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CANADA LANCET.

WILLIAM EDWARD BOWMAN, M.D., EDITOR.

No. 12.

MONTREAL, FEBRUARY 15, 1864.

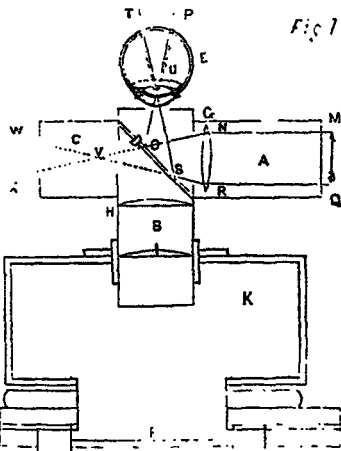
VOL. 1.

A NEW OPHTHALMOSCOPE FOR PHOTOGRAPHING THE POSTERIOR INTERNAL SURFACE OF THE LIVING EYE.

From a paper read before the (Canadian Institute.) By A. M. ROSEBATH, M.D., Toronto.

[This paper was introduced by some remarks on the optics of the eye, showing that the blackness of a pupil under ordinary circumstances, and the visibility of the parts behind it, depend not upon total absorption by the choroid of all the rays of light that enter the eye, but solely upon the reflection of the rays by the dioptrical media; and that a sufficient number of those rays are reflected from the fundus to be visible to an observer, were possible for him to bring his eye in the same line with the rays of light illuminating the eye under examination, without at the same time intercepting those rays. This is impossible without some special contrivance for the purpose. It is best effected by substituting reflected for direct light with which the eye is illuminated, the observer placing his eye behind the mirror, and viewing the illuminated fundus through a small aperture in the mirror, as in Liebreich's ophthalmoscope, and simply through a piece (or rather three pieces) of highly polished plate glass with parallel surfaces, as in the instrument originally used by Helmholtz. As employed by Helmholtz, the illumination of the fundus was feeble, and was soon superseded by the more efficient and convenient instrument of Liebreich, which is the one now in general use by ophthalmoscopists. A fuller report of this part of the paper would render the article too lengthy for our limited space. We will therefore proceed to a description of this new instrument.]

CONSTRUCTION.



The Tubes. The instrument consists of brass tubes (A & B, fig. 1,) 1 1/2 inches in diameter, and 4 inches in length. The upper tube moves in a sliding collar fixed to the aperture of the small camera K, and when the upper tube A is turned toward the source of

A tube C of the same width, 1 1/2 inches in length, is joined to the side of the outer extremity of the tube B opposite to and in a line with tube A. The outer extremity of the tube B extends 1/4 of an inch beyond its juncture with the tubes A and C, and is terminated by a thin brass diaphragm having a central circular aperture of 1/4 of an inch in diameter.

At the juncture of the tube A with B there is a circular aperture of one inch diameter, and between C and B an aperture of 1/4 inch diameter, affording a communication between A and C through B.

The Plate Glass.—At the juncture of the tubes, there is placed an elliptical piece of highly polished thin plate glass with parallel surfaces, which is inclined at such an angle to the tubes that a ray of light falling upon it through the centre of the tube A from the direction M Q will be reflected at right angles to its original direction and in the same plane with the centre of the tube B, which will be through the centre of the aperture in the diaphragm. A portion of the ray will be refracted by the plate glass, and pass through the tube C parallel to its original direction.

The Lenses.—At the inner extremity of the illuminating tube A, and as close as possible to its juncture with the camera tube B, a double convex lens G is placed 1 1/2 inches in diameter, and having a focal distance of 2 1/4 inches. In the corresponding position of the tube B, or close to the plate glass reflector, the lens H is placed, convexo-plane of 5 inch focal distance; 1 1/2 inches from this is another lens, I, also convexo-plane, and of 5 inch principal focal distance, and having the same diameter, viz. 1 1/4 inch.

The Camera.—The camera consists of a mahogany box three inches square and seven inches high, having (to secure steadiness) a base six inches square. At the aperture in the centre of the anterior side there is a brass collar fitted, through which slides the tube B containing the lenses. At the opposite side of the camera is a central aperture 2 1/2 inches square, behind which is a slide with a piece of ground glass 2 1/2 inches square. This slide moves in grooves for the purpose, and can be removed to make way for a slide containing a sensitized plate also about 2 1/2 inches square. The whole is contained in a case about 8 inches in height, which serves the double purpose of supporting the instrument when in use, and holding it afterwards.

PHOTOGRAPHING.

As yet I have not attempted a photograph of the retina of the human eye, but have confined my experiments to the lower animals, and have employed solar light only in order to shorten the time as much as possible; but I do not doubt that diffused light, particularly that reflected from a bright cloud, would with a longer "exposure" answer very well. In using the instrument for this purpose, a tripod, or what answers quite as well, a table of

the ordinary height is placed near a window where the light of the sun will fall upon it.

It is well to have the shutters closed, and a beam of solar light admitted of the size of the illuminating tube; but this is not absolutely essential if precautions be taken to prevent diffused light entering the camera, and the ground glass be shaded while examining the image on its surface.

Position of the Instrument.—The camera must be turned at right angles to the source of light and the tube A, or illuminating tube, turned so that the light will fall full into the tube, and be incident upon the whole of the lens G.

If the camera and tube be now in proper position, a cone of light will issue from the end of the camera tube through the centre of the aperture in the diaphragm, which is the condensed light from the lens G reflected from the plate glass D. This cone forms a focus about $\frac{1}{2}$ inch outside the diaphragm, which can be seen by holding a thin piece of white paper near the diaphragm. If it be a cat, or rabbit, that is to be experimented upon, it is well to have it secured in a box of the right size, with the head projecting through an aperture for the purpose.

In photographing the eye of a cat I found it necessary to put it under the influence of chloroform, but the image of the optic nerve, vessels, &c., upon the ground glass is so very bright and clear that I do not doubt, if the most sensitive process be adopted, the impression could be taken instantaneously, thus rendering anaesthesia unnecessary.

Position of Eye.—In either case the eye must be brought to the proper position, and the eyelids held apart by an assistant. If it be the eye of a patient to be photographed, the instrument must be mounted upon its case, which will, for most persons, give it the right height. The patient being seated upon a chair as close as possible to the table, should lean forward toward the camera, and bring his eye as near as possible to the aperture in the diaphragm, the brow can rest lightly against the end of the tube, and by bringing the elbows upon the table he can, with the palms of his hands, extemporize a very good rest for his chin.

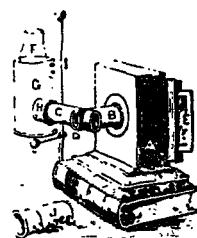
The pupil of the eye to be photographed must have been previously dilated with atropine.

Process.—If the instrument be now in its proper position, and the light from the plate glass enter the dilated pupil, the fundus of the eye will be brilliantly illuminated, and its reflection will pass out of the eye and through the plate glass and lenses, and form an inverted image upon the ground glass at the back of the camera where the observer in the rear will see the optic nerve entrance, distribution of the arteries and veins, &c., beautifully depicted, but magnified about 4 diameters.

If the details of the image be not perfectly defined the camera tube must be moved backwards or forwards until the proper focus be obtained. This image can be seen by the observer again very much magnified by placing to his eye a lens of say six inch focal length, and bringing his eye with the lens to within six inches of the ground glass; but the image will be seen even better by moving the ground glass to one side: the observer will then see the aerial image of the reflection from the eye, which will occupy the same position as the ground glass previously occupied. The slide containing the ground glass can now be removed and a slide substituted containing a glass plate "prepared" by the ordinary collodion process. An "exposure"

of about five seconds is sufficient. If the "developing" prove that a good "negative" has been obtained, it must be "fixed" and used for printing the photographs; if not, other plates should be employed until a more satisfactory result be obtained.

A—AN OPHTHALMOSCOPE.



this is used, the camera can be dispensed with.

In using this instrument as an ophthalmoscope, that is, for examining the interior of the eye, artificial light should be employed. That from a kerosene oil lamp answers very well, but the best light for ophthalmoscopic purposes is from the gas argand-burner, and the most convenient is the movable table lamp supplied with gas through a flexible tube. The evening is the best time for making these examinations: if in the day time, the room must be darkened, and the instrument be placed in the same position in regard to the light as when solar light is used, but the flame of the lamp should be brought within two or three inches of the entrance of the illuminating tube, and the two must be on the same horizontal line. A screen, to shade the ground glass and the observer's eye, should be placed between the light and the back of the camera, or, what I have found to be much better, a metallic shade can be placed around the lamp, from an aperture in which, projects a tube or collar somewhat resembling that of a magic lantern, of the right size to allow the illuminating tube of the instrument to fit closely. Indeed with this apparatus the camera can be dispensed with altogether, the is in making examinations of the eye simply when the object is to demonstrate the fundus of the eye to a number of persons, the camera should be used both with and without the ground glass.

OPTICS.

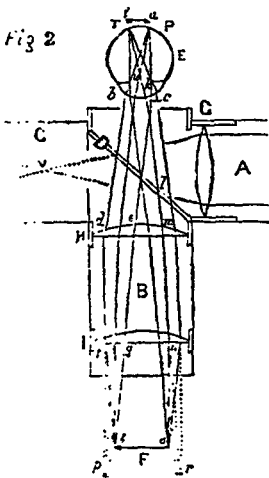
In the accompanying diagrams I have made the mean position of the optical centre of the eye at the centre of curvature of the cornea, or at a distance one-third of the diameter from the cornea, making the posterior focal distance of the eye about $\frac{3}{4}$ of an inch. I have also represented the eyes as "homogeneous bodies, possessed of a single condensing refracting surface, which is regarded as the optical equivalent of the various surfaces in a real eye." "By giving such hypothetical eyes a higher index of refraction than that of the media of any real eye, we may preserve the proportion between the distance of the cornea and the retina from the optical centre almost unchanged, while substituting an equivalent for a real eye, which may be assumed to be quite accurate in so far as concerns any optical conclusions with which we have to do." (Dr. George Rainy on the Theory of the Ophthalmoscope.)

Illumination.—Let M Q (fig. 1) represent parallel rays of solar light incident upon the double convex

lens G, at the points N R they are refracted and emerge from the lens convergingly towards a focus V in the tube C, but at O and S they are intercepted by the plate glass D, a portion of the rays are reflected by its polished surface in the direction E, and rays not reflected or absorbed are transmitted and pass to form a focus at V, the principal focal distance of the lens G, and again diverge in the direction W X.

The rays reflected from the surface of the plate glass form a focus at U (which is also the focal centre of the eye E) at the same distance in front of the plate glass D, as V is behind it, these rays at L again diverge and illuminate a portion of the fundus at T P.

Reflection.—Let E (fig. 2) represent the same eye illuminated as just described, D the plate glass, and H I the lenses in the camera tube. Rays from any portion of the illuminated fundus as *a*, are reflected from the fundus and emerge from the cornea at *b c*, the width of the dilated pupil, and proceed to the plate glass D (parallel rays of light emerging from an eye having its accommodation paralyzed are parallel or very nearly so) where some of its rays will be reflected through the lens G in the direction of the source of illumination, but other rays proceed to *d, e*, where they are incident on the lens H by which they are refracted, and they would proceed to a focus at the principal focal distance of the lens H, viz.: at 5 inches, but they are again intercepted at *f, g*, by the lens I, which refracts them to an earlier focus at *h*. In the same way rays from *i*, on E's retina, proceed from the cornea parallel to the axis *i, k, m*, and are also refracted by the lens H and I, and are brought to a focus at *o*. In like manner all points intermediate between *i* and *o*, on E's retina, are reflected from the fundus and refracted by the lenses forming an inverted image of *i, a*, at *o, h* which is received upon the ground glass placed at F.



APPLICATION—ADVANTAGES.

The advantages I claim for this instrument are:—

1st. The simplicity of its construction, taking into consideration its twofold purpose, viz.: as an ophthalmoscope, and as a photographing instrument. My friend Dr. Noyes, of the N. Y. Eye Infirmary, constructed an instrument for photographing the fundus oculi, and which was I believe to a considerable extent successful, but its construction was too complicated and the instrument too expensive to be generally adopted. Dr. Noyes' instrument is constructed somewhat upon the principle of the binocular microscope. Any good optician can construct this instrument. The one I exhibited to the Institute was made by Charles Potter, of King street, Toronto.

2nd. The limited experience necessary in order to use it successfully; the ordinary ophthalmoscope requiring months of practice before it can be used satisfactorily.

3rd. Being able to see the aerial image free from reflections from the object lens, which reflections are serious obstacles to beginners.

4th. Being able to receive the image, either of a healthy or diseased fundus, upon a screen of ground glass which can be seen by a number of persons at the same time, and could be taken advantage of by gentlemen lecturing upon the physiology of the eye, or upon the pathology of its deep structures.

5th. With it, artists will be enabled to make coloured representations of the fundus, which, with the instruments now in use, has never yet been effected; thus, Mr. Hulke in his Treatise on the Ophthalmoscope, and Jabez Hogg in the preface to his "Manuel of Ophthalmoscopic Surgery" (June 1863,) apologizing for defects in their coloured representations, state that it is impossible to procure the services of artists having the requisite knowledge of the use of the ophthalmoscope.

6th. Rendering it comparatively easy to photograph the reflection from the posterior internal surface of the eye.

I cannot conclude without expressing the hope that this instrument will contribute something towards awakening more of an interest in ophthalmoscopic science, as the ophthalmoscope is undoubtedly as essential in investigating diseases of the eye, as the stethoscope in diagnosing affections of the heart and lungs; and I trust its use will aid in banishing from ophthalmic nomenclature the indefinite term of amaurosis, where, as Walther observed, "the patient and physician are equally blind."

PURPURA HÆMORRHAGICA.

We notice in a late number of the London Medical Times, an article from the pen of Dr. Grant of Ottawa, on the prevalence of an aggravated form of purpura among the lumbermen in his part of the country, styled by them "black leg." He attributes it in a great measure to the excessive use of nitrate of potash in the preservation of the meat on which they subsist. And says that the same effect was produced some twenty-five or thirty years since from the same cause, and that it ceased on a more moderate employment of this salt; and that a long series of years has correctly established the truth of this observation. We quote the following description of it from his article:—

In one shanty twenty-five men out of thirty-six were attacked with this same disease, and, from ascertained facts, the great proportion of the cases were developed as follows:—

Slight pains in the extremities, particularly about the ankle-joints and posterior parts of the legs. After a few days in severe cases, the pain is liable to extend to the arms and shoulder-joints. The integument of the legs is first observed to change colour, passing from a somewhat yellow to a deep venous hue, in large patches, almost approaching to a black (hence the term). The legs and the arms are liable to swell, particularly the former. Frequently, two or three weeks before any constant pain is complained of, or change of colour takes place, the limbs move sluggishly in response to the will, and considerable soreness is experienced upon pressure. Abrasion of the integument is followed by a sero-sanguinolent discharge; and, if

much irritated, is liable to inflammation, partaking of the asthenic character.

The limbs are said to be almost free from pain when immersed in water, during the spring-season, rafting; but afterwards they become hard, painful, and stiff. The gums are frequently observed to be swollen and spongy for some weeks before the limbs become painful. The bowels are usually regular, and the urine voided is normal in quantity. But the sleep is restless, and many of the men are subject to headache, giddiness, loss of appetite, and swelling of the eye-lids; also, at times, to a peculiar sensation, as if the head had attained enormous dimensions.

During the month of April the great proportion of these cases became most marked, and, under judicious treatment, rarely extended over a period of four weeks before convalescence was established. It was not an unfrequent circumstance to observe, amongst those who were exposed to the same dietary influence, attacks of acute rheumatism, as well as nyctalopia (obscurity of vision during day light), both of which readily yielded to rest and regimen, in conjunction with mild medicinal agents.

Whenever nyctalopia is detected by the experienced lumberer, fresh milk is administered largely, when obtainable, which has a most speedy and salutary influence, the retina recovering its tone in the space of a few days.

Canada Lancet.

MONTREAL, FEBRUARY 15, 1864.

With this, the closing number of the year, we return thanks to our readers for past support and co-operation, to our professional brethren throughout the world for kindly feelings and a just appreciation of the talent of our country. The renewed effort to establish a medical journal in this province is succeeding beyond our hopes, and the LANCET holds to-day its true position in medical literature, regardless of its size. The press is freely receiving it in exchange for its finest and most expensive periodicals; that of the United States almost without exception, whilst Great Britain and even the far off countries of India and Australia are not wanting in liberality in this respect. And authors and publishers of both nations are equally generous in supplying us with valuable books and papers for perusal. Thus cheered and encouraged abroad, we naturally turn our attention homeward as the new year is about to call forth in unmistakable language the opinions and wishes of the medical profession of Canada. We wait with interest therefore the appearance of the March and April lists of renewed subscriptions, the tests of warmth or coolness in our friends, of ultimate success or failure. Reader, will your familiar name be there enrolled, to mark your wish that it shall live and prosper; to show us your approval, and speed us on our way?

The Houses of Assembly are again about to meet for the dispatch of business, and we earnestly hope that the requirements of the medical profession of Lower Canada will now no longer be ignored.

We greatly need some law to compel young men, about to commence the study of medicine, to undergo a proper examination before the College of Physicians and Surgeons, both in common school education and in classical attainments, but more particularly in the grammar and spelling of their native tongue. For it is high time that some check should be put upon the disgraceful matriculation of ignorant students permitted by the medical professors of McGill University.

We also require a law to do away with the present distinctions between the French and English medical schools of this city; as the French professors, their school and their hospitals are inferior to none in the province. And it is not right to subject their students to the humiliation of an examination before the professors of other colleges, and especially those of McGill, whilst the latter are allowed the privilege of passing their own students without the concurrence or presence of any of the French teachers. These distinctions, made without regard to justice, tend greatly to keep up ill-feeling and to foster national prejudices. It is the duty of our representatives to legislate impartially for all public institutions; and we sincerely hope for the credit of our country, that this state of affairs will no longer be allowed.

HOSPICE STE. BATHILDE.—We notice an account in *La Presse* of to-day of the establishment of a new hospital in Vitré street (No. 46), to be especially devoted to the treatment of female diseases, with private wards for cases of accouchement. Its medical staff consists of the following well known physicians and surgeons, viz.:

J. Hte. Tresler, M.D. | J. Emery Coderre, M.D.
J. G. Bibaud, M.D. | T. E. D'Udet D'Orsouvans, M.D.
Hector Peltier, M.D.

We thank the *Madras Quarterly* for its kindness to us. We are glad to find that warm hearts continue to speak to us, even from India. In reply we would state that we design enlarging our little journal, just as soon as we find that we can do so without pecuniary loss.

To the Editor of the Canada Lancet.

SIR,—I would call your attention to an account in one of our leading journals, headed a "Small Case," which has produced no little sensation in the community, as well as strong feelings of exasperation against at least one of the parties concerned. And legal proceedings having been entered upon, it is now awaiting, with more than ordinary interest, the result of its action. The individual, seemingly most culpable, is a medical man; let us therefore hope that facts may be brought to light to acquit him, or at least to modify the heinous character of the offence of which he stands charged. Innocent or guilty, the occasion

in my opinion calls for some provision for the maintenance of the high reputation which as a body we have ever possessed in all things appertaining to professional honour.

The physician above all others, sustains, in his daily routine of labour, relationships with individuals and families at once the most delicate and confiding, and of these in what more so than in the care of a wife or daughter? It is incumbent upon him therefore to remember that, to him, the sick chamber should be especially sacred; and accursed ought he to be who visits it with other than the purest and most noble purposes. And I think we, as a body, should sternly mark our disapproval of any breach of this high trust. I submit it therefore to my brethren whether we ought not immediately take steps for the establishment of some law, as in Great Britain, by which physicians convicted of such conduct may be expelled from our ranks, and forever prevented from practising among us. A member of the bar loses his gown under certain circumstances: should not one of our profession be similarly punished when acting wrongfully? Hoping that this suggestion may be seriously considered, and be productive of some good result,

I remain, &c.,

W. C.

Belleville, Feb. 1st, 1864.

Rebichs.

A MANUAL ON EXTRACTING TEETH. By Abraham Robertson, D.D.S., M.D. 12mo., pp. 198. Lindsay & Blackiston, 1863.

This is a capital little work, and is certainly all it pretends to be, a guide for beginners. After a short introduction it enters into the anatomy of the jaws and teeth, and the pathology of tooth-ache. Next is described the different forms of tooth instruments, with the proper modes of employing them. And after an excellent chapter on accidents it finishes up with some practical remarks on anæsthetics.

ON CRIMINAL ABORTION IN AMERICA. By Horatio R. Storer, M.D., of Boston. 8vo., pp. 107. Lippincott & Co., 1860.

Our author has given us a very complete and excellent treatise on abortion. It is thoroughly handled in all its bearings and its appalling frequency in other countries as well as in the United States, and the laws concerning it are fully entered into. But we cannot see how Dr. Storer, or any other person, can affirm at what time the fetus becomes endowed with immortality. Reason certainly points to that of the quickening as most likely; and from our own experience, it is the opinion generally held by the community at large.

It was formerly supposed that abortion was seldom resorted to except for the concealment of shame, and that it was most frequently practised in youth; but experience, he says, has disproved these conclusions, the only real limit being the menstrual climacteric; and that many married women are wont to resort to it to prevent the increase of the number of their children.

In his remarks on the duty of the profession, he says, that medical men are the physical guardians of woman and her offspring, and should manfully utter the truth, and denounce the crime of abortion on every possible occasion; and thinks that by these means a healthier tone might be made to prevail in society.

He deplors the insertion by the press of polluting advertisements of medicines which are not to be taken at the periods for which they are intended, and styles the unprincipled druggists who vend them, the confessed agents of villains.

In conclusion, we have again to regret that our limited space prevents our doing justice to another valuable work.

THE BRITISH PHARMACOPEIA.

The long-expected Pharmacopœia of the General Medical Council has at length been published, and is now by law the only allowable one in the United Kingdom.

Dr. Garrod, who has assisted so greatly in its compilation, as one of the delegates from the Royal College of Physicians, is delivering a course of lectures at this institution on its construction, its comparison with the London Pharmacopœia, and the value of its new remedies in the treatment of disease. We notice the first of the series in the *Medical Times* of the 30th January. After speaking of the importance of having but one work of the kind, he tells us that the London Pharmacopœia has always been published in Latin, whilst those of Edinburgh and Dublin have been in English, and that it had been determined from the beginning to employ our mother tongue for this national work.

The measures directed in the new Pharmacopœia are the standard measures of the realm, the imperial gallon and pint of 20 fluid ounces, the latter being subdivided as formerly into fluid drachms and minims. As the old wine gallon, with its eight pints of 16 ounces, is the measure usually employed in Canada in dispensing medicines, it would be well at least to state that the imperial ounce is 19 minims less than ours, and that its drachm is but 58½ of the minims that we are prescribing.

The weights adopted are the avoirdupois pound of 7000 grains with its usual division into 16 ounces; these require no description, as they are the legal weights of our country for buying and selling. There is but one species of weight known by the name of grain, and it also cannot be mistaken for any other. Drachms and scruples were necessarily discarded from the new work, for it was not considered desirable to alter the size of the grain, so long and universally employed; and 437½ grains, the weight of the ounce, did not admit of this species of subdivision: therefore, physicians are hereafter to write their prescriptions entirely in grains; and the following one, for the first stages of pneumonia, is given to show the appearance of the new mode.

℞ Potassæ Bicarb., gr. 40. Tincturæ Opii, ʒ j.

Potassæ Nitratæ, gr. 80. Vini Colubici, ʒ iij.

Decoct. Senegæ, ʒ viij. M.

S. Half an ounce every six hours; turpentine fomentations being constantly kept to the chest as directed.

As usual the work is divided into two parts, to which an appendix is added. The first occupying 157 pages, besides containing a complete list of remedies, both simple and compound, gives much useful information, and, as Dr. Garrod informs us is of itself nearly sufficient for the general practitioner. It gives their origin, distinguishing traits, and tests of purity, and if of a plant, where some good picture of it may be found; and enumerates at the end of each agent the preparations into which it enters as the active ingredient.

The second part as usual contains the formulae of the different pharmaceutical preparations, and the appendix those agents required in their preparation that cannot be properly classed among remedies.

In remarking on the various improvements, Dr. Garrod commences at the beginning, and notices the introduction of glacial acetic acid, stating, among others of its qualities, its usefulness as an application for the removal of warts and corns. Next of sulphurous acid, and the sulphite and hyposulphite of soda, for generating it slowly and constantly on exposure. He states his confidence in it for all parasitic affections of the skin, and gives the mode of employment as follows :

℞ Sulphite or Hyposulphite of Soda, ℥j.
Acetic Acid, ℥j. Water, ℥viij. M

S. The lotion to be frequently applied with a sponge, or lint kept constantly moist to the part.

The simultaneous separation of sulphur when the hyposulphite is used is of no disadvantage, on the contrary, in many of the cases is of benefit. To ascertain that its beneficial effect was not due to the acetic acid alone, he repeatedly employed the above mixture on one side of the body, whilst the other was treated with the acetic acid alone and of the same strength, and the advantage has proved to be in favour of the salts, although there is no doubt that the acetic acid is likewise a remedial agent in cases of this kind. I think, he says, that the gas thus yielded by these salts deserves a much more extended trial as a remedial agent.

In speaking of the introduction of arnica root and its tincture, he says, — I devised the following method to test its usefulness, dry cupping is well known to produce ecchymoses, more or less severe according to the amount of exhaustion of the glasses, and the length of time they are applied. In the first trial, six patients were selected, and on the chest of each two symmetrical bruises were made, one on each side of the sternum; on one side arnica lotion was applied, containing one part of the tincture to three of water; upon the other spirit and water of the same alcoholic strength. In one case the result appeared in favour of the arnica, in another in favour of the spirit, and in the remaining four no perceptible difference could be detected. These lotions were not applied until well marked ecchymosis was established, and they were kept constantly to the parts for two or three days. And when the whole of them were compared to cases in which nothing whatever had been done, the results were extremely similar!

Nor could any superiority be discovered between the pure tincture and spirit of equal strength. Nor any distinction be made as to covering the tincture or spirit with oiled silk, or allowing it to remain uncovered to evaporate. But in both cases discoloration was checked, and the bruises faded rapidly. The deductions from these observations were that the application of spirit to bruises is of very decided advantage, and that the addition of arnica does not render it more efficacious.

Judging from the present, the remaining lectures of Dr. Garrod cannot but prove instructive, in giving us the different ideas which have been canvassed by the celebrated men who have been engaged in its construction. We shall hail their appearance therefore with pleasure.

The first edition of the Pharmacopœia has been published at 10s. 6d., but we learn that a cheaper one may soon be expected.—Edit.

BROMINE

IN GANGRENE, ERYSIPELAS, AND DIPHThERIA

On page 36 of this periodical will be found some remarks by Dr. Stanford, on the employment and the success of bromine in hospital gangrene. Surgeon Goldsmith, the discoverer of its effects in this disease, gives in the American Medical Times of Sept. last, a consolidated statement of upwards of 350 cases, occurring in the Military Hospitals of Louisville, New Albany, Nashville, and Murfreesboro. By it, we find that the mortality after its adoption, has been less than three per cent. And he denies that these even would have been fatal had not granulation been checked by a too frequent application. He shows also that the total results do not differ, whether this liquid be employed pure or in solution, although experience, he says, has taught the army surgeons that the speedier and better mode is to apply the pure undiluted bromine and that unlike destructive caustics, it does not affect the healthy tissues. His table teaches besides, that of those treated by means of nitric acid and other agents, but 50 per cent. have recovered.

He speaks also of four cases where the arteries had become involved, and hæmorrhage set in, and the surgeons had tied the vessels at the bottom of the sloughing surfaces before applying the bromine over the whole, and yet the patients had all done well, and recovered without any subsequent bleeding.

Dr. Post, who has recently returned from a visit of inspection to these hospitals, bears testimony to the truthfulness of this report. He thinks more favourably of the solution in such cases, and gives the following formula, as the one most usually employed.

℞. Bromide of Potassium 170 grs. Water 4 oz. mix, and add Bromine 1 fluid oz. Shake the mixture well.

And recommends the use of a syringe, both for the washing of the gangrenous part, and the thorough injection of the solution, which destroys the odour at once, and gives the wound the appearance of being varnished.

Surgeons differ, he says, as to the frequency of its application, from once to two or three times in the twenty-four hours, until granulations become visible, after which the solution must be weakened.

Yeast is generally kept to the part when obtainable, but an excellent substitute, and one which is commonly employed in the army, is the ordinary poultice, made light and porous with carbonic acid generated from carbonate of soda and tartaric acid, which should be mixed in the proportion of 30 grains of the former, to 25 of the latter, to render it neutral.

It seems hardly necessary to state, that in conjunction with this local treatment, the system requires to be sustained by means of stimulant tonics, and good food.

Bromine has also proved extremely serviceable as a disinfectant of gangrene and erysipelas, in these hospitals; the vapour being allowed to pervade the apartment by occasional exposure of small quantities of the fluid upon saucers.

Dr. Post, in conclusion, alludes to the good effect of bromine in erysipelas. In the "Park Barracks," in Louisville, this disease broke out with great severity, and as soon as the bromine treatment was introduced, the disease ceased to spread. The remedy was used both in fumigation and as a local application. The surgeons were in the habit of moistening lint with the compound solution, and

plying it directly to the part, and covering the whole with oiled-silk. He saw a number of cases treated in this way where improvement had taken place in from twelve to twenty-four hours after the commencement of the treatment.

Dr. Percy states that he has been in the habit of employing the saturated solution of bromine for diphtheria, and with very satisfactory results. He has also used it with equally good effect in syphilitic ulceration of the throat, and in tonsillitis.

Dr. Metcalfe also, has for some time been in the habit of applying a combination of bromine and iodine to throat affections with equal success.—Ed.

ACUTE RHEUMATISM.

Dr. Nevin's treatment by means of Quinine, Iodide of Potassium, and alternate Steam Baths and Cold Douches.

The British Medical Journal of August last, contains an article by Dr. Nevin of Liverpool, on the following treatment of Acute Rheumatism, which he informs us, has given him greater satisfaction than any other mode he has ever employed. He says it is the result of fifteen years experience, and suggested itself to him, from the acknowledged periodicity of this disease as shown by the general aggravation of pain and other symptoms as night comes on, the copious sweating, &c.; and the great value of iodide of potassium in chronic rheumatism.

The treatment consists in combining quinine with the iodide of potassium, and commencing its administration from the first, without regard to acute pain or febrile excitement. He never directs over two grains of quinine with five grains of the iodide, which he gives four times a day. He says that the thick creamy fur upon the tongue disappears more rapidly from this mixture than by any other means. He allows opiates or Dover's powder at night if necessary to relieve pain or secure rest.

In conjunction with this, he employs from the very first steam baths, and this even when the patient is so helpless that it is impossible to move him from the bed on which he is lying. In the latter case they are produced by wrapping hot bricks in flannel previously soaked in vinegar, and laid upon plates and placed in the bed, one about a foot from the shoulder, and the other the same distance from the opposite leg, the patient's body linen being previously removed: the bedclothes should be well tucked in round the neck and elsewhere. A most refreshing acid steam bath is thus obtained, which may be kept up by replacing one of the bricks with another hot one. In about fifteen or twenty minutes the bedclothes and plates are removed, and the patient instantly mopped all over with a towel wrung out of cold water, and then quickly rubbed dry. Great relief is at once experienced from the pain and exhausting acid sweats. After a thorough wiping, a warm dry blanket should be thrown around him while the bed is turned over, and the bedclothes are being changed and warmed. He says that he has rarely found it necessary to give two of the steam baths in bed, the patient almost always being able to take the second, sitting up. A couple of gallons of boiling water is to be placed in a vessel beneath a chair, and the sick person, seated on a folded blanket, is wrapped about with another around his neck tent-like, allowing the lower border to descend to the floor. The steam is kept constantly generating by means of hot bricks put into the water. After fifteen or twenty minutes the blankets are removed, and a couple of quarts of cold water poured over

the shoulders before drying quickly and thoroughly. These baths are to be continued even after the patient is able to walk about. Opiate embrocations containing chloroform or tincture of acouite may be employed to relieve the pains in the joints.

THE BROMIDES IN WHOOPING COUGH.—This new therapeutical agent, which was some little time ago found by Dr. Gibb to be an anæsthetic to the larynx, is now being turned to further practical account in the treatment of whooping-cough. Within the last nine or twelve months, Dr. Harley has been treating nearly all the cases of this disease brought under his care at University College Hospital by means of the bromide of ammonium, and the results of the treatment seem to be highly satisfactory. As a rule, the dose of the remedy is a grain for every year of the age. This rule is however not always adhered to. In cases where the children are well developed and strong, Dr. Harley occasionally gives as much as double that dose, namely, two grains for every year of the child's age. The bromide apparently acts by simply removing the whoop, which is by far the most troublesome symptom, and after that has disappeared the case is treated as one of simple bronchitic cough. The remedy was at first administered by him with the view of inducing partial insensibility of the glottis and thereby counteracting the spasm, as it appears to be the chief source of the child's misery.

Bromide of potassium, which has a similar anæsthetic power over the pharynx and larynx, has also been used in whooping-cough by Dr. Radcliff. The dose is about the same as that of the bromide of ammonium.—*Med. Times and Gazette.*

SUB-NITRATE OF BISMUTH IN DIARRHŒA.—Dr. Trask of Finley Hospital, Washington, in a pamphlet gives his experience of the effects of bismuth in acute and chronic diarrhœa, after its successful employment in many hundreds of cases. He says that he has generally found a single dose of from 15 to 25 grains, either alone or in combination with an equal quantity of calomel, to be quite sufficient, but when the attack is extremely violent he gives from 40 to 60 grains of the bismuth alone. Ordinarily it produces nausea in an hour or two after it has been taken, but when the case is severe it seems to arrest all gastric disturbance, remove the feeling of extreme prostration, and completely to check the discharges, thereby necessitating the employment of castor oil afterwards.

In chronic cases he gives the remedy in doses of a drachm daily, or 40 grains twice a day. Quite a number of those treated had been suffering from six to eight months previously; and the average period of treatment found necessary, was from five to six days, but the greater majority recovered in from two to four days.

FARADIZATION FOR EXTENSIVE BURNS.—Dr. Raibold of Paris highly recommends this agent for the relief and cure of burns. His directions are as follows:—

The part of the body which has suffered from the effect of fire is immersed in a basin, or if necessary, a bath of water; the negative pole of the apparatus is put into communication with the water by means of the usual conductor, while a wire from the positive pole communicates with some point of the body out of the fluid and not far distant from the part affected. The electrical current is then

carried through the latter, its force being regulated according to the patient's strength. To ascertain whether sufficient electricity has been administered, the patient exposes the burn for an instant to the air, and if he does not feel the intense pain any more, the operation may be suspended—in the contrary case it must be resumed until that effect is produced. So long as the part affected remains immersed in water, under the influence of electricity, the patient feels no pain. In mild cases, an hour's exposure to electricity is sufficient for complete relief; in more serious cases it must be continued for three or four hours, but the cure is stated to be both prompt and certain. When the whole person has been injured by the flames, the patient must be put into a bath with the negative pole in the direction of the feet, and the positive one placed in contact with the nape of the neck. Part of the water must be changed every quarter of an hour, to prevent the bath from getting warm.—*Correspondence of the Philadelphia Med. and Surg. Reporter.*

OXALIC ACID AND BARYTA.—Dr. Onsmum remarks, that in cases of poisoning by salts of baryta, or by oxalic acid, insoluble precipitates of sulphate of baryta, or oxalate of lime, may be discovered obstructing the branches of the pulmonary arteries; the soluble salts of baryta becoming decomposed by the sulphates of the blood, and the oxalic acid forming the oxalate with its salts of lime. He says that chemical analysis has in all instances proved their presence in the lungs, even when they could not be discovered either in the brain, the spinal cord, the kidneys, or the muscles.—*Virchow's Archiv.*

ARSENIC IN PEMPHIGUS.—Mr. Hutchinson of the Metropolitan Free Hospital, gives a very interesting case in proof of the wonderful effect of arsenic in the cure of pemphigus. He says that it renders relapses less likely, and that an improvement may be noticed immediately on its employment, not a single fresh bulla showing itself after the first few days of the treatment.—*Medical Times.*

SULPHUR IN ASTHMA.—Dr. Duclos of Tours recommends washed sulphur in doses from $\frac{1}{2}$ to $1\frac{1}{2}$ grains three times a day for several months. And the Boston Medical Journal mentions three very bad cases of asthma which it says were completely cured by this treatment. It is simple, and may be readily tried.

To Correspondents.

Coating for Pills.—To coat pills similar to those of Blanchard, Mr. Baildon, in the Pharmaceutical Journal, directs one drachm of balsam of tolu to be dissolved in three drachms of chloroform. A few drops of the solution is put with the pills into a suitable box and shaken; the pills are afterwards turned upon a slab, and so placed that each shall be separate. They will become quite hard in a few minutes.

Eau Sedative de Raspail.—Spts. hartshorn (aqua ammonia) 2 oz.; spts. camphor, 1 oz.; common salt, $\frac{1}{2}$ oz.; water, 2 pints. Mix the camphor and hartshorn together, and dissolve the salt in the water, adding a few drops of ammonia, having stood until clear, pour it off and add to it the first mixture. Always keep the bottle stopped and in a cool situation, and shake before using. The parts are directed to be bathed with it, but when a more powerful action is required, wet compresses may be substituted. We publish the above as it is a remedy much inquired after at present for the cure of inflammations, pains, stings of insects, and a thousand and one other ailments. It must not be applied to scoriated surfaces.

A Good Lintment.—Gum, camphor, castile soap, and the oils of origanum and rosemary, of each 2 oz.; strongest liquor of ammonia, $\frac{1}{2}$ oz.; tincture of opium, $\frac{1}{2}$ oz.; alcohol, 2 pints. Soften the soap with 4 oz. of water by means of heat; dissolve the essential oils and camphor in the alcohol;

mix in the soap and laudanum, and lastly the ammonia; let it stand for 24 hours and filter for use. Other oils may be substituted for the ones mentioned if desired. Oil of castor put with a little benzoin makes a very agreeable liniment but is somewhat more expensive.

Whitlow and Felon.—Any collection of pus in the finger is termed by authors a whitlow, but when it forms beneath the periosteum it is denominated a felon; the latter produces the destruction of the bone if not timely prevented by deep incision. In America we find that Mr. Luke has been very successful with arsenical ointment ($\frac{1}{2}$ gr. to the oz. of simple cerate) in obstinate cases of whitlow; it may therefore be well to try it in the one you mention.

Medical Works published in Great Britain from the 1st of December, '63, to the 15th January, '64, with their sizes, numbers of pages, publishers' names, and prices in sterling.

Churchill (Flowerwood)—On the Diseases of Women, 6th ed. revised and enlarged, post 8vo., pp. 915, 12s. 6d. (Simpkin.)

Gray (Henry)—Anatomy, Descriptive and Surgical, 3d ed. by T. Holmes. Royal 8vo., pp. 800, 2s. (Longman.)
Thomas (Evans)—Remarks on Skin Eruptions after Vaccination, and on other Matters connected with the practice being selections from notes of 3,500 Cases. 8vo., pp. 112, sewed, 1s. (Simpkin.)

Periodicals received since 15th January.

The Madras Quarterly Journal, July '63. Australasian Medical and Surgical Review, Melbourne, Nov. '63. London Medical Times to January 30th. American Medical Times to Feb. 8th. Boston Medical and Surgical Journal to Feb. 11th. Ohio Medical and Surgical Journal, Columbus, January. Pacific Medical and Surgical Journal, San Francisco, December. Cincinnati Lancet and Observer, January. Chicago Medical Journal, February. Philadelphia Medical and Surgical Reporter to Feb. 6th. Philadelphia Dental Cosmos, February. American Druggists' Circular, February. London Publishers' Circular to 1st Feb. London Chemist and Druggist, January. The Bookseller, London, Dec. 24th. Buffalo Med. and Surg. Journal, Feb.

Books and Pamphlets received during the Month.

Lectures on Orthopædic Surgery, delivered at the Brooklyn Medical and Surgical Institute. By Louis Bland M.D., M.R.C.S. Eng., Professor of Anatomy and Clinical Surgery, &c. &c. With numerous illustrations, 8vo., pp. 104. Lindsay & Blackiston, 1864. From the author.

Retrospect of Medicine by W. & J. Braithwaite, M.D. Vol. 44, July to December, 1863. 12mo. pp. 448. Simpkin.

A Practical Treatise upon Eczema, including its Localities, Impetiginous, and Pruriginous varieties. By T. M. Anderson, M.D., Physician to the Dispensary for Skin Diseases, Glasgow, &c. 8vo., pp. 143. Churchill & Sons, 1863. From the author.

Special Therapeutics. An investigation into the treatment of Acute and Chronic diseases by the application of the Hot Air Bath and Inhalation. By J. C. Lory Mand M.D., M.R.C.P., London, &c. Post 8vo., pp. 132. Haselwick. From the author.

The Nervous and Vascular Connection between the Mother and Fœtus in Utero. By John O'Reilly, M.D. F.R.C.S.I., New York, 8vo., pp. 76. From the author.

Phenomena of Life from Two Antagonistic Principles: Inervation. A pamphlet by J. G. Freel, M.D., of Salem, C. V. From the author.

Medical Logic. An introductory Lecture by S. G. Arnold M.D., Professor of Materia Medica, University of Michigan. From the author.

First Year's Subscriptions paid since 15th January

Dr. H. A. Mienault, St. Denis; Dr. James O'Reilly, New York; Dr. L. Boudries, Worcester, Mass.; Dr. E. H. Todd, Dr. J. Reddy, Dr. W. P. Smith, E. Spriggins, J. Gould, and A. Christie, Esqs., all of Montreal.

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The Canada Lancet is published monthly at the rate of one dollar, (or four shillings sterling) per annum. Readings may be made to W. E. Bowman, M.D., Editor & Proprietor, or to Mr. John Lovell.