J. H. KIDDER.

Ink-Wells.

No. 136,069. Patented Feb. 18, 1873.

FIG. 1.

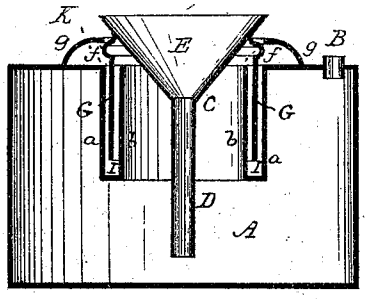
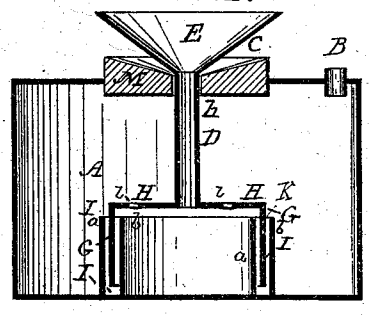


FIG. 2.



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UNITED STATES PATENT OFFICE.

JAMES H. KIDDER, OF LAWRENCE, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND GILBERT E. HOOD, OF SAME PLACE.

IMPROVEMENT IN INK-WELLS.

Specification forming part of Letters Patent No. **136,069**, dated February 18, 1873.

To all whom it may concern:

Be it known that I, JAMES H. KIDDER, of Lawrence, in the county of Essex and State of Massachusetts, have invented a certain new and useful Improvement in Ink-Wells; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying plate of drawing.

This invention relates to certain improvements in inkstands; and it consists in arranging, in an ink-well, a chamber for receiving a quantity of mercury, or its equivalent liquid, and combining therewith an ink-spout and an ink-regulating mechanism, the construction of which will be set forth more fully hereinafter.

In the accompanying plate of drawing my improvement in ink-wells is illustrated, Figures 1 and 2 being each a central vertical section of an ink-well constructed for the use of mercury or equivalent liquid, under this invention.

A in the drawing represents an ink-well or fountain, in the present instance shown as of a cylindrical shape; but it may be made of other forms. B is a nozzle or opening for filling or emptying the ink-well, this nozzle being adapted to be closed in any suitable manner; C, the discharge-spout of the ink-well, or, in other words, the spout into which the ink is forced and made to rise into position for being used. This spout C is, in each case, of a tubular part, D, terminating at one end in a funnel-part, E. In both of the figures, 1 and 2, the spout C in its length is provided with a concentric flange or rim, G, that is parallel to its length; and in Fig. 1 is directly at and secured to the under side of the funnel-part E; and in Fig. 2, to the lower end of the spout by and through the connecting-plate or dish H, in which are holes *l*. For receiving the concentric flange G, shown in Figs. 1 and 2, there is located within the ink-well an annular chamber or space, I, that is concentric with the opening K in the top of the well. This chamber I in both instances is made by concentric walls *a* and *b*, which, in Fig. 1, are fastened to the under side of the top of the ink-well, and in Fig. 2 to the upper side of the bottom of the ink-well. The bottom of the annular space I is in both cases closed, and the space I is for the reception of mercury.

With mercury in the space I, and a tubular spout, C, located therein, as shown in Figs. 1 and 2, if the spout C be depressed the ink can be forced up through the tube of the spout into its funnel end, and thus above its level within the body of the ink-well, because of the heavier specific gravity of the mercury as compared with the ink; and furthermore, because of the compression of air within the ink-well through the upper wall of its flange G, from the downward movement of the tube. The ink thus being forced up into the ink-spout *c*, to hold it there it is necessary that means be provided to secure the spout from being carried upward—that is, back to its normal position.

In Fig. 1, the spout is provided at or near its outer end with a projecting edge, *f*, and ink-well top with a convex flange, *g*, so that when the spout is down, by simply tipping it to bring its edge *f* under the flange or lip *g*, it will be restrained from an upward movement. In Fig. 2, the hole *h* in ink-well top through which the spout *c* passes is suitably packed, to give sufficient friction to restrain the upward movement of the ink-spout, while it will afford no hindrance to its depression. In Fig. 1 the ink-well is made air-tight by the mercurial joint in annular space I.

To insert the ink-spout constructed as in Fig. 2, it is necessary to have an opening through the top of the ink-well sufficiently large to pass its concentric flange G in, and then this opening to be suitably closed; as, for instance, as shown by a plug or stopper, M.

In lieu of the particular construction herein described to hold the ink-spout from an upward rise, other constructions may be employed; as, for instance, the spout may be arranged to screw in and out of a seat upon the ink-well; and it is not intended to limit the invention to any particular construction in this respect.

Having thus described my invention, I shall state my claim as follows:

An ink-well provided with a chamber, I, for receiving a quantity of mercury or its equivalent liquid, in combination with an ink-spout and an ink-regulating mechanism, substantially as described, for the purpose specified.

The above specification of my improvement in ink-wells signed by me this 30th day of May, A. D. 1872.

JAMES H. KIDDER.

Witnesses:
J. E. RENDALL,
C. W. SYLVESTER.