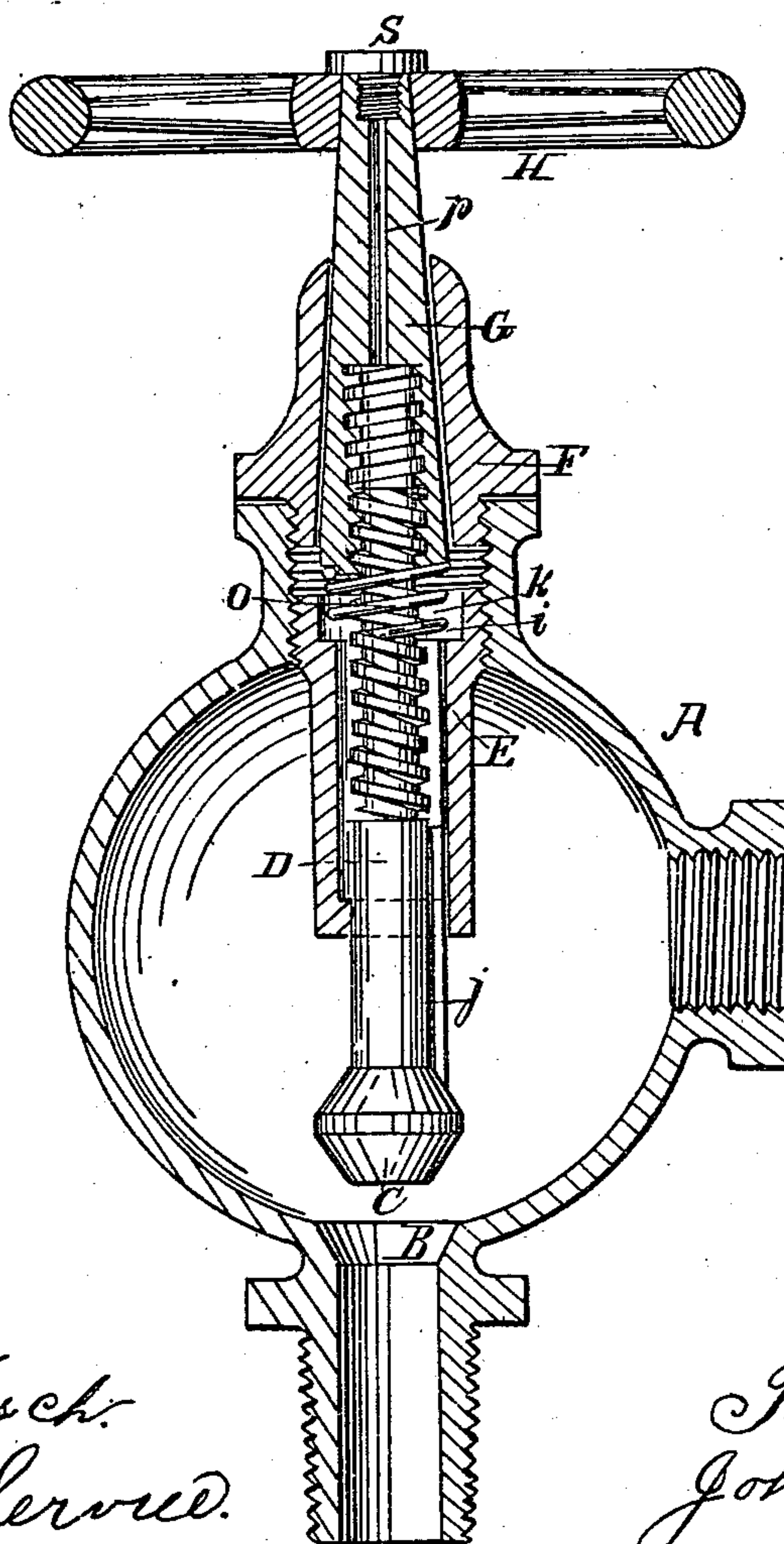


T. & J. BARBER.
GLOBE VALVE.

No. 61,794.

Patented Feb. 5, 1867.



Witnesses:
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United States Patent Office.

THOMAS AND JOHN BARBER, OF BROOKLYN, NEW YORK.

Letters Patent No. 61,794, dated February 5, 1867.

IMPROVEMENT IN GLOBE-VALVES.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that we, THOMAS BARBER and JOHN BARBER, of Brooklyn, in the county of Kings, and State of New York, have invented a new and useful Improvement in Valve-Cock; and we 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 drawings, forming part of this specification.

My invention consists in so constructing and arranging the parts of a valve to be used for steam, water, or gas, that no packing shall be required to keep the cock tight at all times when in use, as will be hereinafter described.

The drawing represents a longitudinal section of the cock. A is the shell or body of the valve-cock; B is the valve-seat; C is the valve; D is the valve-stem; E is a piece screwed into the shell as a guide, etc.; F is a cap piece, cone-like in shape; G is a conical socket piece, which screws on to the valve-stem. The wheel H, by which the valve is operated, is attached to this piece. The screw-thread in the neck of the shell supports the working portions of the cock. The piece E, which guides the valve, is attached to the shell by a screw. There is a channel or seat cut in this piece from the recess at *i* to the lower end, and there is a feather, *j*, on the valve-stem which fits into this seat or channel. This prevents the valve and stem from turning when the socket portion G is screwed on to it. The lower portion of the piece E acts as a guide to keep the valve in place, while in the upper end of it there is a recess, *h*, in which there is a spiral spring, *o*. The socket G is confined by the conical-shaped cap F. This cap is screwed into the neck of the shell, as seen in the drawing; its interior portion encloses the socket G and forms a tight ground joint. The tension of the spiral spring *o* keeps the socket G always pressing upwards or into the cap F, and this being a tapering ground joint, it must always be a tight joint, from the fact that using the cock, instead of wearing it loose and destroying the joint, as in common cocks, only keeps the joint perfect, and, if anything, improving it the more it is used. It will thus be seen that we dispense with all packing, and that our joint is formed entirely by the contact of metallic surfaces, which is allowed to be the most perfect and durable joint that can be made. The valve is raised by screwing the socket G on to the stem D, and closed by an opposite motion. In the upper portion of the valve-stem G there is an oil hole, *p*. There may be an oil cup attached to the top of the stem, but in this example of our invention the orifice is closed by a screw, *s*. By dropping oil into this hole the valve-stem is thoroughly lubricated without any further trouble.

This invention is designed as an improvement upon a similar invention, for which Letters Patent of the United States, dated the 13th day of June, 1865, were granted to us. In our present invention we claim to have obviated all the objections which could be formed against our former one.

We do not claim constructing a valve-cock and keeping the joints tight without elastic packing.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the cap F, the socket G, and the valve-stem D, constructed and arranged substantially as described.
2. We claim the guide-piece E, with the chamber *h*, and with the feather-seat at *j*, substantially as set forth.
3. We claim the spiral spring *o*, in combination with the guide-piece E, and the socket G, substantially as described.
4. We claim the lubricating hole *p*, with the tapering socket G, substantially as herein shown and described.

THOMAS BARBER,
JOHN BARBER.

Witnesses:

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