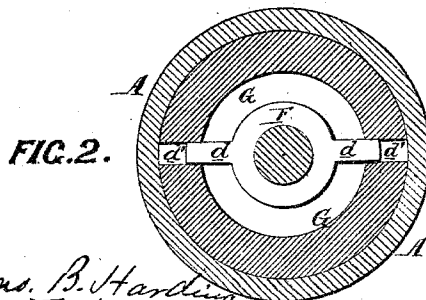
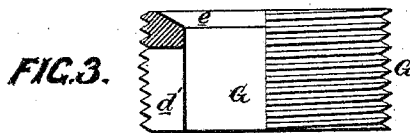
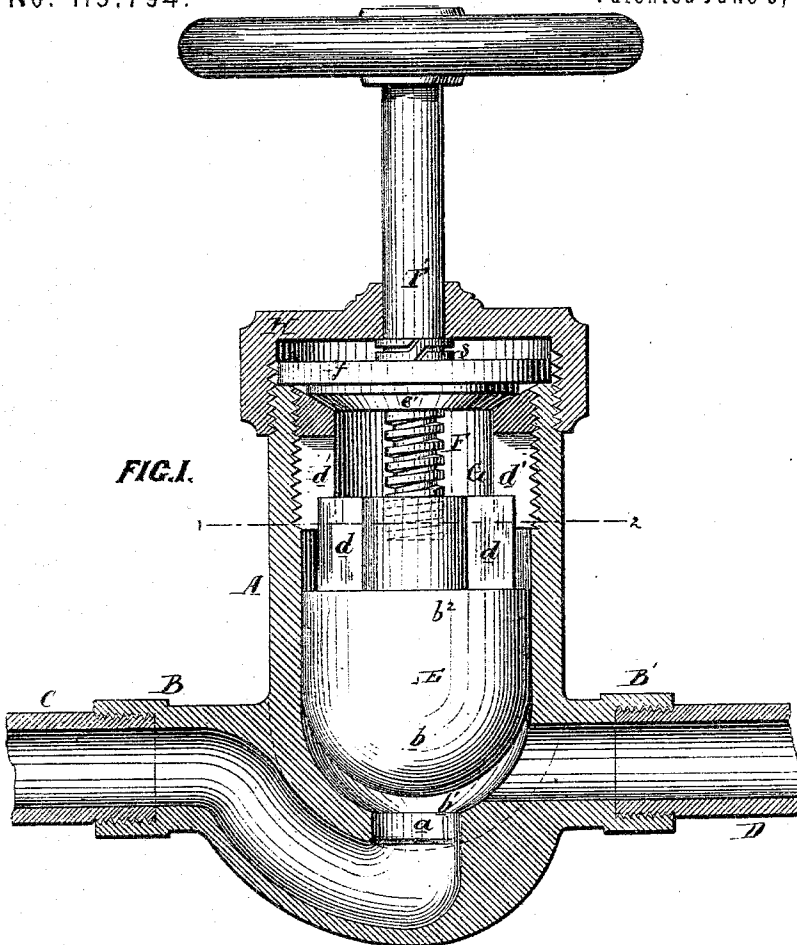


JAMES WALSH.

Improvement in Stop-Valves.

No. 115,794.

Patented June 6, 1871.



WITNESSES { *Jno. B. Harding*
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UNITED STATES PATENT OFFICE.

JAMES WALSH, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN STOP-VALVES.

Specification forming part of Letters Patent No. 115,794, dated June 6, 1871.

I, JAMES WALSH, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improved Stop-Valve, of which the following is a specification:

Nature and Object of the Invention.

My invention consists of a stop-valve, fully described hereafter, constructed with a view of rendering the joints in the said valve steam and water tight without the aid of any elastic packing, the valve being especially applicable to hot-water or steam-heating pipes.

Description of the Accompanying Drawing.

Figure 1 is a sectional view of my improved stop-valve; Fig. 2, a sectional view on the line 1 2, Fig. 1; and Fig. 3, a detached view.

General Description.

A represents the valve-casing, near the lower end of which are the inlet and outlet branches, arranged in line with each other, and threaded, as usual, for attachment to the supply-pipe C and discharge-pipe D. The supply-pipe C communicates with the interior of the casing A through an opening, *a*, directly beneath the valve E, the latter consisting of the semi-spherical portion *b*, adapted to a similarly-shaped seat, *b*¹, in the bottom of the case A, and a cylindrical portion, *b*², arranged to fit and move freely in the interior of the said case. The valve E is operated by a screw, F, adapted to internal threads in the said valve; but the latter is prevented from turning in the casing A by wings, *d d*, which project from it into the vertical slots *d' d'* of a hollow plug, G, Fig. 3, which is screwed into the upper portion of the case A. On top of the screw-plug G is formed a ground-seat, *e*, to which is adapted the edge of a disk, *e'*. The upper edge of the casing A is also accurately turned and ground to form a seat for a disk, *f*, both of these disks turning with, and, if desired, form-

ing part of the screw-spindle F. Between the upper disk *f* and the under side of the screw-cap H, and surrounding the spindle F', is an annular spring, S, the object of which is to hold the disks *f* and *e'* firmly in their seats with a slightly elastic pressure, which must be sufficient to resist that of the steam or water in the pipes. In some cases I dispense with the spring and maintain the disks in their seats by the cap H; but I prefer the use of the spring in the manner described.

It will be seen that by the above-described arrangement I secure perfectly steam and water tight joints without the aid of elastic packing, common to, but always objectionable in, stop-valves used for steam or hot-water pipes, as such packing interferes with the free working of the valves and is difficult to keep in proper order. It will be seen that with a slight modification of the inlet and discharge branches the valve can be converted into a faucet or cock suitable for wash-basins, bath-tubs, &c., the interior arrangement of the ground joints being maintained.

Claims.

1. The combination with the screw-spindle F, carrying a valve, E, of the supplementary valves or disks *f'* and *e'*, adapted to seats on the valve-casing and on a screw-plug, G, fitted within the said casing, all substantially as specified.

2. The screw-plug G fitted within the casing, slotted for the reception of the wings *d* of the valve E, and having a seat formed on it for the disk or valve *e'*, all as set forth.

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

JAMES WALSH.

Witnesses:

WM. A. STEEL,
JNO. B. HARDING.