

No. 857,739.

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C. W. KENNERLY & B. E. STOCKWELL.
FOUNTAIN HYPODERMIC SYRINGE.

APPLICATION FILED OCT. 16, 1906.

FIG. 1.

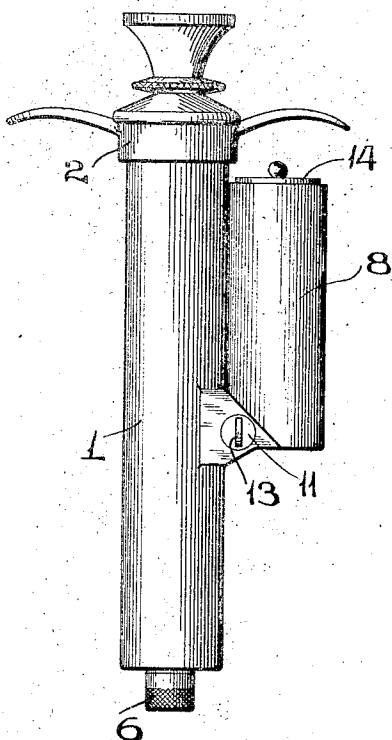


FIG. 2.

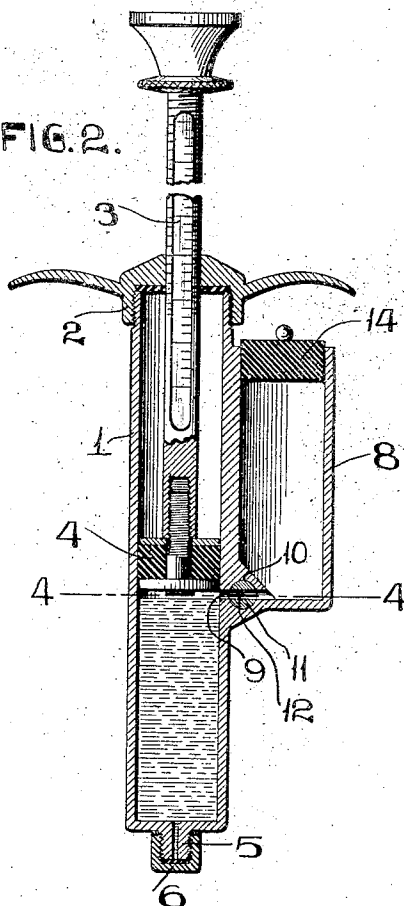


FIG. 3.

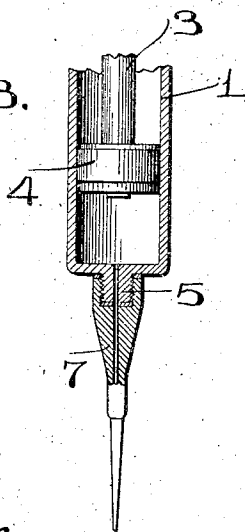
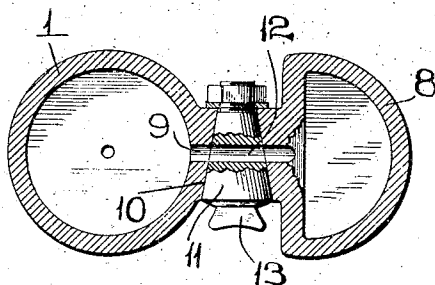


FIG. 4.



ATTEST.

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FOUNTAIN HYPODERMIC SYRINGE.

No. 857,789.

Specification of Letters Patent.

Patented June 25, 1907.

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To all whom it may concern:

Be it known that we, CHARLES W. KENNERLY and BENJAMIN E. STOCKWELL, citizens of the United States, and residents of St. Louis, Missouri, have invented certain new and useful Improvements in Fountain Hypodermic Syringes, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to a fountain hypodermic syringe, and the object of our invention is to construct a hypodermic syringe with a reservoir in which is maintained a supply of water in which a medical compound in tablet form is immersed and dissolved, thus forming the desired mixture to be injected.

Our improved syringe is particularly adapted for emergency use, and in this connection it very frequently happens that the physician or person equipped with a hypodermic syringe and the usual supply of medicine in tablet form is unable to make immediate use of the syringe owing to a lack of water in which to dissolve the tablets. But in our improved construction, the necessary supply of water is carried in a reservoir which is a fixed part of the barrel of the syringe, and which water is allowed to discharge into the barrel of the syringe through a suitably located valve after the proper tablet has been dissolved in the water.

To the above purposes, our invention consists in certain novel features of construction and arrangement of parts, which will be hereinafter more fully set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of a hypodermic syringe of our improved construction, with the needle removed and the lower end closed by a screw cap; Fig. 2 is a vertical section taken through the center of a syringe; Fig. 3 is a vertical section taken through the center of the lower end of the syringe barrel, and showing the needle positioned thereon; Fig. 4 is an enlarged horizontal section taken on the line 4—4 of Fig. 2.

Referring by numerals to the accompanying drawings:—1 designates the main barrel of the syringe, which is provided with the usual screw cap 2, and through which the graduated piston rod 3 operates. Carried

by the lower end of the rod 3 is a piston 4, and formed in the lower end of the barrel 1 is an outlet 5 normally closed by a cap 6, and on which outlet is adapted to be positioned a needle 7. These parts are of ordinary construction and do not materially differ from the syringe now in general use.

Formed integral with, or fixed to the upper portion of the barrel 1, is a cylindrical reservoir 8, the capacity of which is approximately equal to one-half the capacity of the barrel 1; and formed through the wall between the barrel 1 and reservoir 8 is a passageway 9. Extending transversely through the wall between the barrel 1 and reservoir 8, and intersecting this passageway 9, is a tapered aperture 10, in which is arranged for rotation a tapered plug 11, through which is formed an aperture 12 that is adapted to coincide with the passageway 9. An ordinary washer and nut are located on one end of this plug 11, and a plate 13 is formed integral with the forward end, by means of which the plug is rotated to establish or cut off communication through the passageway 9. Normally closing the upper end of the reservoir 8 is a plug 14. The exterior surfaces of the barrel 1 and reservoir 8 can be plated and polished as desired, and the inner surfaces thereof, together with the surfaces of the passageway 9 and aperture 12 are plated or coated with a suitable material which is impervious to moisture and which will not corrode and tarnish after coming in contact with water.

Hypodermic syringes are usually carried in a pocket case together with a number of small vials containing medicine in powdered or tablet form, and to render our improved syringe serviceable, the plug 11 is turned so as to cut off communication through the passage 9, and the reservoir 8 is filled with water. When it is desired to use the syringe, the plug 14 is removed and the proper tablet or powdered medicine is placed in the reservoir 8 and allowed to dissolve in the water therein. The plug 14 is now replaced, and the piston rod is pulled upwardly until the piston 4 passes the opening 9. This creates a partial vacuum in the lower portion of the barrel 1, and the tapered plug 11 is now turned so that the aperture 12 coincides with the passageway 9, and the liquid from the reservoir 8 is free to discharge into the lower

end of the barrel 1 beneath the piston 4. The cap 6 is now removed, and the needle 7 placed in position on the lower end of the barrel, and the syringe is ready for service. Thus, it will be seen how we have provided a hypodermic syringe with a reservoir in which is carried a supply of water to be used in an emergency, and which syringe is simple, inexpensive, and easily manipulated.

It will be readily understood that our improved syringe can be used as is an ordinary syringe by rotating the tapered plug 11 so as to close the passageway 9 and then drawing the piston upwardly through the barrel 1 to draw liquid from a bottle or vessel into said barrel.

We claim:—

1. The combination with a hypodermic syringe, of a reservoir fixed to the barrel of the syringe, there being a passageway leading from the lower end of the reservoir to the interior of the barrel, and a valve operated

from the exterior of the syringe for controlling the discharge of liquid through said passageway; substantially as specified.

2. The combination with the barrel of a hypodermic syringe, of a reservoir formed integral with the upper portion of said barrel, there being a passageway from the lower end of the reservoir to the interior of the barrel, a valve arranged in said passageway and means fixed on one end of said valve whereby the same is rotated to open or close communication through the passageway; substantially as specified.

In testimony whereof, we have signed our names to this specification, in presence of two subscribing witnesses.

CHARLES W. KENNERLY.
BENJAMIN E. STOCKWELL.

Witnesses:

M. P. SMITH,
JOHN C. HIGDON.