No. 610,949. Patented Sept. 20, 1898.

# A. B. POWERS.

## VALVE STOPPER AND POURING NOZZLE.

(Application filed Apr. 16, 1898.)

(No Model.)

*Fig. 1.*

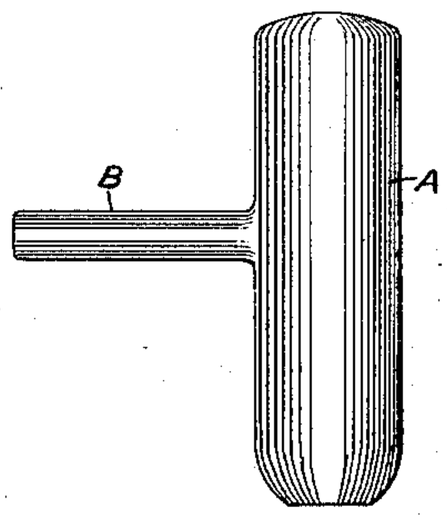



*Fig. 2.*

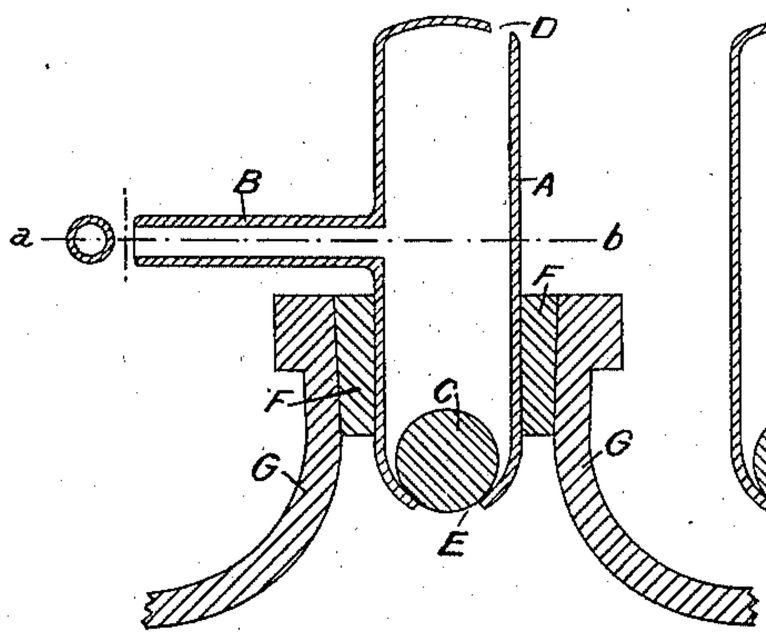
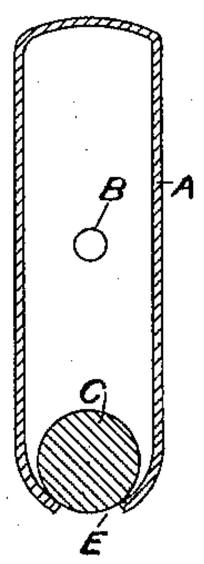



*Fig. 3.*



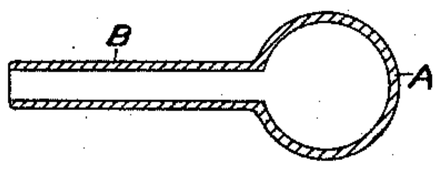




*Fig. 4.*

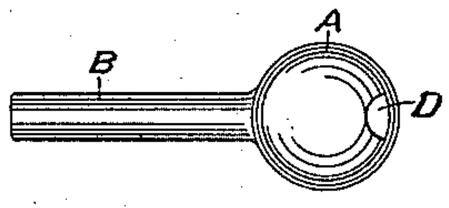



*Fig. 5.*

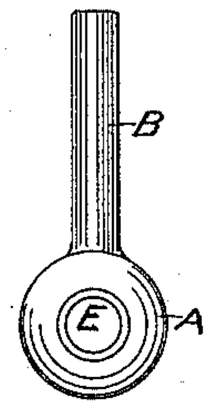



*Fig. 6.*

Witnesses
Charles Kern.
Florence Coffman

Abner B. Powers
Inventor
By his Attorney Hal D. Waugh.

# UNITED STATES PATENT OFFICE.

ABNER B. POWERS, OF DENVER, COLORADO, ASSIGNOR OF ONE-HALF TO JENNIE F. ANDRE, OF SAME PLACE.

## VALVE-STOPPER AND POURING-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 610,949, dated September 20, 1898.

Application filed April 16, 1898. Serial No. 677,900. (No model.)

*To all whom it may concern:*

Be it known that I, ABNER B. POWERS, a citizen of the United States, residing in the city of Denver, county of Arapahoe, and State of Colorado, have invented a new and useful Valve-Stopper and Pouring-Nozzle for Bottles; and I do declare the following to be a clear, full, and exact description of my invention, reference being had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

My invention relates to improvements in valve-stoppers and pouring-nozzles, consisting of a tube or pouring-nozzle having a side tube of smaller size constructed of tin, platinum, or other soft metal when to be used for ink-bottles or bottles containing ordinary liquids, and of glass or porcelain when to be used for acids or chemicals of any kind, in combination with a tapering cork when made of metal, the large tube tapered at the lower end to fit the internally-tapered bottle-neck when made of glass or porcelain, the large lower tube end having a circular valve-seat, into which perfectly fits the glass or porcelain ball-valve when the bottle is in an upright position, thus making the bottle absolutely air-tight. The ball-valve rolls out immediately upon inclining the bottle, which allows the fluid to pass around the ball-valve and out at either of the openings desired. It is adapted for ink-bottles, useful in filling fountain-pens, ink stands or wells from a large bottle without spilling or causing an overflow, as the flow can be regulated at will, hereinafter fully described, and for use in dispensing acids, chemicals, or fluids of any character, as it facilitates the filling of very small bottles from large ones and enables the dispenser to regulate the flow to a drop. I do not confine its use to any particular branch or its construction to any one plan, but construct it in various sizes in such a manner and of such material that it will be practical for use wherever any kind of liquid is poured from one bottle into another or from a bottle into another receptacle.

The objects of my invention are to provide a valve-stopper and pouring-nozzle that will be efficient in its work, yet a very simple and durable article, which can be constructed at a very low cost and will always be practical wherever it may be used.

I attain the above objects by the construction of the article as illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my invention. Fig. 2 is a sectional view of a bottle embodying my invention inserted in a tapering cork. Fig. 3 is a sectional view, spout turned backward. Fig. 4 is a cross-section along line *a b* of Fig. 2. Fig. 5 is a top view of my invention. Fig. 6 is a bottom view of same.

A represents the large tube.

B represents the small side tube.

C represents the ball-valve.

D represents the opening in the top of the large tube.

E represents the circular opening in the lower end of the large tube A, which also forms the valve-seat for the ball-valve C.

F represents the tapering cork which surrounds the tube A when same is made of metal.

G represents the neck of a bottle.

When pouring from a bottle provided with my invention, in combination with a tapering cork, which holds it firmly into the neck of the bottle when made of metal and which is held as firmly by being tapered to a perfect fit with the internally-tapered neck of the bottle when made of glass or porcelain, the ball-valve C rolls away from the opening E, thus allowing the fluid to flow around the ball-valve C, it being of less diameter than the tube A, and out at the opening D in the top of the tube A. The flow can be stopped to a drop by placing the finger over the end of the small tube B. This is one of the valuable features of the combination. The above is the method when pouring into large receptacles. When pouring into small ones—such as fountain-pens, small bottles, &c.—the reverse mode is used—viz., by turning the bottle and pouring from the small tube B. Then by placing the finger over the opening D in the top of the large tube A the flow will stop to a drop, thus preventing spilling the liquid or causing the receptacle to overflow.

Having thus described the nature and objects of my invention and the manner of con-

structing and applying the same, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, a valve-stopper and pouring-nozzle, for bottles, comprising a tube provided with an outlet-opening at the upper end and a circular inlet-opening in the lower end, forming a perfect valve-seat, a ball-valve in the tube, of less diameter than the tube, with a small side tube having an outlet-opening from the large tube, substantially as set forth.

2. In combination a valve-stopper, and pouring-nozzle, having the tube, A, with the small tube, B, the ball-valve C, the outlet-opening, D, the inlet-opening, or valve-seat, E, said tube, A, extending through the tapered cork F, fitting into the bottle G, or having the lower end of the tube, A, tapered so as to fit the internally-tapered bottle-neck, G, as, and for the purposes herein substantially specified.

ABNER B. POWERS.

Witnesses:
CHARLES KERN,
FLORENCE COFFMAN.