No. 843,587. PATENTED FEB. 12, 1907.

H. H. DE PEW.

SURGICAL INSTRUMENT.

APPLICATION FILED JAN. 29, 1906.

Fig. 1.

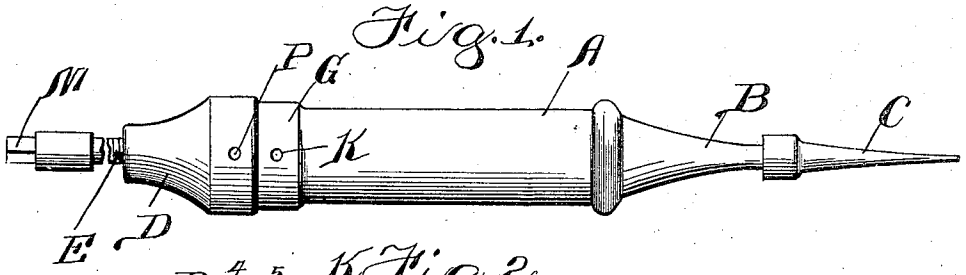

Fig. 2.

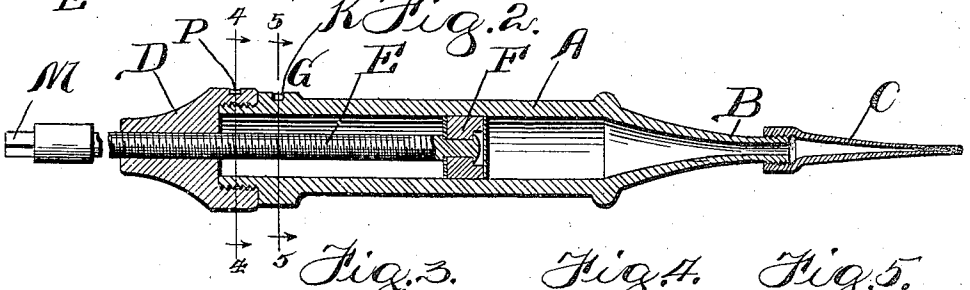

Fig. 3.

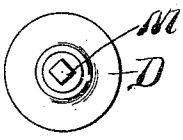

Fig. 4.

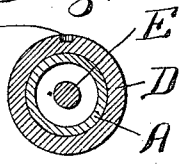

Fig. 5.

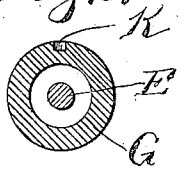

Fig. 6.

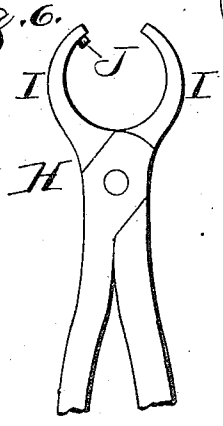

Fig. 7.

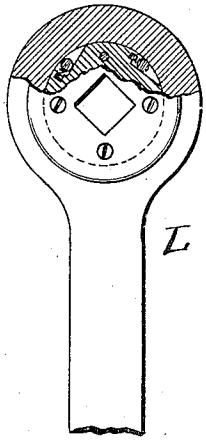

Fig. 8.

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UNITED STATES PATENT OFFICE.

HENRY HANNON DE PEW, OF CHICAGO, ILLINOIS.

SURGICAL INSTRUMENT.

No. 843,587. Specification of Letters Patent. Patented Feb. 12, 1907.

Application filed January 29, 1906. Serial No. 298,311.

To all whom it may concern:

Be it known that I, HENRY HANNON DE PEW, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Surgical Instruments, of which the following is a specification, reference being had therein to the accompanying drawings.

My improvement relates to a surgical instrument used for inserting plastic material into the human body, such as paraffin or the like, and it is especially adapted to the treatment of the extreme cases of hernia.

My invention consists more particularly in the combinations and arrangements of parts whereby the operator is enabled to hold the instrument firmly in his grasp and steadily in place while power is being applied thereto to force the material from the instrument into the desired place, as hereinafter more specifically specified.

In the accompanying drawings, Figure 1 is a plan view of my instrument. Fig. 2 is a vertical sectional view. Fig. 3 is an end view. Fig. 4 is a cross-sectional view on the line 4 4 of Fig. 2. Fig. 5 is a cross-sectional view on the line 5 5 of Fig. 2. Fig. 6 is a side view of the holding-tool. Fig. 7 is a side view, partially in section, of the wrench used for forcing the plastic material from the instrument; and Fig. 8 is a view of the clamp of the instrument for adjusting the removable cap.

A is the body of the instrument, to the open end B of which a hollow needle C is secured, which needle is adapted to penetrate the system to the place where the plastic material is to be deposited. At the other end of the instrument a screw-threaded cap D is secured, through which a screw-threaded piston-rod E passes, carrying a head or piston F. I provide the body of the instrument A with suitable means G to receive the tool H, which is adapted to secure and hold at the body of the instrument so that it will not turn. The tool here disclosed is provided with jaws I so pivoted as to clamp the instrument, and the pin or projection J enters a hole or seat K in the body of the instrument.

By placing the tool H in position the operator can firmly hold the instrument in place while the screw-threaded piston-rod is being turned by the ratchet-pawl L, which is inserted on the square end M of the screw-threaded plunger E. The tool N is provided with a pin O, which enters the hole or seat P in a screw-threaded cap D for adjusting it on the instrument or removing it therefrom. The piston F is so connected to the screw-threaded piston-rod as not to turn with it, but to be moved in either direction by the said piston-rod by means of the shoulders on the piston-rod. On the face of the piston I attach a plate Q by any suitable means, covering the end of the screw-threaded piston-rod, as shown in Fig. 2 of the drawings. A skilled operator takes the instrument filled with the plastic material and inserts the needle carried on the end thereof to the desired place where the deposit is to be made. He holds the instrument firmly in place by means of the tool H, when an associate applies the wrench L to the screw-threaded piston-rod and by turning the piston-rod forces the plastic material from the instrument through the hollow needle to the desired place. By means of this construction of the instrument with the attachments for holding it steadily in place and operating it great steadiness and facility is acquired in performing the operation. As shown in Fig. 2, the surface of the bore of the outlet B is in continuation of the bore of the body and is conical or tapering. The passage of the needles is also tapering. By reason of this arrangement no obstruction is offered to the passage of the paraffin, which in a cold state is exceedingly difficult to move.

It may be seen that various modifications can be made in the special means for attaching these appliances to the instrument that will not be a departure from the scope of my invention. The special construction shown in the drawings, however, I find to greatly facilitate the application of the attachments to the instrument to secure its ready operation.

Having fully described the construction and operation of my improvement, what I claim, and desire to secure by Letters Patent, is—

A surgical syringe comprising a tubular body, having a gradually-tapering outlet, a

needle secured to the outlet so as to provide an unobstructed tapering passage, a cap secured upon the opposite end of the body and having a threaded bore, a piston-rod adjustably passing through the threaded bore in screw-threaded engagement therewith and having a piston within the body and its exposed end shaped to receive a removable operating-tool, the body having a seat for a removable holding-tool.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY HANNON DE PEW.

Witnesses:

ELIZABETH MOLITOR,

GEORGE R. HARBAUGH.