A. E. CARLSON.

INK WELL.

APPLICATION FILED MAR. 13, 1908.

908,544. Patented Jan. 5, 1909.

Fig. 1.

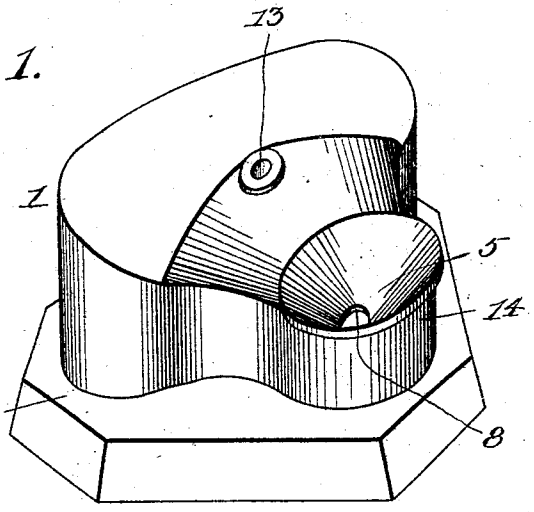


Fig. 4.

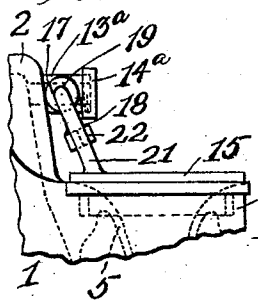


Fig. 2.

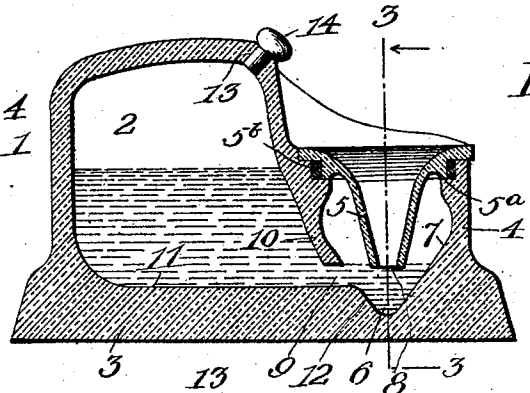


Fig. 5.

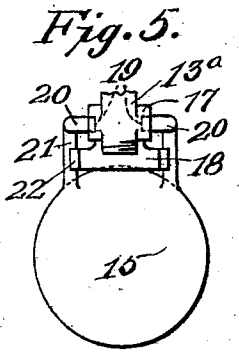
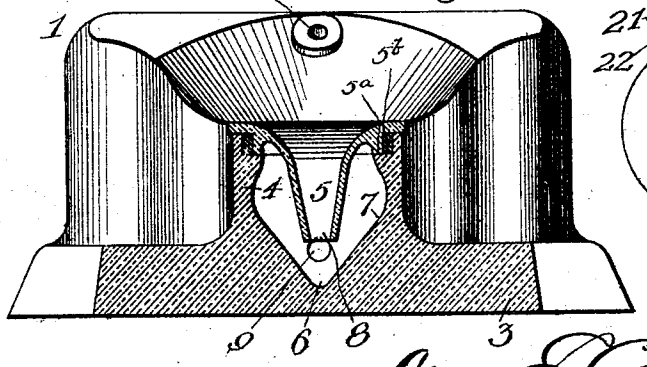


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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INK-WELL.

No. 908,544. Specification of Letters Patent. Patented Jan. 5, 1909.

Application filed March 13, 1908. Serial No. 420,932.

To all whom it may concern:

Be it known that I, ALVIN E. CARLSON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Ink-Wells, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in ink-wells, and its object is to provide one which will be simple and comparatively inexpensive in construction, which will prevent clogging and evaporation and be practically self cleaning, and which will be so constructed that a pen dipped into it can only take up a proper amount of ink and should the well be overturned, the ink will be prevented from spilling.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved ink-well or stand; Fig. 2 is a vertical front to rear sectional view; Fig. 3 is a detail section taken on the plane indicated by the line 3—3 in Fig. 2; Fig. 4 is a detail view of a modified form of the invention, showing a portion of one side of the stand and an improved cover for the funnel or well; and Fig. 5 is a plan view of the cover shown in Fig. 4.

My improved ink-well or stand is preferably cast or molded of glass and in a single piece but it may be made of other material and in one or more pieces or sections. It comprises a hollow body 1 having a flat bottom which forms an ink reservoir or chamber 2 and which has a flat base portion 3, the edge of which projects beyond the outer side walls of the body. At the center of the front of the body is formed an enlargement 4 containing a funnel 5 which is disposed above an ink-well or cavity 6 in the base 3 and which forms in the enlargement 4, around said well 6, an annular air chamber 7.

The funnel 5 may be formed integral with the enlargement, but I preferably make it separate and provide the bottom of its outer edge with an annular groove or seat 5^a to receive a packing ring or washer 5^b which renders the chamber 7 air tight. The opening or hole at the lower end of the funnel or cone-shaped part 5 is of just sufficient size to receive the point of a pen and it is disposed in a horizontal plane that is slightly below the horizontal plane of the uppermost point in an opening 9 formed in the inner wall or partition 10 which separates the ink reservoir or supply chamber 2 from the ink-well 6 and the air chamber 7, as clearly shown in Fig. 2. Said opening 9 is located at the lowermost point of the downwardly and forwardly inclined bottom wall 11 of the reservoir 2 and the ink passing through it enters the well 6, which latter has its rear wall 12 disposed in an almost perpendicular plane. It will be seen that owing to the construction of these parts the ink in the reservoir 2 will feed to the well 6 and be maintained at a constant level in the latter, which level is the horizontal plane of the uppermost point in the feed or supply opening 9. The well 6 is of such size that it holds a little less than is necessary to supply an ordinary pen when dipped into it, so that the ink displaced by the pen will rise in the opening 8 in the funnel 5 and supply the proper amount of ink to the pen. It will be noted that the air in the chamber 7 will prevent the ink from rising in said chamber so that the ink must rise in the small opening 8 when the pen is dipped into the well. The air chamber 7 serves the further purpose of preventing the ink in the well 6 from spilling, should the device be tilted or overturned, it being obvious that when the well is tilted the ink will flow into the chamber 7 and not out of the funnel 5. This construction furthermore prevents air from being taken into the reservoir 2, as might easily happen owing to the sudden disturbance of the ink when the pen is dipped into it. Adjacent to the top of the reservoir 1 is a vent opening 13 closed by a removable cover or cap 14.

In Figs. 4 and 5 of the drawings I have shown a cover 15 for the well or funnel 5. This cover is hinged to a metallic bushing 13^a set in the upper front portion of the reservoir 2 and is of tubular form to provide a vent opening for said reservoir. The outer end of the bushing 13^a is screw threaded to receive a removable cap 14^a and the intermediate portion is formed at opposite points upon its sides with lugs or bosses 17 and upon its lower front portion with a projection 18. The bosses or projections 17 are formed with sockets 19 adapted to receive

pivots 20 upon resilient arms 21 which project from the cover 15 and which are adapted to engage and ride over the curved or cam-shaped faces 22 of the projection 18 when the cover is opened and closed. The cams 22 and the spring pivot or hinge arms 21 are so constructed that when the cover is swung from its elevated open position to its lowered or closed position over the top of the funnel 5 the arms 21 will be forced apart so that the pivots 20 move outwardly to a slight extent in their sockets 19 and then move inwardly again to a slight extent so that the cover will be firmly held in its closed position by the engagement of the arms 21 with the cams 22. When the cover is closed it will effectively exclude dust and dirt from the funnel 5.

The construction, operation, and advantages of the invention will be readily seen. When it is desired to fill the reservoir 2, the plug 14 is removed and ink is poured into the funnel 5 until the latter is full. The device is then tilted in a rearward direction so that the ink in the funnel 5 will pass through the internal opening 9 and into the reservoir 2. The plug 14 is then placed in the opening 13 to render the reservoir air tight and, upon the device being righted, the ink in the reservoir will pass through the opening 9 and fill the well 6 to the level of the top of said opening, which, as above stated, is slightly above the horizontal plane of the bottom or opening 8 in the funnel 5. When it is desired to fill a pen, it is inserted in the well 6 to take up the ink therein and owing to the small size of said opening 8 the point of the pen will be prevented from striking the bottom of the well, thereby protecting the pen point. Owing to the air chamber 7, the ink displaced by the pen will be forced to rise in the funnel 5 so that the pen point may take up just sufficient ink. Since the ink in the opening 8 is the only portion of the ink exposed, very little will evaporate and very little dust will settle in the well. Moreover, the pens inserted in the well will take up the ink in the opening 8 so that there will be little chance of the ink clogging and thickening.

Having thus described my invention what I claim is:—

1. An ink-stand comprising a reservoir, a well, a partition separating said reservoir and well and having a supply opening, a funnel arranged above the well and forming around it an annular air chamber, the lower end of the funnel terminating in a contracted opening disposed in a horizontal plane slightly beneath the plane of the uppermost point of the supply opening, substantially as and for the purpose specified.

2. An ink-stand comprising a body having a base, an ink reservoir arranged upon the rear portion of the base and formed with a vent opening adjacent its top and an enlargement at the center of the front of said base, said base being formed beneath said enlargement with a well, a partition separating the well and reservoir and formed with a supply opening arranged adjacent to the bottom of the reservoir, a movable closure for said vent opening and a funnel shaped member in said enlargement and adapted to form an annular air chamber within said well, the lower end of said funnel terminating in a contracted opening disposed in a horizontal plane slightly beneath the horizontal plane of the uppermost point in said supply opening, substantially as and for the purpose set forth.

3. An ink-stand comprising a body having a reservoir and a communicating well, a cover for the well, spring pivot arms upon the cover, bearings upon the body to receive said pivot arms, and cams upon the body engaged by said arms and adapted to retain the cover in its closed position.

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

ALVIN E. CARLSON.

Witnesses:
MATT H. WITTICH,
ALICE A. HOWARD.