New Inventions.

A METAL HOSPITAL INHALER.

IN connexion with the discussion which has recently taken place in the columns of THE LANCET on the occurrence of pneumonia after operations, and the possibility of infection from the inhalers used in the administration of anæsthetics, I send particulars of the metal inhalers to which I referred in my article of March 20th. If a little care is taken in using them, and if the ordinary instincts of cleanliness are followed, I have had nothing to complain of in respect to

FIG. 1.

General view of inhaler.

the celluloid inhalers which I introduced some years ago; but when subjected to the rough usage of busy hospital work they are apt to get out of shape. It was chiefly to overcome this latter difficulty that these metal inhalers were designed, though it will also be found that they are more easily sterilised in accordance with the advanced theories of aseptic surgery. In general shape (Fig. 1) they resemble the Rendle's Mask, but the dome-shaped, perforated top of the latter is inverted so as to form a cup (Fig. 2, D) through which, if necessary, the sponge (Fig. 2, C) can be fed without

FIG. 2.

Sectional view. A. Drip-catcher or diaphragm. B. Wire sponge guard. C. Sponge. D. Perforated, concave, hinged lid.

removing the apparatus from the face. This cup is hinged to admit of the introduction of the sponge in the first instance. Another distinctive feature is the metal diaphragm (Fig. 2, A), set at an angle, and designed to prevent the superfluous liquid from running on to the face, a radical defect of many inhalers unless in skilled and careful hands. To further ensure that the sponge shall not slip on to the face a wire guard (Fig. 2, B) is fixed across the opening in the diaphragm. No flannel bag or rubber face-pad is necessary, or, in my opinion, desirable. Of course, pure chloroform ought not to be given in such an apparatus as this. It is intended, primarily, for the A.C.E. mixture, or it may be used to maintain the anæsthesia with ether. The method of using it is sufficiently obvious. I may, perhaps, add that I have had these masks in use for two or three years in hospital work, and believe that they fulfil the objects which I had in view when designing them. I am greatly indebted to Messrs. Down Bros. for their patience and skill in carrying out my wishes in the matter.

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AN IMPROVED HYPODERMIC CASE.

MESSRS OPPENHEIMER AND SON, 14, Worship-street, E.C., have recently brought out a new pattern of hypodermic case which presents some useful characteristics. It is made of aluminium, is shaped like a cigarette case, and contains a moveable frame which securely holds a hypodermic syringe, two ordinary hypodermic needles, one exploring needle, and

twelve assorted tubes of soluble hypodermic tablets. In designing the case special care was taken to prevent its contents shaking about when it is carried in the pocket. The tube of any drug which happens to be required can be found at a glance. The shape and materials of the case allow of its being thoroughly cleansed and rendered aseptic whenever required by washing with any of the ordinary solutions used for the purpose.

IMPROVED MOUTH-OPENER AND GAG.

I HAVE recently designed a form of mouth-opener and gag, which, proving satisfactory in practice, I venture to recommend to the consideration of the medical profession. By the illustration it will be seen that it has a rack catch action, which fixes automatically when opening the gag, while upon touching the trigger the stop rack action is thrown out of gear and the gag closed with the greatest facility, irrespective of the amount of pressure which is being exercised upon the tooth plates.

The upper figure shows the gags open. The lower shows the blades closed and the position of the tooth plates one behind the other.

In lieu of the metal vapour tubes, as suggested by Dr. F. Hewitt, I have had a gutter cut in each of the arms of the gag, over which pieces of rubber drainage-tube may be slipped to convert them into tubes; the advantages of this are that the vapour ways do not increase the bulk and are readily cleaned or cleared, and further, being made of solid steel, they are not liable to be damaged from an accidental fall, a somewhat frequent occurrence with the metal tubes originally designed for the purpose. I have also adopted in a modified form the suggestion of Mr. W. R. Ackland—namely, that of setting the tooth plates one behind the other to act as a wedge if required. The gag can be made with broad tooth plates for edentulous jaws, or those in whom the teeth or gums are tender, thus doing away with bruising and at the same time giving a wide basis of support. The instrument being entirely of metal is easily sterilised. I have to thank Messrs. Down Bros., of 21, St. Thomas's-street, London, S.E., the makers, for much time, trouble, and careful carrying out of my ideas.

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