July 8, 1930. R. A. STEWART 1,770,185

DOSE DISPENSER

Filed Nov. 14, 1928

Fig. 1.

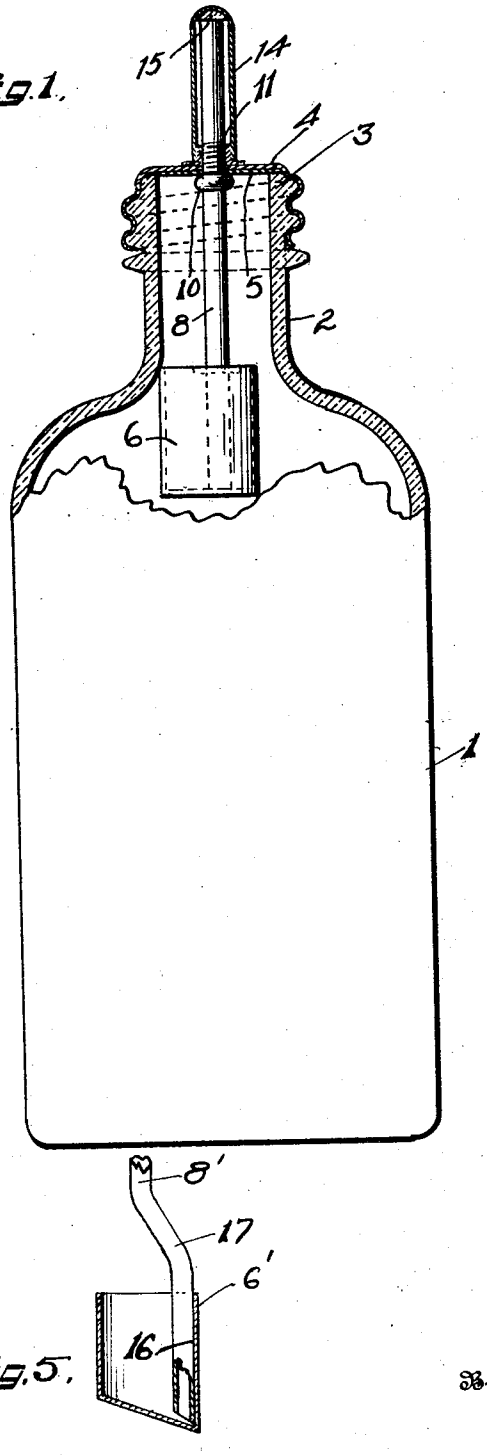


Fig. 2.

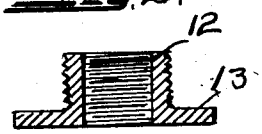


Fig. 3.

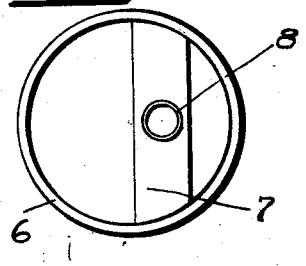


Fig. 4.

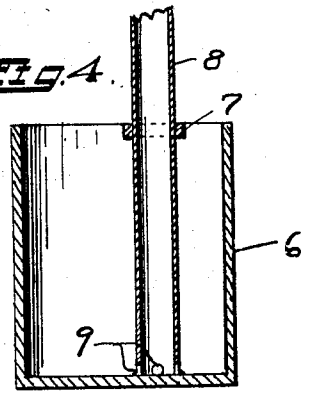


Fig. 5.

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UNITED STATES PATENT OFFICE

ROBERT A. STEWART, OF SAN FRANCISCO, CALIFORNIA

DOSE DISPENSER

Application filed November 14, 1928. Serial No. 319,249.

This invention relates to a dose dispenser, and its object is to provide a sanitary device which will enable the patient to take the proper dose of material he is to be given, and which will not be subject to the filling of a spoon and other unsanitary means for giving the proper amount.

In the present instance the receptacle for the proper amount of the material to be given as a dose is kept within the bottle, and is filled by tilting the bottle, whereupon the person taking the dose sucks out of a tube the quantity of material that is in the dose holder. The tube is then covered over with a screw cap and the entire bottle and dose delivering device is kept perfectly sanitary and free from dust.

Another object of the invention is to so place the dose dispenser in the bottle as to permit practically all of the material within the bottle to be dispensed without difficulty, the dose holder being placed eccentric to the cap so that it can be easily placed with one side in contact with one side of the bottle neck, and thereby remove practically all of the material contained within the bottle.

Other objects of the invention will be apparent as the description proceeds.

An embodiment of the invention is shown in the accompanying drawings in which the same reference numeral is applied to the same portion throughout the several figures of the drawings, and of which there may be modifications.

Figure 1 is a side elevation of a bottle with a portion thereof shown in section to illustrate the application thereto of this dose dispenser,

Figure 2 is a vertical sectional view of the threaded bushing which holds the tube in place on the cap and which provides means for securing the protecting cap on the tube,

Figure 3 is a plan view of the dose holder,

Figure 4 is a vertical sectional view of the dose holder showing the openings through the tubes through which the medicine is removed, and

Figure 5 is a vertical sectional view of a slightly modified form of the dose holder in which the tube is secured to the side of the dose holder.

The numeral 1 indicates the bottle which may be of any desired form having a neck portion 2, and for convenience in use with this particular dose dispenser it is provided with a threaded neck 3. The cap is indicated at 4 and has a suitable gasket 5 therein to prevent loss of liquid when the bottle is overturned or when the dose is to be placed in the dose dispenser 6.

The dose dispenser 6 is of such small size as may be desirable for the desired dose, and it has a cross bar 7 through which the dosing tube 8 passes, said tube extending to the bottom of the dose dispenser as indicated at 9 where a plurality of small holes are placed in the tube to permit the removal of all of the liquid from the dose holder.

The tube 8 is beaded outwardly at 10 and is threaded at 11 to receive a bushing 12, said bushing being threaded internally and externally and having a flange 13 to rest upon the top of the cap 4. The object of this bushing is to provide means for securing the protecting cap 14 in place, said cap having a rubber pad 15 inside the same to prevent the tube 8 from losing any of the liquid, and to keep the tube clean.

It will be seen that the tube 8 is placed eccentrically in the dose holder 6, the object being to permit the dose holder to be placed in the bottle and to be turned in a position so that one side of the dose holder will touch the neck of the bottle, the object being to provide means whereby practically all of the medicine within the bottle may be worked into the dose holder by turning the bottle up and then allowing it to run into the dose holder on the side at which the dose holder touches the neck of the bottle.

The operation of the dose dispenser is as follows:

Assuming the bottle to be filled with the liquid to be dosed it is turned up enough to cause the neck of the bottle to fill with the dose of material to be given, and this material is then turned down so that whatever the holder 6 requires will run thereinto. The user can then remove the cap 14 and suck

out of the holder 6 through the tube 8 all of the dose contained in the holder 6.

In Figure 5 there is shown a slightly modified form of securing the dose holder to the tube to avoid using the cross bar 7 shown in Figure 3. In this form of the invention the dose dispenser is shown at 6′, the tube at 8′, and it is secured to the side of the dose holder by soldering along the line 16, and the tube also has a band at 17 to bring it into proper alignment with the center of the cap as illustrated in Figure 1, while at the same time enabling the open side of the dose holder to be placed against the side of the bottle neck as shown in Figure 1.

Having thus described my invention, what I desire to secure by Letters Patent of the United States is as follows, but modifications may be made in carrying out the invention as shown in the drawings and in the above particularly described form thereof within the purview of the annexed claims.

1. A dose dispenser comprising a bottle neck closure, a tube extending centrally therethrough, means to secure the tube to the bottle neck closure, a dose measuring device on the lower end of the tube set eccentrically of said tube, and an enclosing cap for the outer end of the tube.

2. A dose dispenser comprising a bottle having a neck closure, a tube extending therethrough and secured to the closure, a dose dispensing receptacle within the bottle eccentrically placed to touch one side of the bottle neck, and means to cover the outer end of the tube.

3. A dose dispenser comprising a bottle having a closure, a tubular member extending through said closure and secured thereto, a dose dispenser eccentrically placed within the bottle neck to touch one side of the bottle and secured to the tube through which tube the dose can be sucked.

4. A dose dispenser comprising a bottle having a closure for the neck, a tubular member extending through said closure and secured thereto, a measuring device secured to the tube within the bottle and having one side thereof touching the bottle neck at one side, and a threaded cap for closing and covering the outer end of the tube to prevent it from accumulating dirt.

5. A dose dispenser comprising a bottle having a closure for the neck thereof, a tube extending through said closure, a dose holder having an inclined bottom fixed to said tube, said tube extending adjacent to the lowest part of said bottom, and said dose holder adapted to have one side thereof touching the side of the bottle neck.

In testimony whereof I have hereunto set my hand this 6th day of November, A. D. 1928.

ROBERT A. STEWART.