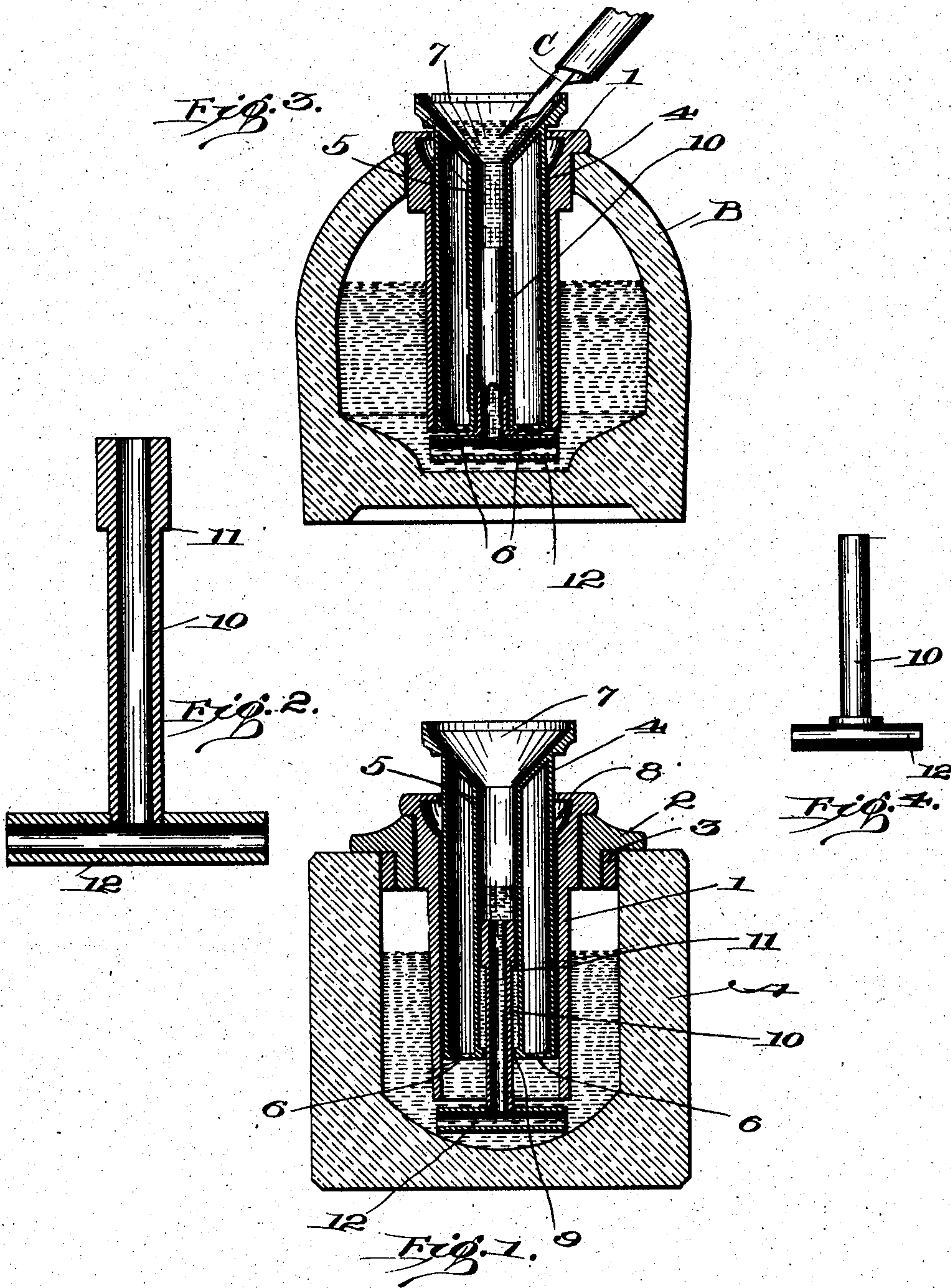


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E. DAVIS.
INKSTAND.

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WITNESSES:

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INKSTAND.

SPECIFICATION forming part of Letters Patent No. 786,959, dated April 11, 1905.

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To all whom it may concern:

Be it known that I, EMRY DAVIS, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Inkstands, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to inkstands, and is in the nature of an improvement on the inkstands shown in the patents granted to me, Nos. 399,844, 413,390, and 491,640, wherein the ink is supplied to the pen by being forced from the reservoir upon the depression of a float or plunger. Its object is to provide a simple and efficient means for regulating the quantity of ink supplied upon the depression of the displacing float or plunger.

The invention consists in the features of construction, combinations of elements, and arrangement of parts, which will be hereinafter fully set forth, and the novel features thereof pointed out in the claims.

In the accompanying drawings, which illustrate two embodiments of my invention, Figure 1 is a sectional view of one form of stand. Fig. 2 is a sectional detail, on an enlarged scale, of one of the parts thereof. Fig. 3 is a sectional view of a second form. Fig. 4 is a side elevation of one of the parts shown in Fig. 3.

Similar reference characters refer to similar parts throughout the several views.

Referring first to Figs. 1 and 2, the body of the stand may be of any desired material and form, preferably a glass reservoir A, open at its upper end. Within this reservoir is placed a sleeve 1, which is supported at its upper end within the mouth of the reservoir by a collar 2, preferably of hard rubber. Between this collar and the reservoir may be placed a packing-ring or gasket 3, preferably of soft rubber, whereby the mouth of the reservoir is closed practically air-tight save for the opening through sleeve 1, which sleeve extends, as shown, down into the reservoir so that its open lower end is adjacent the bottom thereof. Within the tube 1 and having a close or sliding fit therein is the float or

plunger 4, which comprises an outer cylindrical shell having an external diameter approximating the inner diameter of the tube 1 and the inner supply-tube 5, which is of a diameter less than the diameter of the shell, thereby leaving an air-chamber within the plunger surrounding the tube. This air-chamber communicates with the reservoir or with the space within the sleeve 1, through openings 6 in the lower end of the plunger. The end of the supply-tube 5 opens out into a dipping-cup 7, and the upper end of the sleeve is provided with an overflow-chamber 8. These parts are in substantial accordance with the principles and with certain of the specific features of construction of the inkstands described in the patents above noted. The lower end of the supply-tube 5 is contracted in diameter because of the presence of an inwardly-projecting annular flange 9. Telescope-escoping loosely within the supply-tube is the upright member 10 of a tubular adjustment device in the shape of an inverted T. This upright member extends to any desired distance within the supply-tube, and at its upper end is provided with an annular projecting flange or shoulder 11, which is adapted to contact with the flange 9 and prevent the adjustment device dropping out through the lower end of the supply-tube. The upper member 10 is screwed into the lower cross member 12, the length of which is such that its ends open out beyond the opening of the sleeve 1.

The general operation of this stand is the same as that of the patents already noted. Upon depressing the plunger 4 the ink is forced from the outer reservoir through the cross-arm 12 of the T, up through the upright member 10, and through the supply-tube 5 into the dipping-cup, where it meets and inks the pen. When the pressure of the air within the reservoir becomes weakened, so that the depression of the plunger does not bring a sufficient quantity of ink to the pen-level, the air-pressure, or, as it may be said, the inkstand itself, may be adjusted by simply raising the float or plunger. Thereupon the ink in the reservoir will follow up the plunger within the sleeve 1, and the pressure of the air within the reservoir will become so weak that air from the

outside will rush in through the supply-tube and the adjustment device until the equilibrium is restored. The extent to which this is carried will depend upon the height to which the plunger is raised.

Special advantages of this construction reside in the fact that the air entering to restore the equilibrium of the stand is carried out through the cross member 12 of the adjustment device to a point or points beyond the opening of the sleeve, so that it is not possible for it to collect within the sleeve, but is led to its proper place in the reservoir. The presence of the flanges on the tube 10 and within the tube 5, which are adapted to contact with each other under certain relative positions of the telescopic tube and the plunger, prevents the dropping out of the telescopic tube when the plunger and sleeve are raised and preserves the connection between the two, thereby obviating the disadvantage of having to fish the telescopic tube out of the reservoir or to readjust the telescopic tube and plunger. There is also an advantage in this that the relative movement of the telescopic tube and plunger is positively limited at one extreme by the contacting of the flanges 9 and 11 and at the other extreme by the contacting of the lower end of the plunger with the cross member 12. While there should be a comparatively close or sliding fit between the upper end of the tube 10 and the inner walls of the supply-tube 5 in order that communication between the outer atmosphere or the dipping-cup and the reservoir may be through the described channels, the fact that the T-tube is loose at its lower end, so that it may have unrestrained movement with relation to the reservoir, prevents any binding or friction between the parts, as the T-tube is free to accommodate itself to the movements of the plunger or to any slight warping thereof which may be occasioned by use. It will be found that the lower cross member of the T will in use assume various positions parallel to different diametrical lines of the plunger or sleeve, this changing of position being occasioned by the tendency of the T-tube to accommodate itself to the movements of the plunger. In assembling, the upright member 10 of the T-tube is inserted within the supply-tube 5 from the upper end and the cross member thereof screwed onto the threaded lower end of the upright member.

If it is desired to clean either the reservoir or any parts of the stand, the sleeve with the plunger and adjustment device may be removed together, whereupon the reservoir may be cleaned as readily as any open ink-well and the other parts cleaned or manipulated as desired. It will be obvious that the tube 12 could open at one end only and that various other means may be employed of leading the air from tube 10 beyond the opening of sleeve

1 or of preventing its passing back up into the sleeve.

The general construction shown in Fig. 3 is the same as that of Fig. 1. In this instance, however, the mouth of the reservoir B is more contracted. The collar and gasket are omitted and the joint between the reservoir and the sleeve 1 is a direct one. Such changes, however, as well as many others which might be made in the details of the construction of this inkstand, are well within the knowledge of the mechanic skilled in this art or are such as will be readily suggested by the constructions illustrated. The material feature of modification of the construction of Fig. 3 is that the upright member 10 of the adjustment device is of the same diameter throughout, so that it telescopes freely within the supply-tube 5 and may be disengaged therefrom without the necessity of removing the lower cross-tube 12. This obviates the necessity for the threaded connection between the upright cross member of the T, and they may be made integral or may be fastened together in any economical manner.

Fig. 1 shows the inkstand in its normal condition ready for use, while Fig. 3 shows the stand with the plunger depressed by means of a pen C, thereby bringing the ink up to the pen-level and inking the pen.

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

1. In an inkstand, in combination with a reservoir, an inner sleeve, and a plunger working in said sleeve having an ink-supply passage therethrough, and a tube in telescopic relation with the ink-passage in said plunger adapted both for telescopic movement in relation to said plunger and for movement of rotation with reference thereto.

2. In an inkstand, in combination with an outer reservoir and an inner sleeve, a plunger working in said sleeve and adapted to force ink from the reservoir, and an auxiliary tube in telescopic relation with said plunger, said tube communicating both with the interior of the reservoir and with the outer air and being free for movement with relation both to the plunger and the reservoir.

3. In an inkstand, in combination with an outer reservoir and an inner sleeve, a plunger working in said sleeve and having a passage therein through which ink passes from the reservoir, and an auxiliary tube in telescopic relation with said plunger, said tube being adapted to communicate both with the ink-supply passage through the plunger and with the reservoir and being free for movement with relation both to the plunger and the reservoir.

4. In an inkstand, in combination with an outer reservoir and an inner guiding-sleeve, a plunger working in said sleeve and having

an ink-supply passage therethrough, through which the ink passes from the reservoir, and a tubular adjustment device in the shape of an inverted T, the upright member of said T being in telescopic relation with the passage through said plunger and the cross member of said T being extended below said plunger and beyond the opening of said sleeve.

5. In an inkstand, in combination with an outer reservoir, an inner guiding-sleeve, a plunger working in said sleeve and having an ink-supply passage therethrough, an auxiliary adjustment device substantially T-shaped in form and having the upright member thereof in telescopic relation with the ink-supply passage in the plunger and the cross member thereof below said plunger and sleeve and free to assume a position parallel to any diametrical line of said plunger or sleeve.

6. In an inkstand, in combination with an outer reservoir, an inner guiding-sleeve, a plunger working in said sleeve and having an ink-supply passage therethrough, an auxiliary adjustment device substantially T-shaped in form and tubular and having the upright member thereof in telescopic relation with the ink-supply passage in the plunger and the cross member thereof below said plunger and sleeve and free to assume a position parallel to any diametrical line of said plunger or sleeve.

7. In an inkstand, in combination with a reservoir, an inner sleeve, and a plunger working in said sleeve having an ink-supply passage therethrough, a tube in telescopic relation with the ink-passage in said plunger, and means for limiting the relative movement of said telescopic tube and plunger.

8. In an inkstand, in combination with a reservoir and an inner sleeve, a plunger working in said sleeve and having an ink-supply passage therethrough, through which ink may pass from the reservoir, a tube in telescopic relation with said passage in the plunger, a flange at the upper end of said tube of a diameter sufficient to prevent the removal of the tube through the lower end of the supply-passage, said passage being contracted at that point, and a cross-tube connected to the lower end of said telescopic tube and opening at a point or points beyond the sleeve.

9. In an inkstand, in combination with a reservoir and an inner sleeve, a plunger working in said sleeve and having an ink-supply passage therethrough, through which ink may pass from the reservoir, a tube in telescopic relation with said passage in the plunger, a flange at the upper end of said tube of a diameter sufficient to prevent the removal of the tube through the lower end of the supply-passage, said passage being contracted at that

point, and a cross-tube detachably connected to the lower end of said tube and opening at a point or points beyond the sleeve.

10. In an inkstand, in combination with a reservoir, an inner sleeve, and a plunger working in said sleeve and adapted to force ink from the reservoir, an adjustment device cooperating with said plunger, said adjustment device being adapted to communicate both with the interior of the reservoir and with the outer air, and means whereby said adjustment device may be limited in movement in a direction longitudinal of said plunger but may be free for movement of rotation relative to said plunger.

11. In an inkstand, in combination with a reservoir, an inner sleeve extending into said reservoir, and a plunger working in said sleeve, a tubular adjustment device adapted to cooperate with said plunger and constituting a passage for air from the exterior to the interior of the reservoir, said adjustment device being free for movement with relation to said reservoir, but constrained in its movement with relation to said plunger.

12. In an inkstand, in combination with a reservoir, an inner sleeve, and a plunger working in said sleeve having an ink-supply passage therethrough, a removable tube in telescopic relation with the ink-passage in said plunger.

13. In an inkstand, in combination, a reservoir provided with an opening, a sleeve fitted to said opening and projecting downwardly into said reservoir, and separate removable and movable means adapted to conduct air downwardly within said sleeve and discharge the same into said reservoir at a point outside the inner surface of said sleeve.

14. In an inkstand, in combination, a reservoir provided with an opening, a sleeve fitted to said opening and projecting downwardly into said reservoir, and removable means independent of said sleeve adapted to conduct air downwardly within the same and discharge said air into said reservoir at a point outside the inner surface of said sleeve.

15. In an inkstand, in combination, a reservoir provided with an opening, a sleeve fitted to said opening and projecting downwardly into said reservoir, a float and a tubular member adapted to reciprocate within the same and conduct air into said reservoir at a point outside the inner surface of said sleeve.

In testimony whereof I affix my signature in the presence of two witnesses.

EMRY DAVIS.

Witnesses:

J. B. KNOX,
I. C. DELANEY.