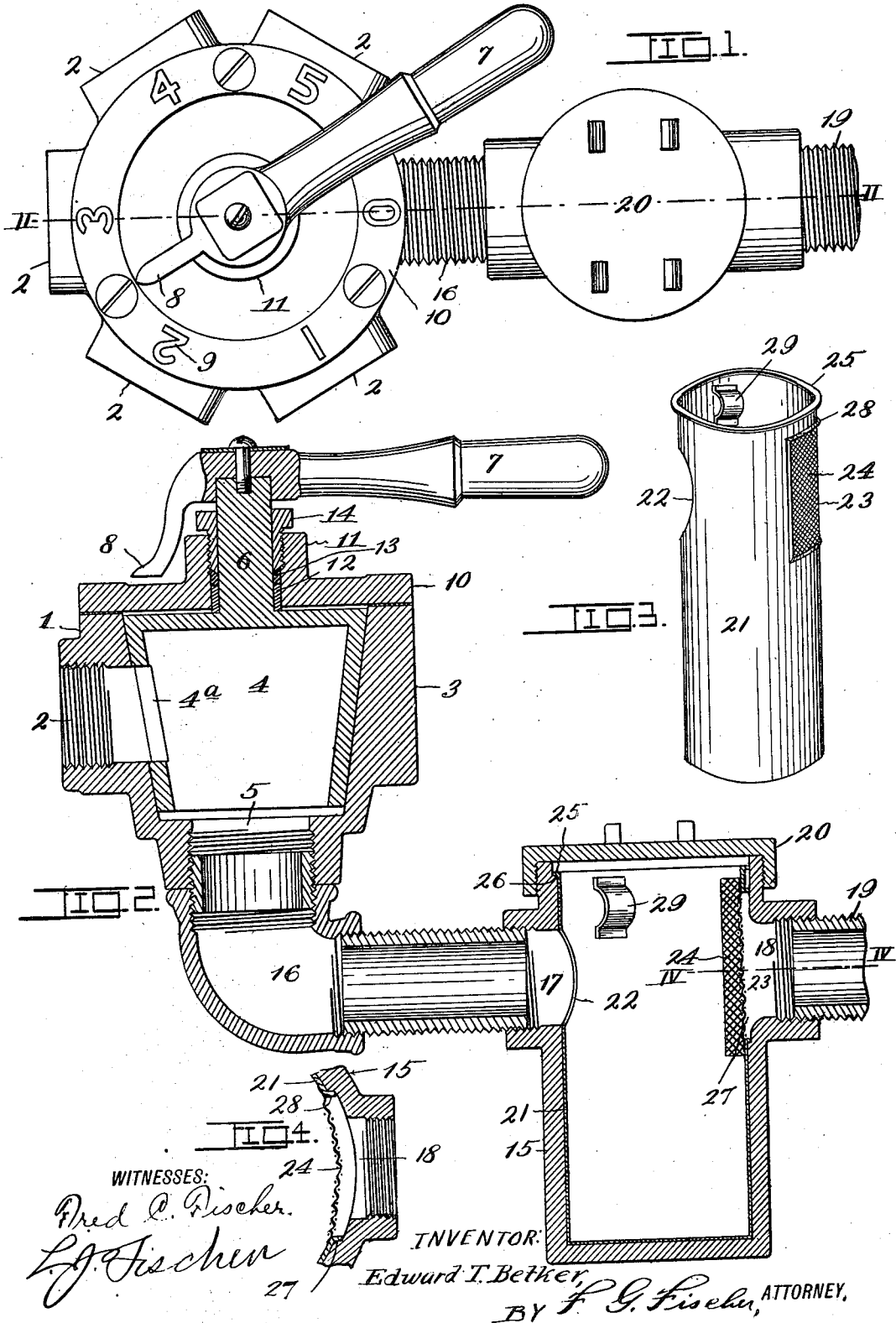


E. T. BETKER.
MULTIWAY VALVE.
APPLICATION FILED NOV. 22, 1915.

Patented Feb. 6, 1917.

1,214,747.



WITNESSES:

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MULTIWAY VALVE.

1,214,747.

Specification of Letters Patent.

Patented Feb. 6, 1917.

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To all whom it may concern:

Be it known that I, EDWARD T. BETKER, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Multiway Valves, of which the following is a specification.

My invention relates to multiport valves, and while susceptible to many uses is well adapted to gasoline systems of clothes cleaning establishments where gasoline is pumped to a plurality of dry cleaning machines from a common supply tank, and after being used for cleaning purposes is pumped back to said tank.

Heretofore it has been customary to provide each cleaning machine with a valve to control the supply and discharge of gasoline to and from such machine, but by using my invention only one valve is required at the discharge side and another at the suction side of the pump, and the individual valves for the cleaning machines may be dispensed with.

The invention also embodies a strainer to be used with my valve on the suction side of the pump, for the purpose of collecting ravelings, buttons, pins and other articles drained from the cleaning machines, so that such articles cannot find their way to said supply tank.

In order that the invention may be fully understood, reference will now be made to the accompanying drawing, in which:

Figure 1 is a plan view of the valve and strainer. Fig. 2 is a vertical section on line II—II of Fig. 1, with the handle of the valve adjusted in alinement with said section line. Fig. 3 is a detail perspective of the strainer removed from the trap in which it is normally used. Fig. 4 is a broken, horizontal section, enlarged, on line IV—IV of Fig. 2.

In constructing my valve, I employ a shell 1 having a plurality of ports 2 radiating therefrom. Said ports are spaced equal distances apart, except at one side, where a solid portion 3 is left in the shell, so that all of the ports may be closed by the valve plug 4, as will hereinafter appear. The bottom of the shell 1 has a central port 5 extending therethrough to communicate with the open end of the hollow valve plug 4, which has a side port 4^a, adapted to communicate with any of the ports 2. The interior of the shell

1 and the valve plug 4 are tapered, as disclosed by Fig. 2, to insure a sufficiently tight joint to prevent gasoline from flowing through said joint.

The valve plug 4 is provided at its closed upper end with a centrally-disposed stem 6 and a handle 7, which latter has a downwardly-extending pointer 8 at its forward end to coact with numerals 9, to indicate which of the ports 2 the port 4^a is in communication with. The numerals are formed on the shell cap 10 and in the present instance, run from "0" to "5" inclusive, the "0" being arranged above the solid portion 3, while each of the remaining numerals is arranged centrally above a port 2. As the pointer 8 is directly above the port 4^a the location of the latter can at all times be determined by the former, and as the numerals "1" to "5", inclusive, correspond with similarly designated cleaning machines communicating with the ports 2, it is obvious that communication between my valve and any of said cleaning machines can be readily established, or such communication can be readily cut off by turning the handle 7 until the pointer 8 registers with the "0" on the cap 10.

The cap 10 has an upwardly-extending tubular portion 11, loosely fitting around the stem 6 to admit a ring 12, packing 13 and a gland 14. With the foregoing arrangement it is obvious that proper adjustment of the gland 14 will keep the valve plug 4 snugly to its seat, while the packing 13 will prevent leakage of gasoline around the stem 6.

Referring now to the strainer constituting part of the present invention, 15 designates a trap communicating with the port 5 through pipe connections 16. Said trap 15 has an inlet port 17 communicating with the pipe connections 16, and an outlet port 18 communicating with a pipe 19, which in turn may communicate with the pump above-referred to. A screw cap 20, is employed to close the upper open end of the trap 15, so that a strainer 21 can be inserted or removed from said trap when the cap 20 is taken off. The strainer 21 has an inlet port 22 to communicate with the port 17 and an outlet port 23 to communicate with the outlet port 18. A fine screen 24 is placed over the outlet port 23 to prevent the passage of impurities with the gasoline or other liquid passing outward through said port. The upper portion of the

strainer 21 has a marginal flange 25 to rest upon a circular shoulder 26 in the upper portion of the trap 15, to prevent gasoline from passing between the walls of the strainer and the trap. The screen 24 is of larger area than the outlet port 18, so that it will have approximately the same capacity as said outlet port 18, and in order that the capacity of the screen may not be restricted a recess 27 is formed in the trap around the port 18 to allow gasoline to flow through nearly all the interstices in the screen 24.

A bead 28 surrounding the margin of the screen 24 and adapted to abut the margin of the recess 27, is provided on the strainer 21 to prevent gasoline in said recess from flowing around between the walls of the strainer and the trap. The upper portion of the strainer 21 is provided with a handle 29, whereby it may be lifted from the trap 15 when it is necessary to empty said strainer of foreign matter collected from the gasoline or other liquid flowing there-through.

According to the arrangement shown in the drawing, the ports 2 and 5 constitute the outlet and inlet ports, respectively, of the valve, but it is to be understood that this order is reversed when the cleaning machines, previously supplied by the valve structure, are drained of gasoline. In draining such machines, the gasoline passes from 5, through 16, 17 and 22, and enters the trap 15 in which latter buttons, etc., drained from the cleaning machines are

caught and prevented from passing through 19, which latter is now the outlet, by the screen 24.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. A trap having a depressed circular shoulder on its interior and beneath its top and also having a side inlet and an outlet, a strainer in the trap having its upper end turned outwardly and engaged with said shoulder, said strainer having an inlet and an outlet, said trap having a recessed part surrounding the outlet thereof, a screen extending over the strainer outlet, and a bead surrounding the margin of said screen and conformably fitted in the recessed part of the trap which surrounds the trap outlet.

2. In combination with a trap having an inlet and an outlet, a strainer in the trap having its top open and terminating below the top of the trap, interengaging means between the strainer top and the trap top to seal the space between the two, said strainer having an inlet, a screen extending across the strainer outlet, and interengaging means between the strainer at points surrounding the screen and the trap outlet to seal the space between the strainer and screen at points surrounding the screen.

In testimony whereof I affix my signature, in the presence of two witnesses.

EDWARD T. BETKER.

Witnesses:

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L. J. FISCHER.