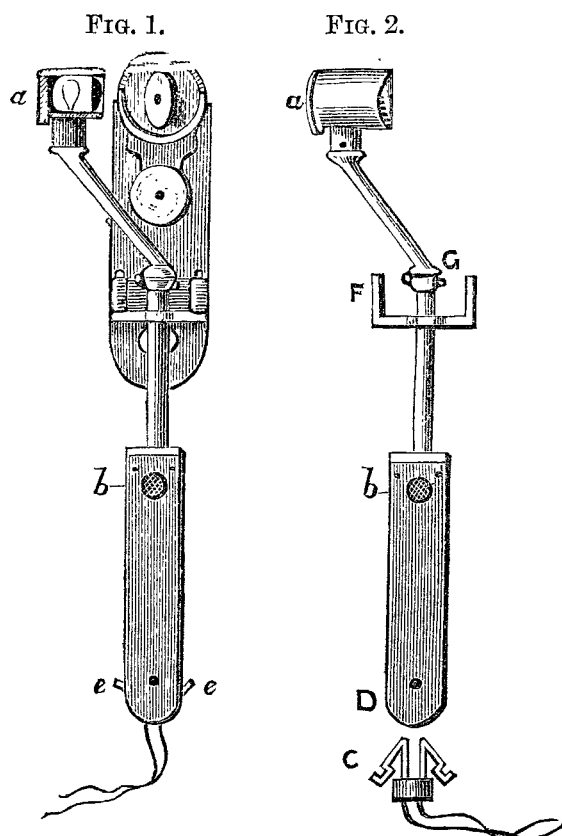


much indebted to the skill of Mr. Panton, of the firm of Messrs. Pickard and Curry. The electric lamp and handle I have had adapted to Morton's ophthalmoscope, but such an arrangement could be adapted to any ophthalmoscope.

The construction of the instrument is simple, as can be seen by a glance at the accompanying woodcut. Fig. 2 shows the small cap (*a*) which encloses the Swan lamp. The cap is silvered on the inside with a reflector, seen shaded dark in Fig. 1. The Swan lamp is in the middle of the cap, and in front is a small bull's-eye lens which concentrates the light on the mirror. This cap is covered externally with wood, so as to insulate the heat from the lamp, which becomes hot if kept at full incandescence for ten or fifteen minutes. The Swan lamp is so fixed as to be easily removed and replaced by another, in case of any damage. The wires from the lamp are carried down within the handle, and entirely concealed from view. Contact with the battery is made by pushing a little contrivance (*c*) into the end of the handle (*d*). It holds by the little notch seen on each side (*e*). It can be at once detached by pressing the two little projections at the side seen at *e*, Fig. 1. This avoids the delay and inconvenience of



having to screw and unscrew the connexions. Any of the flexible conductors may be used to make contact with the battery. The button (*b*, Fig. 2) enables the surgeon to turn the light on or off, as desired. In Fig. 2 (*f*) is shown the means for fastening the handle with the electric lamp to the ophthalmoscope. The two pins slip into two spring clips added to Morton's ophthalmoscope. A collar (*g*, Fig. 2) enables the handle to be rotated, and thus the lamp can be turned to the right or to the left side of the mirror, so as to suit the examination of the right or left eye of a patient. A small catch (*g*) stops the rotation when the lamp is in proper position. This is the whole arrangement about the lamp. The only additions I have made to Morton's ophthalmoscope are the two clips already mentioned, and an oblique mirror of short focus, with a sight-hole oval laterally. This mirror fits into the clip, where the larger mirror of the ophthalmoscope is placed. This smaller mirror is set so that it lies at an angle of 45° to the plane of the ophthalmoscope. Thus, when the lamp is fixed at the side thereof, parallel to the plane of the ophthalmoscope, it follows that the light is focussed

exactly in a line with the sight-hole. Fig. 1 shows the instrument adjusted for examination of a patient's left eye, since it is convenient to have the lamp to the outer side of the eye under examination, otherwise the patient's nose would come in its way. To adjust it for examining the patient's right eye, all that is necessary is to rotate the handle of the lamp to the opposite side, till the catch (*g*, Fig. 2) stops it. It is then in the same plane as the ophthalmoscope. The oblique mirror, of course, has to be turned round, so as to face the lamp. In doing this I find it is best to look straight down the sight-hole, keeping the eye about eight to ten inches from the mirror, and to turn it till the image of the incandescent filament appears round the sight-hole.

This instrument is intended for the direct method of examination of the eye, and is used precisely in the same way as the ordinary ophthalmoscope. The light is pleasant, and quite as well borne as the usual gas or lamp light used in ophthalmoscopic examinations. By this arrangement it is easy for an inexperienced person to see the fundus oculi, and especially so if the pupil be dilated. The light is on the spot he looks at, and always follows the movements of the instrument. The light is never lost. On this account it may prove a useful demonstrating ophthalmoscope. The colour of the parts is nearer that seen by daylight than can be got by the ordinary artificial light. The lamp can be detached in a second, and used independently for oblique illumination in examining the cornea or lens. I have used this lamp in needling operations. The ophthalmoscope can be used in the ordinary way, since the oblique mirror can be removed, the additions in no way interfering with it.

As to the source of the current, I have used lately four cells modified Leclanché battery. This gives a moderate light for about eight minutes, and then requires twenty minutes' rest. The bichromate battery, as employed at Moorfields Eye Hospital is probably the best form of stationary battery. Two small Grove cells will give a good light with this lamp for three or four hours or more. Pocket accumulators have hitherto disappointed me. Mr. Joseph Swan has recently made a reliable accumulator, which is quite portable, and, fixed with a specially constructed Swan lamp, gives a good light for twelve hours. It can then be re-charged. Mr. Swan is now perfecting these accumulators still further, and it is very probable that medical men will then be provided with a portable and trustworthy source of electric current, which will not only be useful for lighting purposes, but also for galvanic-cautery, &c.

J. MCKENZIE DAVIDSON (Aberdeen).

THE TREATMENT OF PERTUSSIS.

To the Editor of THE LANCET.

SIR,—With reference to Dr. Cory's remarks on the above subject in your issue of the 9th inst., and especially with regard to the antiseptic treatment of the same, I am very pleased to have this opportunity of corroborating his views and of adding a view of my own. I would suggest that the carbolic acid, or anything else which is used, should be in the form of a spray. The carbolic acid may be very successfully given by means of an ordinary steam spray, simply allowing it to be diffused through the apartment. A solution of 1 in 20 will be found very suitable, and this should be directed towards the patient's face and as near the face as may be found agreeable. By this plan no internal drugs should be necessary so far as the pertussis is concerned. This system, if judiciously carried out, ought to cut short any attack in an individual, and it will at the same time act as a disinfectant generally. These remarks so far have a special bearing on pertussis, but they will be found equally applicable in many other diseases, such as measles, scarlatina, croup, diphtheria, and phthisis, or any other affection of the air-passages. I consider this idea, when properly carried out, will open up a new field in the treatment of disease generally, and the above may come within the range of the surgeon. I have adopted this system in a number of cases, and found it most satisfactory as far as the patient was concerned, but not so very satisfactory (from a financial point of view) for me.

I am, Sir, yours respectfully,

Bury, Lancashire, Jan. 13th, 1886.

GEO. C. RICHARDSON.