

E. G. VAN WIE.

VALVE.

APPLICATION FILED MAY 27, 1920.

1,434,416.

Patented Nov. 7, 1922.

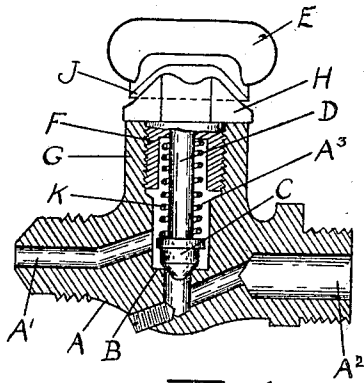


Fig. 1.

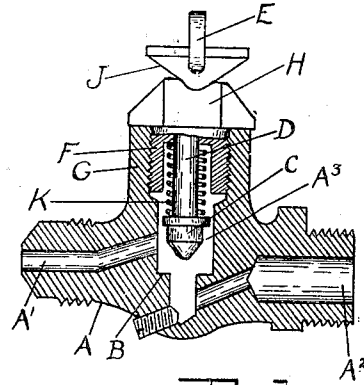


Fig. 2.

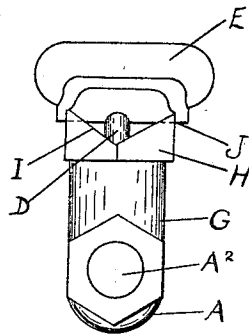


Fig. 4.

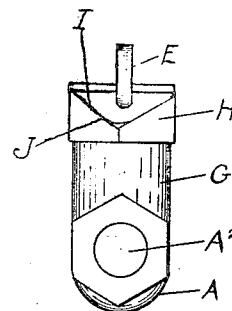


Fig. 3.

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EDWIN G. VAN WIE, OF DETROIT, MICHIGAN.

VALVE.

Application filed May 27, 1920. Serial No. 384,521.

To all whom it may concern:

Be it known that I, EDWIN G. VAN WIE, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Valves, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to valves, and the object of the invention is to provide a valve employing a simple form of cam mechanism to effect seating and unseating of the valve proper upon rotation of the handle.

15 It is a feature of the invention that the valve proper tends to automatically seat if the handle is released in any position thereof other than that corresponding to the fully opened position of the valve proper.

20 In the drawings:

Figure 1 is a vertical sectional view of the valve;

Figure 2 is a similar view showing the valve proper unseated;

25 Figure 3 is an end view of the valve, showing the handle thereof in closed position;

Figure 4 is a view similar to Figure 3, but showing the handle in its position in which 30 the valve is open.

In these views, the reference character A designates a valve casing of the usual T shape having the fluid passages A' and A² and the bore A³ transversely connecting said passages and formed with a shoulder B, providing a seat for the valve proper C. The latter has a stem D terminating in a suitable integral actuating handle E having a flattened head portion, said stem being journaled in a plug F which is screw-threaded into the projecting collar portion G of the casing A and is provided with a head H which seats upon said portion. The head H is formed in its top with a V-shaped trough or channel I, extending preferably longitudinally of the valve casing and the handle member E has a complementary wedge shaped projection J on its under side. A spring K, coiled upon the stem D between the valve proper C and plug F tends to firmly seat said valve proper and at the same time to engage the projection J of the handle E in the trough I. The stem,

however, is so proportioned in length as to insure a slight clearance between said projection and the sides of the trough I so that 55 tight seating of the valve disk may not be interfered with by said projection J and trough I. The head H is of a hexagonal form and the trough I extends between two of the opposed angles of the hexagon so that 60 the end edges of the trough form diagonals in certain of the hexagonal faces upon which the projection J rides up when the handle E is being rotated to the transverse position, shown in Figures 2 and 4, to open 65 the valve or rides down when the valve is being closed. The head H is diametrically notched upon its top, transversely of the trough I to be engaged by the projection J in the open position of the valve for maintaining such position. It is preferred to provide a cleanout opening communicating 70 below the valve seat B with the passage A², normally said passage being closed by a plug L.

From the preceding description, it is seen that a rotation of the handle E in either direction is adapted to open or close the valve, an unmistakable visual indication of the relation of the valve proper to its seat being 80 furnished by the positions of rotative and of vertical adjustment of the handle member. Also the valve is self closing except when adjusted to its fully opened position.

What I claim as my invention is:

1. A valve comprising a valve casing, a valve proper engageable with a seat in said casing, a spring for seating said valve proper, a stem therefor, the casing having a hexagonal portion in which the stem is journaled, said portion having a V-shaped 90 trough extending between opposed angles of the hexagon, a handle carried by said stem, having a wedge portion complementary to said trough and adapted to fit into the latter 95 in the seated position of the valve proper, the end edges of the trough forming diagonals in certain sides of the hexagon upon which said wedge-shaped portion rides when the handle is rotated to seat or unseat the 100 valve proper.

2. A valve comprising a casing with a valve seat formed therein, a valve stem provided at one end with a portion for engag-

ing said valve seat and at its other end with an integral actuating handle having a flattened head portion, a member detachably secured to said casing and carrying said
5 valve stem comprising head and stem portions respectively, said head portion having flattened outer surfaces around its periphery and a groove at its top, in which groove said handle is adapted to rest, said groove and handle providing a cam action upon
10 rotation of the latter to raise and lower the valve.

In testimony whereof, I affix my signature.
EDWIN G. VAN WIE.