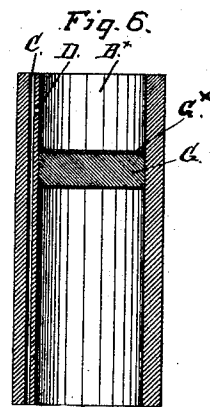
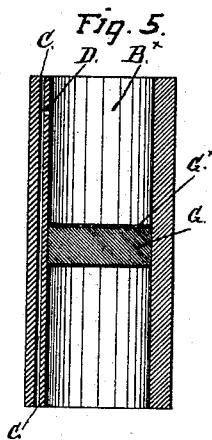
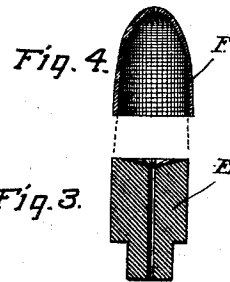
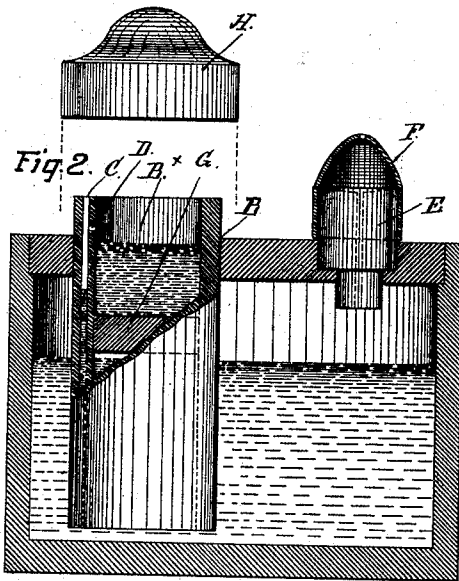
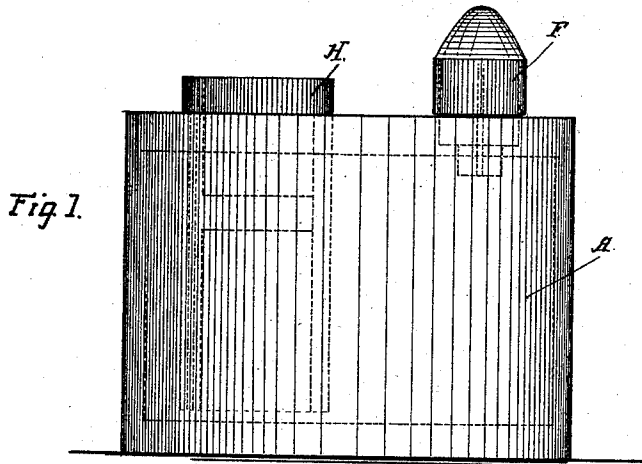


(No Model.)

P. D. HORTON.
INKSTAND.

No. 495,459.

Patented Apr. 11, 1893.



Witnesses:

M. Regan

William Franklin

Inventor:

Peter D. Horton

By Smith & Osborn

UNITED STATES PATENT OFFICE.

PETER D. HORTON, OF OAKLAND, CALIFORNIA, ASSIGNOR OF ONE-HALF TO
SILAS R. OSGOOD AND ERNEST J. OSGOOD, OF SAME PLACE.

INKSTAND.

SPECIFICATION forming part of Letters Patent No. 495,459, dated April 11, 1893.

Application filed July 27, 1892. Serial No. 441,404. (No model.)

To all whom it may concern:

Be it known that I, PETER D. HORTON, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented a new and useful Improvement in Inkstands, of which the following is a specification.

My invention relates especially to ink-stands for holding inks of all kinds employed in writing and has for its object the production of a device wherein the ink is pumped from a fountain or reservoir by atmospheric pressure to an ink-well for use, and the surplus from the ink-well is drawn back again into the fountain at will and thus the ink is preserved in a fresh state for a long period of time. I accomplish this object by means of the device illustrated in the accompanying drawings which form part of this specification and in which:—

Figure 1 is an elevation of my improved ink stand. Fig. 2 is a vertical cross section of the same. Fig. 3 is a vertical section in detail of the plug. Fig. 4 is a section taken through the compressor or cap. Figs. 5 and 6 are views of the ink-well in vertical section.

A is a fountain or reservoir of my ink-stand constructed preferably of flint-glass having an opening in the top as at B. Within the opening B is placed a hollow cylinder which forms the ink-well B^x with one side of the shell perforated from end to end as at C; and a hole D made from the interior of the shell connects at a right angle with the passage C, and as the ink from the fountain is forced up the vertical passage it will pass out through the hole D into the ink-well.

The means which I employ for pumping the ink from the fountain to the ink-well consists in a shouldered plug E which is piped and fits into an opening in the top of the reservoir; over the top of the plug is stretched a flexible compressor or cap F perforated at the top or upper end and the connection of the cap with the plug above the shoulder is such as to be air-tight so that when pressure is given to the cap the air contained in the space or chamber above the plug will be forced into the reservoir above the fluid and cause the ink to ascend the vertical passage and

out through the intersecting hole or opening into the ink-well. The volume of ink however is governed by the volume of air contained in the compressor or cap that is pumped into the reservoir, and in no case will the ink over-flow the top of the ink-well, as when the pressure is removed from the compressor the surplus of ink, if any, will flow back into the fountain through the over-flow opening that connects with the vertical piping and the ink will always assume its level on the plane established by the intersecting hole or over-flow. When the lower edge of the compressor is pressed down close to the top or cover of the fountain, only a small quantity of ink can be pumped into the well at one stroke, but by successive strokes of the finger the volume can be increased but not to the over-flowing of the well as the backward flow through the pipe will be as great as the in-flow between the strokes made by the finger and thus an equilibrium is maintained of the fluid in the well.

In order to prevent the pen-holder and shank of the pen from becoming fouled a movable bottom G composed of cork or rubber is set in the well a sufficient depth to limit the dip of the pen, and on the top of this is placed a removable diaphragm G^x which being flexible will not injure or dull the point of the pen and when sediment settles upon the face it can be quickly removed for cleaning and easily replaced in the well.

Heretofore in atmospheric ink-stands great difficulty has been had in controlling the flow of air to the fountain and especially in preventing the ink from over-flowing the ink-well, but under no such conditions can my ink-stand be over-flowed and the ink will always be as fresh as when taken from the bottle as the fountain itself is a reservoir which will not be affected by climatic change and which need not be replenished for a long period of time.

A temporary inflexible cap H is placed over the ink-well to keep out the dust, but when the ink-stand is laid aside for any length of time a cork may be used and the inflexible cap be placed over the flexible cap and thus both air and dust be excluded.

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

1. In an ink-stand, the combination with a fountain, an ink well therein having a closed bottom and an open upper end extending above the fountain, a vertical pipe in the wall of the well communicating at its lower end with the interior of the fountain and at its upper end with the air, and a hole leading from said pipe into the well above the normal height of the ink therein; of a vertically piped plug removably seated in the top of the fountain, and a movable flexible cap covering the plug and having a domed upper end with an air vent in its top, substantially as described.
2. In an ink stand, the combination with a fountain, an ink well therein having a closed bottom and an open upper end extending above the fountain, a vertical pipe in the wall of the well communicating at its lower end with the interior of the fountain and at its upper end with the air, and a hole leading from said pipe into the well above the normal height of the ink therein; of a compressor to cause the ink to rise in said pipe by the compression of air within the fountain, substantially as described.
3. In an ink stand, the combination with a fountain, an ink well therein having an open upper end extending above the fountain, a bottom consisting of a disk fitting frictionally within the well and having a flexible upper surface, a vertical pipe in the wall of the well communicating at its lower end with the interior of the fountain and at its upper end

with the air, and a hole leading from said pipe into the well above the normal height of the ink therein; of a vertically piped plug removably seated in the top of the fountain, and a flexible cap removably covering the plug and having a domed upper end with an air vent therein, substantially as described.

4. In an ink stand, the combination with a fountain, a cylindrical ink well therein having an open upper end extending above the fountain, a bottom consisting of a disk fitting frictionally within the well and having a flexible upper surface, a vertical pipe in the wall of the well communicating at its lower end with the interior of the fountain and at its upper end with the air, and a hole leading from said pipe into the well above the normal height of the ink therein; of a compressor to cause the ink to rise in said pipe by the compression of the air within the fountain, substantially as described.

5. In an ink stand, the combination with a fountain, a well supported thereby and having a cylindrical interior bore, and means substantially as described for feeding ink from the fountain to the well; of an adjustable bottom within the well, the same consisting of a disk fitting frictionally in the bore thereof and having a soft upper surface, as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

PETER D. HORTON. [L. S.]

Witnesses:

CHAS. E. KELLY,
C. W. M. SMITH.