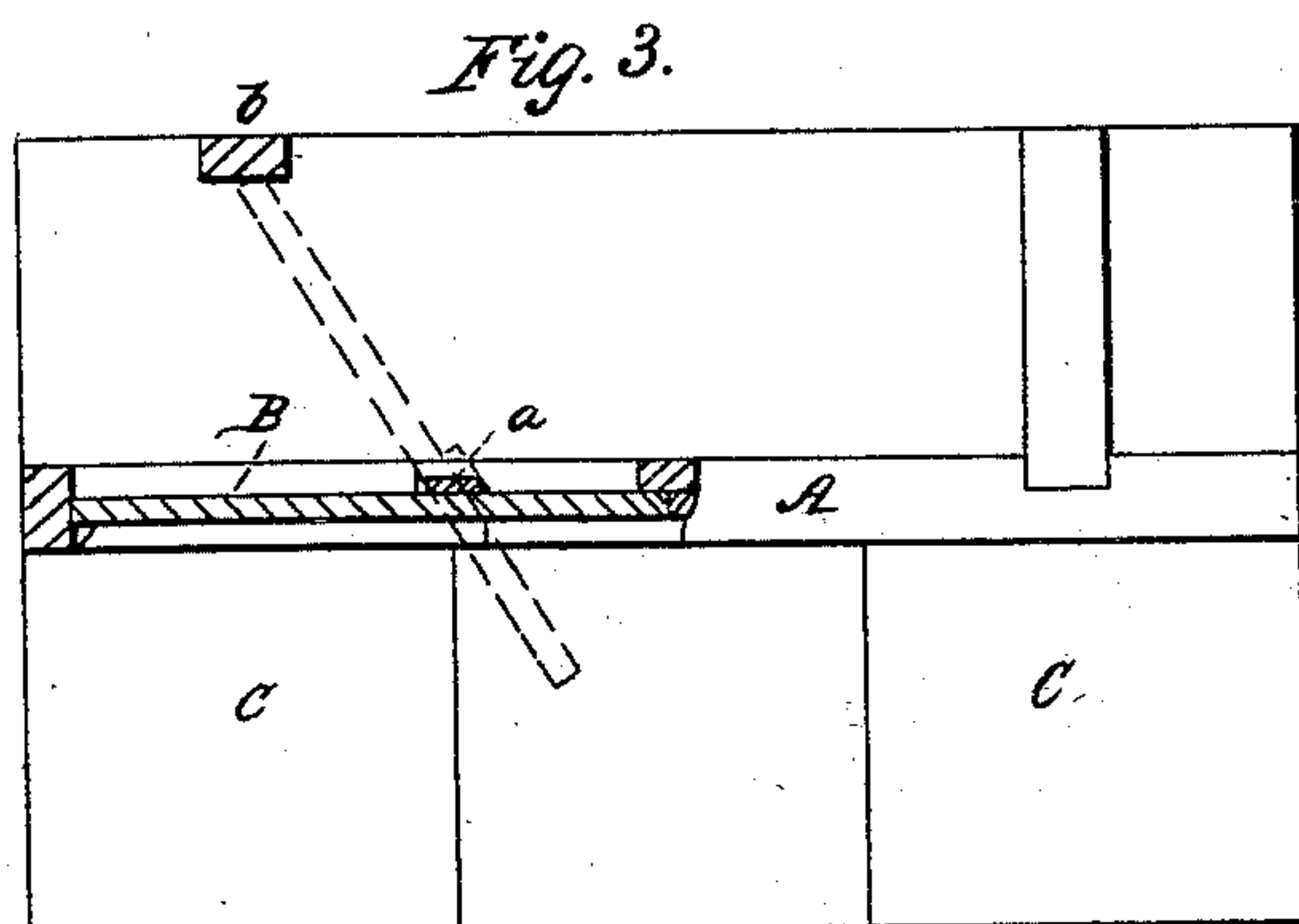
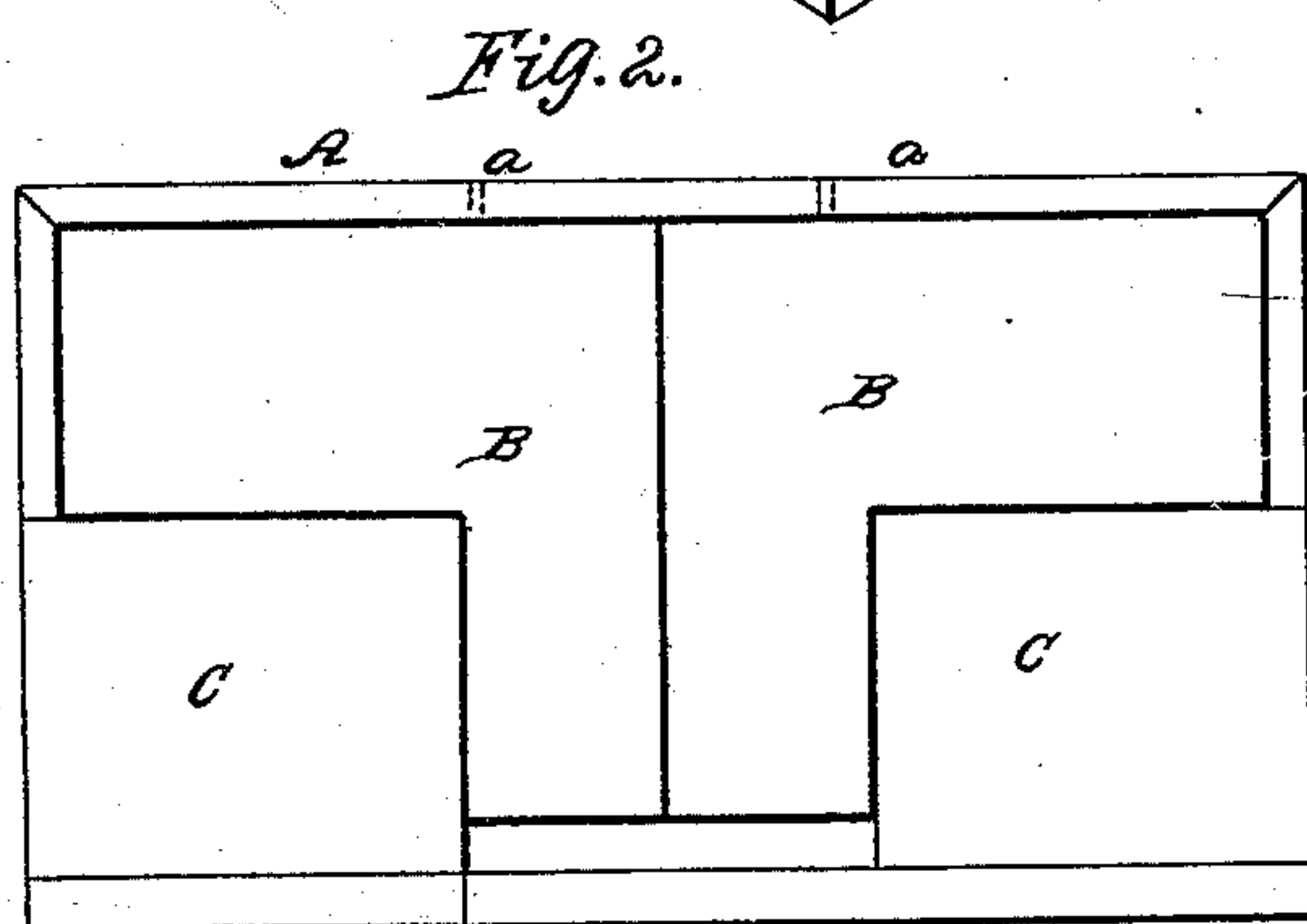
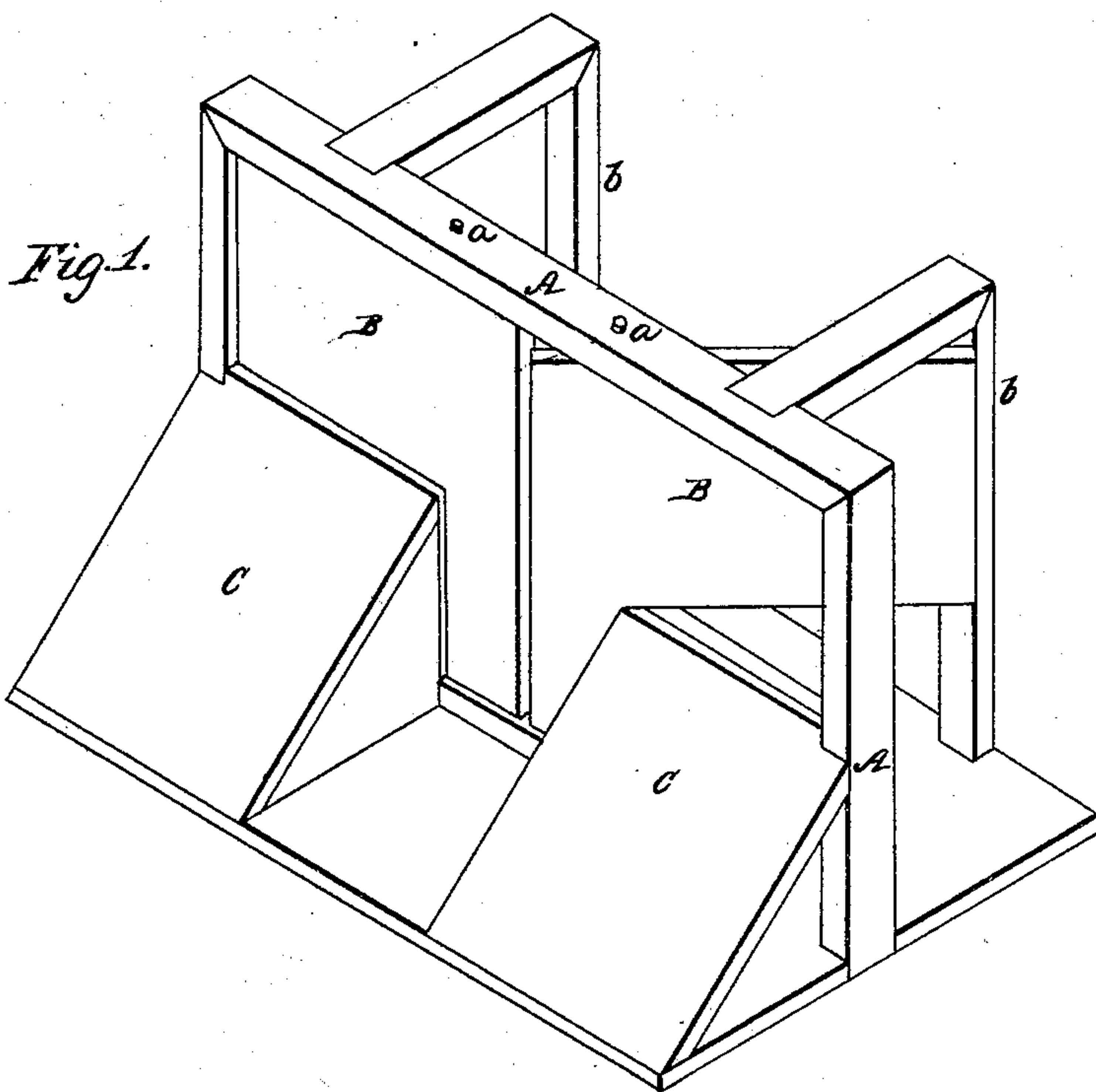


ALLARD & THOMAS.  
Self Operating Flood Gate.

No. 57,839.

Patented Sept. 11, 1866.



Witnesses:  
P. J. Dodge.

Inventors:  
H. H. Allard  
R. H. Thomas  
By W. H. Dodge atty.

# UNITED STATES PATENT OFFICE.

WILLIAM H. ALLARD AND ROBERT W. THOMAS, OF PORTAGE, WISCONSIN.

## IMPROVED SELF-OPERATING FLOOD-GATES.

Specification forming part of Letters Patent No. 57,839, dated September 11, 1866.

*To all whom it may concern:*

Be it known that we, WILLIAM H. ALLARD and R. W. THOMAS, of Portage, in the county of Columbia and State of Wisconsin, have invented certain new and useful Improvements in Flood-Gates; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use the invention, we will proceed to describe it.

Our invention consists in so arranging one or more pivoted gates in a dam that the pressure of the water shall hold said gates closed until the water rises to a certain height, after which the pressure of the water, acting upon the upper portion of the gate, shall cause the same to open, and permit the water to escape until lowered to a certain point, after which the gate will automatically close again.

Figure 1 is a perspective view; Fig. 2, a front elevation; and Fig. 3, a top view, with a portion of the framing broken away.

A represents a strong frame, which may be constructed in any suitable manner, the same forming a portion of the dam, or being suitably located in some portion of the same. Within this frame are mounted one or more gates, B, which are pivoted at top and bottom, as shown at *a*, so as to swing in a horizontal plane, as indicated in red in Fig. 3, the gate at the right hand in Fig. 1 being also shown open.

C represents an inclined breast or frame, built up against or in front of a portion of the gate B, as shown clearly in Figs. 1 and 2, the inner edge of said breast C being in line with the pivots *a*, or nearly so.

It will thus be seen that while the water is below the top of C it will press upon that portion of the gate which extends down by the side of C only, and thereby keep the gate closed; but as the water rises above C it will begin to press upon the longer arm of the gate, and so soon as it shall cover an area of the gate above C equal to that alongside of C it will open the gate by causing it to turn on its pivots, throwing the longer arm outward until it strikes against the post *b*, set there for the purpose, and thus permit the water to escape. As soon, however, as the water becomes lowered so that its pressure upon the longer arm shall be less than that on the shorter arm, or that portion which extends along down by the side of C, it is obvious that the gate will be closed again, and in this way it is rendered self-operating or automatic in its operations, closing as the water lowers and opening as it rises.

The benefit of such an arrangement is obvious, especially on streams subject to sudden rises, and on which, for the want of some such device, dams are frequently swept away by sudden rise of the stream in the night, or at other times when no one is present to open the waste-gates.

It is obvious that any number of these gates may be thus arranged in a single dam to suit its size and capacity.

Having thus described our invention, what we claim is—

The gate B, pivoted eccentrically and arranged to operate in combination with the guards or breasts C, substantially as and for the purpose set forth.

WM. H. ALLARD.  
ROBT. W. THOMAS.

Witnesses:

O. P. WILLIAMS,  
HARVEY C. BAKER.