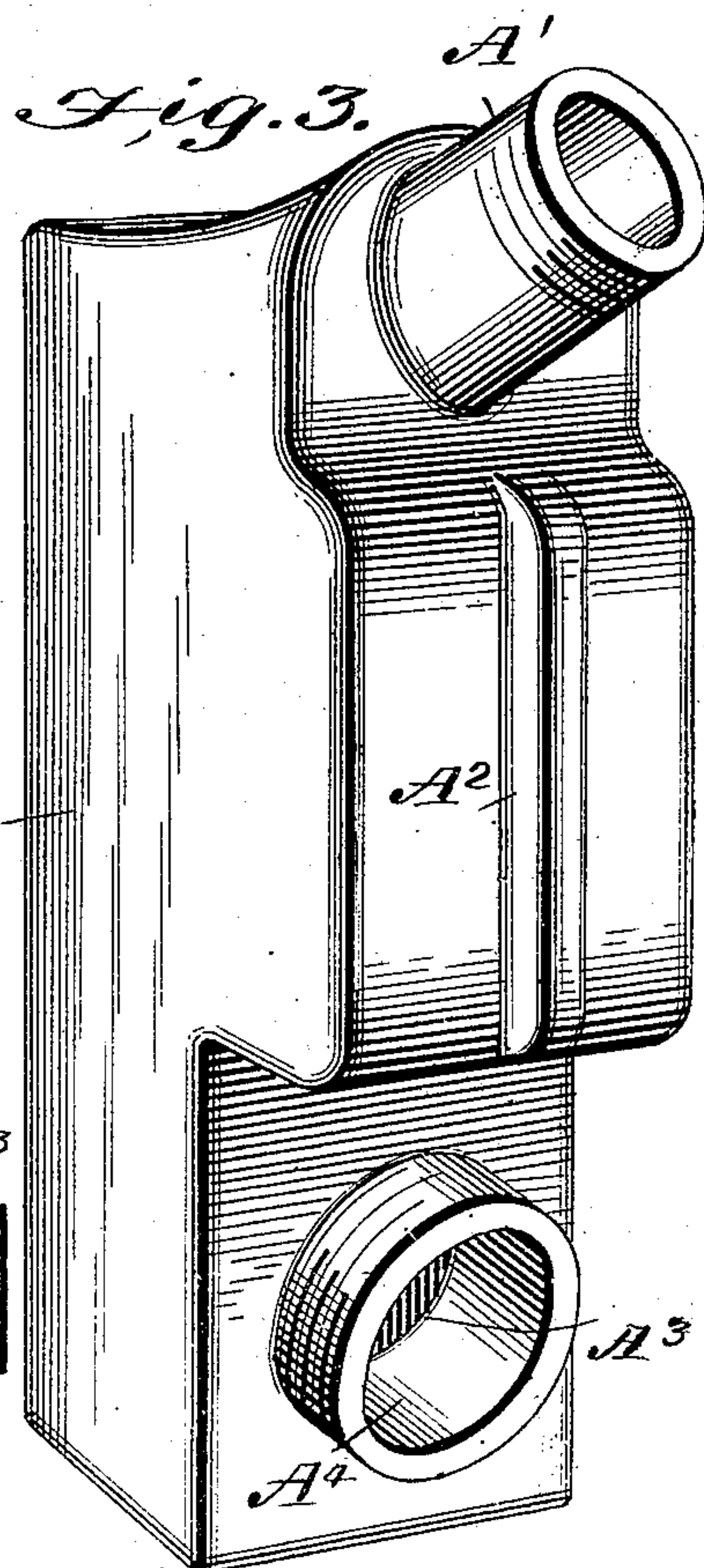
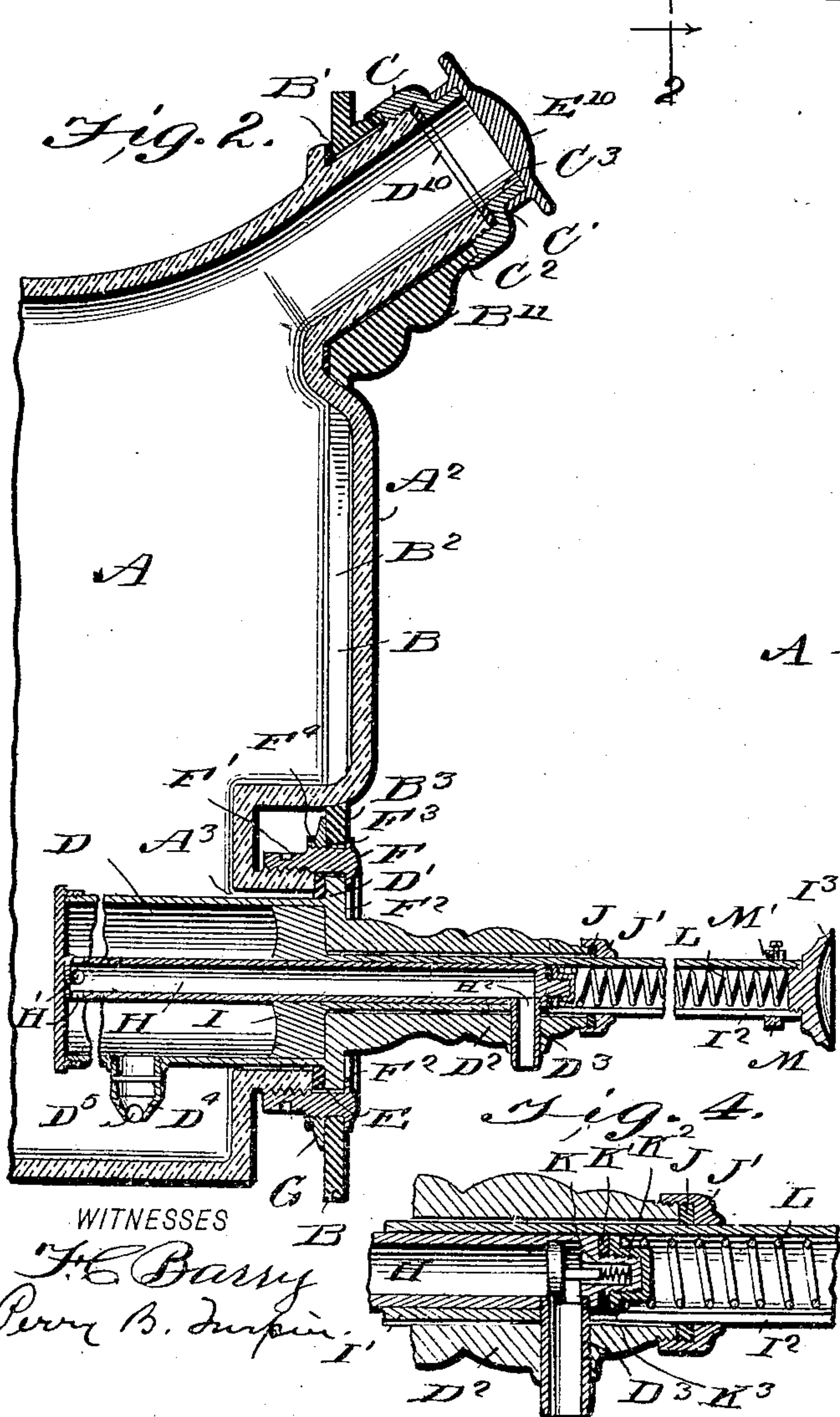
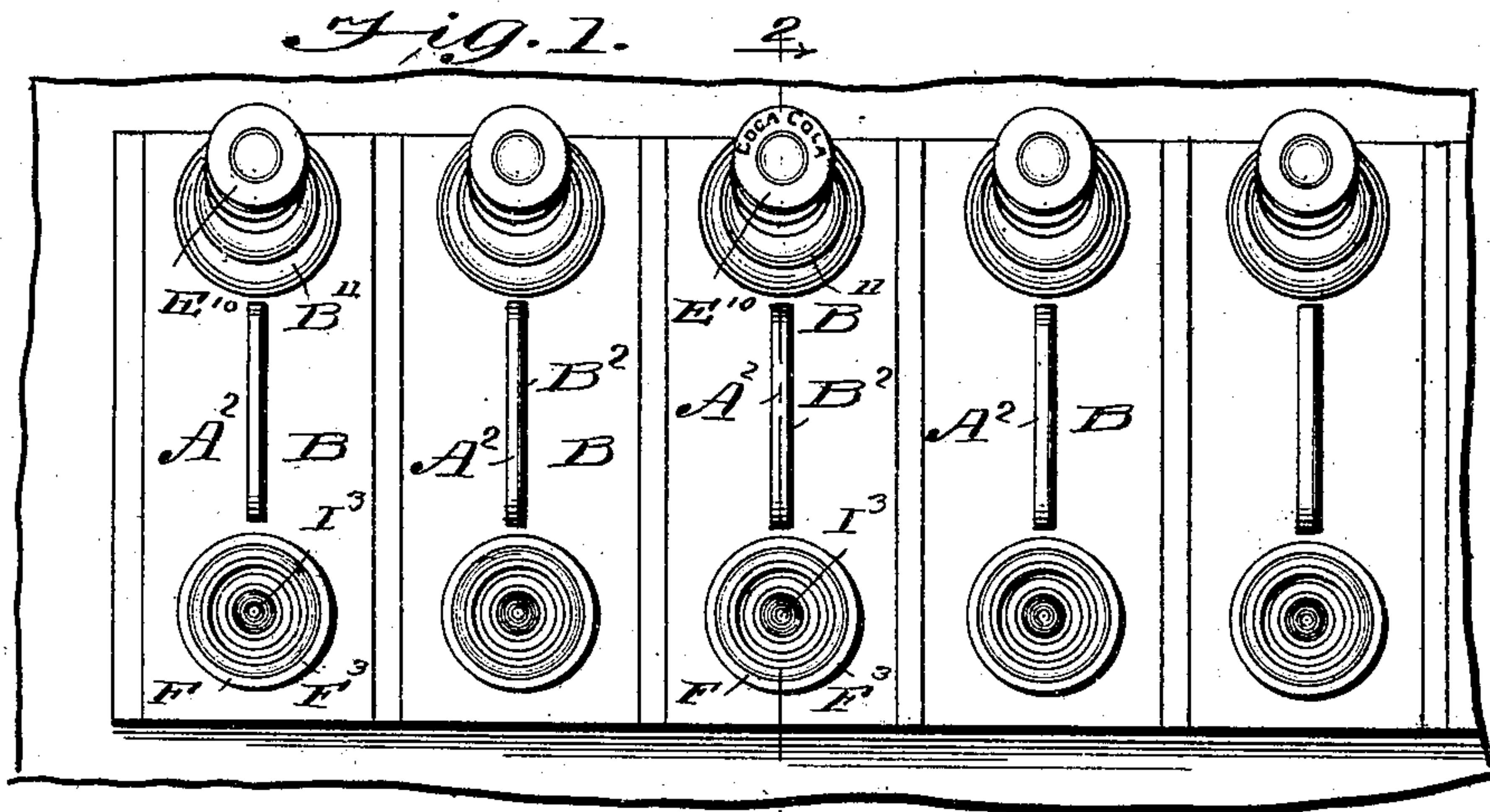


No. 886,881.

PATENTED MAY 5, 1908.

H. K. SMITH.
SODA FOUNTAIN.

APPLICATION FILED MAY 8, 1907.



WITNESSES

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HAMPTON K. SMITH, OF UNION, SOUTH CAROLINA.

SODA-FOUNTAIN.

No. 886,881.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed May 8, 1907. Serial No. 372,503.

To all whom it may concern:

Be it known that I, HAMPTON K. SMITH, a citizen of the United States, and resident of Union, in the county of Union and State of South Carolina, have invented an Improvement in Soda-Fountains, of which the following is a specification.

My invention is an improvement in soda fountains, and particularly in the syrup jar construction of said fountains, and consists in certain novel constructions and combinations of parts as will be hereinafter described and claimed.

In the drawing, Figure 1 is a front view of a portion of a fountain embodying my invention. Fig. 2 is a vertical section on about line 2—2 of Fig. 1. Fig. 3 is a detail perspective view of one of the jars; and Fig. 4 is an enlarged sectional view of a portion of the dispensing apparatus.

By my invention I seek to provide improvements in the means for exposing a portion of the jar so the height of its contents will be rendered visible, also to arrange the filling means so the jar may be filled from the front of the fountain and without necessitating the removal of the jar, and further provide improvements in the dispensing mechanism whereby the quantity of syrup dispensed may be gaged, and whereby the syrup in the discharge tube will be drawn back by the readjustment of the dispensing devices to normal position in such manner as to avoid drip from the syrup tube.

The jars A, of which any suitable number may be employed, are alike, and may be of any suitable size to suit the trade, or the particular fountain in which they may be intended for use. The jar is provided at its upper end with a feed tube A', which extends upwardly and forwardly at an incline, and projects through an upper opening B' in a front plate B of which one is provided for each jar. The front plate B is also provided with a vertically elongated slot B² below the opening B', and the jar A is provided with a vertically elongated narrow wing A² which projects forwardly within the slot B² and forms a sight wing in which the height of the syrup within the jar may be seen at a glance. This side portion A² is reduced as compared with the jar, and as it projects forwardly within the opening in the front plate, exposes its contents at the front of the fountain. These sight wings serve

not only the utilitarian purpose described, but as the syrups are of different colors, serve by exposing a portion of each syrup to aid the ornamental appearance of the fountain as will be understood by those skilled in the art.

The plate B is provided surrounding the opening B' with a tubular portion B¹¹ which encircles and reinforces the feed tube A', the feed tube A' projecting beyond the tube B¹¹ and having its outer end threaded to receive the metallic band C which is shouldered at C' to abut a packing ring D¹⁰ fitted against the end of the tube A', and the inner end of the ring C is recessed at C² to fit over the end of the tube B¹¹ as best shown in Fig. 2 of the drawing. A cap E¹⁰ slips on the tubular portion C³ of the band C, and closes the outer end of the feed or filling tube A', as best shown in Fig. 2. This construction of filling tube permits the jar to be filled from the front of the fountain without in any way displacing the jar or its front plate B, and thus facilitates the filling of any one or more of the jars as may be desired from time to time.

The described construction including the tube B¹¹, the tube A', and the end ring C, connected with the tube A' and abutting the outer end of the tube B¹¹, constitutes the connection between the upper end of the jar and the front plate, and the said jar and front plate are connected at their lower ends by the mechanism for dispensing the syrup, and the parts coöperating therewith. To this end, the front plate B is provided near its lower end with a pump opening B³, and the jar A is provided near its lower end with an opening A³ and a forwardly projecting tube A⁴ surrounding such opening and alined with the pump opening B³. The pump has its cylinder D projecting through the tube A⁴ into the jar, and is provided at the outer end of the cylinder D with a flange D' opposite the end of the tube A⁴, and abutting an interposed packing ring E. This flange D' is held against the tube A⁴ by the band F having a cylindrical portion F' operating in the opening B³, and screwed at its inner end upon the outer side of the tube A⁴, and provided at its outer end with an inwardly projecting flange F² overlapping the flange D' of the pump, and with an outwardly projecting flange F³ overlapping the face plate B surrounding the opening B³ as best shown in Fig. 2 of the drawing. The cylindrical portion

F' of the band F is threaded on its outer side at F⁴ and a nut ring G is screwed on the threads F⁴ against the inner side of the face plate B, thus coöperating with the outwardly projecting flange F³ in securing the band F firmly to the front plate B, and consequently securing in connection with said front plate the lower portion of the jar and the pump through the means before described.

The pump has a tube D² projecting forwardly beyond its flange D', and provided near its outer end with an opening D³ for the downwardly projecting wing of the discharge tube H, which extends from the inner end of the cylinder D where it has inlet ports H', forwardly through the cylinder D, thence into the tube D² to a point opposite the opening D³ where it connects with its wing H² through which the syrup is discharged. The cylinder D has an inlet port D⁴ controlled by a valve D⁵ which drops into place as shown in Fig. 2, and seals the port D⁴ except when the said valve D⁵ is unseated in drawing the syrup into the cylinder D by the operation of the piston I.

The ball valve D⁵ in the bottom of the cylinder by its weight and gravity operates to prevent the syrup from passing into the cylinder except under the forcible action of suction. It will be understood, however, that if desirable or necessary, a valve such as shown in Fig. 4 may be employed to prevent discharge of liquid out of the delivery tube except under the forcible action of the pumping devices. The inlet D⁴ to the cylinder is in advance of the rear end of said cylinder, so the piston may be moved to a point in rear of the inlet port, for a purpose presently described. This piston I is annular, and encircles the discharge tube H, and when moved from the position shown in full lines Fig. 2 toward the inner or rear end of the cylinder D, will force the syrup in the said cylinder through the ports H' and thence out of the discharge tube. This piston I has a tubular stem I', which encircles the discharge tube H, and projects outwardly through the tube D², being slotted at I² to permit it to pass the wing H² of the discharge tube. The tube D² has at its outer end a packing ring J encircling the tubular stem I', and a screw ring J' for securing the same to prevent any leakage around the stem I', and the outer end of the discharge tube H within the tube I', is provided with an extension K, receiving a packing ring K' fitting within the tube I' and held by a nut K² having a flange K³ forming a bearing for the inner end of the spring L, which bearing between said inner abutment and the outer end of the tubular stem I', operates to readjust the piston I to the position shown in Fig. 2, and to permit the adjustment of said piston toward the inner end of the cylinder D by pressure on the button I³ at the outer end of the tube as shown. It

will be noticed that the tube D² forms a barrel tube in which the discharge tube and the tubular stem of the piston project, and a collar M on the tube I', and secured adjustably by a screw M', may be set to any position on the tubular stem I' to limit the extent to which the piston may be forced into the cylinder, and thus regulate the quantity of syrup discharged at each stroke of the pump.

In operation, if the parts be in the position shown in Fig. 2, and the piston be forced toward the inner end of the cylinder, it will discharge the contents of the cylinder through the ports H' and thence out of the discharge tube, the piston passing beyond the inlet of the cylinder so that on the return or readjusting movement of the piston, the latter will operate to suck the syrup back through the discharge tube into the cylinder in advance of the refilling of the cylinder through its inlet port. This sucking back of the syrup is an important feature, as it draws the syrup back through the discharge tube, and thus avoids the drip of the syrup, which would otherwise be a serious objection.

Manifestly, the cylinder of the pump may be made of any suitable length, and its inlet be so disposed as to secure the desired operation of the piston in sucking back the syrup into the discharge tube in the various adjustments of the stop M for regulating the quantity of syrup dispensed at each operation of the pump.

The pump, the jar, and the front plate, may in practice be removed from the fountain bodily, the jar fitting within a suitable chamber in the body of the fountain as will be understood by those skilled in the art.

The band F and the nut ring G may be provided with suitable sockets to facilitate their engagement by a spanner wrench.

I claim:

1. The combination substantially as herein described, of a front plate having an upper opening for an end tube, and a lower opening for dispensing devices, and provided between such upper and lower openings with a vertically elongated slot, a jar provided at its front with a forwardly projecting vertically elongated sight wing, protruding through the slot in the front plate, and having at its upper end a forwardly and upwardly inclined filling tube projecting through the upper opening in the front plate, retaining means on the outer end of the filling tube and engaging with the front plate, the said jar being provided at its lower end with an opening and with a forwardly projecting tube surrounding the same, and alined with the lower opening in the front plate, a pump having its barrel projecting through said tube into the jar, and devices connecting the said pump with the lower tube of the jar and with the front plate, substantially as set forth.

2. A syrup jar having at its front side a narrow vertically elongated sight wing, and a front plate applied to said jar and having a slot in which said sight wing projects, substantially as set forth.

3. The combination of a front plate, having a vertically elongated slot, a syrup jar having at its front side a narrow vertically elongated sight wing in said slot, means securing the front plate to the jar above the sight wing, and means securing the jar to the front plate below the sight wing, substantially as set forth.

4. The combination with the front plate having a vertically elongated slot, and a syrup jar having at its front side a narrow vertically elongated sight wing projecting in said slot, and means securing the front plate to the jar.

5. The combination with the front plate having an opening, and a jar having a pump opening in alinement with the opening in the front plate, a pump having a barrel projecting through the opening in the jar into the same, means securing the pump to the jar, and devices for securing such means in connection with the front plate, substantially as set forth.

6. The combination with the front plate and the jar having a pump opening and a tube surrounding the same and threaded on its outer side, of a front plate having an opening alined with said tube, a pump having a cylinder projecting through the jar tube into the jar and provided with an outwardly projecting flange, a securing band projecting through the opening in the front plate, and screwing on the threaded tube of the jar, and having at its outer end an outwardly projecting flange overlapping the front plate, and an inwardly projecting flange overlapping the flange of the pump, and means on the inner side of the front plate for securing said band in connection with said front plate, substantially as set forth.

7. A syrup jar combined with a pump cylinder projecting therein, and having a discharge tube leading from the inner end of said cylinder and provided with an inlet port in advance of such inner end of the cylinder, and a piston operating in the cylinder and movable on its pumping stroke to a point in rear of the inlet port, whereby on the readjusting stroke of the piston it will operate

to suck the syrup back through the discharge tube, substantially as set forth.

8. A front plate provided with an opening and with an upwardly inclined tubular portion surrounding said opening, a jar having an upwardly inclined filling tube projecting through and beyond the tube of the front plate, and means connected with the outer end of the filling tube, and engaging with the tube of the front plate for holding the plate and jar together, substantially as set forth.

9. A front plate having an opening and an upwardly inclined tubular portion surrounding the same, combined with a jar having an upwardly inclined filling tube projecting through the tube of the front plate and threaded at its outer end, a ring screwed on the outer end of the filling tube and abutting the outer end of the plate tube, and a cap fitted to said ring and closing the outer end of the filling tube, substantially as set forth.

10. A front plate having at its upper end an opening for a filling tube, and at its lower end an opening for a pump, combined with a jar having at its upper end an upwardly inclined filling tube projecting through the opening in the front plate, and at its lower end a forwardly projecting pump tube in alinement with the pump opening in the front plate, a pump fitting in the opening in the front plate and having a cylinder projecting through the pump tube into the jar, and means securing the pump in connection with the pump tube of the jar and with the front plate surrounding the pump opening therein, substantially as set forth.

11. A syrup jar provided at its upper end with a projecting filling tube, and having below said end a vertically elongated sight wing combined with a front plate suspended on the filling tube of the jar and provided with a vertically elongated slot receiving the sight wing of the jar, substantially as set forth.

12. A syrup jar provided with a comparatively reduced forwardly projecting sight portion, and a front plate having an opening into which said sight portion projects, whereby to expose the contents of said reduced portion, substantially as set forth.

HAMPTON K. SMITH.

Witnesses:

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PERRY B. TURPIN.