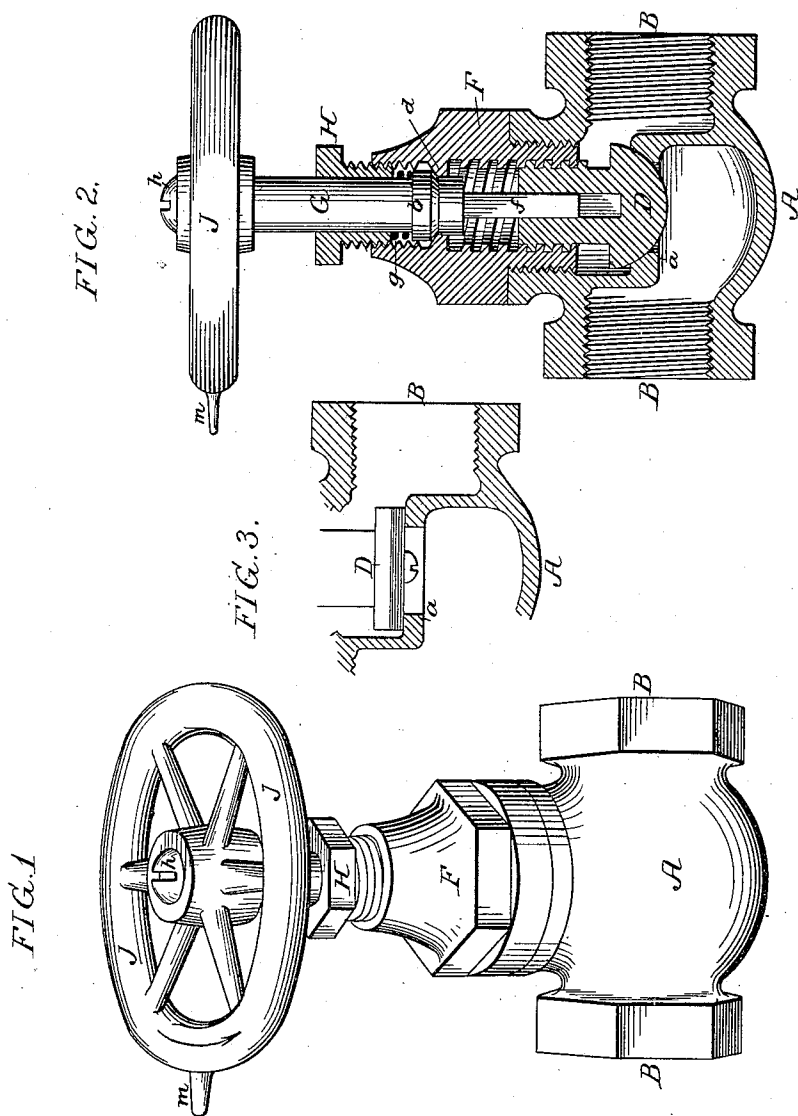


(No Model.)

J. WALSH, Jr.
VALVE.

No. 334,314.

Patented Jan. 12, 1886.



Witnesses:
George C. Libson.
Harry Drury.

Inventor:
James Walsh, Jr.
by his Attorneys:
Howson & Sons

UNITED STATES PATENT OFFICE.

JAMES WALSH, JR., OF PHILADELPHIA, PENNSYLVANIA.

VALVE.

SPECIFICATION forming part of Letters Patent No. 334,314, dated January 12, 1886.

Application filed August 6, 1885. Serial No. 173,729. (No model.)

To all whom it may concern:

Be it known that I, JAMES WALSH, JR., a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Valves, of which the following is a specification.

My invention relates to that class of valves in which the operating-stem has no vertical movement, an instance of such valve being
10 shown in my Patent No. 124,399, dated March 5, 1872.

The object of my present invention is to so construct a valve of this class that the position of the valve will be apparent at a glance. This
15 object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a valve constructed in accordance with my invention;
20 Fig. 2, a longitudinal section, partly in elevation, of said valve; and Fig. 3 a view showing a modification.

A is the casing of the valve, having opposite branches, B B, and intervening seat, *a*, for the valve D, the stem of which is threaded and is adapted to a nut, F, screwed into the upper
25 portion of the casing A, and occupying a fixed relation thereto. The operating-stem G of the valve has a flange, *b*, which is adapted to the
30 seat *d* in the nut F, the lower portion, *f*, of said operating-stem being of square or other polygonal cross section, and adapted to a recess of like shape in the valve D. The flange
35 *b* of the stem G is confined to its seat by a screw-cap, H, between which and the top of the flange is interposed a spring, *g*, so that the stem G has no vertical movement in the casing, the rotating movement of the stem being
40 imparted to the valve, and thereby causing the latter to rise or fall on the stem *f*, owing to the engagement of the threaded stem of the valve with the nut F. The upper end of the stem G is provided with an operating wheel
45 or handle, J, confined thereto by the usual screw, *h*, and in valves of this character as heretofore constructed difficulty has been experienced in determining whether the valve is open or closed, there being no external indication of the position of the valve. In order
50 to overcome this objection, I make the operating screw-thread of the valve and nut of coarse pitch, so that the valve may be fully opened or closed by less than a complete turn of the stem G, the lower end of the cap F serv-

ing as a stop to limit the opening movement 55 of the valve before the stem has made a complete turn, and I provide the operating wheel or handle J with a finger, *m*, so located that when the valve is closed to its seat the finger will be parallel with the longitudinal axis of 60 the valve-casing, and will point in the direction of the outlet-pipe to which said casing is connected, (see Fig. 1,) so that when the handle J has been turned in the direction of the arrow and the finger moved away from this 65 position the position of the finger will indicate the extent to which the handle has been turned and the valve opened, the valve being fully opened and the movement of the handle arrested before the finger can again reach the 70 position shown in Fig. 1.

Instead of having a rounded face adapted to a ground seat in the casing, the valve may have a packing-ring adapted to a flat seat in the casing, as shown in Fig. 3, and the operating- 75 stem may have a T or lever handle, if desired, instead of the wheel.

I am aware that it is not new to apply a pointer to the handle of a plug-valve to indicate the position to which the valve has been 80 turned in the casing; but my invention relates to a different construction of valve, in which the valve moves to and from its seat as the operating-stem is turned, the stem itself, however, having no longitudinal movement. 85

My present invention enables me to dispense with the threaded operating-stem and sliding pointer shown in my Patent No. 141,839, August 12, 1873, the construction of the valve being thereby considerably cheap- 90 ened without loss of effectiveness.

I claim as my invention—

The combination of the casing of the valve, the operating-stem longitudinally confined thereto, the nut, the valve having a stem 95 adapted to said nut, a stop whereby the opening movement of the valve is arrested before the operating-stem has made a complete turn, and a handle having a pointer secured to or forming part thereof and rotating therewith, 100 all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES WALSH, JR.

Witnesses:

WILLIAM F. DAVIS,
HARRY SMITH.