

~Robt. P. Ross, Impts. in Stop Valves.~

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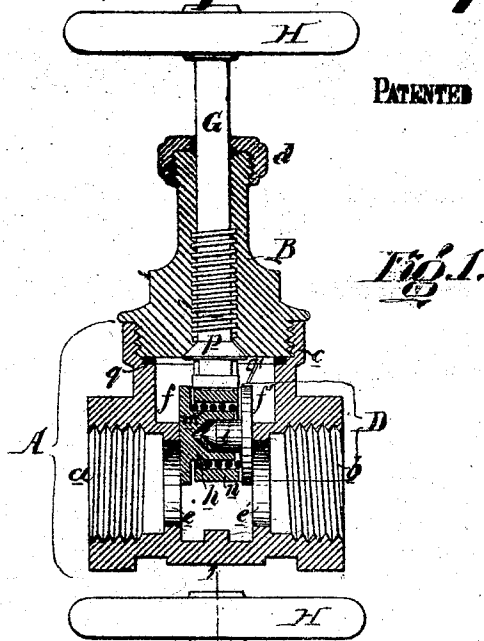


Fig. 2.

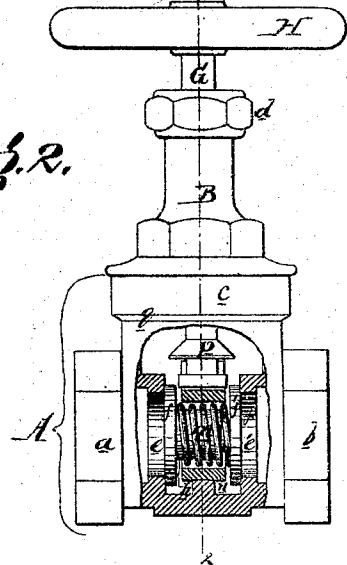
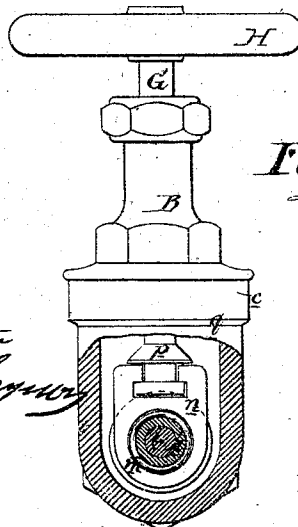


Fig. 3.



Witnesses: B. E. Lehman
Thomas C. Brown

Robert P. Ross

UNITED STATES PATENT OFFICE.

ROBERT P. ROSS, OF BETHLEHEM, PENNSYLVANIA.

IMPROVEMENT IN STOP-VALVES.

Specification forming part of Letters Patent No. 117,466, dated July 25, 1871.

To all whom it may concern:

Be it known that I, ROBERT P. ROSS, of Bethlehem, county of Northampton, State of Pennsylvania, have invented an Improvement in Stop-Valves, of which the following is a specification:

My invention relates to an improvement in stop-valves, the valves proper of which are composed of two disks, to be forced apart against appropriate seats; and my improvements, which are too fully explained hereafter to need preliminary description, have for their main object the maintaining of the disks against the seats with a constant pressure, by which the tight fitting and easy working of the valve are secured.

Figure 1 is a vertical section of my improved stop-valve; Fig. 2, a side view, partly in section, showing the valve raised; and Fig. 3, a transverse vertical section on the line 1 2, Fig. 2.

A is the valve-chest, having branches *a* and *b* with internal screw-threads for the reception of the ends of pipes, and a third branch, *c*, for receiving the screw-cover B, the latter being surmounted by a screw-cap, *d*. Within the chest are two parallel annular seats, *e* and *e'*, for the double-faced valve D, the latter being composed of the disk *f* adapted to the seat *e*, and the disk *f'* adapted to the seat *e'*. The disk *f'* has a pin, *i*, so adapted to a tubular projection, *h*, on the disk *f* that, while one disk cannot move independently of the other in a direction parallel with the faces of the seats, the two disks can be forced apart by a coiled spring, *m*, which surrounds the tubular projection *h* and fits freely in a yoke, *n*; the latter being so connected to the screw-spindle D that it can be raised and lowered by, but will not turn with the said spindle, the screw-thread of which is adapted to an internal thread in the cover B, the spindle being furnished at the top with a suitable wheel or handle, H, and having near its lower end a beveled collar, *p*, forming a valve, which, when ele-

vated, fits to a seat in the under side of the cover B and prevents leakage around the spindle. Inasmuch as the disks *f f'* can be readily turned all danger of unequal wear and consequent leakage is avoided. On a ledge, *q*, in the valve-chest, is placed a leaden ring, *q'*, which, being compressed by the screw-cover, forms an effective packing for preventing leakage between the cover and the valve-chest.

I am aware that valves composed of two disks have been heretofore used, the end of the operating-screw being so arranged as to force the two disks apart when the valve is depressed, a duty which in my invention is accomplished solely by the spiral spring, the latter exerting a constant pressure to maintain the disks in tight contact with the seats at all times, and, rendering the valve more easy to operate than when forcing the disks apart, is dependent upon the end of the spindle. I am also aware that the double faces of turn-cocks have been forced apart by springs; but it will be seen that the same difficulties do not exist in such a case as in the present, and that the object and result of the arrangement are different.

I claim—

1. A valve-chest, having a longitudinal passage and two vertical and parallel valve-seats, in combination with a yoke sliding vertically and carrying independent flat valves adapted to the said seats, and forced apart by an intervening spring, *m*, all as described.

2. The combination of the valve-chest, its seats, the yoke carrying the valves *f f'* connected to the yoke so that they may be turned, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

Witnesses: ROBERT P. ROSS.
B. E. LEHMAN,
THOMAS EYNORY.