and form, for the expulsion of intestinal worms; to which, indeed, all "biters" appear to be inimical. In another case, a tapeworm was expelled after a large quantity of very strong coffee had been drunk.

There is another remedy of which I am about to try the effects, in consequence of its strong recommendation by Friedrich of Heidelberg; and that is the picronitrate of potash (*Kali picronitricum*).*

I may remark, that it would appear that in certain cases there is an attempt on the part of the bowel to dislodge the worm, apart from medicine exhibited. Thus I know of one, a private case, in which for many years the patient has had the tapeworm, and who, every few months, experiences violent griping, with nausea (never vomiting) and diarrhoea, for about half a day, with concomitant expulsion of several yards of the worm. He has never found the root or head of the animal; but he does not appear ever to have sought for it very systematically. In another case of which I have notes, the patient observed that, contrary to what is usually thought to be the case, he had had three worms of large size expelled within a short period of each other, in each of which the head was found. This observation, though stated honestly by the patient, may, of course, have been erroneous.

More than once I have found that the *tænia* and the *ascaris lumbricoides* have existed in the human bowel at the same time.†

With one more remark I will conclude, and it is one which may possibly have a practically beneficial effect; and that is, that I think there may be reason for believing that the *tænia* may be communicated to infants and children from others, and in the following manner. In almost all cases, there is reason to think that a *tænia* does not exist very long within the intestine without portions or joints being passed, not only by stool—i.e., with the *fæces*—but also by their spontaneously working their way through the anus, and "skeddaddling" (to use an expressive Scotch phrase) from the person, adhering to the garments, or falling on the ground. Now, I have known cases in which there is reason to think that these fragments, which soon desiccate, shrivel, and become reduced to a small brownish-coloured mass, may have been picked up by children, often crawling infants, who are ever ready to pounce upon and put in their mouth every crumb or crumb-like substance which they can see, and thus have been introduced into the digestive organs. I have no certainty of this; but I think it is a point worthy of consideration and attention, and one to be mentioned to parents in cases where the *tænia* is known to exist in any members of a family.

I hope shortly to be able, if permitted, to produce through the medium of this JOURNAL some observations with regard to the use of strychnia in the treatment of disease, gathered from hospital notes.

* See the case before quoted from *Virchow's Archiv*, etc.

† On one occasion, a patient was induced from some cause or other to bring me, in addition to the *tænia*-joints which he had really voided, a large earth-worm, which he pretended to have passed along with the other. The deception was recognised without trouble, to the surprise of the patient.

MUNIFICENT LEGACY. The Marquis of Lansdowne, the late Lord-Lieutenant of the county of Wilts, has, by a codicil to his will, bequeathed the handsome sum of £3,000, free of legacy duty, to the Salisbury Infirmary.

CÆSAREAN OPERATION. This operation has been lately performed by Dr. Greenhalgh, at St. Bartholomew's Hospital. Delivery *per vias naturales* could not be effected, in consequence of a tumour attached to the sacrum. The woman was at the seventh month of pregnancy. The child was alive when taken out; but survived only a short time. The mother died about sixteen hours after the operation.

Original Communications.

THE LARYNGOSCOPE AND ITS CLINICAL APPLICATION.

By THOMAS JAMES WALKER, M.D.(Lond.), etc., Surgeon to the Peterborough Infirmary and Dispensary.

II.—INSTRUMENTS EMPLOYED IN LARYNGOSCOPY.

THE instruments which I am now about to describe include not only the very simple laryngoscope itself, but also certain accessory apparatus, which is occasionally required to enable us to throw a sufficiently strong light on to the mirror placed at the back of the fauces; much of the success of laryngoscopic observations depending on the attention which we pay to the illumination of the pharynx. Though the same mirror which we use as a laryngoscope serves to reflect the image of the upper part of the pharynx and the nares, an additional instrument, which we may call a palate-spatula, is required for the examination of these regions; and a combination of this spatula and of the mirror into one instrument constitutes a rhinoscope. The most useful form of this instrument, together with other apparatus for the local treatment of laryngeal, pharyngeal, and nasal affections will be also described.

The laryngoscope is simply a small mirror, placed on a stalk attached to its margin at an angle of from 120° to 150°. The stalk is of metal for about three inches and a half from the mirror; the remainder being a small wooden or ivory handle about three inches long, into which the metallic portion slides. Usually the stalk is straight through its whole length of about six inches and a half, but made of flexible metal in order that it may be bent at the will of the operator; in the margin the laryngoscope is figured which I constantly employ, and I recommend an instrument with similar curves in the stalk as the most useful. (Fig. 2.)

Fig. 2.—Laryngoscope mirror. (The engraver has incorrectly made the handle straight instead of curved, and has represented the angle between the mirror and the stalk too abrupt.)

The mirror itself admits of variety in form and size. Czermak and his pupils use commonly a square one with the corners rounded off and the stem attached at one of the angles; others employ an ovoid mirror, the

stem being attached to the round end of the oval. The most generally applicable form, however, is the circular; and with two mirrors of this form, one about an inch, the other an inch and a quarter in diameter, the practitioner will succeed in examining the interior of almost any larynx.

In selecting the instruments, moreover, attention must be paid to the material of which they are formed. The mirrors are made of polished steel, and of glass coated with amalgam. The former material forms an excellent reflector as long as it remains bright, and is, perhaps, less obnoxious to damage by heat than the latter; but it requires great care to prevent its rusting, and it too readily parts with its heat; on the whole, therefore, a mirror made of thin glass coated with carefully prepared amalgam, and backed with German silver or some similar material, is best. Careful preparation is requisite, or the amalgam becomes cracked from the frequent exposure to heat to which the instrument is subjected. A certain amount of solidity is necessary; otherwise the mirror, cooling too rapidly when placed in the fauces, becomes dull from the deposit of moisture upon it.

This is the only instrument essential to obtaining a view of the interior of the larynx, when circumstances admit of our having the sun's rays falling direct on to the back of the fauces; it is seldom, however, that their direction is satisfactory without the aid of some simple reflector to turn them from their normal course. The most excellent illumination is obtained by placing a looking-glass about eight inches square on a table or the window-sill, about a foot or so below the level of the patient's mouth, and at a few feet distant from him, sloping at such an angle that it catches the sun's rays, and reflects them on to the back of the pharynx in a line corresponding with the axis of the buccal cavity, when the head is held erect, and the mouth opened as widely as possible. Although, for reasons which I shall give directly, the illumination of the fauces by the sun's rays is much to be preferred, it is evident that, unless we are able to apply the laryngoscope under other circumstances than those of sunshine and a convenient window facing the sun, etc., the instrument is of but little practical value. Garcia employed only the sunlight in his observations; and it was Czermak who first conceived and carried out the idea of concentrating diffused daylight and the light from a lamp, so as to make it available for illuminating the larynx. There are two distinct plans for concentrating the light: the first, when the patient is placed with his back to the source of light, the rays from which falling upon a concave mirror placed in front of him are thus concentrated and reflected into the pharynx; the second, where the lamp is placed in the front of the patient, and the light passes through a lens or other concentrating medium direct into the mouth of the patient. The concentrating apparatus of Czermak consists of a slightly concave glass mirror, about three inches in diameter, and having a small hole in the centre of it, through which the observer looks, when the mirror is held before the eye. This mirror may be supported in the hand, as is the ophthalmoscope; but it is much more conveniently attached to the head in some method. Czermak at first used it attached to a strap which he buckled round the forehead; but he now employs the mirror set on a short metallic stalk, which is fixed by a screw to a short piece of wood, the mouth-piece, held between the teeth at such a height that the hole in the centre is on a level with the pupil of the eye. None of our associates should be tempted by the circumstance that this contrivance bears Czermak's name, to choose it as the one they will employ. Even those with perfect teeth will find the fatigue of holding the jaws firmly closed, the interference with speech, and other inconveniences, sufficiently great to check them at the very outset of their laryngoscopic re-

searches. Much more convenient than this apparatus is that of Semeleder, in which the mirror is attached to a spectacle-frame by a stiffly working ball and socket joint; in the eyes of the spectacle-frame, glasses can be inserted to suit every sight. A plan, which I suggested in 1860 to a Viennese instrument-maker, which has since been carried out, is to have the mirror attached by a ball and socket joint to a spring which fastens on to the head; one pad having the mirror attached pressing on the forehead, the other resting at the back of the head as in a fencing mask.

In all of these instruments the mirror is of glass coated with amalgam and backed with metal; it is slightly concave, so that the most brilliant illumination is obtained when the object is placed about eighteen inches in front of it. In using this mirror the patient is placed to the side and a little in front of the lamp or other source of light, the rays from which, passing by his shoulder, strike the mirror in front of the eye of the observer, and are concentrated by it in the pharynx. Much to be preferred, for reasons which I shall subsequently give, to this mode, of illuminating the fauces by reflected light, is that in which, the light from a lamp or candle being placed in front of the patient, its rays are concentrated and fall directly on to the fauces, without the use of a reflector to alter their direction. This was the plan adopted by Dr. Stoerk of Vienna, and also by Tuerck; the concentrator they employed being a globe of glass about six inches in diameter, and filled with water.

The engraving (Fig. 3) shows the mode in which I have had this fitted into a frame of metal, which is much

Fig. 3.—Apparatus for concentrating light.

more convenient than the cumbersome wooden affair used by Stoerk. By means of the screw (a), the cross-bar (b, b), and with it the globe (c), which constitutes our lens, is raised or depressed. This globe must be placed close to and immediately in front of the lamp placed on a table behind the observer. A very brilliant light is thus obtained, which is most concentrated at about twenty inches from the globe, but is sufficiently bright to light up the larynx, both much

nearer to and at a greater distance from the globe; of course, by altering the relative heights of the lamp and the concentrator, we can cause the rays of light to fall higher or lower as we please. The objection to the use of this concentrating lens in place of a reflector is simply that it is too cumbersome to carry about with us to our patients' houses; we may, however, often replace it, when the examination does not take place in our own consulting-rooms, by a plain water-bottle, which, when filled and raised to the level of the lamp and placed in front of it, on a box, or books, or something equally within reach at the majority of houses at which we visit, is an efficient substitute for the globe and frame.

The practical advantages of the direct illumination of the fauces as compared with that by means of a reflector attached to the head of the observer are very great. In the first place, the illuminating apparatus being altogether independent of the body of the operator, he can, as long as he does not bring his head immediately in front of the lamp, move his head and body as may be required, and he can bring his eye nearer to, or remove it further from, the object he is examining, as he wishes. On the other hand, with the reflector attached to the head, the observer cannot move without withdrawing the light from the fauces, and he cannot bring his eye nearer than about eighteen inches to the pharynx without diminishing the intensity of the illumination; and, since the part of the larynx which he is examining is still further from him than the laryngoscope, it must be beyond the range of ordinary accurate vision—a circumstance which interferes seriously with the observation of minute points of difference in structure, colour, etc. Secondly, even supposing that the reflector did not labour under the disadvantages just alluded to, there is the fact that the same flame will give, with the concentrating apparatus to which I give the preference, a much more brilliant light than when concentrated by the reflector.

The inconveniences attached to reflectors for illuminating the larynx, have induced Dr. Moura-Bourouillou, the author of a work on *Laryngoscopy*, to employ a concentrating lens of glass. This is about two inches in diameter, and has its principal focus at about three inches distance. It is attached to a lamp by means of a collar of copper, on which it is supported by an arm having two joints. The lamp, of course, in employing this instrument, is placed in front of the patient as with the globe of water above described; but the focal distance of the lens being so short, not only the concentrating lens, but the lamp itself, must intervene between the mouth of the patient and the eye of the observer; hence a screen is necessary to prevent the bright light of the lamp from interfering with the view of the larynx seen beyond it; this is attached to the collar of copper on the opposite side to that to which the arm supporting the lens is fixed. Although I have no practical experience of this instrument, it appears to me that it possesses many disadvantages as compared with the globe concentrator which I have described. A perfect apparatus would be a glass lens properly mounted, the focal distance of which should be the same as that of the globe of water, which should condense the light to an equal degree, should be as cheap, more portable, and altogether more convenient than the apparatus I have described. Although I have thought it right to mention the several modes of illumination employed by those who are devoting special attention to the laryngoscope, I recommend only certain instruments for purchase by those who wish to pursue the examination of the larynx.

As I have already said, the brightest image is obtained when the sun's rays are thrown into the larynx. For examination with such light, we require simply our laryngoscope, and a common looking-glass to change the direction of the rays. The sunlight failing us, we should employ the glass globe of water, supported in a

convenient frame. And, lastly, in cases where we can neither employ our own globe of glass, nor extemporise a similar condenser from a water-carafe, we must avail ourselves of a concave reflector, which should be either that attached to the spectacle-frame of Semeleder, improved as it has been by our own and the Parisian instrument-makers, or that attached to the spring crossing the head, as suggested by myself.

[To be continued.]

Reviews and Notices.

STATISTICS OF INSANITY; EMBRACING A REPORT OF BETHLEM HOSPITAL FROM 1846 TO 1860 INCLUSIVE. By W. CHARLES HOOD, M.D., Resident Physician of Bethlem Hospital, etc. Pp. 122. London: 1862.

THIS work is an amplification of a decennial report presented to the Governors of Bethlem Hospital in 1855. The statistics of the subsequent five years have been added; and those already given for the preceding ten years have been carefully revised.

The tabular statements and commentaries given in this volume refer to the following subjects: Patients admitted as Curable; Age; Sex; Domestic Condition; Social Condition; Education; Religion; Residence; Apparent and Assigned Causes; Duration of Disease before Admission; Number of previous Attacks; Influence of the Seasons; State of the General Health of the Insane; Form of Insanity; Causes of Death and *Post-mortem* Appearances of the Insane; and the Treatment of Insanity.

During the fifteen years embraced in these statistics, we find that 3668 patients were admitted as curable, of whom 2018, or 55.01 per cent., were cured; while 222, or 6.05 per cent., died. In the last five years—1856 to 1860—the admissions were 939; the cures 539, or 57.40 per cent.; and the deaths 48, or 5.11 per cent. These results show a favourable contrast with the aggregate of the hundred years ending December 31st, 1860, in which the recoveries were 43.45 per cent., and the deaths 7.53 per cent. of the total number of admissions—19,649.

Dr. Hood has given, as the most correct, although only approximative, standard of comparison at his disposal, a table drawn up in 1854 by Dr. D. H. Tuke, exhibiting the comparative statistics of various asylums in Great Britain and several continental countries. From it we gather the following data as to recoveries.

Eleven Dutch Asylums for pauper and private patients, gave 1000 recoveries in 3087 cases, or 32.40 per cent.

Nine English County Asylums receiving paupers only, 5746 recoveries in 15,548, or 36.95 per cent.

Six English County Asylums receiving private and pauper patients, 3627 recoveries in 7738, or 46.87 per cent.

Metropolitan Licensed Houses, 1839-43 (more than half paupers), 1501 recoveries in 5850, or 25.65 per cent.

The York Asylum (one-third paupers), 1814-44, 475 recoveries in 1375, or 34.54 per cent.

The York Retreat, 1796-1847, 292 recoveries in 593, or 49.24 per cent.

Seven Scotch Chartered Asylums (more than half