

over twenty cases which I had seen as out-patient surgeon at the Great Northern Central Hospital during three years. In cases where pus has not yet actually formed the procedure is as follows:—A glass bottle of about one pint capacity and with a mouth about three inches in width is thoroughly purified and the mouth smeared with vaseline. A strip of blotting-paper soaked with methylated spirit is ignited and thrown into the bottle. Just before the flame dies out the mouth of the bottle is applied firmly to the distended breast, so that the nipple is in the centre. The rarefaction of the air within the bottle causes the breast and nipple to bulge well into the bottle; the little plugs which have caused the blocking of the mammary ducts are suddenly forced out, and the milk flows freely into the bottle, as Mr. Spencer describes it, "like water from the rose of a gardener's watering pot." In this way I have removed over half a pint of fluid and, as I believe, prevented the formation of an abscess. Assuming that a mammary abscess is often, if not always, caused by the entrance of septic organisms *viâ* the ducts, then this is about as perfect a method of getting rid of them as possible, for the milk issuing in so many streams and at such pressure must effectually wash them away. The bottle is then removed and a large dressing applied (the breast having been thoroughly washed with a 1 in 20 carbolic solution), and a bandage applied so as to support it. If pus has already formed I have modified the method as follows. A trocar and cannula of about one-tenth of an inch in diameter is boiled so as to purify it and then plunged into the breast, generally just to one side of the nipple; the trocar is withdrawn and the bottle firmly applied as before. The pus escapes very freely at once, and the ducts are all opened as before, and often pus issues freely from them also. As the pus flows gentle pressure may be exerted upon the sides of the breast, as Mr. Spencer describes. The cannula and bottle are then removed and a large dressing and bandage applied. In only four cases out of a number amounting by this time to over thirty have I had to repeat this procedure; but even if it had to be repeated four or five times it is better than making the large incisions and draining, as is usually done, and I think everybody will admit that an out-patient who is suckling a baby, or who has just weaned it, is in about as bad a condition constitutionally as she can be to bear an anæsthetic, free incisions, draining, and constant dressing. The advantages which I claimed for this method in my paper were:—(1) You remove all the pus and can, if you like, wash out the abscess cavity with some lotion by means of a syringe, the nozzle of which fits the cannula; (2) you do not injure the breast tissue; (3) the patient is able to get about and to be out in the air and is not confined to a room or ward, and dressed twice daily or oftener, with the constant change of drainage-tubes; (4) the amount of pain inflicted is trifling compared with that caused by a large incision and by the subsequent moving of drain-tubes and dressings; (5) no anæsthetic is necessary and the patient is consequently not upset, as is so commonly the case and as everybody knows who has opened a large mammary abscess in a lactating woman; and (6) it is about the best method of removing the cause of the abscess—namely, septic micro-organisms which are blocking up the milk ducts and may have penetrated even further.

By the method above described I have been for some years in the habit of treating abscesses, acute and chronic, in situations other than in the breast and with remarkably good results. In very many cases the trocar and cannula have been inserted through healthy skin in the neighbourhood of the abscess, and so the pus has been "tapped," as it were, and withdrawn. This opens up a large question—namely, whether it is right to evacuate pus through an incision in the inflamed skin over it or through healthy skin in the neighbourhood. This is a question which I hope to be allowed to discuss in THE LANCET shortly.

I am, Sirs, yours faithfully.

PEYTON T. B. BEALE.

Grosvenor-street, W., March 2nd, 1896.

## PATHOLOGICAL AND THERAPEUTIC VALUE OF THE ROENTGEN RAYS.

To the Editors of THE LANCET.

SIRS,—I had the advantage on Feb. 15th last at the Camera Club of witnessing the excellent demonstrations by Mr. Campbell Swinton of the effects of the so-called "x" rays

of Roentgen. As I have for the last fifteen years been engaged, whenever opportunity offered, in investigating the effects of sunlight on the human body, and especially the penetrating effects of reflected rays from snow and other surfaces, I was naturally led to inquire whether there could be any relation between what I had observed and the observations of Professor Roentgen. Professor Roentgen finds that certain rays, generated or excited by electrical action, penetrate most of the human tissues and other substances, and are stopped by substances of a different nature. I have, on the other hand, demonstrated that reflected *luminous* or photo-chemical rays also penetrate the human skin into the deeper tissues beneath and produce within them great and important changes. It will, I think, be interesting to compare a summary of facts and conclusions of various phenomena observed by me from time to time with those published by you on the "x" rays of Roentgen.<sup>1</sup>

1. That heat *quâ* heat is not the cause of sunburn.
2. That there is strong evidence for believing that sunburn is caused by the violet rays or ultra violet rays of light reflected from snow, which reflected light is not necessarily of the same quality as that which is incident.
3. Captain Abney finds that the violet or ultra violet rays are very strong at high altitudes, and believes that altitude has much to do with sunburn.
4. That altitude alone does not explain sunburn, for one may be unburnt on rocks, say, at 10,000 feet, and yet become immediately affected on descending to a glacier 3000 or 4000 feet lower down.
5. That sunburn and snow-blindness arise from similar causes, and that sunstroke and sun fever may be associated with the effects of penetrating light rays.
6. That rays from the electric light produce much the same results as sun rays reflected from snow.
7. That the bronzing of the skin and the browning of the wooden *châlets* are probably produced by rays reflected from snow.
8. That various pigments, but chiefly those containing red and yellow, stop or alter reflected luminous rays, and prevent the physiological and pathological changes usually due to them.
9. That freckles, which are but the milder effects of luminous rays, stop the penetration of those rays through the skin.
10. That the sometimes very serious inflammatory changes in sunburn and in what Mr. Hutchinson designates "summer eruptions" are due to the penetration of reflected luminous or photo-chemical rays through the skin to the deeper tissues beneath.
11. Photography often demonstrates the existence of freckles and, report says, various eruptions deep in the skin which are perfectly invisible to the naked eye, showing that the luminous or photo-chemical rays are by them stopped or altered and not reflected back as no change is produced on the negative, an effect which suggests that these photogenic rays have penetrating powers as yet unknown.
12. That the wood of Swiss *châlets* is burnt perfectly black (carbonised) on its surface by rays reflected from snow, which rays in time penetrate deeply into the substance of the wood and change it to a deep brown colour.
13. That the first effect of snow rays on a new *châlet* is shown by its action on the resin of the wood, which sweats out and leads more easily to the charring of the woody fibre itself and the subsequent changes in the deeper parts.
14. Captain Maude, R.E., has shown from his own personal experiences and from experiments on many friends in India that direct solar rays in India produced sun fever of a very serious kind, which was entirely prevented by the wearing of an orange lining to all his clothes and inside his hat. These experiments demonstrate the penetrating power of light rays through clothes unprotected by colour and their important influence on health. In relation to this I have shown that a woman wearing a linen blouse with red and white stripes was strongly marked with red and white stripes on her shoulders, but the red line on her skin corresponded to the white lines of the linen—i.e., the red had completely stopped all rays from affecting the skin beneath them.
15. I have often shown that rays reflected from certain surfaces, such as water, gold and silver lace, white walls, white veils, certain clouds and mists, act quite differently from direct light, and that some physical changes hitherto unexplained must take place in light during or after reflection.
16. In relation with the foregoing are those marvellous changes in the vegetable kingdom connected with the formation of chlorophyll and the deposition of starch.

From these and many other observations I cannot help

<sup>1</sup> Sunburn on the Alps: Alpine Journal, November, 1888. Sunburn on the Alps: Edward Stanford, Cockspur-street, S.W. 1890. On the Influence of Solar Rays on the Skin: British Journal of Dermatology, No. 58, vol. v.

feeling that Roentgen’s “x” rays will be shown to be modifications only of ordinary light, and that their further elucidation must go hand-in-hand with a further inquiry into the profound changes caused by reflection to which I have above referred. It need not necessarily be assumed that what we call darkness implies an absence of all the forms of light.

I am, Sirs, yours obediently,

Upper Brook-street, W., Feb. 17th, 1896. ROBERT L. BOWLES.

## PUBLIC HEALTH (SCOTLAND) BILL.

To the Editors of THE LANCET.

SIRS,—On a previous occasion I drew attention to the miserable salaries paid to burgh medical officers. As no alteration is to be made in the bodies administering the new Act unless some clause is inserted in the new Act those miserable salaries will continue. Roughly speaking, the burgh contains two millions and a half of the population and rural Scotland contains one million and a half. The cost of medical officers looking after rural Scotland is £11,579. The cost of the medical officers looking after the burgh, including Glasgow, Edinburgh, and Dundee, is £4581, not half what is paid for rural work. I have some experience of both, and the rural work is child’s play compared to the burgh. The population of Perthshire is 122,185. Roughly speaking, rural Perthshire contains 61,000 and Perthshire burgh contains 61,000 inhabitants. The cost of the county medical officers is £784 and the cost of the burgh medical officers is £100; or £884 in all. According to Section 8 of the existing Act the board in Edinburgh are entitled to call for reports and returns, but no provision is made for remunerating the medical officers for these reports. Recently, however, the board have had the distribution of some money in aid of salaries. In Crieff the sanitary inspector has a salary of £10 and mine is £7 7s. The local authority left mine untouched and raised the sanitary inspector’s to £46 16s. Even the sanitary inspector did not benefit by the grant as the local authority cut down his wages as burgh surveyor from £60 4s. to £23 8s., so that his total earnings were £70 4s., and the grant went into the ratepayers’ pockets. The grant is, therefore, liable to abuse. I think the grant should be confined to the medical officers, and should be withheld unless the salary amounted to £10 10s. per 1000 of population. This would give for Burghal Perthshire £670 in salaries instead of £100.

I am, Sirs, yours obediently,

Crieff, N.B., March 3rd, 1896. JAMES GAIRDNER.

## “THE HADDEN FUND.”

To the Editors of THE LANCET.

SIRS,—Kindly insert these additional names and oblige,

Yours faithfully,

JAMES CRAIG,  
York-street, Dublin, March 2nd, 1896. Hon. Sec. and Treas.

|                            | £ | s. | d. |                          | £ | s. | d. |
|----------------------------|---|----|----|--------------------------|---|----|----|
| Dr. Creery, Coleraine..... | 0 | 10 | 6  | Surgeon - Major Blood,   |   |    |    |
| Mr. Purcell, Dublin.....   | 1 | 1  | 0  | Birkenhead .....         | 1 | 1  | 0  |
| Dr. Day, Cork - street     |   |    |    | Mr. Wayland, Dublin..... | 0 | 10 | 0  |
| Fever Hospital .....       | 1 | 1  | 0  | Mr. Pollard, Dunkineely  | 1 | 1  | 0  |
| Dr. Henry O'Neill, Belfast | 0 | 5  | 0  | Mr. Neale, Mountmellick  | 1 | 1  | 0  |

## IS MALIGNANT ENDOCARDITIS INVARIABLY FATAL?

To the Editors of THE LANCET.

SIRS,—In Dr. Hale White’s interesting lecture on Malignant Endocarditis reference is made to the occurrence of temporary recovery in this disease, and the question suggested whether the recovery is ever permanent. A few months ago I made a necropsy at the Bristol Royal Infirmary on a case of malignant endocarditis that seemed to have an interest in connexion with this point. Although an endocarditis of malignant character had proved fatal there was evidence that the area of the heart attacked had possessed sufficient vitality to wage a partially successful war against the disease. Vegetations, characteristic of malignant endocarditis, were present on one half of the anterior segment of the aortic valve, and the other half had almost entirely disappeared. A noteworthy feature was, however, that the narrow band that remained had a perfectly

healed edge. About a third of the right posterior aortic segment had also disappeared, and this, too, showed a smooth healed edge. Above the first-mentioned segment the coats of the aorta were destroyed down to the sheath over an area about one-quarter of an inch square, but here, also, neither the edge nor the base of the depression showed signs of the presence of active disease. In short, we may say that, although endocarditis of malignant nature still remained, there was a larger area over which it had been present but had disappeared. A somewhat similar case has occurred quite recently. The heart of a woman aged sixty showed malignant endocarditis of the tricuspid valve. In addition to the presence of the characteristic vegetations there was evidence of destruction and healing of one of the cusps. Radiating bands emanated from a fibrous centre causing puckering of the otherwise thin segment and the production of a scar similar to that which follows the destruction of skin by a burn. It may be thought that this puckering was due to a previous attack of rheumatic endocarditis. I think, however, that most of those observers who are familiar with post-mortem work will agree that rheumatism does not produce puckering of this nature. Rheumatism thickens valves along the lines of the fibres running from the attachments of the chordæ tendineæ to the base of the cusps, and consequently does not give rise to irregular deformity. It may also be mentioned that the mitral valve was not thickened, and thickening of the valve would almost certainly have been present had the disease of the tricuspid been rheumatic in origin. Both these cases seemed to me to give unequivocal evidence of somewhat extensive healing in malignant endocarditis. And if such healing can take place there seems no reason why it should not occasionally gain an ascendancy over the destructive process and cause arrest of the disease. Permanent injury to the valves would without doubt follow, but life for a time would be saved.

I am, Sirs, yours faithfully,

Clifton, Bristol, March 3rd, 1896. THEODORE FISHER.

## MEDICAL TOUTING.

To the Editors of THE LANCET.

SIRS,—Surely some redress can be obtained, or some power can be appealed to, for the repression of the disgraceful and dishonourable tactics adopted by some practitioners for acquiring patients. Some time since I was informed by a patient (and friend) that a seedy individual had called upon him to know if he would join Dr. —’s medical club. For the present I refrain from giving the name and address of the medical man in question. This is the second occasion upon which this disreputable method of house-to-house touting has been brought to my notice, and as this is, in my opinion, tantamount to advertising it should fall within the range of duties appertaining to the General Medical Council. If the Council would only erase a few names from the Register for such offences it would certainly have a wholesome effect, for how is it possible to uphold the dignity of our profession before the public if some of its members are allowed to adopt this scandalous method of procedure—of sending his agent among his neighbours’ patients to induce them to join his club. I should be much obliged by an expression of your opinion upon this matter as it affects all the respectable practitioners in the vicinity.

I am, Sirs, yours faithfully,

London, S.E., Feb. 28th, 1896. WM. LANSDALE, M.D. Durh.

\* \* Touting by medical men for patients who are already under the care of brother practitioners is, we think, correctly described by our correspondent as a “scandalous method of procedure.”—ED. L.

## “THE CHARGE AGAINST AN EX-MAYOR’S DAUGHTERS.”

To the Editors of THE LANCET.

SIRS,—The publicity given by the Press to the unfounded charge against my sisters has led to my receiving a large number of sympathetic messages from my fellow-practitioners, many of them strangers to me. I shall feel much obliged if you will allow me through your columns to sincerely thank all these gentlemen.

I am, Sirs, yours obediently,

New Cross, March 4th, 1896. F. GRAHAM HARGRAVES.