

(No Model.)

J. F. LASH.
INK WELL.

No. 498,174.

Patented May 23, 1893.

Fig. 1.

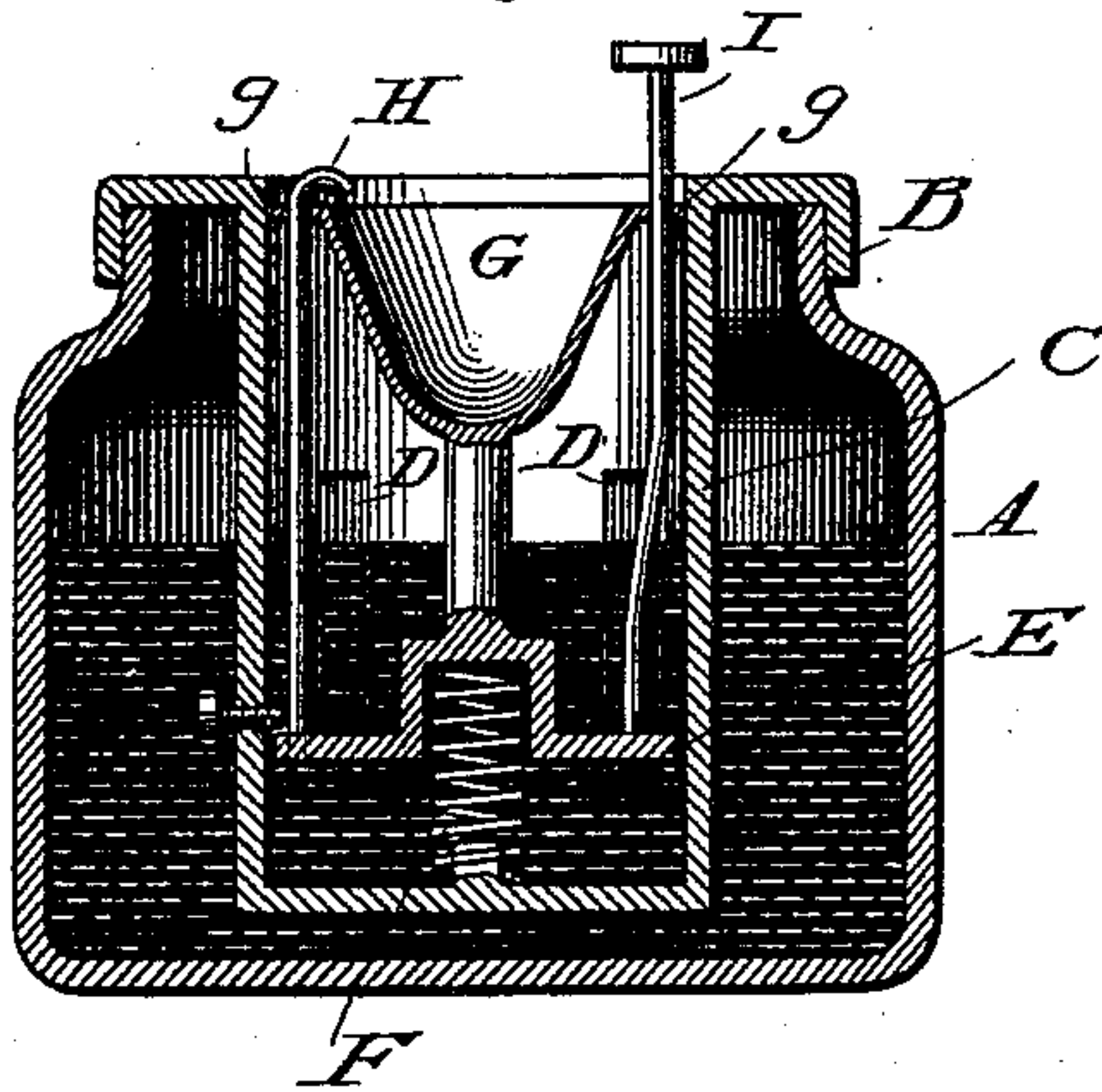


Fig. 2.

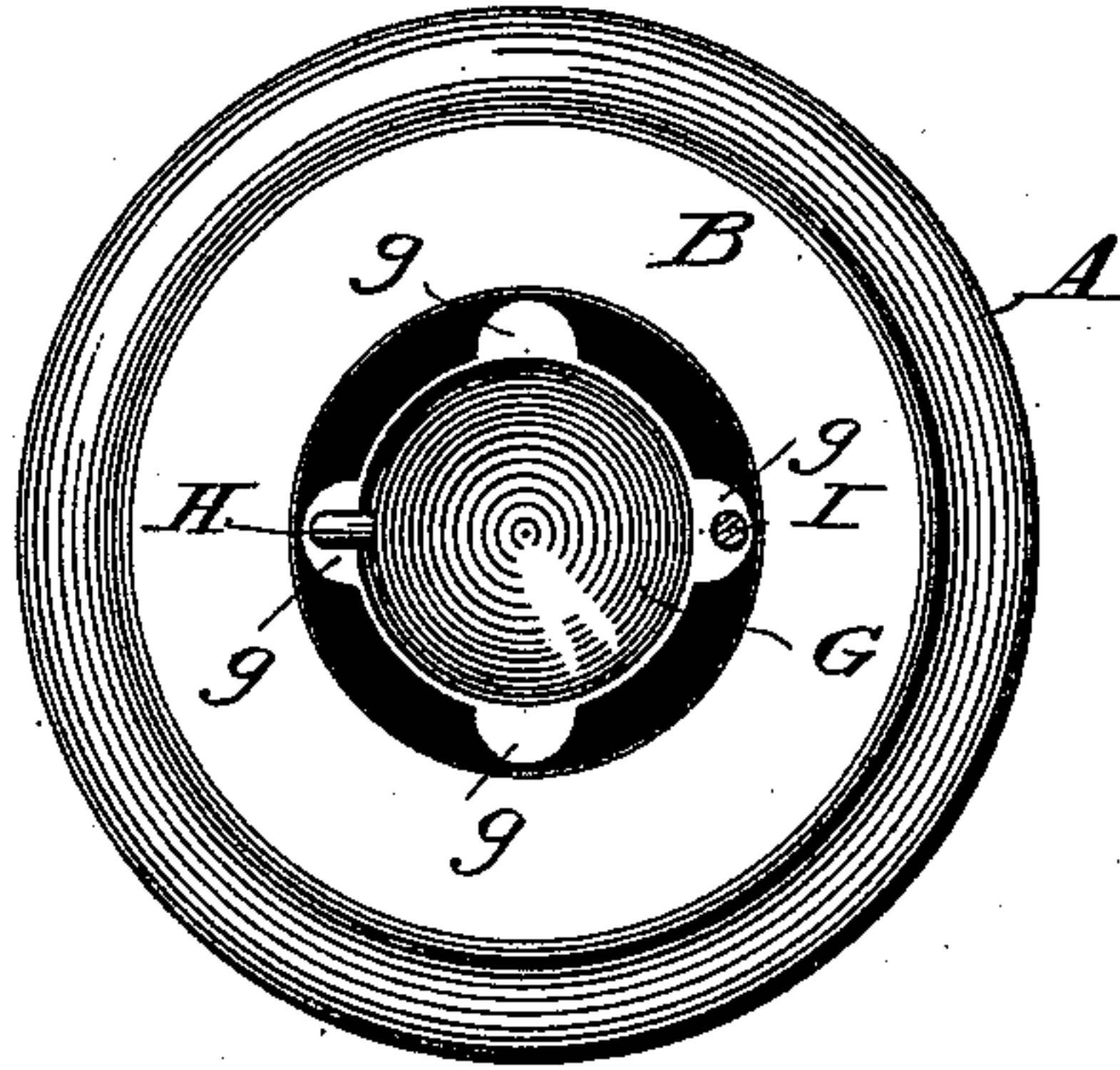


Fig. 3.

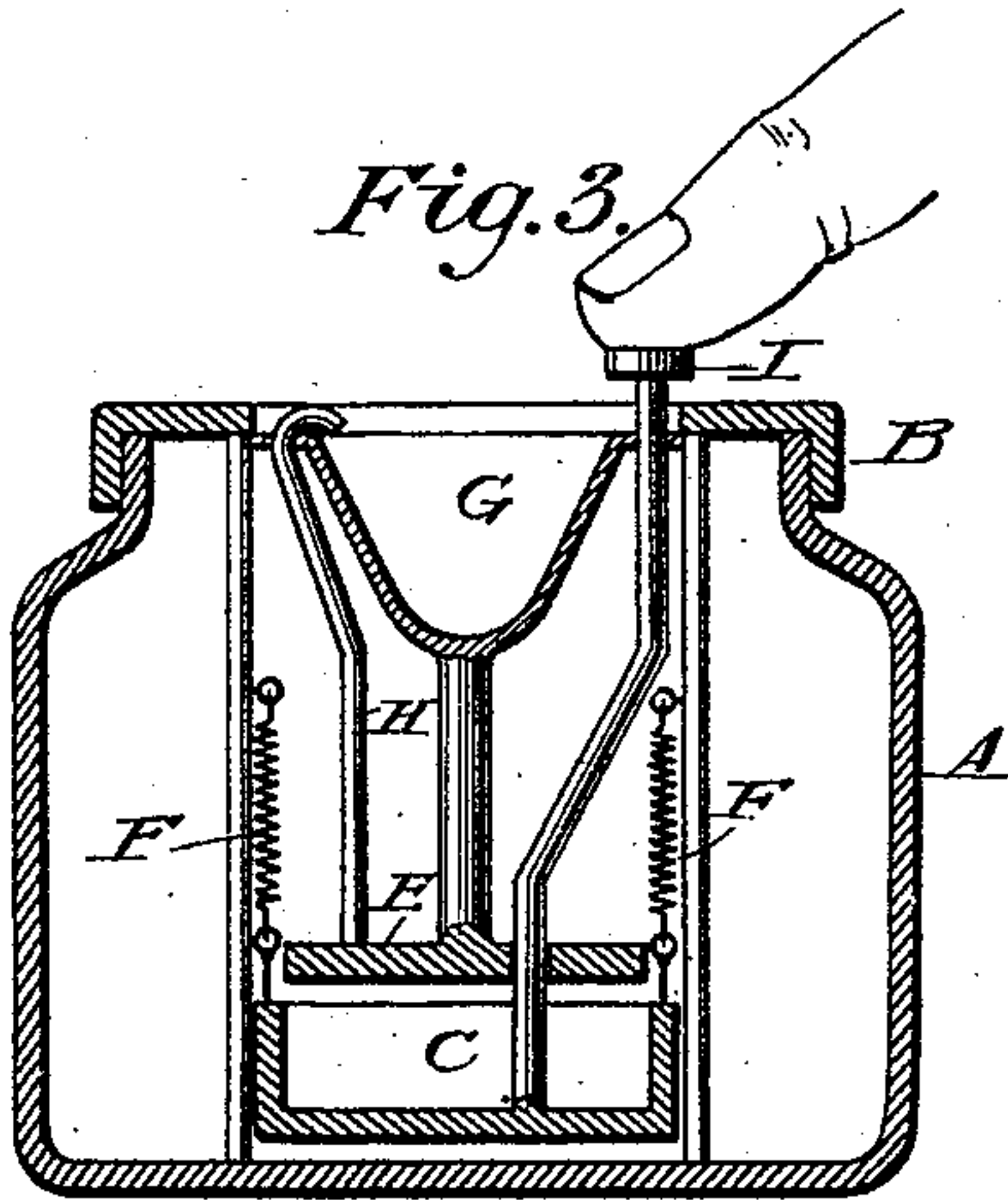


Fig. 4.

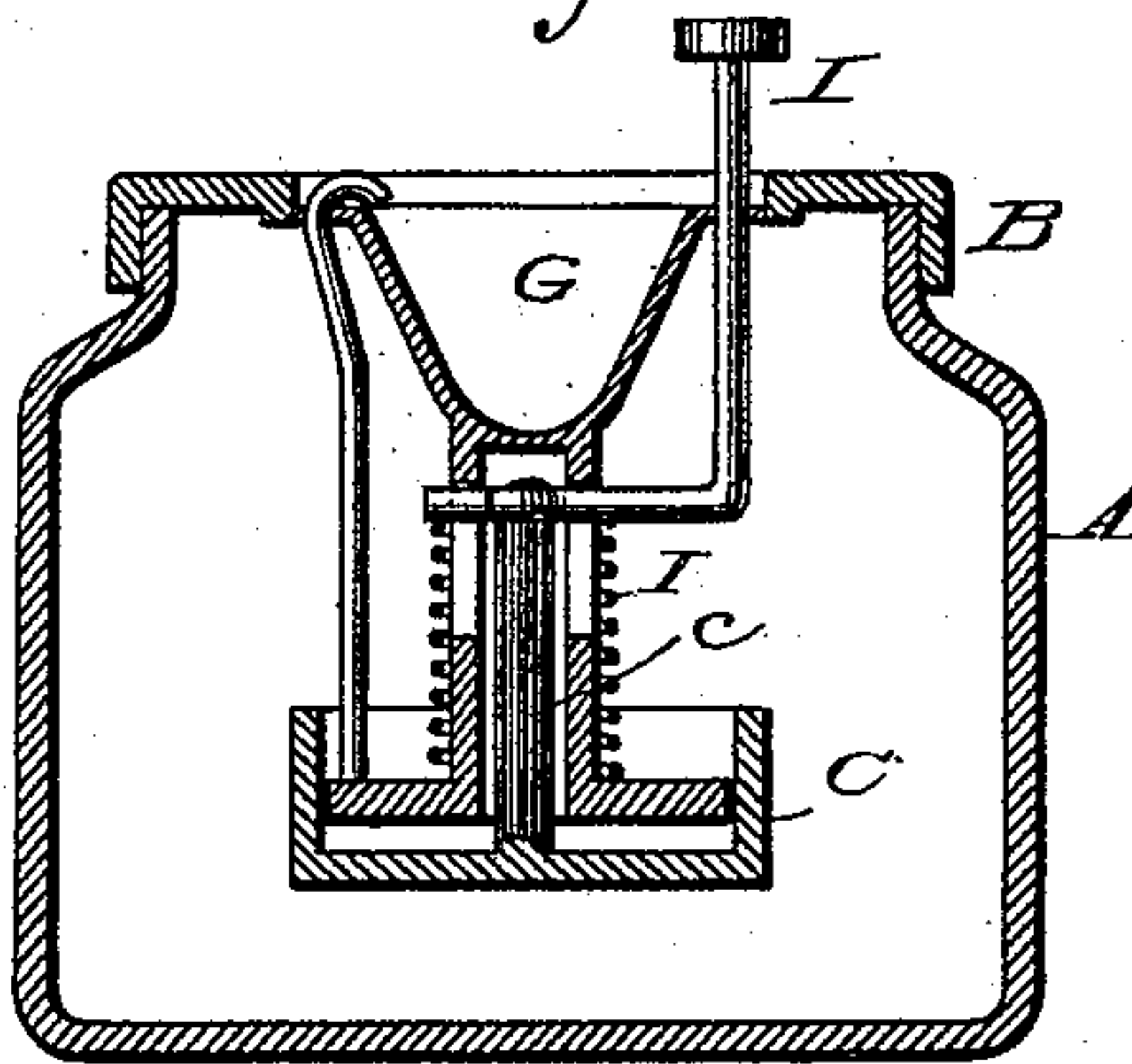
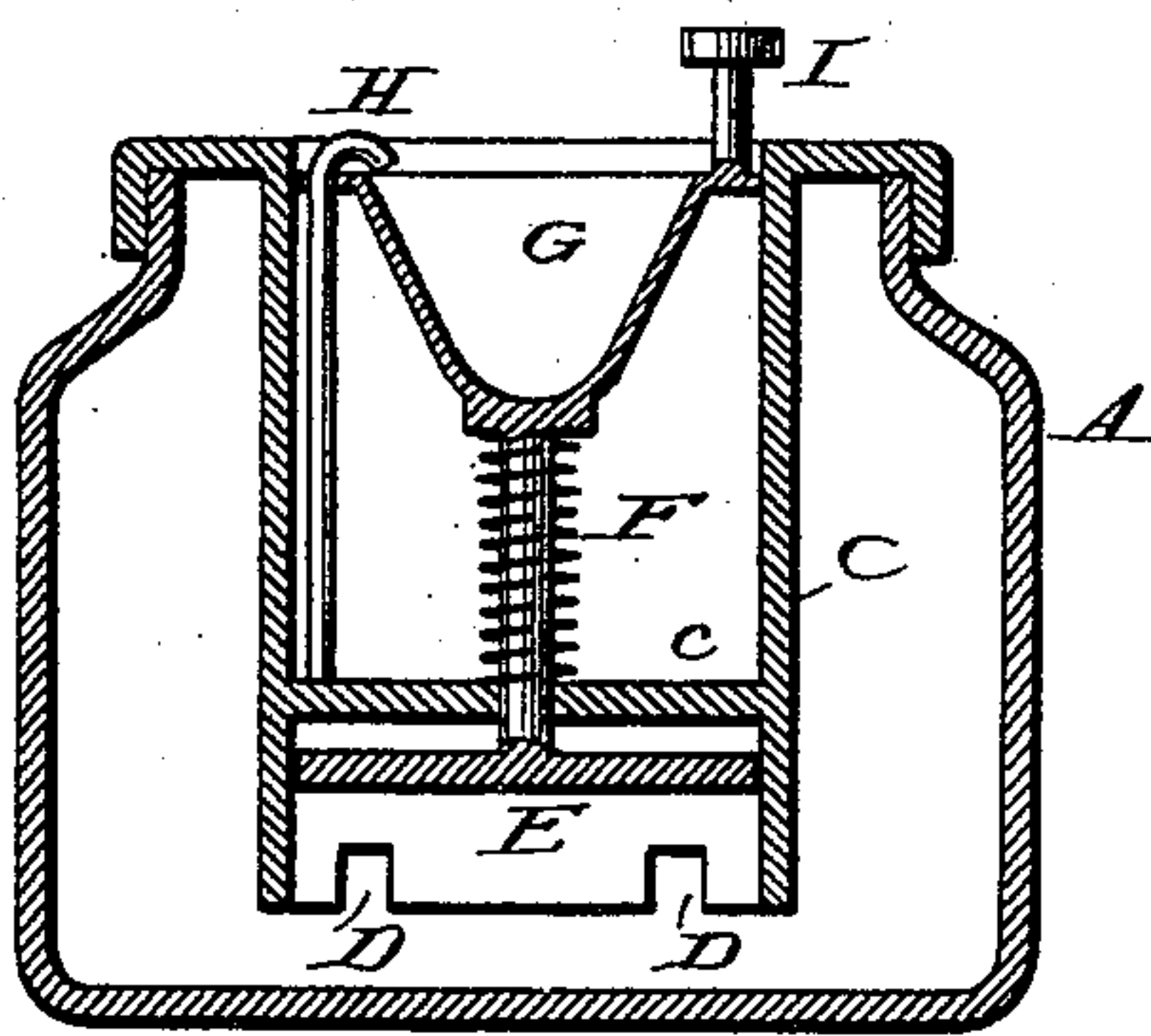


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN FAUNON LASH, OF TORONTO, CANADA, ASSIGNOR TO ZEBULUN A. LASH, OF SAME PLACE.

INK-WELL.

SPECIFICATION forming part of Letters Patent No. 498,174, dated May 23, 1893.

Application filed August 11, 1892. Renewed April 13, 1893. Serial No. 470,258. (No model.)

To all whom it may concern:

Be it known that I, JOHN FAUNON LASH, of Toronto, Province of Ontario, Dominion of Canada, have invented a new and useful Improvement in Ink-Wells, of which the following is a specification.

My invention has reference to that class of fountain inkstands in which the ink is elevated from the reservoir to the dip cup by a downward pressure applied to the dip-cup or to other means for depressing a plunger or piston.

The invention is intended more particularly as an improvement upon the stand for which Letters-Patent of the United States were issued to me on the 29th day of December, 1891, No. 466,247.

The objects of the invention are mainly to simplify the construction and to insure the circulation of the ink within the stand, so that the same ink may not be repeatedly elevated to the dip-cup. The advantage of establishing a circulation lies in the fact that a uniformity in the quality of the ink is maintained.

Referring to the accompanying drawings,—Figure 1 represents a vertical cross-section through my improved stand in its preferred form. Fig. 2 is a top plan view of the same. Figs. 3, 4 and 5 are vertical sections of the same in slightly modified and equivalent forms.

Referring to the drawings,—A represents an ink-well or body of cup-like form, made complete in one piece, and B represents a lid or cover fixed in position on the body and provided with a large central opening and with a depending cylindrical cup C fixed thereto, and extending downward nearly to the bottom of the body, its lower end being tightly closed. This cup C is provided with one or more vertical slots or openings D, through its walls to admit of the ink flowing inward from the surrounding body, these slots being terminated at their lower ends a short distance above the bottom of the cup.

E represents a piston adapted to slide freely but closely up and down in the lower end of the cup and sustained normally in an elevated position by a weak spiral spring F.

G represents the dip-cup sustained by a

central post upon the piston. This dip-cup G is provided at its upper end with outwardly-projecting lugs *g*, by which it is guided within the cylinder C, while at the same time, an annular space or opening is left through which the ink, overflowing the dip cup G, may pass down into the cylindrical cup C, above the piston and thence outward through the slots or openings D, into the surrounding space.

H represents a tube fitted to and extending through the piston E, and continued upward with a bend at the upper end to deliver into the dip-cup G.

The operation is as follows: The piston stands normally in the elevated position shown in Fig. 1, above the lower ends of the openings D, through which the ink enters and fills the space beneath the piston. When the dip-cup is depressed by the pressure of the pen or otherwise, the piston is carried down until it passes the lower ends of the opening D, whereupon the ink being confined beneath the piston in the lower end of the cup C, is compelled to ascend through the tube H, in the dip-cup G. The parts should be so proportioned that at each action the cup will be completely filled and the ink caused to overflow the cup G, into the body. In this way a fresh body of thin ink is insured for each filling of the dip-cup and the ink caused to circulate through the dip-cup in such manner that it is maintained of uniform fluidity. Those difficulties which attend the maintenance of the same body of ink within the dip-cup are avoided.

In some cases I propose to connect with the piston a stem or handle I, projecting upward through the top of the stand so that it may be operated by a pressure of the finger.

The construction represented in Fig. 3 is in effect a reversal of the parts shown in Fig. 1. In this instance the dip-cup G, and piston E, are fixed in position. The cylindrical cup C, lying below the piston is arranged to move vertically and is held normally in an elevated position by springs F. It is provided with a stem or handle I, protruding at the top. A tube H conducts the ink from the space below the piston into the dip-cup. When the cup is pushed down the ink flows over its upper edge into the space beneath the piston,

and when the cup is released it rises closely around the piston so that the ink confined therein is compelled to flow up through the tube H, into the dip-cup, any excess overflowing the cup and returning into the body.

In the construction shown in Fig. 4, the dip-cup is fixed to the top of the body and the piston supported rigidly therefrom. The cylindrical cup C rises and falls as in Fig. 3. It has a central supporting stem or handle c, and a handle or operating stem I, connected thereto. A spiral spring F, acts beneath this arm or stem and serves to elevate the cup when the parts are relieved from pressure.

In Fig. 5, the body A, is of the same character as in the preceding figures. The dip-cup G, is arranged to slide vertically and is connected by a central stem with the vertically-sliding piston E. The piston is elevated by a spring F, encircling the stem of the dip-cup and bearing on a stationary cross-piece c. The piston works in the lower end of a stationary tube c, having ports or inlet openings D, at the lower end. When the cup is depressed it carries the piston below these openings D, and the ink flows into the tube. When the parts are relieved from pressure the piston rises and the ink is forced upward from the tube H, into the dip-cup from which it may overflow into the body, as in the other example.

Having thus described my invention, what I claim is—

1. The combination of an ink reservoir, a cup in the bottom of said reservoir, a piston located in said cup, a dip-cup supported from said piston, and an ink passage leading from below the piston into the top of the ink-well.

2. In an ink-stand, the combination of the reservoir, a stationary cup in the bottom of

the reservoir, a piston working in said cup, a dip-cup supported from said piston, an ink passage leading from below the piston into the top of the ink-well, the said piston and ink-well being provided with a stem which projects above the top of the stand: whereby the piston is adapted to be depressed to cause ink to flow through the ink passage into the ink well.

3. In an ink-stand, the combination of a reservoir, a cup in the bottom thereof, a spring sustained piston working in said cup, a dip-cup supported from said piston, and an ink passage leading from below said piston into the top of the ink-well.

4. In an ink-stand, the combination of a reservoir, a cup in the bottom of said reservoir, a spring-sustained piston working in said cup, an ink-well supported from said piston, an ink passage leading from below the piston into the top of the ink-well, and a stem projecting above the top of the stand: whereby the piston and ink-well may be depressed to fill the well.

5. In an ink-stand, the combination of a cup-shaped reservoir, a top or cover formed with a depending cup-shaped tube having openings in its side walls terminating above the bottom, a spring-sustained piston working in said tube, an ink-well supported from said piston, and an ink-passage leading from below the piston into the top of the ink-well.

In testimony whereof I hereunto set my hand, this 22d day of June, 1892, in the presence of two attesting witnesses.

JOHN FAUNON LASH.

Witnesses:

T. A. LASH,

T. D. LAW.