

No. 654,489.

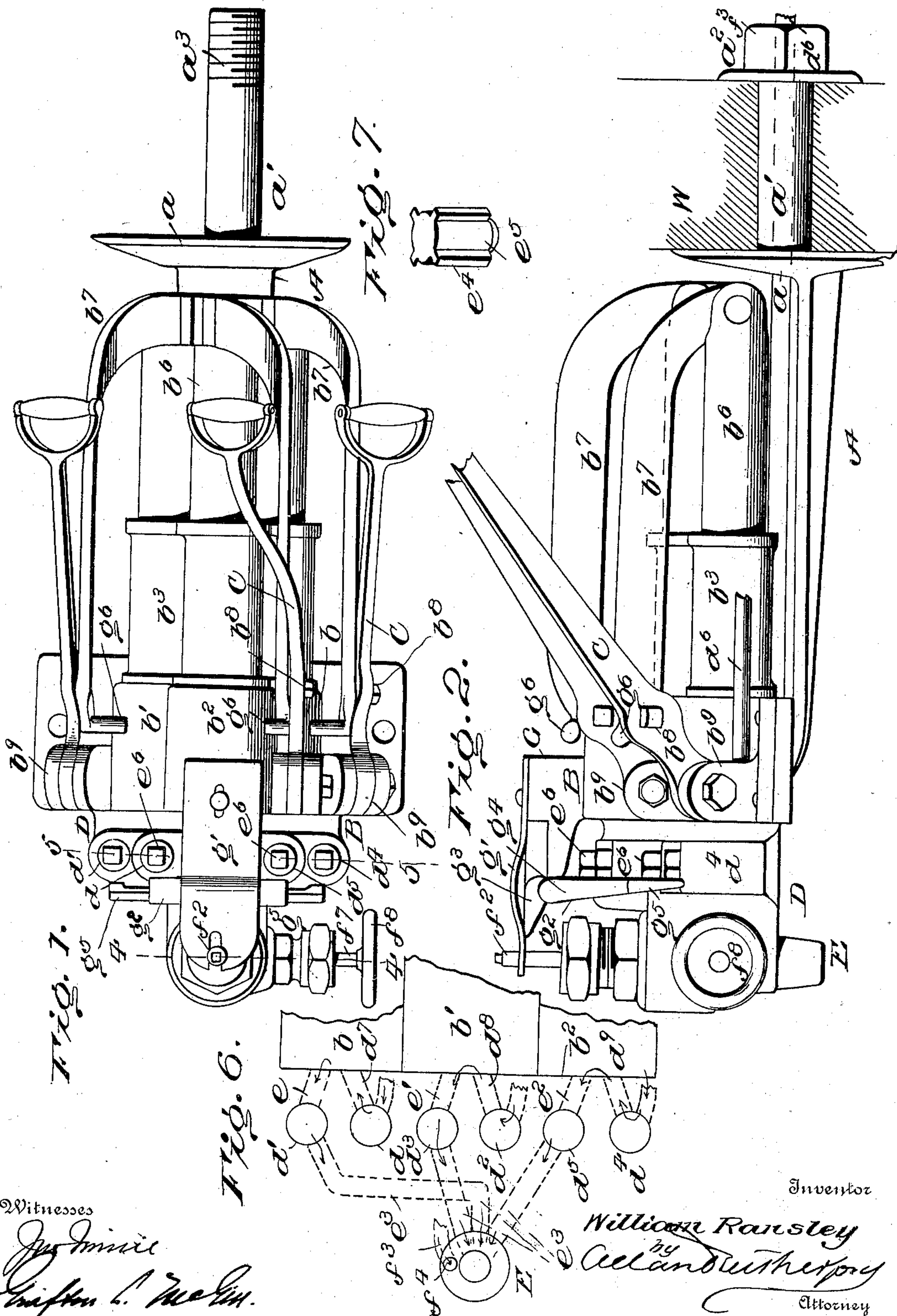
Patented July 24, 1900.

W. RANSLEY.
SODA FOUNTAIN.

(Application filed Aug. 8, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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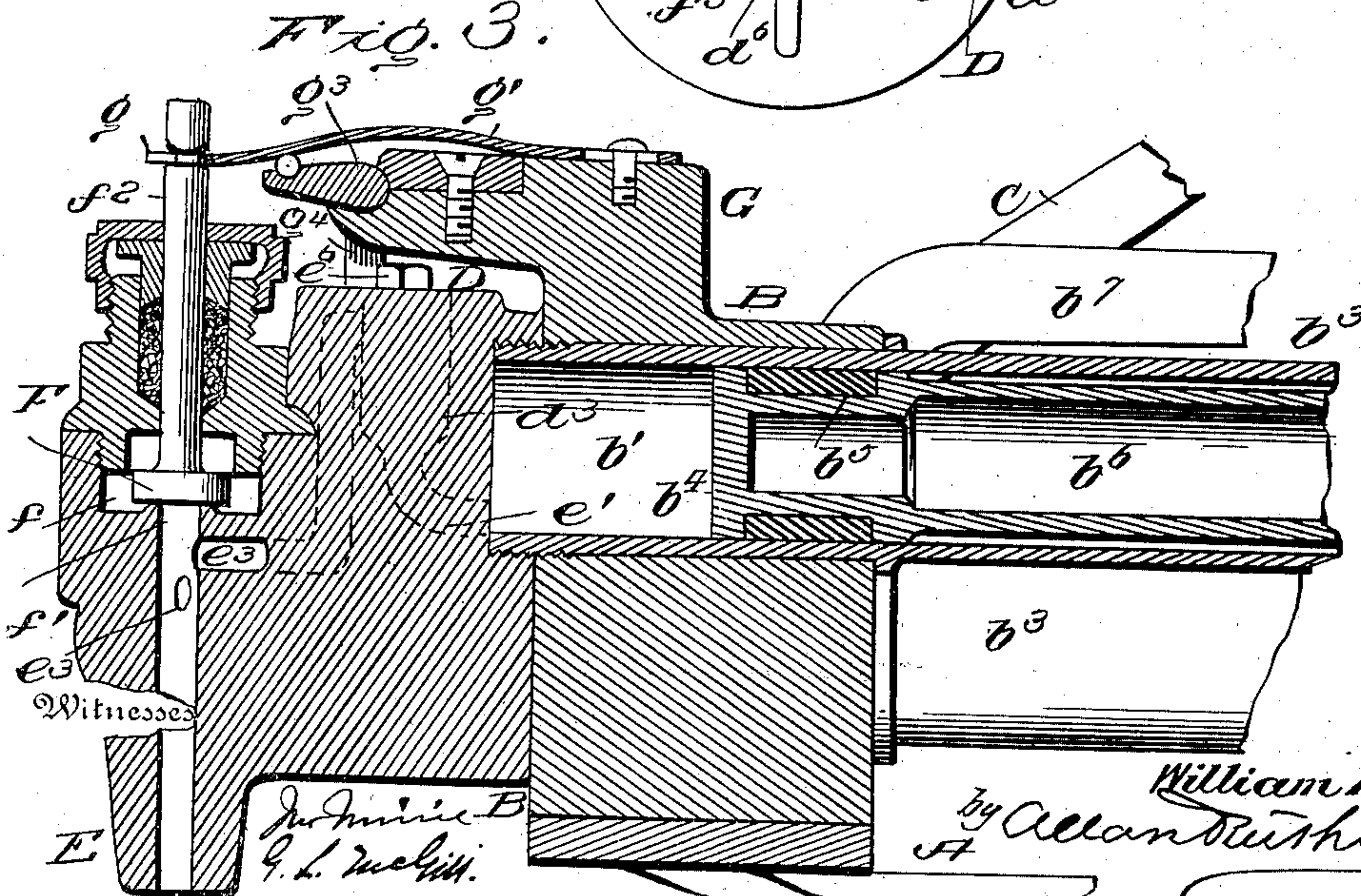
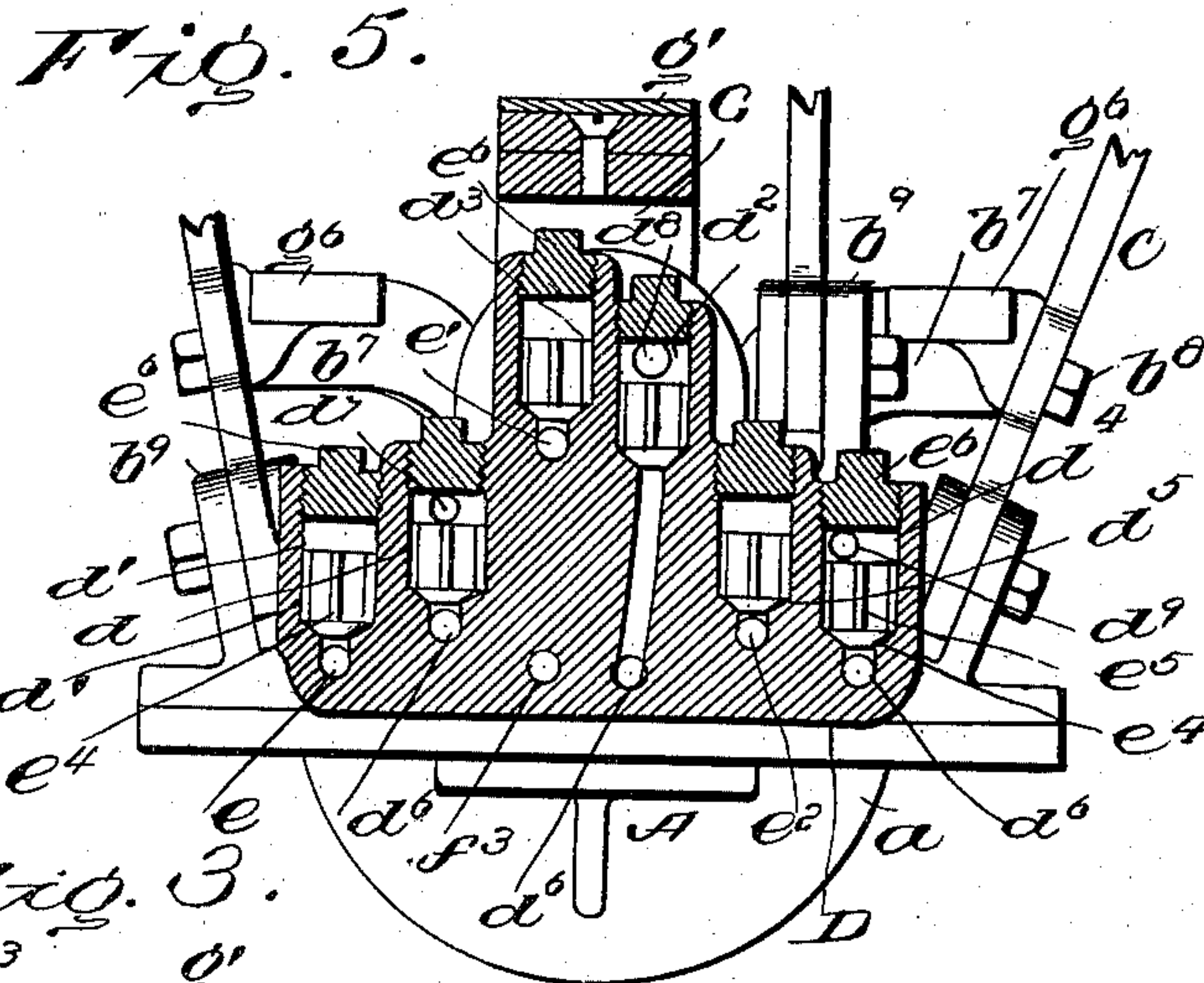
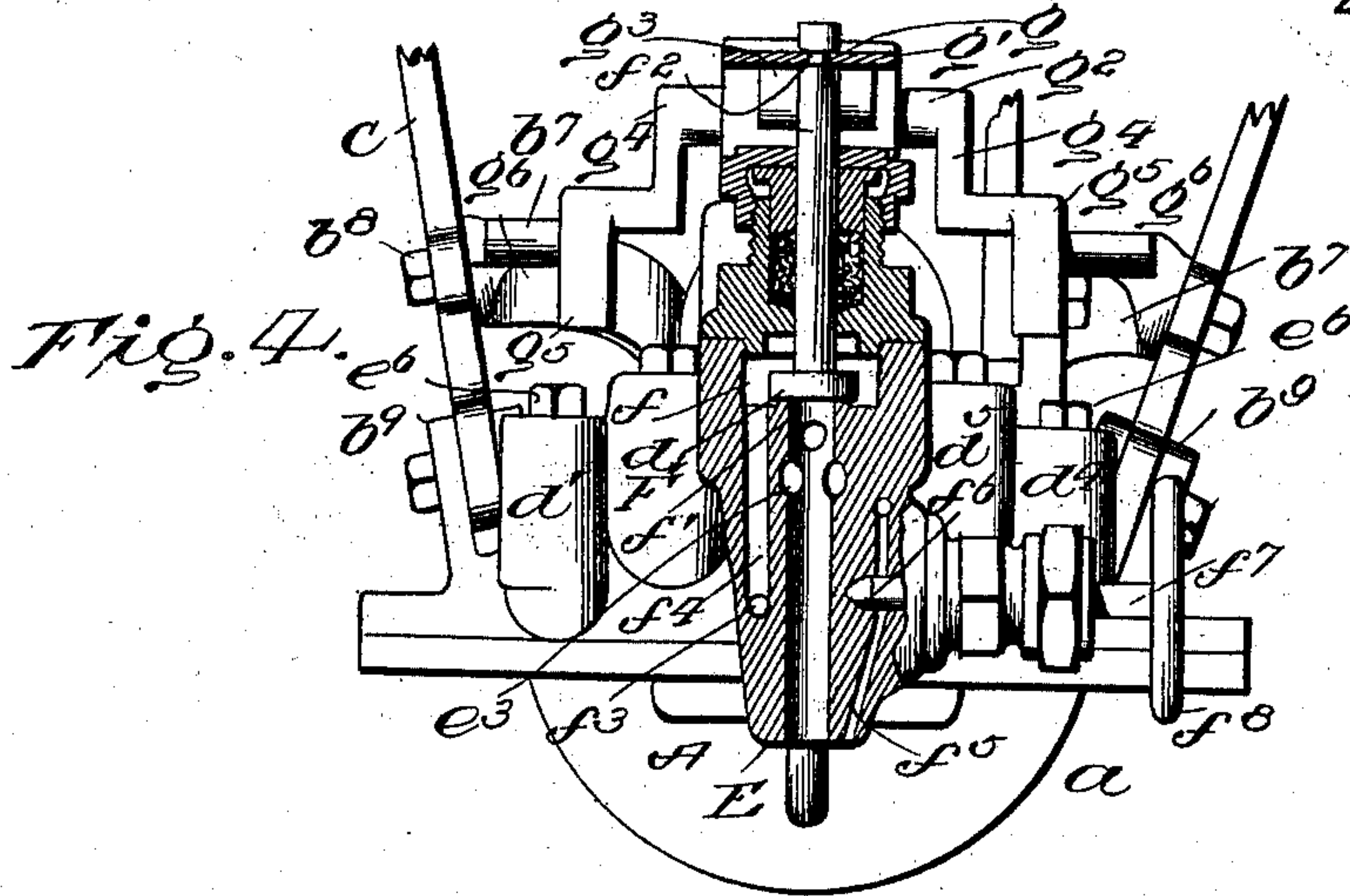
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

WILLIAM RANSLEY, OF EAST ORANGE, NEW JERSEY.

SODA-FOUNTAIN.

SPECIFICATION forming part of Letters Patent No. 654,489, dated July 24, 1900.

Application filed August 8, 1899. Serial No. 726,564. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RANSLEY, of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Soda-Fountains; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 This invention contemplates certain new and useful improvements in soda-fountains, and relates more particularly to that class in which the carbonated water and the flavoring-syrup are drawn and intermingled by one operation.

15 The invention has for its object the production of a soda-fountain of the character specified which will be simple and inexpensive in construction and highly efficient in operation, whereby a predetermined quantity of syrup will be delivered to a reservoir and mixed with the carbonated water as the latter is drawn into glasses for dispensing.

20 A further object is to provide a means whereby reservoirs are automatically refilled after each operation of the apparatus.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

30 In the accompanying drawings, Figure 1 is a top plan view of my improved soda-fountain. Fig. 2 is a view in side elevation. Fig. 3 is a longitudinal sectional view on line 3 3, Fig. 1. Fig. 4 is a transverse sectional view on line 4 4, Fig. 1. Fig. 5 is a similar view on line 5 5, Fig. 1. Fig. 6 is a diagrammatical view illustrating the arrangement of the valve-chambers. Fig. 7 is a detail.

40 Referring to the drawings, A designates a supporting-bracket provided with a flange a and having a tubular arm or member a' , designed to pass through one of the walls W of a cooler-box. Said bracket is clamped in position by means of a nut a^2 , working on the threaded end a^3 of arm or member a' . B is a casing secured to bracket A by any suitable means and provided with a series of cylinders or reservoirs b b' b^2 , having extensions b^3 . Although but three of such cylinders or reservoirs have been shown, it is obvious that the number may be increased or diminished without departing from the spirit of my invention.

Within each of said cylinders or reservoirs is located a plunger b^4 , having a packing-ring b^5 and secured to an operating-rod b^6 , extending rearwardly through the extension b^3 . Said operating-rods are made hollow for the purpose of combining the qualities of lightness, strength, and durability. To the rear forked end of each rod b^6 is pivoted the rear end of an arm or pitman b^7 , which is pivotally connected at b^8 to a hand-lever C, which is in turn pivoted between ears b^9 of casing B.

The forward end of casing B is provided with a head D, in which is arranged a series of valve-chambers d d' d^2 d^3 d^4 d^5 . A pipe or tube d^6 leads into the lower end of each of said valve-chambers d , d^2 , and d^4 , and the latter in turn communicate with cylinders or reservoirs b b' b^2 , respectively, by means of passage-ways d^7 , d^8 , and d^9 , leading from near the tops of said valve-chambers. The valve-chambers d' d^3 d^5 also communicate with said cylinders or reservoirs through passages e , e' , and e^2 , leading into the lower ends of the former, each of said valve-chambers being also provided with an upper outlet-passage e^3 , leading to a nozzle E. In each of the said valve-chambers is arranged a check-valve e^4 , having its walls cut away longitudinally at e^5 , said valves normally closing the lower openings into the valve-chambers. Suitable threaded plugs e^6 serve to close the tops of the valve-chambers, the same being squared to be readily turned by a wrench or slotted to receive a screw-driver, as desired.

The nozzle E is provided with a receiving-chamber f , having an outlet f' , normally closed by a valve F, provided with a stem f^2 , extending through the top of the casing. The outlet-passages e^3 of the valve-chambers all lead into the receiving-chamber of said nozzle. The soda or carbonated water is conveyed by a pipe or tube f^3 , passing horizontally through arm or member a' and the lower portion of casing B to a vertical passage f^4 , leading to chamber f of nozzle E. Said passage is also closed by valve F. If desirable, a suitable fizz-pipe or gas-outlet f^5 may be located in nozzle E, the same being closed by the conical end f^6 of a valve-stem f^7 , extending transversely through the nozzle-casing and operated by a hand-wheel f^8 . The upper end of valve-stem f^2 is grooved

at g to receive the slotted end of a spring-plate g' , secured to an arm or projecting portion G of casing B . To the forward end of said arm or projecting portion is piv-
 5 oted a rocking lever g^2 , having an arm or member g^3 , designed to engage and raise said spring. Said rocking lever is formed with two downwardly-extending arms g^4 , provided with lateral right-angular extensions g^5 , ar-
 10 ranged to be engaged by lugs g^6 on the forward ends of arms or pitmen b^7 .

The operation is as follows: The hand-levers C are normally pushed rearwardly to the limit of their movement. When so
 15 moved, syrup passing through pipes d^6 from the respective syrup-jars or other source of supply (not shown) flows through the several valve-chambers d , d^2 , and d^4 into the respective reservoirs b , b' , b^2 , each of the lat-
 20 ter being just large enough to accommodate a sufficient quantity of syrup for one glass of soda. When it is desired to draw the soda, say, for example, flavored with the syrup contained in reservoir b , the proper handle
 25 C is pulled forward to the limit of its movement, causing the plunger b^4 of said reservoir in its forward movement to force the syrup into valve-chamber d' , raising the check-valve thereof and allowing such syrup
 30 to pass to the nozzle E . Simultaneous with this operation the check-valve of chamber d is closed and the lug g^6 of the arm or pitman engages the rocking lever g^2 , raising valve F through the medium of spring g'
 35 and allowing the syrup to flow out through outlet f' . As soon as valve F is opened the carbonated water flows through passage f^4 to the outlet f' , mixing with the syrup as the latter flows out. The return movement
 40 of lever C will allow of the automatic closing of valve F and check-valve of valve-chamber d' , the suction of the plunger b^4 causing the syrup to lift check-valve of chamber d and refill the reservoir b . It will be observed
 45 that while I have described the delivery of syrup and soda from but one reservoir it is obvious that the operation is the same with each reservoir, save that the various syrups pass through different passages and valve-
 50 chambers.

I claim as my invention—

1. A soda-fountain comprising a casing having a syrup-reservoir, a plunger working therein, means for feeding syrup to said res-
 55 ervoir, an outlet-nozzle, a soda-water conduit leading to said nozzle, a valve controlling the same, a rock-lever having an angular member arranged to operate said valve, and an operating-lever for said plunger designed to
 60 periodically engage said rock-lever, substantially as set forth.

2. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein, valve-chambers arranged to
 65 control the supply of syrup to said reservoirs, additional valve-chambers arranged to control the discharge of syrup from said reser-

voirs, check-valves working in all of said valve-chambers, a nozzle with which said lat-
 70 ter valve-chambers communicate, means for feeding soda thereto, a valve for said nozzle, a rock-lever having an angular member arranged to operate the same, and operating-
 75 levers for said plungers designed to periodically engage said rock-lever, substantially as set forth.

3. A soda-fountain comprising a bracket having an integral tubular extension, a casing secured to said bracket and having a series
 80 of syrup-reservoirs, plungers working therein, a series of valve-chambers communicating with said reservoirs and having check-valves therein, syrup-pipes leading into said valve-
 85 chambers, a second series of valve-chambers also having check-valves working therein, outlet-passages leading from said reservoirs into said latter valve-chambers, discharge-
 90 passages leading from the latter, a soda-pipe passed through said tubular extension, and means for securing said tubular extension to the wall of an ice-box or the like, substan-
 95 tially as set forth.

4. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein, a series of vertically-dis-
 95 posed valve-chambers having passage-ways leading from their upper portions into the tops of said reservoirs, syrup-pipes leading into the lower ends of said valve-chambers, a second series of vertically-disposed valve-
 100 chambers, outlet-passages leading from said reservoirs into the lower ends of said latter valve-chambers, an outlet-nozzle, discharge-passages leading from the upper portions of
 105 said valve-chambers to said outlet-nozzle, check-valves working in said valve-chambers, a soda-water conduit leading to said nozzle, a valve controlling the same, a rock-lever having an angular projection arranged to oper-
 110 ate said valve, and means for reciprocating said plungers and periodically operating said rock-lever, substantially as set forth.

5. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein means for supplying syrup
 115 to said reservoirs, a nozzle communicating with said syrup-reservoirs, a soda-water conduit leading to said nozzle, a valve controlling the same, a rock-lever having an angular member arranged to operate the same, and
 120 means for reciprocating said plungers and periodically operating said rock-lever, substantially as set forth.

6. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers
 125 working therein, a series of valve-chambers arranged to control the supply of syrup to said reservoirs a second series of valve-chambers arranged to control the discharge from
 130 said reservoirs, a nozzle communicating with said latter valve-chambers, a soda-water conduit leading to said nozzle, a valve controlling the same, a rock-lever having an angular projection arranged to operate the same, and

means for reciprocating said plungers and periodically operating said rock-lever, substantially as set forth.

7. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein, means for supplying syrup thereto, a nozzle communicating with said reservoirs, a soda-water conduit leading into said nozzle, a reciprocating valve for controlling said conduit, a spring-plate carried by said casing having one end in engagement with said valve, whereby the latter is normally held to its seat, and means for reciprocating said plungers and simultaneously raising the end of said spring-plate, substantially as set forth.

8. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein, means for supplying syrup thereto, a nozzle communicating with said reservoirs, a soda-water conduit leading into said nozzle, a valve for controlling said conduit, a rock-lever having an angular projection designed to operate said valve, levers pivoted to said casing, connections between said levers and said plungers, and means for operating said levers whereby they will periodically rock said rock-lever, substantially as set forth.

9. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein, means for supplying syrup thereto, a nozzle communicating with said reservoirs, a soda-water conduit leading into said nozzle, a valve for controlling said conduit having a vertical stem, a plate-spring supported by said casing and engaging said valve-stem, levers pivoted to said casing and connected to said plungers, and a rock-lever operated by said levers for raising the end of said spring, substantially as set forth.

10. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein, means for supplying syrup thereto, a nozzle communicating with said reservoirs, a soda-water conduit leading into said nozzle, a valve for controlling said conduit, said valve having a vertical stem provided with an annular groove, a spring-plate supported by said casing and having a slotted end engaging the groove of said valve-stem, levers pivoted to said casing and connected with said plungers, and means operated by said levers for raising the slotted end of said spring, substantially as set forth.

11. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein, means for supplying syrup thereto, a nozzle communicating with said reservoirs, a soda-water conduit leading into said nozzle, a valve for controlling said conduit having a vertical stem, a spring-plate engaging the same, a rock-lever in engagement with said spring-plate, hand-levers pivoted to said casing and designed to operate said rock-lever, and connections between said

hand-levers and said plungers, substantially as set forth.

12. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein, means for supplying syrup thereto, a nozzle communicating with said reservoirs, a soda-water conduit leading into said nozzle, a valve for controlling said conduit having a vertical stem, a spring-plate engaging the same, hand-levers pivoted to said casing and connected to said plungers, and a rock-lever normally engaging said spring-plate and having depending arms extended into the paths of said hand-levers, substantially as set forth.

13. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein, means for supplying syrup thereto, a nozzle communicating with said reservoirs, a soda-water conduit leading into said nozzle, a valve for controlling said conduit having a vertical stem, a spring-plate secured to an overhanging portion of said casing and engaging said valve-stem, hand-levers pivoted to said casing and connected to said plungers, and a rock-lever pivotally supported by the overhanging portion of said casing, said rock-lever having an arm or member engaging said spring-plate, and depending arms or members extended into the paths of said hand-levers, substantially as set forth.

14. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein, means for supplying syrup thereto, a nozzle communicating with said reservoirs, a soda-water conduit leading into said nozzle, a valve for controlling said conduit having a vertical stem, a spring-plate engaging the same, hand-levers pivoted to said casing, arms or pitmen connecting said hand-levers with said plungers, lugs on the forward ends of said arms or pitmen, and a rock-lever having an arm or member engaging said spring-plate, and depending arms or members arranged to be engaged by said lugs, substantially as set forth.

15. A soda-fountain comprising a bracket having an integral tubular extension, means for securing the same to the walls of an ice-box or the like, a casing supported by said bracket and having a series of cylindrical syrup-reservoirs provided with rearward cylindrical extensions, plungers working in said reservoirs, stems therefor projecting through said cylindrical extensions, levers pivoted to said casing, arms or pitmen connecting said levers and said stems, means for supplying syrup to said reservoirs, outlets leading from the latter, and a soda-pipe passed through said tubular extension, substantially as set forth.

16. A soda-fountain comprising a bracket or support having an integral tubular extension, means for securing said extension to the walls of an ice-box or the like, a casing supported by said bracket and having a delivery-

nozzle, a soda-water pipe passed through said tubular extension and communicating with said nozzle, syrup-reservoirs, and means whereby syrup and soda-water are simultaneously delivered from said nozzle, substantially as set forth.

17. A soda-fountain comprising a bracket or support provided with an integral, screw-threaded tubular extension and an annular flange, a casing supported by said bracket having a delivery-nozzle, a soda-water pipe passed through said tubular extension and communicating with said nozzle, and means for controlling the flow of soda from said nozzle, substantially as set forth.

18. A soda-fountain comprising a casing having a series of syrup-reservoirs, plungers working therein, a series of valve-chambers arranged to control the supply of syrup to said reservoirs, a second series of valve-cham-

bers arranged to control the discharge from said reservoirs, a discharge-nozzle, a soda-water conduit leading thereto, passages leading from said latter valve-chambers to said nozzle, a valve located in said nozzle, a spring-plate engaging the same, hand-levers pivoted to said casing, arms or pitmen connecting the same with said plungers, and a rock-lever pivoted to said casing, said rock-lever having an arm or member engaging said spring-plate, and depending arms or members designed to be engaged by said arms or pitmen, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM RANSLEY.

Witnesses:

WILLIAM DEAS,
JNO. H. COCHRANE.