well corked bottle, for a long time. It is, in fact, a kind of thick varnish. To make the resin-cloth, as I term it, for the sake of distinguishing it from the cere-cloth dressing for wounds, which I described in a paper read at the Leeds meeting of the British Medical Association in 1869, it is needful to select a very thin, cheap, porous calico, or calico-muslin, known in the trade as "mulls", which costs at wholesale price about four shillings per piece of twenty yards. This, divided into strips, each about nine inches wide and six yards long, is reduced to a convenient form for general use. The calico should be unbleached and free from stiffening, and each of the strips should be carefully folded up, so as just to lie flatly in the press, as I am about to explain.

An ordinary square tincture press may be used to press the cloth, or such a press as is sold for copying letters, to which a tin box has been adapted, so that the plates of the press can work in it; and into this box the folded calico is placed, the solution being poured over each successive layer, so as to wet perfectly every part of it. There should be an aperture at the bottom of the box, with a tap by which the superfluous fluid can be removed, collected, and used a second time. The press being brought into action, the pile of calico should be squeezed as dry as possible, all the fluid drained off, the resin-cloth taken out, laid over a few lines of string in a warm room with a good ventilation; and in an hour or two, when all traces of smell of the methylated spirit have departed, the cloth may be rolled up and kept in tin cases ready for use.

It is difficult for me to state the exact cost of resin-cloth made by this process, for I have not yet bought the materials for its preparation at such prices as could be had if it were to be manufactured in large quantities; but, allowing for some slight reduction, where six or eight twenty-yard pieces of calico are bought at a time, and the solution made by the gallon, I find it comes to a fraction less than threepence per yard of average width of 44 inches. In using it as a dressing for wounds, I deal with it precisely as I would do with Mr. Lister's antiseptic gauze, for which it must be taken as a cheap and ready substitute. I generally apply ten folds of it over the face of a wound, as in an amputation, and perhaps six folds higher up the limb for some distance, and I cover it with the macintosh hat-lining, so as to distribute the serous discharges through the breadth of the resin-cloth thus covered. I have never found it to irritate the skin in any degree beyond what the oiled silk (protective), liberally used, could control; except once, when, in the hurry of preparing the resin-cloth, I had neglected to dry it thoroughly, and it was applied, still moist with the methylated spirit, the naphtha in it seeming to be the chief cause of the skin-irritation. But if this precaution be observed, I believe this resin-cloth will be found a very useful addendum to our means of treating wounds and abscesses on antiseptic principles.

A CASE OF TUBERCULAR LEPROSY.

By GEORGE GASKOIN, ESQ.,

Surgeon to the British Hospital for Diseases of the Skin.

J. M., aged 29, native of Herefordshire, a stonemason by trade, eighteen months since migrated to Sussex, where he has not stayed very long in any one place. The last four months he has been in town, much of the time in a general hospital. He is a married man, not of the lowest class or necessitous; his general health is not bad; he is tall, pale, and of phlegmatic complexion, sluggish in manner, with intellect at present rather dull. According to his relation, about nine months since he had very severe shiverings, immediately followed by swelling and inflammation in the right leg and foot, with some attendant fever. After three or four days, the swelling in part subsided, but the same circumstance was many times repeated; whenever there occurred a swelling of the leg, this had been preceded by a shivering. "Very red it was"; at last much thickening remained. Since being in town, the patient has ceased to have these shiverings; when they first came on, there was a fortnight or so of interval. He left off work last Christmas. The appearance of the leg is scarred or scabious, somewhat dark and rough, a case of elephantiasis Arabum, which one might even suppose of older date, and of no insignificant dimensions. Besides this, a red brand is very conspicuous on the left cheek. It crosses from mouth to temple; it is hard and tubercular, all of one piece. It came on when he was in hospital. On the right side of the neck are old scars from glandular ulcerations. These have recently become red and to some extent the seat of tubercular deposit, extending to the cheek and back of the neck. On the right shin, half-way down, there is a considerable projecting tubercle, the size of a small walnut, retaining the colour of the surrounding skin. On the opposite limb are smaller but corresponding tubercles. The four outer toes of the

affected foot display on their dorsal surface a projecting tubercular mass distinct from the general swelling. On this part there was previously a scar or trace from an injury received when a boy. Also in the affected cheek there is seen a small scar, with the history of a blow of more recent date. The tendency of the disease, as it would seem, is to fall on parts where vitality is impaired or the circulation low. The voice is not affected.

This case serves to confute the idea that elephantiasis Arabum is a local disease. The present condition of the patient comes very near to elephantiasis Græcorum, if not already merged into this. It has not seemed sufficient, however, for modern pathologists to distinguish the two diseases; the difference has been strained to the uttermost, but, being a mere idol of the theatre, the conclusion can have no permanency.

THE CONNECTION OF DIPHTHERIA WITH LOCAL UNSANITARY CONDITIONS.*

By W. N. THURSFIELD, M.D.,

Medical Officer of Health for the Shropshire Combined Sanitary District.

My object in this paper is to endeavour to elicit an opinion from you as to the exact connection between diphtheria and local unsanitary conditions, as this is a point about which there is much uncertainty, and on which members of a society constituted as yours is to a large extent are particularly well qualified to speak with authority. There are many points connected with the etiology of disease, especially as to the origin of certain diseases *de novo*, about which the observations of practitioners in country districts are of much more value than those of their brethren in large towns. They have a more intimate acquaintance with the habits, movements, and surroundings of their patients, and often they have a complete knowledge of all probable sources of infection in a district, and can thus eliminate various sources of error in a way not possible under more crowded conditions of life.

As the term diphtheria is occasionally somewhat loosely applied, I will define it to mean a systemic contagious disease, characterised by a tendency to membranous exudation, chiefly affecting the pharynx, and having these peculiarities, that, during its course, albumen is frequently present in the urine, and that the disease is liable to be followed by obscure local nervous affections. Another peculiarity of the disease is the remarkable and now well proved influence of hereditary predisposition; in determining personal susceptibility, this, in conjunction with the tenacity with which the contagion element in this disease is liable to remain in a room, unless great precautions be taken, may explain some of the cases where diphtheria has been noticed as recurring several times in the same house.

The medical practitioners with whom I come into contact in this country almost invariably connect diphtheria with local unsanitary conditions, and many of them are of opinion that such conditions not unfrequently originate the disease. On looking through the systematic works on medicine, both English and foreign, I have been struck by the almost complete absence of any reference to a connection between this disease and local influences. In the collection of monographs on the subject published by the New Sydenham Society, one author only, M. Empis, refers to it, and only so far as this, that "the disease is most obstinate, and relapses of the local symptoms most common, in weakly children surrounded by sanitary deficiencies." M. Trousseau states that "he has seen the disease raging on salubrious heights, whilst villages situated in marshy districts have escaped, and *vice versa*." In this country it has also been observed in several epidemics that the disease has prevailed with great fatality on elevated and exposed tracts of country; those of us, however, who are in the habit of making sanitary investigations in country districts know that many localities with the greatest natural advantages of site and air often exhibit, both inside and outside the houses, the worst forms of sanitary neglect, with which the pure winds in vain battle. The elaborate series of investigations, extending to upwards of seventy localities, made for the Medical Department of the Privy Council by Drs. Sanderson and Greenhow on the subject of this disease, and published in the second report (1859) of the medical officer to the Privy Council, do not seem to justify any definite conclusion on this particular point; but, in reporting a subsequent investigation, published in the eighth report (1865) of the medical officer to the Privy Council, Dr. Sanderson states, in reference to an outbreak of diphtheria, that "it is not possible to avoid the conclusion that it was due to local causes, and that it would have been prevented if the nuisance had been effectually abated."

* Abstract of a paper read before the Shropshire Scientific Branch of the British Medical Association.

On the other hand, statements most definitely denying any such connections are not wanting. Dr. Wood, in his large American work on the practice of medicine, states—"It is generally admitted that ordinary unhealthy hygienic influences, such as confined and vitiated air, and all the accompaniments of poverty and privation, have no effect in favouring the development or propagation of the disease, which seems to be as prevalent and destructive in healthy situations as in the most unhealthy." Sir William Jenner, in his recent monograph on the subject, is most definite: he states "that the infection element in diphtheria does not require for its development any of the ordinary considered antihygienic conditions," and "that it is very doubtful if any of those antihygienic conditions favour its development or give it a more untoward course when it occurs."

For my own part, I must say that, in several outbreaks of diphtheria which I have investigated, I do not think that the presence of that disease in conjunction with prominent sanitary deficiencies could be fairly explained as a coincidence.

To aid in settling this important question, I venture to propose to the members of this society two questions.

1. Does diphtheria ever arise in consequence of sanitary deficiencies?
2. Are sporadic cases of diphtheria often met with?

In the discussion which followed the reading of this paper—

Mr. GILL (Wem) was decidedly of opinion that bad hygienic conditions could produce diphtheria, and stated that a few weeks ago he had investigated an outbreak of true diphtheria in his district, in which there was evident connection with various nuisances; and, from inquiry and personal knowledge, he was in a position to state positively that there had not been for a length of time any other cases in the neighbourhood.

Mr. S. WOOD (Shrewsbury) said that some years ago a remarkable series of cases came under his notice. The epidemic extended to several hamlets in one district, and in each locality he ascertained that the disease had first attacked the children attending one national school, and commenced immediately after the holidays. On investigation, he found that, during the holidays, the contents of a ditch receiving the overflow from some privies had been mixed with ashes and spread over the playground; on the reassembling of the school, this formed a ready material for making ovens and dirt-pies, and, as a matter of fact, the children had so amused themselves. It was impossible not to connect this circumstance with the outbreak of diphtheria.

Mr. MATHEWS (Nantwich) referred to an epidemic in which the cases were almost entirely confined to farm-houses, to which a quantity of night-soil had recently been removed from a neighbouring town.

The opinion of the meeting seemed decidedly to favour the theory of a definite connection between diphtheria and bad hygienic local conditions.

THE OBSTETRIC BINDER IN *POST PARTUM* HÆMORRHAGE.

By A. B. STEELE, L.K.Q.C.P.

Lecturer on Midwifery in the Liverpool Royal Infirmary School of Medicine.

My views as to the true value of the obstetric binder differ so materially from those of Dr. Boulton, that I feel bound to state them during the present discussion on the important question of the means of anticipating flooding.

I find it difficult to believe that the use of the binder in the way suggested, or, indeed, under any circumstances, can have much to do with the prevention of flooding, because I have never used it with that object myself; and my experience includes the observation of a very large number of cases of unassisted labour, and those attended by other practitioners and also by midwives, in all or nearly all of which the practice has been not to apply the binder until *after the uterus has contracted*. Its proper use is, in my opinion, to give moderate support to the relaxed condition of the abdominal parietes following labour. As a means of compressing the uterus, in anticipation of and during the presence of flooding, it is vastly inferior to the hand, and less trustworthy. In natural labour, if the last stage be either uninterfered with by "meddlesome midwifery", or judiciously managed, the uterus contracts and no flooding occurs, even although the patient may be subjected to reasonable movement. Such, at least, is my experience; and I regard flooding as an extremely rare accident, and, when it does occur, as due to a constitutional cause—to inertia from protracted labour; to errors in the management of labour, a common one being too great haste in emptying the uterus and removing the placenta; and in no case that I have met with could it be attributed to the want of

attention to the binder. If it were otherwise, surely those who, like myself, do not trust to it, and especially those, and they are not a few, who never use it, must have discovered their mistake long ago. Nothing, I imagined, had been more generally understood and agreed upon by experienced obstetricians, than that the essential point in the management of the third stage, where interference of any kind was called for (and this, I suspect, is more seldom than is often supposed), was to compress and follow down with the hand the uterus during the expulsion of the child, and to maintain such pressure until the uterus has firmly contracted. This manœuvre, I conceive, would be in no way assisted, but, on the contrary, somewhat embarrassed, by the application of a binder. I am aware that, in the Dublin school of obstetrics, great importance is attached to the value of the binder and compress as a means of sustaining contraction; but I have always preferred sustained hand-pressure until firm contraction is secured; and then, so far as my experience goes, the danger is over. In those extreme exceptional cases which I have ventured to call recurring hæmorrhage, in which, in spite of due compression, the uterus, after having once contracted, melts away under the hand again and again, I know no more effectual remedy than the intrauterine injection of perchloride of iron, as recommended by Dr. Barnes.

ELECTROLYSIS OF EXOSTOSIS OF THE EAR.

By THOMAS E. CLARK, M.D., C.M., Surgeon to the Bristol Royal Infirmary.

THE following case of exostosis, blocking up the meatus of the right ear, causing total deafness of that side, and its removal and cure by the continuous current, may be of interest. The patient was M. D., a girl aged 15. In the early part of 1869, a discharge from the right ear was noticed; some simple remedies were used, but without any good effect. In April, I saw her; and, upon examination, there appeared a mucous polypus filling up the meatus, and bathed in a thin purulent discharge. Tannic acid was ordered; and, under this treatment, the mucous polypus disappeared, leaving a hard substance, which proved to be an exostosis.

January 1871. I examined the ear, and found a bony growth nearly filling up the cavity of the meatus, allowing only the end of a director to be passed with difficulty and pain between it and the anterior wall. An application of tincture of iodine and liquor belladonnæ was locally used, and iodide of potassium and citrate of iron internally; and this was continued for some weeks without any beneficial result. I again examined the ear in July, when a director could not be introduced, and only a very small fissure existed between the exostosis and the anterior wall, the largest parts of the fissure being above and below the centre. The hearing was very indistinct and uncertain, the slightest moisture causing entire deafness.

I suggested the application of the continuous current to the exostosis, to promote its absorption and arrest its growth by blocking up the vessels of the periosteum. This was found too painful, and was given up, except under the influence of chloroform.

August 29th. The whole meatus was entirely blocked up by the exostosis; its surface was pinkish, and it felt of stony hardness. No probe could be passed in any direction by the side of the growth. She was totally deaf in this ear. She was placed under chloroform. I introduced three needles, two at the base, close to its attachment to the posterior wall, and one at its anterior edge. The former were attached to the negative pole, and the latter to the positive; and the application was continued for three minutes. This produced a large coagulum at the point of entrance of the needles, and rendered the whole tumour white. There was no subsequent irritation or pain produced. The battery used was Dr. E. Stöhrer's (six pairs of plates).

September 12th. Two needles were introduced while she was under chloroform; and in introducing them the resistance was very slight, whereas at the first application one of the needle-points broke on account of the great hardness of the growth. The connections were similar to the last, but were continued for five minutes. No ill effect followed.

September 26th. There appeared some diminution in the size of the growth.

October 4th. She was again placed under chloroform; and, upon examining the exostosis, it gave the idea of being loose; and with a closed scissors I pressed against its base, and it came away entire. Only a few drops of blood followed. There was no subsequent pain.

On examination of the growth, the front, or part facing the anterior wall of the meatus, was seen to be convex, with slight depressions above and below, covered with periosteum. The posterior part, or its