

J. F. KELLOGG.
 SYRINGE.

APPLICATION FILED JAN. 4, 1911.

Patented Jan. 9, 1912.

2 SHEETS—SHEET 1.

1,014,228.

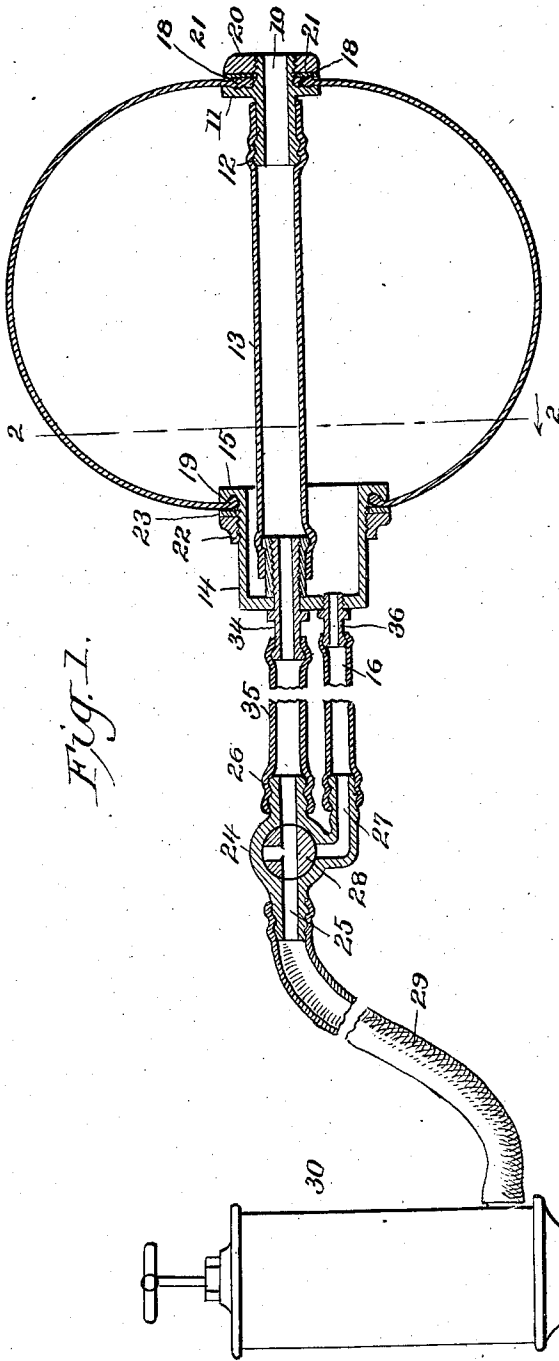


Fig. 1.

Witnesses
W. H. Woodson

Joana M. Fallin

By

John F. Kellogg
W. H. Macy, Attorneys.

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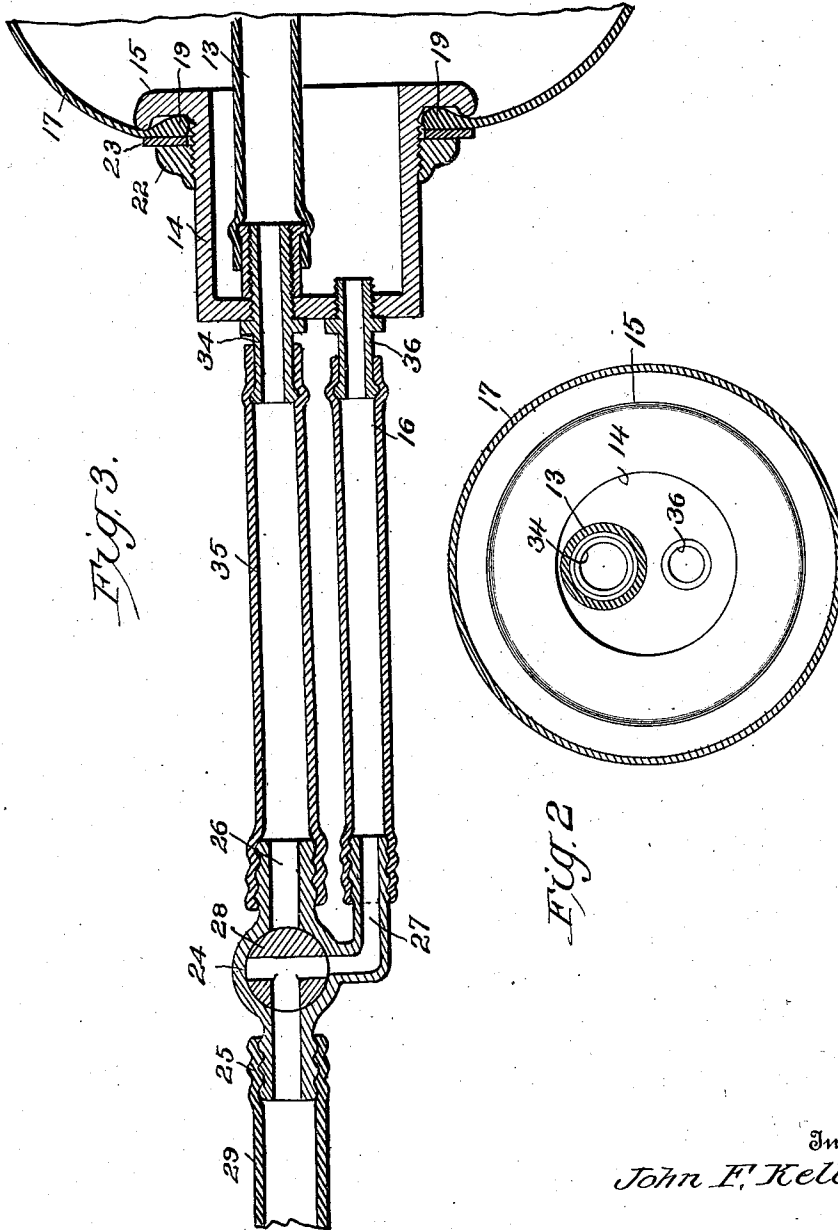


Fig. 3.

Fig. 2.

Inventor
 John F. Kellogg

Witnesses
 W. A. Woodson.

James M. Fallon

By

W. A. Woodson

Attorneys.

UNITED STATES PATENT OFFICE.

JOHN F. KELLOGG, OF GUTHRIE, OKLAHOMA.

SYRINGE.

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Patented Jan. 9, 1912.

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To all whom it may concern:

Be it known that I, JOHN F. KELLOGG, citizen of the United States, residing at Guthrie, in the county of Logan and State of Oklahoma, have invented certain new and useful Improvements in Syringes, of which the following is a specification.

This invention relates to improvements in syringes, of the class wherein provision is made for retaining the contents of the syringe for an indefinite time, and has for one of its objects to simplify and improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a device of this character which is flexible and readily adapts itself to the condition and movement of the patient and without imparting discomfort or annoyance.

Another object of the invention is to provide a device of this character in which the parts may be readily dismembered for renewal or cleansing and without destroying any of the parts.

Another object of the invention is to provide a device of this character wherein provision is made for employing a portion of the liquid for packing the implement within the body and preventing leakage, and thus enabling the liquid which is passed through the implement to be retained in the body indefinitely.

With these and other objects in view the invention consists in certain novel features of construction as hereafter shown and described and then specifically pointed out in the claims; and, in the drawings illustrative of the preferred embodiment of the invention, Figure 1 is a longitudinal sectional view with the implement expanded; Fig. 2 is a transverse section enlarged on the line 2—2 of Fig. 1; Fig. 3 is a sectional detail showing the valve set for supplying liquid to the expansible body.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved implement may be employed as a veterinary syringe or as a syringe for use in hospital practice, but is more particularly designed for use in veterinary practice and is shown in the drawings arranged for such use, but it will be understood that it is not desired to limit the in-

vention as to size or capacity or to the uses for which it may be employed.

The improved implement comprises in general a flexible conductor tube, a head member to which the flexible tube is detachably coupled, a shell member through which the flexible member extends, an expansible body connected respectively to the head and to the shell, means such as a pump for forcing liquid through the conductor and head, and means for supplying the expansible body with a portion of the liquid.

The improved implement comprises a tubular head 10 externally threaded at the outer end and with a lateral flange 11 at the terminal of the threaded portion. At its inner end the tubular head 10 is provided with enlargements 12 over which a flexible conductor 13 is detachably disposed, the member 13 being preferably a section of rubber hose or the like.

The shell portion of the improved device is preferably of metal, and represented as a whole at 14, and with a flange 15 at its inner end, and with two apertures of unequal size through its inner end. Fitting in the larger aperture is a nipple device 34 to the inner end of which the hose section 13 is coupled and with another hose section 35 at its outer end, the object to be hereafter explained. Fitting in the smaller aperture of the shell 14 is another and smaller nipple device 36 to receive a smaller conductor tube 16, preferably a section of rubber tubing. The shell 14 is externally threaded next to the flange 15, as shown.

The expansible body is represented as a whole at 17 and is provided at two opposite sides with apertures surrounded respectively by enlargements 18—19, the enlargement 18 being arranged to bear upon the flange 11, while the enlargement 19 bears upon the flange 15. The threaded portion of the head 10 is provided with a clamp nut 20 and a packing ring 21 which bears against the enlargement 18 of the member 17, while a similar clamp nut 22 and packing ring 23 engages the threaded portion of the shell 14 and bears against the enlarged terminal 19 of the expansible member. By this means the expansible member is firmly and detachably coupled to the head 10 and the shell 14, the joints between the parts being water tight, as will be obvious. The enlargement 18 is preferably in two portions, as shown,

to increase the grip between the parts at the outer end where the greater strain occurs.

The members 35 and 16 extend for a considerable distance from the shell 14 and are connected at their outer ends to a three-way valve, represented conventionally at 24. The three-way valve is provided at one side with a single intake 25, and at the other side with two discharge members 26—27. The tube 10 35 is detachably coupled in the ordinary manner to the discharge 26, while the smaller tube 16 is connected in the same manner to the smaller discharge 27. The plug of the valve is represented at 28 and is of the usual 15 form having a T-shaped passage therethrough. A conductor tube 29, preferably of a section of hose, is connected at one end to the intake 25 of the valve and coupled at its other end to the source of supply for the 20 liquid, as for instance a pump, represented conventionally at 30 and connected into a suitable tank represented at 31.

When an implement thus described is to be employed the member 17 is discharged by 25 detaching the conductor 29 and setting the valve 28 to permit the water to escape from the member 17. The conductor 29 is again coupled to the terminal 25 of the valve and the implement is inserted into the rectum 30 with the plug 28 remaining open to the conductor 16. The pump is then actuated to force a supply of water into the member 17 until the latter is completely expanded. The valve 24 is then actuated to dispose the 35 plug 28 to cut off the supply to the member 17 and open the supply through the main conductor 13—35. The flow is continued until the requisite quantity has been passed through the syringe. The plug 28 is then 40 turned to cut off both conductors 35 and 16, and thus retain the liquid in the animal and also retain the member 17 in its expanded condition. The member 17 thus serves as a 45 packing to effectually prevent any leakage of the liquid around the implement. If it is desired to retain the liquid in the body the conductor 29 is detached and the plug 28, as before described, turned to cut off both tubes 35 and 16. By this means it will be obvious 50 that the animal is free to move about, to roll, or to "wallow" without displacing the implement.

When it is desired to discharge the liquid it is only necessary to turn the plug 28 to 55 connect with the tube 13, and if the implement is to be removed it is only necessary to turn the plug 28 to connect with the tube 16,

when the member 17 will be readily discharged and permit the withdrawal of the implement. 60

As before stated the improved implement is designed more particularly for use in veterinary practice, but will also be found very useful as an ordinary syringe, and when thus employed will be constructed of any 65 size required.

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

1. In a device of the class described, a rigid tubular head, a rigid shell, an expansible body detachably connected respectively 70 to said head and to said shell, a flexible tubular conductor connected respectively to said head and to said shell within the expansible body, a main supply conductor connected to 75 said flexible tubular conductor, a branch conductor leading at one end from said main conductor and connected at the other end into said shell, means for supplying liquid under pressure to said main conductor and 80 to said flexible conductor, and means for conducting liquid from said main conductor to said branch conductor and thence through the shell into the expansible body.

2. In a device of the class described, a 85 rigid tubular head, a rigid shell, an expansible body detachably connected respectively to said head and to said shell, a flexible conductor connected to said head and to said shell within the expansible body, a main 90 supply conductor connected to said flexible tubular conductor, a three-way valve in said main conductor, and a branch conductor leading at one end from said three-way valve and connected at the other end into said 95 shell, whereby means are provided for conducting liquid under pressure alternately through said main conductor or through said branch conductor or cutting off the supply of the conductors. 100

3. In a device of the class described, a flexible tubular conductor, an expansible body surrounding said tubular conductor, another conductor adapted to be connected to a source of liquid supply, and means for 105 alternately conducting liquid from said last mentioned conductor to said flexible tubular conductor and to said expansible body.

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

JOHN F. KELLOGG. [L. S.]

Witnesses:

W. N. KELLOGG,
L. H. MATCHETT.