, as an addendum to the Society's proceedings, was his work in its entirety. It is a collection of more stones for the cairn which will find a place, no doubt, in the forthcoming edition of the "Manual of Therapeutics." With this work the life of Dr. Hughes came to an end, and he died in harness. His religious faith forbade him a belief in death. With that knowledge of him, for his colleagues, the veil is drawn.

The following tribute to Dr. Hughes, by Dr. A. Olive, appeared in the *Revista Homœopatica Catalana* for April last, with a portrait, and as it was written in the lifetime of our colleague, it may fittingly close this notice. It has been translated from the Spanish, for the Journal, by Dr. McNish.

"There are people whose biography can easily be written. Such a one is our friend and master, the veteran Dr. Hughes. In the world of homœopathy his personality is perfectly delineated. His visage is noble and honourable, and sympathetic in the highest grade. I shall never forget the profound veneration I entertained for him after my first interview. His was a handsome presence, rather tall in height, with a gentle curve, due to his advancing years. He had a graceful mein, a head grand and clever, a glance serene, penetrating and grave, a countenance lovable and bountiful, a voice suave and clear, the speech of the man who is prudent and sage. His methods of discourse did not vary, his peroration was that of a man thoroughly convinced, and displayed every consideration, not only for those who shared his opinions, but also for his opponents. . . . Let us conclude by applauding and admiring the faith and noble

qualities of the great clinician, the great and brilliant writer, the grand and sage Hughes. Would to God we see his like again !”

The portrait which accompanies this notice is a reproduction of a photograph (by Lombardi & Co., of Brighton), and will be confessed to be an excellent likeness.—EDITOR.

SOCIETY NEWS.

NEW MEMBERS.

At the meeting in April, Charles John Greig, L.R.C.P., L.R.C.S.Ed., and L.F.P.S.Glasg., of 1, Florence Road, Ealing, was elected a member of the Society.

At the meeting in May, Leonard John Minter, M.D. (Brux.), M.R.C.S., L.R.C.P.Lond., L.S.A., of 60, Brunswick Road, Brighton, was elected a member of the Society.

TWENTIETH CENTURY FUND.

A meeting was held on April 25, in connection with the Twentieth Century Fund, at the Hall of the Stationers' Company, Ludgate Hill, E.C., the Right Hon. the Earl Cawdor presiding. At this meeting the work of the Society in connection with the Fund culminated in the successful inauguration of an association for the development and extension of homœopathy in Great Britain, to be called the British Homœopathic Association. Henceforth the care of the Fund is in the hands of this Association. The following were appointed as officers of the Association. President: The Earl Cawdor; Vice-Presidents: The Earl Dysart and Lord Calthorpe; Treasurer: Joseph Howard, Esq., M.P.; and as a General Committee, with power to add to their number, in addition to the above-mentioned officers, R. W. Perks, Esq., M.P.; J. B. Stillwell, Esq.; Captain Cundy; W. R. Arbuthnot, Esq.; Sir Robert Hunter; Henry Manfield, Esq.; W. M. McArthur, Esq., M.P.; Col. Clifton Brown; J. J. Bowley, Esq.; the members of the Executive Committee of the British Homœopathic Society; Dr. Dyce

Brown; Dr. Clarke; Dr. Madden; Dr. Cash Reed; Dr. Spencer Cox; Dr. Goldsbrough, and Dr. P. Stuart.

The following subscriptions were announced to the date of the meeting.

	£	s.	d.
Captain Cundy	250	0	0
Dr. P. Stuart	100	0	0
Col. J. Clifton Brown	100	0	0
Dr. Dyce Brown	50	0	0
Dr. G. Burford	25	0	0
Dr. Byres Moir	25	0	0
Mr. Knox Shaw	25	0	0
Dr. E. A. Neatby	25	0	0
Mr. Dudley Wright	25	0	0
Dr. J. W. Hayward	25	0	0
Dr. Roberson Day	25	0	0
Dr. Burwood	25	0	0
Dr. J. H. Clarke	25	0	0
Henry Manfield, Esq.	25	0	0
Mrs. Mason	25	0	0
Dr. Percy Wilde	20	0	0
Mrs. A. J. Woodhouse	10	10	0
Dr. Eugene Cronin	10	10	0
James Johnstone, Esq.	10	10	0
W. R. Arbuthnot, Esq.	10	10	0
J. P. Stillwell, Esq.	10	10	0
A. Marshall Jay, Esq.	10	10	0
A. Backhouse, Esq.	10	0	0
Dr. E. M. Madden	10	0	0
Dr. A. C. Clifton	10	0	0
W. B. Liddiard, Esq.	10	0	0
Dr. Spencer Cox	5	5	0
C. A. Russell, Esq.	5	5	0
Allen Stoneham, Esq.	5	5	0
H. Wynne Thomas, Esq.	5	5	0
F. H. Shaw, Esq.	5	5	0
Dr. Cash Reed	5	5	0
Miss Cruickshank	5	5	0
Dr. Searson	5	5	0
Isaac Thompson, Esq.	5	0	0
Miss Annie Paget	5	0	0
Mrs. Paget	5	0	0
Dr. Ramsbotham	5	0	0

	£	s.	d.
Dr. A. M. Cash	3	3	0
Mrs. Swain	2	2	0
Sir P. J. Julyan	2	2	0
Rev. Dr. Horton	2	2	0
Austin Reynolds, Esq.	2	2	0
Dr. F. P. Stanley Wilde	2	2	0
Dr. Stonham	2	2	0
W. G. Freeman, Esq.	2	2	0
Amounts under two guineas... ..	10	19	0
Total	£988	16	0

A Ladies' Committee was also formed to act in concert with the General Committee, consisting of Lady Cawdor, Mrs. Henry Wood, Lady Hunter, Mrs. J. M. McLean, Mrs. Clifton Brown, Mrs. Compton Burnett, Mrs. Arbuthnot, Mrs. Peter Rylands, Mrs. Cundy, Mrs. Stephenson, Mrs. William McArthur, Mrs. Torrens Johnson, Mrs. Keely.

THE HUGHES MEMORIAL FUND.

The members of the Committee for the raising of the Hughes Memorial Fund, elected at the meeting on April 10, are as follows: The President of the Society, *ex-officio*, Drs. Blackley, Goldsbrough, Madden, and Searson. Hon. Treasurer to the Fund, Dr. Blackley; Hon. Secretary, Dr. Madden.

SUMMARY OF PHARMACODYNAMICS AND THERAPEUTICS.

Extracted from Exchange Journals by the Editor, with the collaboration, in the case of journals in foreign languages, of J. Galley Blackley, M.B., and D. MacNish, M.A., M.B.

Arsyual. (*Disodic methylarsyuate.*)—This drug, introduced by M. Armand Gautier, appears to possess many advantages over the ordinary cacodylate of sodium, probably owing to the fact that, unlike the latter, it gives rise to no secondary products when introduced into the circulating media, and causes neither gastric nor renal irritation, nor the garlic-like odour possessed by the breath when cacodylates are given by the mouth. It is freely soluble in both hot and cold water, and solutions undergo no decomposition on boiling (as for purposes of sterilisation). Gautier is sanguine as to its value in phthisis in the second stage, and for this purpose gives 4 to 6 centigrammes per day for one week, followed by a week's intermission of remedies. *Larger doses were found to be accompanied by evening rise of temperature (about 1° F.), flushes of heat to the head, and slight pulmonary congestion, sometimes leading to hæmoptysis.* Considering that *arsyual* was evidently capable of aggravating the condition of tuberculous patients, and that the doses employed by Gautier were many times too large, Lambrechts set himself to determine whether the characteristic symptoms—evening rise of temperature and pulmonary congestion—would not disappear under the use of much smaller doses. His first case was one of pronounced apical mischief in a girl of 18, rise of temperature at 3 p.m. daily to 38·5° or 39° C. (102·2° F.), oppression, frequent cough, with blood-tinged expectoration, abundant night-sweats, rough breathing at left apex, emaciation, pallor, and loss of appetite. Ten centigrammes of the 1x trituration were given in divided doses every day. Even with this dose the temperature rose 0·7° C. (103·5° F.), and the patient complained of flushes of heat in the head and oppression. Medication was stopped, and considerable improvement soon

showed itself, the temperature falling to 37·5° C. (99·5° F.). On resuming the drug after four days' intermission the third in place of the first decimal trituration was given, the result being that there was no visible aggravation, and the general condition of the patient was manifestly better. At the end of three weeks' treatment the patient had gained more than a kilogramme (2¼ lbs.) in weight. In another similar case marked improvement was visible at the end of four days' treatment with *arsyual* 3x; the fever was much less, and night-sweats and hæmoptysis had entirely ceased.—(*Jour. Belge d'Homœop.*, ix., 41, April.)—J. G. B.

Caffeine in Brachialgia.—Dr. Marc Jousset once more calls attention to the value of caffeine in this and other neuralgias characterised especially by *nocturnal exacerbations*. In the treatment of such cases he uses a trituration of equal parts of caffeine and milk-sugar, of which 0·20 grm. (3 grains) is taken in divided doses every other day.—(*Rev. Hom. Française*, xiv., p. 149, April.)—J. G. B.

Calcarea Carbonica in Intermittent Fever.—*An indication.* Dr. A. W. K. Chondbury, of Satkira, Calcutta, contributes an article on this subject. Adopting the suggestion of Dr. G. C. Price in H. C. Allen's "Therapeutics of Intermittent Fever," that the "times" for calc. carb. as a remedy are accession on one day at 11 a.m. and the next day at 4 p.m., he gave it in two cases with immediate results. (1) A female Mahomedan, aged 15, exhibited this type, the noon paroxysm being severe, the afternoon milder. One dose of calc. carb. 30 was given in the apyrexia daily for three days. The fever did not return, and she received a placebo only afterwards. (2) A boy, aged 4, who had been improving under *pulsatilla*, developed a similar type of fever; a severe paroxysm at 11 a.m., and milder at 4 p.m. next day; diarrhœa in chill and heat, with marked heat along the spine. He received two daily doses of calc. carb. 30. No more paroxysms occurred.—*Homœopathic Recorder*, April, p. 174. [It should be noted that both these cases are in early developmental periods of life.—ED.]

Cuprum Arsenicosum in Renal Insufficiency.—Prof. G. M. Hill reports a case of chronic bronchitis with cardiac hypertrophy and aortic obstruction, in which subsequently acute dilatation and renal insufficiency supervened, in which the arsenite of copper had a marked effect on the excretion of urea. With rest and appropriate remedies the cardiac condition had

much improved, but the state of the urine was very unsatisfactory. The amount did not reach much over one pint in the twenty-four hours, and the excretion of urea did not exceed six grammes for that period. Albumen was present in small amount, but casts were absent. After some time of treatment by free administration of water, milk diet, digitalis, apocynum, and stigmalida maidis, the quantity of urine increased to four or five pints per diem, but the average amount of urea was only nine grammes. The patient also exhibited symptoms of uræmic poisoning, such as headache, loss of appetite, and muscular twitchings. Arsenite of copper was then given in the 2x trituration, gr. i., 4 horis. In the first week the excretion of urea was increased to fifteen grammes daily. Subsequently the amount reached twenty-six grammes in twenty-four hours. Prof. Hill suggests that the cuprum was indicated as well by the uræmic symptoms as by the state of the urine.—*The Clinique*, March, p. 173.—ED.

Cicuta Virosa in Convulsive Conditions.—Two cases are reported by Dr. Goldsbrough, in which recovery from convulsive seizures could be inferred as ensuing from the use of *cicuta*. (1) A man, aged 30, who had formerly suffered from malarial and dysenteric infection, had had ten fits of a Jacksonian type in thirteen months, distributed in intervals of three or four months. After taking *cicuta*, he had not had a recurrence in eleven months. (2) A young woman, aged 20, had suffered from hysterical chorea more or less since childhood. For nearly two years the movements had been continuous and violent, of an especially jerking character, and affecting the head, neck, facial and ocular muscles and tongue. She was under treatment as a hospital out-patient several months, receiving *cicuta* 3 and 30, with occasional prescriptions of *ignatia* 30. Marked amelioration of the movements always followed the administration of the *cicuta*, and at the time of the record recovery was almost complete.—*Monthly Homœopathic Review*, April, p. 200.—ED.

Echinacea Angustifolia.—Dr. E. C. Eddy reports three cases in which this drug was used with benefit. (1) In senile gangrene, used as a lotion (θ tincture 1 in 3) and internally (θ gtt. 10 t. d.) its effects were soon manifest in diminution of offensive odour and less rapid destruction of tissue. (2) Miss R., aged 40, suffering from loss of appetite, sleeplessness, debility and excoriating leucorrhœa with very offensive odour, after other treatment had failed, received, after thorough cleansing,

tampons with a solution of echin. ang. in glycerine and water equal parts, also a douche containing the drug and ten drops three times a day internally. The improvement was rapid and permanent. (3) Miss H., 23, was suffering from typhoid fever, in which there had been profuse hæmorrhage, and the odour from the breath and excreta was almost intolerable. An improvement in the entire condition quickly followed, and was maintained by the use of echin. ang. θ gtt. 15 t. d., and afterwards gtt. x bis die until convalescence.

Dr. Spoor reports the use of this drug in a case of dry gangrene in which operation was not possible, where distinctly the disease pursued a much more favourable course from the beginning of the treatment.—*Homœopathic Recorder*, March, p. 134. (Extract from *Trans. of Hom. Med. Soc. of State of N.Y.—Ed.*)

Emetine.—*Its action upon the lungs of animals.*—Five centigrammes of sulphate of emetine dissolved in water, injected into the cellular tissue of a guinea-pig, speedily produced diarrhœa, and the temperature fell 1° C. (from 39·5° to 38·5°). On the following day a similar dose produced a much more powerful effect: respirations rose to 128, pulse to 112, and temperature fell to 36° C.; the animal succumbed during the day. *Autopsy.*—No effusion either in pleural or peritoneal cavity; spleen softened, liver pale, clots in both ventricles and auricles. Both lungs were the seat of foci of *hepatisation*, to the number of five or six, the hepatised portions being black, compact, and sinking when placed in water. Microscopic examination and culture-experiments, made with the usual antiseptic precautions, demonstrated the absence of microbes in this lesion. The results of the histological examination were as follows:—In the lungs enormous congestion of vessels. In two spots the interior of the *acini* was found filled with broken-up red blood globules. In the bronchial tubes accumulation of mucus, but no desquamation of the epithelial cells; around one tube of large calibre was found a half-circle of round embryonic cells. The cells of the *acini* stained slightly or not at all; they had desquamated at certain points and at times showed two nuclei; on the same level were round cells enclosing black pigment granules. The condition was, in short, one of congestion with epithelial pneumonia (broncho-pneumonia).—P. Joussett, *L'Art Médical*, xciv., 172.—J. G. B.

Gnaphalium Polycephalum in Sciatica.—Mr. K., aged 42, complained of pain in the sacral region, which extended

down the left leg along the course of the sciatic nerve. It had then been of eight weeks' duration, at which time he was exposed to cold and wet. The pain is worse before and during a storm. A history of slight rheumatic attacks at intervals of years. Cramps in the legs and feet and a feeling of numbness accompanied the pain. Some improvement ensued from rhus tox. 6x, 30x and 200, but the same condition continued. Gnaphalium polycephalum 3x was given four times a day, which relieved and cured him.—(Professor A. L. Blackwood in *The Clinique*, May, p. 291).—ED.

Hepar Sulphuris in Angeio-Neurotic Œdema.—Dr. F. F. Laird, of Los Angeles, California, records three well-marked cases of angeio-neurotic œdema successfully treated by hepar sulph. (1) A man, aged 38, a neurotic history and temperament, had his first attack, in which the upper lip was markedly swollen and the right eye closed. This lasted a few hours, but the attacks recurred with increasing frequency for eight years. Sometimes the swellings came in the arms and legs, or hands, or penis. The skin chafed easily, was slow in healing, and the lips chapped in cool weather. Hepar sulph. 3x t. i. d. was given for six months. There was no recurrence after the first month. (2) A man, aged 28, also with a neurotic history, and always delicate, in 1895 suffered from attacks of colic, nausea, vomiting, diagnosed as appendicitis. Associated with the last attack was a swelling of the tongue, forcing open the mouth, with profuse salivation. The under lip was also swollen. The attack recurred in a month on the arms and thighs, and also prepuce. He would faint at the sight of blood; craved pickles; skin chafed easily, always less in damp weather. Hepar sulph. 3x, as in Case 1. Attacks vanished in three months, after five years of recurrences. (3) A commercial traveller, aged 45, previous history normal, nearly lost his life in January, 1901, with acute œdema of the larynx. In March he had extensive œdema of the tongue, closure of the eyes, swellings of arms, legs and penis. Careful examination failed to account for the attack. Rapid recovery under apis. In two weeks a recurrence, which vanished suddenly, followed by a sharp paroxysm of cardialgia. A typical outbreak of urticaria was the next manifestation, and afterwards dead fingers and unilateral sweating. Hepar sulph. 3x was followed by gradual improvement, and at the time of the report there had been no recurrence for six months. Dr. Laird writes that he has seen in all eight cases of angeio-neurotic œdema in Los Angeles, all greatly benefited by hepar.—*Hahnemannian Monthly*, April, p. 274.—ED.

Iodic Purpura with Fever.—Dr. Alfred Stengel, in the *Therapeutic Gazette*, January 15, 1902, describes the occurrence of purpura in a young man who was taking potassium iodide gr. 8 t. d. for asthma. The iodide was begun on February 12, in 5 grain doses. On the 23rd it was increased to 8 grains. Early in March there was continuous bronchitis, with fever ranging from 101° to 104°. On March 19 hæmorrhagic spots appeared on the legs, on the 20th pains in the knees, and on the 21st in the left elbow and right foot, were complained of. Several crops of petechiæ subsequently appeared. The gums were also very tender and spongy, and showed a bluish cyanosed line near the teeth; the breath was fœtid. The leucocytes counted 21,280. The joints became infiltrated and erythematous. The patient was very prostrate, and perspiration was increased. The thyroid gland became decidedly enlarged, the pulse was rapid (120) and small. Marked tremor of the hands. Examination of the saliva showed abundance of iodine. On March 23 the iodide was withdrawn, the eruption faded, and recovery became complete.—*N. A. Journal of Homœopathy*, May, p. 340.—ED.

Kousso (*Hagenia Abyssinica*).—This drug, used from time immemorial in Abyssinia as a vermifuge, has several well-marked physiological effects. It causes nausea, and vomiting is frequent after its use. If not vomited, it provokes at first intestinal contractions and solid evacuations; then diarrhœa with considerable thirst, but without intestinal pains. In some cases vertigo, precordial anxiety, slowing and irregularity of pulse, subdelirium, and collapse are produced. In Abyssinia cases of death have occurred after its use, but not in Europe. It is also credited in Abyssinia with the power of producing abortion.—(*Piedvache, Rev. Hom. Franç.*, xiv., 178, April.)—J. G. B.

Lycopus Virginicus in Exophthalmic Goitre.—Prof. H. F. Halbert, of Chicago, reverts to this subject. In a rare case, in a man 21 years of age, who had had the disease several years, and presented the three cardinal symptoms in a marked degree, with all other symptoms contributing, five-drop doses of the tincture of lycopus were administered every three hours. The relief of the tachycardia was gradual and satisfactory. The goitre diminished in size, and the general fatigue disappeared. The exophthalmus subsequently required operative measures, and the excitement incident to this brought back the tachycardia. It was found necessary to give digitalis as well as lycopus. Prof.

Halbert says that in the average case he does not find it necessary to give more than *lycopus* unless characteristic symptoms demand it. *Ferrum phos.* works well with *lycopus*.—*The Clinique*, May, p. 283.—ED.

Natrum Muriaticum in Headache.—Dr. Z. W. Shepherd reports a case of excruciating headache, cured by *nat. mur.* 200, in which the selection was based on the key-note of excessive fondness for salt. The medicine was given casually and without the knowledge of the patient as to its nature; the pain was quickly relieved, also the excessive liking for salt.—*Homœopathic Recorder*, March, p. 104. (In this connection see remarks by Dr. Molson on the trituration of *nat. mur.* in the *Journal* for April, p. 196.)—ED.

Opium.—*A case of poisoning in a seven-months-old child.*—Dr. N. Feuerstein, of Bukowina, was called to a child of seven months, to whom the nurse had, by accident, given a teaspoonful of tincture of opium instead of syrup of rhubarb. Given at six in the morning, the accident was concealed until, the condition becoming alarming, it was seen at nine. Then the little patient was cyanotic, both in its face and whole body, head drawn back, eyes protruding, arms extended, fingers clasped spasmodically into the palms. The pupils were greatly contracted, and it made movements with its mouth as though it were nursing. The pulse was scarcely to be felt, respiration superficial, and each inspiration accompanied with a crowing sound. The reflexes were abolished, the cornea was insensible to contact. The stomach was washed out by means of a soft catheter, introduced through the nose, with warm water and a weak solution of permanganate of potash. After a warm bath, with cold affusions, consciousness returned. After a little stimulation by wine and coffee, sleep ensued. By the evening the cyanosis, spasm of the glottis and rigidity of the neck had disappeared. The next day the child was out of danger.—(Translated in *Hahnemannian Monthly*, May, p. 390.)—ED.

Ptelea Trifoliata in Hyperæmia of the Liver.—Professor A. L. Blackwood, of Chicago, cites a case illustrating the above. Mrs. H., aged 50, had been under treatment some weeks. At her first appearance she complained of pain in the right side, which was constant, and made worse by a deep inspiration, and while lying on the left side, and is relieved by lying on the right side. There is severe headache at times, which comes on suddenly, and is most marked about the frontal region, but may

penetrate all the bones and extend to the tongue. It is often attended by nausea and pains in the stomach. At times there has been an enormous appetite, while at other times repugnance to food. Butter and fats aggravate the gastric distress. The bowels were constipated, the stools being small and hard. There is general lassitude and weariness, with mental confusion. Ptelea trifol. had been given for four days. The patient was much easier, complained of practically no distress, while the liver is much reduced in size, and there is no tenderness.—*The Clinique*, May, p. 290.

Tartar Emetic.—P. Jousset made experiments upon animals with daily subcutaneous injections, at first of 1 milligramme, and after a few days of 2 milligrammes dissolved in 1 cc. of water, his object in using such dilute solutions being to allow the animals to survive as long as possible, in order that lesions might develop and acquire their typical aspect. With doses of 1 mgrm. per day, continued daily for nineteen days, the only symptoms produced were diarrhœa and notable diminution in frequency of respiration, the temperature still being normal. On doubling the dose temperature began to fall, and by the twenty-fourth day, when the animal was obviously in a stage of collapse, registered 35.8° ; soon after this death in convulsions took place. *Autopsy.*—Stomach alone affected; not far from the pylorus was a single oval-shaped ulcer, measuring 8 mm. \times 5 mm., by about 2 mm. deep, and reaching the serous coat, being surrounded by a dark ridge of mucus. The peritoneum over the spot was injected but not adherent. Histological examination showed the margins of the ulceration to be composed of the glandular layer. The *muscularis mucosæ* ceased suddenly, and between it and the glandular layer existed large hæmorrhagic foci. The bottom of the ulcer was formed of necrosed tissue with islets of embryonic cells. Embryonic cells had invaded the *tunica muscularis*. Besides the slowing of respiration, diminution of temperature and death by collapse produced by large doses, small doses administered hypodermically produce ulceration, having the greatest analogy with "round ulcer."—*L'Art Médical*, xciv., 173.—J. G. B.

Trional.—*Poisoning.*—A thin, anæmic woman, of 50 years, took at a single dose two 15-grain powders of trional for the relief of sleeplessness and sciatica. Five minutes later she complained of feeling stupid and numb, even to the lips. Her tongue seemed thick, and she almost immediately fell backward on the pillows.

This was followed by inco-ordination of the movements of the arms, and she lapsed into a semi-comatose state, from which she could be aroused, but lapsed again immediately. Vision seemed gone. She was seen by Dr. Dobson after 18 hours. She was in a convulsion which lasted 15 minutes; the eyes twitched, the thumbs were flexed in the clenched hands, there was partial paralysis of the tongue, and all extremities were rigid. The pupils were widely dilated. Hardly any urine had been passed for 18 hours, and the bowels had not moved. A second spasm occurred in 3 hours similar to the first, but in which she was also violent, trying to bite and scratch. A period of stupor, with cold, clammy sweat, followed. In 2 and 4 hours respectively other similar attacks occurred. The temperature before the attacks averaged 101° and pulse 82, afterwards 102°-104°, with pulse 90-110. Consciousness returned on the second day, and the patient complained of intense temporal headache, with a numb drawing sensation in the occiput, and with sharp, lance-like pains in the region of the heart. During sleep she dreamed of ugly faces floating about her, and felt as if being dragged from the bed. On the third day she seemed brighter, but had some headache, and a feeling of scum over the eyeball with lachrymation. The kidneys and bowels reacted to diuretics and a purge. The patient continued to improve. On the tenth day there were left some sluggishness of the kidneys and bowels and some nervousness.—*Hahnemannian Monthly*, April, p. 283.—ED.

Veratrum Viride in Puerperal Eclampsia.—Dr. W. M. Hill, in an article on veratrum viride, gives a summary of its pathogenetic effects and therapeutic uses, and points out that its chief value is in the treatment of puerperal convulsions. He cites a case in which a few drops of the tincture were given hypodermically, and there was but one convulsion after injection, although consciousness was not regained for a day or two. This same patient was taken in the same way after her next labour. She had fourteen convulsions before the veratrum was used, and then made a good recovery. She had a return of convulsions with the third labour, but under another physician the veratrum was not used. The author suggests that the green hellebore has a selective affinity for the pons and medulla oblongata, and that the main indication for its use is high *arterial* as distinguished from nervous tension.—*Pacific Coast Journal of Homœopathy*, April, p. 97.—ED.

JOURNAL
OF THE
British Homœopathic Society

No. 4.

OCTOBER, 1902.

VOL. X.

All communications and exchanges to be sent to

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THE LAW OF UNITY AND HOMŒOPATHY.¹

BY ARTHUR A. BEALE, M.B., C.M.GLAS.

MR. PRESIDENT AND COLLEAGUES,—At the threshold of a new century, at the threshold of a new epoch in the history of Homœopathy, and, therefore, of medicine in general in this country, I invite your attention to the consideration of this important subject. The Law of Unity expresses that all phenomena in the cosmos are related. It reminds us that extremes meet, that there is an infinity of greatness and smallness. Both the microscope and telescope introduce us to this land; and yet Infinity is not outside us, we are part of it, and, therefore, have a right to investigate it. It is a presumption and insult to Man to avow that “the Infinite is inscrutable.” We are constantly trespassing upon its domain, though the vistas beyond remain the fields of the Infinite. “Nothing is great and nothing is small” and he who understands the small will understand the great. The same laws that govern the cell govern the sun, the planets,

¹ Presented to the Section of Materia Medica and Therapeutics, May 1, 1902.

the universe. We have not in the so-called civilized races appreciated enough what has been called "the Divine law of Analogy" because we have been trained to consider ourselves as units without appreciating the Unity of Units. We scrutinise the part without studying the whole. The individual pebbles of the mosaic trouble us, till we trace the design *in toto*.

I suggest that we have just passed through an age, or period, of Analysis, splitting up specialisation and isolation, which has done its work and a good work too. But analysis, if allowed to run wild, spells destruction. The period that is upon us is one of synthesis, harmony and construction. In this, medicine has been no exception. The ambition in the past has been to isolate the disease, give it a name and then attempt to treat it. Homœopathy being a system of the future, rather than the past, has been a protest against this process. It assists us to look at disease as an aberration. But can we say in honesty that we have emancipated this new system from the evil tendency? Do we, in using a drug, keep ourselves sufficiently alive to the relation and inter-relation of any disease and drug to the other diseases and drugs?

Science has drawn grotesque landmarks between the different realms of nature; the organic and inorganic, living and dead, laid them down with a dogmatism that amounts to arrogance. It often forms the first consideration of text-books on physiology; and yet when one is brought face to face with the facts, we must admit that these lines of demarcation are superficial and artificial. Consciousness itself has, I believe, never been satisfactorily defined, but one essential feature of it seems to be a cognising, to appreciate the presence of, and in its broadest sense, it must be embraced by the lowest kingdoms of Nature as well as the highest. If we say that the consciousness of a stone, plant, animal, man, and a world varies in manifestation, well and good, but to say that one has consciousness and the other has not is illogical. If we say that man possesses self consciousness whilst an animal lacks it, so much may be admitted as possible, though the lack of capacity on the part

of the man to fully appreciate the states of consciousness of animals must be remembered.

The word vitality again is a vague term, which has acquired a limitation entirely at variance both with facts and philosophy. The same forces are at work in the mineral, vegetable, animal, and human kingdoms: the forms vary and so do the results; the force remains the same. Has not evolution in its wide sense, apart from side issues, acquired practically universal approbation? But this is only a re-statement or re-discovery of an ancient teaching propounded in almost all the ancient religious and philosophical systems. When Buchner said, "imperceptibly the plant glides into the animal, the animal into man," he was repeating, in part, the old Kabalistic axiom, "The breath becomes stone, the stone a plant, the plant an animal, the animal a man, the man a spirit, and the spirit a god," which in turn borrowed it from Manu the Indian legislator and Hermes Trismigistus the Egyptian Demigod; though we must not forget that the great difference between the ancient and modern teachings on this matter is that the former taught, side by side with Evolution, the more important Doctrine of Involution.

Some people boast that vitality has been done away with. Vitality is motion. Suppose the retort is made, motion is vitality, and we arrive at the Chinese puzzle: which came first, the hen or the egg?

Science, with its blinding hypnotic wave of Materialism, seemed very pleased when it arrived, in its mental gyrations, at the almighty molecule. Everything was molecular, molecules were material, therefore all things, all manifestations, all phenomena, were material. Chance played the music, men and other things danced, till the dreadful revelation began to dawn that in the molecule they were face to face with a cosmos! Yes, we might be told, but you forget the atom—and it is really amusing how atoms are dogmatized about, as if they had been examined under the microscope. We are told for instance, that in a piece of sugar of a certain size there are so many atoms, till Prof. Rucker reminds us that our present atomic theory is

but a theory. Tait's "force and matter" states there are about 40 theories regarding the atom and molecule.

Even granted that the theory be a true one (never mind which), can we get away from the idea that not only are atoms centres of force, but centres of consciousness, and is not the whole system of evolution an evolution of consciousness? Turning for a while to another startling revelation of Science as embodied in the investigations of Prof. Crookes. In delivering his presidential address before the Royal Society of Chemists, he suggested that such a thing as a really simple molecule entirely homogeneous is *terra incognita* in chemistry; he says, "Where are we to draw the line? Is there no way out of this perplexity?" Take the case of yttrium. It has its definite atomic weight, it behaves in every respect as a simple body, an element to which we might indeed add, but from which we could not take away, yet this yttrium, this supposed homogeneous whole, on being submitted to a certain method of fractionation, is resolved into portions not absolutely identical among themselves, and exhibiting a gradation of properties. Or take the case of a didymium. Here was a body betraying all the recognised characters of an element. It had been separated with much difficulty from other bodies which approximated closely to it in their properties, and during this crucial process it had undergone very severe treatment and very close scrutiny. But then came another chemist, who, treating this assumed homogeneous body by a peculiar process of fractionation, resolved it into the two bodies phraseodymium and neodymium, between which certain distinctions are perceptible. Further, even now we have no certainty that neodymium and phraseodymium are simple bodies. On the contrary, they likewise exhibit symptoms of splitting up. Now, if one supposed element on proper treatment is thus found to comprise dissimilar molecules, surely we are warranted in asking whether similar results might not be obtained in other elements, perhaps in all elements, if treated in the right way. We may even ask where the process of sorting out is to stop, a process which, of course, presupposes variations between the individual

molecules of each species. And in these successive separations we naturally find bodies approaching more and more closely to each other."

We are reminded also of dextro- and levo-rotation in polarisation of light; also other phenomena of Isomerism. So, then, these supposed simple elements are themselves more than probably compound bodies composed of other bodies that in their turn, in a pristine state, approximate homogeneity. These we may call molecules,¹ for, as Prof. Rucker says, "I have tried to show that, in spite of the tentative nature of some of our theories, in spite of many outstanding difficulties, the atomic theory unifies so many facts, and simplifies so much that is complicated, that we have a right to insist—at all events, till an equally intelligible rival hypothesis is produced—that the main structure of our theory is true: that atoms are not merely helps to puzzled mathematicians, but physical realities." Admitting this, the whole series of so-called elements may well be conceived to be a series of compound units or entities, that show by their nature a well-regulated gradation, not only so, but are easily arranged into groups or families showing some common properties, and in their turn, each group or family, some bond of similarity to that next it; all, remember, as a fair inference from Prof. Crooke's deductions, having a common substantial basis, call it molecule, or atom, or protyle, to use Prof. Crooke's expression, which is homogeneous in all.

As to the special grouping of these families, to quote Prof. Crookes himself: "In the Birmingham address already referred to I asked my audience to picture the action of two forces on the original protyle—one being time, accompanied by a lowering of temperature, the other swinging to and fro like a mighty pendulum, having periodic cycles of ebb and swell, rest and activity, being intimately connected with the imponderable matter, essence, or source of energy we call electricity." "Besides the lowering of temperature with the periodic ebb and flow of electricity,

¹ The question is whether or not what Science calls atoms are really not ultimate molecules.

positive or negative, requisite to confer on the newly born element their particular atomicity, it is evident that a third factor must be taken into account." He then goes on to explain that space is required, which is demanded by cosmogenic operations.

The pendulum then has circular zig-zag or rather spiral gyrations as might be well represented by the caduceus, the points of intersection of the two spiral oscillating forces representing points of correlation or lemniscation corresponding with certain groups or families of elements. So that one does not get a series of gradations of atomic value but of corresponding intersections. As he says himself, "If we project the figure in space, we find on examination that the points of the curves, where chlorine, bromine and iodine are formed, come close under each other. So also will sulphur, selenium, and tellurium. Again phosphorus, arsenic and antimony.

These elements are supposed and are generally recognised to be the chemical basis of all matter, though this can scarcely be the case, when we realise the existence of some imponderable form of matter as that referred to by Prof. Crookes as electricity, not to mention what might be a still more contestable point, viz., thought matter. Taking them as the chemical basis, each compound of these elements, in its turn, shows a further differentiation in properties from the separate elements that compose it. These compounds associate together to form classes, which again produce among themselves a further multiplicity of properties, till the vegetable, animal and human kingdoms are run through. This passage from the homogeneous to the heterogeneous is one of the most wonderful of all phenomena, and, to me, is one of the clearest proofs of an all pervading consciousness. The same is applicable in music where combinations of notes and cords do not only involve an arithmetical, but something approaching a geometrical progression of sounds and harmonics. The same law is applicable in all realms. The method is one, the basis is one, the issues are one, and, more than all else, the consciousness is one. The common basis, the atom,

from which all these complex phenomena arise and evolve, must resolve itself into something very much like pristine, undifferentiated consciousness whose evolution forms a continuous history up to the pinnacle of the temple, Man, or something infinitely greater.

For whilst we can get to nothing simpler than the Immortal atom, and since, as far as we know, atoms are homogeneous, and all things have the atom as a basis, it is a fair inference that mind itself has the same basis. Since then, the atom can evolve to such a development as the mind, without going further, and, since mind possesses properties which, for the want of a better word, we call spirituality, these atoms must not be considered as sorts of *things* which are the products of chance, but are, in reality, if spirituality exists at all, real spiritual entities with the potentiality of worlds in their being.

The same principle was wonderfully worked out in the cell life by Professor Weismann in his "Germ Plasm." Whatever the ultimate deductions of the professor are, his investigations were on strictly scientific lines; and his main arguments must be correct. On the lines of analogy under the higher law of Unity we shall be able to follow the principles at work in kingdoms, so called above and below that of the cell, not stopping at man, though in our ignorance and conceit we fancy him as the acme of evolution. Huxley, in one of those wonderful flights of intuition which we see occasionally in his writings, makes this remark: "Looking at the matter from the most rigidly scientific point of view, the assumption that amidst the myriads of worlds scattered through endless space there can be no intelligence as much greater than man's as his is greater than a black beetle's, not being endowed with the powers of influencing the course of Nature as much greater than his, as his is greater than a snail's, seems to me not merely baseless but impertinent.

"Without stepping beyond the analogy of that which is known, it is easy to people the cosmos with entities in ascending scale, until we reach something practically indistinguishable from omnipotence, omnipresence, and omni-

science." When we begin to realise the cosmos as an entity and a spiritual one, and that man is part of that cosmos as each tiny cell of our body is part of that body, with an individuality of its own; then realising, moreover, that the same forces are working throughout in their various grades of evolution, we are, I maintain, in a better position to construct a philosophy which will explain many things that at present remain a mystery, disease and drug action included. Weismann *did* realise this, for he appropriately concludes his work on the "Germ Plasm" with these words: "We are thus reminded afresh that we have to deal not only with the infinitely great, but also with the infinitely small; the idea of size is a purely relative one, and on either hand extends infinity."

By the cell and its universe, we have a means of examining the greater universe, Man, or even the cosmos. Through the microcosm we see the macrocosm, though even the basic activities of the cell elude our grasp, though sufficient is seen to give us the clue.

Weismann says "All the phenomena of heredity depend on minute vital units which we have called 'biophors' and of which living matter is composed. These are capable of assimilation, growth and multiplication by division. We are unacquainted with the lowest conceivable organisms, and do not even know if they still exist. But they must, at any rate, have done so at some time or other in the form of single biophors, in which multiplication and transmission occurred together, no special mechanism for the purposes of heredity being present. A higher order of beings would then have been constituted by those organisms, which were composed of a larger number of similar biophors.

"Of these also we have no actual knowledge based on observation, but must suppose that they too required no special apparatus for the processes of transmission; for a reproduction of binary fission must result in two perfectly corresponding halves, each containing similar biophors, and each of which simply by the multiplication of these units, is able to give rise to a complete organism exactly like the parent." The professor then proceeds

to explain that this simple form of transmission became modified when the biophors underwent differentiation in connection with a division of labour. Two kinds of hypothetical beings came into existence, which might be distinguished as homo-biophorids and hetero-biophorids. In the fulness of time the complexity involved the necessity for the production of a nucleus. What is the nucleus, but a co-ordinating centre of consciousness, on which principle all greater systems are built? Having reached a stage of evolution, in which centres of consciousness combine to make compound entities, there is at once a call for a co-ordinating centre, which in the cell life manifests its executive control through the nucleus and its ingredients.

Soon a multicellular organism develops for the purpose of reproduction of these organisms, in which a variety of constituent elements or cells is shown. The hereditary substance, in Weismann's words, "consists of several equivalent groups of biophors, constituting 'nuclear rods' or 'idants,' each of which contains all the kinds of biophors of the organism, though they deviate slightly from one another in their composition, as they correspond to individual variations."

This idea of variations suggests many points of importance, but especially the fact that at the very bottom of the ladder of evolution the relative equilibrium is restored and kept by dissimilar elements. These biophors are invested in the nuclear ingredients called *idants*, and their constituents called *ids*. Let us not forget the words *idants* and *ids* are derivatively associated with the word *idea* from the Greek *idein* to see, and according to the platonic philosophy represented, on the authority of the Library Dictionary, "one of the archetypes or patterns of created things, conceived by the Platonists to have existed from eternity in the mind of the Deity," an excellently selected word to express the idea wished.

In the process of reproduction, "half the *idants* of two individuals become united in the process of amphimixis, and thus a fresh intermixture of individual characters

results. But before even the *ids* can be said to have an existence, we have to account for a series of ingredients called by Weismann *determinants*, which in their turn contain the invested *biophors*. The germ cell then has a nucleus, this nucleus contains the *idants* which are capable of forming into rods and so-called *chromosomes*. These *idants* are a collection of simpler organisms called *ids*. The *ids* are, in their turn, composed of *determinants*, and the *determinants* are complex congeries of *biophors*, the primal elements, though in reality probably universes themselves, composed of simpler elements which in imagination might be traced down to the atoms. These being reached, one finds oneself in the universal ocean of spirit itself. But to come to concrete facts, we are all familiar with the processes of *karyokinesis* : how the nucleus loses its wall of separation from the cell substance ; how the two poles, the *centrosomes*, take up their positions at opposite ends of the cell ; how the nuclear ingredients after forming an apparently continuous spiral thread break up into two sets of elements, which separate from each other, connected with the *centrosomes* by tiny filaments which appear to drag them farther apart, and so arranged into a spindle mass ; how the rods become further and further separated, or perhaps repel each other towards their corresponding poles or *centrosomes* ; and how, ultimately, the cell wall falls in, to make the separation complete and permanent. In this apparently simple phenomenon lies the secret of Homœopathy in drug action, as will be discussed later on.

There is another phenomenon which is intimately associated with *karyokinesis*. It is that of the expulsion of polar bodies from the germ cell, in the great majority of cases, the exception being parthenogenesis. After the process of division of the nuclear elements into two, as in cell division instead of the cell proceeding to fission, the collection of rods nearer the surface is propelled beyond the margin of the cell circumference, that remaining within the cell wall forming the nucleus. These represent the first extended or polar bodies. The process is repeated again immediately afterwards, and the expelled elements remain

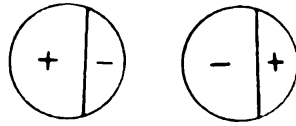
attached to the cell as the second polar bodies until they disappear by absorption.

What is the process most marked in all these cases? Surely polarity, the same pertaining in electricity, magnetism, chemistry, light and heat, and represents a universal law, as appropriate to the tiniest molecules as the largest magnet and from this to worlds.

We know that, according to the law of polarity, similarly charged bodies repel each other, dissimilar attract. We remember by the pithball electroscope, bodies oppositely charged, after attracting each other, have their condition so altered as to become equally electro-charged, and so repel each other. We see that in the cell before a change, prior to cell division, takes place in karyokinesis, the cell equilibrium of forces is disturbed and *pro-tempore* the cell is converted into a bipolar organism; a magnet in fact. Of course, it is always potentially a magnet, otherwise it would not exist as a cell, *i.e.*, it always potentially possesses the properties of duality, or bipolarity. During the period of quiescence the opposite poles become invested in one another as it were, or to put it clearer, both have mutually become invested in the nucleus until some disturbance, probably in the consciousness of the elements of the nucleus, the bipolar nature of the cell is brought into active manifestation; with the culminating distribution of the chromosomes, to the opposing centrosomes. In the process of extrusion of polar bodies the germ cell (in cases dependent on outside fertilisation) immediately after such a change becomes unipolar, or, at anyrate, with an excessive bias to the positive or negative, as the case may be; the polar bodies representing the other pole, now outside the cell. If at the time there is no oppositely charged element near, that ovum dies unimpregnated; if on the other hand, there is within the immediate environment a germ (or rather sperm) oppositely charged, the law of affinity causes a conjunction, and ultimate amphimixis in Weismann's phraseology.

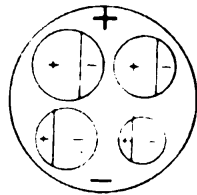
Where, of course, there is no *complete* extrusion of the polar bodies of elements (there is some *incomplete* expulsion),

the equilibrium in the cell polarity, whilst being sufficiently disturbed to stimulate activity, is not permanently disturbed and parthenogenesis is thus possible in this way. Philosophically and actually reproduction without fertilisation is possible, granted that influence can be supplied which will prevent the expulsion of polar bodies, as in parthenogenesis. Now, some deductions are possible here. All phenomena are based on their dual nature, or bipolarity. The hypothetical atom unites to atom by the law of polarity; no molecule would be possible without this same law working, but to be consistent, the primal elements must be so dependent that we must come to this conclusion, viz., all bodies are bipolar with a proclivity to the one side or the other. This must be, to be able to account for manifestations at all. Two bodies, A and B, are bipolar and analogically hermaphrodite, but in the one the positive element



predominates, in the other the negative. So we say that the one is electro-positive, the other electro-negative.

Suppose we take a collection of bodies which are attracted to one another with a cohesive power sufficient to constitute them an entity, the relation of these bodies to one another is on the basis of polarity, thus the opposite poles of these bodies would be in contingency, and the body composed of



these elements have a polarity made up of the composite polarity of their ingredients, but quite separate from them. The positive end of such a body would be decided by the excess of positive elements in that end and *vice versa*.

On this principle cohesion of matter is made possible, the stability of the solar and other systems and the existence of the earth itself. It is possible to imagine the existence of a force capable of so disturbing the polarity of the earth *en masse*, that the present appearance of things would be immediately dissipated, rocks would become fluidic, or gaseous, or merely light (or what is behind light). It were easy to explain the eruption of volcanoes in this way. In the cell world the relation of cell to cell and of cell combinations to form tissues are thus explained. Sex at once acquires reasonable solution. But we must always remember that all are primarily potential hermaphrodites. Sex predominance is not absolute, only a predominance of one element over the other, and so producing males and females.

Let us take an example in colour. Let us for experiment make two spiral glass tubes, so constructed that whilst they ran in different directions, intersected each other at regular intervals, in such a way that two coloured pigments poured separately into each tube contemporaneously, say red and blue, (and let these represent the masculine or + and feminine or — principles), that they mix with each other at the points of intersection, each would take some of the pigments from the other, until you would get a series of approximation to a neutral tint, but throughout the red would maintain its masculine or red predominance and the blue its feminine whilst after the first intersection each would contain representatives of both.

Having thus explained the principle of attraction we are in a position to proceed into its application in drug action. The first application is the working out of affinities. This is recognised as a general principle in chemistry, but there is a reticence to make a more general application. The terrible word "dead matter" seems to preclude the action of affinity as it denies to such matter any prerogative. Affinity does not only involve attraction, but selection. Charles Darwin devoted much time to the working of this law in the higher kingdoms; his grandfather Erasmus poetically described the same process in the plant world in his "Loves of the plants."

But we should be illogical if we failed to apply it to the humbler lives, the lives of molecules, and their most discreet selection of mates. A molecule of iron does not unite with one of iodine by chance, but by favour, and were we to apply our knowledge to drug action, much useful information might be gained. The interesting chlorine, iodine, and bromine group might well be studied in their feminine aspects, and their promiscuous affections for other substances in varying regard will throw much light on their uses as medicines. Since as a compound like potassium iodide on entering the body comes in contact with certain other substances, for which iodine or potassium has a greater affinity, they are divorced, in which change energy is liberated, to give to the cells involved that stimulus required for the reinstatement of a healthy metabolism or maybe the very death blow to specific disease. For instance, what is cancer but a disturbance in the even growth of tissue elements, a local depolarisation resulting in a disorganised control of cell growth? Anarchy of cell life. Supposing by the exhibition of an appropriate drug, that specific stimulus might be liberated by the dynamic influence of the cells themselves, which would restore the even growth of the tissues, and curb the one-sided development.

To be able to apply this principle in any practical way, it is not sufficient to study the various salts and drugs from their external appearance only. It is when we examine their internal anatomy and their pathogenesis that we are able to learn more.

Now there is one more or less sure guide as to the nature of a salt and, for that matter of plants, and that is their spectroscopic colours. When we can trace a substance down to its prevailing colour, we have something to go on. Babbitt, the American, has made a life-long study of colour, and has formulated many laws of how colour works. At first sight it would appear as fanciful that colour could be made a basis for deductions, but when we realise that minerals are practically crystallised colour, that vegetables are deposited colour, we can see how practical such a proposition is.

Babbitt states the law as follows:—"All substances under full chemical action tend to attract, or combine in harmonious union those elements whose colours form a chemical affinity with their own, or at least under a chemical action which is less complete, to unite their thermal principles with the electrical principles of substance in proximity to them or *vice versâ*."

Babbitt divides the spectrum into the *Thermal*, which includes the colours red, red-orange, orange, orange-yellow, yellow, yellow-green, and the *Electrical* end of the spectrum, comprising the blue-green, blue, blue-indigo, indigo, indigo-violet and violet.

The natural affinities of the various colours might be categorised as follows:—

Thermal (invisible or *trans* red) affinitises with
blue-green.

Red	...	...	affinitises with	Blue
Red-orange	...	..	..	Indigo-blue
Orange	...	..	..	Indigo
Yellow-orange	...	..	..	Violet-indigo
Yellow	...	..	..	Violet
Yellow-green	...	..	..	Dark-violet

Now these are the natural affinities, but any combination may take place as long as there is not identity of colour, as identical colours repel each other, or even similars. Thus, as Babbitt suggests, the outside colour of anything is so, not because that colour is the natural spectrum, but because it tends to repel or reflect the colour. So the spectral or internal nature of a substance may be just the opposite to its external appearance. Sulphur is yellow in colour, but its most powerful spectra are on the side of blue and indigo.

Hydrogen burns with a blue flame, but its spectrum bands are strongest in the red. Most substances are compound, and contain elements on the thermal and electrical side of the spectrum rather suggesting the complex side of elements as suggested by Prof. Crookes.

Now the atmosphere contains practically representatives of all the elements of the earth. What do we do by trituration but so disturb the dynamic condition of the molecules that they become more active? and in what way do they become active but by attracting those elements (not in the technical sense of the term, but general) which have the greatest affinity for the triturate, which elements would be not similar, but dissimilar? A red element would attract a blue, and so on.

Dr. Wilde showed us that the dynamic influence of trituration was to produce a cohesive union.

Now if this be true, I take it that this affinitising influence is ever present and active. Nature is ever permitting the attraction of affinities, and in due time separating again, so that all drugs, whether they be attenuated or dynamised or not, will constantly attract its affinity, colour, or influence, for I have used colour simply as a special example. On the lines of analogy the same principle is working in other departments.

When a drug is introduced into the body it has a specific action on the body, which we call the pathogenesis of the drug. That drug action may directly or allegorically be explained in terms of colour. It carries with it a certain element of its affinity, attracted in the course of, say its growth, if a vegetable; or some of Nature's dynamic influence, if a mineral. Triturate the same drug, and what have you done? You have brought to bear an influence which will so act on and stimulate the molecules that an enormous amount of its affinitive substance is attracted, and acquires cohesive relations with the drug, which, on entering the body will, by other dynamic influence brought to bear, liberate the stored-up energy of a *specific* character, specifically opposite to the drug used in all particulars, since every molecule or combination of molecules would form a mould, so to speak, for the dissimilar combinations of elements.

Nor must we stop here. For let us not forget the powerful dynamic influence of the stomach and intestines in giving the desirable stimulus to attract the necessary

affinities. In this way two great and important phenomena in therapeutics previously apparently inexplicable are explained: (1) The fact that drugs given on the principle of dissimilars at first seem to give relief, but afterwards leave the patient worse; for after the direct action of the drug passes, which tends to neutralise the condition, it has in its action attracted elements which would only tend to aggravate the condition, because they will be similar. (2) It also explains the primary and secondary symptoms of drugs which are so often contrasting.

It also explains the principle of antitoxins otherwise without a satisfactory philosophical solution. I have heard from a highly educated intelligent and reliable medical man, who has seen much service in various parts of the world, especially Africa, including many snake inhabited countries, that the best antidote to snake poison is to swallow some of the poison. Natives in some parts know this, and on being bitten, immediately suck the wound and swallow the poison, instead of spitting it out. The dynamic influence of the stomach, I presume, would be to attract the subtle antidote in the form of its natural affinity from the environing atmosphere. We should remember that atoms are not elephants, that the laws of attraction and repulsion are universal, that even thought transference is not to-day considered ridiculous, and that there are even people found, who do not scoff at the idea that thoughts are things. How easy then for subtle elements like atoms to travel long distances under the dominating influence of a powerful attraction. I do not wish to dogmatise on this point, but the difficulty is one that only occurs with the difficulty of appreciation of nature's finer forces, which, for the majority of mankind, are a complete mystery. The idea however, remains as a working hypothesis waiting to be displaced by a more plausible one, and I, for one, do not care how soon its doom is sounded.

According to this position, the rule of *similia similibus* remains untouched, as an infallible guide to the selection of the drug, but when anyone says, as I have heard it stated in this room, that it is a law of nature I must protest. As

a law of selection, I say yes! As a law of nature, no! since the underlying principle of drug action must remain *dissimilia dissimilibus curant*. This only explains a broad principle of drug action, but one study of this great Law of Unity tells us much more than this. It explains how closely we are knit up, first of all, with all the other people in the world, and, second, with all nature apparently outside the human kingdom, but this law demands that we recognise that there is nothing outside the human kingdom, nor is the human kingdom outside nature. So knit up are we with it, that there is a correspondence in man with every change that goes on about us; nay, further, I think that it is recognised that we are only able to appreciate any phenomena, in proportion as we have something in common with it. We speak of hearing a sound. Do we realise that that sound only exists in our sensorium? Previously vibrations pass through the air or the ether, and impinge on the ear and then produce effects which the mind translates into found: outside they were waves in the air, inside sound.

We interpret conditions outside by certain molecular changes in our senses which are interpreted into terms of consciousness. We are put *en rapport* with our environment by certain changes in our consciousness which are connected with those other changes we cognise.

We see this to a remarkable extent in our studies of drug action: the peculiar correspondence between the pathogenesis of drugs and the chain of symptoms produced independently of the drug, which are such a faithful picture of that drug action, to which it is related. We must often have been startled when hunting down the symptoms of a supposed appropriate remedy, to find how many of its pathogenic effects are represented in the patient we are anxious to relieve. It is no exaggeration to say that on a fine day in the country we can see before us in the common herbs of the field, the personification of many of our ailments. These are the objective forms, in fact, of many subjective conditions in ourselves. The relation of this part of nature to ourselves is remarkably proved enough. It is also a recognised fact that the evolution of man is a faithful

short epitome of the various kingdoms of nature ; even the mineral kingdom can be scarcely excluded, since the *bases* of all cell life, the ovum included, are the salts. If then, as man evolves he simulates forms which belong to the other kingdoms, he is so far related to those kingdoms, since although the body of man changes in form there are those forms potential, if it be only in idea, always persisting in the consciousness which keep up that peculiar sympathetic relation.

Shall we be going too far in saying that man is an epitome of nature, and that the world is practically a reflection of him. Surely in any case man leads nature on. But before we can see clear issues, we must realise man's composite nature. Man is not his body. His body is only a temporary, ever-changing *congeries* of lives held together controlled and energised by his higher consciousness.

But his personality is just that portion of his complex nature that is related to the lower kingdoms. In nature, when the conditions are unfavourable to the evolution of animals and plants, we say they degenerate, and we mean by that, that there is a reversion to type. When, therefore, from any circumstances, the environment of the tissues of the body is such as to be inconsistent with the proper evolution of those tissues, there is a reversion which we call disease, which reversion is related to that kingdom outside corresponding to the tissues involved, viz., the vegetable or mineral, which, in the form of drugs introduced into the body, properly dynamised, will reinstate the health of those tissues.

But since by the Law of Unity all phenomena are proportionally related, and that nature in its evolution shows a peculiar serial progression, there must be, if we could only categorise them, the same order and serial relation in diseased states. That whilst we cannot isolate diseases, and say this or that is quite separate from any other, yet we ought to be able to categorise them perfectly. We do certainly recognise certain families, such as zymotic diseases, constitutional diseases, &c. ; but there remains a big field of work for the physician on the one hand and the homœopathic

therapeutist on the other. Homœopathy has certainly categorised the drug symptoms; it has introduced law and order into the arrangement of these symptoms of drug pathogenesis, but it has yet to systematise the disease in relation to drugs that with skill and ease it may select the right remedy. When we realise practically the infinity of the vegetable kingdom alone, each plant having a pathogenesis of its own, it is practically impossible to carry in our minds even an epitome of the symptoms of these drugs. But could we categorise the disease conditions in such a way that we could relegate to one, say, of a *dozen families*, with their simple subdivisions, and, at the same time, classify the drugs in a similar simple way, there ought to be in this a simplification of treatment and drug selection.

This, surely, was the object of the ancient School of Medicine which systematised the temperaments and diseases associated with those temperaments. They had not the technical knowledge of diseases that we have to-day. But on the line of universal principles, having acquired the acme of differentiation, we must retrace the path reaching towards synthesis, carrying with us the knowledge gained in the process of differentiation. The object of this paper is not to lay down any detailed line of work, but simply to point the way. We have been so choked up with what we call scientific facts that we find ourselves in the position of having more stock than we can warehouse. The question comes now—What shall we do with this tremendous wealth of material? Shall we leave it to decay as lumber, or shall we, by a process of order, categorising, and relegation, so arrange this material that it will cease to be a nightmare leading to insanity, and to produce from the chaos a harmony that this age, an undeniable age of transition, shall grace the future with a wisdom and dignity, that we may in a true sense be the saviours of the coming race? Shall we in this be the progenitors of chaos or harmony? We have in our country reached a crisis in homœopathy; we are willing to go forward with the work; we are practically pledged at no short distance in the future to found a school for the study of medicine. If we are willing we may profit by the mistakes

of the past, even by the obstruction to our work in the past; recognise that the cyclic moment had not, but now, arrived, believing that a work started in this new century must be a better structure than one built in the last. May we not agree to build wisely, to be the real masons of medicine, having one of the golden keys to the mysteries of nature, putting aside bigotry, intolerance, fanaticism and ignorance, and, above all, declaring our Independence? This can be done by reinstating a philosophy of medicine, so that these meetings may be vital centres of strength and life; inspirations to further activity in the search for Truth and amelioration of human suffering and aids to human progress.

Dr. GOLDSBROUGH suggested that before they had another discourse on philosophy it might be well to come to some agreement upon such questions as "Relation and Quality," "Subject and Object," and the various other antitheses which appeared in every process of thinking. Dr. Beale had said many things which were very suggestive, but he was not so clear at the end of his paper in giving his own conceptions as he was at the beginning in giving the theories of others. If, in discussing the question of the selection of a remedy on the basis of the rule of similars, he had given them something like a rational and intelligible explanation of that rule of practice on the basis of his previous universal consciousness, they would then perhaps have had something to go upon in future. But so far as he (Dr. Goldsbrough) was able to follow the paper, that was just where it really failed. What they needed in the way of philosophy was a logical demonstration, that their rule of practice was based on a law of nature of sufficient generality, allied to the widest general laws which they were accustomed to recognise in physics. That could only be given as a law of life. He, the speaker, had tried to demonstrate that in life there was a uniform sequence, a maintenance of the equilibrium of the energy of life with the energy of the environment; that was to say, there was an inherent energy in life which maintained itself in each cell and in each organism, and when that equilibrium was disturbed by external influences, then the inherent energy righted it again. The reason why a drug which produced similar effects in the healthy would assist this inherent energy in a diseased organism in reinstating an equilibrium again was that given by Dr. Beale, viz., that each

drug had a selective affinity for each organ. The parts they had to study were the relationship of the selective affinity between the organ to the drug, to the rule of selection, and the laws on which they were based. It seemed to him that generalisations on these aspects were needed to make Dr. Beale's contribution to the biological part of his subject more complete.

Dr. CLARKE thought Dr. Beale had put together some very valuable ideas, and had supported them with most interesting observations of various scientists. As homœopaths they were always dealing with forces which were quite outside the reckoning of ordinary science. It was very natural that they should want to relate their ideas to ordinary common knowledge. It was a difficult thing to relate them in their own consciousness, and it was quite impossible to communicate them to persons who were not educated up to them. Further it was very difficult for homœopaths to separate themselves from the common or garden ideas of allopathy. Those ideas were always hampering them in the practice of homœopathy; and it was because they were unable to separate themselves from those ideas that they did not develop homœopathy as finely as they ought to do. Now, it was very natural that they should every now and then, as Dr. Beale had to-night, try to universalise their knowledge and bring it into line. But he was rather of Dr. Goldsbrough's opinion that the practical part of Dr. Beale's work was before him—that of translating the philosophy of homœopathy into a better ordered and more simplified practice. There was a very large scope for him and he hoped he would set to work and do it.

Mr. GERARD SMITH said that philosophical papers had their value, but the sooner they began to study the *rationale* of the actions of their medicines upon a purely scientific basis the better. He disagreed to some extent with what the reader of the paper had said. He did not care whether atoms had consciousness or not, he did not care whether they knew they were here or what they were doing, or whether matter was only one, or whether it were only here because we are here. We were here and our duty was to make use of the phenomena of matter. He thought the sooner we got rid of the "bogey" theory when speaking of drug dynamisation, and came down to the genuine molecular physics of the thing and, if possible, put all the phenomena we meet on a material basis the sooner we should make some advance. On looking at the excellent synopsis he thought possibly Dr. Beale would have made a different use of the matter he mentioned, and he was a little disappointed that he did not go into it in a more

practical way. Drugs must enter the blood stream, and to do so must be in an attenuated form. X-Ray discoveries and Crooks' discoveries were certainly a strong argument which could be used in advancing the cause of homœopathy. Having discovered that they must get matter to an attenuated state before it had the power of passing through solid substances, they were encouraged to go on and believe that the power of some of the drugs they used might be developed, the most when brought to a state of attenuation. The word analogy had been used, and certainly many of the analogies that were introduced might have been extended and made more use of, as supporting the theory of homœopathy. Analogies were useful when speaking to a number of people. For instance, if he said to an average unscientific person that he would rather take a needle to put his watch right than a poker he would be merely using a rough analogy. But when they got to the state of attenuation of the air in high vacuum tubes and the possibly atomised state of molecules outside the tube they were really dealing with more than analogies. This was an instance of law which they might be able to absolutely identify in the molecular movement of attenuated drugs in the system.

Dr. BURFORD, the President, said Dr. Beale had shown the character which they all knew he possessed, viz., that of having a special qualification for dealing with the philosophical side of homœopathy in its relation to other philosophical elements in the cosmos. His own feeling with regard to metaphysics was something like that of the Professor's who defined it as a blind man searching in a dark room for a black hat that wasn't there; but still, he felt there was a great deal to be done in the way of an accurate and common sense presentment of the philosophic element in homœopathy.

Dr. BEALE, in reply, said that if any justification were necessary for his paper, the object of it was not so much to point to any special new theory of homœopathic drug action—it had always been drummed into his head that there had been too many attempts on that score already—but rather to point to a universal principle on the lines of which much good and useful work could be done, and to show a practical result. He was, therefore, obliged to relate it in the way he did. Five or six papers might easily be devoted to every one of the points touched upon. He would make himself acquainted with Dr. Goldsbrough's contribution to the subject. Their President, Dr. Burford, had more than once reminded him, in relation to various subjects, that he was far too transcendental. He felt he must join issue

with Dr. Burford on that score. To condemn a thing because it was transcendental or metaphysical was entirely opposed to the spirit of the times. That things were metaphysical, that there were conditions which were outside what were generally considered physical, nobody would doubt. But that that meant supernatural he absolutely denied. Metaphysicians of any note deny there is anything supernatural. That metaphysics might be as true as physics he was prepared to support any day.

PAIN AS AN AID TO DIAGNOSIS AND TREATMENT.¹

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MUCH of the literature of the medicine of to-day belongs to the specially descriptive and pathological aspects of disease.

The prevalence to which specialism has attained, together with the great advances which have been made in the appliances and methods of investigation, have brought this to pass; but in its train there lurks a subtle danger, hardly to be recognised at first sight, yet very real and imminent. The danger lies in confounding the ultimates or issues of disease with the disease itself; or to put it in another way, in the use of the pathological terms descriptive of the disease as though they comprised the alpha and the omega, the beginning and the ending of the whole vital proceeding. As Clifford Allbutt pointed out some time ago, there is no such thing as enteric fever or diphtheria—these are not things, but abstract conceptions—the realities being large numbers of individual patients, no two of whom are alike, and many of whom are very unlike.

Amongst the things which have suffered neglect through the whole-hearted devotion to the microscope, the test tube, *et hoc genus omne*, are the rank and file of subjective symptoms. These as occurring especially to each individual,

¹ Presented to the Liverpool Branch, May 8, 1902.

bear the hall-mark of the person as such, rather than of the disease, and ought to be entertained and welcomed as a contribution "to the rise of the patient and fall of the disease."

In this paper it is proposed to consider the subject of pain, its value as an aid in diagnosis, and its significance from a therapeutic standpoint.

Whilst current literature on this topic, is, with the exception of a few articles by Head of London, and Mackenzie of Burnley, very scanty, we cannot omit mention of that classical work of Hilton's on "Rest and Pain." We shall have occasion later on to quote from that work, so well does it voice certain of our ideas regarding the beneficent uses of pain.

The difficulty which meets us at the very outset is the great unreliability of pain. It is largely, if not in all cases entirely, subjective, and, therefore, allows of no standard by which it can be measured by on-lookers. It occurs so frequently; it finds expression in so many different and almost contrary terms; lastly, it can so readily be simulated, as malingerers know; these and many other considerations which might be put forward, clearly show how impossible a task it would be to classify pain, or to fix a hard and fast, or even a sliding scale of values to the various manifestations of pain met with.

Each case has to be investigated on its own merits, and the points which require to be adjudicated upon, are roughly speaking, three—(1) the veracity; (2) the temperament; and (3) the intellectual endowment of the patient. The influences which these three factors, which we may conjointly term the personal equation of the patient, have upon the pain complained of, scarcely needs illustration. We are accustomed almost intuitively to classify our patients as neurotic, phlegmatic, or melancholic as the case may be, and to qualify their account of themselves accordingly; and it is right here, as the Americans would say, that we so often go astray.

I shall not readily forget a patient who once passed through my hands, when I was acting as clinical clerk in

the Medical Outpatient Department of the Royal Infirmary, Edinburgh. The patient, a young man, practically just a well-grown lad of 19, complained vaguely of illness, and though we could find no physical cause to account for his feelings, the general look of the patient supported his statement, and we drafted him on into the ward of one of the most famous of Edinburgh physicians, since deceased.

The next time I saw that patient was in the clinical medicine theatre, when, before some 300 students, his *case* was expatiated upon as a typical instance of hysteria in the male, or hypochondriasis, as it is more commonly termed. Within three weeks I assisted at the autopsy on that patient, and we found, high up in the rectum, the cancerous mass which had caused the patient his sufferings, and had in the end killed him.

I doubt very much whether we could not all of us furnish from our own practices similar, if not so aggravated, examples of hasty judgment arrived at, to the detriment of our patient and the subsequent disparagement of our own professional skill and abilities.

But though *pain* possesses in a very marked degree this element of unreliability which is common to all subjective symptoms, yet there are to be met with occasionally objective symptoms forming very clear corroborative evidence of the existence of pain. Of these control-symptoms, if I may so term them, mention may be made of two: (1) The expression of face of the patient, (2) the position adopted and reflex movements made under the influence of pain.

The case whose history I have just cited was one in which due consideration was not given to the expression of suffering which the patient's face portrayed. It bore the indefinable, anxious look which is associated with malignant disease, and although one cannot diagnose the presence of malignant or other disease through expression alone, it should at least help to put us on the right track. Eustace Smith it was who said, speaking of pain in children, that pain in the head is indicated by contraction of the brows, pain in the chest, by sharpness of the nostrils, and pain in the belly by a drawing of the upper lip.

But the position and attitude which the patient adopts may also act as control-symptoms. When asked to see a child complaining of pain in the knee, and also of lameness, the first thing we look to is the position of the limb, which in many cases indicates the presence of hip-joint disease. Again, in abdominal disease associated with peritonitis, it is scarcely needful in some cases to ask questions; the anxious look, the flexed thighs, and the immobile abdomen, which the patient almost shrinks from your inspection of, speak eloquently both of the nature of the disease and the character of pain experienced; of angina pectoris, and of the passage of biliary and urinary calculi, the accompaniments in the way of bodily contortions and mental suffering are too well known to need recital.

In considering the value of pain as an aid to diagnosis, there are a few general propositions regarding its psychology which have to be made. The points about which modern psychologists are not agreed are three: (1) The existence of pain spots analogous to tactile bodies and temperature spots; (2) the existence of separate pain-conducting tracts in the cord; (3) the existence of a specific pain centre in the brain.

The first point does not concern us here. But with regard to the second, Professor James remarks that in certain cases of analgesia the sense of touch is retained, whilst that for pain is lost, which strongly supports the view that there are special pain-conducting tracts.

The difficulties to be overcome before establishing the hypothesis of a specific pain centre are very great. Pain can be produced through over-stimulation of any of the special senses, possibly indeed, by currents of overflow from the sensory centres reaching such a specific pain centre. But the difficulty which to our way of thinking demolishes the hypothesis is that a specific pain centre, supposing such to exist, would give a uniform response to stimulation, proportionate to the stimulus supplied. But pain has to be reckoned not only as regards its degree of intensity but according to its character, and we cannot see how one specific centre can give rise to the infinite variety of pains met with according to the site of the lesion.

This brings us to consideration of some clinical points regarding pain, which may help in elucidating the *fons et origo* of the affection. The first of these is the character of the pain complained of.

The dull gnawing tearing pain of bone affections, the sharp burning and stinging pain of neuralgia and other nerve affections, *e.g.*, locomotor ataxia, and the bruised aching of muscle and aponeurosis are well-known instances of the varying character which pain assumes in different structures.

Then another point I wish to emphasise is the *mode of onset* of the *pain*. Speaking in a broad sense, we think it may be said that sudden attacks of pain point to the involvement of one or other of *two* structures either (1) of nerves as in the case of neuralgia, or (2) of hollow viscera, with whose contraction the morbid process has in some way interfered. The frequency with which the pain in abdominal diseases manifests itself suddenly shows how readily irregular muscular contractions are capable of inducing sudden and acute pains. We cannot leave this part of our subject without pointing out the periodicity which often characterises pain. This is met with typically in some forms of neuralgia. The nocturnal aggravation which almost all diseases show, seems to be another example of periodicity, and although there are general physiological considerations which may account for this, its results are none the less painful, as sufferers from tertiary syphilitic bone pains well know.

The re-actions which various pains give to their environment are points not so much of clinical as of therapeutic import. The re-actions I refer to are what we homœopaths are wont to call, the conditions of amelioration and of aggravation.

The effect of (1) Heat and cold. (2) Rest and motion. (3) Heavy and light pressure and (4) the Re-action to atmospheric influences, *e.g.*, damp, cold, thunder; all these are points which are well brought out in provings and with them as guides we are enabled to value at their true worth, those same features and re-actions when manifested in the course of natural diseases.

It is worthy of note in passing that Musser in his book

on "Medical Diagnosis" enters at some length into the consideration of these reactions of pain, but without giving a hint of their value therapeutically.

In dealing now with the diagnostic value of pain, I must beg leave to confine our attention to that class of diseases in which pain is felt remote from the actual site of the disease and unconnected with it, except by way of nerve continuity.

This opens up the whole vista of reflex or, as Dana prefers to call them, reflected pains, and it is also meant to include those pains which have lately been brought before the notice of the profession by Dr. Henry Head in various papers dealing with the cutaneous symptoms of visceral disease.

The following quotation taken from Dana's work shows how very frequently reflex pains occur in visceral disease.

"Irritations from the stomach cause reflexly a larger variety of pains. We all know that the simple ingestion of a glass of ice water will cause a sharp frontal or temporal pain."¹ Lauder Brunton finds that constipation and presumable intestinal irritation cause a diffuse frontal headache over the whole brow. When there is no constipation and the condition is one of gastric irritation, the pain is either just above the eyes, or more rarely in the occiput (when it will be relieved by acids), or just at the roots of the hairs (when it will be relieved by alkalies).

The scapulæ and shoulder pains in dyspepsia and the pains felt between the scapulæ due to the involvement of the posterior branches of the second to the sixth intercostal nerves are common phenomena familiar to all.

The milder irritations produced by undigested food, excess of acid, seem to be reflected most often upon the upper intercostal nerve or the cardiac nerves, vagal or sympathetic.

The stomach and intestines are probably the most frequent cause of transferred pains; after this I would place the uterus and its appendages, and next the eye or heart.

Pains started up by the gall bladder are felt in the right

¹ This quotation is extracted from "Functional Nervous Disorders in Women." McGillicuddy (Baillière, Tindall & Cox).

side of the thorax and right arm, whilst it is one of the aphorisms of medicine that disorders of the liver may cause pain in the right shoulder.

In abscess of the spleen, there is a pain felt in the left shoulder.

In kidney disease, neuralgic pains may be felt in the lumbar region, radiating forward to the lower abdomen and genitals.

Lange says that in uterine troubles the reflex pains occur oftenest in the form of arthralgia . . . Studies of the cause of reflex pains in the feet show that they may be referred in almost all cases to irritation of the genito-urinary tract (*e.g.* gonorrhœal rheumatism). . . . It has been stated that pain in the heel may be caused by ovarian abscess (I can remember a case which was brought before the Royal Medical Society of Edinburgh, in which pain in the heel was the symptom which led to a vaginal examination being made, revealing the presence of cancer of the cervix).

Lesions in the lung itself cause reflex pains in the form of intercostal neuralgia. Slight pulmonary congestions such as occur at the very onset of phthisis may cause intercostal neuralgia and Anstie speaks of the value of these pains as "warnings of the approach of phthisical disease."

Such are a few of the clinical instances culled from allopathic literature in which the value of pain as an aid to diagnosis is now universally recognised. An anatomico-physiological relationship—sufficient to satisfy the most sceptical—has been shown to subsist in them all, and renders the claim which we desire to make on behalf of this most fickle of all subjective symptoms to a place of interest and of importance in the study of disease processes, unimpeachable.

Dr. Henry Head, of the London Hospital, has contributed an article to the last edition of Quain's Dictionary of Medicine, upon "Pain in Visceral Diseases." The basis upon which he has worked out the interdependence of cutaneous pain with visceral disease is a purely clinical one and the method adopted is that of mapping out the various areas of hyperæsthesia met with in association with visceral disease.

In the article in question he gives a tabular list of organs and the areas of skin—in terms of their nerve distribution—found to be in organic association and sympathy with each other.

This experimental test, it is interesting to note, gives a very similar result to that of Dana, whose scheme is founded upon a knowledge of the intercommunications which anatomists have shown to exist between the sympathetic nervous system, supplying the viscera, and the cerebro-spinal system, supplying the skin.

Head's theory explanatory of these associated cutaneous phenomena is a very ingenious one. He says, "When impulses pass up sensory sympathetic nerves from an organ which is diseased, they set up a disturbance in the segment to which they are conducted. Now any secondary impulse from another part, *e.g.*, from the surface of the body which passes into this same segment, will be profoundly altered. For it no longer falls into a normal quiescent segment of the nervous system, but into one whose activity is already disturbed. The resultant stimulus conducted upwards to the brain, therefore, differs from that which would have passed onwards from that segment under normal circumstances. The second stimulus will appear to be exaggerated, or may, perhaps, undergo some actual increase in its passage through the excited segment. Thus, any otherwise painless stimulation applied to the surface of the body, falling within the area supplied by fibres which enter the disturbed segment, will appear to be painful, and the skin will be said to be tender. The fact that these areas correspond so closely in extent with those occupied by herpes zoster renders it probable that they belong to the same level of the nervous system, and that the cause of the tenderness is to be sought in that portion of the nervous system, which, when injured, produces herpes zoster. This has now been shown to be the ganglion of the posterior nerve root. It is therefore probable that impulses passing from an affected internal organ up the white ramus of the sympathetic system produces an alteration in some of the cells of the posterior root ganglion. These cells form the trophic

stations for the sensory fibres from the skin. Thus painful stimuli from an internal organ produce such a disturbance in the ganglion that every stimulus from the peripheral distribution of the fibres entering that ganglion appears to be painful."

Having thus, as we believe, shown incontrovertible evidence of the value of pain in the diagnosis of disease, we now proceed with the consideration of the second part of our subject, viz., the value of pain as a guide to treatment. We must however, in order to prevent misunderstanding, and to disarm criticism, preface these remarks by anew asserting our belief in one of the cardinal tenets of homœopathy that the totality of the symptoms constitute the disease, and the similimum the proper treatment. But that belief need not debar us from investigating the therapeutic indication which pain may afford, more especially as such an investigation will allow us an opportunity of stating some of our opinions regarding the validity of provings, some of which seem of late to have fallen somewhat into disrepute.

That each drug has its own special sphere of action and specific mode of action within that sphere, has come to be recognised by even our old school brethren. According to Sharp "Essays on Medicine," No. 7, it was Haller, an eminent Swiss physiologist who, about the middle of the eighteenth century, first laid down that "the remedy is to be tried on the healthy body; a very small dose is to be taken and attention is to be directed to every effect produced by it. Having obtained these obvious phenomena *in health*, you may then pass on to experiment on the *body in a state of disease*."

Such was Haller's dictum; what the fruits of it in his hands were is not recorded. But we know that for more than thirty years, Hahnemann, conscious of the truth of the law, *similia similibus curantur*, devoted himself with untiring zeal to the work of proving medicines, and in this way the homœopathic materia medica came into being. In this connection, it is well to bear in mind that different constitutions and temperaments show just as marked divergence in their reactions to drugs as they do to natural diseases.

One prover may bring out the symptoms of the mind very prominently; with another the gastro-intestinal symptoms rank highest; whilst with others symptoms of the nervous, genito-urinary, or other systems may predominate. We believe that no one individual can possibly give in his proving a full picture of the potentialities of a given drug. In order to arrive at the genius of a drug, the experiment must be made with many provers, of varied characters and constitutions.

The symptoms recorded by the various provers collected together, just as though one man only had proved the medicine, can alone give the full image of the medicinal disease. This necessitated the adoption of a definite, and to some minds an apparently arbitrary subdivision of the symptoms of the provers, in order that symptoms produced in the same spheres—of mind or of heart—would come together and complement each other.

Of course, this has led to much diversity of symptomatology, and is, we think, largely accountable for much of the destructive criticism which is nowadays levelled at many of the older provings. It has been suggested, we believe, that pathogenetic symptoms to be of any value must be produced in all or in a majority of the provers of a drug. We understand that some provings have been re-modelled upon this basis, all the symptoms recorded by only one or two provers being expunged. To purge the roll in this way in order to get down to a bed-rock (so to speak) of common symptoms and reactions, is to us equivalent to sacrificing our birthright for a mess of pottage. By so doing we might possibly gain the adherence of a few more men, but at the cost of our most precious heritage, viz., the faculty of individualising both as regards drugs and patients.

These rather discursive remarks apply to all the pathogenetic records of provings, and to none more so than those of pain.

The following short extract from Hilton's "Rest and Pain" is of great interest:—"Sympathetic pains on the surface of the body connected with derangements of the internal viscera are of great and pressing interest to us. I

conceive that pains situated upon the surface of the body and associated with some abnormal state of an internal viscus, must be looked upon as a beneficent provision, enabling us by external pain to receive the information and to appreciate slight organic changes or derangement of functions of the internal viscera."

That these remarks hold true of pain in natural disease has been shown by the evidence which later-day physiologists and clinicians have brought forward. They are equally true, we venture to think, of pain as supplied in the records of our provings. In both classes the pain evidences the reaction of the system to the morbid agent at work in the body, and as in the first class the pain acts as an intelligible guide to the site of the disease, so in the second class it acts likewise in regard to treatment.

I have collected a few examples of remedies whose pathogenesis contains, as a prominent symptom, pain in connection with various organs. I give the symptoms as recorded by the provers, and may here remark that in the light of the anatomico-physiological data already referred to, as well as from the result of their exhibition in diseased states, they warrant our acceptance.

Actæa Racemosa.—Pains from the region of the heart all over chest and down left arm.

Agaricus.—Burning, shooting pains in region of heart extending to left shoulder.

Alumen.—Pressive hot pain on vertex of head (modality, relieved by pressure). I had a case a short time ago in which this symptom was most pronounced. The patient, a very anæmic woman—the vertex is the typical site of anæmic headaches—complained of this hot, burning pain, and she also had very bad alopecia. I tried phos., as she had lately gone through a period of rather anxious nursing, without result. On closer investigation I got the above symptom of modality, and gave alumen, with great benefit to the anæmia, complete relief to the headaches, and rapid recovery of the growth of the hair.

Cactus grand.—Pain in the apex of the heart, shooting down left arm to ends of fingers.

Cannabis sativa.—Drawing pains from region of kidneys to inguinal glands, with anxious, nauseous sensations in pit of stomach.

Chelidonium.—Constant pain under the inferior angle of right scapula.

Helonias.—Pain in lower part of back through to uterus.

Kreasote.—Pain in small of back and in sacral region, urging to urinate and ineffectual desire for stool.

Lycopus.—Rheumatoid pains in præcordial region and at apex of heart, followed by pains in left wrist.

Kalmia.—Shooting pains above heart through to scapula.

Sepia.—One of our most important uterine remedies, contains the following symptoms: "Pulsating headache in cerebellum," which is just the site associated with headache of uterine disorder (Dana).

Many more examples might be cited, but as I do not wish to appear to advocate this as a method of arriving at a correct prescription, I will refrain. They are adduced merely as instances in which the structural interdependence of pain with visceral disease, now known to exist, was foreshadowed; and that which has been proved to be true of pain, one of the chiefest of subjective symptoms, ought to establish us in the faith, and enable and encourage us to deal more confidently with those other symptoms whose exact pathological relationships are not yet revealed.

A SUCCESSFUL CASE OF RESECTION OF THE COLON.¹

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MR. PRESIDENT AND GENTLEMEN,—I have lately had under my care a case of great interest to me, and it has been suggested that a short history of the symptoms and

¹ Presented to the Section of Surgery and Gynæcology, June 5, 1902.

progress might prove of general interest, I therefore venture to bring it before you.

I first attended Mrs. B. in 1900. She consulted me in the hope of obtaining relief from what she called "her frequent bilious headaches." In October of that year she was suffering from a somewhat severe attack, and on reaching her house I found she had been in bed for twenty-four hours. The following notes I fortunately made at the time:—A somewhat small woman, aged 52, decidedly thin; but this is her normal condition, and there is no evidence of recent wasting. Complains of headache and nausea, sometimes relieved by forced vomiting; pain in back and in the region of the liver; and constipation, sometimes followed by shining yellow stools.

On examination I found the *heart* normal, except for a reduplicated first sound at the apex. The *lungs* normal. The *abdominal wall* thin and flexile, flat or inclined to be sunken, allowing easy palpation of the contained viscera. The *skin* somewhat dry and inclined to be yellow, but I was told that at times it was markedly so. The *liver* dulness extended from the sixth rib to $1\frac{1}{2}$ inches below the costal border. The *kidneys* could be felt to slip between the fingers, and were slightly moveable downwards. A sausage-shaped mass could be made out in the region of the colon, apparently due to accumulated *fæces*. The patient told me that since the birth of her last child she had suffered from a recto-vaginal fistula; but on examination this was found to be non-existent. I was also informed that the uterus was supposed to be enlarged and to contain fibroids, but as there were no symptoms pointing to this condition, I did not think it necessary to investigate. The climacteric had occurred two years previously, being brought on by the shock of her husband's death.

Her habits of life were very simple, and she had studied her diet for years. I found little to alter on this point, but suggested that fruit should be taken daily, and prescribed iris versicolor ϕ every three hours, with hydrastis canadensis ϕ night and morning.

I saw her again in a day or two, and on this occasion I

was inclined to think the gall bladder enlarged, and I altered the prescription to berberis ϕ every two hours, with two five-grain tabloids of mercurius dulcis 1x to be taken on alternate nights. There were never at any time symptoms pointing to biliary colic.

I should like to put in here that, in my opinion, enlargement of the gall bladder, or even the presence of stone therein, is not by any means invariably easy to diagnose, and I am sometimes sceptical when I hear this condition confidently diagnosed and wonderful recoveries reported. How often do we see on the *post-mortem* table large stones and distended gall bladders that were never suspected during life by able physicians, and on the other hand how frequently we hear of operations being undertaken for the relief of this condition, and when the maligned cyst is laid open to our eyes, it is found to be perfectly harmless, and even particularly normal.

I visited Mrs. B. two or three times, and on November 24 she expressed herself as feeling wonderfully better. The bowels had acted, and were still acting well; the tongue was clean and the skin clear. The abdomen was soft, but containing some flatus, the liver rather smaller, and the sausage-shaped mass *quite disappeared*. She had had no headache or nausea since the treatment was commenced.

The patient was so much better, that she announced her intention of taking a trip to Ceylon, accompanied by two of her daughters, and shortly afterwards she left England for the tea gardens.

I heard nothing more of her for six months, till on May 20, 1901, I was surprised to hear that the lady was in my consulting room. I thought she had merely come to tell me of her safe return, but I soon saw that something very serious was the matter. The patient looked anxious and ill, she was in a nervous excited state, and exhibited a curious metallic bronzing of the skin. She complained of pain in the right side, weakness and fever. *On examination*, I found her thin as usual, but not much more so than before, the skin of the body was yellow-brown, but not so bronzed as the face; the thoracic

organs were unaltered, but on fully exposing the abdomen, a well-defined tumour about the size of a small orange was clearly visible on the right side at the level of the umbilicus; on palpation it was found to be extremely hard, unconnected with the skin, apparently extending deeply but quite mobile. It could be separated from both liver and uterus. The left kidney was felt in its usual position, but that on the right I could not distinguish. There had been no trouble with the bladder, the bowels had acted daily with occasional help, and there had been no hæmorrhage per rectum. The temperature was 100°, but had been 103° two days previously. It had not been my lot to come across a hard tumour in this position before, and though I came to the conclusion, in spite of some contra-indications, that it was a malignant growth, its exact locality puzzled me, and the possibility of Addison's Disease crossed my mind. I now sent her to one of our consulting physicians. He rightly ascribed the intense bronzing to the action of the sun in Ceylon, and diagnosed probable malignant disease of the head of the pancreas, or of the bowel in the vicinity. He advised careful watching, and further examination, with a course of arsenicum 3x and hydrastis ϕ . I watched the case carefully for three weeks, during which time some slight improvement was noted. The temperature was generally normal, but occasionally rose to 100°, the tumour was less noticeable to the eye, but felt much the same to the touch, and was painful on pressure, the bowels acted daily and the patient took light nourishing food. This slight improvement did not, however, warrant further temporising, and, on May 19, the opinion of Mr. Knox Shaw was sought with a view to operation. After careful examination, he pronounced the trouble to be a malignant growth of the caecum, with probably deep ramifications and secondary deposits in the liver, and was doubtful about operating. On July 10, the patient desired to see Sir Frederick Treves, so I sent him an account of the case, and he wrote in reply that he also believed it to be malignant disease of the caecum, but doubted the liver complication, and advised operation. I had, of course, gone fully into the family history, but no case

of cancer could be remembered; now, however, the patient thought an uncle had had something of the sort.

Operation by Mr. Knox Shaw was decided upon, I was to assist him, and Dr. Roberson Day was called in to administer the anæsthetic. On July 15, the patient moved into a Nursing Home, and two days later the operation was performed on the hottest day of that hot summer. As Mr. Knox Shaw will give you a report of the operation, I need only say that we found the growth encircling the ascending colon, that we were able to separate it entirely from surrounding structures, finally resected practically the whole of the ascending colon, and reunited the separated bowel end to end. The operation was long and difficult, but the patient stood it well, and the anæsthetic in the able hands of Dr. Day, gave no trouble. A very interesting point was the condition of the gall bladder. This contained several stones, which it would have been easy to remove had the condition of the patient permitted us to do more, but I think we were wise to leave this to be dealt with on some future occasion should the symptoms warrant interference.

The patient rallied fairly well in spite of the intense heat, which we reduced as far as possible with large blocks of ice and electric fans, but a state of insomnia supervened leading to great lassitude and loss of desire to live, which gave us some anxiety for a time. A somewhat serious scolding roused her, however, and thenceforth all went well, though I fear I have not been fully forgiven for my apparent heartlessness. The patient was able to leave the Home on August 22, and by the beginning of October was back from the country looking very well and able to get about. She had picked up the flesh lost after the operation and complained of little except occasional pain in the liver region probably due to the gall stones. From that time I saw nothing more of the patient though I heard she was doing well. In order, however, to complete this paper I called on Mrs. B., two days ago—just eleven months after the operation—and found her looking very bright and well, and a good deal fatter than I had ever seen her before. She

told me that she sleeps well, and rises at ten, does her shopping and looks after her house, frequently goes off to the country, and when there, can walk three miles easily. She has had no pain at all in the bowels and only two headaches since the operation ; but occasionally, perhaps once a month, gets slight liver symptoms such as spots before the eyes, and then takes a dose of merc. dulcis. which speedily sets her right. Before leaving the Home she had pains which were attributed to the gall stones and was put on a course of salad oil, which she continued till February last, but had no recurrence of the pain till about three weeks ago when it was relieved by the same means. She now has a very good appetite, enjoys a clean tongue and never suffers from nausea. The bowels act daily and there is no constipation, but sometimes a little flatulence. *Examination.*—Abdominal paristes much better covered than I have ever seen them before. *Liver* still felt below the margin of the ribs but the gall bladder not distinguished. *Cicatrix* looks very healthy feels soft with slight puckering at the suture holes. Below the site of the incision and in the line of the ascending colon, can be felt a softish mass somewhat spherical in shape, about three inches in diameter, evidently the united bowel with the layers of omentum that we wrapped about it. It seems perfectly healthy and not in any way fixed or painful on pressure. The *heart* still shows the reduplicated first sound. The lady is now contemplating a little trip to Canada !

This, gentlemen, completes my history of the case, but before asking Mr. Knox Shaw to give you an account of the operation I should like to recapitulate one or two of the points of interest.

First, as regards the rapid growth of the tumour, I believe it only took five months to arrive at these serious proportions. It is true that on my first visit to the patient I noted the presence of a sausage-shaped mass, but this I have often seen before in other cases of chronic constipation, and as it was entirely removed by appropriate treatment, and nothing was afterwards noticed in the abdomen, I believe that the growth only began during the

lady's absence in Ceylon. She went away bright and well, and came back a wretched wreck.

I have referred before to the difficulty in detecting the presence of gall stones, and I think this case emphasises the fact; but it is interesting to note that, although we left the liver severely alone at the operation, there has since been practically no return of the sick headaches and other liver symptoms which had previously been for years the bane of her life. May we take it that this improvement is due merely to the opening of the abdomen, an unexpected result so often noted in other abdominal complaints?

Another point of interest was, that although the lumen of the bowel was so narrowed by the growth that it would not even allow the passage of the little finger, yet there had never been actual obstruction: the bowels had acted daily, of course with help, and there was practically no accumulation above the stricture. Neither had there been at any time blood passed from the anus.

The most interesting point of all is, of course, the complete recovery of the patient from this severe operation, so ably designed and skilfully carried out by Mr. Knox Shaw, and the fact of our being thus privileged to snatch a human life from a certain grave, gives to us medical men a thrill of pleasure and a delight in our profession such as can hardly be experienced in any other walk in life.

REMARKS ON A SUCCESSFUL CASE OF RESECTION OF THE COLON.

BY C. KNOX SHAW, M.R.C.S.ENG.

Surgeon to the London Homœopathic Hospital.

I FIRST saw Mrs. B. in June, 1901. Her previous history has been related by Dr. Spencer Cox, so I need not refer to that, nor to the symptoms giving rise to the consultation; but I may record my impression of her condition

then. Looking at her, one would not have expected to find that she had a serious organic disease. But on examining the abdomen there was readily found in the right iliac region, midway between the umbilicus and the anterior superior spine, a freely moveable, hard, irregular tumour, which was somewhat tender on pressure. The abdominal wall was lax, allowing an easy palpation of the abdominal cavity. The right kidney could be felt in position, the liver was slightly enlarged, and towards its centre there was a hard, nodular, tender mass. The local and general symptoms led me to a diagnosis of an intestinal growth, probably of the caecum, with apparently a secondary affection of the liver. Under these circumstances I could not give a favourable prognosis, nor even press an exploratory operation, though that alone could settle positively the diagnosis.

Three weeks later operation was undertaken, Dr. Day anæsthetising, and Dr. Cox assisting me. An oblique incision was made in the right iliac region as for appendectomy. A large growth was at once found in the ascending colon, the mass being freely moveable, and without abnormal adhesions. Further exploration showed the liver to be enlarged, but smooth. The nodular mass felt at the first examination proved to be the gall-bladder packed with gall-stones. This was a most interesting association of diseases, but one adding considerably to the difficulty of the diagnosis; the most probable connection between the bowel and the liver being one of primary and secondary disease. The methods of resecting the intestine are numerous, varying a great deal with the part of the bowel to be dealt with; but the main difference consists in the use of simple suturing, or various bobbins, buttons, or plates as aids in the performance of the enterorrhaphy. Each surgeon has his preference, and whenever it is possible I personally prefer simple suturing. I had, therefore, already threaded and lying in a long tray, twelve intestinal needles. The growth was brought outside the wound, and the field of operation shut off by sterile gauze pads. Fully four inches of the intestine were involved in the growth. Four of Lane's clamps were applied, two above and two below the growth. The colon was now

resected with scissors a good inch beyond the furthest limits of the growth. At this point two small glands were removed from the mesentery. The divided ends of the colon were approximated and united, end to end, by means of a continuous internal suture, and an external Halsted's quilt suture. Some omentum, being readily available, was utilised to strengthen the line of suturing. The operation was completed in under two hours on one of the very hottest days of last summer. About seven inches altogether of the ascending colon were resected, a good area of healthy bowel being removed with the tumour. The mounted specimen shows that the new growth had circularly invaded the colon, involving primarily the muscular coat, but had also involved the mucous membrane, which was thickened and papilliform. The calibre of the intestine was considerably narrowed, not even admitting the passage of the little finger. It is surprising that no symptoms of obstruction had presented themselves. The microscope shows the growth to be a typical columnar-celled carcinoma of the colon, extensively invading the muscular coats of the bowel.

The operation was performed at 3 p.m. on July 17. She suffered very little from shock, but was much distressed by the great heat. At 10.30 a.m. on the 20th, the patient had a most offensive fluid stool after a warm enema, and another, but more normal action on the 21st. She slept badly, had a quick pulse, with a temperature varying from 99° to 100°; she was a difficult patient to manage. There was another offensive action of the bowels on the 23rd, after three ten grain doses of merc. dulcis 1x. On the evening of the 25th, the temperature ran up to 101° for the first time. Next morning pus was found exuding from a stitch hole, a fæcal abscess was then opened with sinus forceps, and drained. This looked as if there had been some slight leakage at the line of suturing, but that it was fortunately shut off from the general peritoneal cavity. From this she slowly convalesced, and left the Nursing Home on August 22. She walked into my consulting room in the middle of October last, looking wonderfully well, and saying that she was feeling very well, in fact better than she had

been for a very long time. She was having no trouble with her bowels.

I have had an opportunity of seeing the patient this morning, just eleven months since the operation. She is stout and well, feeling better than she has done for some years; she has quite lost a distressing headache, which she used to have every six weeks. She is careful in her diet, and though her liver and gall bladder can be distinctly felt, they do not appear to be causing her any discomfort. She has an excellent scar and no hernia. Beneath the scar there is some induration, but this has the appearance of being due to some adhesions. She has a daily normal action of the bowels.

We have delayed the publication of this case in order that the ultimate effect of the operation might be thoroughly observed. These cases are more commonly undertaken now than formerly, but are still of sufficient rarity to make them worthy of record. As far as we know, this is the first successful case of resection brought before this Society. In July 1899, I resected the ileo-caecal coil in a very unhealthy man, aged 43 (a chronic alcoholic) which unfortunately terminated fatally five days after the operation. A favourable point in the case under discussion, was, that the diagnosis was made before any signs of obstruction had set in. It can be readily understood that the earlier the operation can be undertaken, the better the prospects of both immediate and permanent success. The operation must always be a severe one, and to wait until advanced cachexia has supervened adds immensely to its immediate gravity. Until the abdomen is opened, it is impossible to decide as to the practicability of the removal of the tumour: adhesions, glandular involvement, or other complications may make resection inadvisable; but relief can still be given to the patient by means of a lateral anastomosis or short circuiting of the intestine, leaving colotomy for those cases seen at the stage of threatening obstruction, or where the growth has formed below the sigmoid flexure.

Dr. ROBERSON DAY commented upon the connection there evidently was between the growth in the abdomen and the headaches. Medical observers were frequently confronted with analogous cases, where some lesion at a distance produced pain. The pelvic reflexes were well-known to produce headache. He had in his mind the case of a gentleman, an exceedingly intelligent man, who for many years had been a sufferer from what were considered various gastric crises, unaccountable pains which were put down to some erring condition of the gastric track; in addition he would at times have sciatic pains which were intensely severe, necessitating rest; he consulted many physicians and surgeons, and finally one surgeon fixed upon the vermiform appendix as the erring member, and although there had been very little evidence as to its being the source of the trouble, prevailed upon him to have it removed. The operation relieved him there and then of all his terrible sufferings. He thought, therefore, that the case under consideration was no doubt one of those where the growth involved that great mass of nervous tissue, the solar plexus, the headaches being brought about reflexly. It was known that patients of the neurotic type were easily affected by causes which would not affect people of more stable nervous constitution. A good deal had been written on the subject of the congestion of the pancreas and the many symptoms it brought about; and after drainage of the gall bladder and the lessening of the congestion of the pancreas these symptoms in the same way disappeared. He congratulated his colleagues on the result of the case.

Dr. GOLDSBROUGH referred especially to a remark made by Dr. Day as to the cause of the headache. He (the speaker) suggested by way of opposition that the original condition of the abdomen might have had very little to do with the periodical headache, but that the occurrence of an operation and the alteration of the state of the bowel in the condition subsequently was sufficient to alter the nervous cycle and so cure the headache. The operation was a crisis in the patient's history, and it was well-known such a crisis could alter a habit of the nervous system.

Dr. NEATBY agreed with Dr. Goldstrough, and did not see how an evidently recent intestinal trouble could have been the cause of headaches which had lasted for so many years. At first the presence of the gall stones seemed to have something to do with the headaches, but whether that was so or not he would not like to say, because although the gall stones were still

present, the headaches were not. Although the connection between the growth and the headaches did not seem clear, yet they had all seen cases where some very distant part of the intestinal canal caused reflex symptoms—headaches, or vomiting or other forms of so-called biliousness. He had in his mind a case of the kind of an elderly woman who was operated upon by Mr. Knox Shaw. The patient had had pain, vomiting, and more or less headache repeated from time to time, and it was found that she had a growth in the ascending colon; the growth did not in any way obstruct the bowels, but was a small malignant growth in the wall of the colon, with considerable dissemination of smaller nodules in the omentum and the glands. The patient was considerably relieved by an exploratory operation, which he thought supported Dr. Goldsbrough's theory that the nerve cycle had something to do with the question. The so-called bilious attacks had been very much less frequent and severe, and the patient had put on flesh. After abdominal operations, heat, either natural or artificial, sometimes caused insomnia. At one time a great many years ago, too little care was taken of the patient after operation, especially when the spray played freely over the abdomen of the patient for a very long time. A very great shock followed, and the patients were not specially taken care of afterwards. In some instances he thought that patients now suffered too much from heat, and were made restless and sleepless by the bandages and hot water bottles. He thought that especially in the summer time certain of those discomforts might be remedied by the judicious removal of the bandages and clothing on the bed.

Dr. LESTOCK REID asked the authors whether because they had waited eleven months before bringing the case before the Society they considered the patient had a good prospect of being permanently freed from the carcinoma. It seemed to him that eleven months was an entirely inadequate time in which to form any conclusions as to the future of the case, especially when one heard that several enlarged glands were removed, together with an extensive abdominal growth. Although the patient might be better for a time and the growth did not seem to proceed any further, it eventually recurred, and he thought the chances were it would do so in the present case.

Dr. Cox, in reply, said the relief of the headache was to him one of the most interesting points of the case, and he had been anxious to see if the members could give any reasons for its disappearance. With regard to Dr. Day's remarks, the head-

aches had been in existence for many years, while the growth was only of a very recent appearance,, so that they could not have had any connection. Dr. Goldsbrough's suggestion that the operation had altered the nerve cycle and so caused a cure, seemed an interesting solution with which he was inclined to agree. In very many cases an operation, such as opening the abdomen, which apparently had no connection with such things as headaches, or pains, and which had been undertaken for quite different reasons, had resulted in ease of these symptoms and this could only be explained on some such hypothesis. In reply to Dr. Reid, eleven months, though certainly not long enough to decide a cure, was at any rate a considerable period of time. The patient was at present wonderfully well, and no doubt in a future paper Mr. Shaw would give further information as to the progress of the case. The glands removed were very small indeed, and there was apparently no diseased tissue left behind, and, personally, he hoped there would be no recurrence, and thought there was a very fair chance that there would be none. In reply to Dr. Wynne Thomas, he had often given salad oil before, but in the present case Dr. MacNish prescribed it. Dr. MacNish saw the patient for him when he was away on his holidays, and ordered salad oil; he understood the patient was taking it very freely indeed—half a bottle, and sometimes a bottle a day. In previous cases he had ordered the patients to take as much as possible—a “no time like the present time for taking it” sort of prescription. It had been remarked, that directly malignant disease was diagnosed the case should not be *watched* but operated on immediately. In the present instance he sent the patient to a consulting physician, who proposed that it should be watched for a short time. In the three weeks during which he watched the patient there was considerable improvement, but finding the case had come to a standstill and there was little chance of further improvement, he passed her on to the surgeons.

Mr. KNOX SHAW, in reply, said he did not for a moment anticipate that those present would consider that he thought the patient at the end of eleven months was cured. He had learned from bitter experience that even the three years' limit was not safe, and that patients might go for many years and yet have a recurrence. But if he saw a patient living, well and happy, with a good daily evacuation of the bowels, and with practically no trouble, eleven months after the operation, he was satisfied it was worth undertaking. He thoroughly agreed

with Dr. Burford that as soon as malignant disease was diagnosed it was better for the patient to be operated upon at once or not at all; it was absolutely no good waiting.

THE CLINICAL FEATURES OF EARLY ECTOPIC PREGNANCY.

BY EDWIN A. NEATBY, M.D.

Assistant Physician for Diseases of Women at the London Homœopathic Hospital.

WHEN the Secretary of the Surgical and Gynæcological Section did me the honour of inviting me to contribute to the proceedings this evening, he suggested extra-uterine gestation as a subject likely to be of interest, and added that it had not before been under the consideration of the Society. Ectopic pregnancy is too large a subject to be dealt with in one paper, and in some of its aspects it is too technical to be of real general interest. I have chosen to err on the side of simplicity, and I must ask your forbearance if my remarks are too elementary and too didactic. You cannot be more convinced of the painful incompleteness of my paper than am I.

To save monotonous repetition I use the terms extra-uterine, ectopic and tubal pregnancy or gestation as synonymous, though this is somewhat loose practice.

It is, to-day, hardly credible that although a knowledge of the fact that a fertilized ovum may develop, even to term, external to its normal home, has existed for over 900 years, yet at the time I and some of you were medical students, no hand had, with determinate foreknowledge, ever been stretched forth to save a woman, the unsuspecting victim of this condition, from the appalling accidents which might at any moment hurry her into eternity. I do not state that no ectopic foetus had ever been removed by operation from the abdomen, but I mean that never had a pre-determined operation been done for primary rupture of an ectopic gestation sac with the woman dying before the

surgeon's eyes from internal hæmorrhage. Operation for removal of the unruptured sac had not even been thought of, for it is only quite recently that the diagnosis of unruptured tubal pregnancy has been accomplished. Mr. Lawson Tait wrote concerning a case seen in 1881 that he agreed with the medical attendant as to the nature of the lesion (ruptured tubal gestation). He adds, "This gentleman made the bold suggestion that I should open the abdomen and remove the ruptured tube. The suggestion staggered me, and I am ashamed to say that I did not receive it favourably. I saw the patient again, and again I declined to 'operate,' and a further hæmorrhage killed the patient." In 1883 Tait's first operation for a ruptured gestation sac was performed. The result was not satisfactory owing to faulty technique, but it demonstrated the feasibility of the operation, which soon became popular and widely successful.

As far as possible let us approach the subject from the clinical side. I shall ask you first to consider with me what I may call a schema of the symptoms of ectopic gestation—to view the question from the outside of the patient before applying either acquired knowledge or theory to explain them, or looking with the mental eye into the pelvis and abdomen of the sufferer. Every method involves repetition, and none is wholly satisfactory—this one, at least, avoids the elaborate anatomical classification of the text-books.

In investigating a case where any abnormality in connection with pregnancy is suspected it is of the utmost importance to go minutely into the history. This was impressed upon me more than ten years ago by listening to the cross-questioning by Dr. Burford of a patient for whom I sought his advice. Apart from the history as dealt with below in the description of hæmorrhage, pain, &c., it is necessary to refer to the previous history of the patient. Are there any circumstances in the patient's past which arise with sufficient frequency to attract one's attention? You will at once reply that a period of prolonged sterility furnishes an instance of one such circumstance. I believe

this is undoubtedly so ; but while allowing this, it is right to emphasise the fact that extra-uterine pregnancy may occur at any stage or period of a woman's reproductive life. Her first pregnancy may be ectopic, either immediately after marriage or not for years later. A normal delivery or a recent abortion may be followed almost immediately by a tubal conception. A long series of normal pregnancies may be interrupted at any point by an abnormal one, or intra- and extra-uterine pregnancies may occur together. More than one ectopic pregnancy may occur in the same patient, and even in the same tube, as will be shown by a case to be referred to later. These facts cannot be too prominently before the mind. Again, the history of any pronounced pelvic inflammation, or of so-called "inflammation of the bowels," must be held to bear a possible relationship to the condition. Although it cannot now be believed that the action of the ciliary processes has so great a power as was formerly supposed, yet it appears reasonable to suppose that mechanical narrowing or distortion of the Fallopian tube may hinder the progress of the ovum, whether impregnated or not, even while permitting ingress of the smaller spermatozoon, endued with locomotor powers. More than this we cannot say regarding the clinical ætiology of ectopic pregnancy.

The main symptoms and signs may be stated to be :—

- (1) The symptoms of pregnancy.
- (2) Irregular hæmorrhage.
- (3) Pain.
- (4) Collapse.
- (5) Retching and vomiting.
- (6) Rectal tenesmus.
- (7) Vesical irritability.
- (8) Mammary pains.
- (9) Abdominal distension.
- (10) Abdominal tumour.
- (11) Pelvic tumour.
- (12) Displacement of pelvic organs.

(1) Firstly, let me say that the subjective symptoms of pregnancy, according to the supposed date of gestation, should be carefully enquired for. They may be present as in intra-uterine pregnancy, and in the case of an intelligent woman, able to communicate the history of her recent health, they may be of the greatest possible value in aiding the medical attendant in arriving at a correct conclusion. The absence of such phenomena is of practically no use. Some patients have none; the symptoms for which the patient seeks advice may be associated with a date of pregnancy too early for their development; the patient may be unobservant, or she may be too ill to render an account of herself.

Apart from conspicuous and leading symptoms and physical signs, the menstrual history is perhaps of prime importance, and it may form the only guide as to the date of a possible pregnancy. It must be borne in mind that a delay of one or two weeks MAY mean pregnancy, but the value of this delay will be discounted or nullified if "irregularity" of the same degree have been noticed before. It is not enough simply to enquire when the patient last "saw" anything. Minute enquiry must be made as to whether the last coloured discharges were in every way a full, regular, and ordinary period occurring when expected. If an irregular hæmorrhage be mis-interpreted as an ordinary period, a danger signal is construed as an "all-right-ahead" light.

(2) IRREGULAR HÆMORRHAGE may appear as one slight bleeding of a few hours' duration, or a number of such "losses," or there may have been an almost continuous oozing, since the last ordinary period, varying in quantity and colour. A *dirty brownish discharge* following close on menstruation, or after a few days interval, may mean either a threatened abortion of intra-uterine pregnancy, or extra-uterine gestation, or again, a hydatidiform mole. In the last-named condition there may be nothing diagnostic, or the expulsion of some of the hydatidiform vesicles or "skins" may solve existing doubts. The character of the coloured discharge may be of value in determining the nature of the pregnancy (if any). The presence of a definite decidual *membrane*

or cast, is probably positive evidence of pregnancy, though individual large cells (like decidual membrane cells), as seen under the microscope, are not conclusive. A cast due to pregnancy must be distinguished from a dysmenorrhœal membrane. The latter "possesses the complex structure of a hypertrophied endometrium, and contains follicles, nucleated cells and blood-vessels."¹ It is usually known to be recurrent in any given patient, and is not more than one-twelfth of an inch in thickness, and two inches in length, and is hardly to be mistaken for a decidua of pregnancy, which attains from one-eighth of an inch to a quarter of an inch in thickness, and is of a fleshy vascular nature.

[A complete decidua from a case of ectopic pregnancy was shown in Slide No. 2, from a specimen presented to the Royal College of Surgeons, by Mr. Bland Sutton. The specimen shows two lateral prolongations corresponding with openings of Fallopian tubes and larger opening for cervical canal. Shaggy externally; inner aspect smooth and marked with minute orifices of the uterine glands. Expelled 36 hours after operation for the removal of ruptured tubal gestation.

Under microscope No. 1, was a section showing the compact and spongy layers of the decidua. The superficial portions of the glands are straight, with dilated funnel-shaped mouths, while the deeper portions are tortuous, and in sections look like a number of cavities of various shapes, and lined by cubical or flattened epithelium. The deepest portions again, next the *muscularis mucosæ*, are lined with columnar epithelium. The inter-glandular substance becomes filled with cells with large and often multiple nuclei.

These are shown in lantern-slide 3, from a first pregnancy (uterine). Here are also normal chorionic villi, surrounded by blood clot, &c.]

If chorionic villi are found in the cast, then the pregnancy is intra-uterine, but of course it is not fair to jump to the conclusion that the converse is true. Chorionic villi readily elude even a diligent search. Consequently, though their

¹ "System of Gynæcology." Allbutt and Playfair, p. 366.

discovery may be taken as a proof of intra-uterine pregnancy, their absence from decidual shreds can never with certainty be regarded as proof of an extra-uterine conception.

[Slide 4 shows chorionic villi in a Fallopian tube, the wall of the tube showing enlarged thrombosed vessels, oval in section. There are no plicæ, the lumen being filled by villi and blood clot. The specimen is from a patient of my own, as also Slide 5,¹ showing fibrotic villi and a small amount of degenerate decidua at the periphery. As villi may sometimes be mistaken for plicæ in the Fallopian tube cut across, I have had two slides made to show the branching processes (Slide 6), columnar epithelium and goblet cells secreting mucus. Slide 7 shows another portion of a Fallopian tube, with the lumen nearly blocked by plicæ. I have shown these slides partly to enable us to compare a villus with the plicæ of the tube, and partly to show how small a circumstance may be supposed to hinder the progress of an ovum in its journey to the uterus.]

Before leaving the subject of irregular hæmorrhage we may summarize by saying that almost any form of it, in almost any relation to a previous menstruation, may exist in a case of ectopic gestation. Should an intra-uterine pregnancy be associated with a tubal gestation even a serious "flooding" may occur (as a result of abortion). This would form a serious and misleading complication, but as it is a quite possible occurrence it must be borne in mind. These facts suggest that it would be a safe rule to institute a careful aseptic pelvic examination in every case of supposed abortion.

It must not be forgotten that there may be merely an absence of menstruation without any irregular bleedings, and, finally, that the gestation may be of too early a date for any amenorrhœa to have been observed and irregular hæmorrhage may be absent—in short no departure from the normal as regards menstruation or hæmorrhage may exist. Should abnormality develop it may arise at any period of the ectopic pregnancy prior to or after rupture or tubal abortion or molar formation.

¹ See Plate I., fig. 1, page 366.

Before dismissing the menstrual phenomena altogether I may state that, theoretically, an ectopic conception may occur immediately before an imminent menstruation through the meeting of a wandering spermatozoon and an ovum, the union taking place too late to stop the menstruation. The history, as furnished by menstruation, would in such a case be misleading by a week or more.

I may remind you that both in the lower animals and in man spermatozoa have been found free in the tube and it is demonstrable that either a fertilised ovum, or a spermatozoon and ovum, independently, may find their way from one tube via the peritoneal cavity to the distal extremity of the opposite tube. This is, of course, the only explanation of the occurrence of a pregnancy in the distal part of a tube which is from ancient date proximally closed. A case of this kind is recorded by Howard Kelly and Slide 8 showed the same fact.¹ Here is a pregnancy in an undeveloped horn of a bicornuate uterus. Müller's ducts have failed to fuse, and one part only of the left Müller's duct has remained patent. The part indicated is closed, showing that there is no ingress for spermatozoa from the cervix to the distal patent portion of the cornu except via the developed cornu, right Fallopian tube, peritoneal cavity and left Fallopian tube, and patent end of the undeveloped cornu. These are facts of extreme interest and are corroborated by the cases where pregnancy occurs after the removal of one tube and the opposite ovary. Although the digestive powers of the peritoneum for some foreign bodies, such as silk, is so great, yet the living fertilised ovum seems able to resist, for a time at least, its efforts.

(3) I have so far, of course, referred only to vaginal, *i.e.*, externally manifested hæmorrhage. Such bleeding may stand alone as the sole sign of a possible abnormal pregnancy. More often some form of pain co-exists. This may vary from merely dull aching of indefinite situation and character to an anguish which induces or is at least accompanied by collapse. An early sense of weight or aching in one side of

¹ See Plate III., fig. 6, page 382.

the lower part of the abdomen is occasionally present. It is readily conceivable that the presence of what is practically a foreign body in the tube, and one which is quite rapidly increasing in size, would cause such pain. If the enlarging foreign body (embryo) be in the intra-mural part of the tube, the pain will be more marked. As a matter of fact, however, pain may be entirely absent in the first stage of an ectopic gestation, *i.e.* before rupture, abortion, or hæmorrhage into the peritoneal cavity. When one or more of these events takes place it is announced by pain both sudden and severe. It is cutting or shooting or tearing, occurring most often in one iliac region, or in the hypogastrium, or in the vagina or vulva. But it not seldom occurs around the umbilicus or in one or other loin, and simulates renal colic, appendicitis or some form of perforation. Mr. Hastings Gilford, of Reading, wrote in the *Lancet* (June 24, 1901, p. 1710): "In all four cases which I have seen, the seat of pain has been in the abdomen, and not in the pelvis." He mentions the iliac region, the small of the back, and the splenic region as having been the seat of agonising pains.

Should the patient survive one severe attack of pain attended by collapse, it is almost certain to be followed by another of a severity equal, greater, or less. The second may be followed by a third, and the third by a fourth, &c. It is these recurring attacks of pain and collapse, with varying intervals of greater or less freedom, which are most characteristic of an extra uterine foetation. A case which Mr. Johnstone kindly allows me to quote, besides having other interesting features, presented two very well-marked separate attacks.

Patient, aged 24, had been sterile six years.

On April 1, 1900, menstruation began, "like tinted leucorrhœa" at first, then natural. It continued on and off for fifteen days, patient being shaky and pale. On April 15 she rose feeling well; at 9 a.m., while dressing her hair, with her hands over her head, she had sudden pain in the abdomen, all over, which bent her double. This lasted an hour and passed off in bed, but she remained cold, pale, and in some pain for two days. There was no vaginal hæmorrhage. Five days later, when in bed, suddenly

seized by a severe pain in the centre of the abdomen and above the pubes; return of collapse and some delirium. She passed a complete decidual cast. *Physical signs*: A dull area on right side of abdomen, a mass of ill-defined outline reaching to umbilicus, pressing uterus forward and fixing it; also a mass in Douglas' pouch (probably blood-clot).

She rallied, and on May 21—three and a half weeks after the last attack—Dr. Johnstone operated and found the abdomen full of liquid and clotted blood and a mass in the right tube, which he removed without further hæmorrhage. The fœtus was partly in and partly outside the tube, and aged about two and a half months.

The patient made a good recovery.

One sudden overwhelming abdominal pain, accompanied by collapse of a mortal character, indicates some terrible intra-abdominal cataclysm, but does not necessarily point to rupture of a gestation sac. Indeed, the evidence of the symptoms may point away from ectopic pregnancy, even when that is present and rupture has taken place. For instance, one evening a patient was seized without warning with severe pain in the sacrum, upper part of the abdomen, and under the left breast; she vomited and became faint, and next morning the doctor found her cold, pale, and in severe pain. From this time the history was that of a case of acute intestinal obstruction, no fæces or flatus passing and nothing being kept down. There were the physical signs of peritonitis without any localising cause, and what physical signs there were, were against pregnancy. Operation showed a tubal mole and much blood in the peritoneal cavity.—(Gilford, *loc. cit.*)

To return. If each succeeding pain is accompanied by moderate collapse the probability of ectopic pregnancy is enhanced. If pains and collapse occurring in a series are accompanied or preceded by vaginal hæmorrhage with shreds of membrane, little doubt need remain; and if the shreds, carefully examined, show decidual cells but no villi the diagnosis can be made almost with certainty.

(4) *Collapse* and pain are not uncommonly associated, but this is not invariable, nor are they by any means necessarily

of equal severity. A comparatively slight sudden pain may be followed in the course of a few moments by profound and steadily increasing collapse. Again, the patient may make a good rally from the collapse, either permanently, or, as just stated when dealing with pain, only to relapse into a series of syncopal attacks. It is this series of pains and collapse which is practically pathognomonic of ectopic pregnancy, and, as we shall see later, of one particular feature of ectopic pregnancy.

The collapse of extra-uterine gestation is commonly associated with pallor, especially of the mucous membranes, with difficult sighing respiration, and a characteristic restless tossing of body and limbs. This, needless to say, indicates internal hæmorrhage, but in the early ruptures such severe evidences of bleeding may be absent.

(5) The symptoms of retching and vomiting being common in normal pregnancy and in so many other abdominal conditions are not of any diagnostic value alone. They may occur in almost any degree of severity and may last and vary in length of time. They are associated rather with the accident of ectopic pregnancy than with extra-uterine gestation *per se*. They are more sudden and severe in intra-peritoneal rupture, more moderate and long-continued or recurrent in tubal abortion or extra-peritoneal (meso-metric) rupture.

(6 and 7) Rectal tenesmus and vesical irritability are not seldom present in the more chronic cases such as have been alluded to in the last paragraph. (8) Mammary pains are less common than the foregoing, and occur in the same class of cases. Darkening of the areola and development of follicles are common.

Turning now to some of the physical signs, we come first to the examination of the abdomen. Remembering again that even a negative sign may be of value, we may note on inspection that no alteration in the appearance of the abdomen has taken place, and, on palpation, that its softness is maintained, and no tenderness exists, and no abnormal area of dulness is discoverable in the flanks or the hypogastrium. Or distinct tympanitis may be at once

obvious, or, while no distension is found, there may be a dull area and a lump on either side of the middle line in the iliac region or hypogastrium. The lump may be hard, or it may be semi-elastic; in either case tenderness will probably be present. The history obtained from the patient or the medical attendant may tell of the steady increase of general and local swelling, or even that local distension varies from time to time, *e.g.*, being diminished after voiding urine.

It is seldom that dulness is found in the flanks in a very recent case, though occasionally this sign and a thrill may cause free fluid to be diagnosed.

On vaginal examination the uterus may be moveable and normal in size and position. A swelling in the situation of the Fallopian tubes, or lying between the uterus and the pelvic wall, may be felt. Such swelling may vary indefinitely in size, or, together with a swelling of elastic consistence and ovoid shape, the moveable uterus may be enlarged up to four or five inches. Such a combination of physical signs—*i.e.*, an enlarged uterus, with another swelling by the side of and behind it, especially if on the latter are numerous pulsating vessels—is strong evidence of extra-uterine pregnancy. The enlarged uterus may be pushed to one side.

[The next slide showed a uterus and its appendages from a case of interstitial or tubo-uterine gestation.¹ The right side of the fundus is dilated and rent asunder by a long ragged aperture. Exposing an oval cavity which measures two inches in its chief diameter, and an inch antero-posteriorly. Its walls are very thin. The floor of the cavity bulges into the upper part of the interior of the uterus, and here its walls are much thicker. Its inner surface is rough and reticulated. From some of its numerous pits and depressions hang broken-off portions of chorion, but there is not a trace of a distinct decidua. The right Fallopian tube passes into the outer and anterior aspect of the wall of the cyst, expanding slightly into a funnel-shaped orifice which opens into the cavity close to the

¹ See Plate I., fig. 2, from Royal College of Surgeons' Museum, by permission.

PLATE I.



FIG. 1.

Chorionic villi and decidua tissue.



FIG. 2.

Interstitial gestation.

rent in its walls. At the extreme upper and inner part of the cavity of the cyst is the continuation of the tube, which terminates by a funnel-shaped opening in the uterine cavity, where its wall is bulged inwards. These orifices are marked by a stout bristle. The uterus is five inches long from the fundus to the os externum. The reverse of the specimen shows that its posterior wall is three-eighths of an inch thick, and the cavity is lined with a decidua. The right ovary contains a true corpus luteum.

From a healthy married woman, aged 32. She had had two children, of whom the younger was fourteen months old, and had been weaned about two months; she had not menstruated during lactation, or since the weaning of her last child. One evening when in bed she was seized with severe abdominal pains, accompanied by sickness and slight diarrhoea, but her abdomen was not swollen or tender. She rapidly became collapsed, and died in twelve hours from the commencement of the attack. Her abdominal cavity contained nearly six pounds of clot, and five pints of a bloody fluid, in which floated a fœtus.¹

Next was shown the fœtus and membranes from the same case as the preceding specimen. The fœtus measures one inch and a half in length, and is, probably, in the second month of development.]

The uterus may have lost its mobility and its distinctness of outline, and the pelvic swelling may be irregular in shape, filling Douglas' pouch or extending above the brim of the true pelvis, not limited to either side, though, perhaps, more marked on one. The pelvic mass may bulge down towards the vaginal orifice, and its consistence be hard and inelastic or somewhat doughy. The whole may thus be a mass in which it is impossible to distinguish the component elements. Or, once more, there may be no mass—simply slight abdominal distension and an elastic bulging of the posterior fornix, and some obscure sensation of fulness or displaceable resistance. Finally there may be a one-sided abdominal swelling, tense and elastic or hard on palpation, displaced out of the middle line, together with a bulging

¹ Case recorded by Mr. Alban Doran in *Trans. Obstet. Soc.*, 1882, vol. xxiv., p. 227.

elastic vaginal mass near the vulvar orifice, possibly surrounding the rectum like a ring of rigid resisting substance, very much like the exudation of pelvic cellulitis.

Having considered the list of symptoms and signs of ectopic pregnancy as found at the bedside, we must now sort these symptoms into their natural groupings in co-relation with anatomical changes, as observed from the inside so to speak, *i.e.*, on the operating or *post-mortem* tables. The Fallopian tube is the first home of practically all ectopically fertilised ova. The most frequent seat of their arrest is the ampullary portion of the tube, the isthmus is the next, and the interstitial the least frequent.

The developing ovum forms a swelling in the tubes at first globular and then ovoid. It may be felt on bimanual examination in many cases at any early date, and of course may be seen if the abdomen is opened. The mucous membrane swells and thickens, but the wall of the tube stretches and thins almost from the first, the whole adjoining vascular area, including the ovaries and uterine vessels, increasing in size, and the branches appear even to multiply. The uterus commences to enlarge and a decidua to form. A developing ovum in this situation may go on for three or four weeks with no local symptoms whatever, and possibly, too, with no general ones, such as those of normal pregnancy. Unless the patient be examined, as part of a routine, for symptoms apart from pregnancy, the tubal pregnancy will certainly be overlooked at this stage, or if discovered, be misinterpreted. This forms Group 1, a stage which must exist in the beginning of every tubal gestation, but which is practically non-existent clinically. Group No. 2 is formed of cases with an unruptured tubal sac, with slight local one-sided dull pain, the symptoms of normal pregnancy, irregular hæmorrhage, with or without decidual shreds or casts; these, plus a tubal swelling discovered bimanually form the earliest diagnosable cases. A few years ago it was deemed impossible to diagnose them; now, although such cases are rarely diagnosed, it is possible to be done. Such cases, if not operated on at once, should be under supervision moment by moment, and should be ready for operation at an hour's

notice. After Group 2 all the cases are complicated with some form of accident, with rupture of the tube, or with tubal abortion, or the formation of a tubal mole. Rupture, the most serious accident possible, may occur from the third to the twelfth week, or later.

Ruptures of very early date—say during the first month of pregnancy—form a class by themselves, and differ from later ruptures in several points:—(a) In the absence of symptoms of pregnancy; (b) in the paucity of physical signs; (c) in the non-localising character of the pains; (d) in the smaller degree of anæmia.

Although it is commonly stated that the sac usually ruptures not later than about the twelfth week, a case has recently been related by Professor Sinclair, of Owens College, of an unruptured tubal pregnancy going on for six or seven months, the foetus then dying, the breasts filling with a copious secretion of milk, and the liquor amnii being completely absorbed. It was removed fourteen months after the onset of pregnancy and about eight after the death of the foetus, which was found very much shrivelled. He states that the tube was evidently unruptured, and if this is a correct interpretation of the specimen, it greatly extends the period during which pregnancy is believed to be possible in an unruptured tube. He also states that the muscular layer of the tube is much hypertrophied. Drawings from the initial issue of the new *Journal of Obstetrics and Gynecology* of the British Empire (January, 1902) to illustrate Sinclair's case were shown.

Rupture may be induced by some straining effort such as defæcation, sexual intercourse, coughing, dressing the hair (as in Dr. Johnstone's case), or it may occur without any obvious cause.

One of two sets of anatomical changes may lead up to the rupture. (A) The gradual growth of the embryo and enlargement of the sac may cause rupture through overdistension of the progressively thinning walls. The living embryo or foetus may escape into the abdominal cavity, and be lost among the clots filling that space, or may remain in the tube, or partly in and partly out. In the early cases,

say up to two months, it is commoner for the embryo to remain in the tube, but later the foetus rarely continues in its tubal home. Again, the foetus may escape into the broad ligament, the tube having given way at its inferior zone, where uncovered by peritoneum. In either case its fate depends upon its age and upon the amount of accompanying hæmorrhage. If a placenta has formed, it usually remains attached to the wall of the sac, and the life of the foetus may be maintained *viâ* the placenta, if the mother is not killed by the hæmorrhage.

Some years ago an interesting case was treated in the gynæcological department of this hospital by Dr. Burford and by myself.

In March, 1895, a married woman, aged 29, consulted me in the out-patient's department. She was suffering from lumbar pain and continuous vaginal hæmorrhage for nine weeks.

The pain, which was very severe, began suddenly in the middle of the night, and was accompanied by vomiting and shivering. Her only confinement occurred seven years previously. The uterus was found to be slightly enlarged, and behind and to the right was a soft, round, tender swelling; moving the cervix caused much pain.

After improvement, she discontinued attendance, and ten months later, came to Dr. Burford's clinique, and it is by his courtesy I am permitted to refer to this stage of the case. Three months before admission, menstruation ceased. Three weeks before admission, she was suddenly seized during the night with acute spasmodic pain, for which morphine was injected. Subsequently, pain continued until admission on January 9, less severe in character, but varied by violent paroxysms, micturition and defæcation were painful, pulse 112 and 124. In the afternoon of the next day, the pulse was 160, and patient's condition was worse. In Dr. Burford's absence, I was asked to see the patient. The abdomen was tumid and very tender, and an ill-defined swelling existed on the left iliac region. Pelvic examination revealed a diffuse resistant swelling in the pouch of Douglas, and a well-marked tumour to the left of the uterus, displacing it to the right and rising out of the pelvis. The patient's condition being critical, after consultation I opened the abdomen at 1.10 a.m., and removed the sac which had ruptured intra-peritoneally, the abdomen being full of fluid and clotted blood. Extensive matting of intestines had occurred.

The case was under allopathic advice prior to admission and should have been operated on two or three weeks earlier. Very little blood was lost at the operation, but the patient died from the shock of the hæmorrhage 36 hours later.

A three months' fœtus escaped into the abdomen during removal of the sac. At the first illness, ectopic pregnancy was diagnosed. It was not examined for at the operation later.

[Slide No. 11 is an uterus and its appendages, showing a large dilatation of the Fallopian tube, which contains a fœtus of about the third month, connected by a well-formed umbilical cord to a placenta lining the walls of the dilatation. The cord is inserted into the aspect of the placenta which is attached to the anterior inferior part of the dilated tube. The left tube is also dilated to more than half an inch in diameter, and its fimbriæ are effaced; it passes under the ovary, which is atrophied and flattened as on the right side. The ovary and tube were partly united by old adhesions. The cavity of the uterus is laid open anteriorly, and on it is suspended a decidua, cast from it a day before the patient's death.

From a woman, aged 22 admitted into hospital for severe pains in the hypogastrium of a month's duration. She asserted that she had menstruated regularly till a few days before admission. A hypogastric tumour was discovered; it appeared to contain fluid, and to be surrounded by large pulsating vessels. Because of the peculiar discoloration of the inner aspect of the vulva, pregnancy was suspected. The tumour was tapped, per rectum, with an aspirator, and a pint of bloody fluid was thus removed. A styptic solution was injected to check hæmorrhage, and at once removed.

The patient died suddenly four days later, having passed a decidua on the third day. Blood was found diffused over the peritoneum, and issuing from an aperture in the upper part of the back of the tubal cyst. For a full account, see *Trans. Obstet. Soc.*, vol. xxi., p. 93.]

[The next slide showed another tubal gestation, an uterus, with the Fallopian tubes, ovaries, &c. The right Fallopian tube, near its outer end, is dilated into a sac, about an inch and a half in diameter, by a retained ovum. The ovum is laid open, and a fœtus, nearly an inch in length (fifth or

sixth week) with the extremities just budding, and parts of the amnion and other membranes are exposed. There is a large corpus luteum in the right ovary. The uterus contained no decidua, nor has the injection of its vessels displayed any increased vascularity.]

The following measurements may be some guide to the age of an embryo :—

Ovum entering tube $\frac{1}{15}$ in.

At the end of 1st month = $\frac{1}{3}$ in.

At the end of 2nd month foetus = 1 in. (22 millimetres).

At the end of 3rd month foetus = 3 ins. Sex of genitalia recognisable.

At the end of 4th month foetus = 5 ins.

[A case where the foetus had escaped into the peritoneal cavity was shown in Slide 13. A uterus, with the Fallopian tubes and ovaries. The middle portion of the left Fallopian tube is dilated into an oval cyst, filled with coagulated blood, in the anterior wall of which is a ragged opening, through which the small foetus suspended to the preparation has escaped. Clots of blood are adhering to the uterine ligaments and the peritoneum. The uterus is enlarged as in the early stages of pregnancy, and when recent was said to have been "vascular with a slight decidua."

E. H., aged 36, married, and the mother of one child, whilst carrying a heavy burden, suddenly became faint and fell down. She was found in this state by her neighbours, and carried home. When seen soon after by her medical attendant she was suffering from great exhaustion, perfectly conscious, and did not complain of pain, except a little at the pit of the stomach which had existed for several weeks. There had been no vomiting. Stimuli were administered, warmth applied to the extremities, and an aperient ordered. On the following morning she was found with a bloodless countenance and a feeble fluttering pulse, but without any pain. In the course of the day, while being lifted on to a night-stool, she expired.

When the abdomen was opened a foetus, scarcely two inches in length, was found floating in serum above an immense coagulum of blood, which filled the pelvis and lower portion of the abdomen.

The viscera were healthy, but bloodless.]

If the foetus, as in the last case, escape into the peritoneal cavity the risk to the mother is enormously greater than if rupture takes place into the broad ligament where the pressure exercised by the broad ligament and connective tissue thereof arrests the bleeding and saves the mother. The foetus may develop in this situation and rupture again take place—secondary rupture—this time into the peritoneal cavity, once more threatening its own life and the mother's. Or, it may become absorbed if young enough or may form a lit hopædion. As in intra-peritoneal rupture so in this extra-peritoneal form the foetus may remain in the tube alive or in a molar condition and hæmorrhage take place into the broad ligament. This is what happened in a case sent to me by Dr. Tindall which has been fully described elsewhere. The physical signs are very characteristic.

A woman married four and a half years; never pregnant. Eight weeks before she came under my notice began to menstruate *a fortnight late*. One week later, after cycling, she was suddenly seized with "griping pains like knives" in the private parts, and was kept in agony for an hour. She could not stand, but "crouched on the floor." Bleeding came on and continued throughout until operation. The day after the attack of pain she went down stairs, but pain recurred, and the following day also. Five days later she again had pain, "like pulling her inside out," in the groins and the vagina. The pain, after another week, extended to the bowels and to the back, which felt "as if breaking." Tenesmus of rectum and evacuation of mucus persisted.

Here the pains began low in the pelvis, and, as recurring hæmorrhages distended the broad ligament, they extended upwards to the abdomen, rupture having occurred extra-peritoneally seven weeks before I saw her. Hæmorrhage into the sac had continued on and off all that time, for Dr. Tindall had watched the growing distension of the left lower abdomen during the week prior to her removal to London. The bladder and uterus were drawn up out of the pelvis to an unusual degree, and a bulging mass near the vulvar orifice behind the uterus filled the pelvis. The pregnancy cannot have been of more than six weeks' duration, and no trace of the foetus was discovered.

A satisfactory recovery after operation took place.

[Another excellent example of a broad ligament sac is seen in Slide 14 (Royal College of Surgeons, 4695 G). Here secondary rupture had occurred. The sac contains a foetus about three months old, the head of which is projecting through the ruptured wall. At the lower part of the sac the corresponding ovary may be seen.

From a married woman, aged 25, who had several violent attacks of pain in the abdomen and amenorrhœa during a period of three months. Laparotomy was performed on account of severe symptoms of internal hæmorrhage. Much blood-clot was found in the pelvic cavity. The patient recovered (see *Lancet*, vol. i., 1896, p. 836.)]

Symptomatically it is not possible to distinguish between the intra- and the extra-peritoneal ruptures except by the fact that the extra-peritoneal ruptures are not fatal at once if at all. Sudden pain and collapse exist in both, and, of course, the collapse in the intra-peritoneal variety may, from bleeding, be fatal. The pain in the extra-peritoneal variety begins lower down; in my case just described commencing in the private parts, to use the patient's words.

Physical signs are certainly more helpful. A bulging lump—the distended meso-metrium—may be felt near the vaginal orifice, at the posterior part, traceable upwards to the abdominal cavity, where it is felt quite distinctly, and more pronounced on one side. The distending broad ligament draws up the uterus and bladder out of the pelvis into the abdomen, so that *even the cervix* may be felt bimanually above the symphysis. Lateral displacement of the uterus also occurs. The second change (*B*), which may lead to rupture, is where blood is effused between the chorion and the amnion. The blood comes from the foetal tissues, as shown by the nucleated red cells and the excess of colourless corpuscles. This may destroy the life of the embryo at once or at a later date; at any rate, the effect of the hæmorrhage is *suddenly* to increase the size of the sac, and, in proportion to the quantity of blood poured out, is the likelihood of immediate rupture. The younger the embryo the more easily is it killed. If not killed by one

hæmorrhage further hæmorrhages will probably occur. Another result from the bleeding from the foetal (chorionic) source is that the relation of the parts is disturbed, and hæmorrhage on a larger scale from the maternal tissues occurs, thus further endangering the life of the embryo and the integrity of the tube. Where the bleeding is fatal to the embryo, development is arrested, the clot consolidates, the embryo itself may be absorbed, and a tubal mole is thus formed. The bleeding and consequent distension of the tube may, however, be so gradual that small rents only occur in the wall of the sac, these rents being extended from time to time or fresh ones taking place. Healed rents may sometimes be seen on the surface of an extra-uterine gestation sac. These facts explain the serial pains alluded to in the earlier section of this paper and the spreading of them over two or three months. Much discussion has occurred as to the cause of recurrent pains, but there appears to be no doubt that they are due to repeated hæmorrhages or to slight peritonitic attacks induced thereby. When the abdomen is opened, in these cases of tubal mole, with pelvic hæmatocele (so-called) adhesions between contiguous tissues and structures is the rule. It is not necessary to invoke a hypothetical tubal colic to explain these pains.

Of late years it has been established that abortion from the tube may occur just as it does, for like reason, from the uterus, and, similarly, a "missed abortion" may occur—this, in my opinion, being quite frequent. By missed abortion I understand the retention of a dead embryo or mole in the tube, together with bleeding from the patent tube, a laminated blood clot being thus formed in the pelvis as in gradual rupture. This is a most striking condition, the gradual bleedings from the tubal orifice, or from the small tubal rupture, forming a mass in the pelvis which baffles diagnosis unless the history is clear. I have operated upon three such cases, the first of them coming from the out-patient department of the London Homœopathic Hospital. The specimen is on the table, and also a drawing with explanatory letter-press, both of which I pass round for your inspection.

August 5, 1897.—Patient, aged 21. One child. Always regular until two months before admission, when the period arrived a fortnight before due. Seemed like the previous periods; was followed in a week by pain in the right iliac region, especially after any exertion. The hæmorrhage ceased when the pains began, but was followed by a brownish discharge until admission.

P.v. cervix is high up and directed backwards, and pushed to the left by a large rounded elastic swelling on right side. The uterus lies to the front. On August 26 I opened the abdomen and found the right tube dilated, and containing dark altered blood. Attached to the ovary was a mole about the size of a walnut, which had escaped from the rent in the Fallopian tube (see specimen). Recovery was good.

The second case was sent to me at this hospital by Dr. Sandberg. A curious appearance is seen in the drawing. The whole thing is a clot, but it was encapsulated by organised lymph, which looked to the naked eye like the Fallopian tube. A circular orifice in this capsule looked like a very patent abdominal tubal ostium, but it is only a rent.

Mrs. L., married six months. Admitted July 4, 1899. Last regular period, February 4. March period did not appear punctually, and a few days after it was due, sharp abdominal pain of an intermittent character set in. This lasted three weeks, with gradually increasing severity, and accompanied by frequent vomiting—two or three times daily. The pain obliged her to go to bed after about ten days, and got easier about the end of March, when the catamenia appeared. Hæmorrhage lasted two months, slight in quantity, and mixed with clots. At the end of May, the bleeding ceased, and she had very little pain in June, but a feeling as if something were swelling up on the left side of the abdomen.

On July 3, abdominal section performed, and the right tube was found to be very much dilated by a mole, its free extremity was extremely patulous. Good recovery. Some blood in the pelvis, adhesions amongst pelvic viscera but no free blood in abdominal cavity. No sign of rupture in the tube.

The third case was operated on at the Hampstead Hospital, and sent to me by Dr. Weaver, J.P. It is an instance of tubal abortion, the pelvis becoming filled with organising blood clot forming a true hæmatocele, and the tubal ostia (abdominal) becoming glued up by the peritonitis set up, forming double hæmato-salpinx.

Patient had amenorrhœa for two months, of which she spent three weeks in bed on account of pain. After the two months, vaginal hæmorrhage began. She had some dysuria in the early part, but gave no account of any severe attack. The hæmorrhage lasted six weeks. On examination, a mass was found extending upwards to within one and a half inches of the umbilicus, and on its surface, to the left, was a smaller sausage-shaped lump of semi-elastic consistence, thought to be a distended tube. The large mass could be felt also in Douglas' pouch, and there was one portion quite elastic, which turned out to be the hæmato-salpinx. Chorionic villi were found. The rest of the mass was a laminated clot with a distinct fibrinous capsule, and the small sausage-shaped portion was simply a series or string of clots, which, presumably, had been moulded by the movements of the intestine into the peculiar shape.

This case and the last one furnish good examples of the laminated hæmatocele due to gradual rupture of a tube, or to the blood-drip from a damaged embryo into the peritoneal cavity through the patent ostium. These cases present none of the urgency of complete rupture into the abdominal cavity. If early, small and symptomless, they may be left to nature.

The following notes on Mr. Alban Doran's *specimen of tubal pregnancy*, in the Royal College of Surgeons, show that it is sometimes difficult to determine by *proof* the nature of the tubal swelling; but these tubal moles are now readily recognised even when *proof* is lacking. [A right ovary with the Fallopian tube removed by operation. Immediately beyond the fimbriated end of the tube is an oval sharply circumscribed clot two and a quarter inches in its chief diameter. At one side of the clot there is a cavity suggestive of an amniotic sac, but no amniotic lining was discovered on microscopic examination. Histological examination of the peripheral part of the coagulum, from different situations, shows a capsular formation of hyaline fibrous tissue, but no chorionic villi.

From a woman, aged 25, married six years, but childless. For three months a discharge of blood had been noticed from the uterus.

On examination a mass could be felt in the right fornix.

There were extensive intestinal adhesions.

Slide 18. A right Fallopian tube and ovary removed by operation. The outer end of the tube is dilated into an oval cavity containing blood clot and a molar pregnancy. In the recent state this tubal cavity communicated with the pelvic pouch of the peritoneum through the widely dilated abdominal ostium of the tube.

From a woman, aged 28, who was admitted to a hospital with symptoms of ruptured tubal gestation. (See *Trans. Obstet. Soc.*, vol. xxxvi., p. 261.)

On the way to form a mole is a Fallopian tube which has been distended by a tubal pregnancy into an oval sac three inches by two in its chief diameters. The cavity is lined with clot, more thickly at the poles than elsewhere. The internal surface of the clot has a smooth amniotic lining, the sac of which contains a well-developed foetus three quarters of an inch in length attached by a short swollen umbilical cord. The ovary, which is normal, lies below the dilated tube; in the vicinity of this is a tortuous portion of the uninvolved uterine segment of the tube. The outer aspect of the dilatation presents a few delicate adhesions but for the most part is smooth and overrun by a prominent plexus of vessels.

The parts were removed from a woman, aged 24, married six years, with two children, of whom the youngest was over $3\frac{1}{2}$ years of age. Menstruation was last noticed fourteen weeks before the tube was removed; seven weeks later hypogastric pains set in, with a free show of dark blood which continued daily. A violent attack of pain with expulsion of a clot took place four days before the operation. The gravid tube lay in Douglas' pouch, behind and to the left of the uterus, displacing the latter with the left appendages upwards. Recovery was complete. Alban Doran. *Trans. Obstet. Soc.*, vol. xlii., p. 134.]

I have only incidentally alluded to interstitial pregnancy, where the ovum develops in the tube as it traverses the uterine wall. Rupture is in these cases early and severe, and the case is difficult to diagnose beforehand from intra-uterine pregnancy. The hæmorrhage is often very great, and rapidly fatal. Indeed, some of these cases so quickly put

PLATE II.

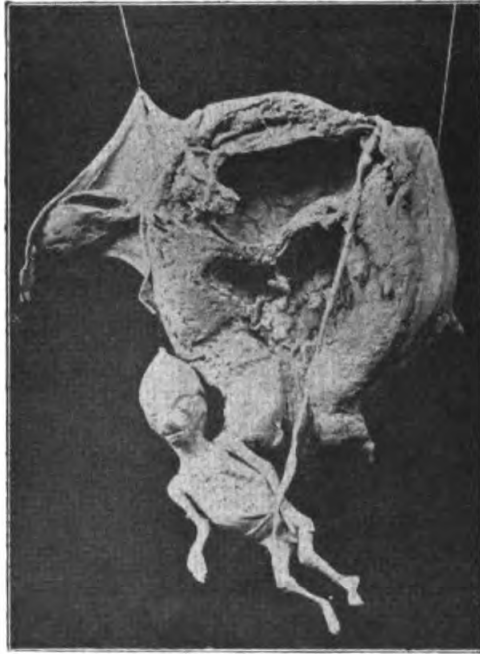


FIG. 3.

Interstitial sac encroaching on cavity of uterus.

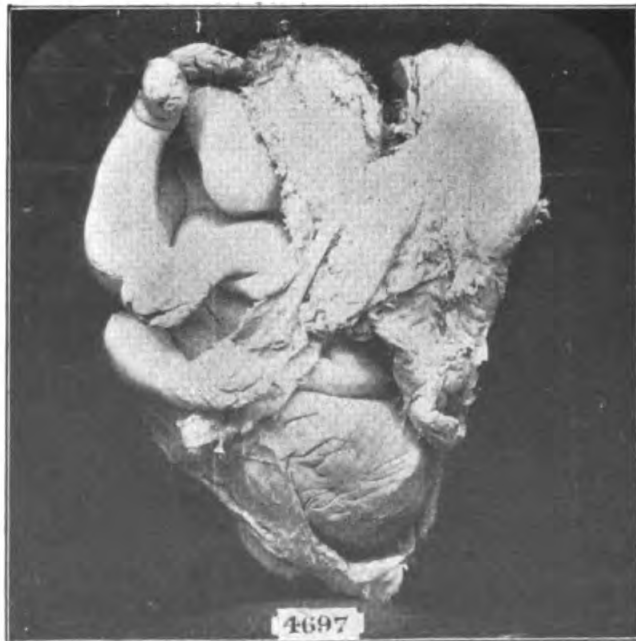


FIG. 4.

Ectopic gestation sac at eighth month.

an end to life, that they simulate cases of poisoning, and foul play is suspected. Death may occur in from seven to twelve hours, in intra-peritoneal rupture, and these interstitial sacs always rupture intra-peritoneally. It is only sacs in the middle part of the tube which rupture extra-peritoneally. Slide No. 20 is from a specimen in the museum of Guy's Hospital. The sac¹ distends the wall of the uterus and encroaches on the cavity. A corpus luteum is seen in the left ovary.

Although ovarian pregnancy cannot, perhaps, be said to be a clinical variety of ectopic gestation, yet it is historically of such interest, that I should like to show you Slide No. 21. It is the photograph of the first proved British specimen of the kind, presented to the Royal College of Surgeons by two Leeds surgeons, Messrs. Anning and Littlewood. The specimen was exhibited at the Obstetrical Society, and reported upon by a committee in 1901. It has long been disputed whether an ovarian pregnancy could exist, but a Dutch lady doctor published a case, a section of which I have myself seen, showing the ovum actually embedded in the ovary with membranes unruptured, the ovarian albuginea covering the superficial surface. Other specimens have come to light subsequently, and ovarian pregnancy will not remain such a curiosity long.

The first undoubted published case in England is in the Royal College of Surgeons' Museum. It shows the right ovary and part of the left with the right Fallopian tube. In the right ovary is a cavity which contains, partly embedded in blood-clot, the products of an early gestation which occurred within the ovary; the villous surface of the chorion is distinctly recognisable to the naked eye.

The patient was 28 years of age, and had been married five months; there had been no previous pregnancy. Menstruation was usually normal. Laparotomy was performed about thirty-six hours after what was diagnosed as the rupture of an ectopic gestation (August 27, 1900). About two pints of blood and clot were removed, together with a small ovum about the size of a Barce-

¹ See Plate II., fig. 3, p. 379.

lona nut; this fitted into a firm envelope composed of laminated coagulum. There was a rent in the right ovary leading to a cavity which contained some blood; and to this cavity the ovum was exactly adapted, indicating the ovarian origin of the pregnancy (in the preparation the extruded ovum and clot have been replaced within the cavity in the ovary). The right tube which is removed showed no evidence of rupture. The left tube was examined and found to be normal. The cystic portion of the left ovary was cut away.

The patient made a good recovery. *Trans. Obstet. Soc.*, vol. xliii., p. 14.

I have one or two more slides of later stages of pregnancy and some curiosities which may be of interest.

[Slides 22 and 23 (4,697) show a cyst,¹ about eight inches long, measured vertically, and containing a foetus of about the eighth month, with cord and placenta. The right Fallopian tube is lost on its surface, and between it and the visible part of the tube the ovary may be seen. The left Fallopian tube is distinct from the cyst, its fimbriated extremity has been cut away. The left ovary, extremely flattened and atrophied, cannot be seen, as it lies deeply hidden between the cyst and the side of the left broad ligament. The rectum is closely adherent to the back of the cyst; the uterus, five inches in length, contains a well-formed decidua. The foetus, which has an encephalocele covered by the cyst, is kept in the position it held at death; it lies with its head in Douglas' pouch, below the upper part of the vagina; the occiput looks to the left, and the right parietal bone is the most forward.

From a woman aged 34. For several months before her death she was suspected of being the subject of malignant disease of the ovary; repeated hæmorrhages had occurred, which were taken for menstruation; other symptoms of pregnancy were absent, and the mammæ were small and pendulous to the last. She died rather suddenly in the night, a few days after admission into hospital. The peritoneal cavity was found filled with coagula, which issued from a rent in the upper and anterior part of the cyst. The case is mentioned (by the donor) in the discussion on Mr. Lawson Tait's paper on "A Second Successful

¹ See Plate II., fig. 4, page 379.

Case of Gastrotomy for Extra-uterine Pregnancy," read before the Royal Medical and Chirurgical Society, November 11, 1879 (see *Brit. Med. Journal*, vol. ii., 1879, p. 779, and *Lancet*, vol. ii., 1879, p. 731).

[Slide 24, shows to what perfection an ectopic foetus may attain. Female foetus, from cyst in right side of abdomen, removed six months after completion of pregnancy. Length 2 ft. Weight 4 lbs. 3 ozs. Nails long, well developed. Urachus and umbilical vessels open.

Mother, aged 28, married 8 years, never before pregnant. In February, menstruation closed. In June, movements felt. In November, false labour, with vaginal discharge of blood and flesh-like substance. In February next, menstruation re-appeared; removed by "gastrotomy"; placenta adherent and left; wound closed. Complete recovery.

Slide 25 illustrates an unusual accident.

Cyst and foetus from a case of extra-uterine gestation.¹

Large portion of cyst wall occupied by placenta-like tissue. Wall of cyst contained unstriped muscle. Cyst was adherent to omentum from which it derived its blood supply. It occupied left side of abdomen and Fallopian tube was shortened but not connected with the cyst. The structure of cyst wall and the short tube suggest separation of the distal portion of the tube.

From patient, aged 34, with severe intermittent abdominal pain, vomiting and cold sweats. Tumour on left side of abdomen from pelvis nearly to umbilicus. Abdominal section. *B.G. Jl.* May, 1886, p. 1.

Slide 26 shows a thick walled sac with left broad ligament seen from behind; consists of a dilated horn of a bicornuate uterus laid open to show skeleton of retained foetus. On the reverse of preparation left Fallopian tube and cut end of round ligament seen.

Woman, aged 30, admitted for abdominal swelling and pregnancy. There was no indication of pregnancy. Laparotomy performed for the removal of supposed sub-peritoneal myoma. *Obs. Trans.*, xxxvi., p. 263.

¹ See Plate III., fig. 5, page 382.

Slide 27 from Guy's Hospital Museum shows a sac¹ formed in the left undeveloped horn of a uterus bicornis. The pregnancy is between two and three months, the foetus having fallen from the sac. The chorionic villi are abundant, and there is a decidua in the uterus, and a corpus luteum in the right ovary.

Patient went to Guy's for an uneasy feeling in the abdomen, and a few days later fainted, and died in four hours.

Slide 28 shows the bones of a lamb retained long in utero. The bones are bleached and dry, and all their relations altered by compression. All the soft tissues are removed. This occurs also in tubal gestation sacs, and differs from a lithopædion where the bones and soft tissues are fused together by pressure and deposit of lime salts, and often so altered in shape that individual bones cannot be recognised, and scarcely any parts of the foetus made out.

Slide 29 shows a lithopædion which was taken after death from the right side of the lower part of the abdominal cavity. The uterus and appendages have been removed with the specimen, but they afford no evidence as to the original site of gestation.

From a woman, aged 76, who thirty-seven years previously had been told that she was pregnant; no labour resulted, and laparotomy was proposed, but this the patient refused.

Slide 30, gives a diagram showing (a) pregnancy in one half of a double uterus; (b) pregnancy in the undeveloped horn of a bicornuate uterus.

Slide 31 gives diagrams showing (c) tubal pregnancy; (d) tubo-uterine (interstitial) pregnancy. Note position of round ligament in each.]

Dr. WYNNE THOMAS could imagine no greater catastrophe happening to any woman than the rupture of a tubal pregnancy. It required a good deal of imagination to suppose that a spermatozoön was gifted with such a capacity of wandering in the way described by the author of the paper, and to find the right spot to attack. In a case where it was distinctly proved that the end of the tube was blocked, it seemed to him (the speaker) that

¹ See Plate III., fig. 6.

PLATE III.



FIG. 5.

Dr. Heywood Smith's case from Royal College of Surgeons' Museum.

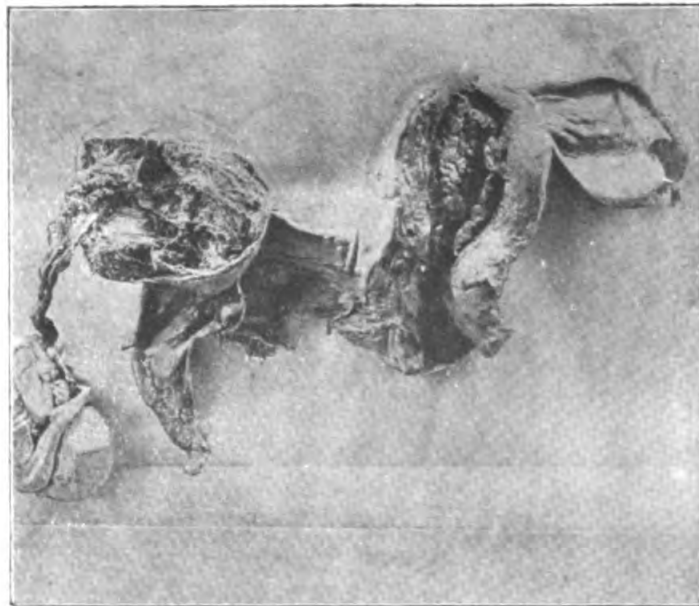


FIG. 6.

Pregnancy in undeveloped horn of uterus bicornis.

it might have taken place after the spermatozoön had entered and impregnated the ovum which it found up in the tube; the pregnancy having taken place, a certain amount of inflammation followed and blocked up the tube. He thought they would all congratulate Dr. Johnstone on the successful result of his operation. It was difficult in a great many cases to obtain a correct history, and the fact that there had been no symptoms previous to the rupture of the tube, might put a practitioner off his guard. Lawson Tait had said that he had never seen a case, had never heard of a case, and had never come across a specimen in any museum of ovarian pregnancy; but in the year 1901 a case was sent up which was examined by a committee of experts who proved without doubt that it was a case of ovarian pregnancy. Personally he did not see why such a thing should not occur. If the ciliated epithelia of the tube had been so far prevented from performing their function that the ovum had not been transferred from the ovary to the uterus, and the spermatozoa, being allowed to go up the tube, happened to find a Graafian follicle which at the time had just ruptured, he did not see any reason why conception should not take place at that situation.

The PRESIDENT (Dr. Burford), on behalf of the society, thanked the author for the exceedingly careful, entirely accurate, and thoroughly practical paper. Before the time of Lawson Tait very little was known about extra-uterine gestation, except as found at the *post-mortem* table. It was generally looked upon as one of those unavoidable accidents, like the eruption of volcanoes, which could not be prevented, and which were mourned over after the dread results had been made too manifest. In that unique work, "The Diseases of Women," by Lawson Tait, the whole history and the recent development of knowledge concerning extra-uterine gestation during the previous quarter of a century was diligently set forth. Only the careful investigations which Lawson Tait made of the detail of his operative cases enabled him to carry out the entirely new procedure of diagnosing extra-uterine pregnancy and dealing successfully with it before it culminated in disaster. Since Tait died, the study of the subject had been taken up by Mr. Bland-Sutton, who was probably the greatest living British authority on tubal gestation. Mr. Bland-Sutton had the good fortune to discover what nobody suspected, that not only was there such a thing as tubal gestation, but tubal abortion also, *i.e.*, that the Fallopian tube might expel its contents through the open end without

actual rupture. The result, however, was practically the same as in rupture, the death of the patient, sooner or later, unless operative relief was carried out. It was most interesting to discover that the behaviour of the tube under circumstances of gestation should as nearly as possible be founded on the model of the prototype, the uterus. The author had raised one point upon which he (the President) would ask him to be a little more elaborate, namely, the liability in hasty diagnosis for early extra-uterine gestation to be confounded with ordinary abortion. This was a perfectly avoidable mistake if only certain clinical signs characteristic of these conditions were carefully borne in mind. It was in the early stages of tubal gestation this mistake was most likely to be made. When he (Dr. Burford) was in Berlin some years ago, working with Professor Martin, certain matters connected with tubal gestation had been investigated by that authority, the results of which the author had incorporated in his paper. The first was that Martin attached much importance in the early diagnosis of unruptured tubal pregnancy to the pulsation of the uterine artery in one *cul-de-sac* at the side of the uterus. When one found a uterus with an established history of recent gestation, with an artery easily made out, coursing in the *cul-de-sac* over the ordinary small swelling, the probability was that that small swelling was a tubal gestation. The other point upon which Martin laid great stress was that what was called tubal colic could not possibly exist. Dr. Burford narrated one or two cases which had occurred in his own experience. He operated upon the first case of extra-uterine gestation which was operated in the hospital; the patient had passed through the hands of three or four allopaths before she came to him, through the agency of Major Deane. The history of tubal gestation was as plain as it could be, and how it could have been overlooked was to him a marvel. The foetus was certified by Mr. Bland-Sutton to be a foetus of twenty-six weeks gestation. It was expelled from the tube into the abdominal cavity, and had lived there for some time, and died at the twenty-sixth week of its existence. The patient was now perfectly well. In another case, with which unfortunately he had nothing personally to do, a lady of his acquaintance came to him in great grief and said her sister-in-law had suddenly died of tubal gestation. This patient had been known to be three months pregnant, she got up on Sunday morning, breakfasted with the family at eight o'clock without an ache or a pain, and at eight o'clock in the evening was dead; tubal rupture having

occurred during the day. That case gave some idea of the awful suddenness with which this condition occurred, and it also gave a very clear idea of the absolute necessity (which he invited Dr. Neatby to dilate upon) for drawing up in categorical form a clear and lucid statement of the cardinal indications of extra-uterine gestation, particularly in the early months, when the greatest danger existed.

Dr. NEATBY, in reply to Dr. Thomas' remarks, said that in the first place the difficulties of the spermatozoön mentioned were not so insuperable as might be supposed. Spermatozoa lived and flourished for a greater or less length of time in the abdominal cavity; they had been found during life in the tube, and had been found immediately after death in the peritoneal cavity both of men and animals. Therefore, if one conceived that such minute organisms were living in the peritoneal cavity, it was not very difficult to suppose that they could traverse the distance from one Fallopian orifice to the other. With regard to the less active ovum, it was perfectly well-known that if the appendages became prolapsed into the pouch of Douglas that the orifice of one tube might be very close indeed to the corpus luteum or the Graafian vesicle of the opposite ovary, but the thing which proved what he stated was that the blocks were obviously permanent. For instance, a portion of the undeveloped Müller's duct might be found to be merely an impervious fibrous cord; and, indeed, it was pretty well established that the condition he had been discussing obtained. He did not think the cilia were very important, because the spermatozoa easily penetrated the Fallopian tube, and where examination had been made in cases of tubal gestation cilia were generally found; they were more often found than not. It was believed that a tubal gestation was at least as common in a normal Fallopian tube as in an abnormal one, if not more common. In his paper he did not refer at all to treatment. The question of operation was a very difficult one. It was easy enough to suggest that there should never be any delay in operating, and if the patient was in a condition to be operated upon with safety, it was perfectly clear there need be no delay, but there were cases in which it was doubtful whether the patient would survive the operation, and unless the practitioner felt that he must give the patient the last and only chance, and he was practically convinced it was the only chance, he would hold his hand in moribund cases. Nowadays, with the help of transfusion, which had been largely used in the hospital and had been demonstrated to be such a wonderful restorative by

Dr. Burford in many of his cases, it was possible to operate in more questionable cases than practitioners would have operated on a few years ago. He learnt a very useful test from Mr. Knox Shaw as to when a patient was in a condition to be operated upon: if the patient rallied after injecting a large amount of saline fluid into the sub-cutaneous cellular tissue, she might be considered well enough to be operated upon.

CASES, SPECIMENS, &c., EXHIBITED AT
VARIOUS MEETINGS.

CASES.

*Rupia Syphilitica.*¹

A case in which there was loss of soft palate, &c., in a woman of 40, where the infection was derived from a nurse-child.

*Keloid.*¹

A case of keloid in which there were several discrete patches supervening upon shingles of the face in a previously healthy woman of 21 years of age.

*Coxa Vara in a Rachitic Child.*²

This child was 7 years old, and one of a family of thirteen, three of whom have rickets. A brother and a sister were operated on five years ago in the London Homœopathic Hospital for tibial curvature. The child seems to have been fed on flour, water and sago at five months old. He began to stand about 2, and could stand better then than he can now, but he has never been able to walk properly. He shows the usual signs of rickets in an aggravated degree in his wrists, ribs and clavicles, and most of his long bones are curved. The affection of the hip-joint is bilateral, both trochanters being higher than normal, but there is no downward movement on traction of the leg as in dislocation. The limbs are extended, and rotated inwards, and the feet everted. The movements of the joints are slightly diminished, especially in abduction. There is "scissor legged" progression when he tries to walk, some tilting of the pelvis and consequent scoliosis. When he flexes the thighs there is

¹ Exhibited by Dr. GALLEY BLACKLEY at the Clinical Evening, July 9, 1902.

² Exhibited by Mr. C. KNOX SHAW at the Clinical Evening, July 9, 1902.

marked crossing of them on the body. Most cases of coxa vara come on in adolescence, but cases have been observed in early life in rachitic children. This seems to be a severe case.

*Tumour of Brain.*¹

W. J. C., male, aged 12. Ill nine months. He began with vomiting while attending school, also constant headache, vertigo and fear of falling. Sight failed three months afterwards, and is now blind and has ataxic gait. Occasional lapses of consciousness, nystagmus, slight facial paralysis, various irregular explosive movements on volition. Knee jerks exaggerated and ankle clonus. The tumour is diagnosed as cerebellar; nature unknown and prognosis very unfavourable.

*Lesion of the Pons Varolii.*¹

W. L., aged 49, cabman. Duration of ailment, ten months. No history of syphilis or rheumatism. Began with unsteadiness of gait. Inclination to fall to the right side. Numbness and formication of right hand, weakness of left. Slight nystagmus on looking far to left. Loss of general sensation—right hand. Reflexes exaggerated. Under treatment eight months. Nearly recovered.

The lesion was diagnosed as a small neoplasm, nature unknown, at the posterior part of the left pontine region. Treatment, arsen. iod. and gelsemium alternately.

*Children's Diseases.*²

- (1) Enteric fever in a child, aged 4½ years.
- (2) A cretin, aged 6, 30 inches high, treated successfully by thyroid extract.
- (3) Myxœdema. Aged 3 years and 8 months. The illness began four months before treatment, till then the patient was a normal child. Treated successfully by thyroid extract.
- (4) Birth paralysis. Aged 7. Facial and ocular muscles paralysed.
- (5) Central apoplexy, at 6 months of age. Patient now 2 years and 1 month. Is hemiplegic.

*Scleroderma of Vulva.*³

Mrs. S., aged 63, admitted to out-patient department for pruritus vulvæ: the vulva appeared to be covered with several

¹ Exhibited by Dr. GOLDSBROUGH at the Clinical Evening, July 9, 1902.

² Exhibited by Dr. J. ROBERSON DAY at the Clinical Evening, July 9, 1902.

³ Exhibited by Dr. E. A. NEATBY at the Clinical Evening, July 9, 1902.

thickened layers of white epithelium ; extending into the vagina ; neither tender nor painful.

Patient had treatment in 1900 at Soho Hospital ; vagina being scraped and a portion removed.

The diagnosis of a scleroderma of vulva and vagina was made.

*Recurrent Sarcoma.*¹

Occurring in left groin in young married woman ; noticed as a painful swelling four years ago. Operated on twice at Middlesex Hospital. On second recurrence operation considered unadvisable. Microscopic diagnosis of myeloid sarcoma. Under treatment at London Homœopathic Hospital since October, 1899. Chief treatment has been arsenic. There has been no further growth of the tumour during that time.

*Scirrhus of Breast.*²

Miss J., aged 46, came from Bedfordshire to out-patient department in December, 1901, suffering from advanced scirrhus of left breast with glands in axilla and above clavicle.

Operation absolutely refused ; patient was put on cacodylate of soda, gr. $\frac{1}{4}$ t. d. ; seen every month.

In June, 1902, breast was much smaller and softer, no pain experienced, glands in axilla and above clavicle had disappeared. Treatment is being continued.

*Atresia of the Posterior Nares.*³

A case of atresia of the posterior nares following scarlatina in a young woman.

*Large Tumour of Left Lobe of Thyroid.*⁴

In a woman, aged 34, of four years duration, condemned to operation at King's College. When she came under treatment the tumour reached the angle of jaw, and was very hard and almost cartilaginous to the feel. Under homœopathic treatment it has considerably diminished in size and form, has become quite soft, almost throughout, and all urgent symptoms have disappeared. She has taken sulph., lach., lycopodium, ars. and kali. carb. Principally lycopodium.

¹ Exhibited by Mr. JAMES JOHNSTONE at the Clinical Evening, July 9, 1902.

² Exhibited by Miss L. CUNARD CUMMINS at the Clinical Evening, July 9, 1902.

³ Exhibited by Dr. VINCENT GREEN at the Clinical Evening, July 9, 1902.

⁴ Exhibited by Dr. LAMBERT at the Clinical Evening, July 9, 1902.

*Peculiar Abdominal Tumour.*¹

H. B., aged 56, labourer. Ill nine years. Pain in right side of abdomen which comes suddenly and lasts about four hours sometimes longer. The pain accompanied by vomiting and when severe, by shivering. He has used stomach tube for eight years. He has lost flesh throughout his illness, but during the last five years gained a little and been able to do some work.

SPECIMENS.

Multiple Uterine Fibro-Myomata.

A. R., aged 36, married four years, no children, no miscarriage. 1896.—Slight menorrhagia and dysmenorrhœa; gradual increase of symptoms till the present. January, 1901.—Curetted with temporary benefit. November, 1901.—Abdominal hysterectomy and double salpingo-oöphorectomy. Recovery.

*Periosteal Sarcoma of Femur.*²

Frances D., aged 50, married, 7 children, mitral regurgitation. August, 1900.—Pain and stiffness in the right knee joint (treated for synovitis). September, 1900.—Slight swelling of joint noticed. Admitted, September, 1900.—Gradual increase of pain and swelling with complete fixation of joint. September 17.—Amputation at hip-joint by external racquet incision. Recovery.

The growth is an osteo-sarcoma in which the bone forming cells of the periosteum and medulla (one or both) are involved. Having taken on a malignant tendency, they have begun to multiply rapidly, but do not lose the capacity for depositing calcareous matter. The bony network is very distinct and in places is deposited between individual cells. In others between groups of cells. The prognosis for the patient is very unfavourable. Recurrence in internal organs usually occurs early.

*Vesical Calculus, submitted three times to Lithotrity: removal by Suprapubic Lithotomy.*³

Edward Simms, aged 40, booking clerk. 1887.—Difficult and frequent micturition, urine thick. 1893.—Lithotrity, St. Peter's Hospital. 1894.—Lithotrity, St. Peter's Hospital. 1895.—

¹ Exhibited by Dr. LAMBERT at the Clinical Evening, July 9, 1902.

² Specimen exhibited by Dr. BURFORD, Dec. 5, 1901.

³ Specimen exhibited by Mr. KNOX SHAW, Dec. 5, 1901.

Lithotrity, St. Peter's Hospital. 1896-1899.—Sounded on several occasions, no stone found. 1901.—Still complains of painful and frequent micturition, urine thick and offensive. June 25.—Cystoscopic examination, stone seen lying behind prostate. A sharp attack of cystitis followed. July 9.—Suprapubic lithotomy, calculus removed. The calculus was partly encysted, and its exposed half had been crushed by the lithotrite, leaving a moiety behind.

*A Centrifuge.*¹

Bausch and Lomb's spiral geared, single speed Centrifuge; giving 2,000 to 3,000 revolutions per minute. Agents: Staley & Co., 35, Aldermanbury, E.C.

*Extra Uterine Gestation—Operation, Recovery.*²

A specimen showing tube distended with blood clot (extravasation into broad ligament) tube ruptured. Fœtus lying partly in tube, partly in peritoneal cavity.

*Membranous Colitis.*³

A specimen from a case of dyspeptic membranous colitis.

*A Gall-stone.*⁴

A specimen removed *post mortem* from the ileum; ulceration between the gall bladder and duodenum; perforative peritonitis. Death.

*Portion of Colon Resected for Carcinoma.*⁵

This specimen was from the case referred to in the paper on the subject, on p. 343. Also with microscopic section.

*Uterine Myo-fibroma.*⁶

A specimen removed from a patient by abdominal retroperitoneal hysterectomy. Recovery.

*Double Pyosalpinx.*⁶

A specimen of double pyosalpinx removed by cœliotomy. Recovery.

*Broad Ligament Cyst.*⁶

A large specimen removed by enucleation.

¹ Exhibited by Mr. KNOX SHAW, Dec. 5, 1901.

² Exhibited by Mr. JOHNSTONE.

³ Exhibited by Dr. ANDREW NEATBY, June 5, 1902.

⁴ Exhibited by Dr. STONHAM, June 5, 1902.

⁵ Exhibited by Dr. SPENCER COX and Mr. KNOX SHAW, June 5, 1902.

⁶ Exhibited by Dr. NEATBY, April 10, 1902.

*Mammary Carcinoma.*¹

A recurrent tumour removed by excision of the pectoralis major muscle.

*Rectal Polypi.*²

Specimen from a child, aged 3 years and 6 months, and a second similar specimen.

*Carcinoma of Ovary.*³

Specimen taken from case in which temporary recovery had ensued.

*A Papillomatous Ovarian Cyst.*³

*Epithelioma of Vulva.*⁸

Two drawings taken eleven months apart, showing discoloration and sensitive area and area of increase in that period. *Clinically*: no hardness, elevation of edges or loss of substance by ulceration were present. Two microscopic sections of same:

Uterine Myomata.

Fibro-myoma uteri,⁴ in a single lady, aged 49. Hæmorrhage with much periodic pain, had existed for several years. Prolonged therapeutic treatment, followed by curetting, had been of no permanent avail. The patient was blanched, and had also some cardiac dilatation. Abdominal hysterectomy. Recovery.

Fibro-myoma uteri,⁴ in a married lady, aged 45. The tumour had been in existence for some years, and only lately given rise to serious hæmorrhage. The patient was very anæmic, but had no cardiac disease. The growth was a mono-myoma. Abdominal hysterectomy. Recovery.

Fibro-myoma uteri,⁴ in a single lady, aged 35. The growth was a multiple fibroid growing for the most part within the right broad ligament, and extending nearly to the liver. The operation was a very complicated one. Abdominal hysterectomy. Recovery.

Uterine myoma⁵; retroperitoneal hysterectomy for pain and growth. Recovery.

Uterine myoma⁵; retroperitoneal hysterectomy. Death from secondary hæmorrhage.

¹ Exhibited by Dr. NEATBY, April 10, 1902.

² Exhibited by Dr. J. ROBERSON DAY, July 9, 1902.

³ Exhibited by Dr. E. A. NEATBY, July 9, 1902.

⁴ Exhibited by Dr. BURFORD, July 9, 1902.

⁵ Exhibited by Dr. E. A. NEATBY, July 9, 1902.

Myoma of uterus¹ (pedunculated, subperitoneal) removed, *post mortem*, from a patient, aged 52, who died suddenly from dilated and diseased heart.

Uterine myoma¹ (interstitial and pedunculated subperitoneal) producing pain and attacks of distressing dyspnoea; removal by retroperitoneal hysterectomy. Recovery.

*Ovarian Tumour.*²

Ovarian tumour, in a lady, aged 48. In this case, that of a single lady, the appearance of the growth removed was such as to suggest malignancy; and though the microscopical evidence was negative, the after clinical history has supported the original view. Ovariectomy. Recovery.

Ovarian tumour, in a patient, aged 25. This case also was that of a single lady, in whom the tumour had been noticed only for a few months. The mass removed was of a unique character stated by Mr. Targett to be teratoma. Ovariectomy. Recovery.

*Carcinoma Cervicis Uteri.*²

Carcinoma cervicis uteri in a patient, aged 53. The chief symptom was periodic hæmorrhage, before the advent of the menopause. Vaginal hysterectomy. Recovery.

*Adenoma of Thyroid.*³

Adenoma of thyroid, removed successfully from a female patient, aged 40. Symptoms of laryngeal stenosis, rapid pulse and tremors.

*Microscopic Specimens of Stained Blood-Cells.*⁴

- (1) *Physiological.* (a) Lymphocyte. (b) Large mononuclear leucocyte. (c) Polynuclear neutrophile leucocyte. (d) Eosinophile leucocyte. (e) Basophile-cells. (Mast-Cells).
 (2) *Pathological.* (f) Normoblasts. (g) Megaloblasts
 (h) Myelocytes (neutrophile). (i) Eosinophile myelocytes.

¹ Exhibited by Mr. JAMES JOHNSTONE, July 9, 1902.

² Exhibited by Dr. BURFORD, July 9, 1902.

³ Exhibited by Mr. DUDLEY WRIGHT, July 9, 1902.

⁴ Exhibited by Mr. F. A. WATKINS, July 9, 1902.

REPORT OF THE COUNCIL.

THE Council of the British Homœopathic Society, in presenting its Annual Report, feels that the past year has been an eventful one in its history. At the last Annual Assembly the Laws were amended and brought into line with the greater development of the work of the Society. These Laws have been published in the Journal. Following the Presidential Address, delivered before one of the best attended meetings held for a long time, there has arisen the British Homœopathic Association. The Society has been responsible for its inception, but the Association has now an independent organisation. The Council has had under consideration during the year several important matters, and the results have been from time to time communicated to the Society. Death has removed from amongst our members Dr. Richard Hughes, for forty-one years one of the most active workers in the Society. He was elected a member in 1861. From 1879 to 1884 he was energetically engaged in work as Secretary, and, after serving two years as Vice-President, was chosen President. Since its institution as a quarterly journal, Dr. Hughes has ably fulfilled the function of Editor of the Journal of the Society. His position in the homœopathic world has cast a lustre upon the Society; his death leaves a vacancy which will be difficult to fill.

Another loss by death has been that of one of our most esteemed and distinguished corresponding members, Dr. William Tod Helmuth, of New York.

Ten new members have joined the Society, an encouraging sign of activity and interest in our work. The number of resignations has been one only.

The attendances at the monthly meetings have been good and the discussions of value.

At the first meeting of the Annual Assembly a successful clinical evening was held, at which a large number of clinical cases and specimens were shown.

The Indexing Committee are at the end of their labours

and have found their task no light one. A special report will be made by them.

This year it has been deemed wise to hold the annual meetings of the Society and the British Homœopathic Congress on successive days, thus giving those who live at a distance from London an opportunity of attending both meetings. It is hoped that much benefit to British homœopathy may result therefrom.

REPORT OF THE INDEXING COMMITTEE.

THIS Committee has been engaged in the arduous work of revising and eliminating clerical errors in the index proofs; and they greatly regret that the revision is not, as yet, sufficiently far forward to allow of an accurate copy to be presented to the Society this session. They anticipate by the next meeting of the Society that specimen copies will be laid upon the table for the Society's inspection and approval.

GEORGE BURFORD.
WASHINGTON EPPS.

THE BRITISH HOMOEOPATHIC SOCIETY.

BALANCE SHEET—SESSION 1901-1902.

RECEIPTS.	£ s. d.	EXPENDITURE.	£ s. d.
To Balance	33 10 5	By Rent	25 0 0
„ Dividends on 2½ per cent. Consols	5 3 0	„ Printing	134 12 0
„ Subscriptions	200 12 6	„ Honoraria to Editors	21 0 0
„ Sale of Publications	6 4 11	„ Library	4 9 5
„ Half cost of Plates	1 13 3	„ Postage and Stationary	16 2 3
„ Advertisements	58 0 0	„ Refreshments	5 10 0
		„ Petty Cash	3 4 1
		„ Cheques returned	3 3 0
		„ Indexing Account	6 18 6
			£219 19 3
		„ Balance	85 4 10
	£305 4 1		£305 4 1

T. H. HAYLE, Auditor.
 July 8, 1902.

JNO. G. BLACKLEY, Treasurer.
 July 8, 1902.

VALEDICTORY ADDRESS BY THE PRESIDENT.

THAT wise time-limit which the constitution of the Society imposes upon its most dignified office, now enables me, with greater freedom and less responsibility, to appraise the result of our sessional labour, and to indicate from actual experience the weak as well as the strong links in our co-operative chain. First in order of importance comes the growing membership of the Society. I rejoice with you that this session has seen added ten new members to the comity of our body. But how limited a number relative to the hundreds of new graduates, thirsting for more professional knowledge, yearly introduced into our honourable profession! I cannot but recommend to your notice the wise suggestion of Dr. Wynne Thomas—that every member of the Society should labour to interest at least one of his younger professional acquaintances in the art of Homœopathic practice, and follow up the effort with point and with perseverance, until a wider range of knowledge and power is gained by admission into membership of this Society.

Following up this practical suggestion, I would indicate how much this Society has it in its power to make such additions possible, by largely increasing the value of its *Materia Medica* and Therapeutic work. By the law of reaction, this, the sole object of the Society for many years, is now temporarily shifted from its place of precedence by the thronging and multitudinous professional interests of the present day.

Yet, it is time the pendulum began to swing again in the former direction, and that the most time and the best work of this Society be given to problems and experience in the control of disease by Homœopathic Therapeutics. I regard the present mechanism of this Society as requiring some re-adjustment, so as to make of the subject of *Materia Medica* and Therapeutics a predominant part. This

department is, in fact, our *raison d'être* as a Society. While I regard this body as, of necessity, a microcosm of all departments of practice—as corresponding to all the various sides of our professional work—yet these diversities are not all of identical importance. First and foremost comes the applied science of therapeutic law. Valid as this is, no less is the sphere of obstetric medicine, in the accessory therapeutics of surgery, than in the wide range of clinical medicine proper, its place is thus somewhat more than *primus inter pares*; and the special, the insistent, the paramount necessity of our younger adherents, as conveyed to me by some of them, is to tap the wider and deeper views and experience of those who sit among us as *patres conscripti*, in Homœopathic practice. If we wish to grow, we must provide for our younger element a fit environment for their continuous development in the art, the very difficult art, of successful applied Homœopathy.

May I now, absolved from the reticence which the Presidency entails, convey to you my entire appreciation of the thorough-going efficiency which marks the conduct of your official administration. After some experience of societies, I may say that I never have known the interests, nay, the individual views and suggestions, of members more carefully and courteously dealt with, than by the elected officers of the Society to which you and I have the honour to belong. Its Council Meetings are marked by a hard-working, discriminating spirit, eager to seize on and to develop all points which make for the greater union or the greater usefulness of the general body. Here I feel I must tender my personal thanks for the valued assistance I have received from the members of the Council in the conduct of my responsible duties, to the Editor, and to the Secretaries chiefly, as well as to one of your ex-presidents in particular. I have received the most valued co-operation both in questions which could be settled by routine, as well as questions where discretionary power was involved. A society served by officers in such a spirit as I have found cannot but congratulate itself on the men willing to work unostentatiously, but strenuously, for its best interests.

Two items of sessional history point the moral and adorn the tale. When the Carnegie Education Endowments were first announced the Council were prompt to recognise and deal with the question of approaching the authorities for the inclusion in the subsidised bodies of a Chair of Homœopathy. The best thanks of the Society are due to Dr. Storrar, of Belfast, for the valuable personal aid repeatedly given to the Council in regard to this business. After careful collection of facts and opinions, the Council reluctantly came to the conclusion that the time was not fitting, nor the conditions satisfactory, for their successful approach to the trustees, and this without prejudicing any future action the Society might afterwards elect to take. The wisdom of this course has been amply supported by private information conveyed to the Council at a later date from the same professional source.

Next, as indicating the ability and the care with which the Society's affairs are managed, I may instance that most creditable piece of official work, the foundation and launching of the British Homœopathic Association, without it costing this Society a single shilling. You will recall that a resolution was proposed and carried, at the first meeting of the session, for giving effect to a forward movement, the necessity for which had been propounded to the Society. In compliance with this resolution a Committee was formed, details of procedure worked out and carried through, much circular literature distributed, pamphlets sent out, numerous personal interviews, and a large correspondence conducted, until, finally, a new Association, constituted *ad hoc* at public meeting, assumed the duties and took over the responsibilities connected with the work. Into all this the officers nominated by the Society threw themselves with characteristic ardour, carrying out their instructions with no sparing of time or trouble. So well was this managed, that the finances of the Society, unable at present to bear any additional strain, were never once touched upon during the hard work preceding the constitution of the British Homœopathic Association. I can provide you with no more convincing proof of the care and attention your officers give to the interests and the behests of the Society they so well serve.

No allusion, however cursory, to the history of the Session, would be permissible without recounting the great loss this Society and the larger Homœopathy of the wide world have sustained in the death of Dr. Hughes. To us, for so many years familiar with his personality, it seems as though the times were out of joint to miss his striking figure, his genial and charming manner, and that characteristic detachment from the temporary and the trifling which impressed all those who came in contact with him. His great services to this and other Homœopathic Associations, and his enormous contributions to our technical literature we need not here dilate on : *si monumentum requiris circumspice* ; but here finally may we reverently bestow the palm of honour and of affection won by him whose memory is ever green among us.

SOCIETY NEWS.

OBITUARY.

William Tod Helmuth.

THE late Dr. Helmuth, of New York, who died on May 15 last, was a corresponding member of the British Homœopathic Society, to which honour he was elected in 1893. Dr. Helmuth has been described as the "father of homœopathic surgery." He had been Professor of Anatomy in the Homœopathic Medical College of Pennsylvania, also one of the organisers of the Missouri Homœopathic College. He held the Chair of Surgery in the New York Homœopathic College from 1870 until his death. In 1867 he was President of the American Institute of Homœopathy and in 1891 he received the distinguished honorary degree of LL.D. from Yale University. He was the author of a text-book of surgery used as a standard work in homœopathic colleges, and held from time to time editorial offices on homœopathic journals.

Henri-Louis Martiny.

Dr. Martiny of Brussels, also a corresponding member, elected in 1893, died on June 30, in the sixty-fourth year of his age. Dr. Martiny was the founder of the *Revue Homœopathique Belge*. He was a corresponding member of several learned societies, a Chevalier of the order of Leopold in Belgium, and also had received the decoration of *la Croix civique* of the first class.

NEW MEMBER.

At the Annual Assembly, Philip McConnel Corbould Wilmot, of 6, Sussex Terrace, Plymouth, was elected a member of the Society.

OFFICERS AND COMMITTEES FOR 1901-1902.

Elected at the Annual Assembly held on July 10, 1902.

President: J. Roberson Day, M.D.

Ex-President: George Burford, M.B.

Vice-Presidents: James Johnstone, F.R.C.S., H. Nankivell, M.D.

Treasurer: J. Galley Blackley, M.B.

Council: The above and (*Fellows*) Byres Moir, M.D., E. A. Neatby, M.D., D. MacNish, M.D., Dudley Wright, F.R.C.S.; (*Members*) Lestock Reid, M.R.C.S., Vincent Green, M.D.; *Representative of Liverpool Branch*, A. E. Hawkes, M.D.

SECTIONAL COMMITTEES.

Section of Materia Medica and Therapeutics: George Black, M.B., J. H. Clarke, M.D., J. R. P. Lambert, M.D., J. McLachlan, B.A., M.D., F.R.C.S., Percy Wilde, M.D.

Section of Medicine and Pathology: J. H. Bodman, M.D., J. W. Ellis, M.B., G. F. Goldsbrough, M.D., D. MacNish, M.A., M.B., Byres Moir, M.D.

Section of Surgery and Gynæcology: George Burford, M.B., James Johnstone, B.A., M.B., F.R.C.S., E. A. Neatby, M.D., H. Wynne Thomas, Dudley D'A. Wright, F.R.C.S.

SUMMARY OF
PHARMACODYNAMICS AND THERAPEUTICS
WITH CLINICAL NOTES.

Extracted from Exchange Journals by the Editor, with the collaboration, in the case of journals in foreign languages, of J. Galley Blackley, M.B., and D. MacNish, M.A., M.B.

Apium Graveolens.—Dr. J. H. Clarke publishes the following as the result of eating celery. An American lady, after celery for supper, “woke up in the middle of the night with the throat swollen that she could not speak, the condition lasting for hours. The throat seemed entirely closed. Dyspnoea. At the same time she had indigestion with oppression at epigastrium. Itching of the chest, hands, in the throat, and eyes, like hay fever.” The worst attack of all occurred in the West Indies. Celery having formed part of breakfast at 11 a.m., three hours after, there was fulness, oppression, dulness, and sleepiness, the throat gradually swelled, then the face and hands; the eyes quite disappeared in the swelling, the whole followed by an intense shaking chill not relieved by external warmth. Profuse perspiration ensued, which gave relief, and she was well in two hours. (*Homœopathic World*, August, p. 364.)—ED.

Arnica Montana, a study.—Dr. Richard Hæhl, in a study of the symptomatology of arnica montana, considers the following four spheres of action the keynotes to a proper understanding of the drug: Firstly it induces severe pains, as if a contusion or bruise had been sustained. Every portion of the body, but especially the muscles, feel as if beaten. Joint pains develop as if after violent over-exertion or sprains. Secondly, arnica affects the venous system, inducing stasis, eccymosis, and hæmorrhage. Thirdly, diarrhœa is induced. Even small doses will induce frequent dysenteric stools accompanied with muscular

pains (compare baptisia). Fourthly, arnica produces a train of febrile symptoms closely related to typhoid fever. (*Hahnemannian Monthly*, June, p. 480. Translated from the *Homeöpathische Monatsblatt*.)

Chelidonium in Chronic Hepatitis and Catarrh of the Ductus Communis Choledochus.—A case is published¹ by Dr. J. K. Eberle which, in an acute exacerbation, was quickly relieved by chelidonium 3x, followed by podophyllum 6x. The patient was a man aged 55, a miller, who had suffered for five or six years off and on. The symptoms were enlargement of the liver, dulness extending to two inches below the ribs, tenderness up to the right shoulder blade, pain and soreness in the pit of the stomach extending to the gall bladder, and from it at times a paroxysm of sharp pain running to the back causing him to scream out. Accompanying symptoms were nausea, vomiting, belching of wind, coated tongue, jaundice of skin, and conjunctivæ, dark yellow urine and rise of temperature (100° F.). The man regained his health rapidly, and two years afterwards had not had a recurrence. (*Medical Counsellor*, May, p. 112.)—ED.

Cocculus.—*Characteristics.* In an article on this drug, Dr. M. E. Douglas, Lecturer on Materia Medica at Baltimore, closes with the following list of symptoms as “characteristic.” Vertigo, as from intoxication, or with inclination to vomit when rising up in bed; must lie down. Confusion and stupefaction of the head, generally increased by eating and drinking; headache with inclination to vomit; metallic taste with loss of appetite; extreme aversion to food; unusual nausea and inclination to vomit while riding in a wagon, or from getting cold; great distension of the abdomen; constrictive pinching in epigastrium, taking away the breath; spasmodic flatulent colic about midnight, passing flatus without relief, aggravated when coughing; painful inclination to an inguinal hernia; menses too early, with cramps in the abdomen and colic pains; weakness in the cervical muscles, unable to support the head; feet and hands go to sleep alternately; hands numb and asleep; knees give way, totters when walking; soles of feet go to sleep while sitting; attacks of paralytic weakness with pain in back. (*American Physician*, August, p. 236.)—ED.

Coccus Cacti in Cough.—Dr. Redpath corroborates the well-known indication for coccus cacti in cough. A troublesome

cough by which the patient (a girl aged 7½) was awake every night before midnight. The prescription was coccus cacti cm. dry on the tongue one dose, and S. Lac gr. ii. t. d. Recovery was noted from the date of the prescription. (*Homœopathic World*, July, p. 305.)—ED.

Diphtheria.—*Treatment.* Dr. H. W. Westover, of St. Joseph, Mo., contributes an article on this subject, of which the following is a summary:—*Local Applications.*—He advises their use on the principle of prevention of absorption, but utters a caution against violence in application. The best is considered to be a solution of pix cresol. as a spray, flushing the pharynx, or the application by a cotton swab. In laryngeal cases a steam inhaler may be employed. *Tracheotomy or Intubation.*—In laryngeal stenosis intubation is preferred to tracheotomy, resorted to as soon as the breathing is sufficiently difficult to tax the strength of the patient. *Diet.*—Milk, strong mutton or beef broth, oysters, fruit juices, especially pineapple juice. Stimulants are frequently called for, and egg-nog, milk punch, or whisky diluted with sweetened water are recommended; whisky being much preferred to wines. *Drugs.*—A chief reliance is to be placed on the homœopathically selected remedy of which the following are the principal with their leading indications: *Arum triphyllum*, in nasal cases, with great fœtor and ichorous discharge, the fauces being bright red with abundant or scanty deposit; an anxious expression of face; some ulceration may be present. *Calcarea iodide*, in laryngeal diphtheria, but not in triturations or potencies: "Use the brown iodide of lime made by Billings, Clapp and Co. Put ten grains in four ounces of water, in a well-stoppered bottle and give a teaspoonful for a dose." *Echinacea.*—Where there is much glandular swelling, a general septic condition with fœtor oris and pronounced prostration. *Kali bichromicum.*—Where there is huskiness of the voice, not much membrane, but it may extend to the nares or larynx; abundant tough, ropy mucus; not much glandular swelling. The laryngeal symptoms cause most apprehension. The second decimal trituration is recommended. *Lachesis* should be considered. *Mercurius* is usually called for in some stage of the disease. The cyanide and perchloride should be considered, but the author's favourite is the biniodide in the 2x trituration. It is indicated specially in strumous subjects with extensive glandular swelling. *Antitoxin.*—The author thinks the antitoxin treatment has been

over-rated and gives statistics to show that the mortality from diphtheria varies at different times of the year, and at different places. The author concludes that treatment by antitoxin shows a general average less success than homœopathic treatment, and recommends abiding by the latter means. (*Medical Century*, June, p. 161.) (The author says nothing about the success of homœopathic treatment with antitoxin, information on which point is needed.)—ED.

Faradism in Paræsthesia.—Dr. C. F. Barker, of Chicago, mentions a case in which faradism was used in a sensory disorder which ensued after diphtheritic paralysis. Miss M., 26, had diphtheritic paralysis affecting the throat which yielded to zincum 6x and causticum 3x in six weeks. She now began to experience numb feelings and prickling in the hands and feet. These sensations increased in spite of symptomatic prescribing. After two months the trouble had extended from the fingers to the elbows, and the toes to the knees, and tactile sensibility was disturbed. Local and general faradism were now used, and after six applications two days apart, the patient was completely relieved. (*The Clinique*, June, p. 378.)—ED.

Ferrum and Manganese combined in Anæmia.—Dr. Hermann Metall, Assistant Physician to the General Polyclinic, Vienna, contributes an article on this subject giving reports of sixteen cases treated successfully by a preparation of iron and manganese in an organic combination with peptone. Referring to manganese, Dr. Metall points out that it is a constituent of healthy blood and has an important bearing upon the absorption of oxygen by the blood. Chalybeate medication is materially aided and promoted by the addition of manganese. Dr. Ende has succeeded in producing a preparation of the kind above described which is a clear fluid, resembling dark red wine of an agreeable, non-metallic, non-astringent taste. Sour, fatty foods and red wine should be prohibited during its administration. The strength of the preparation is not certainly indicated by Dr. Metall, but may be inferred to be about 1 in 100 of metallic iron. Dr. Metall's cases are summarised as follows: They all received one tablespoonful of peptomangan (Gude) three times a day. Altogether twenty-three cases of anæmia were treated of which twelve showed a normal percentage of hæmoglobin after fourteen days, five after three weeks, and five after a month. Details of nine cases are given in which the red blood cell enumeration ranged from two millions to over

five millions while under the treatment. Two cases of acute anæmia after profuse hæmorrhages showed a favourable result as early as the end of the first week, and three (following miscarriage) after four weeks' administration of the preparation. In six other instances of weakness and anæmia following acute and chronic diseases (tuberculosis, carcinoma, scarlet fever, &c.), a considerable improvement of the general health could be observed in every instance. No disagreeable sequelæ were observed during the use of the remedy. (*American Medical Monthly*, July, p. 121.)—ED.

Hæmoglobinuria following the injection of antipyrin.—

MM. Simon and Malieu report the case of a little girl suffering with chorea who was treated with large doses of antipyrin; she took 9 grammes in four days. At the end of this time the urine became red in colour and contained albumen; no red globules were seen under the microscope, but the spectroscope revealed the absorption-bands of hæmoglobin. A little blood was taken from the finger-tip and the serum examined after coagulation had taken place; the serum was red and contained hæmoglobin in solution, and this hæmoglobinæmia persisted after the disappearance of the hæmoglobinuria. At the same time that the hæmoglobin was passing into the urine, some bile pigments, derived apparently, from transformation of part of the hæmoglobin, were found in it. The same authors had also examined the serum of another choreic patient, treated with still larger doses of the same drug. They found hæmoglobin dissolved in the serum although there was no trace of hæmoglobinuria. (*Bulletin Médical*, November 20, 1901.)—J. G. B.

Hydrastis Canadensis in Ulceration of the Tongue.—

U. N., aged 47, a journeyman tailor, had, for three months, on the dorsum of the tongue an oval ulcer an inch long and half an inch broad, not deep, granular in appearance, grey coloured, with a thick yellow secretion. Single fissures towards the edges of the tongue; pricking pains on eating and on movement of the organ; glands not enlarged; no history of syphilis; pressure in the pit of the stomach with sharp darting pains up through the œsophagus; cough with expectoration of yellow-white, tough mucus. Hydrastis 1x, gtt. iii. t. d. internally, and a pencilling of the ulcer and the fissures with a solution of the matrix tincture in glycerine (1 in 10) morning and evening was the treatment adopted. Cured the ulcer in two months, and with the help of phosphorus 5x, at the close of the case the whole train

of symptoms disappeared. (Dr. Oscar Hanson in *Homœopathic World*, September, p. 417.)—Ed.

The Kali Group of Drugs.—Through the instrumentality of Dr. H. A. Roberts, a series of papers on individual members of the Kali group of drugs were read recently before the Connecticut Homœopathic Medical Society. In a prefatory paper Dr. Roberts gives some notes on three of these, concerning which a separate paper was scarcely called for.

Kali ars., or *Fowler's solution*, produces a dry, fine, scaly condition of the skin, similar to psoriasis, very irritable, itching and tingling, much worse when getting warm, especially with the warmth of the bed. It resembles arsenic except that the arsenic condition is relieved by warmth. An eruption from kali alone is also relieved by warmth.

Kali brom.—The mental symptoms are characteristic. Loss of memory, especially for words (but not word-deafness or blindness—Ed.); profound melancholia, weeping, nervous irritability, and all sorts of frightful delusions—thinks he is pursued, or will be poisoned, or has committed a crime; the hands are constantly busy at something; frequent green, watery stools with intense thirst and vomiting soon afterwards; eyes are sunken, pupils dilated; skin becomes corrugated; body cold; tongue red and dry; pulse imperceptible; urine suppressed, retraction of abdomen; jerking and twitching of muscles. The drug is useful homœopathically in the sleeplessness of weak, hysterical women, cholera infantum, inflamed pustular eruptions on the legs, night terrors in children.

Kali nitri.—Has thin, watery fæcal and sometimes bloody stools, a diarrhœa which some persons always get by eating veal; corresponding to ipecac. except that the tongue of ipecac. is clear while that of kali nitri is coated, and there is distressing nausea with ipecac. which is lacking in the former drug.

Kali iodatum.—Dr. C. E. Stark writes on this member of the series. Time of aggravation of symptoms, the early morning hours. Attacks fibrous and connective tissues always, and nervous tissue ultimately. Tends to produce infiltration. Useful in headaches of the external head with hard lumps like nodules; coryza in people who had been mercurialised; especially sudden attacks from exposure; long continued cough; profuse expectoration from low down, salty taste, greenish colour; pains from ensiform cartilage; night sweats and general weakness. Cured a case of erythema nodosum following long

continued tic douloureux, rheumatism with infiltration. Dr. E. E. Case adds the following: In the treatment of gouty subjects modalities are important. The kali iod. patient is relieved by movement, is always too warm and endures exercise without exhaustion. The coryza is worse in the open air. Cold food and drinks are not borne by the stomach, they cause distress, nausea, and perhaps vomiting. Useful in painless gonorrhœa with thick, green or yellow discharge, and in recurrent urticaria where there is heat and large nodular erythematous eruption.

Kali bichromicum.—The paper on this drug is contributed by Dr. B. H. Cheney. He begins by emphasising the tendency to "catch cold" as characteristic of the drug, and the amelioration by warmth, then the kind of mucus secreted as tough, stringy, viscid and hard to expel. Another peculiarity is that the mucous membranes chiefly affected are those covered by columnar epithelium, such as the nares, larynx, trachea, body of the uterus, and Fallopian tubes. Now and then eruption of papules or fine pustules are produced. The headache of *K. bic.* is usually frontal and over one eye, the bones feeling sore. Conjunctivitis with viscid discharge, swelling of the lymphatics, and sensitiveness to touch. Deep ulceration of the nasal septum with purulent infection. Dryness of the mouth with red fissured tongue. Complete loss of appetite and sometimes vomiting of pinkish fluid. Brown frothy or gelatinous stools with much tenesmus and urging. Periodicity is an indication for its use. Laryngitis and tracheitis call for it, and bronchitis with the characteristic sputum. It is applicable to persons who are light-haired, fat and chubby. The drug compares with *pulsatilla*, *mercurius*, nitric acid, *sanguinaria*, *hepar sulph.*, *aurum*, *graphites*, *silicea*, &c. Dr. Linnell calls attention to *calcareo acetica* in cases where *kali bichromicum* fails.

Kali carbonicum, by Dr. A. W. Phillips. All potash salts promote tissue waste, weak heart and deficiency of red corpuscles in the blood. Irritability, peevishness, despondency, and sleeplessness after 3 a.m. in young girls or aged people with lax fibre and dark hair call for it. It causes catarrhal conditions with lassitude, hence its value in influenza and chronic catarrhal states. Useful in acute otitis media and right-sided parotiditis, muscular weakness of the eyes following inflammations, with puffiness of the upper eyelids (characteristic). It is called for in some forms of dyspepsia, hæmorrhoids, anæmia, and dysmenorrhœa, asthma with sharp, shooting pains in the chest.

In sympathetic or "chin cough" it is almost specific. Should be compared with apis, bryonia, calc. carb., carbo. v., lycop., china, helionas, ferrum and puls.

Kali phosphoricum, on which Dr. C. N. Payne writes: Its keynote is want of nerve power. It has nervous dread, dark forebodings, depression of spirits, brain fag, loss of memory, occipital headache, especially from brain fag. Dr. W. T. Laird compares the drug with anacardium and educes the following indications for its use. In neurasthenic patients, especially if they have an all-gone, faint, sinking sensation one to three hours after food, felt through the spine and temporarily relieved by eating, aggravated by excitement or worry; urine diminished with excess of phosphates.

Kali muriaticum.—Dr. T. St. John contributes the paper on this remedy. In its general action kali mur. answers to croupous exudations, and grayness or whiteness should be accepted as a characteristic indication. It is also useful in rheumatism in cases like those which call for bryonia. In secondary or chronic conditions of the middle ear with closing of the Eustachian tubes, it is the first medicine according to Schuessler. Kali mur. deserves very careful consideration and trial in selected cases.

Kali sulphuricum.—Dr. E. E. Case points out that this drug has not been, but deserves to be, proved. Its effect seems to be on the lymphatic system causing a lack of secretions therein. Yellow, sticky discharges seem to be an indication for it; also burning, itching, papular or scurfy eruptions; vertigo from becoming erect; migratory arthritis; aggravation of all pains from warm air, and in the evening with amelioration from cold open air. The drug deserves close comparison with pulsatilla. (*North American Journal of Homœopathy*, August, pp. 492-511.)
—ED.

Kali Bichromicum in Hay Fever.—Dr. Goullon relates a case of hay fever in which the patient complained of "coryza of the most pronounced type with obstruction of the nose and violent attacks of sneezing." The attacks of sneezing came on in bed, and were so persistent that the patient felt debilitated therefrom. He was a neurasthenic, complained of cold hands and feet and had been to the seashore where the symptoms subsided, but on returning home they recurred with full force. Kali bichromicum, 6th decimal trituration, was prescribed and a cure promptly followed. Dr. Goullon believes this remedy

to be strongly indicated where the above symptoms are encountered. Together with these there is usually a profuse, watery discharge from the nose. He recalls having cured a number of other such cases. (*Hahnemannian Monthly*, June, p. 478. Translated from *Leipziger Populäre Zeitschrift für Homöopathy*.)—ED.

Lycopodium.—*A question of dose.* Dr. E. C. Dunning records the use of lycopodium in his own person, suffering from dyspepsia, which is an important illustration of the value of a high dilution of the drug by comparison with a lower. "Early in October, 1901, I found myself a lycopodium patient with digestive symptoms most prominent. A mouthful was a meal; there were small quantities of gas in the stomach and lower abdomen; a constant sensation as of something very sour in the stomach, amounting to pain, though eructations were not at all sour; headache coming on every day about 5 p.m.; occasional brickdust sediment in the urine. Took lycopodium 3x every half hour for five hours, with relief for about thirty hours, when stomach symptoms and headache returned with greater intensity. Took lycopodium 3x every hour for ten hours; relief at once for four days, and then all the symptoms became worse than ever; the headache was intense and the urine scanty and high coloured. Now tried lycopodium again, but used 3 drops of cc. on little milk sugar. The pain in the stomach disappeared within an hour, and all the symptoms followed within forty-eight hours, and at the time of writing there was no return." (*American Physician*, *Materia Medica Miscellany*, by J. Wilford Allen, M.D., June, p. 173.)—ED.

Mercurius Cyanatus as an Antiseptic.—The following conclusions are deduced by Dr. Ralph St. J. Perry relative to the use of mercury cyanide as an antiseptic after careful and extended experiments covering a period of several months. Subject to being a *very powerful toxic agent*, it has the following recommendation over the use of the perchloride of mercury: (1) It is readily soluble in those menstrua most likely to be used in surgical practice. In cold water it dissolves in the proportion of 1 to 12·8, in hot 1 to 4. (2) It does not corrode instruments be they solid silver, nickel-plated, or polished steel. (3) Solutions do not stain the finger-nails or influence the skin, or cause stiffness or cracked feeling of the fingers or hands. (4) It does not coagulate the albumen in blood, mucous, or purulent discharges as does the mercuric bichloride. In washing wounds,

cavities, or sinuses the solution remains transparent or translucent. (5) It will not precipitate or decompose when brought into contact with soap. (6) It does not necessitate the use of enamelled or porcelain vessels. It can be used in tin vessels. (7) It is an effectual antiseptic. (*Medical Counsellor*, July, p. 112. Quoted from the *Minneapolis Homœopathic Magazine*.) (No statement is made of the strength of solution which may be employed without harm.)—ED.

Nausea and Vomiting during a Meal.—Dr. Ray Chaudhuri, of the L.M.S., reports the following case: Babu B., aged 23, came on November 8, 1901, complaining of a peculiar sensation in the stomach during the last part of his meal. He felt a sensation of pushing up in a certain portion of the stomach and immediately nausea and vomiting followed. He ejected part of his food and found relief. Flatulency accompanied these symptoms. Under borax 6 he completely recovered. The doctor discusses the indicated remedy for the above condition from a perusal of Lippe's "Repertory," the "British Repertory," Allen's "Handbook," and Clarke's "Dictionary of Materia Medica," and finds that borax has nausea and uneasiness in the stomach during a meal but not vomiting. Dr. Mahendra La'L Sircar alludes to a case where digitalis proved curative in a similar condition, although the symptom is not found in the pathogenesis of the latter drug. (*Calcutta Journal of Medicine*, July, p. 291.)—ED.

Nyctanthes.—This plant (*Nyctanthes arbor tristis*) is a small tree growing wild in the forests of Central India, but also cultivated on account of the agreeable perfume of its flowers. The part employed is the fresh leaves gathered in March and April. It is known as an expectorant, bitter tonic, febrifuge, and slight purgative, and has been employed in bilious fever and rebellious remittent fever, in sciatica and rheumatism; also in the constipation of infants. Ghose has recently proved the drug on himself and a lady prover, five-drop doses of the tincture being taken three or four times a day. He has given the symptoms observed in schema form as follows: *Nervous system.*—Subject very anxious and agitated. *Head.*—Dull headache. *Abdomen.*—Sensibility of liver, stabbing in hepatic region, which is very sensitive to touch. *Stomach.*—Severe sensation of burning at stomach relieved by cold applications, bilious vomiting every time he drinks. *Tongue.*—Tongue covered with whitish or yellowish fur. *Stools.*—Stools bilious, very abundant, and accom-

panied with nausea; or there may be constipation. *Urine*.—Urine dark. *Fever*.—Tormenting thirst before and during the cold stage and the fever; bitter vomiting at the end of the cold stage; temperature rose to 100 to 100·2°; sweat somewhat scanty. Ghose gives notes of six cases of intractable intermittents where the symptoms closely resembled those produced by nyctanthes. On exhibiting the drug complete cure was reported after intervals of from two to seven days. (*Rev. Hom. Française*, Tome xiv., 289.)—J. G. B.

Paralysis Agitans.—William H. Lyle, M.D., Philadelphia, makes the following remarks on the treatment of paralysis agitans: “The fact that pathologists generally agree in attributing the phenomena of paralysis agitans to conditions sequential to arterio-sclerosis suggests that treatment be directed primarily to combating that process. Warm baths, given at bedtime for a period of fifteen to thirty minutes, are of inestimable value, because of their effect on the general circulation. Cold sponge baths, rapidly applied on arising in the morning, undoubtedly possess a decided tonic influence. In addition, remedies applicable to sclerotic processes, such as plumbum and phosphorus, may be prescribed. “For the control of the tremor a number of remedies are prescribed; almost all be it noted are derived from plants of the solanacæ family. For the past two years we have made extensive use of atropine in the Neurological Department of the Hahnemann Hospital Dispensary, administering one grain tablets of the third decimal trituration every three hours. Our results have been quite satisfactory. Hyoscine hydrobrom. in doses of $\frac{1}{100}$ to $\frac{1}{80}$ of a grain three times a day, is extensively used and highly praised by a number of excellent clinicians. Dr. Allen Starr, of New York, expresses a preference for hyoscyamine, giving $\frac{1}{100}$ of a grain three times a day, and is quite enthusiastic as to its results. In the use of all these remedies some care is necessary lest an excessive dose lead to disagreeable dryness of the throat, to which many patients prefer the tremor.” (*Hahnemannian Monthly*, June, p. 435.)—Ed.

Silicea in Spina Bifida.—In a translation from *Leipziger Pop. Z. f. Hom.* for July, there is recorded a case of *spina bifida* in which silicea 12 dec. trit. was administered. The remedy was commenced three or four days after birth. The tumour was evidently one of the more serious forms of *spina bifida*, being described as “a red sore on the spine, a cutaneous

mass like a blister containing fluid." There were no paralytic symptoms at first. Operation was advised by the attending surgeon, but the parents preferred to wait a week by the advice of a homœopathic friend. In a week's time operation was refused by the surgeon as there was believed to be no chance of recovery and paralysis had set in. In the meantime the medicine was being given regularly. Four weeks later power returned in the legs, the opening in the tumour closed, and the oozing ceased, one-third was covered with normal skin, and the tumour became flatter on one side. The general health of the child also greatly improved. (*Homœopathic Recorder*, August, p. 361.)—ED.

Small Pox.—In a very severe case of 24 days standing, confluent, with adynamic symptoms, lachesis 200 every four hours seemed to have a beneficial effect. The patient, a Hindu lady, 25, vaccinated, recovered. In a hæmorrhagic case, a gentleman, aged 45, arg. nit. 3x was given with benefit followed by phosphorus, and recovery ensued. A number of cases were treated with success by *sarracenia purpurea*, the scales falling off in about twelve or thirteen days. (Dr. B. B. Maitra in the *Indian Medical Review*, December, 1901, p. 164.)—ED.

Stellaria media in Synovitis.—F. Kopp publishes a case of synovitis in the left knee-joint treated by *stellaria*. Rheumatism was diagnosed as the cause. The patient, a man aged 27, had previously suffered from rheumatism. The joint was very painful and walking was impossible. *Stellaria media* 2x 3 m. every two hours, and the knee wrapped in bandages soaked in a lotion of the ϕ tincture 60 m. to 6 ounces of water. Relief was obtained in a few hours and complete recovery in a week. (*Homœopathic World*, July, p. 315.)—ED.

TWO CLINICAL NOTES.

Bile Salts in Urine.—The following method for recognising bile salts in urine is recommended by MM. Hillard and Dieulafé: Five cubic centimetres of chloroform and ten of urine are poured into a test tube and vigorously shaken. If the urine is normal there is produced an abundant froth lasting about two hours, and in the lowest part of the tube an emulsion which remains stable for several days. If the urine contains bile the emulsion is completely destroyed after the lapse of an hour and the froth also is very unstable. (*L'Art Médical*, June, 1902, p. 457.)—J. G. B.

Malarial Fever accompanied by a Scarlatiniform Rash.— Surgeon-Major Billet, of the Constantine Hospital, has observed a very interesting case of malarial fever where the attacks were accompanied by a scarlatiniform rash. The patient, a young zouave of 21, was actually sent into hospital with the diagnosis "scarlatina," but had been living in a malarial camp. When first seen he presented large patches of a vivid red colour, disseminated on different parts of the body; they were seen on the anterior aspect of arms and forearms, on the thorax, and the back (and later the front) of the thighs. They had all the character of a scarlatiniform eruption, and were symmetrically disposed. There was also at the same time slight redness of tonsils and velum palati, and some dysphagia. The patient had had fever for five days, but the eruption only shewed itself the day before his admission to hospital. He said the fever ceased each evening after abundant perspiration. Next day, after complete apyrexia during the night, there was slight shivering about 6.30 a.m., and the maximum temperature (39.8° C.) was reached at 10 a.m. The eruption which had almost disappeared during the night again showed itself and increased in intensity with the fever. At 2 o'clock temperature began to fall and reached the normal towards 8 p.m.; sweating was profuse and the erythema had almost completely disappeared by 4 p.m. The course of the fever, with its three stages and the behaviour of the erythema, suggested the probability of malarial complications. Hæmatological examination confirmed this idea, the blood literally swarmed with hæmatozoa, there being ten to a dozen in each field of the microscope, and some globules contained two or three of the amœboid form. Leucocytes numbered 25,000 per cb. mm.; 70 per cent. being mononuclear, of which 17 per cent. were large mononuclear; there was, therefore, *mononuclear hyperleucocytosis* with predominance of the special phagocytes of paludism, large mononuclear white cells, as is the rule at the end of malarial attacks. The case was, therefore, not one of ordinary scarlatina, but of *intermittent malarial scarlatiniform erythema*. The case was treated by hypodermic injections of quinine of which the first cut short the fever. On the eighth day it returned and was accompanied as before by erythema; on this occasion it assumed the tertian type; quinine was now given persistently and cured the patient but left him rather cachectic and needing a course of treatment by cacodylate of iron. (*L'Art Médical*, May, 1902, p. 377.)—J. G. B.

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