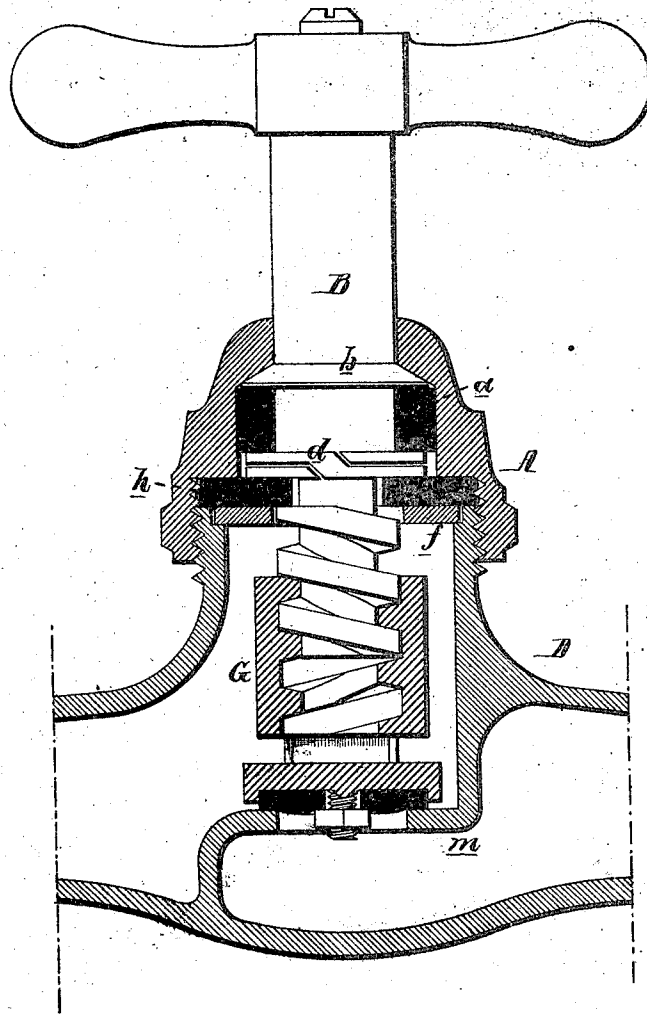


W. S. COOPER.
Stop-Cocks.

No. 140,248.

Patented June 24, 1873.



Witnesses, Thomas, McIlwain
Harry Smith

Wm S. Cooper
By his attys.
Howe and Son

UNITED STATES PATENT OFFICE.

WILLIAM S. COOPER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN STOP-COCKS.

Specification forming part of Letters Patent No. 140,248, dated June 24, 1873; application filed March 8, 1873.

To all whom it may concern:

Be it known that I, WILLIAM S. COOPER, of the city and county of Philadelphia, Pennsylvania, have invented an Improvement in Valve-Cocks, of which the following is a specification:

The object of my invention is to insure the ready application and adjustment, in a valve-cock, of the parts employed to prevent leakage around the screw-spindle, and this object I attain by the use of a recessed-cap or cover, A, in which is fitted the packing *a*, surrounding the spindle B, the packing *h*, which closes the joint between the cover and the cap, and a spring *d*, which is supported by a ring, *f*, in the casing D, against the flange *b* of the spindle, all as shown in the vertical section illustrated in the accompanying drawing.

The valve-chest D is of ordinary construction having the usual inlet and outlet passages separated by a partition, *m*, in which is an opening. The edge of the latter being the seat for a guided valve, *b*, which is controlled by the screw-spindle B, as in other valve-cocks of this class. To the upper edge of the valve-chest is screwed the cover A, and in a recess in the top of the chest bears the metal ring *f*, between which and the cover A is confined a packing-ring, *h*. The cone-shaped flange *b* of the spindle, is ground truly to a seat in the cover A, and between this flange

and the annular spring *d*, which bears on the packing *h*, intervenes one or more packing rings, *a*, fitting snugly in the annular space between the cover and the spindle. The constant pressure of this spring against the packing *a*, prevents any leakage, which might otherwise occur between the spindle and cover, owing to the wearing or imperfect fitting of the flange *b* to its seat.

As the packings and springs are all fitted to the detachable cap A, they may be adjusted and rearranged or refitted by merely removing the cap, without disturbing the casing.

It is not essential that the packing-ring *h* should extend beneath the annular spring; it might, for instance, be no wider than the portion of the cover which bears upon it, in which case the spring will bear directly on the ring *f*.

I claim as my invention—

The combination, with a valve-casing, of a detachable plate, *f*, and a cap, A, recessed to receive the valve *b*, upper and lower packings *a* *h*, and spring *d*, substantially as specified.

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

WM. S. COOPER.

Witnesses:

WM. A. STEEL,
JOHN K. RUPERTUS.