

No. 824,163.

PATENTED JUNE 26, 1906.

E. H. WHITNEY.
VALVE INDICATOR.
APPLICATION FILED MAR. 12, 1902.

2 SHEETS—SHEET 2.

Fig. 3.

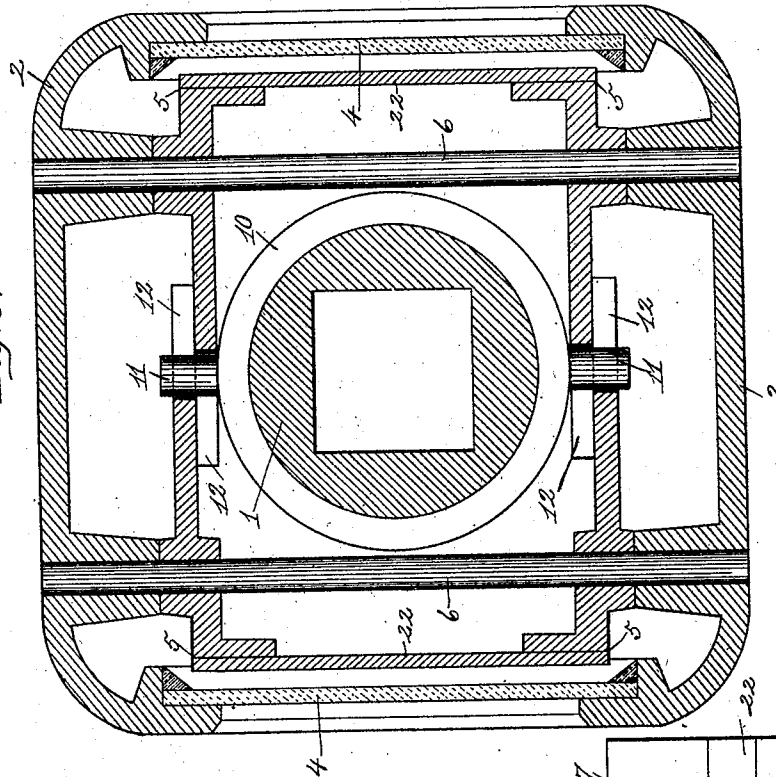


Fig. 4.

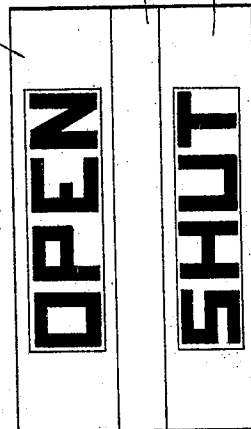
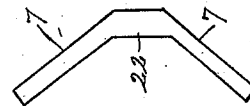


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWIN H. WHITNEY, OF WATERFORD, NEW YORK, ASSIGNOR TO EDDY VALVE COMPANY, OF WATERFORD, NEW YORK.

VALVE-INDICATOR.

No. 824,163.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed March 12, 1902. Serial No. 97,851.

To all whom it may concern:

Be it known that I, EDWIN H. WHITNEY, a citizen of the United States, residing at Waterford, county of Saratoga, and State of New York, have invented certain new and useful Improvements in Valve-Indicators, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a view in elevation of my improved valve-indicator. Fig. 2 is a central vertical section of the case of the same, taken on the broken line 2 2 in Fig. 1, showing the interior mechanism in side elevation. Fig. 3 is a horizontal section of the same, taken on the broken line 3 3 in Fig. 2. Fig. 4 is a front view of the angular lettered plate of the indicating member. Fig. 5 is an end view of the same. Fig. 1 is made on a comparatively small scale.

The object of my invention is to provide a simple, durable, and efficient mechanism for indicating the position of a valve at any time, whether wholly or partly open or closed.

A further object of my invention is to provide for indicating the direction of movement of the valve at any time while being operated.

My invention is especially adapted for use in connection with a valve wherein the valve-gate is operated by a stem-nut which travels up and down upon a screw-threaded stem or spindle, in which construction the stem or spindle has a rotary movement only.

1 represents a rotary spindle, and 2 an inclosing case provided with bearings for the spindle, which projects through the top of the case and has its projecting end 3 formed to receive the valve-operating mechanism, as a wrench or hand-wheel, in the usual manner.

The case may be either a portion of the valve-case proper or the case of what is known as an "indicator-post" used in connection with a valve, as desired, and the spindle may be the valve-stem itself or an ex-

tension thereof, by means of which the valve is operated. The portion of the case containing the indicating mechanism is preferably rectangular in cross-section, as shown in Fig. 3, and is provided on two opposite sides with inspection-apertures closed by a transparent glass 4, supported within the case. Located within the rectangular portion of the case are two indicating members 5 5, mounted and capable of oscillation upon the respective cross-rods 6 6, fixedly mounted upon the case-walls at right angles to the spindle and between said spindle and the respective apertured case-walls. Each indicating member is preferably provided with two plane surfaces 7 7, arranged tangentially to their respective paths of movement and at an angle to each other and each parallel with the axis of oscillation of its supporting member. The parts are so arranged that oscillation of the indicating member causes each of said plane surfaces to be moved to and from a position opposite the inspection-aperture in the neighboring case-wall. These surfaces 7 7 are provided with characters, those on one of said surfaces indicating a certain position of the valve and those on the other of said surfaces a different position of the valve, any suitable characters being used for this purpose. I have shown such characters in the form of the word "Open" on one of said surfaces and the word "Shut" on the other.

Any known means may be provided for operatively connecting the indicating members with the spindle in such a manner that rotary movements of the spindle will cause oscillating movements of the indicating members. I have shown the spindle provided with a screw-threaded portion 9, upon which is mounted a trunnion-nut 10, having oppositely-projecting trunnions 11, and each of the indicating members provided with slotted arms 12, engageable with said trunnions, whereby as the spindle is rotated in opposite directions the resultant reciprocating movements of the trunnion-nut will cause the indicating members to be oscillated to expose to view the words or characters indicating the position of the valve.

One of the indicating members may be dispensed with, if desired; but for convenience of observation I prefer to duplicate the mech-

anism on opposite sides of the case, the same trunnion-nut serving to simultaneously operate both indicating members.

5 If it is desired to indicate only a single position of the valve, the indicating member may be provided with only one character-bearing surface.

10 I have shown in the construction above described the indicating mechanism wholly inclosed within the case 2, with the inspection-aperture so located as to expose to view the indication characters only at certain times; but any known means may be employed for exposing to view said characters at a certain
15 point in the path of oscillation of the indicating member and for concealing them from view at other points in such path.

What I claim as new, and desire to secure by Letters Patent, is—

20 In a valve-indicator, the combination with a rotary valve-operating screw-threaded spindle; and a trunnion-nut thereon; of a sta-

tionary case inclosing said spindle and having oppositely-disposed apertured walls; a pair of indicating members separately pivotally
25 mounted upon the case upon opposite sides of said spindle with their axes at right angles thereto and between said spindle and the respective apertured case-walls, and having
30 slotted pivotal connection with the trunnions on said nut, said members having similarly-located surfaces bearing characters indicating the same position of the valve and movable by oscillation of said members, both
35 in the same direction to and from a position opposite the respective apertures in the neighboring case-wall, substantially as described.

In testimony whereof I have hereunto set my hand this 11th day of March, 1902.

EDWIN H. WHITNEY.

Witnesses:

FRANK C. CURTIS,
E. M. O'REILLY.