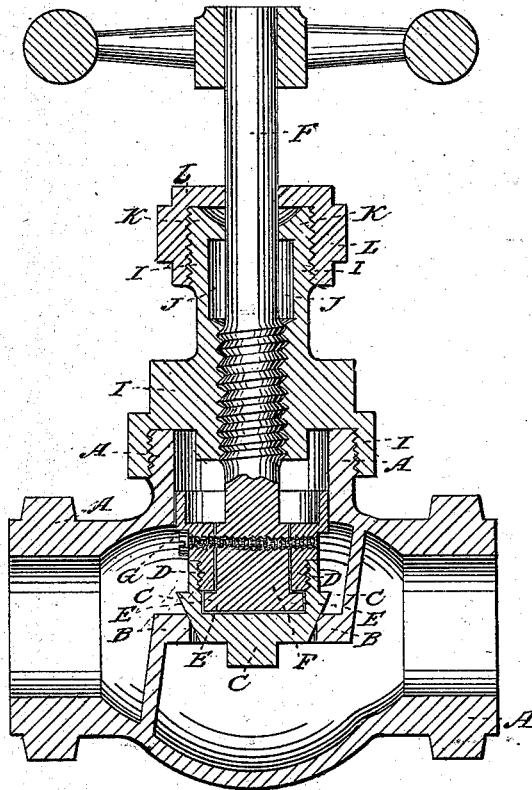


J. C. McDONALD.

Valve Cock.

No. 107,697.

Patented Sept. 27, 1870.



WITNESSES:

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PER

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# United States Patent Office.

JOHN C. MACDONALD, OF ST. LOUIS, MISSOURI.

Letters Patent No. 107,697, dated September 27, 1870.

## IMPROVEMENT IN VALVE-COCKS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, JOHN C. MACDONALD, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and useful Improvement in Valve-Cocks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

The figure is a detail sectional view of my improved valve-cock.

My invention has for its object to improve the construction of valve-cocks, so as to enable them to be ground to their seats at any time, when necessary, without removing them from their fittings, and, at the same time, to have a true working-guide when being re-ground; and

It consists in the construction and combination of various parts of the valve-cock, as hereinafter more fully described.

A represents the body of the cock, which is made substantially in the usual form and manner.

B is the valve-seat.

C is the valve, which is screwed upon the lower end of the guide-nut D.

The guide-nut D works snugly in the smooth barrel or neck of the body A, and incloses the collar E, formed upon the lower end of the stem F, between its lower end and the valve C.

This construction gives to the valve, when in its working condition, a loose or swivel movement, and allows it to take its seat firmly, and without any rubbing or grinding.

G is a set-screw, working in the guide-nut D, and which, when screwed into the hole H, formed in the stem F, and which may be bored entirely through the said nut D and stem F, locks or secures the guide-nut D to the stem F, and enables the valve to be securely ground into its seat.

I is the nut-cap, which connects all the parts of the valve-cock to each other by being screwed upon the neck of the body A.

The valve-stem F has a screw-thread formed upon it, which works in a similar screw-thread cut in the inner surface of the nut-cap I.

J is a recess formed in the nut-cap I, to allow the screw to terminate in a full thread.

The upper part K of the nut-cap I fits closely upon the stem F, which construction, in connection with the recess J, prevents the screw-thread of the stem F from passing through the said close-fitting part of the said nut-cap, and penetrating the packing placed upon the recessed end of the nut-cap I, and kept in place by the nut L, thus forming a durable and reliable stuffing-box, and dispensing with the follower, which is generally used in such cases.

In adjusting the device for re-grinding the valve, the nut-cap I is unscrewed from the body A, and run up upon the stem F, so as to be clear of the upper end of the neck of the body A.

The set-screw G is then screwed into the hole H in the stem F, fastening the valve C, guide-nut D, and stem F, rigidly to each other.

The operation of re-grinding can then be performed with facility and exactness, so that the valve may fit perfectly true.

It will be observed that the valve, having its guide in itself, independent of the stem, as shown by the guide-nut D working in the true cylindrical neck of the body A, possesses great advantage over valves which are guided only from the stem.

When the operation of re-grinding is completed, the set-screw G is turned back until the stem F turns freely in the guide-nut G.

The parts are then all connected by screwing the nut-cap I down tightly upon the body A, and the valve will again be in perfect working order.

To the upper end of the valve-stem F is keyed, or otherwise secured, a wheel, M, or other handle, for convenience in operating the valve.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The combination, with the ordinary body A, and valve-seat B, of the valve C, threaded and collared stem E F, and the cap-nut I, when all are constructed and relatively arranged as and for the purpose described.

Witnesses: JOHN C. MACDONALD.

DUNCAN BROWN,  
ROBERT HERRIES.