

No. 766,121.

PATENTED JULY 26, 1904.

F. K. STEARNS.
HOLDER FOR SERUMS.

APPLICATION FILED JULY 7, 1903.

NO MODEL.

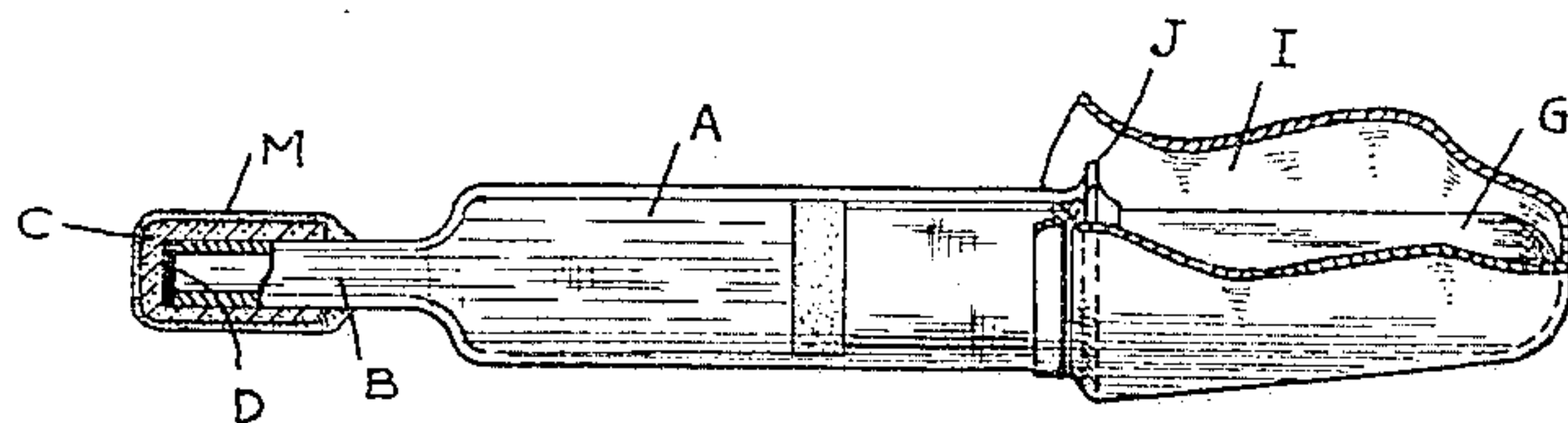


FIG. 1.

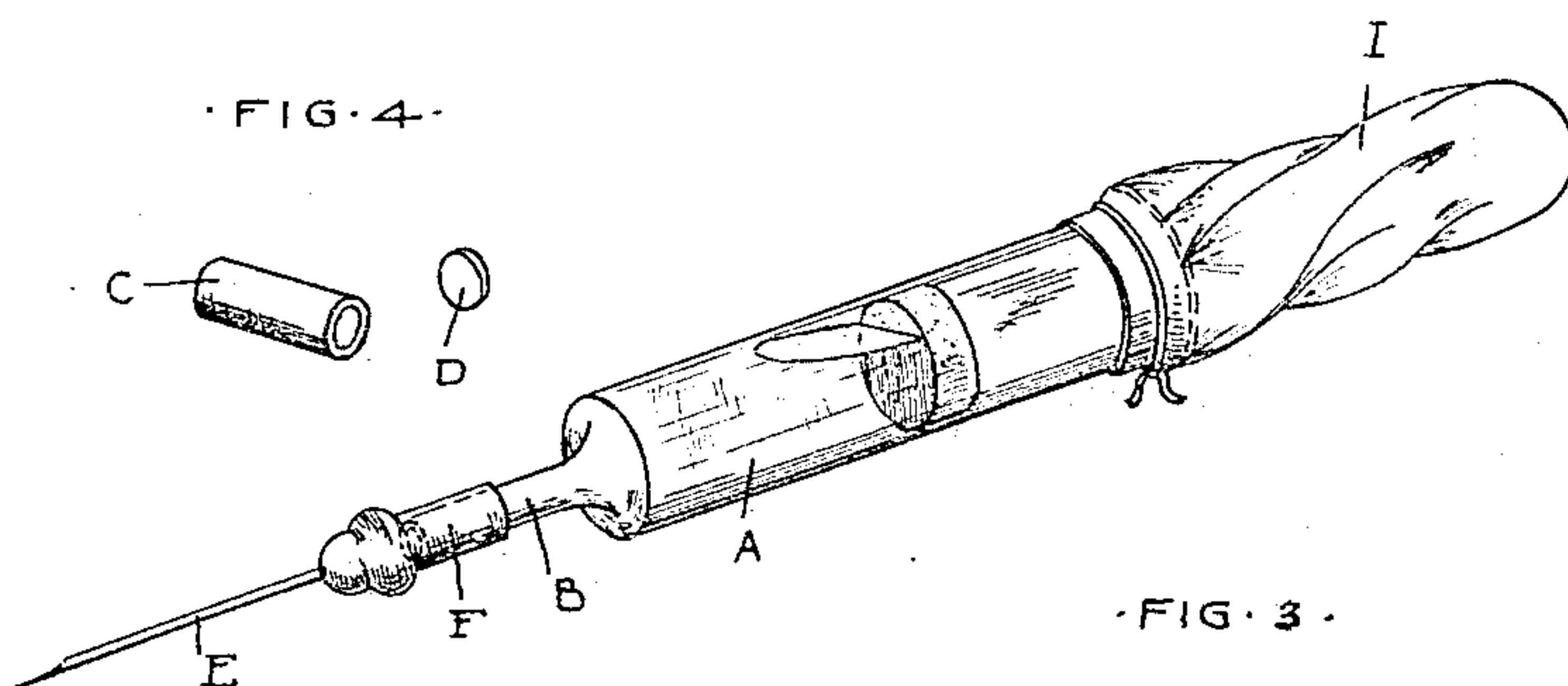


FIG. 3.

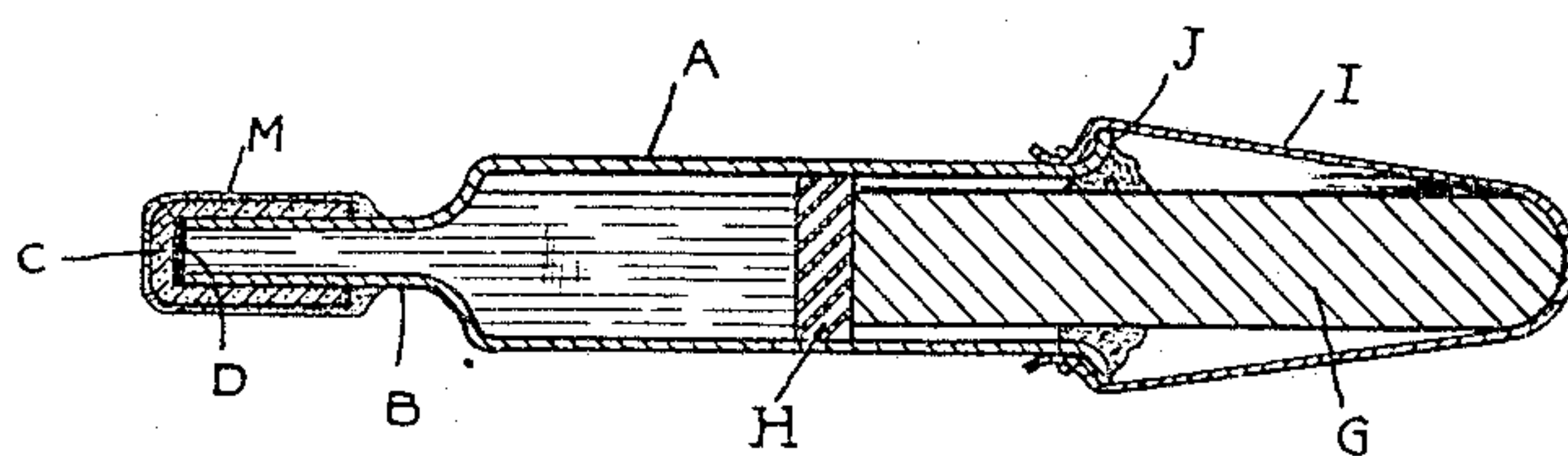


FIG. 2.

WITNESSES:

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HOLDER FOR SERUMS.

SPECIFICATION forming part of Letters Patent No. 766,121, dated July 26, 1904.

Application filed July 7, 1903. Serial No. 164,527. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK K. STEARNS, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Holders for Serums, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to new and useful improvements in holders for serums; and it consists in the construction of such a holder comprising a vessel, preferably of glass, terminating in a slender nipple having an open end and a detachable cap therefor; further, in such a holder in which the opposite end is closed by a plug which projects outside the holder and a flexible covering therefor which permits the plug to be moved in the holder to act as a piston to discharge the contents, all as more fully hereinafter described.

In the drawings, Figure 1 is a side elevation of my improved serum-holder, partly in section. Fig. 2 is a longitudinal section thereof. Fig. 3 is a perspective view of the holder with a hypodermic needle attached, and Fig. 4 is a perspective view of the detachable cap and its packing-disk.

A is the body of the holder, preferably of glass and preferably in the shape of a cylinder. It terminates in the slender hollow open-ended nipple B. This I close by means of a cap C, of rubber or other suitable material, fitting snugly over the end of the nipple and forming a good closure therefor. I preferably put a disk D, of cork, on the end of the nipple before putting on the cap. With some materials this is desirable; but with others it is not necessary. This forms a perfect closure for the nipple and may be removed without breaking the glass (as has heretofore been the practice) by simply pulling endwise on the cap, and then the hypodermic needle E may be attached to the nipple by means of the rubber coupling F, which is of well-known construction.

G is a plug which with this cylindrical form of body is put into the other open end thereof.

This plug terminates in a packing H, which I preferably make of a piece of cork, cemented or otherwise secured to the end of the plug G. Before putting in the plug and its packing I preferably treat it with some sealing solution—as, for instance, with paraffin—to lightly seal it in position and make it air-tight. It is then pushed in sufficiently far to hold it and to leave the proper space in front of it for the serum. I next further seal it by a flexible covering I—such, for instance, as capping-kid—and tie it down around the end of the body, which is flanged, as shown at J, for this purpose. It will thus be seen that by the use of the flexible cover I a complete closure is formed for the projecting portion of the plug G, permitting rotary and endwise movement of said plug without breaking the cover.

Now to use the holder I proceed as follows: First remove the cap and the disk from the nipple and attach the needle, as shown in Fig. 3. Then taking hold of the projecting portion of the plug twist the same, so that the seal between the packing and the body is broken. After the needle has been inserted the plug can be pushed in steadily and the contents properly ejected with little effort.

It is painful and objectionable to have the piston resist and then yield with a rush, and with this construction the movement of the piston is easy and steady. This construction makes a perfect package or holder for the serum which can be converted quickly and without breaking the glass into a perfect hypodermic syringe.

I may and preferably do seal the end of the holder to render it perfectly air-tight by coating it with some light sealing compound—such, for instance, as paraffin, as indicated at M—extending the coating slightly up onto the nipple B. This is so slight a seal that it can be easily broken by drawing up on the cap C, and yet more certainly renders air-tight the closure for that end of the holder or receptacle.

What I claim as my invention is—

1. A holder for serums consisting of a glass body for holding the serum, a slender, hollow

nipple thereon having an open end, and a detachable cap therefor slidably engaging over the end of the nipple, whereby the same may be moved by simply drawing up on the same, 5 substantially as described.

2. A holder for serums consisting of a glass cylinder having an open-ended slender nipple at one end, a detachable cap slidably mounted thereupon, the other end of the cylinder being 10 open, a plug fitting loosely therein, and having a projecting portion extending beyond the cylinder, a packing of cork secured to the inner end of the plug and lightly sealed therein so that the seal may be broken by twisting 15 the plug, and a flexible covering fitting over the projecting portion of the plug, substantially as described.

3. A holder for serums consisting of a glass cylinder open at its outer end, a plug fitting 20 loosely therein and projecting outside the cylinder, a packing on the inner end of the plug, and a flexible cover for the plug permitting the twisting and endwise movement without breaking the cover, a hollow, slender 25 open-ended nipple at the other end of the body, and a detachable cap on the nipple, substantially as and for the purpose described.

4. A holder for serums consisting of a cylinder open at its outer end, an ejector therein 30 projecting outside the cylinder, and a flexible cover inclosing the end of the projecting portion of the ejector.

5. A holder for serums consisting of a body for holding the serum, said body terminating

in a reduced portion, forming a nipple at its 35 open end, the outer surface of which being smooth and uninterrupted, a detachable cap having an uninterrupted inner surface fitting snugly over the nipple, and a coating of sealing material upon the nipple inclosing said cap. 40

6. A holder for serums consisting of a glass cylinder open at its outer end, a plug fitting loosely therein and projecting outside the cylinder, a packing on the inner end of the plug and a flexible cover inclosing the outer 45 end of the plug.

7. A holder for serums consisting of a glass cylinder open at its outer end, a plug fitting loosely therein and projecting outside the cylinder, a packing on the inner end of the 50 plug, and a flexible cover completely inclosing the projecting portion of the plug permitting the twisting and endwise movement without breaking the cover.

8. A holder for serums consisting of a cyl- 55 inder, open at its outer end, an ejector therein projecting outside the cylinder, and a flexible cover completely inclosing the projecting portion of the ejector permitting the twisting and endwise movement of the ejector without 60 breaking the cover.

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

FREDERICK K. STEARNS.

Witnesses:

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DAVID M. GRAY.