

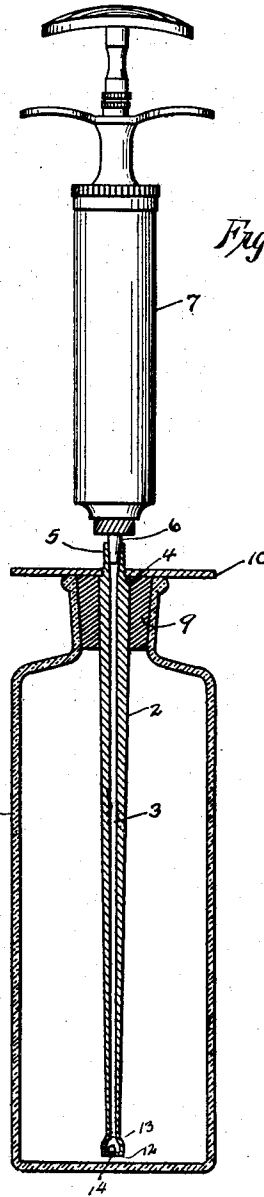
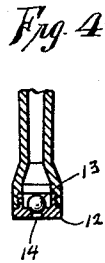
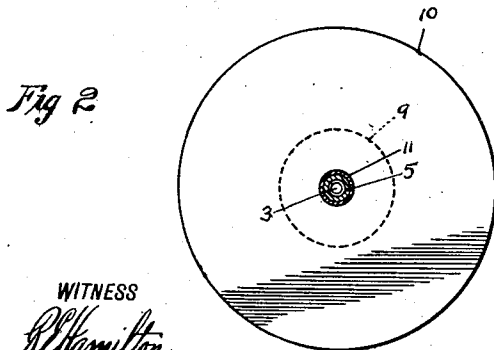
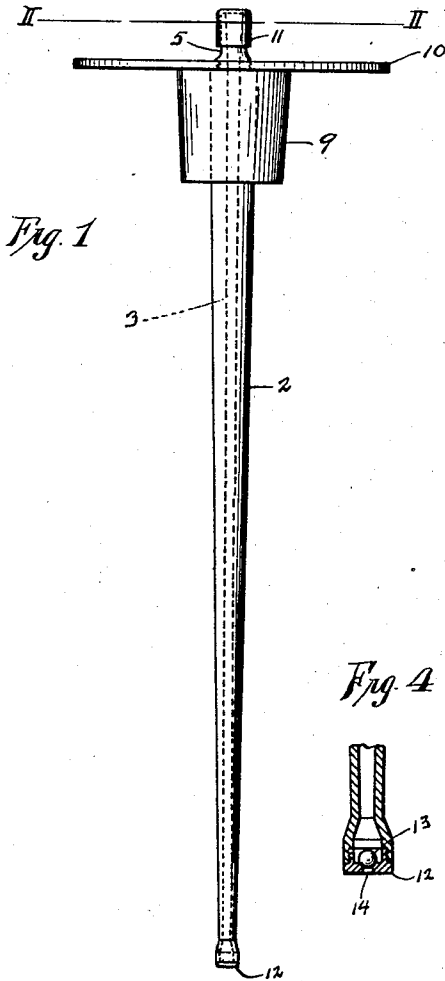
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DEVICE FOR USE IN FILLING SYRINGES AND THE LIKE FROM RECEPTACLES.

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DEVICE FOR USE IN FILLING SYRINGES AND THE LIKE FROM RECEPTACLES.

1,219,937.

Specification of Letters Patent.

Patented Mar. 20, 1917.

Application filed July 17, 1915. Serial No. 40,421.

To all whom it may concern:

Be it known that I, LEONIDAS BRECK GREEN, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Devices for Use in Filling Syringes and the like from Receptacles, of which the following is a full and exact specification.

10 This invention relates to devices for extracting liquids from bottles or similar receptacles, and the object is to provide as convenient and simple means as possible for use in connection with syringes and the like for filling the latter from bottles in a manner which will enable the contents of the bottle or receptacle to be kept free from contamination from outside impurities.

15 To this end the invention provides a device adapted to be inserted into the receptacle and forming a tubular passage from adjacent the bottom of the receptacle and out through the mouth thereof, where a nipple or the like is formed which is adapted to form an air-tight connection with the syringe. The device is also equipped with a shield and hand-grip portion or member at the base of said nipple and adjacent the mouth of the receptacle.

20 With this general object in view, the invention will now be described in connection with one form of embodiment thereof which has been found to be suitable and efficient in practice, reference being had to the accompanying drawing, in which—

25 Figure 1 is a plan view of a device constructed in accordance with the present invention;

30 Fig. 2 is a section on the line II—II of Fig. 1;

35 Fig. 3 is a longitudinal section through the device (on a smaller scale) and a bottle associated therewith, and showing the mode of use of the device in connection with a syringe.

40 Fig. 4 is a sectional detail of the valve.

Referring to the parts in detail as illustrated by the said drawing, the device comprises a tapered tubular member 2 having an axial bore or passage 3 of uniform diameter excepting at one end where it is reduced to form a shoulder 4 and a nipple 5 through which the bore is expanded to form a tapered passage adapted to fit and make air-tight connection with the tapered nipple 6 of the syringe 7 or the like.

The tubular member 2 is made of a length depending upon the size of the receptacle, such as the bottle 8, with which it is to be used, the length being such as to extend through the mouth of the receptacle and into proximity to its bottom, and at the upper end of the tubular member it is equipped with a stopper 9 which is adapted to fit snugly the mouth of the receptacle. At the base of the nipple 5 the reduced portion of the tubular member is threaded as shown in Fig. 3 for fitting a correspondingly threaded opening in a disk 10, which is thus adapted to be screwed upon said reduced portion into engagement with said shoulder 4. In this position the disk 10 rests against the stopper 9 and the mouth of the bottle 8 and acts as a shield for guarding against any of the liquid seeping back into the bottle between the stopper and adjacent parts; and also acts as a hand-grip member to be grasped by one of the hands of the operator in filling the syringe.

The lower end of the tubular member is slightly expanded (see Fig. 4) to form a valve chamber and tapped for receiving a valve plug 12 which is provided with a ball check valve 13 for normally closing the port 14 of said plug 12. By this valve construction the passage 3 is maintained filled at all times even after the bottle is partially empty, so that the passage 3 is not allowed to become charged with air after each filling operation.

The manner of using the device will be clearly understood from the view shown in Fig. 3. The bottle is supplied with the required liquid, such as serum which is employed in the treatment of diseased cattle and hogs, to which the serum is administered by means of a syringe. The needle (not shown) being removed from the instrument, the latter is applied with the nipple 6 inserted in the opening of the nipple 5 of the device, as illustrated, and the syringe filled by suction in the usual manner. The syringe is then removed and the needle attached to the nipple 6 ready for service. Any stray portions of the liquid will fall upon the disk 10 where they may be readily removed and none allowed to reënter the bottle.

It is very important in connection with liquids and instruments with which the present invention is designed to be used, that the liquid serum in the bottle be kept

as free as possible from any foreign particles or from any portion of the liquid which has once passed through the nipple 5 reëntering the bottle since such portion may be contaminated and would taint the supply of liquid in the bottle. With the construction above described it will be seen that the contents of the bottle may be kept free from all outside contamination until practically all of the said contents have been used. A cap 11 is used for covering the nipple 5 and closing the passage 3 when the bottle 8 is not in use.

While the foregoing represents what is now deemed to constitute the preferred form of embodiment of the invention, the right is reserved to such formal changes and modifications as may fairly fall within the scope of the appended claims.

20 Claims:

1. In a liquid extracting device for filling syringes and the like from receptacles, a tubular member adapted to extend through the mouth of the receptacle into proximity to the bottom thereof, a stopper embracing said member and adapted to fit the mouth of the receptacle, said member being provided with a nipple portion at its outer end adapted to form air-tight connection with said syringe or the like and having a threaded portion at the base of said nipple portion, and a combined shield and hand-grip member having a threaded central

opening for detachably mounting the same upon the threaded portion of said tubular member. 35

2. In a liquid extracting device for filling syringes and the like from receptacles, a tubular member adapted to extend through the mouth of the receptacle into proximity to the bottom thereof, the outer end of said member being provided with a reduced portion forming a nipple adapted to make air-tight connection with said syringe or the like, said member having a threaded portion and shoulder at the base of said nipple, and a combined shield and hand-grip member having an opening threaded to fit said threaded portion and seat said shield member against said shoulder. 40 45 50

3. In a liquid extracting device for filling syringes and the like from receptacles, a tubular member adapted to extend through the mouth of the receptacle into proximity to the bottom thereof, said member being provided with a nipple portion at its outer end having a smooth tapered passage adapted to form air-tight connection with said syringe or the like, a combined shield and hand-grip member having detachable threaded engagement with the base of said nipple portion, and a check-valve associated with the lower end of said member. 55 60

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