The author's formula was the following:

Saturated solution of iodoform in ether ...	100
Guaiacol	9
Eucalyptol	2
Menthol	1

Amount injected to be gradually increased up to 2 c.c.

Improvement was due to the large quantity of active principles carried by the ether into the trachea and whole respiratory tract. The author hoped that this might prove an effective treatment for tuberculosis.

Abstracts.

DIPHTHERIA.

Cobbett, Louis.—*Diphtheria in the Horse.* "Lancet," August 25, 1900.

On May 22, 1900, Dr. A. Mearns Fraser, the Medical Officer of Health of Portsmouth, supplied a culture of a bacillus which he had obtained from the nasal discharge of a pony. The history was as follows: A little girl having fallen ill of diphtheria, Dr. Fraser, while seeking the source of the infection, found that a pony belonging to the child's father was ill with a purulent and slight sanguineous discharge from its nose. Subsequently the animal suffered from enlargement of the glands under the tongue and laryngeal obstruction, with difficulty of breathing and retraction of the abdominal wall, and a bacillus obtained from the nasal mucus having been pronounced morphologically indistinguishable from the diphtheria bacillus the animal was killed.

The bacillus isolated from the culture sent had the usual appearance and habit of growth of the *Bacillus diphtheriæ*. It belonged to the short variety. It did not liquefy gelatin, it formed acid in media containing glucose, it clouded beef broth and subsequently cleared it, and, like many diphtheria bacilli freshly isolated from man, it formed only a scanty film on the surface. It was pathogenic to guinea-pigs, causing local hæmorrhagic œdema and the general symptoms which are seen in these animals when they are inoculated with the *Bacillus diphtheriæ*. It formed a powerful toxin, the filtrate from broth cultures causing a little œdema at the seat of inoculation, followed in about ten days by falling out of the hair in the neighbourhood, widespread hæmorrhagic œdema and necrosis of the tissues immediately affected, or death, occurring sometimes within twenty-four hours, according to the quantity of poison injected. The effect of injecting large doses of living culture, or even 100 fatal doses of filtrate, was completely neutralized by diphtheria antitoxin.

Experiments were carried out which placed it beyond doubt that the bacillus obtained by Dr. Fraser from the pony was a true diphtheria, and it is concluded that the horse is liable to nasal and laryngeal diphtheria. The discovery is not only of practical but also

of scientific importance, because it has a direct bearing on the question of the origin of antitoxin.

The fact that diphtheria antitoxin is present in many horses in this country and on the Continents of Europe and America suggests that diphtheria is a common disease among these animals; and this is in accordance with the well-known susceptibility of some of them to the action of diphtheria toxin. It is therefore possible that the horse may be found to play a not inconsiderable part in the transmission of diphtheria. *StClair Thomson.*

MOUTH, Etc.

Mackay, W. A.— *A Case of Œsophagotomy; the After-treatment.* "Lancet," December 2, 1899.

Œsophagotomy is, on the whole, a not unsuccessful operation, though the mortality has been estimated at 23 per cent., for in many of the cases the fatal result could hardly be attributed to the operation. One of the most frequent causes of death is septicæmia following sloughing of the edges of the wound. A difficult question to determine in these cases is whether to close the œsophageal wound or to leave it open. The general opinion is well expressed by Jacobson[1] when he says that sutures "should only be used when the wound in the gullet is clean cut, not bruised, and when the body has been quickly removed." With regard to the after-treatment, nutrient enemata are often useful, or food may be given by a soft feeding-tube. It is certainly unusual for the patient to be allowed to sip food at once, as in the case recorded below, but it seems to have been successful and no harmful results followed it. The fact that the wound was not closed probably contributed to the prevention of accumulation of the food between the sides of the wound, and this is the chief reason for the unusual employment of an œsophageal tube for the first week. So far as the patient's comfort is concerned, the disuse of a tube would have a marked effect, but it is probable that in most cases a soft rubber tube is desirable and does no harm.

In the author's case a piece of bone had been lodged in the œsophagus for six weeks. With the probang it could be located just below the cricoid. The usual operation was performed on the left side. When, as in this case, nothing can be felt externally, it facilitates the operation to take the cricoid cartilage as a fixed point, the aim of the operator being to expose its left lateral aspect. The skin incision was carried well on to the sternum, the platysma was freely divided, and the omohyoid muscle was cut across. By the aid of deep retractors the thyroid gland was recognised. The inferior thyroid artery was ligatured and divided, and the posterior part of the left lateral aspect of the cricoid was exposed. On the ivory knob of a probang passed through the mouth the œsophagus was carefully opened. The left index-finger was then inserted into the opening, and with a dressing forceps passed along the finger the bone was gently extracted. It presented three sharp points, and proved to be part of the rib of a goat. It measured 1½ inches in its longest axis, and smelt most foully. The wall of the œsophagus was infiltrated with pus, and

[1] "The Operations of Surgery," third edit., p. 458.