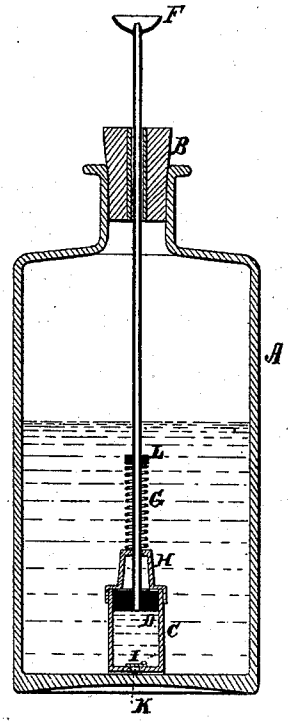
W. S. WARD.

Ejecting Apparatus for Bottles.

No. 134,953. Patented Jan. 14, 1873.



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UNITED STATES PATENT OFFICE.

WILLIAM S. WARD, OF NEW YORK, N. Y.

IMPROVEMENT IN EJECTING APPARATUS FOR BOTTLES.

Specification forming part of Letters Patent No. **134,953**, dated January 14, 1873.

To all whom it may concern:

Be it known that I, WILLIAM S. WARD, of the city, county, and State of New York, have invented a new and Improved Ejecting Apparatus for Bottles, &c., of which the following is a specification:

My invention consists of a simply-contrived force-pump, let into a perfumery or other bottle or vessel, with its stem or piston-rod passing through the cork or stopper in such manner that by suddenly pushing the rod down a small quantity of the fluid in the bottle will be ejected, preferably through the piston-rod made hollow for the purpose, constituting a simple and convenient contrivance for perfuming the handkerchief and other articles more readily than can be done by removing the stopper and pouring out the fluid, and calculated to prevent the waste of perfume which takes place when the stopper is removed.

The drawing is a sectional elevation of a perfume-bottle provided with ejecting apparatus, arranged according to my improvement.

A is a perfume or other bottle, and B the cork, glass, or other stopper, with a small hole through it vertically, preferably at the center. C is a small pump-cylinder in the bottle, resting on the bottom, with a piston, D, whose rod E extends up through the stopper, and is made hollow for conducting the fluid ejected up through the stopper. At the top this rod is provided with a small concave push-piece, F, and above the cylinder is a spring, G, which lifts and holds the piston to the top of the cylinder. H is a bridge or brace to keep the piston-rod and cylinder in line properly. I is a check-valve in the lower end of the cylinder, closing the port K, through which the fluid enters the cylinder. Another spring may be introduced between collar L and the inner end of the stopper to hold the cylinder against the bottom of the bottle in case it overturns or is laid on its side in packing, but said spring must be less powerful than spring G, so as not to force the piston down. A collar on the piston-rod, immediately below the stopper, would accomplish the same purpose.

It will be seen that by placing the handkerchief or other article on the push-piece F, and forcing the piston down smartly, a small quantity of the fluid will be ejected against the said article. The concave push-piece prevents the choking of the mouth of the rod, and allows the liquid to spread over a considerable area of the handkerchief.

By making the port K quite small proportionately to the cylinder, and forcing the piston down quickly, I may dispense with the check-valve. Therefore I do not limit myself to the use of a pump with a check-valve; neither do I limit myself to a pump with a hollow piston-rod for conducting the fluid up through the cork, for another tube may be used; but of course it is simpler and cheaper to have the piston-rod serve the purpose of such a tube also.

The push-piece F may be screwed on the piston-rod, or otherwise detachably connected to it, so that the rod may be readily applied to any cork or stopper.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The hollow piston-rod having a concave push-piece, F, attached to the upper end, substantially as specified.

2. The combination of the spring G with the pump-cylinder and piston-rod of an ejecting attachment for bottles, substantially as specified.

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