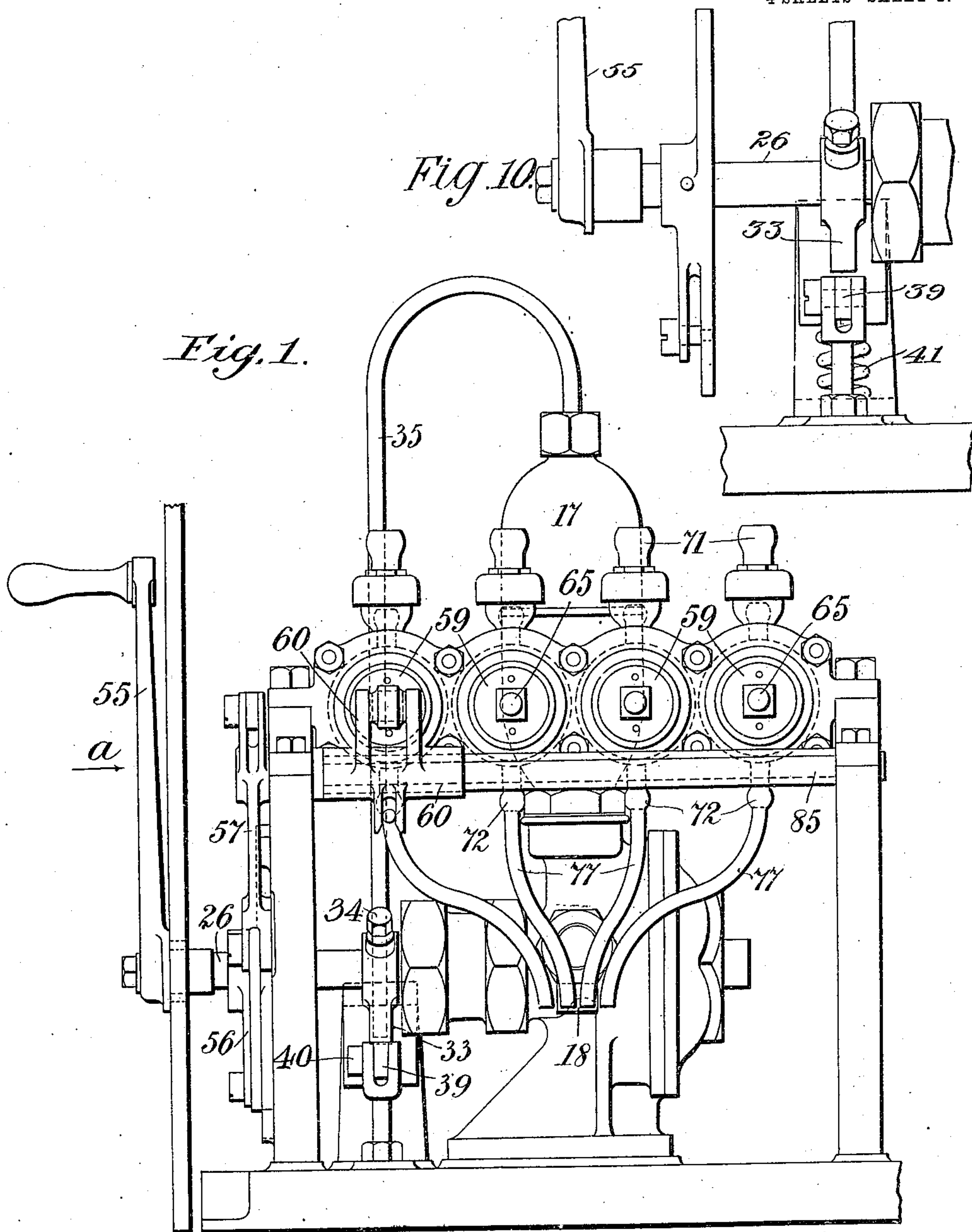


944,458.

L. J. MOSER.
DISPENSING APPARATUS.
APPLICATION FILED NOV. 3, 1905.

Patented Dec. 28, 1909.

4 SHEETS—SHEET 1.



Witnesses

Geo. A. Bynne.
W. Max. Durrall.

Inventor

L. J. Moser

by Wilkinson & Fisher
his Attorneys

944,458.

L. J. MOSER.
DISPENSING APPARATUS.
APPLICATION FILED NOV. 3, 1905.

Patented Dec. 28, 1909.

4 SHEETS—SHEET 2.

Fig. 2.

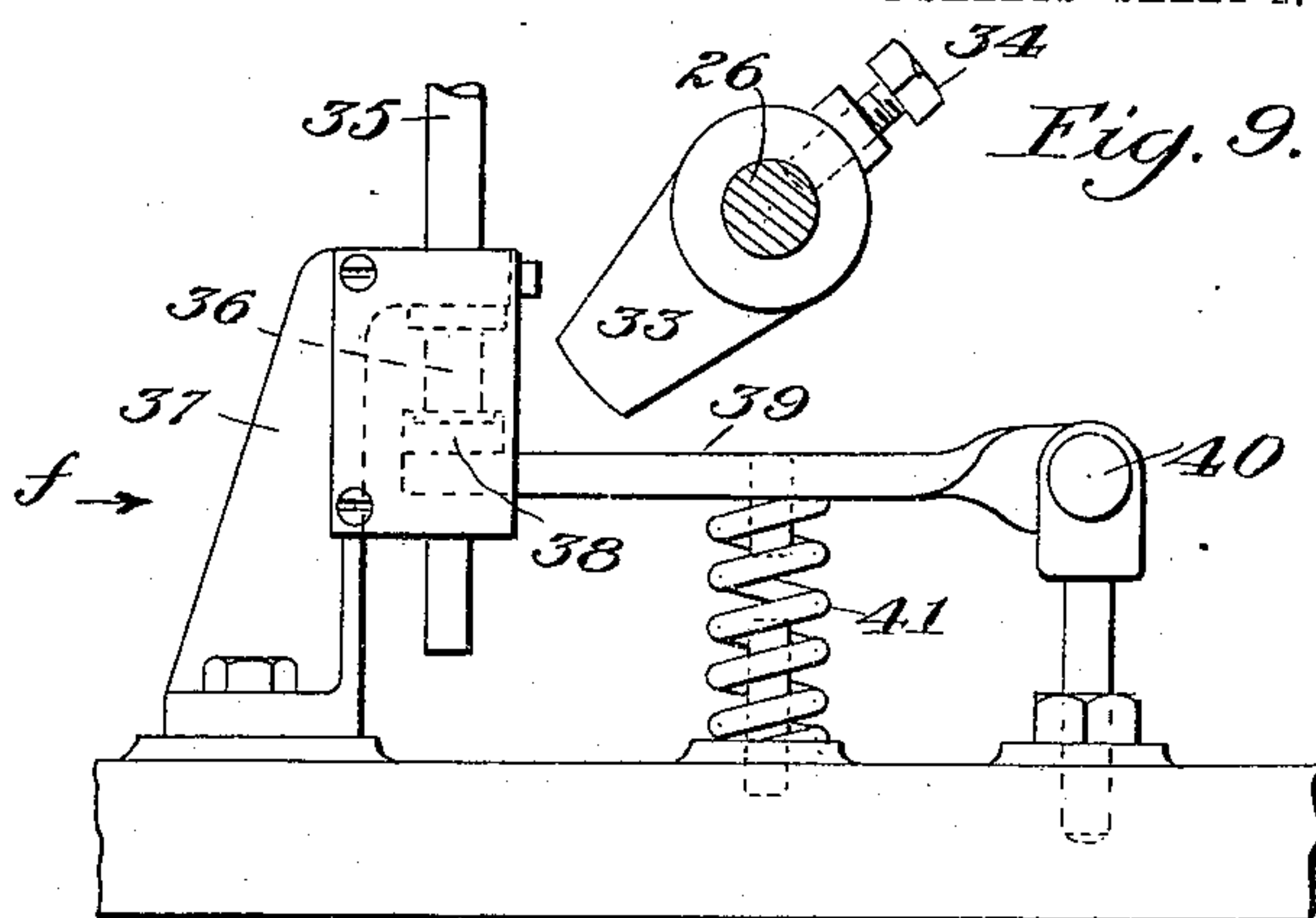
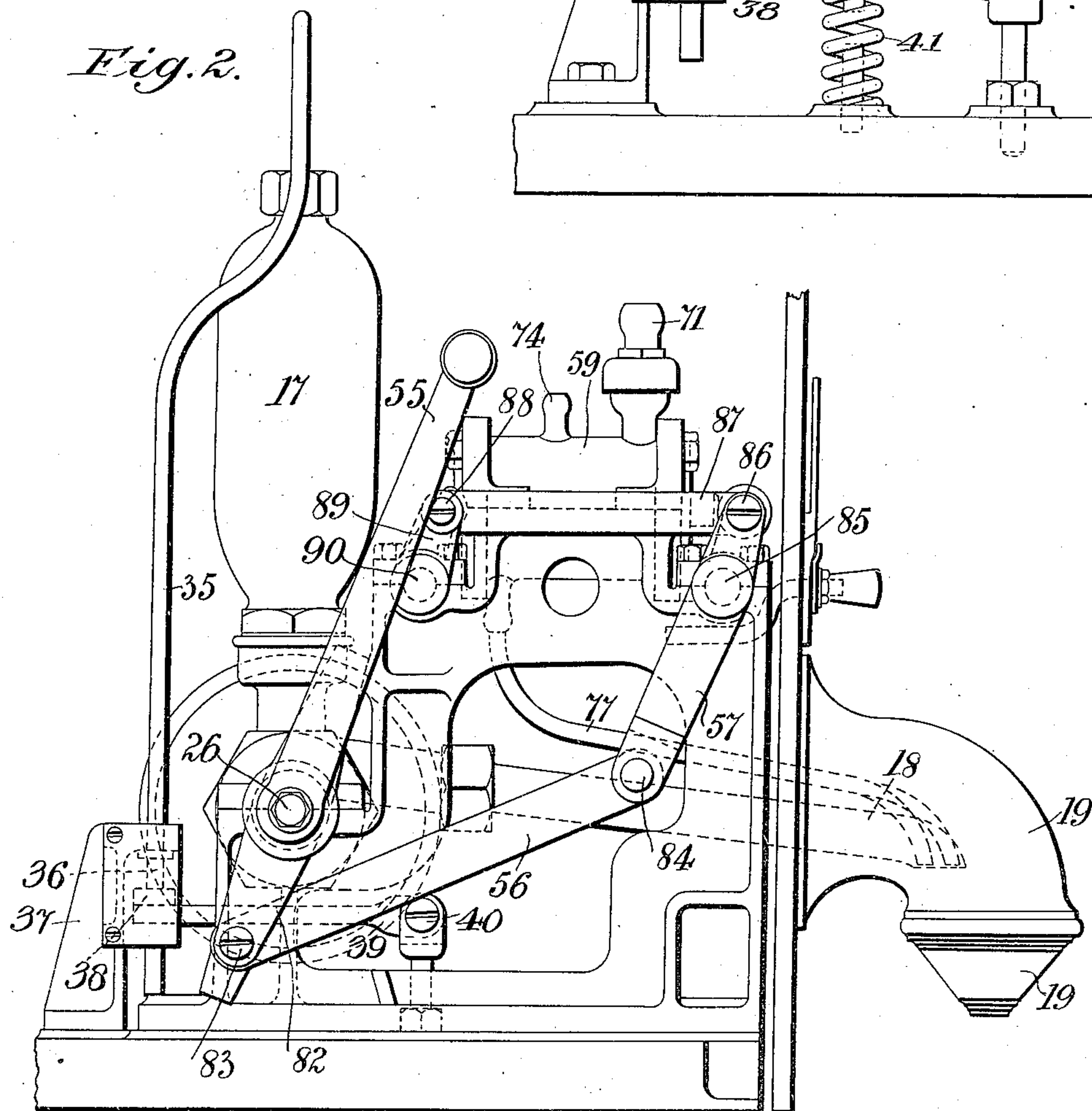


Fig. 9.

Witnesses
Geo. H. Bynum.
W. Max Durrall.

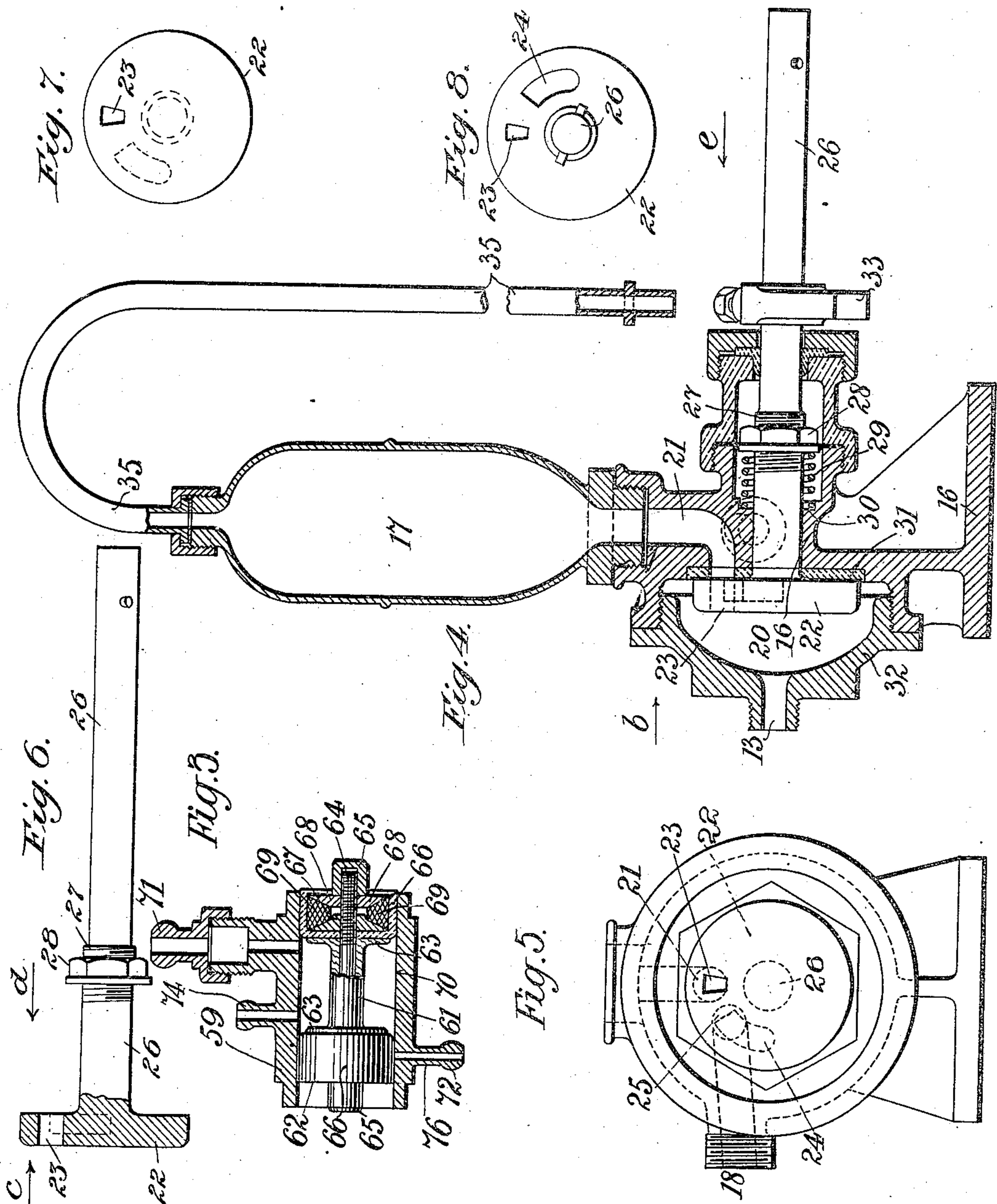
Inventor
L. J. Moser
by T. J. Henshaw & John
his Attorneys

944,458.

L. J. MOSER.
DISPENSING APPARATUS.
APPLICATION FILED NOV. 3, 1905.

Patented Dec. 28, 1909.

4 SHEETS—SHEET 3.



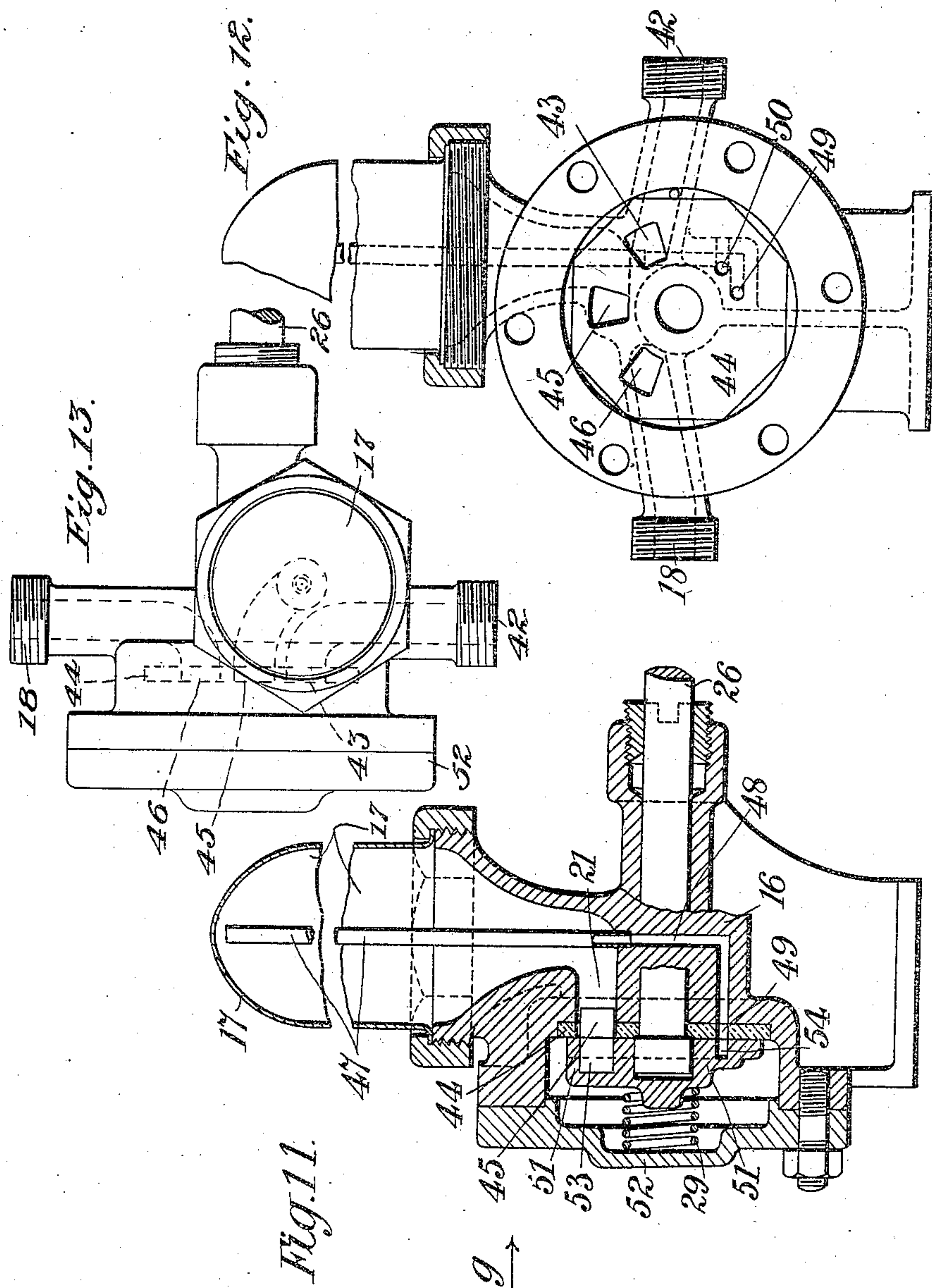
Witnesses
Geo. A. Bynum
W. Max. Durrall.

Inventor
L. J. Moser
by Wickham & Finner
his Attorneys

944,458.

L. J. MOSER.
DISPENSING APPARATUS.
APPLICATION FILED NOV. 3, 1906.

Patented Dec. 28, 1909.
4 SHEETS—SHEET 4.



Witnesses
Geo. A. Bynne.
W. Max. Duwall.

Inventor
L. J. Moser
by Wilkinson & Fisher
his Attorneys.

UNITED STATES PATENT OFFICE.

LESLIE JAMES MOSER, OF LONDON, ENGLAND, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO THE CORY TEMPERANCE SYNDICATE LIMITED, OF LONDON, ENGLAND, A BRIT-
ISH JOINT STOCK COMPANY.

DISPENSING APPARATUS.

944,458.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed November 3, 1905. Serial No. 285,752.

To all whom it may concern:

Be it known that I, LESLIE JAMES MOSER, engineer, a subject of the King of Great Britain, residing at 94 Cannon street, London, England, have invented certain new and useful Improvements in Dispensing Apparatus, of which the following is a specification.

My invention relates to improved dispensing apparatus, and the object of my invention is to provide a machine for delivering mixed beverages, flavored or not, the beverage and the material to be mixed therewith flowing out together through a delivery spout.

The apparatus is primarily designed for delivering aerated water mixed with a flavoring syrup, like the ordinary soda water. It is not restricted to this use, however, as plain soda may be delivered by the apparatus, or liquids other than water, for example, cider may be delivered without flavoring mixtures by the apparatus, or alcoholic drinks, plain or mixed, may be delivered in the same way.

The present invention is an improvement upon my former patent, No. 730,286, dated June 9, 1903.

In the accompanying drawings—Figure 1 is an elevation of the complete apparatus, the syrup tanks being omitted. Fig. 2 is an end elevation of the same. Fig. 3 is a longitudinal section partly in full lines, showing one of the syrup valves. Fig. 4 is a vertical section of part of the device, showing the sniffing arrangement. Fig. 5 is an end view of part of Fig. 4, looking in the direction of the arrow *b* of Fig. 4, with the cap removed and the measuring bottle omitted. Fig. 6 is a side view of the valve shaft and rotary valve, the latter being shown partly in section. Fig. 7 is an end view of the same, looking in the direction of the arrow *c*, Fig. 6. Fig. 8 is a view of the same valve, looking in the direction of the arrow *d*, Fig. 6. Fig. 9 is a view of a part of the machine, looking in the direction of the arrow *e*, Fig. 4, showing the means for opening the sniffing valve. Fig. 10 is a view of part of the machine, taken at right angles to Fig. 9, and looking in the direction of the arrow *f*, in Fig. 9. Fig. 11 is a vertical sectional view of a modified form of the measuring bottle, valve and

sniffing device. Fig. 12 is an end view of the same, looking in the direction of the arrow *g*, Fig. 11, with the outer cap spring and rotary valve removed, and Fig. 13 is a plan view of Fig. 11.

The aerated water is delivered from a suitable source of supply through the pipe 13, and through the valve casing 16 to the measuring bottle or vessel 17, see Fig. 4, and thence through the discharge pipe 18 to the delivery spout 19, Fig. 2, the admission of said liquid to and from said measuring bottle 17 being controlled by either of two valve arrangements, which will be hereinafter specifically described.

Referring more particularly to Figs. 4 to 9, the pipe 13 delivers the aerated liquid into the valve chamber 20, from whence it passes through the passage 21 to the bottle 17, being controlled in its passage by the rotary disk valve 22. This valve is provided with an aperture 23 therethrough, and a concealed port or valve passage 24 on the inner face thereof, see Fig. 8. This port 24 is adapted to connect the passage 21 with the outlet passage 25 leading to the discharge pipe 18, see Fig. 5. Before this connection can be established between said passageways 21 and 25, however, the rotation of the valve 22 first moves the port 23 out of register with the passage 21, so that all connection between the chamber 20 and the passageway 21 is cut off. Said disk valve 22 is formed or fixed on a shaft 26, which is provided with a screw-threaded portion 27, on which a nut 28 is secured. A coiled spring 29, the tension of which can be varied by changing the position of the nut 28, is interposed between said nut and the annular ledge 30 in the valve casing 16, the object of this spring being to keep the rotary valve 22 closed against the flush valve facing 31 in the valve casing 16 and to thus make a tight joint. 32 is a screw cap which fits into one end of the valve casing, and which may be removed in order to obtain access to said valve 22 when desired. The shaft 26 of the rotary valve is prolonged, as shown in Figs. 4 and 6, and at its outer end has fixed to it the main operating handle 55. At an intermediate point between the valve 22 and the handle 55 there is fixed to the shaft 26 a tappet or crank arm 33 provided with a set screw 34, see Fig. 9, whereby said tappet may be adjusted in any

desired position around the shaft 26. 35 represents a snifting or gas pressure relieving pipe. This pipe leads from the top of the measuring bottle 17 and is bent downwardly, its lower end terminating close to the shaft 26, and this lower end passes through a bracket 37. The lower open end 36 of this pipe 35 is normally closed by the valve 38, which is carried on the arm 39, pivoted at 40 on a screw stud carried by the bottom plate of the apparatus. The arm 39 is normally pressed upward by the spring 41, said spring being strong enough, under ordinary circumstances, to hold the valve 38 in contact with the lower end of the pipe 35, keeping said pipe 35 closed. The outlet pipe 18 leads into the delivery spout 19, where the liquid delivered by said pipe is mixed with the flavoring extract or other liquid. When the shaft 26 is rotated by the operating lever 55, the disk valve 32 first cuts off connection between the source of supply of the aerated water or other liquid and the measuring bottle 17. A further movement of the handle causes the tappet 33 to strike the arm 39, opening the lower end of the pipe 35. The gas which has accumulated in the upper part of the measuring bottle 17 then immediately rushes out through the pipe 35, relieving the gas pressure in said measuring bottle, so that the liquid in the measuring bottle 17 will, when the valve is further rotated, flow out by gravity alone, and not be forced out by gas pressure.

A modified form of the valve arrangement controlling the admission and discharge of the liquid to and from the measuring bottle 17, and a modified form of snifting device, is shown in Figs. 11 to 13, which will now be described. The pipe which delivers the aerated water, or other liquid, from a suitable source of supply, is connected to the inlet pipe 42, Fig. 12, this inlet pipe 42 terminating in the port 43 in the valve facing 44, see Figs. 11 and 12. 45 is another port in said valve facing 44, which is in communication through the passage 21 with the measuring bottle 17. 46 is a third port in the valve facing 44 in open communication with the delivery pipe 18, which, as stated before, delivers into the delivery spout 19. In this modification, the gas pressure in the measuring vessel 17 is relieved as follows: A pipe 47 is located inside the measuring vessel 17, the upper open top end of which pipe is located near the top of said measuring vessel or bottle, and the lower end of said pipe 47 being in communication with a passage 48 in the valve casing 16. This passage 48 terminates in a port 49 in the valve facing 44, while another port 50, in open communication with the exterior of the casing, see Fig. 12, is arranged in said valve facing adjacent to the port 49. The valve in this modification is a rotary disk valve

51, see Fig. 11, fixed on the shaft 26, and rotated by the latter, as before described. 29 is a spring located between the inside of the movable cap 52 and bearing on the outside of said valve 51. In this valve 51, two concealed ports or sunk passages are provided. One of these passages 53, when the valve is in its normal position, that is to say, before the handle or lever 55 is operated, connects the two ports 43 and 45, so that aerated water or other liquid is supplied through the pipe 42 to the measuring bottle 17. In this position the other port 54 is so located that the port 49 of the snifting device is closed. When the shaft 26 is turned by the lever 55 the port 43 is first closed, so that communication is cut off between the source of supply and the measuring bottle 17. A further movement of the lever 55, by means of the concealed port 54 in the valve, opens communication between the port 49 and the port 50, whereupon the gas in the measuring bottle 17 immediately escapes through the pipe 47 and ports 49, 54 and 50, to the atmosphere. A further movement of the lever 55 causes the port 53 in the valve 51 to open communication between the port 45 to the port 46, whereupon the liquid contents of the measuring bottle 17 flow by gravity through the passages and ports 21, 45, 53, 46 and 18 to the delivery spout.

The construction of the improved syrup delivery valve is best shown in Fig. 3. 61 represents the valve stem, and on this stem are mounted two pistons, one of these pistons 62 being shown in elevation in Fig. 3, while the other piston, of similar construction, is shown in section. The valve stem 61 has near each end thereof a collar or central boss 63. The valve stem is hollow, and through the center of this stem passes a central pin 64, screw threaded at each end, for the reception of the screw caps 65. Around each end of the pin 64 is placed a leather bucket or cap 66, which cap opens outwardly. Inside the cap are placed two conical faced metal washers 67 and 68, and between the conical faces of said washers a thick rubber washer 69 is located, this rubber washer being annular in shape and thickest on the outside. The three washers 67, 68 and 69 are all located within the cavity of the leather bucket 67, and are all forced against each other and held in position by the screw cap 65. Thus it will be seen that if the leather bucket 66 becomes worn, or if for any other reason it requires adjusting, such adjustment may easily be accomplished by simply screwing up one of the caps 65.

The syrup tanks and supply valves are not shown, but it is, of course, contemplated that they should be removably connected with the syrup valve casings 59, so that the latter may be cleaned at any time.

A nipple 71 is provided on each syrup valve casing 59, to which the pipe from the syrup supply tank is connected. Similarly, a nipple 76 is provided on the syrup valve casing with which the pipes 77 are connected which lead to the delivery spout 19, the syrup passing down through one of the pipes 77, and the aerated water coming in through the pipe 18 being mixed in the delivery spout 19. The nipples 76 are each provided with an enlargement 72, so that the pipes 77 will not slip off of said nipples. 74 is another nipple on the top of each of said syrup valve casings 59, which permits air to enter said valve when the syrup flows off, so that the formation of a partial vacuum in said valves will not interfere with the flow of the syrup. The syrup valve casing 59, in its interior construction, is a cylinder open at both ends, as shown at 70.

Referring to Figs. 1 and 2, the means for operating the apparatus so as to deliver the contents of any particular one of the syrup valves mixed with the contents of the measuring bottle will now be described.

The shaft 26 has fixed to it an arm 82 and to this arm is pivoted at 83 a link 56, the other end of which link 56 is pivoted at 84 to a vibrating lever 57, which lever is in turn fixedly attached to a shaft 85, square in cross section. On this shaft is mounted a slide 60, so that the said slide can be easily moved along said shaft, either opposite to, or between the cap 65 of the syrup valve, but will be compelled to rotate by the rotation of said shaft. The upper end of the lever 57 projects above the shaft 85, and to its upper end is pivoted at 86 a link 87, the other end of which is pivoted at 88 to a crank 89 which is fixed on a back shaft 90. On this shaft 90, opposite the center of each one of the syrup valves, is mounted an upwardly-projecting arm, like the crank 89.

The operation is as follows: If it is desired to deliver an unmixed liquid, as plain soda, for example, the slide 60 is moved, so that the upper part thereof is between two of the syrup valves. The handle lever 55 is then operated, whereby the gas in the measuring bottle 17 is first allowed to escape, and whereby the liquid in said bottle is then allowed to flow out through the delivery spout 19 by gravity. If it is desired to deliver aerated water, or other liquid, mixed with syrup, for example, the slide 60 is moved, so that its upper part is exactly opposite the screw cap 65 on one of the syrup valves. The movement of the handle or lever 55 first relieves the gas pressure in the measuring bottle 17, and then simultaneously opens the selected syrup valve, and the communication between the measuring bottle 17 and the outlet pipe 18, whereby the water and syrup are delivered simultane-

ously through the delivery spout 19. When the handle 55 is turned in the opposite direction, the projections on the shaft 90 move back the syrup valve which has been operated to its normal position.

It is obvious that if a double flavored extract or a compound beverage is desired, additional slides like the slide 60 may be provided on the shaft 85.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is:—

1. In a dispensing apparatus, the combination of a measuring vessel, a snifting pipe connected to the top of said vessel, inlet and outlet pipes for said vessel, a disk valve provided with openings and passages and governing the connections between said vessel, and said inlet and outlet pipes, a rock shaft on which said valve is mounted, and means operated by the motion of said rock shaft for periodically opening the end of said snifting pipe, substantially as described.

2. In a dispensing apparatus, the combination of a casing, liquid inlet and outlet pipes connected thereto, a measuring vessel connected to said casing, a snifting pipe connected to said measuring vessel, a valve normally closing one end of said snifting pipe, a disk valve in said casing provided with a passage and a cut away portion, a rock shaft for operating said disk valve, said rock shaft being provided with devices for periodically opening the valve on the snifting pipe, and means operated by the movement of said rock shaft to allow a charge of syrup to flow into the discharge pipe, substantially as described.

3. In a dispensing apparatus, the combination of a casing, a liquid inlet and a liquid outlet pipe connected to said casing, a second outlet pipe in which said outlet pipe delivers, a measuring vessel connected to said casing, a snifting pipe connected to said measuring vessel, a spring-pressed valve normally closing the end of said snifting pipe, a disk valve provided with a passage and a cut away portion, located in said chamber, a rock shaft for operating said valve, means carried by said rock shaft for periodically opening the valve on the end of the snifting pipe, syrup pipes delivering into said second named outlet pipe, and means operated by the movement of said rock shaft for delivering a charge of syrup and a charge of aerated water through the main outlet pipe simultaneously, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

LESLIE JAMES MOSER.

Witnesses:

E. GAUDER,
FREDK. L. RAND.