

Feb. 1, 1927.

H. C. FITCH

1,615,873

SERUM SYRINGE FILLER AND BOTTLE CARRIER

Filed Sept. 15, 1925

Fig. 1.

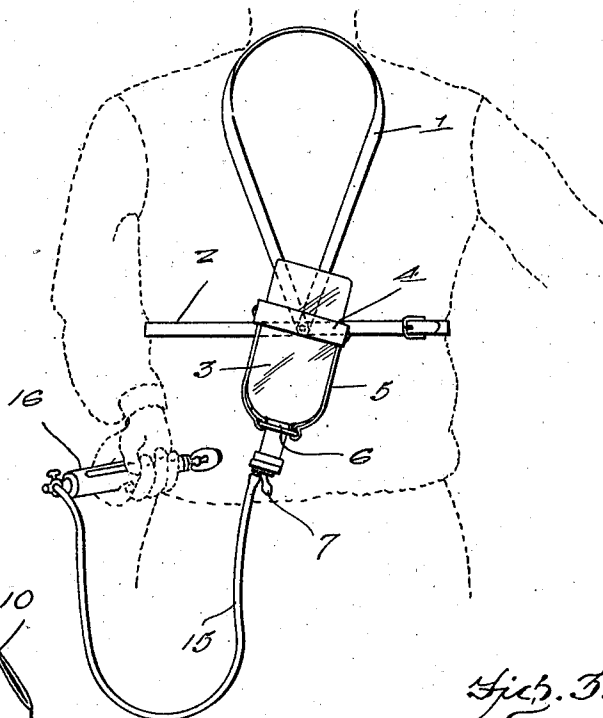


Fig. 3.

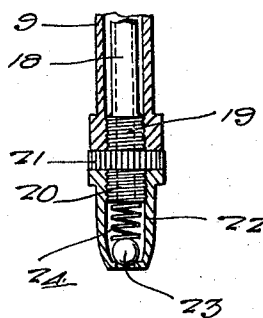
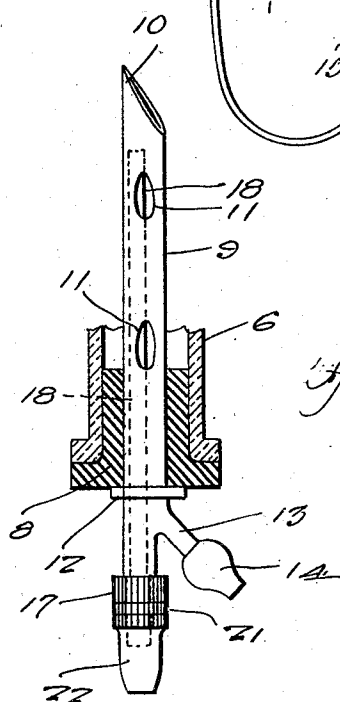


Fig. 2.



Inventor

H. C. Fitch

By *Clarence A. Fitch*
Attorney

Patented Feb. 1, 1927.

1,615,873

UNITED STATES PATENT OFFICE.

HUGH C. FITCH, OF MISSOURI VALLEY, IOWA.

SERUM-SYRINGE FILLER AND BOTTLE CARRIER.

Application filed September 15, 1925. Serial No. 56,432.

This invention relates to an improved device especially adapted for use by a veterinarian.

It is my principal object to provide a simple and inexpensive device which is adapted to pierce the stopper of a serum bottle, whereby to afford a novel means of attachment of the hose of a conventional syringe, the device embodying a check valve to facilitate flow of the fluid and to prevent the formation of a vacuum in the bottle, such as would retard such flow.

An equally important object is to provide a novel harness embodying an arrangement of straps for providing a holder for the serum bottle and a means for suspending said holder from the neck and shoulders of the user.

The outstanding feature of construction of the invention, however, is the novel device which is adapted to puncture the bottle stopper, this device embodying inner and outer detachably connected tubes, one for the passage of air, and other for the passage of the fluid serum, the air tube being provided with the valve and the fluid tube with a nipple for attachment of the syringe bowl.

Other features and advantages of the invention will become apparent from the following description and drawings.

In the accompanying drawings forming a part of this application, and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is an elevational view of the improved harness and syringe filling device showing the operative association and the approximate manner of suspension from the body of the user.

Fig. 2 is an enlarged detail view of the syringe filler per se, showing the association of the same with the bottle stopper and neck.

Fig. 3 is a detail structural and elevational view of the air valve.

Referring to the drawings in detail, it will be seen that the harness comprises a neck encircling strap 1 and a body encircling strap 2. Mounted in any appropriate manner upon the strap is a holder for the serum bottle 3. The holder comprises a bottle encircling strap 4 and a pair of depending side straps 5 which are connected at their free ends with a ring 6 surrounding the neck 7 of the bottle. This permits

the bottle to be suspended in an inverted position from the body of the user to facilitate application of the serum.

At this time, attention is confined to Fig. 2, wherein the improved device known as the filler is shown. In this figure the reference character 8 designates the stopper of the bottle. In many instances, this stopper is of rubber, altho in some instances, it is of cork. The improved filler device comprises a relatively large outer tube 9, having a beveled inner end 10. The bevel forms a piercing point which is adapted to penetrate the stopper and permit the device to be forced into the interior of the bottle without removing the stopper.

This tube is formed at longitudinally spaced points with elongated holes 11 to facilitate discharge of the entire contents of the bottle. Adjacent its lower end this tube is formed with a stop flange 12 which is adapted to abut the stopper and limit the insertion of the tube. Below this flange, it is formed with an angular branch 13 carrying a nipple or head 14 adapted for connection of the hose 15 which leads to and is connected with the conventional syringe 16. At its lower extremity this outer tube 9 is formed with a knurled collar 17 and as shown in Fig. 3, it is internally screw threaded. Disposed in the tube 9 is a relatively small tube or pipe 18. This is of a length shorter than the outside tube 9.

The pipe is formed at its bottom with a screw threaded portion 19 and 20 and with a shuttle finger grip 21. A cap 22 is screwed onto the threaded portion 20 and a ball check valve 23 is located in this cap and is held against the same by a coiled spring 24. This forms an air valve. It is clear that when the bottle of serum is received, it is placed in the especially designed holder on the harness in the inverted position shown, the filler being associated with the cover as shown in Fig. 2. In placing the filler in position, it is simply forced through the stopper and provides a novel means for slowing but continually feeding the anti-cholera serum from the bottle into and through the hose 15.

The filler itself is exceedingly compact and efficient in its operation, may be readily placed in position and removed, is sanitary against contamination, and is such that it will relieve any vacuum and formation of air bubbles in the bottle. Moreover air

is prevented from getting into the syringe to enter the application of the fluid.

No doubt, by considering the description in connection with the drawings, persons
5 familiar with devices of this class will be able to obtain a clear understanding of the invention. Therefore a more lengthy description is thought unnecessary.

While the preferred embodiment of the
10 invention has been shown and described it is to be understood that minor changes coming within the field of invention claimed may be resorted to if desired.

Having thus described my invention, what
15 I claim as new is:—

1. As a new article of manufacture, a filler device of the class described comprising inner and outer tubes, said outer tube having a pointed inner end to penetrate a
20 bottle stopper, being provided at its opposite end with a branch provided with hose connecting means, being further provided with a stop flange intended to abut the stopper and with apertures, said inner tube being carried by the outer tube and having its
25 inner end terminating in spaced relation from the aforesaid pointed end of the outer

tube, the outer end of said inner tube extending beyond the corresponding end of the outer tube, and a valve carried by said
30 extended end.

2. As a new article of manufacture, a filler device of the class described comprising inner and outer tubes, said outer tube having a pointed inner end to penetrate a
35 bottle stopper, being provided at its opposite end with hose connecting means, with a stop flange, and with an internally screw threaded portion, the intermediate part of said outer tube being formed with aper-
40 tures, said inner tube having its inner end terminating in spaced relation from the pointed inner end of the outer tube, and being provided at its opposite end with spaced screw threaded portions and with a finger
45 piece separating said portions, one of said screw threaded portions being attached into the screw threaded portion of the outer tube, and a valve carried by the remaining screw threaded portion of said inner tube.
50

In testimony whereof I affix my signature.

HUGH C. FITCH.