Dec. 29, 1925. 1,567,306

J. F. STRAITZ

REGULATING VALVE

Filed July 9, 1923

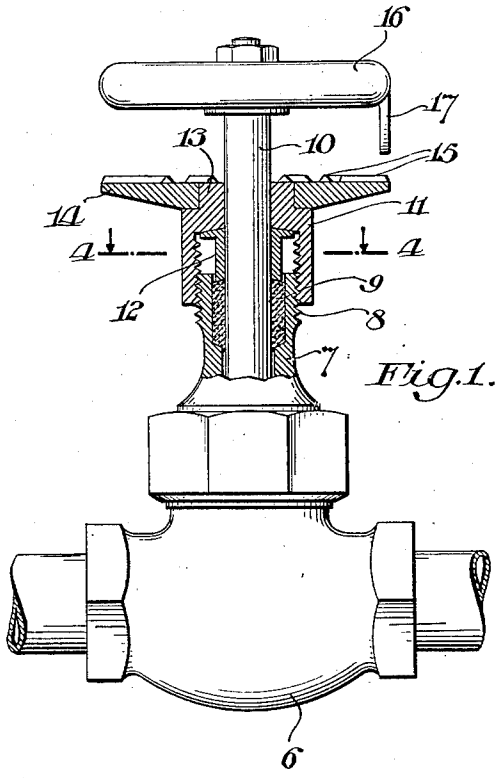


Fig. 1.

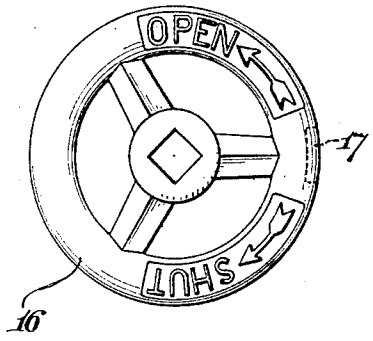


Fig. 2.

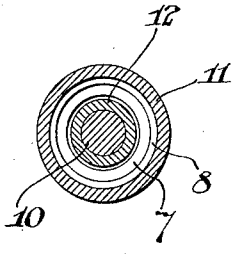


Fig. 4.

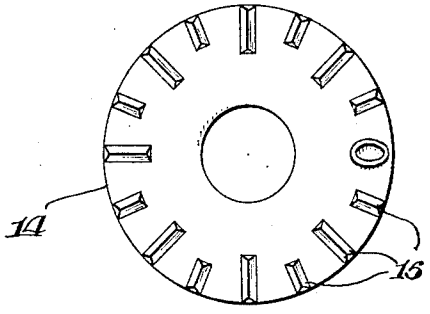


Fig. 3.

Inventor:
John F. Straitz,
By Mc Clure & Dale
Attorney.

Patented Dec. 29, 1925. 1,567,306

UNITED STATES PATENT OFFICE.

JOHN F. STRAITZ, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO NATIONAL AIROIL BURNER COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF DELAWARE.

REGULATING VALVE.

Application filed July 9, 1923. Serial No. 650,221.

To all whom it may concern:

Be it known that I, JOHN F. STRAITZ, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented a new and useful Regulating Valve, of which the following is a specification.

The invention relates to improvements in steam regulating valves. The object is to provide improved means for indicating the control. The device is especially adapted for securing the desired relative operation of a plurality of fuel oil burners, so that each burner shall perform its alloted work.

The invention comprises the usual steam valve with an operating hand wheel upon which is marked a zero point with the words "Open" and "Shut" flanking said point, and direction arrows pointing toward the said words "Open" and "Shut" to indicate the direction of operation in order to secure the desired flow of steam through the valve. In order to indicate the degree of opening or closing movement, or to indicate the position to which the valve should be brought to secure the desired regulation of flow, I provide a pointer on the hand wheel, and a disc rotatably secured to a neck provided on the cap or thimble which secures the packing for the valve spindle. Upon the upper face of this disc are provided a zero mark and evenly spaced marginal graduations or marks for cooperating with the pointer on the hand wheel. The purpose of movably securing the disc upon the said cap is to permit a proper adjustment of the cap upon the valve neck and then, when the hand wheel has been operated to bring the valve tightly upon its seat, the disc is moved or rotated upon the cap in order to bring the zero mark thereon into register with the zero mark on the wheel. This adjustment of the disc is desirable not only to permit of varying positions of the cap which controls the packing, but also to permit of varying positions of the hand wheel due to wear of the valve or to variations in the thickness of the valve washer, etc. The disc should have a reasonably tight fit on the neck of the cap in order to prevent accidental movement thereon. The device is especially desirable where a number of oil burners are in use, controlled by said steam valves, so that said valves may be adjusted relatively in order to secure the desired relative efficiency of the several burners.

Referring to the drawings, which illustrate merely by way of example, a preferred embodiment of the invention:—

Fig. 1 is an elevation in part section of a steam valve embodying the invention.

Fig. 2 is a plan of the hand wheel.

Fig. 3 is a plan of the graduated disc.

Fig. 4 is a sectional detail.

Similar numerals refer to similar parts throughout the several views.

The valve body 6 is provided with the neck 7 having its upper end exteriorly threaded, as at 8, and having an offset recess, as at 9, surrounding the spindle 10, for the packing. The cap 11 is threaded on to the neck 7, and the flanged element 12 is interposed between the cap and the neck and has a cylindrical portion as shown, projecting into the offset recess 9 for compressing the packing therein. The cap 11 has a cylindrical neck 13 at the top for receiving, with a reasonably tight frictional engagement, the hand operated indicating disc 14, provided with the zero mark and the graduation marks 15 as shown. The hand wheel 16 is fitted in the usual way on the top of the spindle 10. On the top of the hand wheel 16 are provided the zero mark, the words "Open" and "Shut" and the arrows pointing from the zero mark to these words, as shown. The hand wheel is also provided with the pointer 17 projecting downwardly from its peripheral margin at the zero point for registration with the zero point and the graduation marks on the disc 14.

It will be obvious that the cap 11 will have different rotative positions on the threaded neck 8 as it is screwed down upon the neck to maintain the required compression upon the packing in space 9, or when the packing is renewed. It will also be understood that the hand wheel 16 may have different rotative positions when the valve is in the closed position, due to the wear of the valve, the valve washer or the valve seat, or when the valve washer is renewed. It is thus to be seen that, when the valve spindle is properly packed and the valve is in the closed position, the relative positions of the wheel 16 and cap 11 will vary under the con-

ditions above enumerated. In order therefore that the zero mark and the pointer 17 on the hand wheel 16, shall register with the zero mark on the disc 14, it is only necessary to rotate by hand the disc 14, when the valve is tight closed, to bring the two zero marks into the desired relationship, after which the pointer and graduations will accurately indicate the steam control until the disturbing conditions, as above indicated, occur. In such event the disc is again adjusted as indicated.

What I claim is:—

In a regulating valve, the combination of a valve body, a valve, a valve spindle, a spindle operating hand wheel, a hand operated rotatably adjustable graduated disc surrounding the spindle and in friction relationship with the valve body, the hand wheel provided with direction arrows and suitable legends associated therewith, and a pointer connected with the wheel for cooperating with the disc graduations.

JOHN F. STRAITZ.