

(No Model.)

J. FELT.

COMBINED STOPPER AND TUBE FOR INKSTANDS.

No. 280,922.

Patented July 10, 1883.

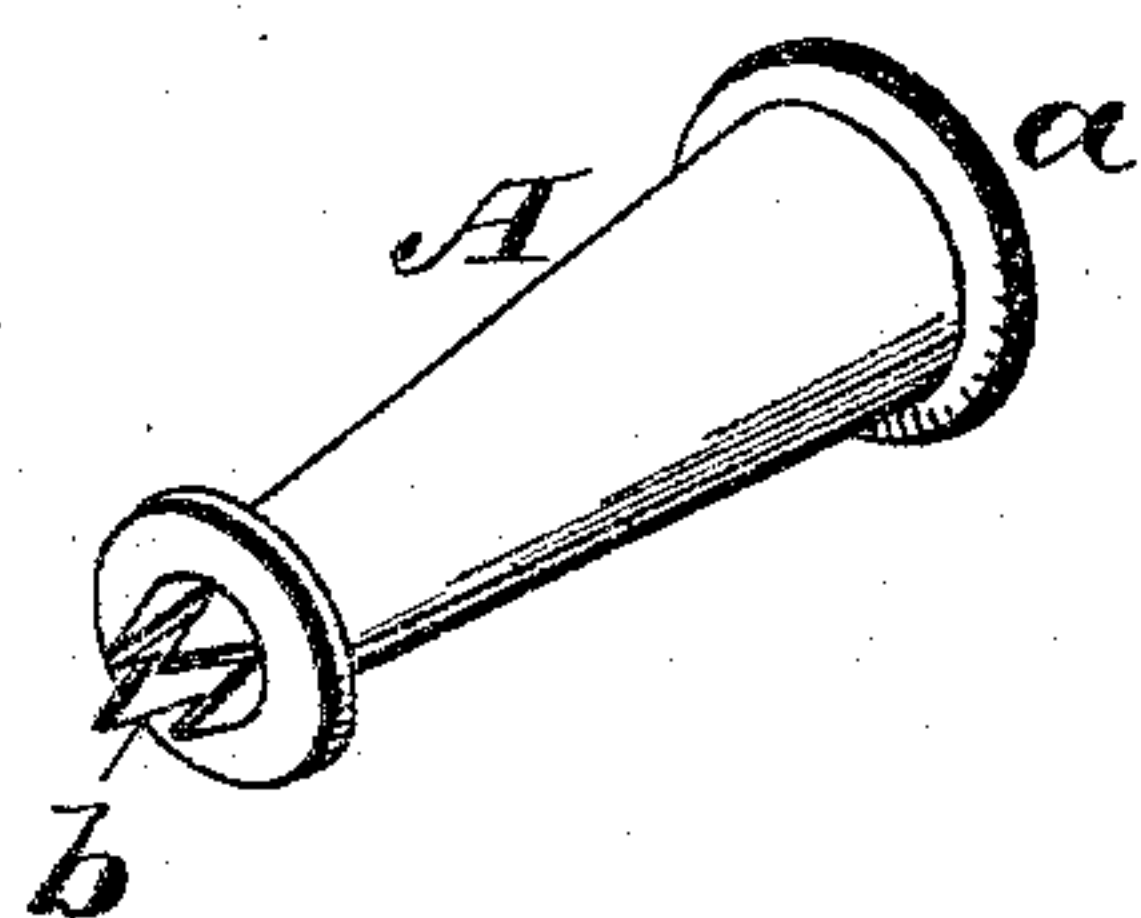
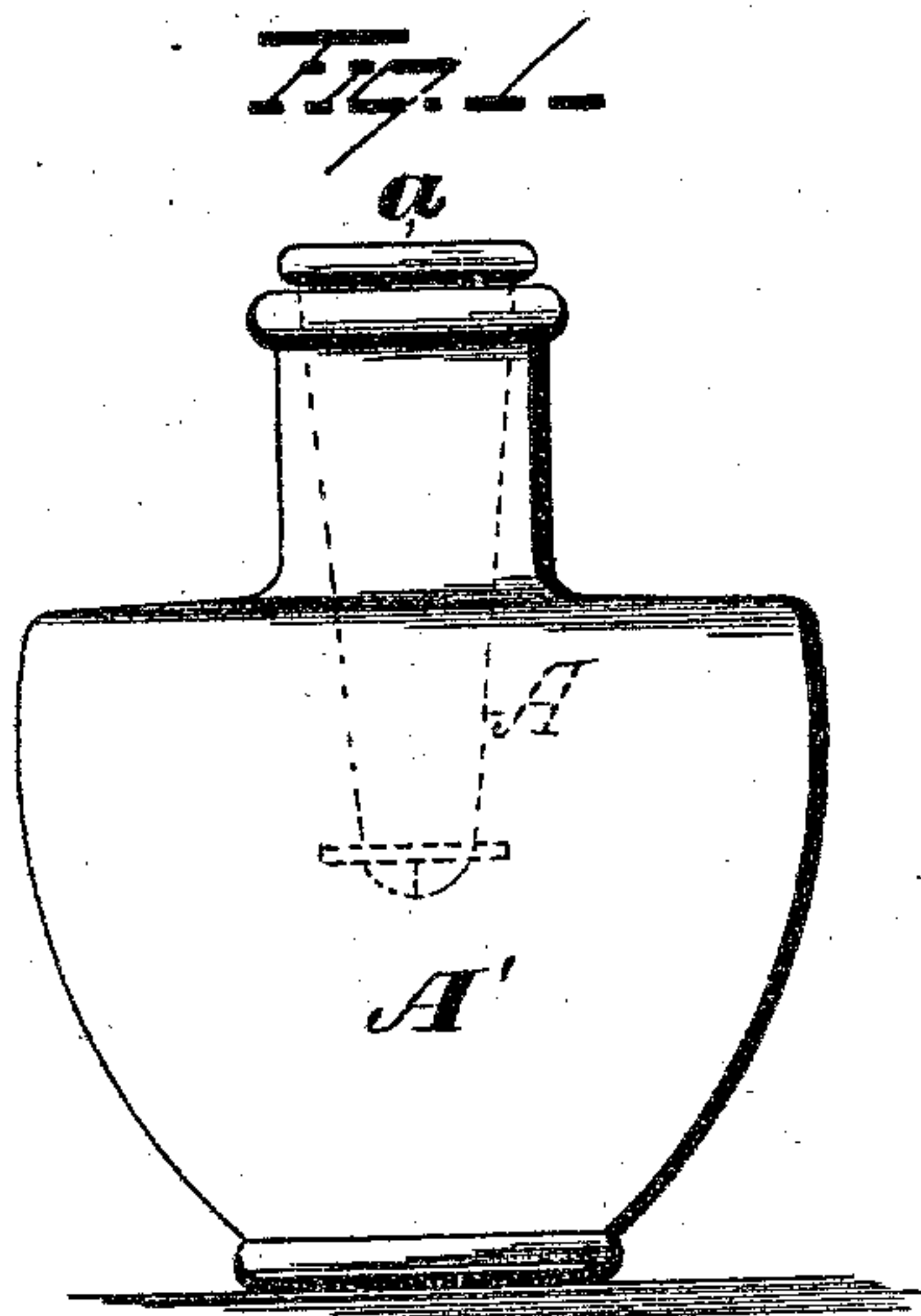


Fig. 2.

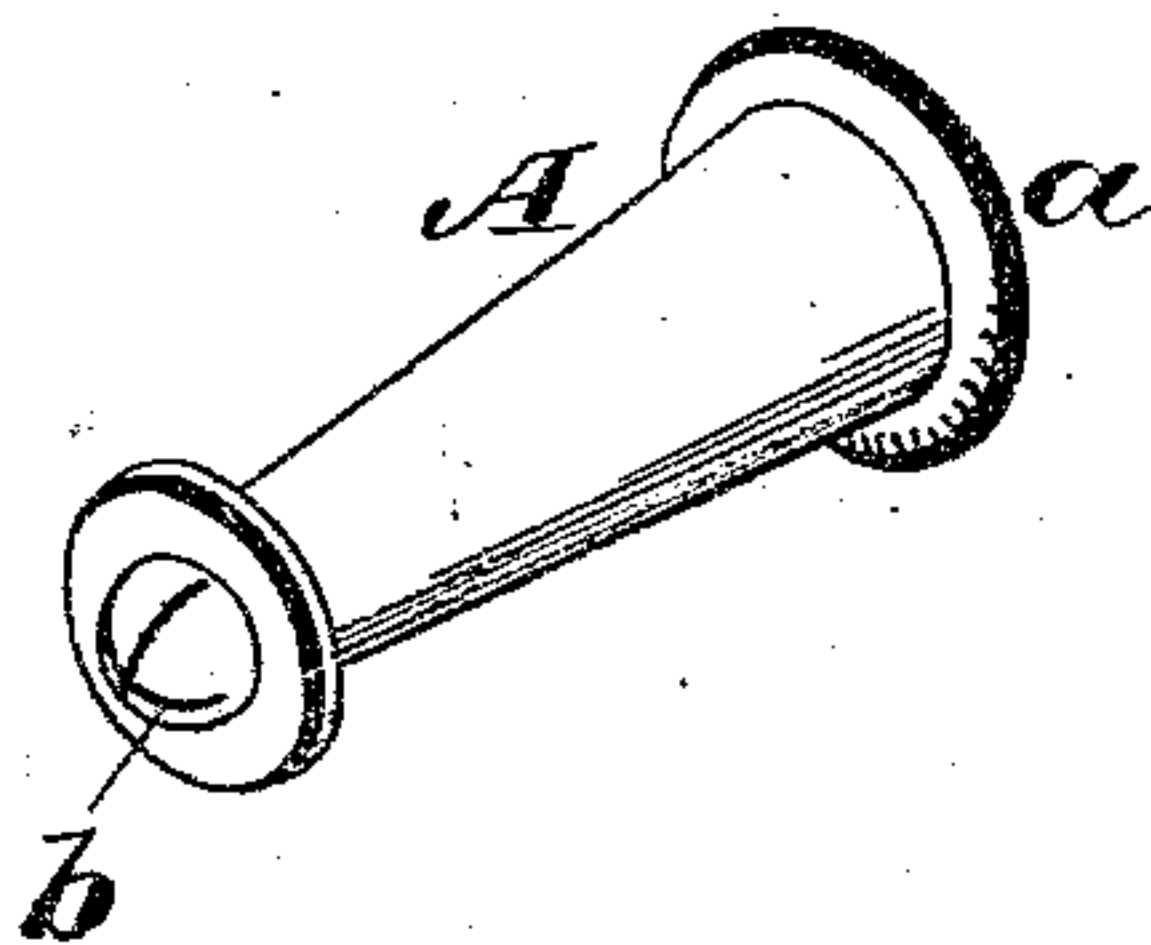
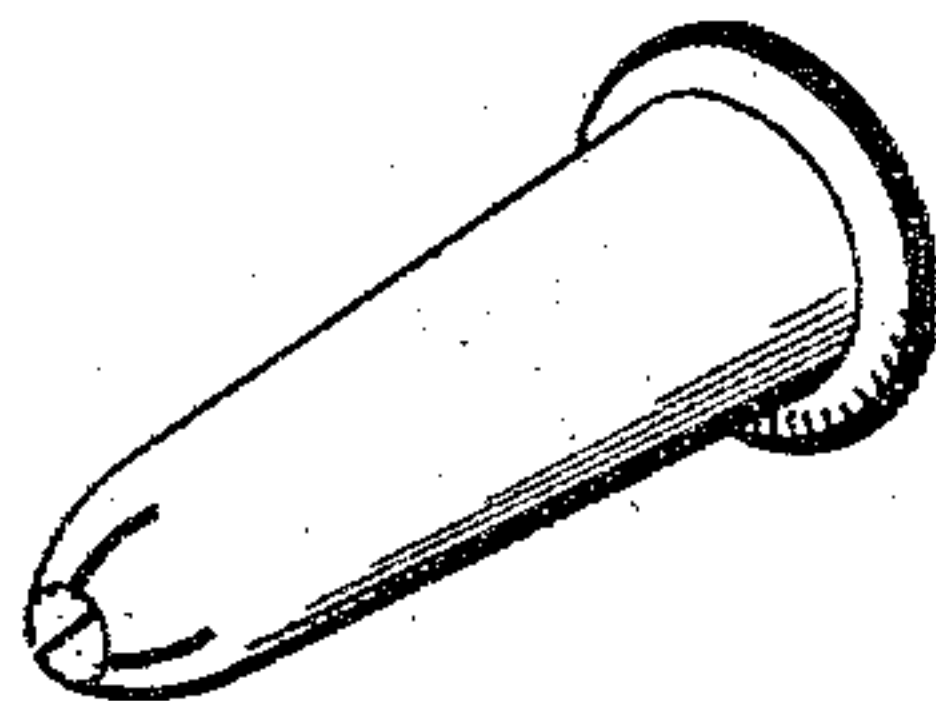


Fig. 3.



WITNESSES

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COMBINED STOPPER AND TUBE FOR INKSTANDS.

SPECIFICATION forming part of Letters Patent No. 280,922, dated July 10, 1883.

Application filed August 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN FELT, of Clayton, in the county of Jefferson and State of New York, have invented certain new and useful
5 Improvements in Combined Stopper and Tube for Inkstands and Bottles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it per-
10 tains to make and use the same.

My invention relates to an improvement in combined stopper and tube for inkstands and bottles, the object of the same being to provide a flexible tube with a valved lower end, adapt-
15 ed to be combined with an inkstand or placed in the neck of the ink-bottle and perform the function of a stopper, and also remove all surplus ink from the pen as the latter is withdrawn from the tube; and with these ends in
20 view my invention consists in certain details in construction, which will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a perspective view of my improvement.
25 Fig. 2 is a detached view of the tube, showing the valved end in open and closed position, and Fig. 3 is a modified form of tube.

A is the conical or converging tube, made of rubber or other suitable flexible material, and
30 provided at its open upper or larger end with the enlarged collar or band *a*, which latter forms a seat or rest for the tube when the latter is inserted in the neck of the ink-bottle *A'*. If desired, this can be secured to an inkstand-
35 cover in any suitable manner, so as to project into the ink, or it can be provided with a stiff rim or flange at its upper end, which will enable it to be retained on bottles having different-sized openings without the danger of fall-
40 ing in or being pulled out while withdrawing the pen. The opening throughout nearly the entire length of the tube is sufficiently large for the introduction of a pen and the end of the holder, while the lower end, or that por-
45 tion thereof which rests in the ink, is in a closed or partly closed position, which, together with atmospheric pressure in the tube, will prevent the ink from rising therein or spilling when
50 inverted. The side or sides of this tube *A* gradually incline until near the lower end,

when they curve inward, forming a convexed end. This convexed end is provided with a slit, *b*, running in the direction of the length of the tube, which makes an opening sufficiently large for the passage of a pen, but not
55 large enough for the passage of the end of the holder when ordinary pressure is exerted thereon. As the tube is made of rubber or other flexible material, it follows that when the parts are in their normal position the end
60 of the tube is closed, and the tube consequently performs the function of an ordinary stopper. When a pen is introduced into the tube, it forces open the lower slitted or valved end thereof, and as the pen is moved downward the sides
65 or valves formed by the slitting at all times closely bear against the pen. When the pen is withdrawn, the valves remove all surplus ink therefrom, retaining enough, however, for all necessary purposes. This construction ob-
70 viates the danger of blotting the paper, and, besides that, keeps the pen-holder free of ink. It also prevents waste of ink by evaporation and spilling, and saves time and trouble in closing the bottle or stand when finished using it.
75 If desired, the convexed end of the tube can be provided with more than one slit, all, however, running in the direction of length of the tube and crossing each other at an angle.

In the modification shown in Fig. 3 I have
80 provided the lower convexed end of the tube with a small round opening and slitted the edges of the tube surrounding the said opening, so that the same can be enlarged when necessary. This construction is well adapted
85 for the purpose in view, as it enables the point of the pen to pass completely through the tube without engaging therewith.

The bottle *a'* is shaped as shown in the drawings, and is preferably greater in capac-
90 ity in its upper portion than in its lower part. This bottle is provided with a tubular neck or opening, into which the elastic tube fits, so as to form an air-tight joint. The tube passes down perpendicularly to a joint within the
95 bottle at or near its center.

With this improved bottle and tube, there is no danger of spilling the ink when the bot-
100 tle is tipped over, as when filled more than half full the contents are kept from escape by

atmospheric pressure acting through a very small aperture, and when filled less than half full the ink never flows over the inner end of said tube, no matter what the position of the bottle may be.

Heretofore inkstands having an opening for the pen near the center of the interior space have been in every case made of rigid or stiff material throughout and all in one piece. The opening for the pen, therefore, could not be less in diameter than the width of the widest pen ever used in taking ink therefrom. The passage to the said opening has not been tubular, but funnel-shaped, and has therefore taken up much of the space in the upper portion of the bottle or stand. In order to empty such inks readily, a second aperture has been necessary. It is evident that such inkstands cannot be filled above or even to the opening without a loss of a part of the contents whenever tipped over, owing to the large size of the opening; but when filled less than half full they do not spill their contents. Thus made, but very small space for ink is allowable below said opening, for the reason that said space must not exceed that above it, which is of necessity small, because of the funnel-shaped passage. Such a construction does not prevent evaporation when left uncorked; but by employing a removable elastic tube, as described, I need but one opening for filling and emptying, have more filling-space in the upper portion of bottle, hence may have more in the lower part and still have the lower end of tube always above the fluid when filled less than half full; hence, in case the valves of the tube give out the bottle will still have the advantage over every previous construction as a non-spilling one. If the tube is perforated, as shown in the modification, the perforation must be of a diameter less than the width of a small size pen, so that the side edges of the tube around the perforation will remove the surplus ink, as described. A large perforation would let the ink out of the bottle should it accidentally tip over, while a small one will not.

I have described my improved tube in connection with a particular construction of bottle; but I do not limit myself to the employment of the tube combined with the bottle, as it can be adapted to any construction of inkwells and perform its function in a satisfactory manner.

It is evident that the form of my tube can be modified and changed in numerous ways, and hence I would have it understood that I do not limit myself to the exact form and construction shown, but consider myself at liberty

to make such changes as come within the spirit and scope of my invention.

I am aware that inkstands have been provided with funnel-shaped stoppers made of rigid material for preventing the ink from spilling should the inkstand be overturned; also, that inkstands have had a rubber diaphragm fastened to the top by a screw-collar, the central portion of the diaphragm being provided with a depending ink-supply tube, which extends nearly to the bottom of the inkstand; also, that inkstands have been provided with a self-closing orifice, consisting of wings adapted to be opened by the insertion of the pen and closed by a weight or spring, and hence I would have it understood that I make no claim to such construction of parts.

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

1. As a new article of manufacture, a combined stopper and tube for inkstands and bottles, composed of rubber or other elastic material, and provided with an open upper end and a slitted or valved lower end.

2. A combined stopper and tube for inkstands and bottles, consisting of a conical or converging rubber or other elastic tube, provided with an open upper end and a convexed lower end, the latter being slitted in the direction of the length of the tube, substantially as and for the purpose set forth.

3. A combined stopper and tube for inkstands and bottles, made of rubber or other elastic material, the lower end of which is adapted to rest in the ink and is provided with valves constructed as described, which latter are adapted to close as the pen is withdrawn from the ink.

4. The combination, with an ink-bottle having a tubular neck or annular opening, of a tightly-fitting removable elastic tube passing through such opening or neck, and at whose lower extremity the passage is either closed up or is less in diameter than the width of a small-sized pen, and provided with slits therein running from the lower end of the tube outward and upward, of sufficient length and number to allow the pen to pass freely through by either passing into the slits or pressing apart the portions of the tube between said slits.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN FELT.

Witnesses:

CHARLES M. MARSHALL,
ORSEN W. SMITH.