NEW SAFETY HYPODERMIC INJECTOR.

By J. WARD COUSINS, M.D. LOND., F.R.C.S.,
SURGEON TO THE ROYAL PORTSMOUTH HOSPITAL.

DURING the last few years treatment by hypodermic injection has been very generally adopted in many forms of disease, and the number of remedies introduced into the system by this method has also steadily increased. Up to the present time the hypodermic syringe has been the only instrument employed by medical men, and the great demand has resulted in the production of many new forms and many ingenious modifications. It is, however, a very general opinion that the syringe does not even now readily and conveniently fulfil all the purposes for which it is required in practice. It is easily deranged, very liable to accidental injury, and always requires very careful manipulation. In any form it must be considered a costly instrument, and certainly very troublesome to clean. When not in daily use it soon gets out of order, and the piston is a constant source of trouble. The washer shrinks or becomes worn and loose, so that the syringe does not work well, and often the operator discovers to his great vexation that the fluid, instead of entering the patient, gradually makes its appearance at the other end of the barrel. I am sure there are few medical men constantly employing hypodermic remedies who have not been disappointed by the faulty action and sudden failure of this delicate little instrument. The vast majority of practitioners, moreover, employ the same syringe for every emergency, and in the case of those who are fortunate enough to possess two such instruments it will be very frequently found that one of them at least is broken or otherwise out of order. The same hypodermic syringe is used for every patient as well as for every remedy, and in fact for every purpose for which it is required both in medical and surgical practice. Sometimes morphia has to be hypodermically injected for the relief of pain, then ergotine has to be administered in the same way during labour, and after that some other remedy must be introduced into another patient. At one time the syringe is charged with perchloride of iron for the treatment of nævus, and at another time it is used for injecting iodine into an indurated thyroid or other glandular enlargement. By the general use of a single instrument much extra labour and additional responsibility are always incurred. The same syringe when continually employed for a large number of potent medicines demands at the hands of the busy practitioner of the healing art the most scrupulous care in washing and cleaning after every operation. Of course this difficulty is readily overcome by obtaining a set of instruments, and by using a special syringe for every patient and for every remedy; but this alternative involves considerable outlay, and certainly renders the administration of hypodermic remedies an expensive form of treatment quite beyond the reach of a large class of patients. The syringe always requires care in its application: the eye must generally assist the hand, and the quantity of fluid injected must be regulated by the movement of the piston over an index. The piston is often furnished with a movable stop, and this is no doubt a valuable safeguard. Still it must be remembered that every addition involves extra attention, and that the stop itself has to be properly adjusted before every operation. The hypodermic injection of an active medicine and the due regulation of the dose always involve considerable responsibility, and for this reason it is never my practice to place the administration of any remedy by the syringe in the hands of attendants or friends.

The little instrument which is accurately represented in the figure is intended as a substitute for the hypodermic syringe, and I venture to hope that many of my professional brethren will find it a simple and economical contrivance, and well adapted for every medical and surgical purpose in which such an instrument is essential. The injector consists of two parts: an elastic measuring ball and an injecting needle; the latter is provided with a boss, which serves for a handle during its introduction. It is conveniently furnished with a joint, so that the same needle may be adjusted on several measuring balls. The prefix "safety" is employed to indicate the important fact that its simple construction affords a valuable safeguard against accident, and that it renders an overdose practically impossible. The measuring

balls are made in different sizes, and each ball is capable of holding only a definite amount of fluid, the quantity varying from one to twenty minims. The number placed on the exterior of each ball expresses its capacity, so that by selecting an injector the exact dose can be at once administered.

The instrument can be instantly charged by compressing the elastic ball and inserting the point of the needle or the open end of the joint into the fluid to be injected, and it is generally advisable to repeat this little operation two or three times to ensure the complete expulsion of air. It can be discharged slowly or rapidly under the skin, and this is of course regulated by the pressure of the thumb and finger. It can be washed out and cleaned in a moment, and it is no trouble to keep in order for any emergency. It cannot be broken by an accidental fall, which is too often the fate of the hypodermic syringe, and when it is worn out, it may be

very easily replaced. The injector can be used if necessary under the bedclothes, and as a mistake in the dose is impossible, the performance of the operation does not require the guidance of the eye. It has still another important quality, which cannot fail to increase its utility—the cost is so moderate that a separate instrument can be used for every remedy as well as for every patient.

In conclusion, the safety hypodermic injector will serve many important surgical purposes, and it is a perfect substitute for the syringe in the treatment by injection of nævi and other tumours. It is made for me by Messrs. Mayer and Meltzer, 71, Great Portland-street, and can be obtained from that firm in the form of a single instrument, or in a little case containing several injectors of various sizes. The surgical needle is furnished with three openings at the point to facilitate the escape of fluid into the tissues.

Portsmouth.

FATAL CASE OF LARYNGISMUS STRIDULUS.

By JOHN McMUNN, L.R.C.P. ED., L.R.C.S.I.,
LATE DEMONSTRATOR OF ANATOMY, CARMICHAEL COLLEGE, DUBLIN.

ON May 5th, 1882, a woman sought advice for her little daughter, aged one year and nine months. The general health of the patient was good, but at certain times she lost her breath and had to struggle hard to regain it. There were three previous children, all of whom had died in infancy. The duration of disease in the present instance was three weeks; such was the mother's story. The child looked healthy, voice and respiration were normal; the lower gum was swollen and tense over the sites of the temporary molars. Finding here a probable exciting cause of what I believed to be laryngismus stridulus, I determined to lance the gums. As the knife grated on the subjacent tooth the child commenced to cry violently, but at the expiration of one long loud cry it became silent. Breathing was suspended. After the lapse of a couple of seconds a struggle for breath ensued, the face assumed a frightened look, the mouth was widely opened, the trunk and limbs were stiffened, the toes and fingers worked, while the inspiratory muscles were thrown into violent contraction, and signs of asphyxia rapidly developed; the face grew livid, drops of sweat stood on the forehead, the pulse grew feeble and small, while with widely dilated pupils the inturnd and suffused eyeballs seemed to