

(No Model.)

A. GASKILL.
FOUNTAIN INKSTAND.

No. 472,703.

Patented Apr. 12, 1892.

FIG. 1.

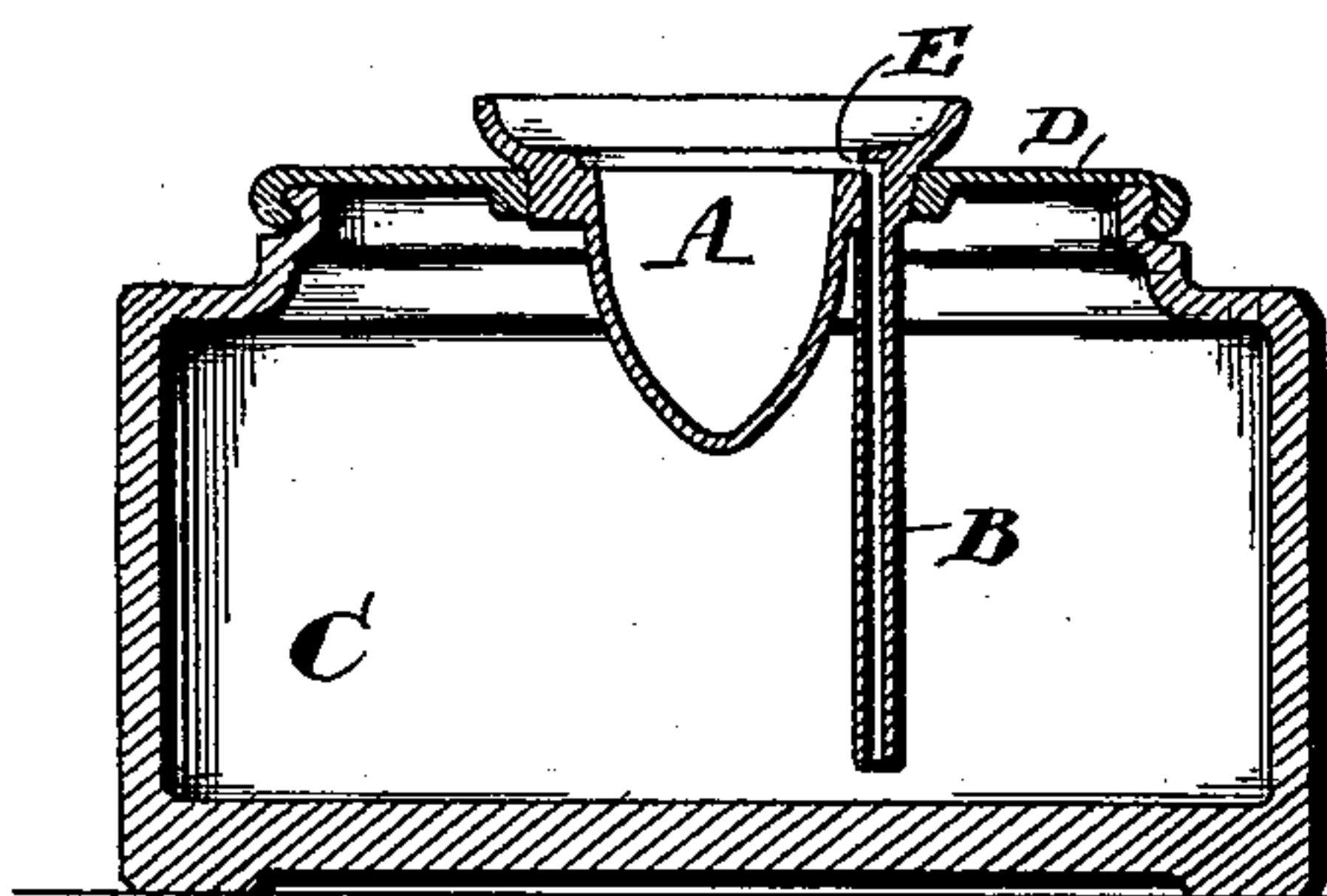


FIG. 4.

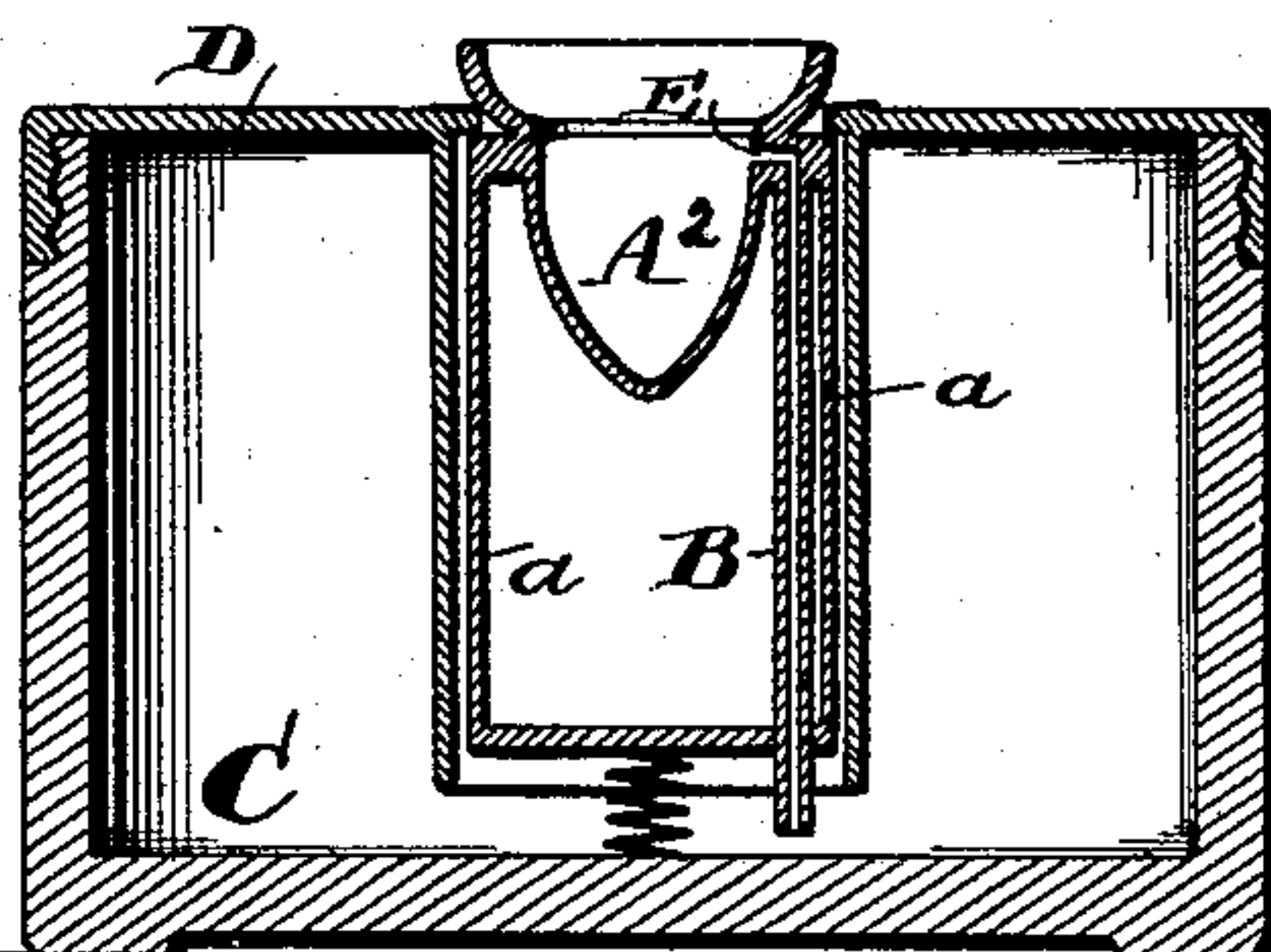


FIG. 2.

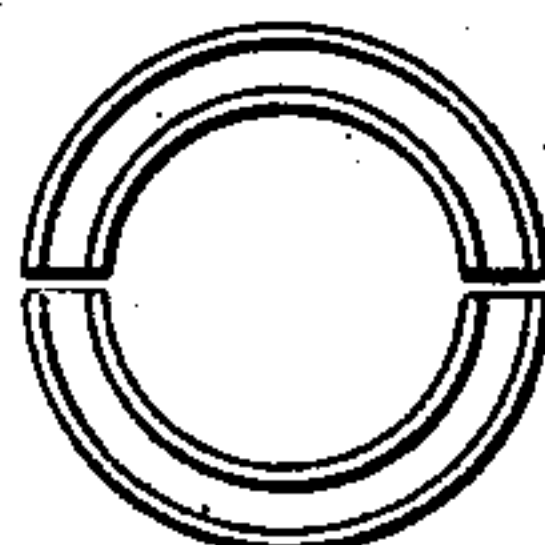
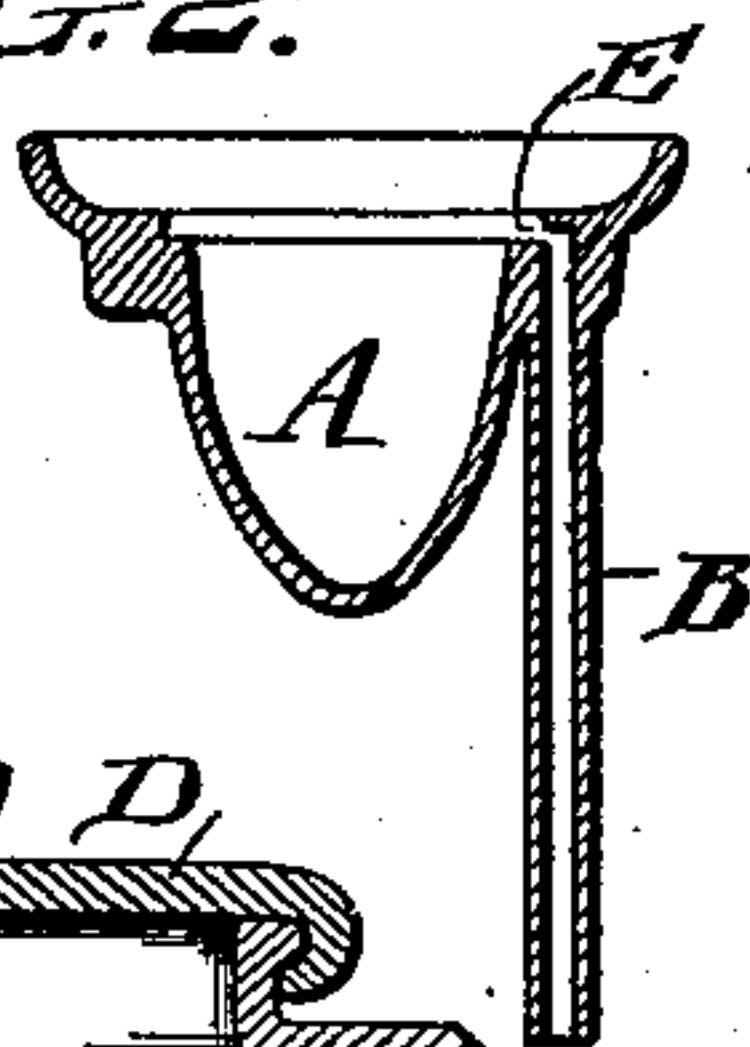


FIG. 5.

FIG. 3.

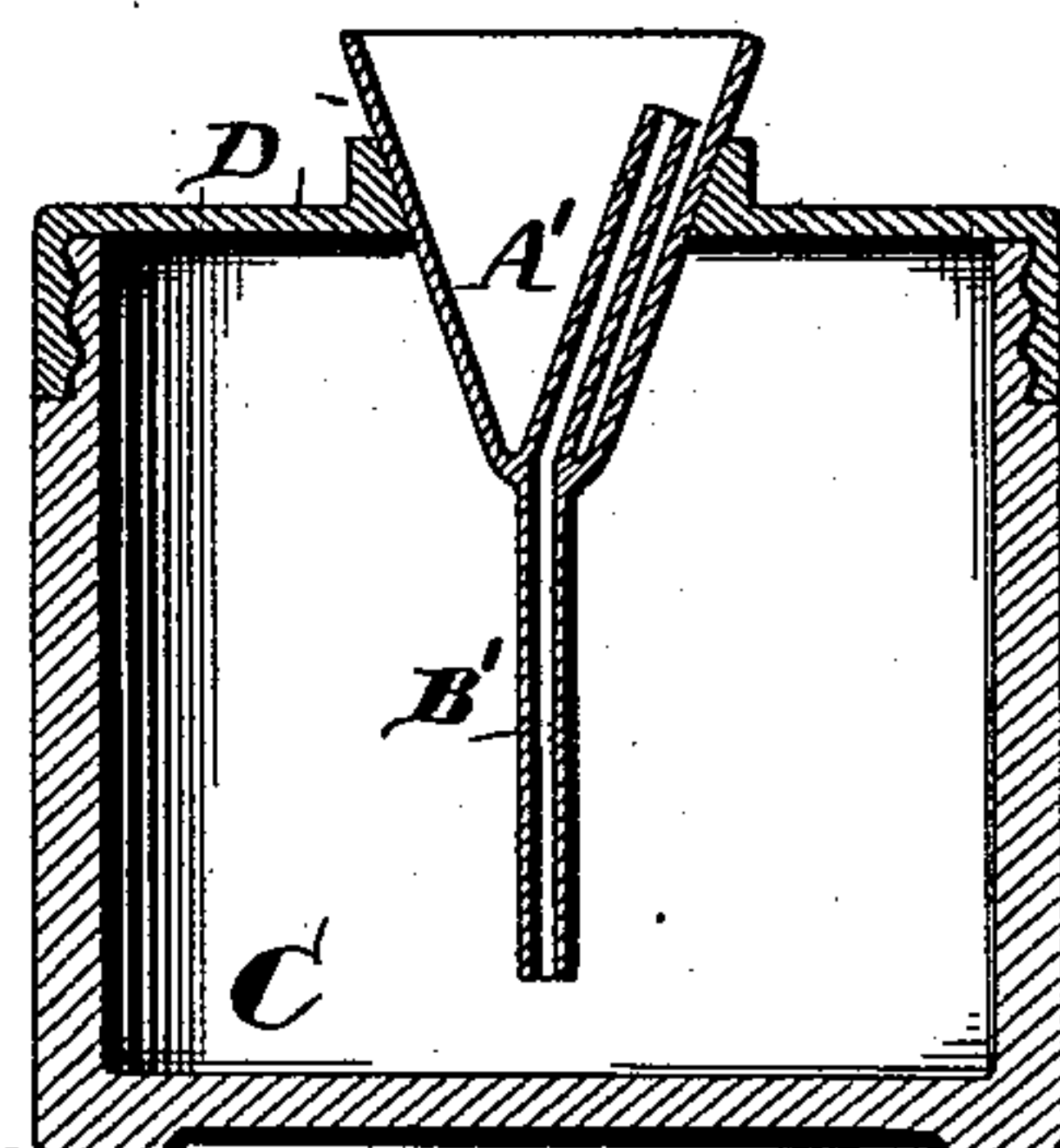


FIG. 6.

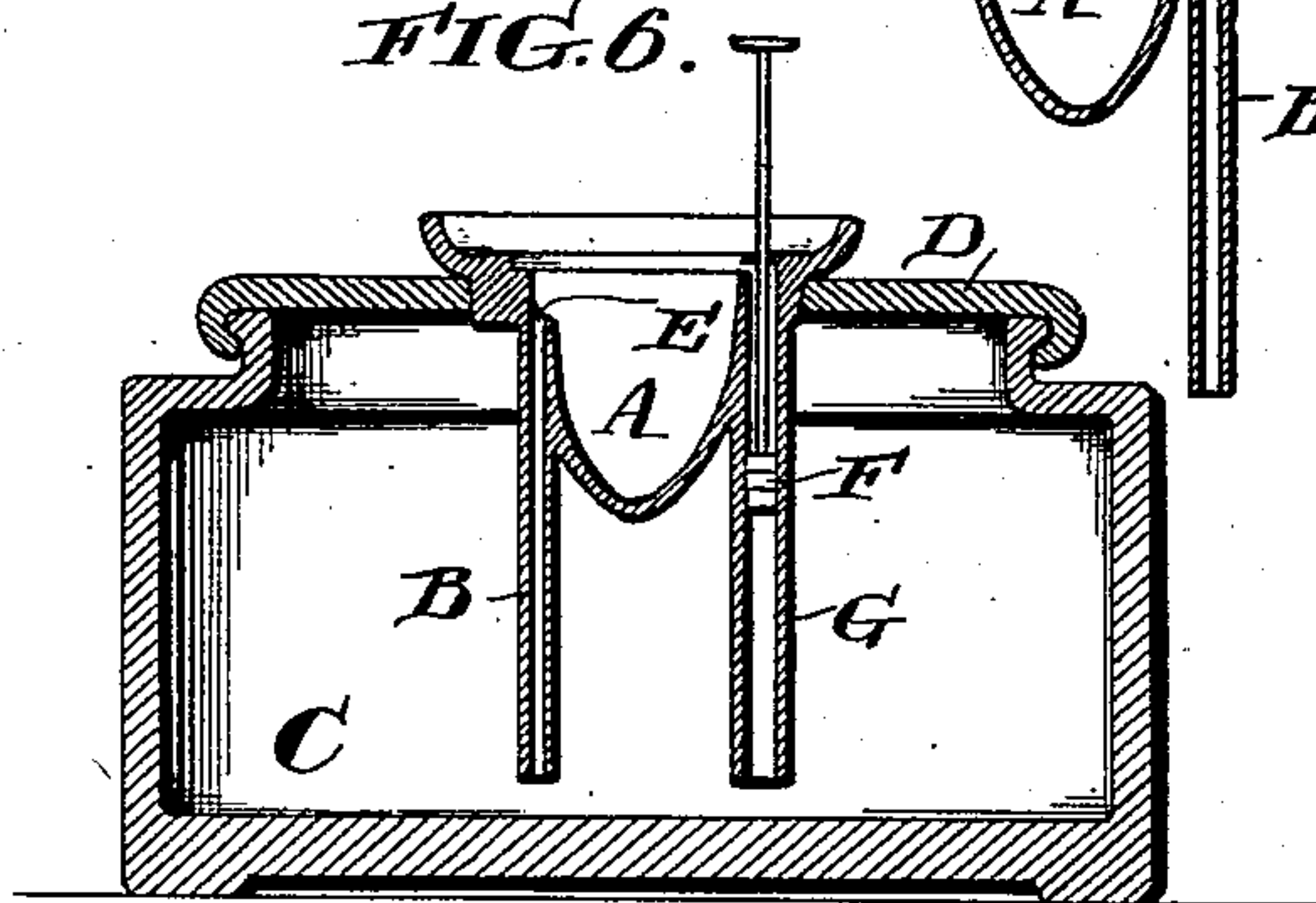


FIG. 7.

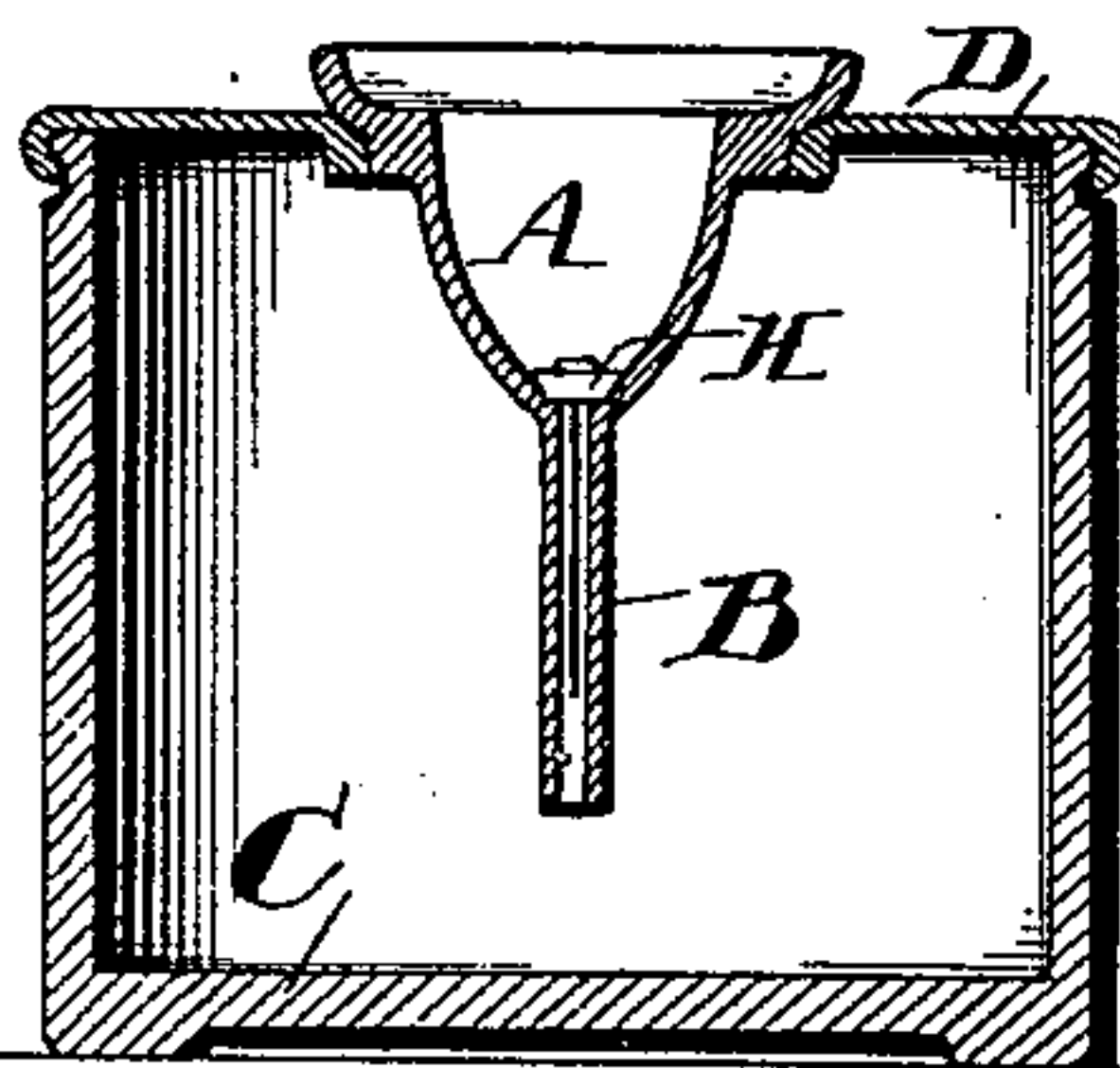


FIG. 8.

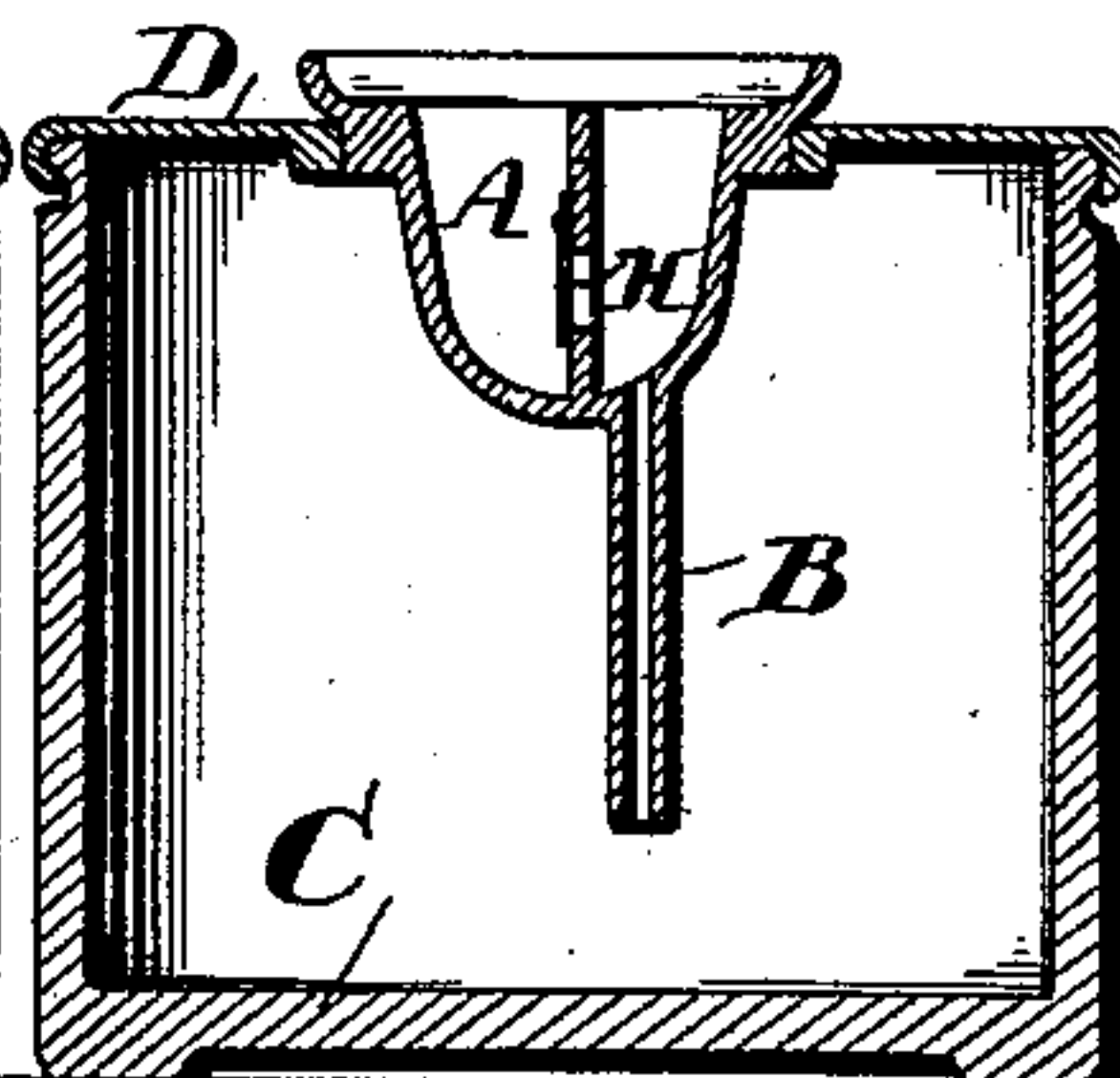
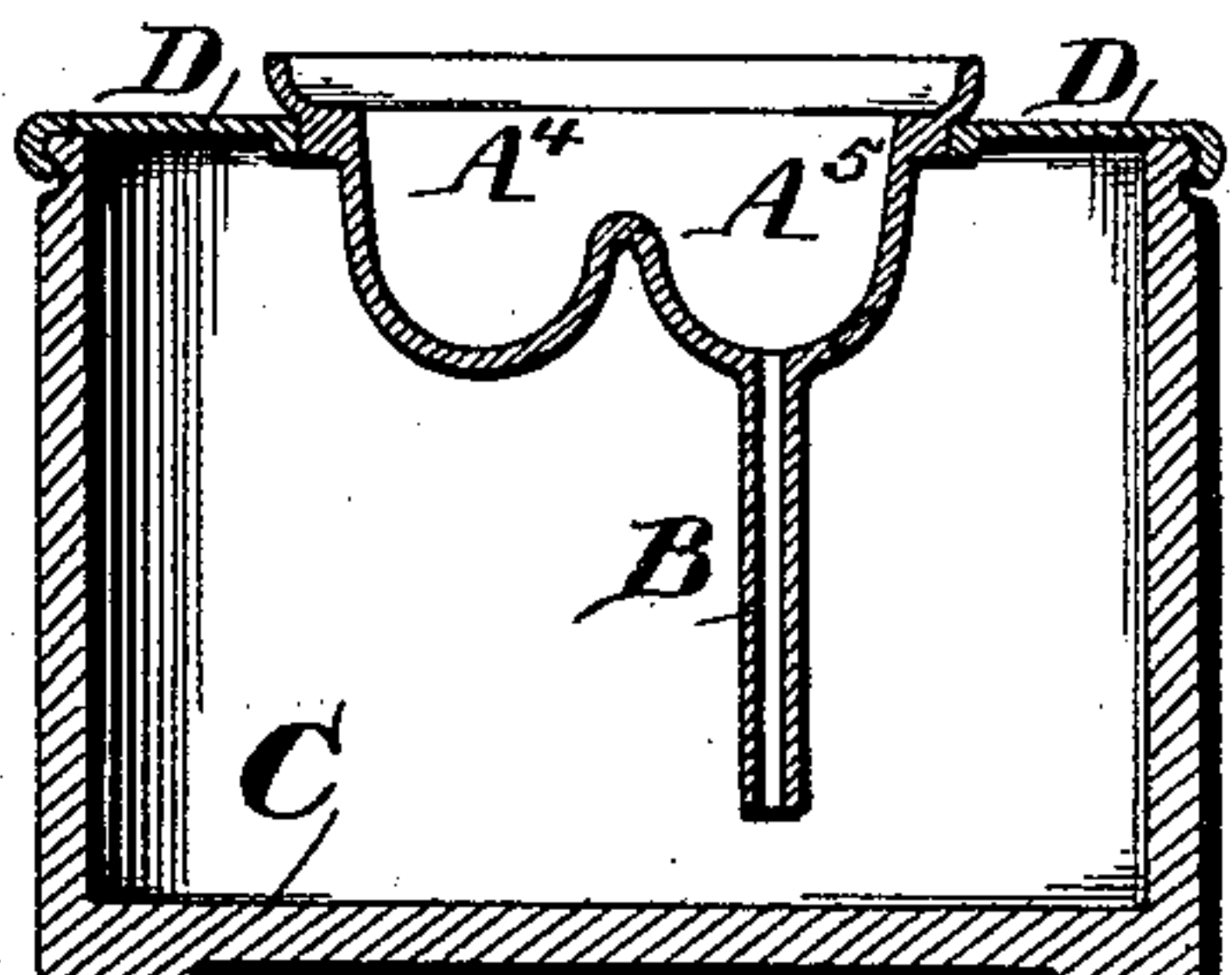


FIG. 9.



Witnesses:

Henry Drury
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UNITED STATES PATENT OFFICE.

ALFRED GASKILL, OF MILLVILLE, NEW JERSEY.

FOUNTAIN-INKSTAND.

SPECIFICATION forming part of Letters Patent No. 472,703, dated April 12, 1892.

Application filed February 6, 1892. Serial No. 420,575. (No model.)

To all whom it may concern:

Be it known that I, ALFRED GASKILL, a citizen of the United States, and a resident of the city of Millville, in the county of Cumberland and State of New Jersey, have invented a new and useful Improvement in Fountain-Inkstands, of which the following is a clear and sufficient specification, reference being had to the drawings annexed.

My invention relates to that class of inkstands known as "fountain-inkstands," in which class an air-pressure is employed to force the air upward into a cup in which it is held for the dipping of the pen. It has more especial reference to the class in which the pressure caused by the insertion of the pen is instrumental in causing the upward flow of the ink into the cup; but it may be employed when the ink is caused to flow into the cup by pressure at points exterior to the cup and by other means than the insertion of the pen.

The chief value of a fountain-inkstand is that it will retain the main body of the ink away from the air, by which it is evaporated and filled with dust, and provide a small supply of ink for the pen apart from the main body.

The main objection to the fountain-inkstands hitherto has been that when the upward flow of the ink was caused by the outside pressure and the ink was permanently maintained in the ink-cup by the ink-raising devices much trouble was occasioned in maintaining exactly the right amount of ink in the cup.

If any inkstands had been made in which the ink was temporarily raised in a funnel by other pressure than that caused by the insertion of the pen, they would have required that the ink-raising devices should be operated at each pen-dipping and would have been subject as well to most of the objections to the fountain-inkstands hitherto made in which the ink is raised by the pressure caused by the insertion of the pen, which by the fact that the ink runs immediately back into the well when the pressure ceases strip off the greater portion of the ink from the pen, which makes constant dipping and quickly wears out the pen and requires a conscious effort at each dip to get the ink up into the ink-cup.

My invention chiefly consists in adding to

the ink-conductor through which the ink flows from the ink-well to the ink-cup a receptacle adapted to retain a small quantity of ink for the use of the pen independently of the devices raising the ink in the ink-conductor.

The other portions of my invention and various types of mechanical constructions in which I have embodied it are set forth in the following portions of the specification and in the accompanying drawings, in which—

Figure 1 is a sectional view of one form of my invented device. Fig. 2 is a sectional view of a dipping-funnel used in this form of my device. Fig. 3 is a view of another form of dipping-funnel. Fig. 4 is a sectional view of my invented device applied to a "piston" form of fountain-inkstand. Fig. 5 is a plan view of my invented device where plural ink-conductors are employed. Fig. 6 shows a form where the ink is forced into the cup by pressure exterior to the funnel, and Figs. 7 and 8 show sectional views of forms of cups where the ink is retained by valves. Fig. 9 is a view of a modified form of ink-well.

On the ink-well C, constructed in any usual or convenient form and of any usual or convenient material, I place a diaphragm D, in which I set an ink-cup A, provided with a conductor B in the form of a tube, which reaches down into the ink in the well and has its outlet E at the side of the cup A, the whole being arranged to seal tightly the ink-well C, except through the conductor B. The portion of the cup A below the outlet of E will retain ink independently of the pressure of the pen on a level of the outlet E, and the ink in the cup above the same will, so soon as the pressure ceases, flow back through the conductor B. In practice I arrange the capacity of the portion of the cup A above the level of the outlet E, so that it will contain without overflowing all the ink which can be raised by a single depression of the cup and the surrounding parts. After the well has been filled and the diaphragm and adjacent parts put in place the ink will be made to flow into the cup A by the downward pressure of the pen therein in the usual manner. On removing the pressure the ink above the level of the outlet E will return to the well. This action will, however, be almost unconscious after the lower part of the cup is once filled,

and a supply of fresh ink will be always ready for use, while it will be impossible to overflow the cup.

Fig. 3 shows a type of my invented device in which the tube B' enters the bottom of the funnel-shaped cup A' and an auxiliary tube is run up part way the cup A'.

Fig. 4 shows a type of my invented device in which a depressible cylinder replaces the diaphragm. C is the ink-well, and B the cover hermetically sealing the same by a rubber packing or other suitable means. To the cover may be attached the funnel d, though I do not limit myself to any especial arrangement of these parts. Within the cylinder or funnel a piston E is fitted, at the opposite end of which the cup A² is placed. The piston is supported by a spring or is made light enough to float in the ink, so that its upper edge makes a joint with the lower edge of the funnel. I do not limit myself to this construction, as any usual or convenient form of piston construction may be employed.

Fig. 5 shows a form of my device where, instead of a single conductor in the form of a tube, the ink is supplied to the cup A by two conductors formed by channels made in the side of the piston and over its top. The number of conductors for supplying the ink is not a limitation on my invention.

In Fig. 6 I have shown a form of the type of my invention in which the ink is forced into the cup A by pressure exerted exteriorly thereto. The cup and the conductor B may be rigidly secured to the well. Communicating with the well is placed the piston F, moving in the cylinder G, by the depression of which the ink is made to flow into the cup A. Upon the release of the piston the ink will flow back through the conductor B into the well C.

Figs. 7 and 8 show forms of my invented device, in which the ink is retained in a portion of the cup A by means of a valve H, which opens to allow the ink to enter and closes when the devices raising the ink cease to act.

Fig. 9 shows a modified form of ink-cup in a construction similar to that in Fig. 1, the ink being retained in the portion A⁴ after it has returned from the portion A⁵.

While I have described many forms of my invented device, I do not limit myself to the forms shown and described, as many changes may be made by a mechanic of competent skill without departing from the spirit of my invention.

What I claim, and desire to secure by Letters Patent, is—

1. The combination of an ink-well provided with a cover sealing said well, devices for intermittently compressing the air in said well, an ink-conductor leading from the ink in the well into the ink-cup, and an ink-cup containing provisions for automatically retaining the ink in the ink-cup, substantially as described.

2. The combination of an ink-well, a cover sealing said well, devices actuated by the insertion of the pen intermittently compressing the air in said ink-well, an ink-conductor leading from the ink in the ink-well into the ink-cup, and an ink-cup containing provisions for retaining the ink therein independently of the upward movement of the ink in the ink-conductor, substantially as described.

3. The combination of an ink-well, an elastic cover sealing said ink-well and operating by its depression to cause a compression of the air above the ink in the ink-well, an ink-conductor leading from the ink in the ink-well into the ink-cup, and an ink-cup containing provisions for retaining the ink in the ink-cup independently of the upward movement of the ink in the ink-conductor, substantially as described.

4. The combination, in a fountain-inkstand, of an ink-well, a cover hermetically sealing said ink-well, an ink-cup secured thereto and moving therewith and depressible by the insertion of the pen, an ink-conductor leading from the ink-cup into the ink-well, and provisions in said ink-cup for retaining the ink therein independently of the uprising of the ink in the ink-conductor, substantially as described.

5. The combination of an ink-well, a cover sealing said ink-well and provided with a depressible funnel, a cup containing provisions for automatically retaining the ink in the ink-cup independently of the force injecting the ink into the same, and a conductor leading from the ink in the ink-well into the ink-cup, all said parts operating to compress the air above the ink in the ink-well and force the ink upward into the ink-cup, substantially as described.

In witness that I hereby claim the above-described invention as my own I have hereto set my signature in the presence of two subscribing witnesses.

ALFRED GASKILL.

Witnesses:

ALONZO COSSABOOM,
HARRY C. WOODRUFF.