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L. H. ASHMORE ET AL

2,149,263

INKWELL

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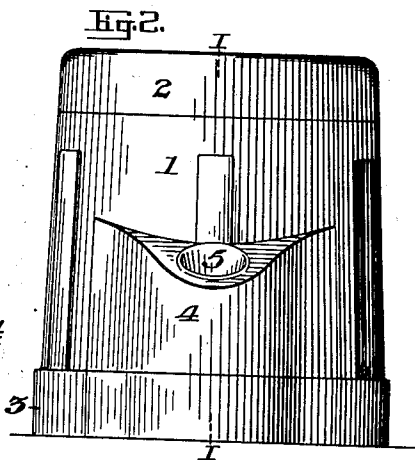
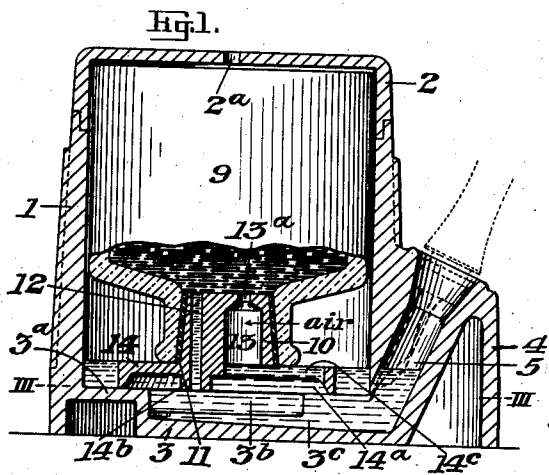


Fig. 3.

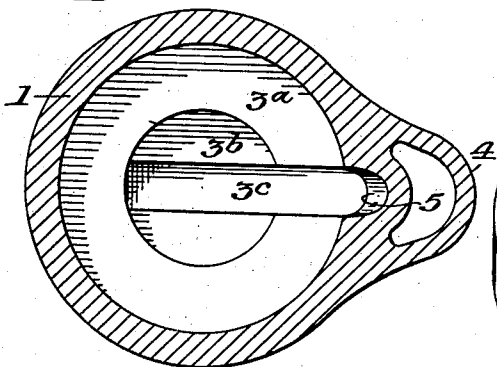


Fig. 6.

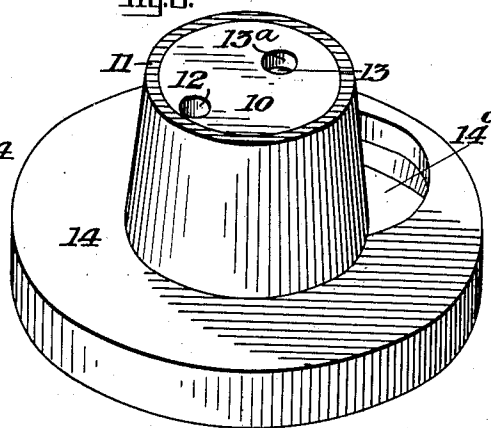


Fig. 4.

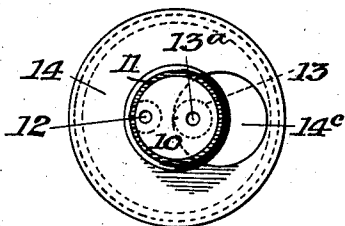


Fig. 7.

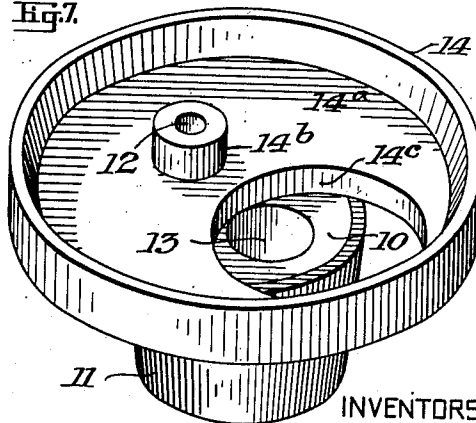
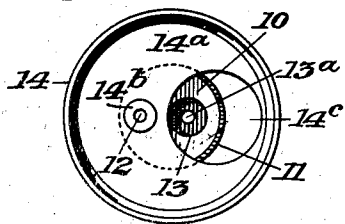


Fig. 5.



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# UNITED STATES PATENT OFFICE

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## INK WELL

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Application September 30, 1937, Serial No. 166,634

16 Claims. (Cl. 120—59)

Our invention relates to inkwells, and comprises certain improvements in that type of inkwell or ink-stand in which a bottle constituting a reservoir for the supply of ink is disposed in an inverted position within a shell or casing constituting the inkwell proper, and which may be of ornamental character. Our improved inkwell structure includes an externally arranged pen-receiving dipping well, and the reservoir or ink-containing bottle is combined with feeding or supply means of a barometric type for maintaining a proper quantity of ink in the pen-receiving dipping well.

One object of our invention is to provide a type of inkwell or ink-stand that may serve as a desk set, with a diagonally arranged and externally disposed dipping well arranged to supply the necessary amount of ink to a pen when dipped therein, the dipping well being of such character that the pen may be maintained therein when not in use to serve as means for sealing the same to prevent undue evaporation of the ink.

A further object of our invention is to provide a simple and efficient ink feeding device which may be carried by the ink bottle reservoir and which, when the latter is in an inverted position within the inkwell casing, will serve to maintain a supply of ink in the bottom of the inkwell for delivery to the connected pen-receiving dipping well to keep a supply of ink in the same at the desired level.

And a further object of our invention is to provide the bottom of the inkwell with a central recess and a shelf or floor surrounding the same upon which the feeding device may rest, with a narrow channel axially arranged below such recess and communicating with the external pen-receiving dipping well.

Other objects and advantages of our invention will be pointed out hereinafter; reference being had to the accompanying drawing, in which:

Figure 1 is a sectional elevation on the line I—I, Fig. 2, of an inkwell or ink-stand, showing one form or embodiment of our invention.

Fig. 2 is a front elevation of the same; showing the externally arranged dipping well to receive the pen.

Fig. 3 is a sectional plan view of the inkwell on the line III—III, Fig. 1.

Fig. 4 is a plan view of the feeding device carried by the inverted ink-containing bottle when in the position of use.

Fig. 5 is a view of the under side of the feeding device.

Fig. 6 is a perspective view of the feeding device on a slightly larger scale, detached from the reservoir bottle, and

Fig. 7 is a similar perspective view of the under side of the feeding device.

Referring to the drawing, the shell or container

of the inkwell or ink-stand forming the subject of our invention is indicated at 1, and it comprises a hollow body portion provided with a removable cap or cover 2 and having an integral base or bottom 3, providing a floor 3<sup>a</sup>. Centrally of the base we provide a recess 3<sup>b</sup>, and axially of this recess a central channel 3<sup>c</sup> is formed which leads to an externally accessible dipping well. At the front of the shell or container constituting the ink well proper, we provide a projecting portion 4, integral with such shell, and this external portion is provided with an inclined bore or recess 5 whose lower end reaches to and communicates with the channel 3<sup>c</sup> in the base of the shell or container. The bore or recess in the projecting portion 4 forms a pen-receiving dipping well, and its upper portion or mouth may be outwardly flared to provide a suitable seat to receive the end of a pen holder.

A bottle 9, containing ink and forming a supply reservoir, is mounted within the shell or casing 1 in an inverted position. This bottle carries a cork or plug of special type, indicated at 10, which forms a most important feature of our invention; such cork or plug fitting tightly in the neck of the ink bottle with the aid of a sleeve or gasket 11 of resilient material and resting on the floor 3<sup>a</sup> of the shell 1 of the inkwell when in the position of use. Within this cork or plug, a plurality of passages are formed; that indicated at 12 serving for the passage of ink to maintain a supply in the bottom of the shell or container constituting the inkwell proper for delivery to the external pen dipping well via the channel 3<sup>c</sup>, and that indicated at 13, which is larger in area, serving for the inlet of air to balance the pressure upon the body of ink in the bottle as its contents is slowly consumed after passage to the externally disposed pen-receiving dipping well. The larger passage 13 terminates in a small orifice 13<sup>a</sup> opening from the same into the ink reservoir.

The cork or plug is provided with a rim or flange 14 which rests upon the floor 3<sup>a</sup> surrounding the recess 3<sup>b</sup> in the bottom of the shell forming the inkwell proper, and may be hollowed out on its under side as indicated at 14<sup>a</sup>, to increase the ink-receiving space and avoid trapping. The flange may be provided with a tubular projection 14<sup>b</sup> depending from its under surface and forming a continuation of and lengthening of the passage 12 with respect to the lower end of the passage 13. The flange 14 is provided with an opening 14<sup>c</sup>, which may be circular and extends over the lower opening leading to the passage 13, to permit free access of air to such passage for delivery to the ink in the reservoir in the form of bubbles as the ink is consumed; the presence of such opening in the relation indicated also serving to raise the level of ink in the bottom of

the shell or container forming the inkwell proper.

The shell or casing providing the inkwell is closed by a removable cap 2, which is preferably furnished with an aperture 2<sup>a</sup> to vent air when the cap is applied after a bottle containing ink has been placed in the shell. If not vented, the application of the cap would tend to compress the air within the shell which, acting upon the ink in the bottom of the same, would cause it to rise in the dipping well and upset the equilibrium of pressures inside and outside the inkwell and the bottle constituting the ink reservoir. In addition, such opening prevents the expansion or contraction of air within the shell or container 1, due to temperature changes, from varying the level of ink within the container and/or the dipping well.

The cork 10 should make a tight fit within the neck of the bottle, and the edge of the neck may be in contact with the flange 14; the upper surface of the latter coinciding with the opening at the lower end of the passage 13, which determines the height to which the ink will rise within the bottom of the inkwell and the external pen-receiving dipping well.

The channel 3<sup>c</sup> in the lower part of the inkwell supplies the ink to the external pen-receiving dipping well and by reason of its restricted area greatly lessens the amount of sediment that would otherwise collect in the bottom of the well. In addition, the agitation of the ink as it flows from the reservoir keeps any sediment stirred up so as to pass with the ink flowing to the dipping well where it will be consumed in the ordinary course of using the ink. This channel is preferably inclined from the back of recess 3<sup>b</sup> to the bottom of the external dipping well.

All parts of the structure are accessible for cleaning, and when a fresh supply of ink is to be placed in the reservoir bottle the cork, after removal to permit filling the bottle, is preferably cleaned by running water through the passages 12 and 13.

The shell or casing is preferably formed in one piece, and it may be of any suitable material. It may be molded of synthetic resins, or of glass, transparent, or opaque, and it may be of any color. The cap is of such a size that the ink bottle will project above the upper edge of the shell or container when it is removed, to facilitate insertion and removal of such ink-containing bottle.

The cork may be of molded material, with the passages 12 and 13 drilled or otherwise formed therein, and by preference the passage 12 through which the ink feeds to the lower part of the inkwell may be slightly less in diameter than the orifice 13<sup>a</sup> opening from the passage 13.

While we have described a specific embodiment of our invention, it will be understood that modifications may be made therein; all of which are believed to be within the scope of the appended claims.

We claim:

1. In an inkwell, the combination of a main receptacle having a recessed bottom, an external projection formed on the main receptacle and diagonally bored to form a pen-receiving dipping well in communication with said recessed bottom, an ink reservoir in inverted position within the main receptacle, a feeding stopper carried by the ink receptacle and having a plurality of passages located wholly within the same; one of said passages feeding ink and the other providing for the passage of air, and a supporting flange

for said stopper arranged to seat over the recessed bottom of the main receptacle.

2. In an inkwell, the combination of a main receptacle having a recessed bottom with a channel at a lower level, an external projection formed on the main receptacle and diagonally recessed or bored to form a pen-receiving dipping well in communication with said channel, an ink reservoir in inverted position within the main receptacle, a feeding stopper carried by the ink reservoir and having a plurality of passages located wholly within the same; one of said passages feeding ink and the other, of larger size, providing for the passage of air, and a supporting flange for said stopper arranged to seat over the recessed and channeled bottom of the main receptacle.

3. In an inkwell, the combination of a main receptacle having a recessed bottom providing a shelf, an external projection diagonally bored to form a pen-receiving dipping well in communication with said recessed bottom, an ink reservoir in inverted position within the main receptacle, a flanged feeding stopper carried by the ink reservoir and resting upon said bottom shelf; said stopper having a plurality of passages located wholly within the same, one of said passages delivering ink and the other passage providing for the inlet of air to the ink reservoir, and means providing for the communication of air to said last-named passage of the feeding stopper.

4. In an inkwell, the combination of a main receptacle having a recessed bottom providing a shelf with a channel at a lower level leading therefrom, an external projection diagonally recessed or bored to form a pen-receiving dipping well in communication with said channel, an ink reservoir in inverted position within the main receptacle, a flanged feeding stopper carried by the ink reservoir and resting upon said bottom shelf; said stopper having a plurality of passages of different cross-sectional area located wholly within the same; the smaller of said passage delivering ink and the other and larger passage providing for the inlet of air to the ink receptacle, and means providing for the communication of air to the larger passage of the feeding stopper.

5. In an inkwell, the combination of a shell or casing forming a main receptacle, an external projection diagonally bored to form a pen-receiving dipping well in communication with the bottom of said shell or casing, an ink reservoir in inverted position within the main receptacle, and a flanged feeding stopper carried by the ink reservoir and having a plurality of passages; one of said passages delivering ink and the other providing for the passage of air to the ink reservoir and the flange of said stopper having an opening overlying the air passage and extending beyond the lip of the ink reservoir.

6. In an inkwell, a shell or casing forming an ink receptacle, a pen-receiving dipping well formed within and opening externally of the casing and in communication with the bottom of said shell or casing, an ink-containing reservoir in inverted position disposed within the casing, a stopper mounted in the neck of said reservoir; said stopper having a plurality of passages, and a flange carried by the stopper for supporting the ink container within the shell or casing; said flange having a portion cut away to afford communication with one of the passages in the stopper.

7. In an inkwell, a shell or casing forming an ink receptacle and having a channeled bottom, a pen-receiving dipping well formed within and

opening externally of the casing and in communication with said channel, a shelf above the channel, an ink-containing reservoir in inverted position within the casing, a stopper mounted in the neck of said reservoir and having close-fitting engagement therewith; said stopper having a plurality of passages, and a flange carried by the stopper and resting on said shelf for supporting the ink container; said flange having an enlarged opening communicating with one of the passages in the stopper and extending beyond the neck of the ink reservoir.

8. In an inkwell, a shell or casing forming an ink receptacle and having a recessed bottom, a pen-receiving dipping well formed within and opening externally of the casing and in communication with said recessed bottom, a shelf above the recessed bottom, an ink-containing reservoir in inverted position within the casing, a flanged stopper mounted in the neck of the same; said stopper having close-fitting engagement with said neck and supporting the ink container on said shelf and having a plurality of passages located wholly within the same for air and ink, and an apertured cover fitting the upper end of the shell or casing and covering the enclosed ink reservoir.

9. In an inkwell, a shell or casing forming an ink receptacle and having a channeled bottom, a pen-receiving dipping well formed within and opening externally of the casing and communicating with said channel, a shelf above the channel, an ink-containing reservoir in inverted position within the casing, a stopper mounted in the neck of said reservoir and having close-fitting engagement therewith; said stopper having a plurality of passages, one for the delivery of ink and the other for the passage of air and said air passage having greater cross-sectional area than the ink delivering passage with an orifice of reduced area opening into the ink reservoir, and a flange carried by the stopper for supporting the ink container on said shelf; said flange having an enlarged opening communicating with the air passage within the stopper and extending beyond the neck of the ink reservoir.

10. In an inkwell, a shell or casing forming an ink receptacle, a pen-receiving dipping well formed within and opening externally of the casing and communicating therewith, an ink-containing reservoir in inverted position within the casing, a stopper mounted in the neck of said reservoir; said stopper having a passage for the delivery of ink and a passage for the delivery of air and said air passage having greater cross-sectional area than the ink delivering passage with an orifice of reduced area opening into the ink reservoir, and a flange carried by the stopper for supporting the ink reservoir; said flange having an opening communicating with the air passage within the stopper.

11. In an inkwell, the combination of a shell or casing forming a main receptacle, an external projection formed on the main receptacle and bored to form a pen-receiving dipping well in communication with the bottom of the same, an ink reservoir in inverted position within the main receptacle, and a feeding stopper carried by the ink reservoir and arranged to seat over the bottom of the main receptacle and having a plurality of passages located wholly within the same; one of said passages feeding ink to the bottom of the

main receptacle for passage to the dipping well and the other providing for the passage of air.

12. In an inkwell, the combination of a main receptacle having a recessed bottom with a channel at a lower level, an external projection formed on the main receptacle and recessed or bored to form a pen-receiving dipping well in communication with said channel, an ink reservoir in inverted position within the main receptacle, and a feeding stopper carried by the ink reservoir and arranged to seat over the recessed and channeled bottom of the main receptacle and having a plurality of passages located wholly within the same; one of said passages feeding ink to the channel in the bottom of the main receptacle for passage to the dipping well and the other, of larger size, providing for the passage of air.

13. In an inkwell, the combination of a shell or casing forming a main receptacle, an external projection bored to form a pen-receiving dipping well in communication with the bottom of said main receptacle, an ink reservoir in inverted position within the main receptacle, a feeding stopper carried by the ink reservoir and having a plurality of passages located wholly within the same; one of said passages delivering ink and the other passage providing for the inlet of air to the ink reservoir, and means providing for the communication of air to said last-named passage of the feeding stopper.

14. In an inkwell, the combination of a main receptacle having a recessed bottom providing a shelf, an external projection bored to form a pen-receiving dipping well in communication with said recessed bottom, an ink reservoir in inverted position within the main receptacle, a feeding stopper carried by the ink reservoir and resting upon said bottom shelf; said stopper having a plurality of passages of different cross-sectional area located wholly within the same, the smaller of said passages delivering ink and the other and larger passage providing for the inlet of air to the ink reservoir, and means providing for the communication of air to said larger passage of the feeding stopper.

15. In an inkwell, a shell or casing forming an ink receptacle, a pen-receiving dipping well formed within and opening externally of the casing and in communication with the bottom of the same, an ink-containing reservoir in inverted position within the casing, a feeding stopper mounted in the neck of the same and supporting the ink container in the shell or casing; said stopper having a plurality of passages located wholly within the same for air and ink, and an apertured cover fitting the upper end of the shell or casing and covering the enclosed ink reservoir.

16. In an inkwell, the combination of a main receptacle, a pen-receiving dipping well formed within and opening externally of the main receptacle and in communication with the bottom of the same, an ink-containing reservoir in inverted position within the main receptacle, and a feeding stopper mounted in the neck of the same and supporting the ink container; said stopper having a plurality of passages wholly within the same for air and ink, and the passage for ink terminating below the air passage formed in said stopper.

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