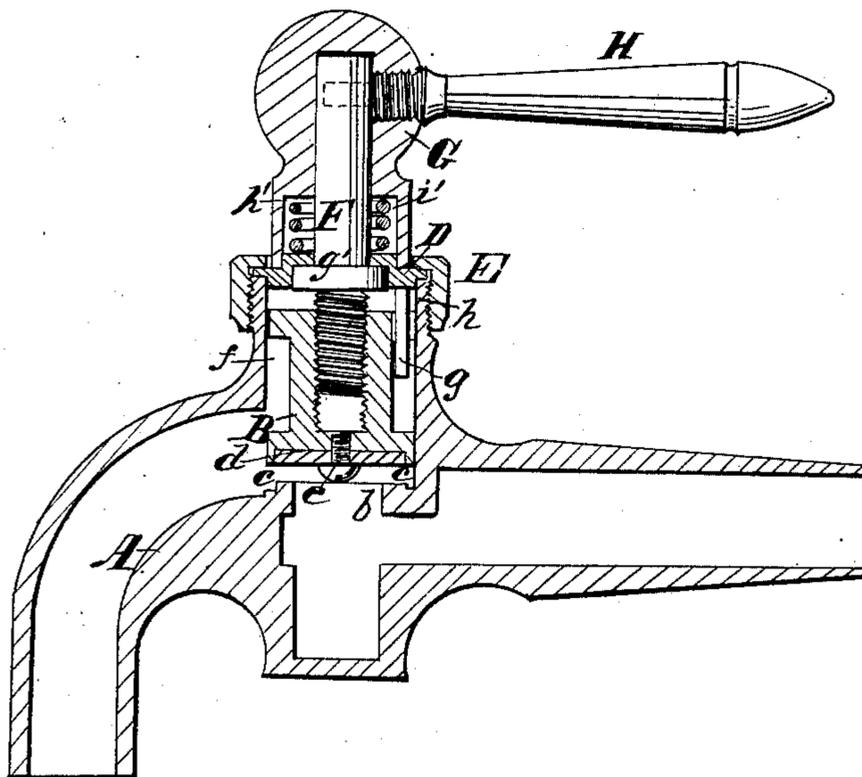


*J. C. Macdonald,*  
*Globe Valve,*  
*Nº 21,510,* *Patented Sep. 14, 1858.*

*Fig. 1.*



# UNITED STATES PATENT OFFICE.

J. C. MACDONALD, OF CINCINNATI, OHIO.

## VALVE-COCK.

Specification of Letters Patent No. 21,510, dated September 14, 1858.

*To all whom it may concern:*

Be it known that I, J. C. MACDONALD, of Cincinnati, in the county of Hamilton and State of Ohio, 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 of the same, reference being had to the annexed drawing, making a part of this specification, said drawing being a vertical central section of my invention.

The object of this invention is to dispense with the use of packing around the stem of the valve and still have the cock perfectly steam and water tight, equally so as if packing were used and applied in the best possible manner to the stem.

The invention is applicable to all valve cocks, but is more especially designed for an improvement in the same for which Letters Patent were formerly granted to me, the Letters Patent bearing date, August 11th, 1857.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents the body of the cock which is substantially of the usual form, and *b*, is the valve seat which is surrounded by a rabbet *c*, so as to give it an elevated position.

B, is the valve the lower end of which is faced with a rubber, leather or metallic disk *a*, secured to it by a screw *e*, the disk *d*, bearing on the seat *b*, when the valve is closed. The valve B, works vertically in its socket *f*, and is retained in a perfectly vertical position by a pendent guide *g*, which fits in a recess or notch *h*, in the side of the valve, said guide being attached to a cap D, which is fitted by grinding snugly into the top of the socket *f*, and is secured therein by a screw cap E, which is screwed over the top of the socket *f*.

F, is the valve stem, the lower part of which has a screw thread formed on it, said thread working in a female screw in the

valve B. The stem F, is provided with a collar *g'*, which is snugly ground into the under side of the cap D. The stem F, extends up through the cap D, and passes into a head G, in the lower part of which a chamber *h'*, is formed to receive a spring *i* which is placed on or around the stem, the lower end of the spring bearing on the cap D, and the upper end bearing against the head G.

H is a handle which is screwed laterally into the head G, the end of said handle fitting into the upper part of the stem.

From the above description it will be seen that the valve stem F, is kept in proper position in the head G, by the end of the handle H, and that all the working parts are kept together and secured in proper place by the screw cap E, the spring *i*, keeps the collar *g'*, snugly in the cap D.

By this invention the use of packing around the valve stem is entirely dispensed with, and the cock around the stem kept perfectly steam and water tight. The trouble therefore attending the packing of the stem is avoided it being always in proper working order, and the difficulty caused by the bursting of the packing cap in frosty weather, when the invention is used as a water cock is also avoided.

I do not claim the guide *g*, nor the valve B, nor the screw on the stem F, for operating said valve for these were secured to me by Letters Patent previously referred to; but,

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

The collar *g'*, on the valve stem F, the guide cap D, spring *i*, head G, connected with the stem F, by the handle H, and screw cap E, combined and arranged substantially as and for the purpose set forth.

J. C. MACDONALD.

Witnesses:

F. H. RÖWEKOMP,  
I. B. GIBSON.