

United States Patent Office.

W. SMITH, OF SAN FRANCISCO, CALIFORNIA.

Letters Patent No. 68,249, dated August 27, 1867.

IMPROVEMENT IN VALVES FOR WATER-CLOSETS.

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, W. SMITH, of San Francisco, in the county of San Francisco, and State of California, have invented a new and useful Improvement in Adjustable Valve for Water-Closets; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

In situations where the pressure of water varies it is necessary that the water-valve should be adjusted to the pressure, so that no more water can be used than is necessary. To prevent a waste of water under these circumstances is the object of my invention. In the accompanying drawings—

Figure 1 represents the recess which is attached to the receiver of a water-closet, with the lever and arm, and also an outside view of the valve.

Figure 2 is a vertical section of the valve as it stands in fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the recess which is cast in the receiver; B is the lever; C is the arm on the lever; D is the lower valve-stem; E is the upper portion of the shell of the valve, forming a chamber; F is the water pipe; G is the shell of the valve; H is the valve; J is the chamber. The valve-stem D passes down through the body or shell, and rests on the arm C, when it is lifted from its seat. The arm C is rigidly attached to the lever, and is located on the inside, while the lever is on the outside of the receiver or recess. The valve is lifted from its seat by raising the lever, when the water is allowed to pass through the pipe F. Above the seat the valve is enlarged, is hollow, and enters a chamber, J. There is a narrow channel, *h*, cut vertically in the upper part of the valve. Surrounding this portion of the valve there is a leather washer, *i*, which is kept in its place by being screwed in the joint between E and the lower portion of the valve-shell. The water finds a passage into the chamber J through the channel *h*, but when the valve is raised the upper portion of it displaces a portion of the water, and to allow the valve to close again, water has to return to the space above the valve, which is prevented by the leather washer, except through the channel *h* gradually, thereby suspending the valve long enough to fill the pan after the handle is dropped. *m* is a groove around the valve, to give the water access to the channel *h*. The length of time the valve remains open after the handle is down is according to the length of the throw of the valve; and the throw of the valve is regulated by the distance it is screwed into the receiver. The valve is closed by its own gravity and the pressure of the water, the spring *k* in the chamber being merely to overcome the friction of the leather washer.

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

The valve H, working through the annular elastic washer *i*, whereby, in opening the valve, the water in the chamber J is allowed to pass freely, said washer preventing the return of the water, excepting through the channel *h*, as herein set forth for the purpose specified.

W. SMITH.

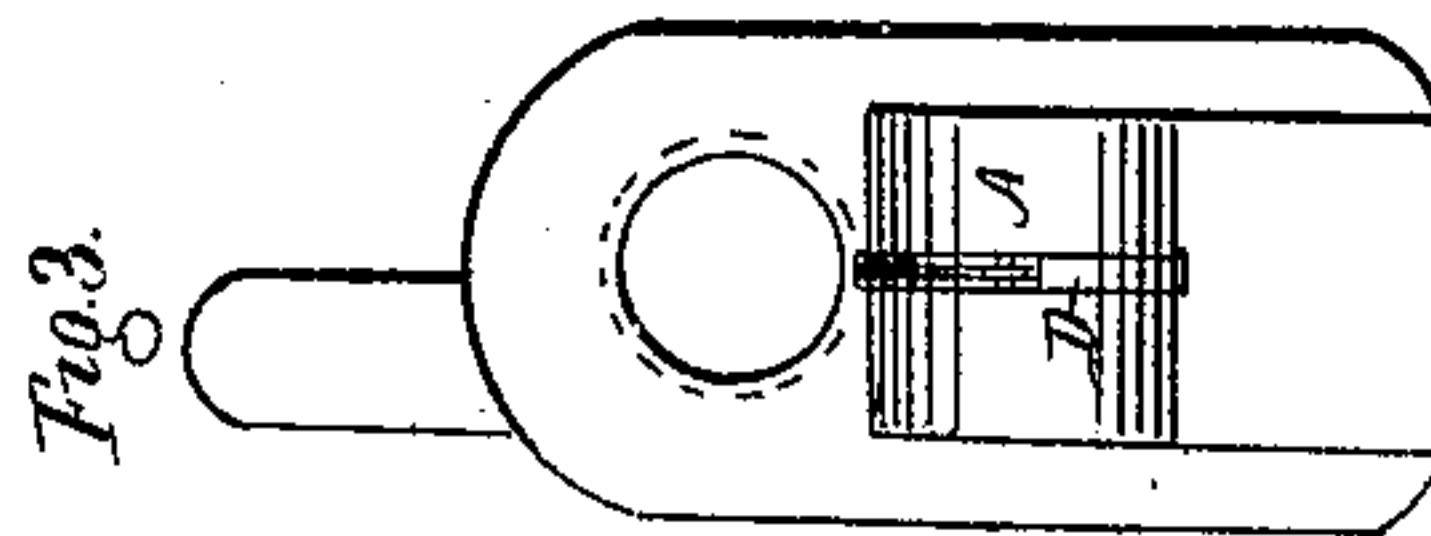
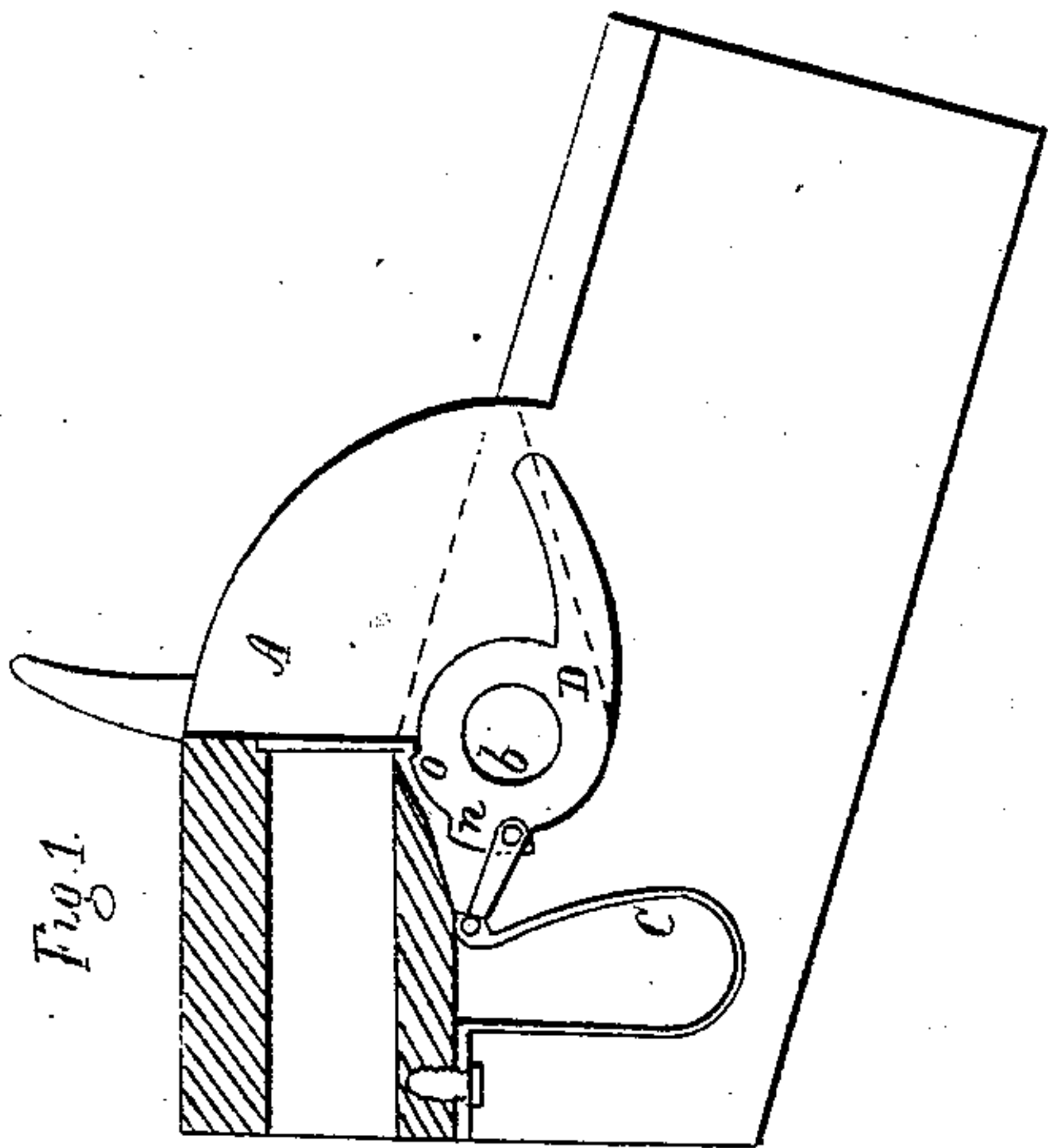
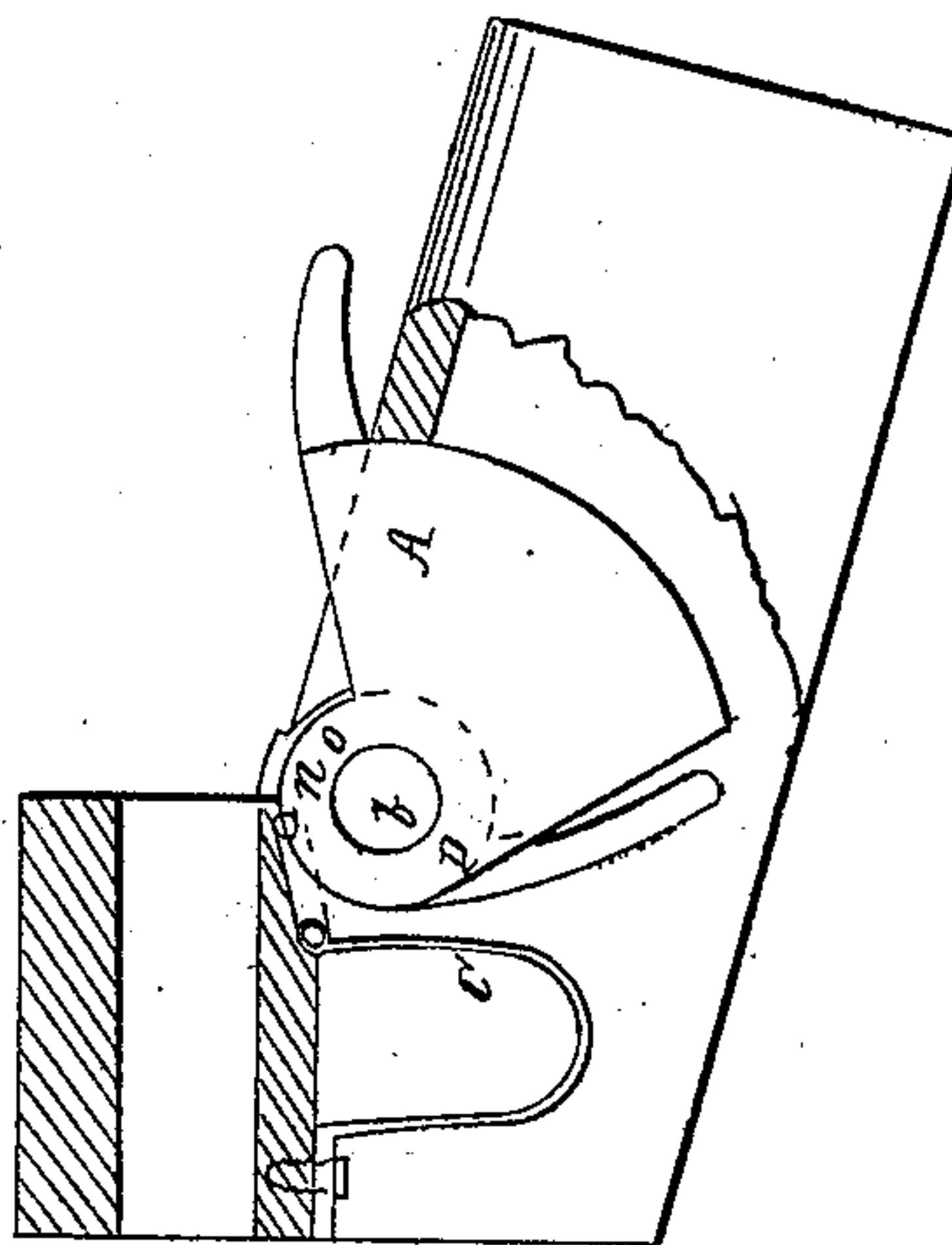
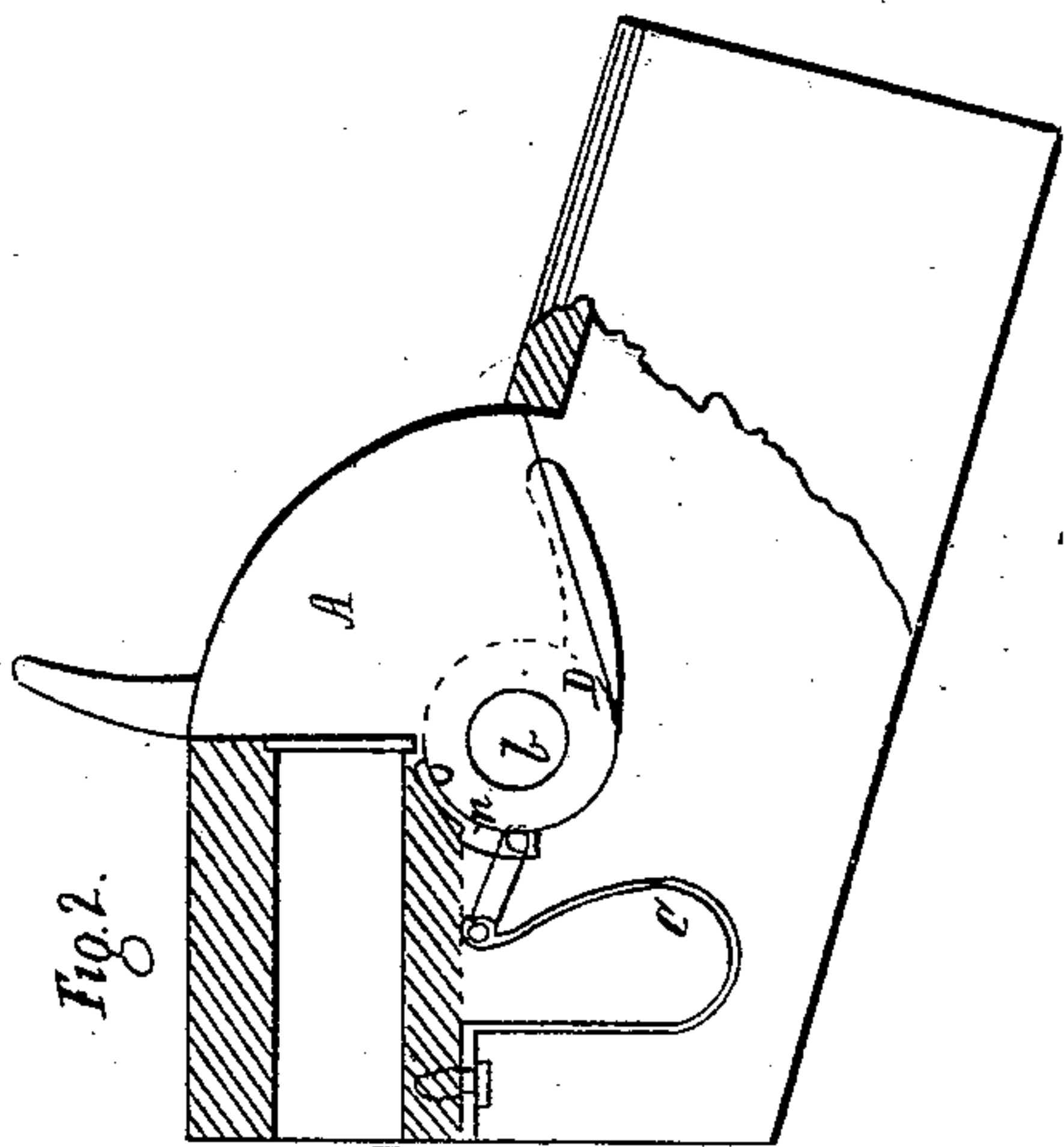
Witnesses:

WM. O. FARNSWORTH,
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W. S. SMOOT.
Breech-Loading Fire-Arm.

No. 68,250.

Patented Aug. 27, 1867.



Witnesses.

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