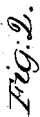


Nº 54, 129,

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UNITED STATES PATENT OFFICE.

THOMAS B. DEXTER, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN STEAM-VALVES.

Specification forming part of Letters Patent No. 54,129, dated April 24, 1866.

To all whom it may concern:

Be it known that I, THOMAS B. DEXTER, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Globe-Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use the invention, I will proceed to describe it.

My invention relates to that class of valves denominated "globe-valves;" and it consists in so constructing it that the valve may be ground to its seat without removing it, and also in so constructing the parts that the stem of the valve may be packed without shutting off the steam from the globe or valve.

A represents the globe or shell having the diaphragm *a*, with the valve-seat, constructed in the usual manner.

E represents the valve, which is fitted to its seat as usual, and having a stem, B, which passes through a hub or collar, D, which screws into the side of the shell, as shown in Fig. 1. To the outer end of this collar D is screwed a sleeve, C, having a screw-thread cut on its interior surface corresponding with a similar thread on the stem B, a hand-wheel, H, being secured to the outer end of the stem for operating it, as usual. The lower end of the sleeve C is provided with an annular recess surrounding the stem B, on which latter is placed a collar or ring, *n*, for the purpose of packing the stem and preventing the escape of steam.

It will be observed that the valve E is provided with a conical hub on its upper side surrounding the stem B, and that a corresponding recess, *o*, is made in the inner end of hub D, so that by unscrewing the sleeve C and drawing the stem B back the conical hub of valve E will fit into the recess *o* and prevent the escape of steam around the stem while it

is being packed at the upper end of D, thereby saving the necessity of shutting off the steam in order to pack the stem B.

As ordinarily constructed, it is necessary when the valve becomes worn so as to leak steam to detach it from the pipes in order to grind the valve to its seat again and make it tight. In order to obviate this necessity I tap a hole into the shell on each side and fill them with a screw, as shown at *m* of Fig. 2. These holes are so located that no matter in what position the shell A may stand, whether attached to a horizontal or vertical pipe, one of said holes will always be in a proper position to admit emery and oil to be inserted through it onto the valve-seat. If the shell is attached to a vertical pipe one of the holes will be above the center whichever end up the shell may be, and if attached to a horizontal pipe one of the holes will always be on the upper side. By these means the emery and oil can always be inserted without removing the valve or the hub D, it only being required to unscrew the sleeve C, so as to turn the stem in grinding the valve and fitting it to its seat.

In order to guide the valve accurately to its seat a bracket, *b*, is cast on the inside of the shell, directly under the lower end of the stem. A hole is bored in this bracket *b* to receive the small projecting stem *c*, which is but a continuation of the main stem B, as shown in Fig. 1. If desired, however, this may be dispensed with, as the stem B is guided both by its bearing in the sleeve C and also in the hub D.

Having thus described my invention, what I claim is—

The shell A, provided with the openings and plugs *m*, for the purpose of introducing material and enabling the valve to be ground to its seat without removing the hub D or other parts, as set forth.

THOMAS B. DEXTER.

Witnesses:

W. C. DODGE,

R. E. ELLERBECK.