seton or an issue; and this not by reason of the discharge from a particular spot, and still less from the draining away of any supposed peccant humour, but by virtue of a dynamic impression on the central nerve-ganglia. (a) *Some very sudden inflammations of the brain and of the viscera of the chest are admirably treated by rapid blisters.* The old-fashioned acute cerebritis now and then seen should be combated in this way (the head, of course, having been previously shaven); and nothing affords such relief to the fearful dyspnoea of acute capillary bronchitis. The life of even a very young child, who may be attacked by this urgent disease, may be saved by the bold application of a cantharides blister. I am persuaded that there is much unnecessary terror about the use of blisters in the case of children—a terror which is increased, rather than quelled, by the authority of some text-books; but on this point I say no more at present, as I propose, shortly, to write some independent remarks in favour of the practice. Finally (c), *counterirritation deserves a trial in some forms of chronic consumption.* This is one of the traditions of what we term old-fashioned days, which ought to be highly commended. Damage to lung-tissue and all its consequences may be alleviated by blisters to different parts of the chest; and trustworthy observers have testified that the morbid process is sometimes arrested, if not altogether stayed. I am glad to add my own experience in this matter; for nothing, I think, can be better than the results which are now and then obtained by limited counterirritation of chest-surface in the earlier stages of pulmonary tubercle. In my next paper I hope to offer some statistics on this important topic.

[To be continued.]

INFECTIOUS DISEASES AND SANITARY LAW REFORM.

By JOHN LASCELLES, Esq., Barrister-at-law.

THE recent outbreak of typhoid fever in Mayfair and Marylebone has again forced upon public attention the desirability of legislation for preventing the spread of infectious diseases. It is now admitted that the outbreak in question was caused by infected milk, which had been obtained from a farm where one or two persons had lately suffered from a form of typhoid fever which had been prevalent in the neighbourhood. The Mayfair and Marylebone case is by no means exceptional. We know that several outbreaks of typhoid fever have, within the last two or three years, been traced to infected milk-supplies. One of these took place at Leeds early in the present year, and the infection was clearly traced to a farm near Harewood, from which the families affected obtained their daily supplies of milk; and at which the Corporation Officer of Health found six persons suffering from fever in a room on the ground floor, which opened into a kitchen from which there was a door into the dairy. He also discovered that the same woman acted as dairy-maid and as nurse to the fever-patients. Diseases have been thus often traced to infected milk-supplies, because outbreaks so caused are usually of sufficient importance to lead to public investigation. There can be no doubt, however, that large numbers of isolated families are desolated by infectious diseases which are conveyed to them by means of infected clothing, food, etc.; and that, as such outbreaks are not general, the public hear nothing about them. We are sometimes startled by stories of poor journeymen tailors who have used cloth, which had given them to make into overcoats, as temporary blankets wherewith to cover their wives and children who were suffering from fever or small-pox. We have been told of infected bakers who were employed in the manufacture of the bread which, perhaps, conveyed the seeds of death into some of our houses the next morning. These stories may or may not be true; but we cannot shut our eyes to the fact that infectious diseases, with all their terrible consequences, are conveyed into our homes by some means or other, and that, as our sanitary laws now stand, we have no means of knowing whether our milk, our clothing, or our bread will or will not, on any particular day, bring suffering and death into our households; we leave the matter to chance. Certain statistical tables, gloomy records of our apathy and folly, periodically remind us that infectious diseases destroy as many of our people every year as would be destroyed in a bloody and disastrous battle. These dry statistical tables speak to us, and we must not dare to pretend that we do not understand what they say. They tell us of desolate and poverty-stricken families; of fatherless children and widows; they awaken echoes in our hearts of distant sounds of suffering and lamentation and woe in thousands of English homes.

Now we know that much of the suffering and death caused by infectious diseases is preventable, and that it would be prevented if we could make up our minds to submit to suitable and necessary legisla-

tion. At intervals during the last three years, I have advocated a reform in our sanitary laws which would, I think, reduce our danger from such diseases to a minimum. The principle of my scheme has been approved of by men who were well able to judge of its merits. I first devised and drew it when acting with my friend Dr. Arthur Ransome as a subcommittee of the Manchester and Salford Sanitary Association. It was afterwards carefully considered, and was approved of by the Committee of that Association; and the Joint Committee on State Medicine and the Report of the Royal Sanitary Commission of the British Medical and Social Science Associations also considered it, and printed it in the appendix to their report. Nothing less, however, than a healthy and intelligent public opinion in favour of the scheme can enable its supporters to put it into the practical shape of a section in a future Sanitary Law Consolidation and Amendment Act. I think it well, therefore, to take advantage of the interest which has been recently awakened in the subject to which it relates, to submit it to more extensive criticism than heretofore, in order that what is valuable in it may gain additional supporters, and what is useless may be finally dismissed to the limbo of impracticable ideas and suggestions.

I have stated above that our safety from infectious diseases is now left to chance, but, I think, no one will seriously argue that this state of things should be allowed to continue. If we can protect ourselves and our families by taking a little trouble and forethought, it will readily be admitted that it is our duty to take the trouble and forethought required for that purpose. I am far from being an advocate of what is called over-governing the country, or of undue interference with individual liberty of action. Infectious diseases are, however, a source of danger to all persons in their vicinity; and the public have an undoubted right to insist that such precautions shall be taken by persons in charge of those who are suffering from them, as are necessary to reduce this danger to themselves to a minimum; and, this being so, they clearly have a right to take means to satisfy themselves that such precautions are duly taken in all cases. I will not support these propositions by arguments, for they will be admitted by even the most persistent advocates of the *laissez-faire* principle of government. Premising, therefore, that every part of England and Wales is now within the jurisdiction of some one local sanitary authority, I will proceed to submit the following proposals for legislation which, if properly acted upon, will, I think, give the people the protection they require.

In order that they may be clearly understood, I will state them as dryly and concisely as possible. All cases of fever, or any other infectious disease, shall be speedily brought under the notice of the sanitary authorities having jurisdiction over the areas in which they occur. In order that this may be done, medical men attending such cases shall be bound to give immediate notice thereof to such local sanitary authorities. They shall also be bound to declare their infectious character to the persons in charge of the houses in which they occur, so that some immediate precautions may be taken to prevent them from spreading. When no medical man is in attendance, the persons in charge shall themselves give the required notice to the local sanitary authorities. Every local sanitary authority receiving such a notice, shall immediately send printed directions as to the disinfection of clothing, etc., and as to precautions which should be taken to prevent the spread of infectious diseases, to the person in charge of the house where the infectious disease is. These directions shall include various methods of disinfection, some of which shall be capable of being adopted by persons in the humblest circumstances; they shall be drawn up and printed under the supervision of the medical officers of the Local Government Board; and each local sanitary authority shall keep a stock of them ready for immediate use. At intervals of not more than ten days, counting from the receipt of these directions, the person in charge shall send to the local sanitary authority the certificate of a properly qualified medical man that the directions have been duly acted upon. And he shall continue to do this until he send to such authority the certificate of a properly qualified medical man that no person in the house under his charge is ill of fever or any other infectious disease, and that those parts of it requiring disinfection, together with the bedding and clothing used by and about the person who was sick, have been thoroughly cleansed and disinfected. Medical men wilfully neglecting to give notice and to declare as mentioned above; medical men or other persons giving false certificates; and persons in charge of houses, having cases of fever or other infectious disease in them, wilfully neglecting to give the required notice when no medical man is in attendance, or to act upon the printed directions sent them, shall be liable to be fined. Moreover, the persons last mentioned, on being guilty of any of the defaults, or failing to send the periodical certificates referred to above, shall also be liable to have their houses entered by the officers of the local sanitary authorities, who shall have power to do the disinfecting required, to remove the infected persons to a hospital, and to charge the cost of such pro-

ceedings to such defaulters. The periodical sending of the certificates mentioned above appears to be the only plan by which the public can be adequately protected without putting the local sanitary authorities to the expense, and persons having infectious diseases in their houses to the annoyance of domiciliary visits. These certificates will generally be given by the medical men in regular attendance, so that persons who are disposed to act as they ought to act, and as all right-minded and reasonable men do act, without any compulsion whatever, will be put to very little extra trouble or expense in obtaining them, or in forwarding them to the sanitary authorities having jurisdiction over the areas in which their houses are situated; and for this trouble and expense they will be amply repaid by being speedily made acquainted with the best methods of disinfection, etc., which the most skillful and highly trained men of science in the country can devise. Those who are careless will be kept under effective supervision, and will be obliged to take proper precautions for the protection of their own families and of the public; and the whole country will be benefited if the provisions which I have described be put in force; provisions which will be a positive boon to the well disposed, and which will only press upon the careless and the reckless. The people will be protected from infectious diseases, and medical science will be advanced by the valuable information which will be obtained by making use of the facilities which will be afforded for a reliable registration of such diseases when treated in private practice.

I shall not enter into details as to the form of the notices to be given to the local sanitary authorities, the form of the certificates to be given by medical men, the fees to be paid for them, etc. There is one point, however, which must not be left unnoticed. Men of science do not agree as to whether certain diseases are or are not infectious. It will be necessary, therefore, to give a list of diseases which shall be deemed to be infectious in the definitions and section at the end of any Act of Parliament containing provisions based upon the above proposals. It will be wise, moreover, to give the Local Government Board power to add, by means of provisional orders, to the number of diseases which shall be deemed to be within the Act. Increased knowledge and experience will then, from time to time, be readily made available for the protection of the people.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

GENERAL HOSPITAL, NOTTINGHAM.

CASE OF HYDATIDS OF LIVER, DISCHARGING BY FISTULOUS OPENINGS.

(Under the care of Dr. RANSOM.)

Reported by L. W. MARSHALL, M.B., Resident Surgeon.

E. P., a lace girl, was admitted Nov. 13th, 1872, having a lobulated mass situated in the upper part of the umbilical region, extending as far as the umbilicus inferiorly, but leaving the epigastrium unoccupied. The tumour was dull on percussion, this condition being continued uninterruptedly through the right hypochondrium to the hepatic region. The hepatic dulness rose nearly to the level of the fourth rib; a slight bulging being observable in the right lateral region. The whole mass was movable by hand laterally to a limited extent, although the respiratory act had but little effect in altering its position, and the abdominal walls appeared to be carried with the tumour when shifted by this effort. To the hand the tumour felt tense and elastic, but distinctly fluctuating. Three cysts or lobes were to be made out, one of which was situated in the middle line immediately above the umbilicus, the other two being respectively on the right and left sides of the mesial line. Fluctuation was communicable from the left to the right cyst. The left cyst was larger and more tender and painful than the others. Between the conjoined cartilages and the left cyst was about a finger's breadth of resonance, continuous with that of the cardiac end of the stomach, the limit of which was at a point immediately below the left nipple. On deep palpation below the umbilicus, some indurated masses could be felt, which were believed to be either enlarged glands or smaller cysts, but they appeared to have some connection with the lower border of the tumour. On the posterior surface of the trunk, no undue prominence was to be found, neither was the hepatic dulness extended.

The tumour was first discovered eight years prior to admission, at which time she was tapped, and believed "about a pint of clear water"

was removed. Subsequently to this, she stated, she was put under chloroform, and the tumour was diminished on her returning to consciousness, and it was her belief she had been again tapped. She resumed work nine weeks after first operation, and continued in fair health until twelve months before the date of admission, when she was caused to discontinue her employment by pain in the side. The swelling had increased slowly until within a few weeks before she became an in-patient, but was then stationary. With the exception of pain in the left lobe, she complained of nothing. No important physical signs were discoverable elsewhere. Pulse 108, after examination; respiration 26.

Nov. 18th.—At the most elevated point (two inches above the umbilicus) she measured twenty-eight and a half inches in circumference. There she was tapped, two ounces of fluid escaping, which was tolerably clear until the last few drops, which were turbid and had a yellowish colour like pus. By this tapping the other lobuli were diminished in prominence, but not emptied. The wound was dressed with collodion. On microscopical examination of the fluid, the turbid deposit was found to be pus, besides which numerous echinococci, shreds of hydatid cysts, and plates of cholesterol were found. With the exception of some tenderness at the point of puncture, she appeared to be in no way inconvenienced by the operation.

Nov. 24th.—It was noted this day that there was an enlargement of the whole mass, with a considerable induration of the matrix. The said matrix was believed to be the left lobe of the liver.

Dec. 27th.—The cyst on the right side of the mesial line burst, a small quantity of blood and serous fluid escaping.

Dec. 29th.—Another opening was formed about an inch above the first, from which numerous cysts had escaped, accompanied by or floating in an opaque fluid. The integument being considerably thinned on the left side of the mesial line, it was thought expedient to make a puncture at that point with the needle of the pneumatic aspirator, but the action of that instrument was imperfect, from the tube becoming stopped by pieces of cyst. A small quantity of fluid was withdrawn by the use of the instrument. This opening was covered by lint and collodion; the other (first) by carbolic gauze. Cysts and fluid escaped for four or five days, no constitutional disturbance having been caused by the tapping. The lower opening was kept open for a week or more by sea-tangle tents, these, however, being soon replaced by a drainage-tube; cysts and purulent fluid escaped freely at the same time.

Jan. 16th, 1873.—The dull region was confined to the space above and in immediate neighbourhood of the fistulous opening. The discharge was diminished.

Feb. 2nd.—The aspect of the abdomen was normal, the lobulated tumour having disappeared. The edge of the liver was felt an inch below and in a line with the umbilicus. In the position of the tumours, which burst naturally, nothing was felt but flat indurated liver-surface. In the position of the separate cyst on the left margin of the left lobe, which was punctured by the aspirator, the same physical signs were present, with slight oedema. There was very little tenderness. The principal opening through which cysts had come was contracting, but closure was prevented by lint and carbolic oil.

Feb. 25th.—The openings were closed. The area formerly occupied by the multiple tumours was now slightly resonant, but on deep palpation was felt to be indurated. That part occupied by the cyst on the left side, which was punctured by the aspirator and did not suppurate, was flat, boggy, and slightly oedematous, with patches of vascular injection in its centre. It threatened to suppurate, and the skin was adherent to the tissues beneath.

March 5th.—She was re-admitted with a fistulous opening on the left side, from which (prior to admission) a small quantity of bloody fluid had escaped. She complained of no pain. There was slight tenderness.

April 6th.—She was convalescent. The edge of the liver could not be felt, neither was there any discharge from the fistulous openings, which had been closed about seven days.

CASE OF COMPOUND FRACTURE OF TIBIA AND FIBULA: HÆMOR- RHAGE STOPPED BY SOLID PERCHLORIDE OF IRON.

(Under the care of Mr. WRIGHT.)

Reported by L. W. MARSHALL, M.B., Resident Surgeon.

G. B., a boy, aged thirteen years, was admitted Dec. 29th, 1872, with the injury mentioned above; the lower end of the upper fragment of the tibia being protruded half an inch through a wound on the upper and inner side of the limb. Reduction was effected by removal of a portion of the tibia, but bleeding continued from between the two fragments. The posterior tibial artery could be felt distinctly behind the inner malleolus; but the anterior tibial, although felt, was not so