A NEW FORM OF FOOT-BELLOWS FOR USE WITH JUNKER'S INHALER.

HAVING frequently felt the want of a third hand when using Junker's chloroform apparatus in prolonged and bloody operations upon the face and jaws it occurred to me that the ordinary bellows might be equally well worked by the foot, thus liberating a hand, but on inquiry I found that already Dr. Dudley W. Buxton had invented a form of foot-bellows; this apparatus, however, has disadvantages which are not present in the one figured below, which has been made to my design by Messrs. Krohne and Sesemann, of 37, Duke-street, Manchester-square, London, W., and is extremely simple and portable; it can be used with the ordinary hand-bellows by making a slight alteration in them which any anæsthetist can easily effect for himself. The apparatus consists of a wooden base with a raised piece upon which to rest the heel when working the bellows; upon this is hinged another piece of wood supported by a spiral steel spring, under which is placed the modified hand-ball of the Junker bellows. This ball is detached from the second, netted ball, a sufficient length of tubing being interposed having a conical, circularly ribbed, metal nozzle at each end so that it can be easily and firmly inserted by one end into the netted ball and by

the other into the hand-ball. This simple alteration can be effected in a moment and does not in any way spoil the apparatus for ordinary use as the balls can be reunited by means of one of the nozzles. When being used as a foot-bellows the ball is kept in place by a little ledge of wood in front and behind and by two stout wire loops which pass round its extremities where they become elongated into its entry and exit tubes; these loops when not in use fall inwards so that the whole apparatus can be shut up flat, being then only one inch in thickness, thus taking up very little room in one's bag. By its use the anæsthetist has one hand free to manage a gag or to sponge out the throat in such operations as I have mentioned above, and it will also be of value to the general practitioner who desires to give chloroform while attending a midwifery case single-handed; doubtless, also, to the pathologist when using ether for freezing specimens for cutting microscope sections.

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AN ASSILINI FORCEPS WITH A HINGED HANDLE.

Messrs. Weiss and Son, Limited, of London have worked out to my design a pair of Assilini forceps with a hinged joint. The annexed figures need no long description. Fig. 1 shows an Assilini forceps with both blades fixed. A small lever will be noticed on the left handle (= the upper one in use) which firmly locks the hinged joint. Fig. 2 shows the same blade with deflected handle. On the side of the joint there is seen a shoulder that limits its extension; hence there is no possibility of this handle extending beyond its fellow blade when strong traction is applied. The shoulders of this joint are made purposely small to prevent any entanglement of the pudendal hair or "nipping" of the maternal structures. The object of having a hinged joint is to shorten the blade, whereby its introduction is greatly facilitated without the edge of the bed interfering. It cannot be denied that the application of the upper blade is less easy than that of its lower fellow, this is chiefly on account of its

FIG. 1.

FIG. 2.

length. There are many ways of overcoming this little difficulty—viz., by posturing or by a rotatory movement of the blade from beneath the patient's left thigh—a method that requires great care, especially in cases of incomplete dilatation of the os uteri. When the handle of this forceps is deflected its length scarcely exceeds that of an ordinary tablespoon. It at once becomes apparent that the introduction of a shortened blade is somewhat easier than that of a long fixed one, no special posturing of the patient, in most cases, being required. On introducing the blade the deflected handle is gradually extended; it then becomes automatically and rigidly locked when the full limit of extension is reached. The small locking lever can at times be disengaged, this causing the upper portion of the blade to become mobile (both handles in this case being locked), and thereby assisting intra-pelvic rotation in some cases. This mobility of the upper portion of the blade is useful in the lateral rotations of breech cases and of special service in liberating the after-coming head, the blade in the latter case adapting itself to the size of the head and finding its own *point d'appui*.

In conclusion, it may be mentioned that the makers of the forceps have turned out a well-finished and strongly-made instrument of which all parts are bevelled down; the hinder parts can instantly be detached and thoroughly cleansed and antisepticated.

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