

(No Model.)

F. B. SPOONER.
MEDICINE DROPPER.

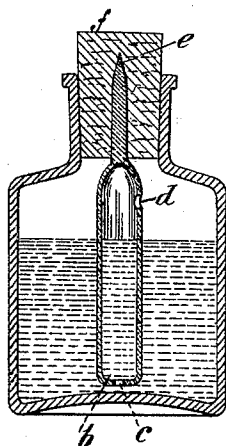
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Fig. 1.



Fig. 2.



WITNESSES:
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FREDERICK B. SPOONER, OF BROOKLYN, NEW YORK.

MEDICINE-DROPPER.

SPECIFICATION forming part of Letters Patent No. 448,555, dated March 17, 1891.

Application filed May 19, 1890. Serial No. 352,321. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK B. SPOONER, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Medicine-Droppers, of which the following is a specification.

My invention consists in a medicine-dropper comprising a reservoir for holding the liquid, having an orifice at the lower portion for the escape of the liquid in drops, and an orifice at the upper portion for influx of air, a taper point at the top for the purpose of penetrating the cork of a bottle, all as hereinafter described, and then set forth in the claims.

In the drawings, Figure 1 is a perspective view of the medicine-dropper. Fig. 2 is a vertical central section taken through a bottle having one of the medicine-droppers attached to its cork.

a is the reservoir for containing the liquid. In its bottom *b* is placed a small orifice *c*. In the upper end of the reservoir is placed another orifice *d*.

e is a taper point, which point or extension upward I prefer to make of solid glass, so that it will be more durable, as it is then less likely to break when it is pressed into the lower portion of a cork, as shown in Fig. 2.

The operation of the device is as follows: The taper end *e* is first inserted into the lower portion of a cork, as shown at *f*, Fig. 2. The cork is then placed in the neck of a bottle. At once to restore the equilibrium the pressure of air upon the surface of the liquid in the bottle will force the liquid up through the orifice *c* and into the reservoir *a*, the air which is displaced by the liquid in the reservoir escaping through the orifice *d* in the upper portion of the reservoir. In order to measure out the liquid by drops, the cork *f* is pulled out and held either in a vertical or slightly-inclined position, when the liquid will commence to escape through the orifice *c* drop by drop, the air entering at the orifice *d*, thereby giving the necessary pressure to so eject the liquid from the medicine-dropper. The dropper is then returned to the bottle, as shown in Fig. 2, where it will refill itself, as before stated.

I am aware that a dropper has heretofore

been made which was provided with an enlarged bulb-shaped upper end to be inserted in a recess in the cork. In its use it was first necessary to cut out a recess in the cork for its reception, and the bulb when in place therein robbed the cork of much of the elasticity necessary to its efficiency as a stopper, because these droppers are used exclusively with medicines which are handled in small quantities, and therefore in small bottles with correspondingly-small corks. Unless very particular care was taken, whenever the cork was inserted the bulb would be crushed and the fragments of glass and the body of the dropper dropped into the medicine.

I am aware that a glass measuring-tube has been made having a bulb-like enlargement at its upper end with a slender neck between the bulb and the body of the tube. In applying this to a cork it was necessary to make an undercut recess in the cork, and even then in forcing the bulb through the contracted entrance to the recess there was very great liability to breakage at the slender neck, which rendered the device weakest at the point where strength was most required, and this same liability to destruction constantly attended the after use of the device, as is apparent. If attempt were made to insert the bulb without first making a recess for it, breakage was almost certain to ensue. From both these devices, it will be observed, the dropper of my invention differs essentially. From the body of the tube the upper end is extended in a continuous even taper to a sharp point. The result is that this point and the tapering end may be readily and easily pushed into the cork without cutting any recess for it and without any danger of breaking in the act of insertion or in after use, because the parts are strongest where strength is most required, while the presence of this slight tapering end in the cork does not materially decrease its elasticity. With equal safety and facility a dropper may be removed from one cork and applied to another.

I claim—

1. A medicine-dropper consisting of a reservoir having an orifice in its lower end, an orifice in its upper portion, and its upper end being continuously tapered to a point, by

means of which the dropper can be driven into and be attached to a cork, substantially as described.

2. A medicine-dropper consisting of the reservoir *a* for receiving the liquid, having the
5 exit-orifice *c* and air-inlet orifice *d*, and provided with the solid continuously-tapering-

point extension *e*, enabling it to be driven into the lower portion of a cork, substantially as described.

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Witnesses:

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