

W. Glass.  
STEAM VALVE.

PATENTED NOV 8 1870

109001

Fig. 1.

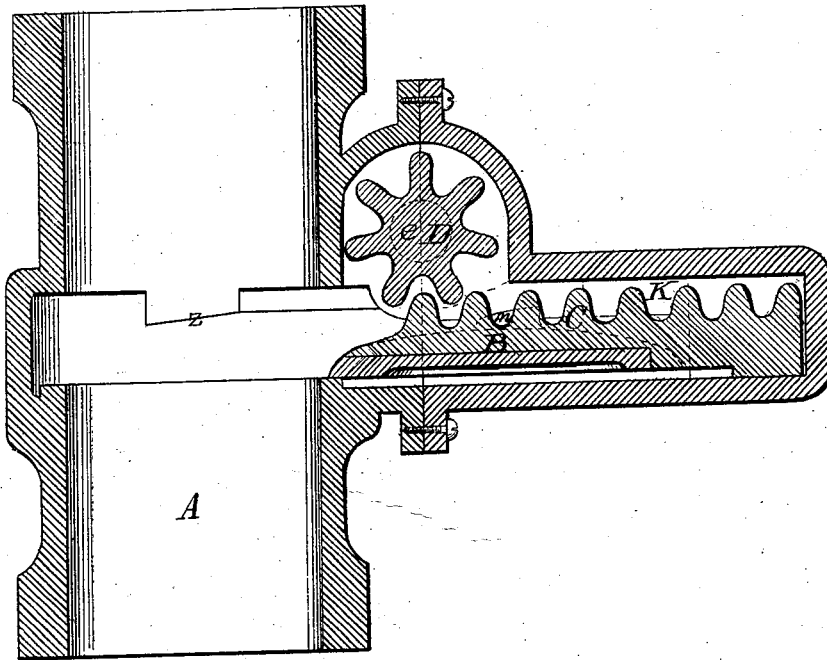
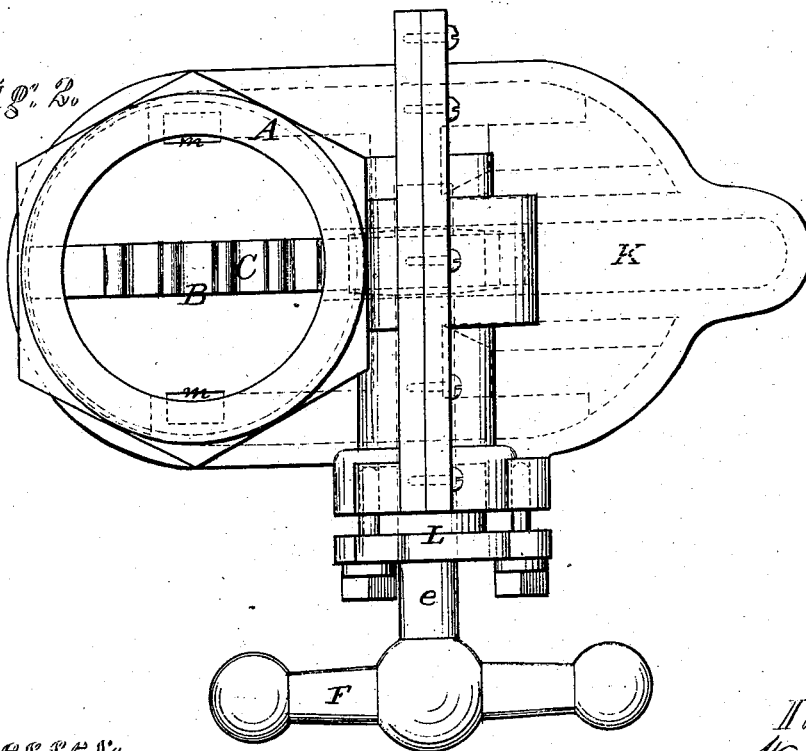


Fig. 2.



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# United States Patent Office.

WILLIAM GLASS, OF BROOKLYN, NEW YORK.

Letters Patent No. 109,001, dated November 8, 1870.

## IMPROVEMENT IN LATERALLY-SLIDING THROTTLE-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 I, WILLIAM GLASS, of Brooklyn, in the county of Kings and State of New York, have invented a new and valuable Improvement in Sliding-Valves; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a central horizontal section of the valve and casing.

Figure 2 is a front view thereof.

My invention has relation to an improvement in slide-valves, and consists in constructing a ratchet on the back of the slide, and operating the same by means of a pinion in the valve-casing.

The letter A of the drawing designates the valve-casing made in such form as may be most desirable to subserve the purpose intended, and provided with a groove for the operation of the valve, as hereinafter mentioned.

B represents the valve slide, to which is secured the ratchet-bar C.

D represents a pinion, pivoted within the valve-casing.

The shaft *e* of the pinion projects through the casing, and the end thereof is provided with a square seat to receive the handle or operating lever F.

K represents a pocket or recess, which is attached laterally to the valve-casing, and forms a part thereof.

Usually I propose to introduce the valve-slide into its way at the side of the casing, and close the opening by means of a separate pin containing the pocket or recess.

L represents a stuffing-box, through which the pinion-shaft passes.

This stuffing-box is used principally when the valve is employed to regulate the passage of steam. For liquids it is not required.

In the operation of my invention it will appear that the number of turns of the pinion-shaft required to carry the valve-slide from one end of its way to the other, depends upon the relation between the number of teeth on the pinion to that of the teeth of the ratchet-bar.

Usually I find it practicable so to regulate these numbers that the full movement of the slide shall be accomplished by less than one revolution of the pinion.

When used for liquids, as a spigot, the advantage of a free passage through the tube is obtained by a comparatively small movement of the handle.

Wedge-shaped lugs, *m m*, are attached to each side of the slide, and serve, when in contact with the inclined planes *z*, to keep the valve pressed tightly against its seat.

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

In combination, the slide-valve B, with attached ratchet-bar C, and wedges *m m*, the valve-casing A, with sliding grooves as described, inclined-planes *z*, and the pinion D, substantially as specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM GLASS.

Witnesses:

FREDERICK W. BOLAND,  
WILLIAM H. DRAKE.