

J. A. Marden,

Stop Valve.

No. 98,510.

Patented Jan. 4. 1870.

Fig. 1.

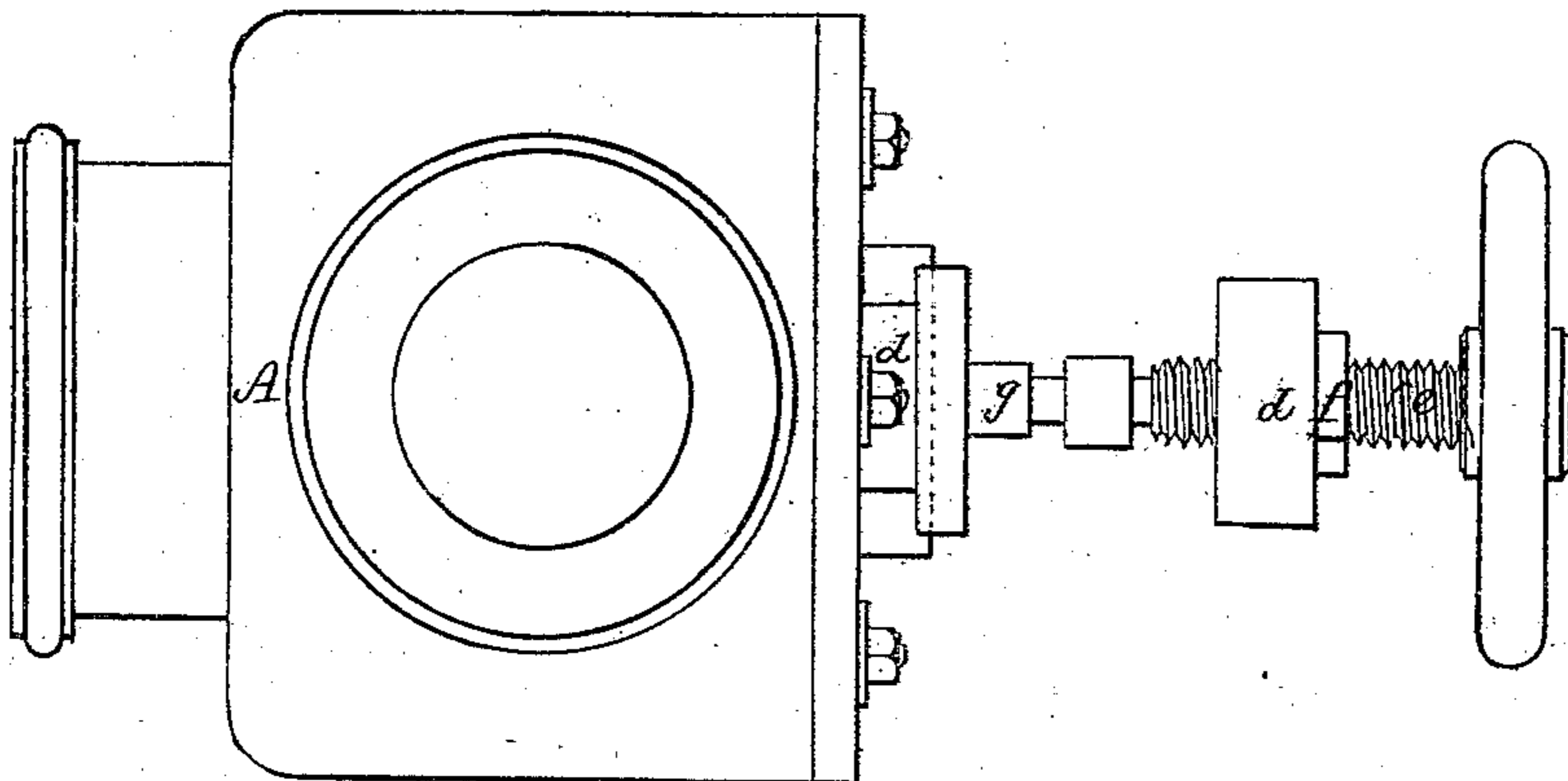


Fig. 2.

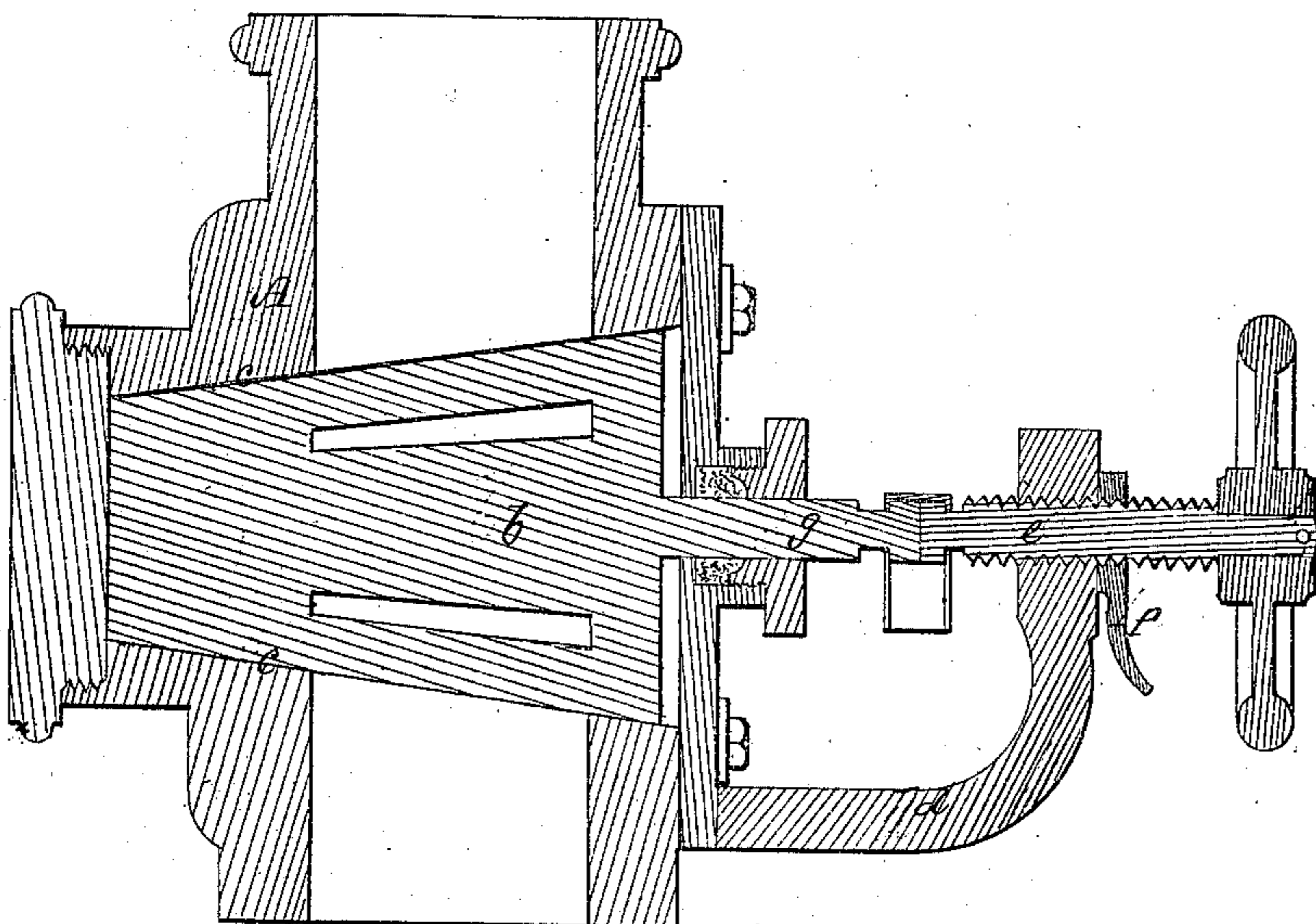
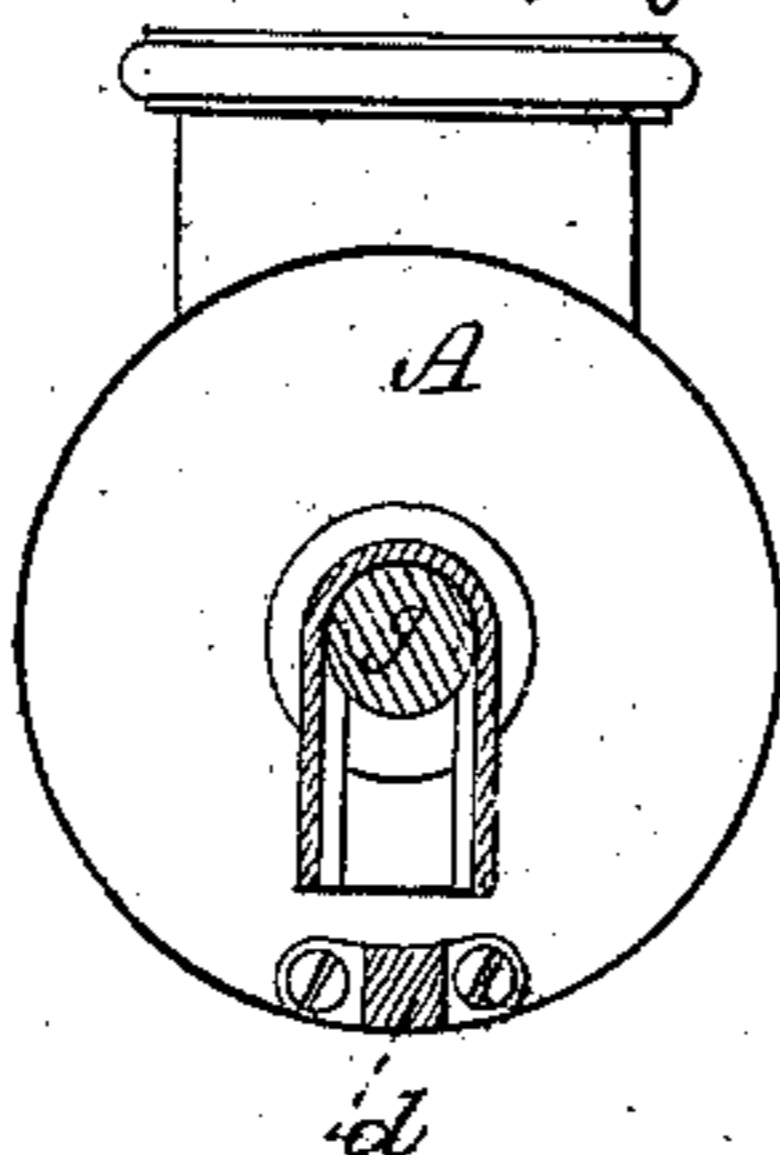


Fig. 3.

on line a, b. of Fig. 2.



Witnesses,
C. Griffith
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J. A. Marden.
By his Attorney,
Frederick Curtis.

United States Patent Office.

JEREMIAH A. MARDEN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO GEORGE M. GIBSON AND THOMAS A. JOHNSTON, OF SAME PLACE.

Letters Patent No. 98,510, dated January 4, 1870.

IMPROVEMENT IN STOP-VALVES.

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

To all to whom these presents shall come:

Be it known that I, JEREMIAH A. MARDEN, of Boston, in the county of Suffolk, and Commonwealth of Massachusetts, have made an invention of a new and useful Improvement in Steam-Enginery; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawings, making part of this specification, and in which—

Figure 1 is a plan,

Figure 2, a longitudinal section, and

Figure 3, a transverse section of a cylindrical steam-valve, provided with my invention.

A cylindrical conical steam-valve is now very generally employed, in connection with governors of steam-engines, and such class of valves, while possessing many important advantages, have, likewise, their defects, prominent among which is the liability to clogging by any foreign substance, owing to the fact that the entire circumference of such valve is surrounded by its seat.

From this cause, as well as for replenishing end-packings, and other reasons, it frequently becomes necessary to partially or wholly remove the valve from its box or case.

My invention relates to means whereby the valve may instantly be loosened within its case or seat, without the removal of any portion of the latter, and consists in stepping or swivelling the outer end of the valve-stem within or upon the end of a screw, such screw being passed through a bracket or arm, making part of the valve-case, in such manner as to advance or retract the valve, which is left free to oscillate independently of the screw, as hereinafter explained.

In the drawings before alluded to as accompanying this specification, and which illustrate my invention, A denotes the box or case of a cylindrical steam-valve, such valve being shown at b, and its seat at c, such parts being constructed and combined in manner similar to others in use.

In carrying out my invention, I affix to the outer end of the box A, a curved standard or bracket, d, while through the upper part of this standard I pass a screw, e, provided with a suitable hand-wheel or head, and also with a check-nut, f, to prevent its retraction.

This screw is disposed in axial alignment with the valve b and its stem g, such screw and valve-stem being connected by a suitable swivelling-joint, which, while securing them fully together on all occasions, permits of rotations of the valve and its stem, with respect to the bracket, which is, of course, stationary.

It will be evident, from the above-mentioned arrangement of parts, that should it become necessary to retract the valve b, such movement may be effected by a corresponding retraction of the screw e, or by continuing this retraction of the screw to a sufficient extent, the valve may be entirely removed from its case.

The ease and celerity with which a valve may be "blown off," as it is technically termed, by means of my invention, renders it one of value.

Another and important advantage of my invention results from the ease and celerity with which the valve may always be perfectly fitted, should any wear occur.

Although, in the accompanying drawings, I have represented the connection of the valve-stem and the screw e, as effected by means of a yoke, clasping a head or collar, formed upon each, it will be apparent that various descriptions of swivelling-joints may be adopted for the purpose.

I would remark that I do not wish to confine myself to the employment of the screw e, as a means of regulating the end-movement of the valve, as other mechanical devices may be adopted, which shall effect the desired object, such as a cam or eccentric.

What I claim, then, and desire to secure by Letters Patent of the United States, is—

Connecting the valve-stem with the screw-rod, or other device by which the end-movements of the valve are effected, by means of a swivel-joint, which, while compelling the valve to follow the longitudinal movement of the screw or other device, will permit it to oscillate independently of the same, substantially as shown and set forth.

JEREMIAH A. MARDEN.

Witnesses:

FRED. CURTIS,
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