kidneys are somewhat enlarged and soft, and weigh respectively $6\frac{1}{2}$ and $6\frac{3}{4}$ ounces. The lower margin of the great omentum, which is spread out over the distended bowels, is bound down to the brim of the pelvis, and, on separating the adhesions to the pelvic brim, pus escapes. The whole cavity of the pelvis, namely, Douglas's pouch and that between the uterus and bladder, is the site of an intense purulent peritonitis, the pus being confined in loculi formed by adhesions. The aspect is not at all that of a tubercular peritonitis. The pelvic organs are removed *en masse*. The rectum and urinary bladder are found to be quite healthy. The os uteri shows a catarrh of the mucous membrane, and a similar catarrh is observed at the fundus uteri. Both Fallopian tubes are slightly distended, containing a small quantity of puriform fluid, and their fimbriated extremities are bound down in the peritoneal adhesions. The greatest formation of pus has taken place immediately around the uterus, and all the facts of the case point to a pelvic purulent peritonitis set up by extension from below, the hepatic and splenic conditions being secondary to the pelvic.

In the mesentery there was found a gland, the size of a hazelnut, filled with pultaceous semi-calcareous material. The following additional note as to the condition of the generative organs is supplied by my colleague, Dr. James K. Kelly. "At the right side of the orifice of the vagina, close to the edge of the hymen, is an opening bounded by a thin edge of mucous membrane, about half an inch in length from before backwards, which can be followed up in the side wall of the vagina for about an inch and a half, where it seems to end in a *cul-de-sac*. The fimbriated end of the left Fallopian tube is greatly dilated and cystlike, and the abdominal orifice is wide, while the fimbriae themselves seem normal."

REMARKS.—As I have already observed, perhaps the most striking feature in this case is that the exceedingly coarse organic lesions, which I have just described, should have been more or less latent throughout, that is, that they should have gone on to a fatal issue without calling forth symptoms sufficiently definite to direct attention to the chief seat of disease, for I understand that from first to last the state of matters in the abdomen was not suspected. The pleurisy was detected at once, and treated throughout, but nothing occurred to throw suspicion upon the abdomen or pelvis. In the month of September last, while in temporary charge of wards in the Royal Infirmary, the patient was under my care for two or three days, and at that time, with the exception of pleurisy, nothing else was made out. Although she was under observation from this time until the time of her death some weeks afterwards, nothing occurred to direct attention to the abdomen.

The next circumstance which demands a little attention is the causation of the exceedingly severe suppurative pelvic peritonitis in an unmarried female. In this connection the condition of the Fallopian tubes is, of course, most important, and I think there can be very little doubt that the peritonitis originated in connection with them. It is more difficult, however, to be sure of the cause of the salpingitis, and there is no clinical history to point the way. One very common cause of severe pelvic inflammation of this kind is undoubtedly gonorrhoea, and it is possible, though we cannot tell, that this may have been the starting point of the patient's troubles.

There can be little doubt that the abscesses of the liver had been directly set up by absorption of septic matter from the pelvis, and that we had to deal with a pyæmia limited to the portal circulation. It is, perhaps, a little difficult to account for the splenic abscesses in this way, but there was so much matting of the parts all around the liver and spleen, that I am not surprised that one or two small suppurations occurred in the latter organ. General pyæmia is, I think, excluded, because no suppurations were found in any other part of the body, and the pleuritic condition at the base of the left lung was not pyæmic.

The only other circumstance calling for remark is the anatomical peculiarity present in the generative organs in the shape of a rudimentary vagina. I examined Dr. Kelly's careful dissection of the parts, and I had no difficulty in agreeing with him that we had to deal with a case of double vagina, one being in a rudimentary condition. This, of course, was of morphological rather than pathological interest.

It is proposed to hold a French Colonial Medical Congress in the spring of the present year. The meeting will probably take place at Marseilles.

HISTORY AND USES OF THE PROTECTED SURGICAL ELECTRIC LAMP.

By N. STEVENSON, M.R.C.S., L.D.S.

IN 1883 I designed an electric light for dental work. The lamp was made expressly for me by the Swan Electric Light Company. It was fitted into an ivory socket firmly screwed to a metal tube like a No. 8 catheter, and covered with a glass shade, so as to allow sufficient air space, to prevent contact at any point between the two. The tube passed through a suitable wooden handle, and being open at each end, allowed the air to circulate freely. It was described at the time in the medical journals, and exhibited at the Pathological and Odontological Societies of London and Edinburgh, but the difficulty in getting the lamps and unsatisfactory working of the batteries made me abandon the use of it; now, however, that better lamps can be easily obtained and that the batteries are immensely superior to the old ones, I have taken to use them again and adapted them to other surgical purposes besides my own.

Fig. 1.—Diagram, half size, of lamp for ordinary purposes, showing the lamp full size.

Fig. 1. I find this lamp useful for any kind of examination where light is required without undue heat. It may be used in contact with any part of the body, if it is not kept lighted too long; for this reason I prefer to let the patient control it if possible, for then it can be lit at pleasure, and confidence is established. It is valuable in most operations of dental surgery, but especially so in preparing difficult cavities for fillings, or for working out nerve canals and in detecting exposure of the pulp. In cases of closure of the jaws from spasm or other cause, it gives enough light through a gap in the teeth to enable one to see perfectly the whole cavity of the mouth. It may be put into one nostril to examine the other by lighting it up through the septum.

It is useful also (with a slight alteration in the bend of the stem) for gynecology, and in abdominal surgery specially valuable.

Fig. 2.

Fig. 3.

Fig. 2.—Five-volt lamps for lighting the bones of the face, either by mouth or nostrils.

Fig. 3.—For dental operations. Both full size.

Fig. 3 is another application chiefly useful for scaling long teeth sloping inwards. The lamp is fixed by the air tube to a flat silver ring, which is surrounded with gutta-percha, so that it may be conveniently held in position by passing the forefinger through it. Whilst the lamp lights the whole floor of the mouth, it also keeps the tongue out of the way, and the ring prevents the mouth from closing and protects the finger from the teeth.

I fitted another into the tongue plate of Mr. Smith's gag for cleft palate operations; with this the surgeon gets a perfect light, and is relieved from the nuisance of having constantly to dodge his own shadows; this, indeed, is one of the chief advantages in all these lights. The necessary air tube here is carried in a groove in one side of the lower limb of the gag, and emerges into the open air near the hinge. The operator regulates both these instruments by pressing with his foot or knee a specially arranged switch for the purpose. If a constant light is wanted for a long operation, air would have to be forced through one tube and out at another by means of a similar arrangement to that used for diffusing spray, but although this would be less complicated than the hydraulic plan, it is quite unnecessary for ordinary purposes.

Dr. Felix Semon suggested that I should try the experiment first employed by the late Professor Heryng to diagnose empyema of the antrum. He used a five-volt lamp fixed to a tongue depressor, and in a perfectly dark room, lighted the bones of the face from the mouth. I have repeated this with two five-volt protected lamps (Fig. 2) on one stem, and have further modified it by introducing them into the nostrils. The bright red in the facial cavities and the lurid glare of the soft tissues gives the face a ghastly aspect, the practical value of which is that if either antrum is diseased or filled with pus, it will be less luminous than the other, and the abnormal condition will be detected. Of course, a naked lamp cannot be used in the nostrils, as the heat would be unbearable.

I cannot estimate the practical value to others of these instruments, but I think there must be many who will find them as I do of great service. I have myself made or mounted all those I have referred to, and if anyone wishes to do the same, I may as well mention that the lamps are from the Edison and Swan Electric Light Company, and are called five-volt pencil-shaped micros. In mounting the most important points are to have the lamps without other attachment than the conducting wires, and to hermetically seal the glass cover to the socket. Those who do not care to make them can obtain them with the batteries from Mr. Schall, Wigmore Street. The carbons are so delicate that the instruments must be handled with great care; a drop of three inches on anything hard will probably break them. I always try to place them gently on something soft, like blotting paper or velvet.

THE Mexborough Montagu Cottage Hospital was opened on January 30th.

THE PROPAGATION OF LEPROSY.

By ERNEST F. NEVE, M.D., F.R.C.S.E.,
Surgeon to the Kashmir Mission Hospital.

It is well known that (1) heredity is one of the means of propagation of leprosy. This is, however, a less potent factor than might be supposed. Out of twenty-two cases in which I made careful inquiry there was no hereditary history in fifteen.¹ (2) Direct inoculation has been almost, if not quite, proved to be a possible source, as in Arning's case.² It appears improbable that it is a frequent origin. (3) A considerable number of cases have been recorded³ in which there are reasons to suppose that the disease has been communicated by a leper to a previously healthy person. I have quite recently heard of a case in this country in which a healthy woman who had lived with a leper became leprosy after the death of the latter. Such propagation may be due to vaccination with contaminated lymph, or to contagion from clothes and eating vessels, or even to aerial transmission. (4) There has been for many years a popular impression⁴ that the eating of fish, especially when salted, is a specific cause of leprosy. This view has been adopted by a well-known surgeon,⁵ whose eminence appears to me the strongest argument in favour of the theory; for the facts adduced in support are of slender proportions, and the theory has been repeatedly challenged.

That there is nothing intrinsically improbable in the transmission of bacilli by means of fish may be readily admitted. It has been recently pointed out by Edington⁶ that dried salt fish contains organisms of putrefaction to a considerable extent. It is quite probable that the leprosy bacillus might find a suitable nidus in fish; but the previous contact of leprosy virus with that fish would, I imagine, be a *sine quâ non*. And, if so, then fish is in no sense a cause of leprosy, but may be relegated to a minor place as a possible medium of cultivation. Thus, as we might expect, leprosy is common in districts in which fish is never eaten; and, conversely, it often does not exist where fish is eaten in large quantity. In this country the fishermen and boatmen are almost the only important classes of the community free from leprosy taint.

It is probable that (5) many nutrient substances, if exposed to leprosy contamination, may become sources of danger. Forster⁷ has shown that various bacilli may retain their vitality in salt meat. Again, milk is especially liable to different forms of infection.

In Kashmir, leprosy exists to a considerable extent amongst herdsmen, many of whom never eat fish, but all of whom consume largely milk and milk products. One adult may eat from six to twelve pounds of curds in twenty-four hours; putrid buttermilk is considered a delicacy. It is easy to see that a leprosy milkman might spread infection; and in this connection I would point out that Europeans, who drink unboiled milk, if they chance to live in or visit a district where leprosy is endemic, might contract the disease in this way; in fact, this may be the explanation of various recorded cases. Probably, however, some predisposition is required.

6. In this country, the distribution of leprosy corresponds to the mountain slopes and valleys of the trap or sedimentary series, and to a less extent to the plateaux of the pleistocene. On the flat, alluvial floor of the main valley leprosy is by no means common. I question, however, whether the geological formation exercises any influence on the propagation of the disease except in so far that leprosy tends to become endemic in certain valleys and tracts shut in by natural mountain barriers.

We know that a pathologist engaged in constant *post-mortem* work enjoys a freedom from accidental blood poisoning not shared by those fresh to the work. The surgeon who frequently attends cases of infectious disease appears to become similarly protected. Does living in contact with leprosy ever produce a like immunity?

The prolonged incubation period of leprosy, often of several years' duration, interferes with the solution of this question; it also renders—in connection with the question of contagion—the tracing of the original source of infection difficult, if not impossible.

¹ *Lancet*, ii, 1889, p. 900.

² *JOURNAL*, ii, 1888, p. 1171.

³ *Vide (int. al.) JOURNAL*, i, 1887, p. 1269; ii, 1887, pp. 335, 799, 1119, 1055; i, 1888, pp. 112, 1372.

⁴ *JOURNAL*, ii, 1889, p. 167.

⁵ *JOURNAL*, i, 1889, p. 1449.

⁶ *JOURNAL*, ii, 1889, p. 997.

⁷ *JOURNAL*, ii, 1889, p. 938.