Aug. 6, 1935. M. W. BANOWETZ 2,010,251

VALVE

Filed June 21, 1934

Fig. 1.

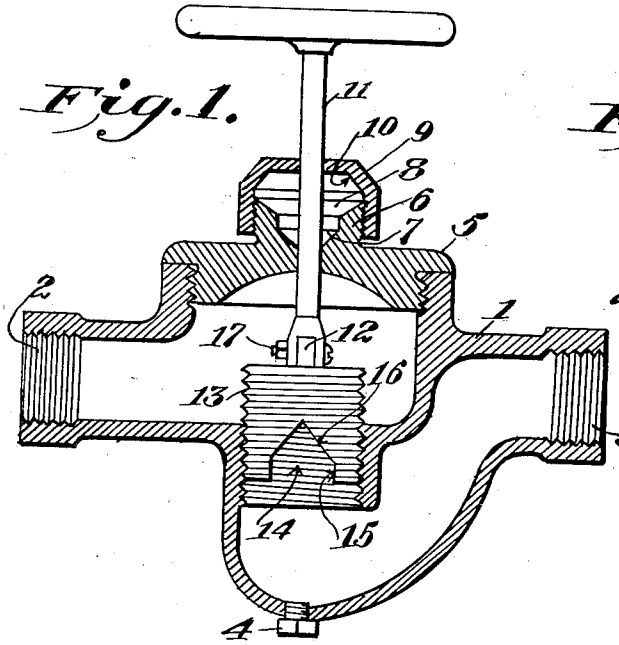


Fig. 2.

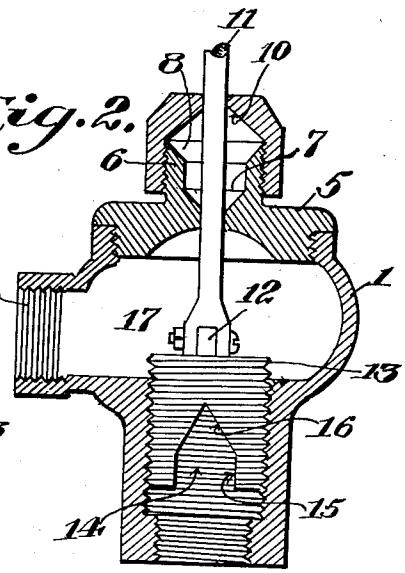
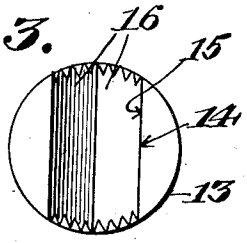


Fig. 3.



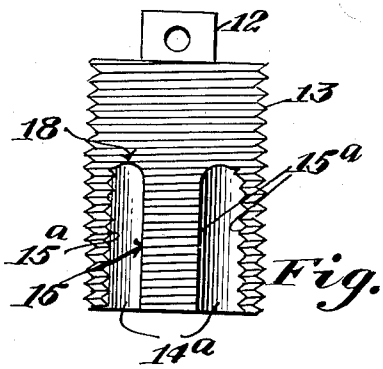


Fig. 5.

Fig. 4.

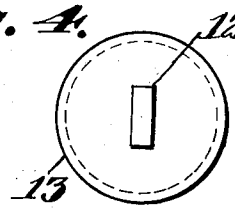
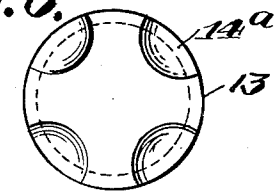


Fig. 6.



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Patented Aug. 6, 1935 2,010,251

UNITED STATES PATENT OFFICE

2,010,251

VALVE

Michael W. Banowetz, New Orleans, La.

Application June 21, 1934, Serial No. 731,746

1 Claim. (Cl. 251—35)

This invention relates to valves.

An object of my inventtion is the construction of a new and efficient valve comprising a rotatable plug that is relatively inexpensive to manufacture, gives greater efficiency and is positive in operation.

Another object of the invention is the construction of a packing compartment of such novel arrangement as to produce efficient results.

With the foregoing and other objects in view my invention comprises certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawing, and more particularly pointed out in the appended claim.

In the drawing:

Figure 1 is a vertical, central, longitudinal, section view through a valve device constructed in accordance with the present invention, while

Figure 2 is a similar view of another embodiment of the invention.

Figure 3 is a bottom plan view of the preferred embodiment of the rotary plug, while

Figure 4 is a top plan view of the same.

Figure 5 is a view in side elevation of another embodiment of the rotary plug, while

Figure 6 is a bottom plan view of the same.

Referring to the drawing by numerals, 1 designates the casing in the embodiments shown in Figs. 1 and 2, with the usual internally threaded ends 2 and 3. In Fig. 1 I have shown a clean-out plug or screw 4.

The top of the casing in both embodiments has a threaded closure 5. This closure has an upstanding cup 6. The cup 6 is provided with a tapering bottom 7 and with a flared top portion 8 to better receive the packing material. Screwed on cup 6 is cap 9. This cap is provided with an inverted tapering portion 10, similar in structure to the tapering portion 7. Extending through the compartment formed by cup 6 and cap 9 is the rotatable valve stem 11. When the packing material is in the compartment formed by said cup and cap, by screwing inwardly upon cap 9, the packing material is held snugly and efficiently around the stem 11, producing at all times a very tight joint.

The inner end of stem 11 is bifurcated to receive lug 12. This lug 12 is integral with the body of rotary plug 13, which is solid and screw-threaded. Plug 13 is provided in its solid bottom with a comparatively wide and long channel 14 extending entirely across the same, (Fig. 3) and through a majority of the threads. The novel channel 14 is provided with straight parallel side walls 15 terminating at their inner ends in inclined converging walls 16. By reason of this novel channel the flow of liquid can be controlled to a nicety, allowing only a small or "needle-like" flow at first, through the V-shape inner structure of said channel, and as the plug is screwed to a wide-open position the free flow, or full volume is obtained between the wide-spaced parallel walls 15. This novel plug is relatively inexpensive to manufacture, gives great efficiency and is positive in operation.

In assembling the stem 11 with the plug 13 I preferably use bolt 17 as shown in Figs. 1 and 2.

In the embodiment shown in Figures 5 and 6, the solid plug 13a is provided in its sides with a plurality of long channels 14a. Each long channel is provided with parallel straight side walls 15a terminating at their inner ends in a curved wall 18, which acts similar for a "needle-like" flow to the structure shown in Figures 1 and 2 but not as efficient, because I consider the structure of my preferred embodiment superior to any other.

My improved plugs may have a one ten-thousandth taper thread, thereby making a more positive set-up.

While I have described the preferred embodiments of my invention and illustrated the same in the accompanying drawing minor changes or alterations may appear to one skilled in the art to which this invention relates during the extensive manufacture of the same, and I therefore, reserve the right to make such changes or alterations as shall fairly fall within the scope of the appended claim.

What I claim is:

As a new article of manufacture, a valve device of the class described, comprising a casing provided with a deep threaded inner wall, a comparatively long solid cylindrical plug provided with threads throughout its entire length and threaded into said deep threaded inner wall, said solid plug provided with a lug in the center of its inner end, said solid plug provided with a single wide channel extending entirely across its outer end, said wide channel being provided at its outer end with straight parallel side walls for full flow therebetween, and said parallel side walls terminating at their inner ends in straight inclined converging walls, producing an inverted V-shaped portion only at the inner end of said wide channel for a decided variance in volume of flow, and operating means detachably fastened to said lug.

MICHAEL W. BANOWETZ.