

W. S. Cooper,

Globe Valve,

No 58,039,

Patented, Sept. 11, 1866.

Fig: 1.

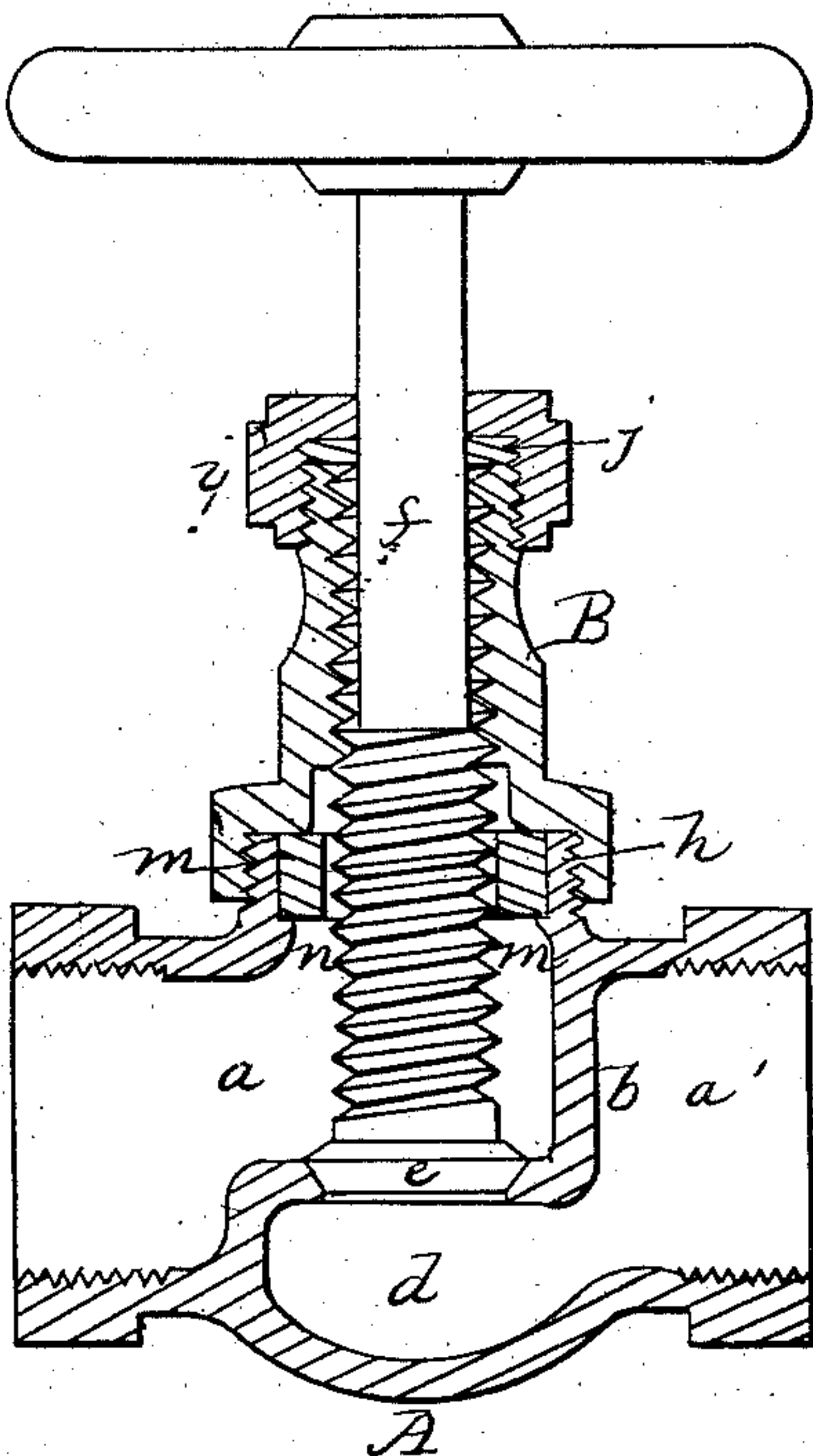


Fig: 2.

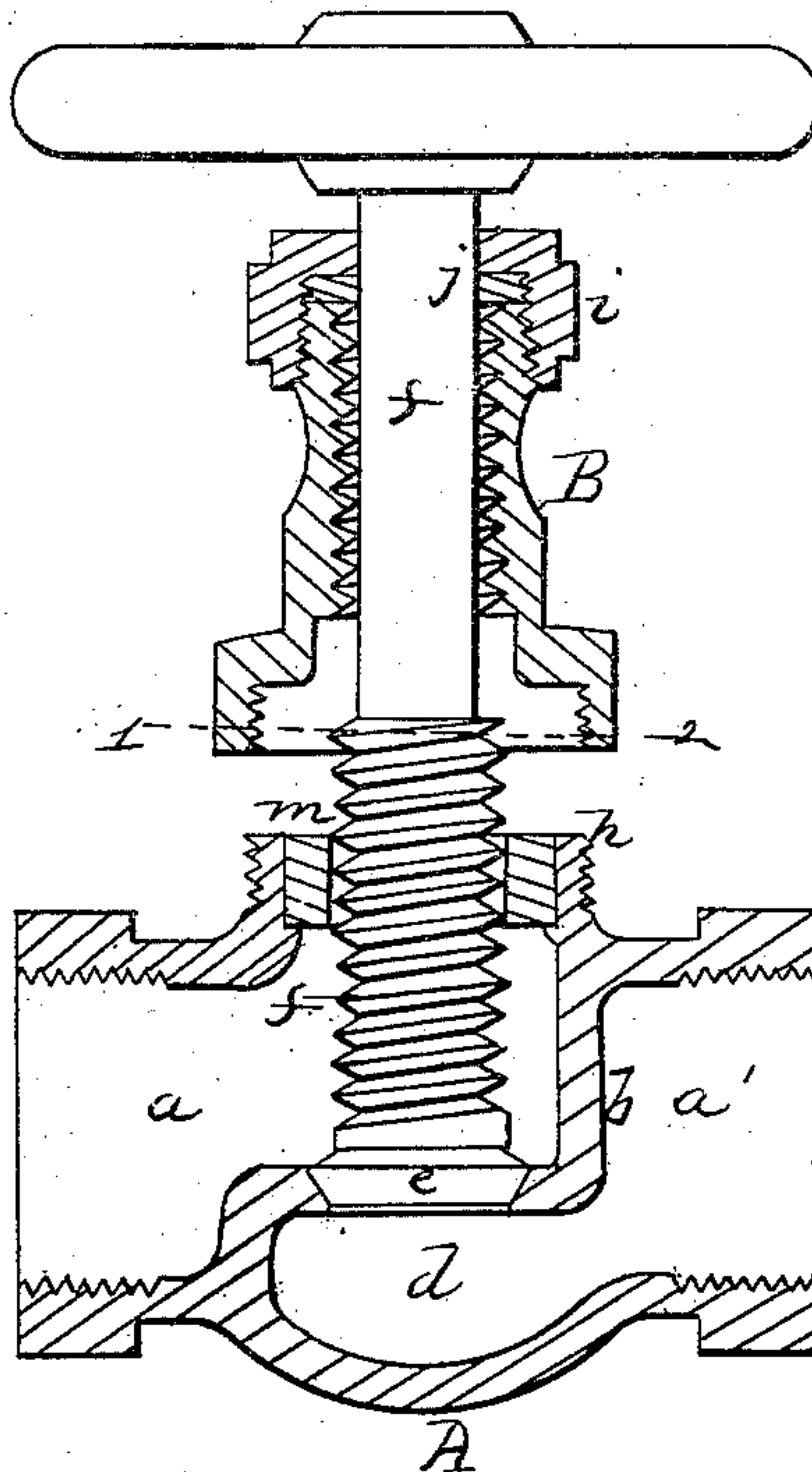
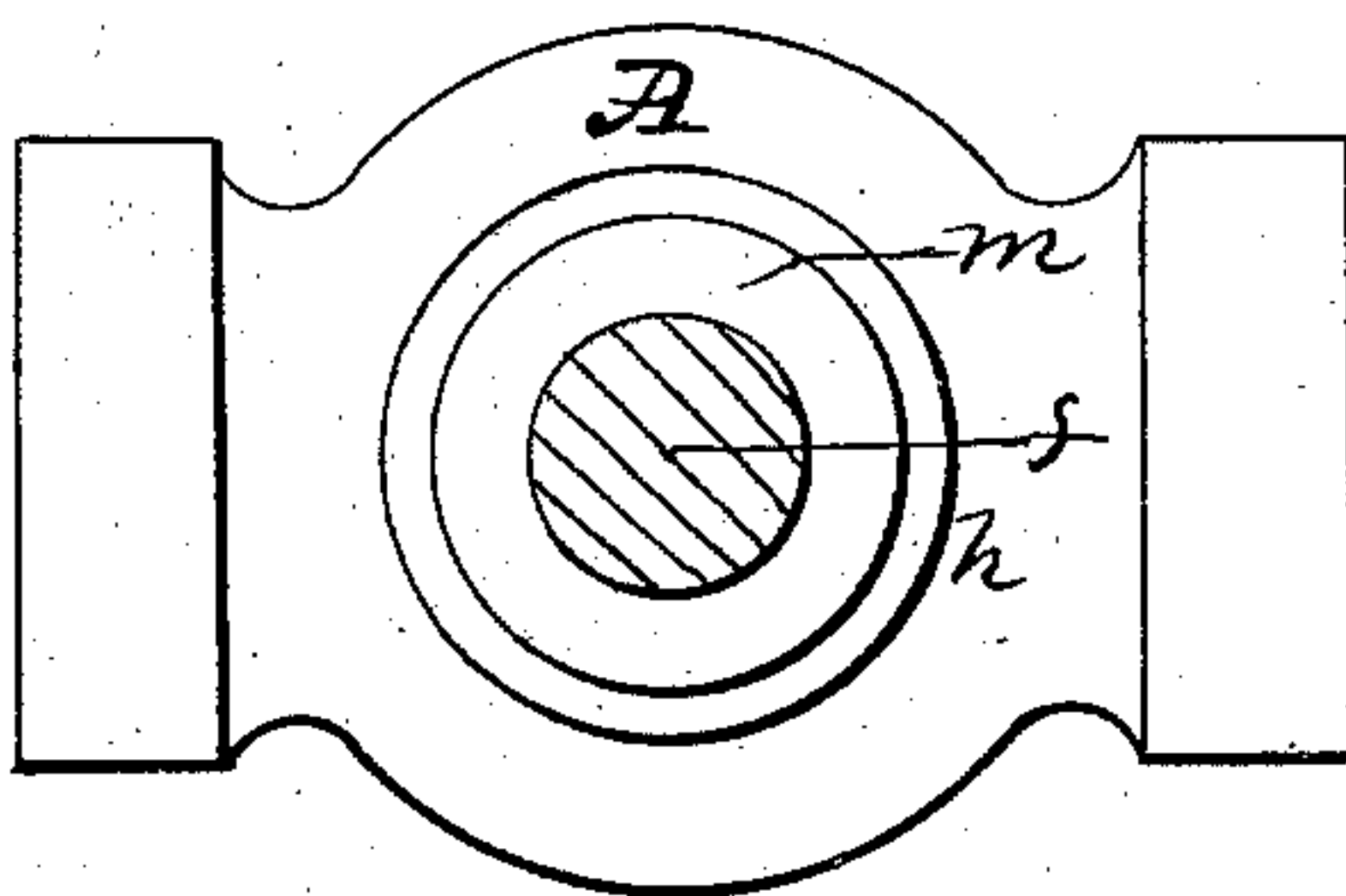


Fig: 3.



Witnesses.

W. S. Cooper
S. H. Howson

Inventor.

W. S. Cooper
By his attorney
H. Howson

UNITED STATES PATENT OFFICE.

WM. S. COOPER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN STEAM-ENGINE VALVES.

Specification forming part of Letters Patent No. 58,039, dated September 11, 1866.

To all whom it may concern:

Be it known that I, W. S. COOPER, of Philadelphia, Pennsylvania, have invented an Improvement in Stop-Valves; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a ring applied to the chest and spindle of a stop-valve, substantially as described hereinafter, the said ring being such that it will serve as a guide for the spindle during the operation of grinding the valve to its seat, and at the same time permitting the valve to be withdrawn from the chest when necessary.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figures 1 and 2 are vertical sections of a stop-valve with my improvement, and Fig. 3 a sectional plan on the line 1 2, Fig. 2.

Similar letters refer to similar parts throughout the several views.

A is the valve-chest, which is, as usual, separated into the receiving and discharging chambers *a* and *a'* by a partition, *b*. In the partition *b* is an opening, *d*, with a beveled edge adapted to the beveled edge of a valve, *e*, at the lower end of the spindle *f*, a portion of which has screw-threads adapted to similar internal threads in the tubular piece B, through which the spindle passes, the said tubular piece screwing onto the annular projection *h* of the valve-chest. The tubular piece B is surmounted with the usual screw-cap *i*, within which is a packing-washer, *j*.

The above-described parts are similar to

those of ordinary stop-valves, and will therefore require no minute description.

Considerable difficulty has been heretofore experienced in regrinding the valve *e* evenly to its seat after it has become worn, a difficulty which has been owing to the size of the opening through which the valve is admitted to the chest, this opening being so much larger than the spindle that the latter is without a guide to maintain it in its proper position free from all lateral movement during the operation of grinding. This difficulty I obviate by the improvement which I will now proceed to describe.

In a recess in the top of the valve-chest, and within the projection *h*, I fit a metal ring, *m*, which is confined between a ledge, *n*, in the said chest and the lower end of the tubular piece B in the manner best observed on reference to Fig. 1. The opening in the ring is sufficiently large in diameter to admit and serve as a guide for the screwed portion of the spindle *f*, which is consequently maintained by the said ring in its proper position during the operation of regrinding the valve *e* to its seat, the ring being so loose in its recess that it can be readily withdrawn therefrom when the valve has to be removed from the chest.

I claim as my invention and desire to secure by Letters Patent—

The guiding-ring *m* applied to the chest and spindle of a stop-valve, substantially in the manner described.

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

WM. S. COOPER.

Witnesses:

CHAS. E. FOSTER,
W. J. R. DELANY.