Continuous Feed Ligature Carrier. (22259)

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In experiments in our laboratory, where perfusions were made on small animals, ligatures were made around the aorta in 4 places. Since a rather large number of operations were to be performed, a faster method was sought to make these ties. The instrument shown in Fig. 1 was made. In use the needle acts as a probe which once pushed completely under the vessel to be tied supplies the tying thread. The needle is withdrawn and the thread cut with the cutting blade attached to attaching the blade, the needle hub is wrapped with thread, then the blade set in place and wrapped with 21 gauge copper wire. The thread supplies enough springiness so that when the blade becomes dull it can be pushed out and another slid into place on the needle.

The thread is wound into a coil as shown in Fig. 2. A motor drives the tapered glass rod for coiling the thread which is held lightly at the small end with the fingers. Six yards of triple zero surgical silk is wound in a coil 10 cm long while moving the string back and forth. Separate turns of the thread should be about $\frac{1}{8}$ inch apart. When the coil is finished, the side thread B is passed under a previous turn and pulled tight. A glass rod about 1 to 1.5 mm diameter is placed against the end of the thread coiler and the coil pushed onto the rod for storage. When the ligature carrier is to be threaded, the free inside end A is pushed through the syringe and used to pull the coil and rod into the syringe. When all is in the syringe, the glass rod is withdrawn and the thread unwinds freely from the inside of the coil. The instrument is ready to use when the threaded needle is attached.

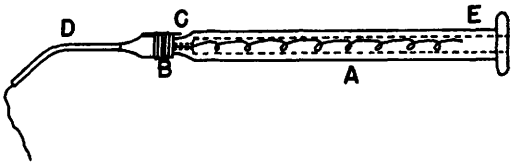

FIG. 1. A, 6 yard coil of 000 surgical silk; B, 21 gauge copper wire; C, steel cutting blade; D, 18 gauge hypodermic needle; E, 1 ml tuberculin syringe.

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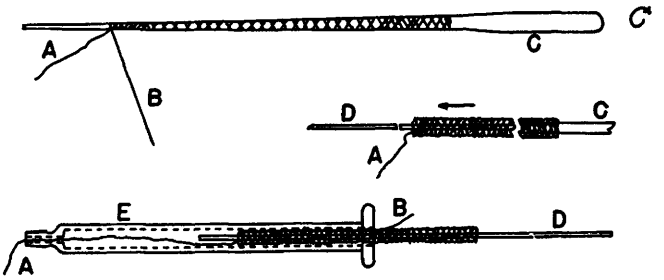

FIG. 2. A, silk thread to inside; B, outside thread; C, thread coiler; D, storage rod; E, 1 ml tuberculin syringe.