be left in situ for days without any unusual irritation. (4) During a craniotomy a ventricle can be tapped, the cannula left in place and the surrounding brain retracted for whatever approach is necessary (for example: transfrontal pituitary approach), without danger of brain damage from the catheter. (5) One can Luer-Lok any system for continuous ventricular injection, pressure estimation or drainage to this cannula.

There are some disadvantages in its use. It is not satisfactory for probing for tumor unless the stilette is kept in place. One must become accustomed to the “feel” of this cannula as compared to that of a metal one. When attempting to enter a small ventricle it is sometimes necessary to twirl or twist the cannula to free the holes in the end. Since the rubber is soft the cannula cannot be twisted unless the stilette is inserted. This is a minor inconvenience.

AN APPLICATING FORCEPS IN WHICH CLIPS CANNOT STICK OR JAM

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(Received for publication January 18, 1953)

All neurosurgeons at one time or another have been faced with the problem of clips sticking in the jaw of the clip applicator after the clip itself has been applied to an artery or a vein. The results of such an incident are often annoying, occasionally serious. Because of repeated incidents of this nature, it was felt that some means should be devised whereby the clips would either be dislodged from the grooves in the applicator jaw or prevented from jamming in these grooves at the time of application. To eliminate the possibility of faulty construction of clip forceps and variations in clip stock, applicators were carefully selected in which clips did

Fig. 1. (A) Detail of applicator jaw. (B and C) Standard “V” and “U” clips in the instrument.
not stick when tried at the factory. At the operating table, however, it was found that the sticking of the clips in the holders occurred just as frequently as with instruments selected at random. We felt, therefore, that the jamming of the clips was caused by bits of tissue that were wedged between the clip and the walls of the groove in the applicator tip.

To devise a means of dislodging the clip from the groove would have led to a more complicated type of applicator with consequent increase in cost and difficulty in maintenance. At the suggestion of Mr. Fred G. Todt, Sr.,* the problem was finally solved by a simple change in the jaw of the applicator whereby the longitudinal groove was entirely eliminated and rather heavy transverse serrations were substituted. This presents, as can be seen in Fig. 1, an essentially flat surface to the outer surfaces of the clip once the applicator jaws are closed, so that it is impossible for the clip to jam or stick to the jaw. This clip applicator is used with the standard McKenzie rod and Cushing clips or Duane “U”-clips.

This instrument has been used for several months under all conditions and has entirely eliminated the problem of clips jamming or catching in the jaws of the forceps. There is less tendency for the clips to become dislodged from the forceps in transfer from the nurse to the surgeon, and the operating room nurse has found that it is easier for her to pick clips off the McKenzie rod with this holder than with the standard holder.

Two minor difficulties that have been noted are a slight tendency for the clips to swing laterally and for the ends of the clips to become crossed if too much pressure is applied to the forceps. Both of these difficulties are solved by a very short period of experience with the applicator.†

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† This clip-applying forceps is available from George P. Pilling & Son Company, 3451 Walnut Street, Philadelphia 4, Penna.