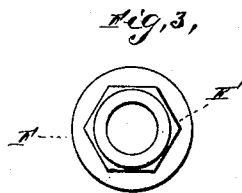
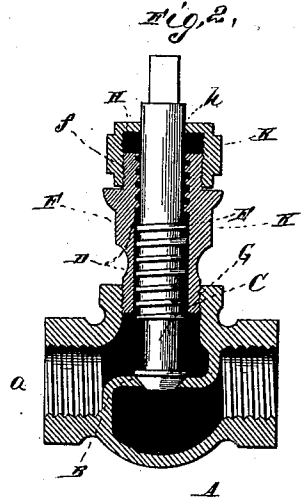
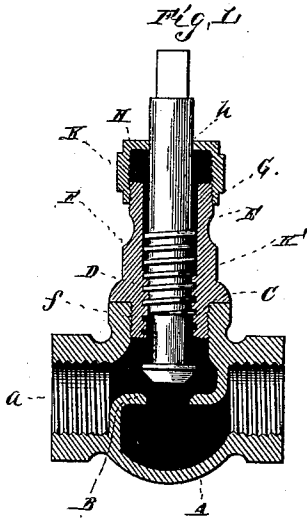


(No Model.)

E. N. WHITAKER.  
VALVE.

No. 463,431.

Patented Nov. 17, 1891.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

EDWARD N. WHITAKER, OF ANDERSON, INDIANA.

## VALVE.

SPECIFICATION forming part of Letters Patent No. 463,431, dated November 17, 1891.

Application filed February 28, 1891. Serial No. 383,204. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD N. WHITAKER, a citizen of the United States, and a resident of Anderson, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Steam and Water Valves; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a vertical central section showing the valve unseated. Fig. 2 is a similar view showing the valve seated. Fig. 3 is a detail.

This invention has relation to steam and water valves and means for grinding and repairing the same; and the invention consists in the novel construction and combination of parts, as hereinafter described.

In the accompanying drawings, illustrating the invention, the letter A designates the casing or shell, of the usual form, having the inlet *a* communicating with the valve-chamber, which communicates with the outlet through the valve-seat B, formed in a partition of the casing.

C is the stem of the valve, having the conical or tapering head adapted to fit in the seat B, which is of conical form. This stem enters the valve-chamber through the threaded opening D, and has a male thread E cut thereon, which works in a female thread cut in the interior surface of one end of the annular angular sleeve F on said stem, and by means of these threads the valve-head is driven to its seat. This sleeve F at one end has a screw-threaded shouldered portion *f*, which enters and engages the threaded opening D and forms a steam or water-tight joint. The opposite end of the sleeve F also has an external screw-threaded portion G, of the same diameter as the shouldered threaded portion *f*, and when the parts are in their normal position this portion is engaged by the threaded cap-piece H, which is chambered and threaded on its interior at one end to re-

ceive said threaded portion. The opposite end of the cap-piece has a central circular aperture *h*, through which passes the stem. The normal position of the parts is shown in Fig. 1. The sleeve F is made reversible end for end on the stem, and when the valve-seat becomes worn so as to cause a leakage, as is frequently the case, said sleeve is unscrewed from the shell or casing, the cap removed and the sleeve reversed, and the end G screwed into the shell and the cap replaced. The interior surface of the chamber at this end is smooth, and has a diameter sufficient to permit the screw-threaded portion of the stem to slide loosely therein, the head dropping into its seat. By means of a brace, wrench, or other suitable appliance the stem may then be turned freely and the grinding of the seat effected, oil and emery being supplied, as usual. The sleeve and cap will hold the stem steady during this operation, preventing any wabbling motion thereof, whereby the seat may be evenly ground.

The cap and sleeve are provided with the angular portions K K', respectively, to permit the application of a wrench thereto for the removal of the said parts. When the seat has been sufficiently ground, the parts are changed to their normal position, as already described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, with the shell or casing and the valve-seat therein, of the valve having a solid stem, having a portion of its surface provided with a raised thread, a hollow sleeve or guide for said stem, said guide having an externally-threaded portion at each end, its aperture being threaded at one end and at the opposite end of larger diameter and having a plane wall, and the cap having a screw-thread adapted to engage either threaded end of said sleeve, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD N. WHITAKER.

Witnesses:

W. H. ZIEGLER,  
SAMUEL P. MOORE.