

Feb. 24, 1953

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2,629,614

DISPENSING DEVICE

Filed June 5, 1946

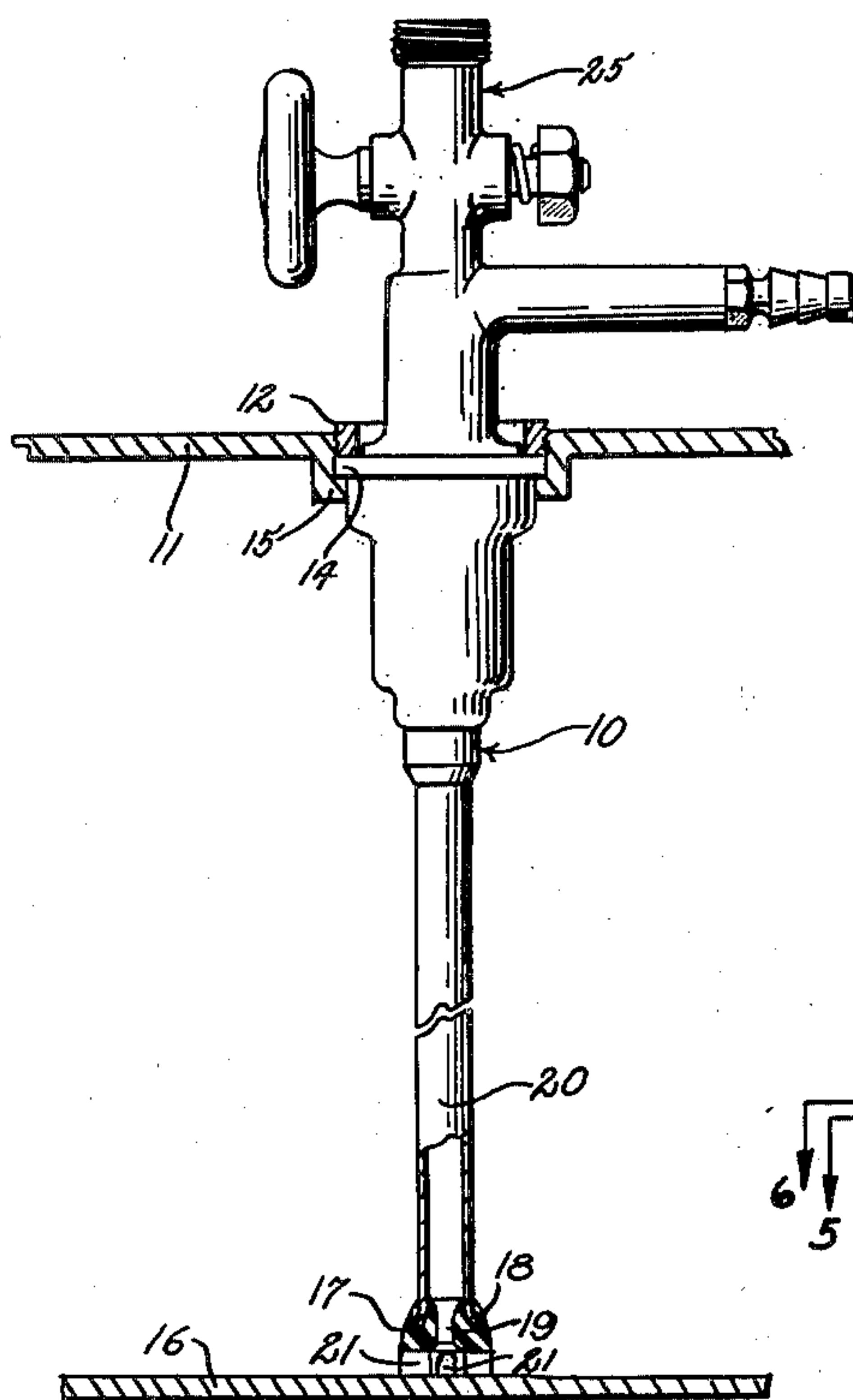


FIG. 1

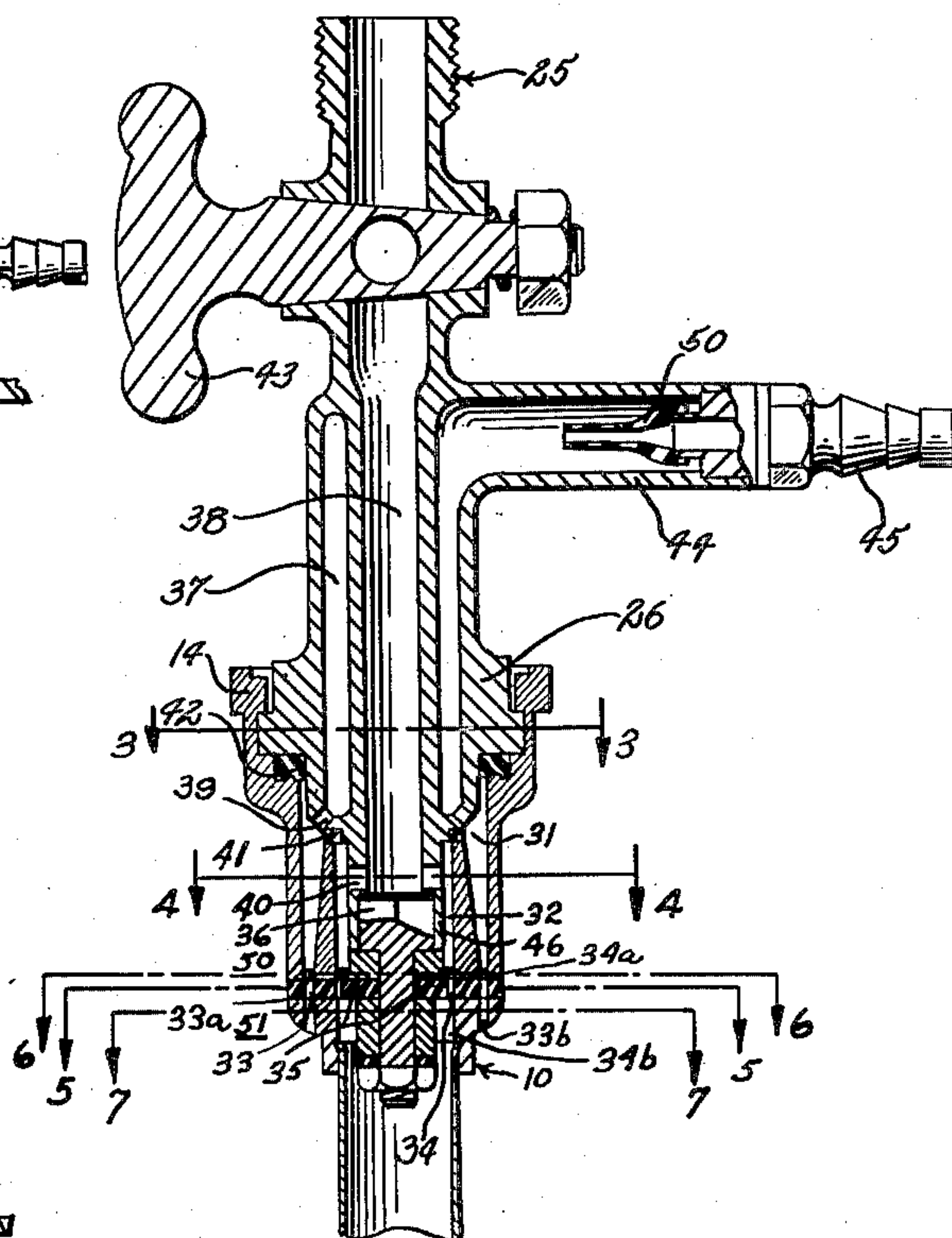


FIG. 2

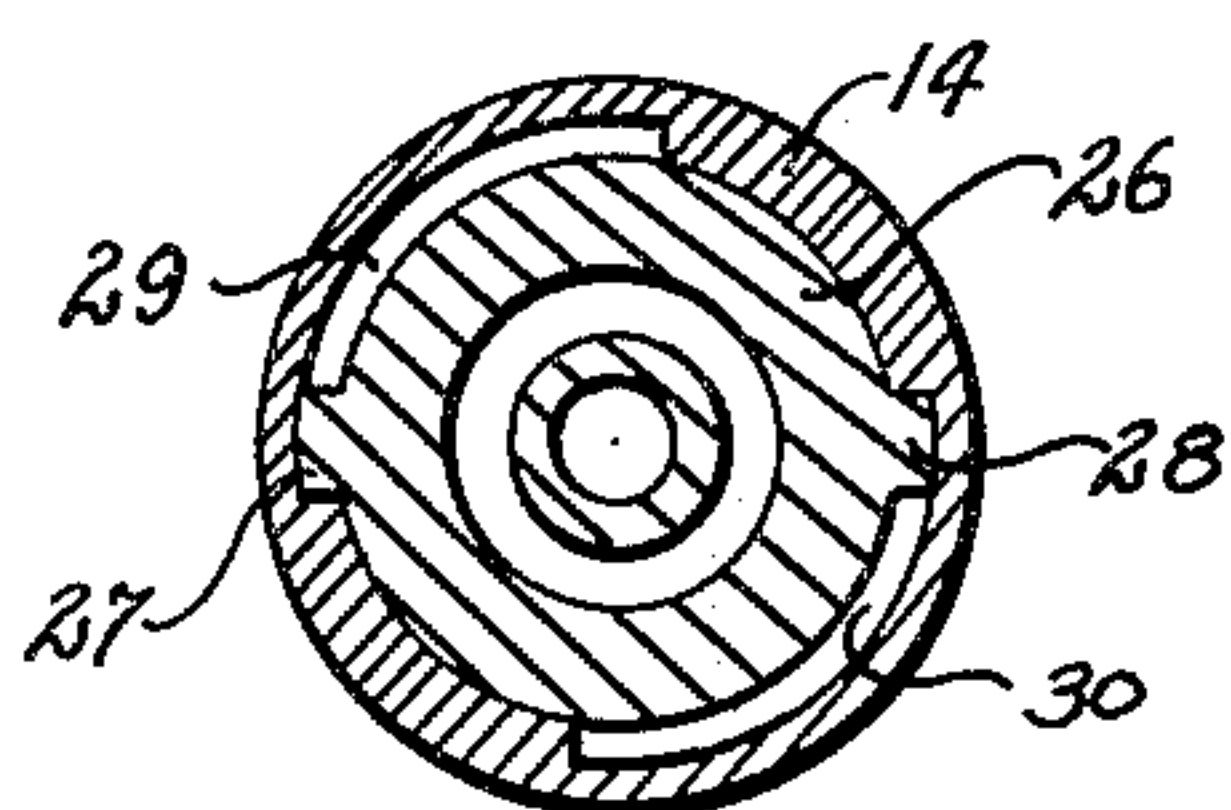


FIG. 3

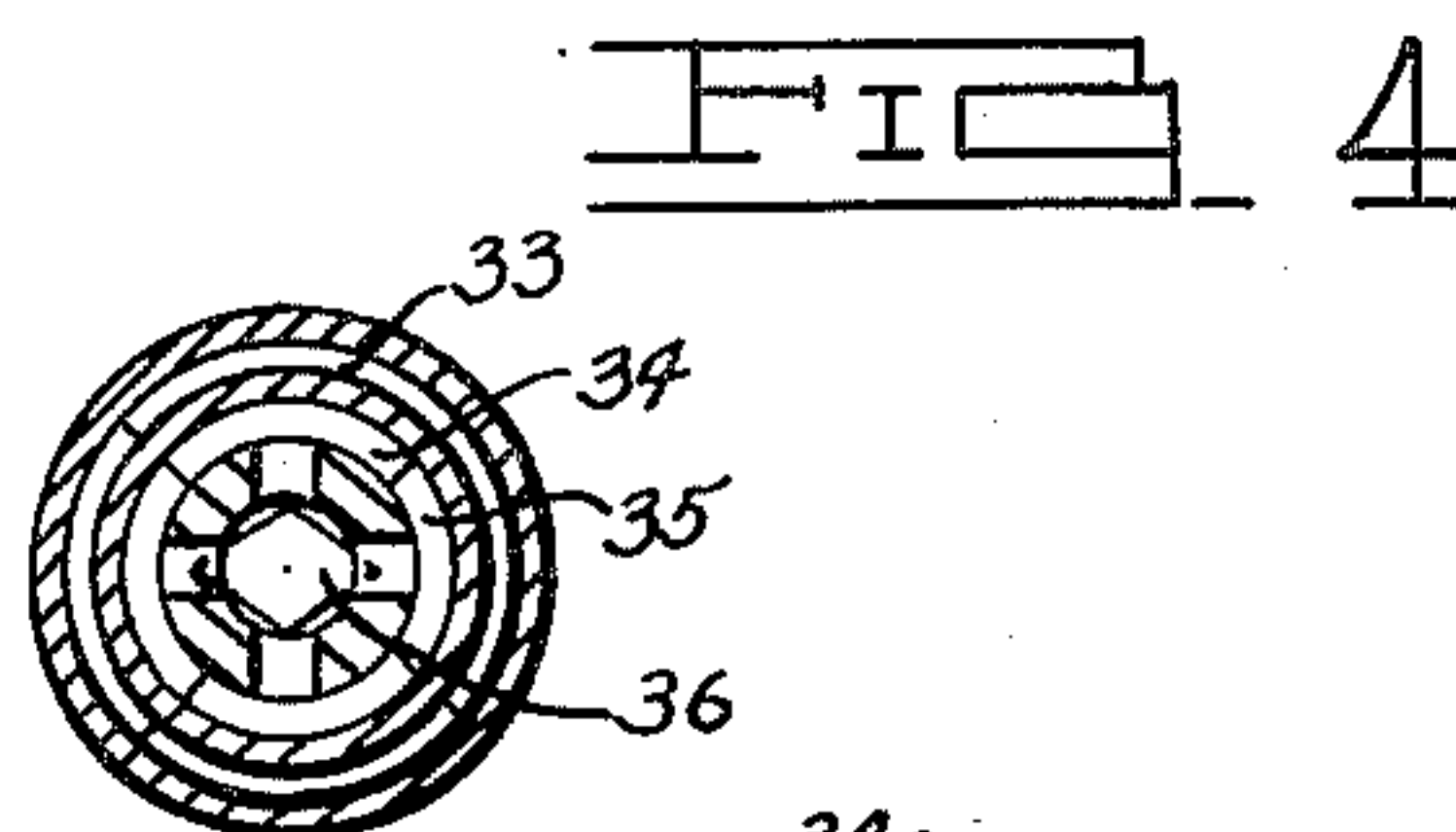


FIG. 4

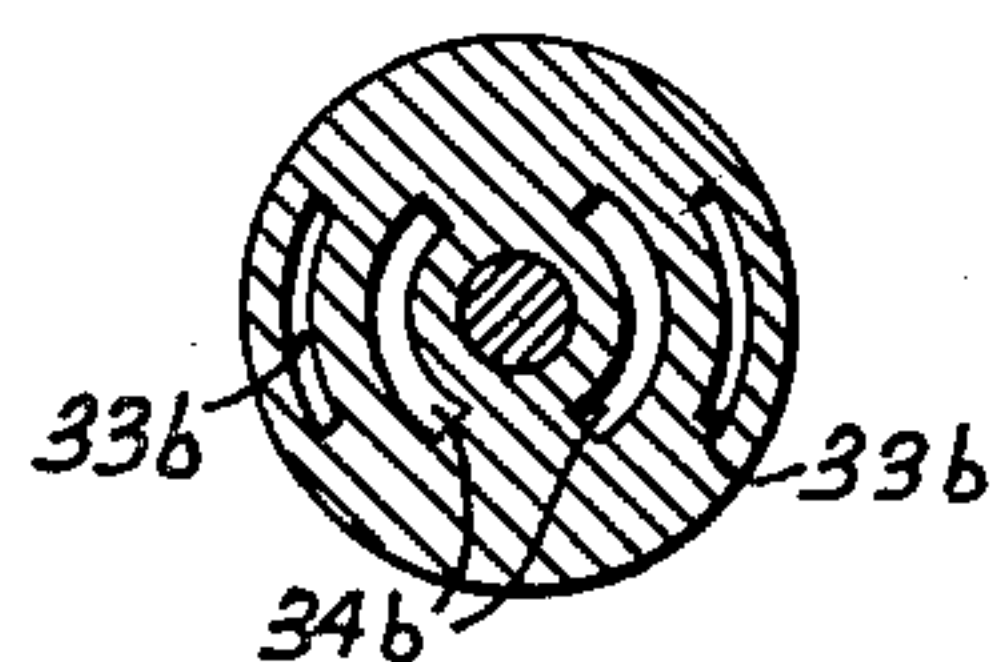


FIG. 5

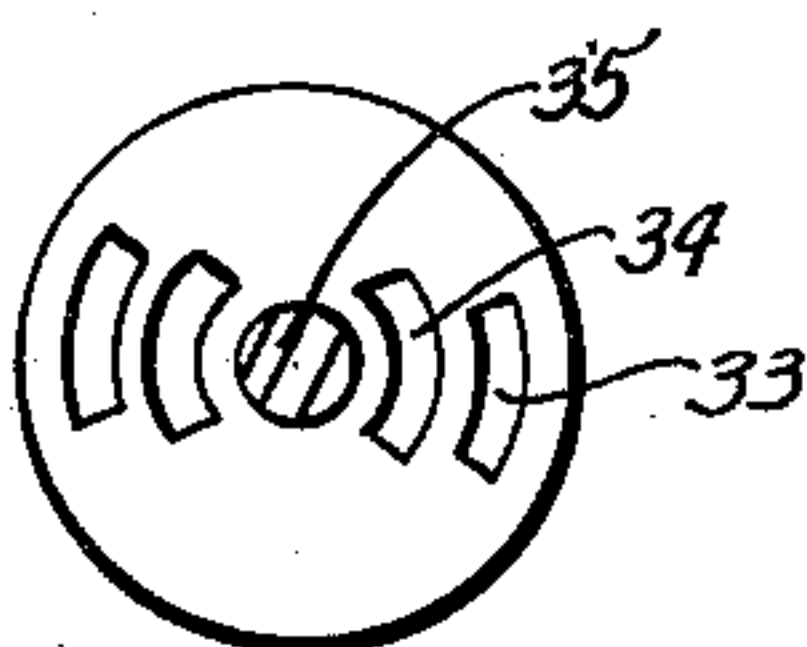


FIG. 6

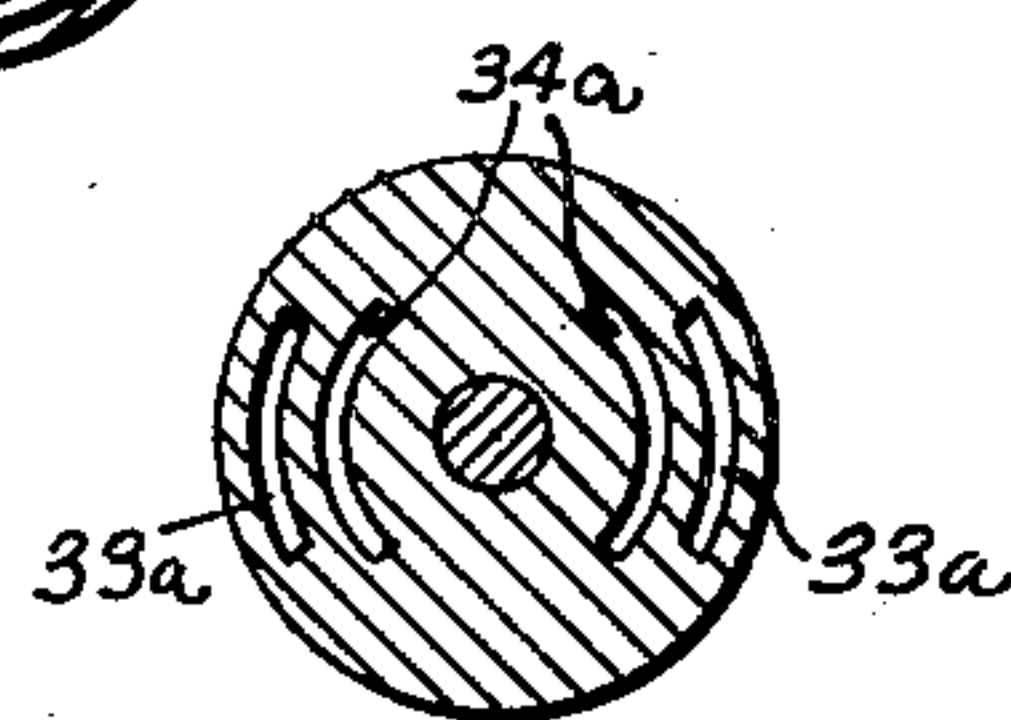


FIG. 7

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2,629,614

DISPENSING DEVICE

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Application June 5, 1946, Serial No. 674,485

1 Claim. (Cl. 284—15)

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This invention generally relates to liquid dispensing apparatus for barrels and particularly pertains to a new, useful, and inventive beer barrel tap, a portion of which is permanently fixed within the barrel and a portion of which is detachably affixed to the exterior of the barrel when it is desirable to tap the barrel.

An object of the invention is to equip a barrel with a permanent internal fixture which is adapted to cooperate with an external fixture to open the barrel for dispensing the liquid contained therein and to close the barrel for sending the barrel back to the brewery for refilling.

An object is to provide an external fixture that cooperates with the barrel internal fixture and which attaches itself to the barrel via the internal fixture and acts as means for opening the barrel and dispensing the liquid when it is attached to the barrel.

Another object is to provide a barrel tapping means that closes the barrel when the external fixture is removed from the barrel.

A further object is to provide a barrel tapping means that is permanently affixed to the barrel that is engineered so that it can be made with a minimum of machinery and which comprises few parts that are easy to clean before the barrel is refilled.

A further object is to provide a rubber gromet or flexible member on the end of the feed tube at the bottom of the barrel which is press fitted against the bottom of the barrel and which absorbs any differences in barrel dimension from top to bottom and which is adapted to get the last drop of liquid from the barrel as the intake orifices are at the very bottom of the barrel.

Various other objects and advantages will be apparent from the following description and the attached drawings, in which:

Fig. 1 is a side elevational view of the invention showing the barrel fixture permanently affixed thereto with the external tap fixture detachably connected;

Fig. 2 is a somewhat enlarged longitudinal cross sectional view of a portion of Fig. 1 showing the bayonet slot connecting means and the liquid and air chambers with their connecting orifices;

Fig. 3 is a cross sectional view of Fig. 2 taken on the line 3—3 thereof showing the bayonet slot attaching means;

Fig. 4 is a similar view of Fig. 2 showing the diamond headed nut which operates the disc type valve in opening and closing the barrel;

Fig. 5 is a similar view to Figs. 3 and 4 showing the orifices of the moving disc of the valve;

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Figure 6 is a cross sectional view of Figure 2 taken on the line 6—6 thereof showing the upper orifices; and

Figure 7 is a cross sectional view of Figure 2 taken on the line 7—7 thereof showing the lower orifices.

Referring to the drawings, the barrel portion 10 of the invention, Figs. 1 and 2, is secured to the top 11 of the barrel by ring nut 12 which holds flange 14 of the invention against flange 15 of the barrel thereby sealing the peripheral opening. At the other end of the invention 10 and adjacent the bottom 16 of the barrel is rubber gromet or flexible member 17 which has internal core 18 for receiving and retaining the outwardly flanged end 19 of tube 20. Also formed in the member 17 are orifices 21 which allow the beer or other liquid in the barrel to enter the tube 20. The member 17 is press fitted against the bottom of the barrel and as it is flexible, it absorbs any differences in a barrel's dimension from top to bottom and it also presses its orifices 21 against the bottom of the barrel so that the intake orifices are at the very bottom of the barrel which enables the last drop of liquid to be drawn therefrom.

The dispensing portion 25, Figs. 2 and 3, of the invention, has a bell or enlarged part 26 adjacent its center equipped with lug 27 and lug 28 adapted to operate in bayonet slots 29 and 30 respectively in the flange 14 of the barrel part 10, which connects the barrel member 10 and the tap member 25 together. The slots 29 and 30 and the lugs 27 and 28 are so arranged that the dispensing portion 10 can be put on backwards as lug 28 is the same as lug 27 and the slots are so arranged that a quarter turn connects the two parts regardless of how the members are connected.

Referring now to the internal construction of the invention, the barrel portion 10, Figures 2, 4, 5, 6 and 7, has air or gas intake chamber 31 surrounding beer or liquid outlet chamber 32. Air chamber 31 communicates with the interior of the barrel via arcuate orifices 33a in the base of the upper member 50 of barrel portion 10, arcuate orifices 33 of disc-type valve 35, and arcuate orifices 33b in the head of lower member 51 of barrel portion 10. Liquid outlet chamber 32 communicates with the interior of the barrel via arcuate orifices 34a in the base of the upper member 50 of barrel portion 10, arcuate orifices 34 of disc-type valve 35 and arcuate orifices 34b. Disc type valve 35 operated by diamond headed nut 36 to which it is keyed may be rotated a quarter turn. In so doing arcuate orifices 33 no longer register with arcuate orifices 33a and 33b. In like manner ar-

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cuate orifices 34 no longer register with arcuate orifices 34a and 34b. This closes the communication between the interior of the barrel and the air and liquid chambers 31 and 32.

The tap portion 25 has air or gas chamber 37 surrounding liquid chamber 38 which chambers communicate with the air and liquid chambers 31 and 32 of the barrel portion 10 via apertures 39 and 40 respectively. Gaskets 41 and 42 seal off the chambers from each other. The liquid chamber 38 is equipped with a valve 43 for turning the flow of the liquid on and off while the air chamber 37 is connected via pipe 44 to air intake nozzle 45 and valve 50. The tap portion 25 is also equipped with socket end 46 which is adapted to fit the diamond headed nut 36 for operating the disc type valve 35.

In operation, the barrel is filled with liquid and the valve 35 is in the off position. In the off position disc type valve 35 is so adjusted in its angular position that orifices 33 and 34 are out of register with orifices 33a, 33b and 34a, 34b respectively. The tap portion 25 is then inserted within the ring nut 12 into the barrel portion 10 with the socket 46 fitting the diamond nut 36 and the lugs 27 and 28 positioned in the slots 29 and 30 respectively. The tap portion 25 is then given a quarter turn which seats the lugs and connects the portions 10 and 25. The rotation of diamond nut 36 also causes the disc type valve 35 to rotate a quarter turn. This brings orifices 33 in register with 33a and 33b. It also registers orifices 34 with 34a and 34b.

Air or gas pressure can now be fed into the barrel via nozzle 45, valve 50, tube 44, chamber 37, orifices 39, chamber 31, orifices 33a, orifices 33 and orifices 33b.

Liquid can be drawn out of the barrel via apertures 21 in gromet 17, tube 20, orifices 34b, orifices 34, orifices 34a, chamber 32, orifices 40 and chamber 38 by placing the valve in the open position.

After the liquid has been drawn from the barrel, the tap member 25 is removed from the barrel member 10 by a reverse quarter twist which closes the valve 35 thereby sealing the barrel from dirt, and foreign matter until it is returned to the brewery.

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It can now be seen that the permanent barrel fixture and the detachable tap fixture can be easily cleaned at the brewery as there are no complex turns in the fixture and no pockets that would trap a quantity of beer and so sour the barrel. It can also be seen that the fixtures are engineered so that they can be easily manufactured.

Various adaptations, substitutions, omissions, and additions can be made to the invention without departing from the spirit thereof as the invention is limited only by the scope of the appended claim.

I claim:

A barrel, a tap receiving fixture carried by said barrel, said fixture having an air chamber terminating in a set of arcuate orifices, a liquid chamber coaxial with said air chamber terminating in a set of arcuate orifices and a disc valve having a first set of arcuate orifices registerable with said air chamber orifices and a second set of arcuate orifices registerable with said liquid chamber orifices, a tap fixture having an air chamber and a liquid chamber for communicating with said air and liquid chambers in said tap receiving fixture, means carried by said tap fixture for adjusting the angular position of said disc valve whereby the register of said orifices is altered.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
602,510	Knapp	Apr. 19, 1898
614,465	Haberman	Nov. 22, 1898
842,343	Schilling et al.	Jan. 29, 1907
850,070	Spikes	Apr. 9, 1907
911,225	Flach et al.	Feb. 2, 1909
1,021,669	Frisholm	Mar. 26, 1912
2,174,354	Shields	Sept. 26, 1939
2,223,012	Wanderski et al.	Nov. 26, 1940

FOREIGN PATENTS

Number	Country	Date
103,116	Germany	May 12, 1899