(No Model.)

H. OLDENDORPH.

VALVE.

No. 274,364. Patented Mar. 20, 1883.

Fig. 1.

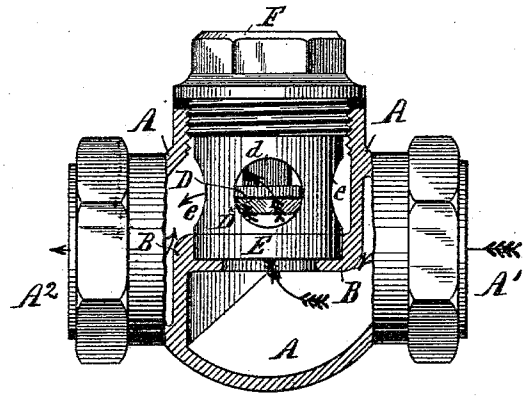
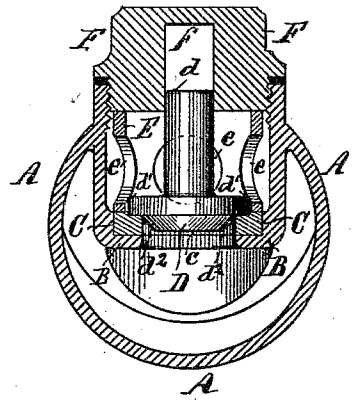


Fig. 2.



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UNITED STATES PATENT OFFICE.

HENRY OLDENDORPH, OF BELLEVILLE, ILLINOIS.

VALVE.

SPECIFICATION forming part of Letters Patent No. 274,364, dated March 20, 1883.

Application filed November 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY OLDENDORPH, a citizen of the United States, residing in Belleville, in the county of St. Clair and State of Illinois, have invented a new and useful Improved Valve, of which the following is a specification.

My invention relates to improvements in globe, check, and the like valves, in which the valve proper closes against a seat to "shut off," regulate, and otherwise control the passage for steam, liquid, and similar purposes.

My invention consists in certain improved features, hereinafter described, by means whereof a "tight joint" can be the better insured between the valve proper and its seat, preventing leakage, effects of corrosion, grinding, &c. I provide a seat of wood, and in conjunction therewith a metal valve, and as will now more fully appear.

The accompanying drawings illustrate my invention as applied to a check-valve, Figure 1 being a side elevation with part of the shell broken away to show the interior parts, the valve proper being raised from its seat and the arrows indicating the direction of the steam, liquid, &c. Fig. 2 is a transverse sectional elevation, showing the valve closed against its seat.

Similar letters refer to similar parts throughout the several views.

A represents the outer or globular shell of the valve, with its inlet and outlet branches A' A^2, as ordinary.

B is the usual annular metal seat inside the shell, but here made countersunk to form a seat and annular shoulder to receive and retain the wood valve-seat C. The wood seat C is the valve-seat proper, against which the action of the stem-valve takes place. Both the countersunk seat B and the wood seat C have their openings or passage-way in line with each other, as indicated in Fig. 2, and so that the steam or liquid, &c., can pass through said openings. (See Fig. 1.) The valve-seat C is simply an annular-shaped piece of wood, having opening *c*, and snugly fits into the surrounding metal seat B. (See Fig. 2.)

D represents a metal valve, and forming part of it is its stem *d*. This metal valve or disk D, I further make to have a flange at d', and tapering or bevel sides at d^2. (See figures.) The purpose of both the flange and bevel sides is to obtain a twofold means of insuring a closure of the valve D against the seat C—that is to say, the valve by its bevel sides can be made to close against the like contiguous sides of the wood seat, and at same time the said valve by its flange can close against the top face of the wood seat, as shown in Fig. 2.

E represents a metal sleeve, having side apertures or holes, *e*, through which the steam, liquid, &c., can pass, as indicated. The sleeve E is placed on top of the wood seat C and keeps same in place; also, the sleeve acts as a guide to "true" the closing and opening action of the stem-valve.

F is the screw-cap, having mortise *f* to allow for the automatic action of the stem-valve. The cap F closes the top part of the valve, retains the sleeve E and wood seat C firmly in their places.

My improved valve being constructed as shown and described, the operation is as follows: The stem-valve, in fully closing by its bevel sides and flange, acts upon the fibers of the wood seat in the direction where the latter is confined in the countersunk seat B, and embeds its shape in the wood seat. The material (wood) has its nature, when subjected to steam, hot water, or liquid action, rendered sufficiently pliable to accommodate itself in shape to that of the valve, and follow up the movements of the latter in accordance with the manner in which the valve is forced down or made to close against the seat. The two points of contact—viz., the flange of the valve against the top of the wood seat and the bevel sides of the valve against the like sides of the wood seat—cause its fibers to expel gritty or fine substances, and at same time insure a most effective joint between the valve when fully closed or pressed against its seat. Any wear on part of the wood seat is "followed up" by properly seating or closing the valve.

What I claim is—

1. The improved valve for steam, liquid, &c.,

consisting essentially of a wood seat, C, and metal valve D, in combination with an outer shell, A, substantially as herein shown and described.

2. The improved valve, consisting of the shell A, having countersunk metal seat B, the valve-seat C, of wood, the sleeve-guide E, having apertures *e*, the valve D, having bevel face d^2, flange d', stem *d*, and the screw-cap F, all constructed to operate as and for the purposes set forth.

In testimony of said invention I have hereunto set my hand.

HENRY OLDENDORPH.

In presence of—
WILLIAM W. HERTHEL,
JOHN W. HERTHEL.