

(No Model.)

3 Sheets—Sheet 1.

J. S. PIHLSTRÖM.

WINDOW.

No. 321,245.

Patented June 30, 1885.

Fig. 2.

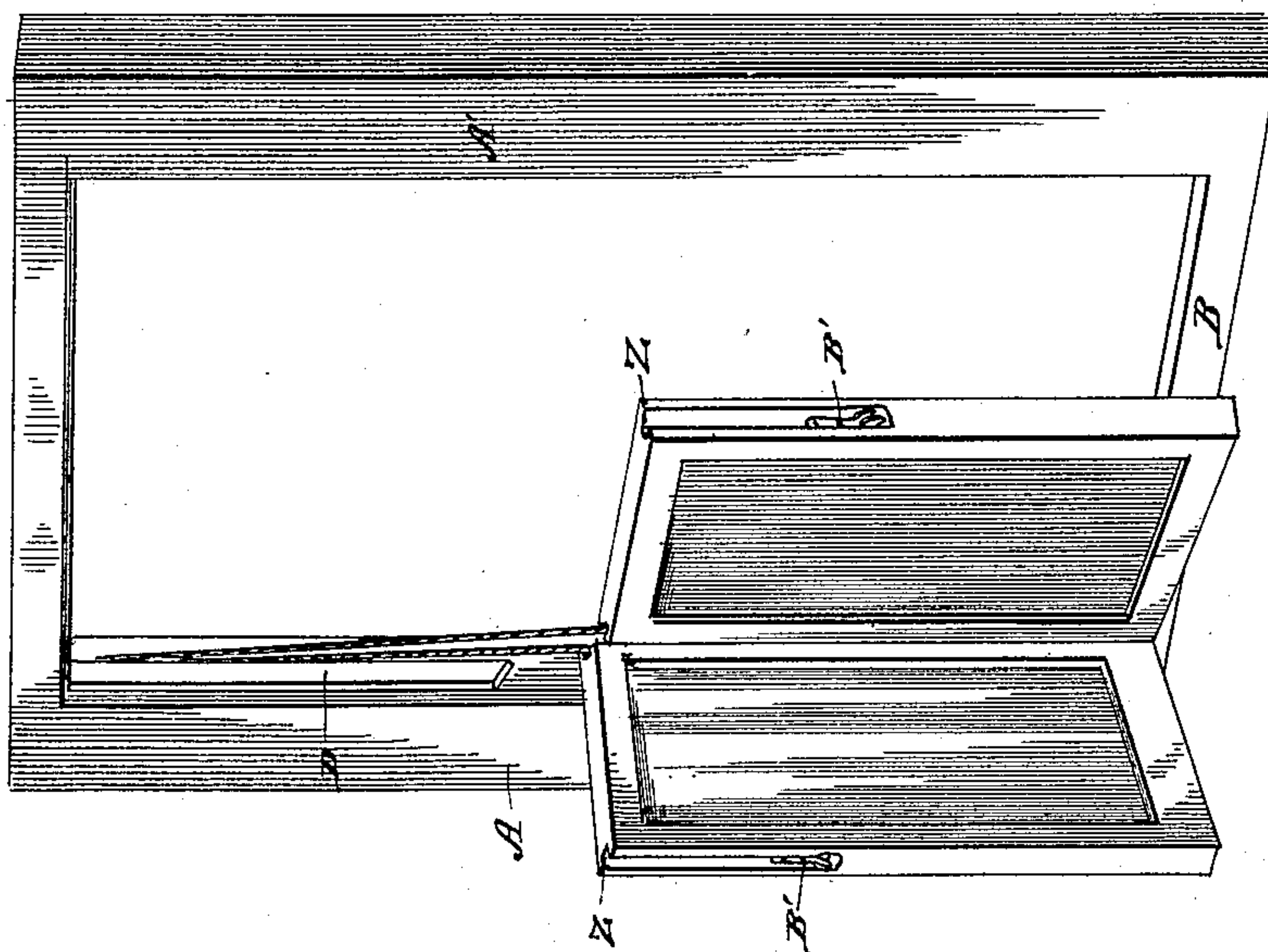
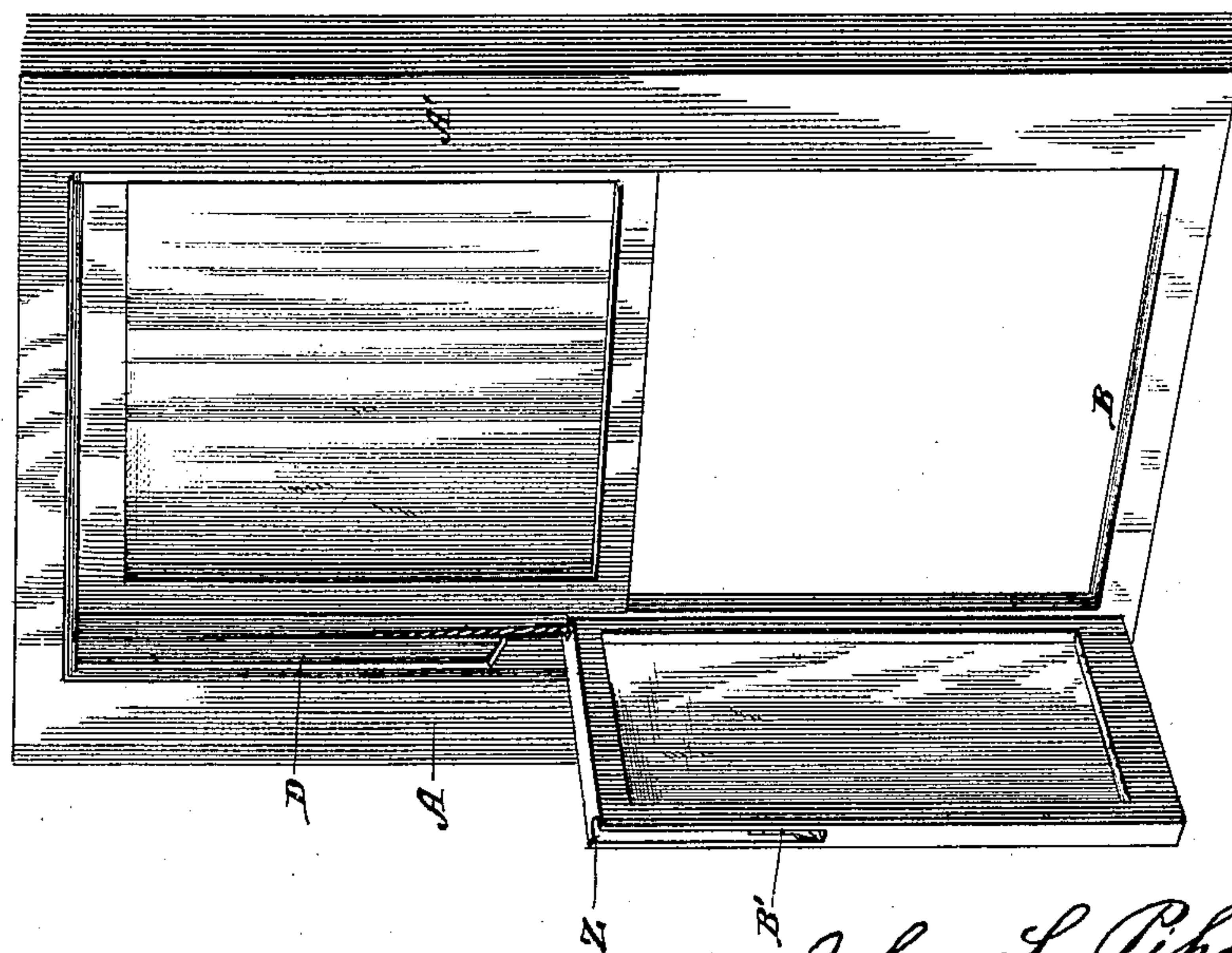


Fig. 1.



WITNESSES:

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John S. Pihlström,
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by Louis Bagger & Co
ATTORNEYS

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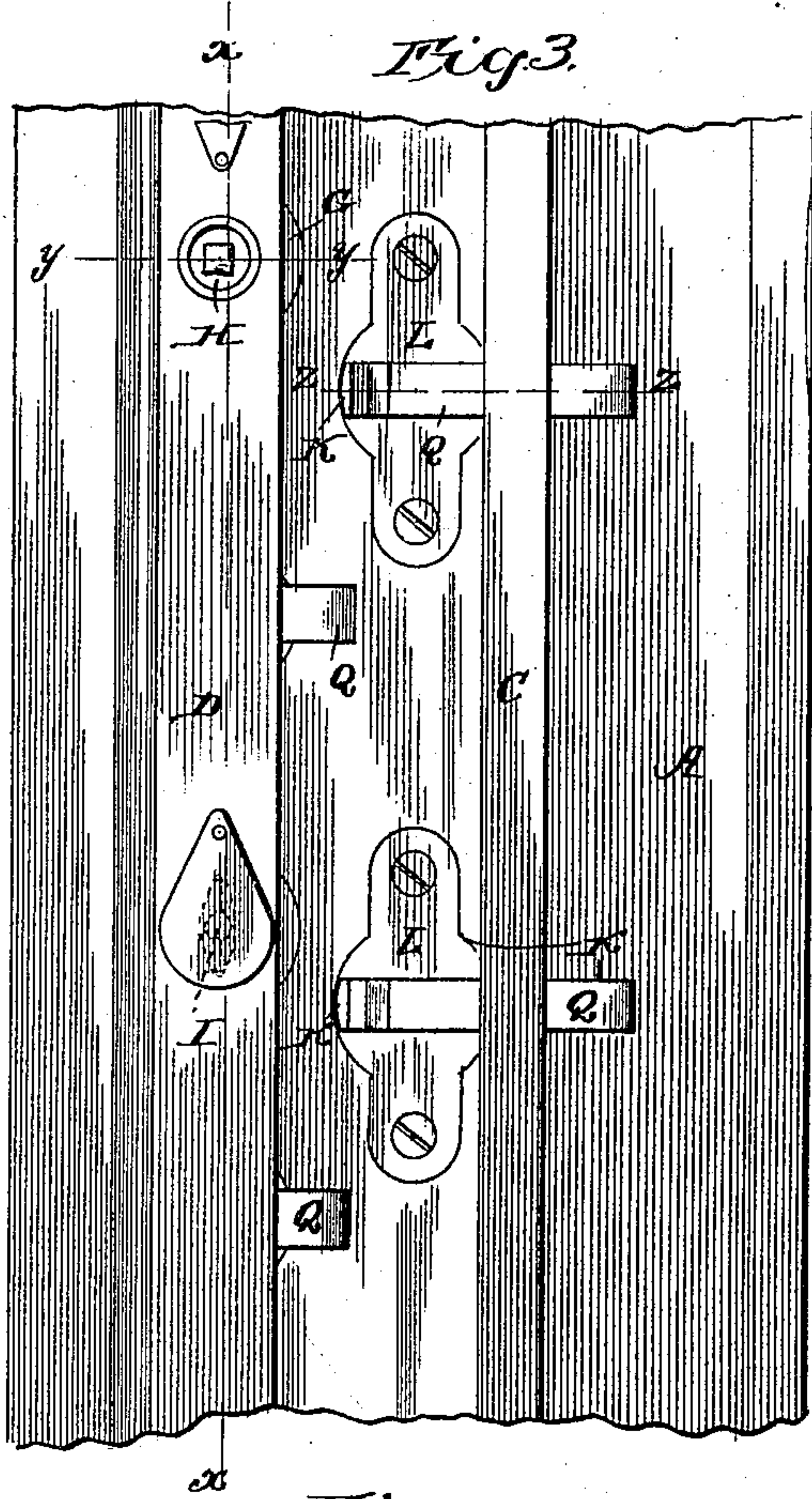


Fig. 10.

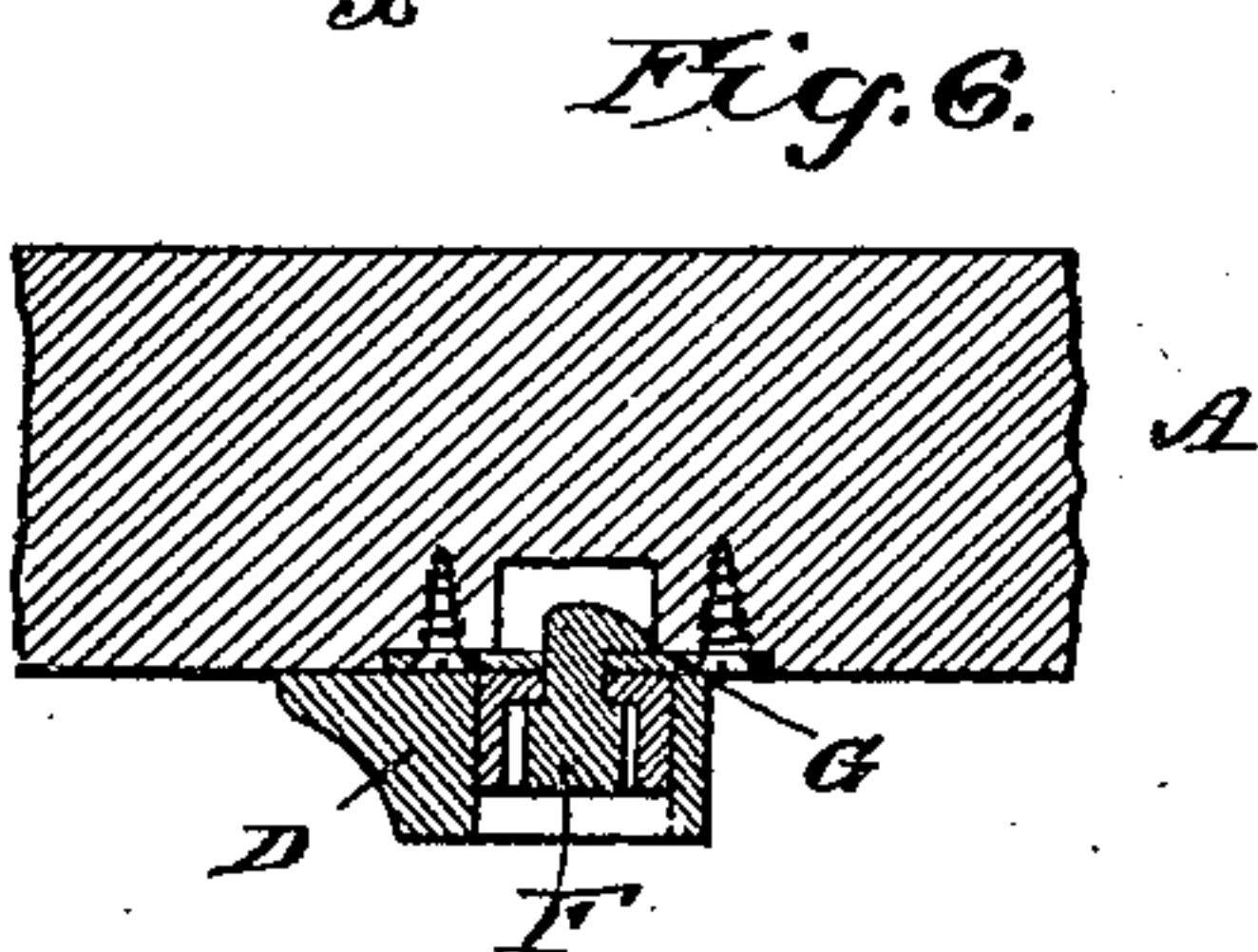
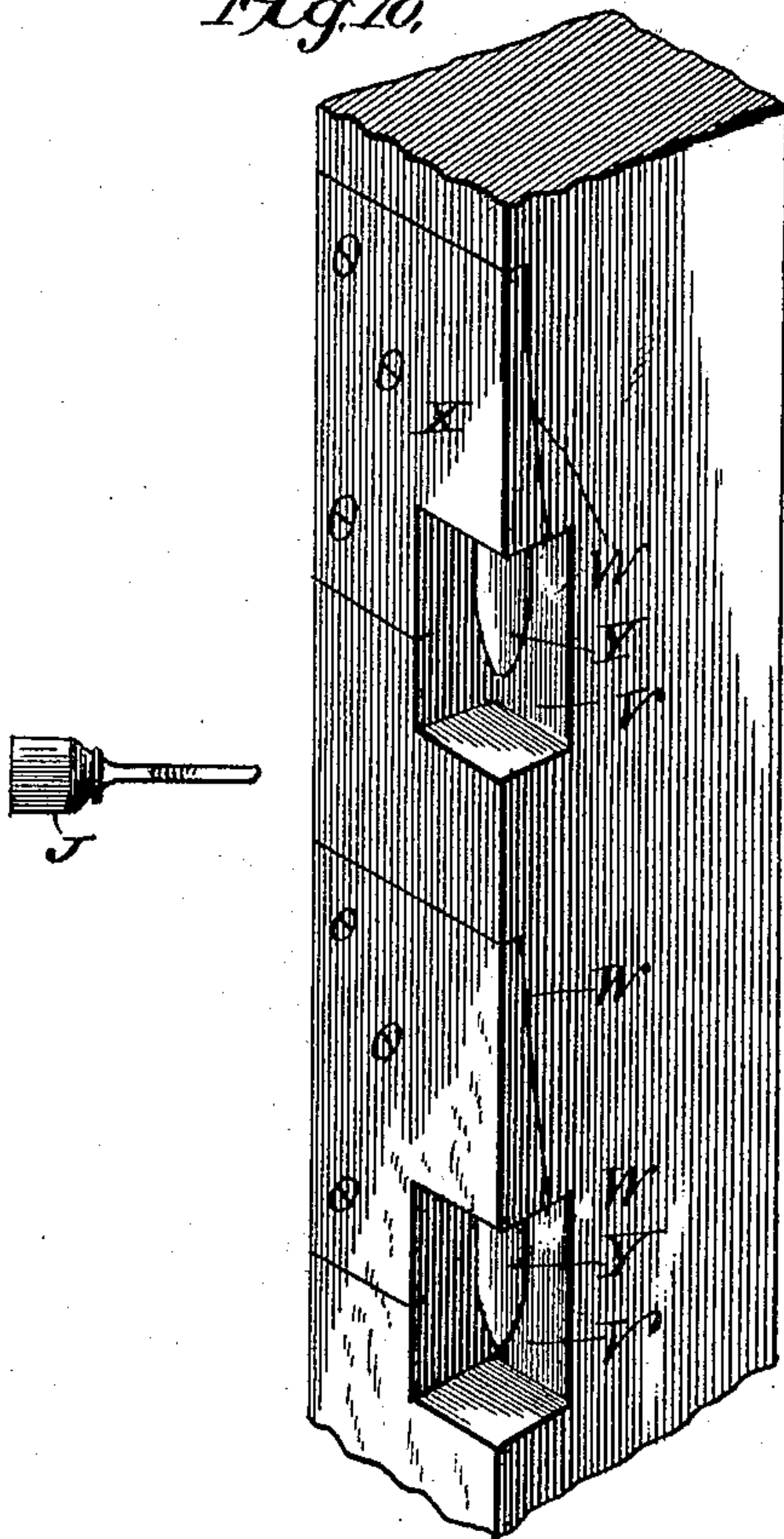


Fig. 6.

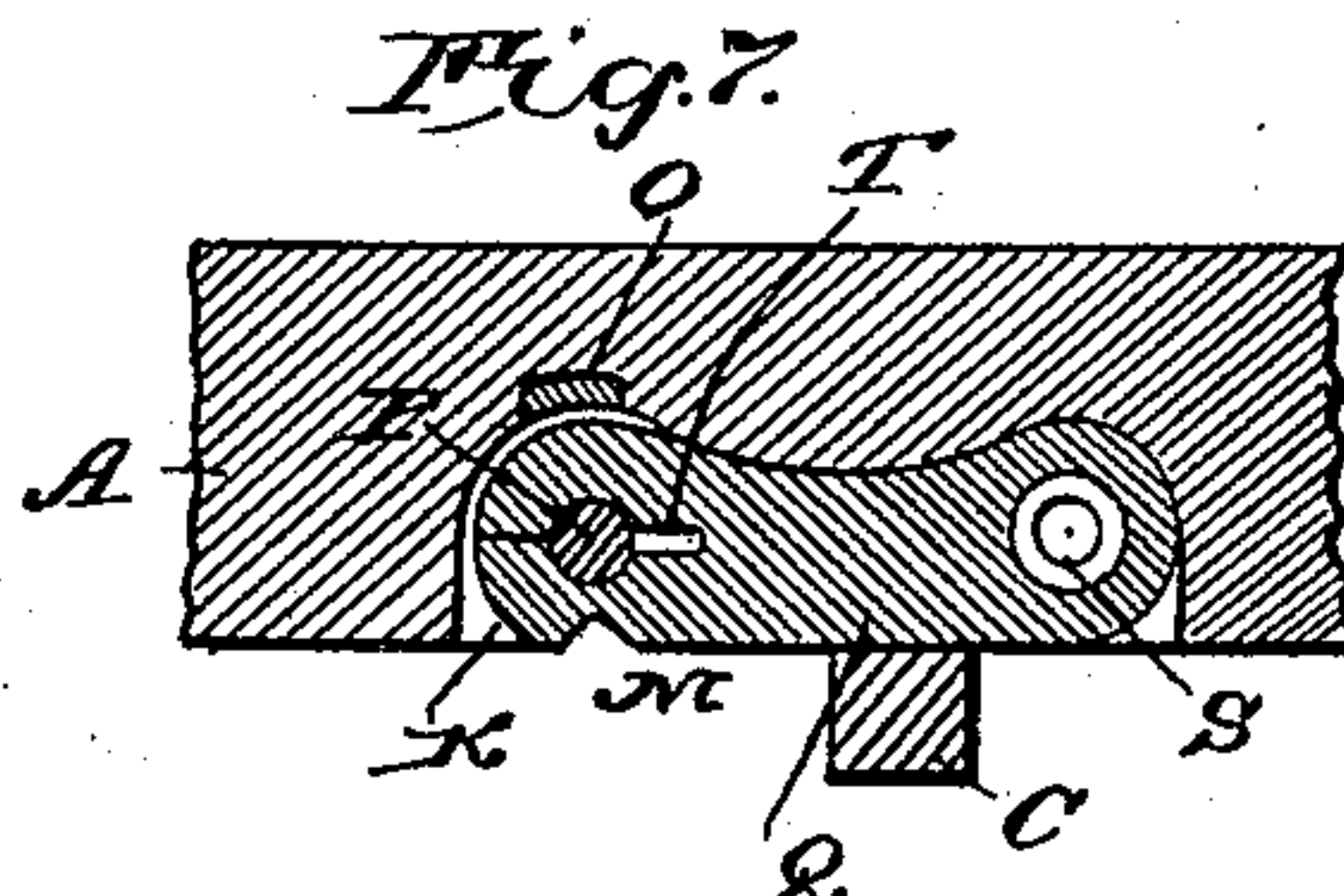


Fig. 7.

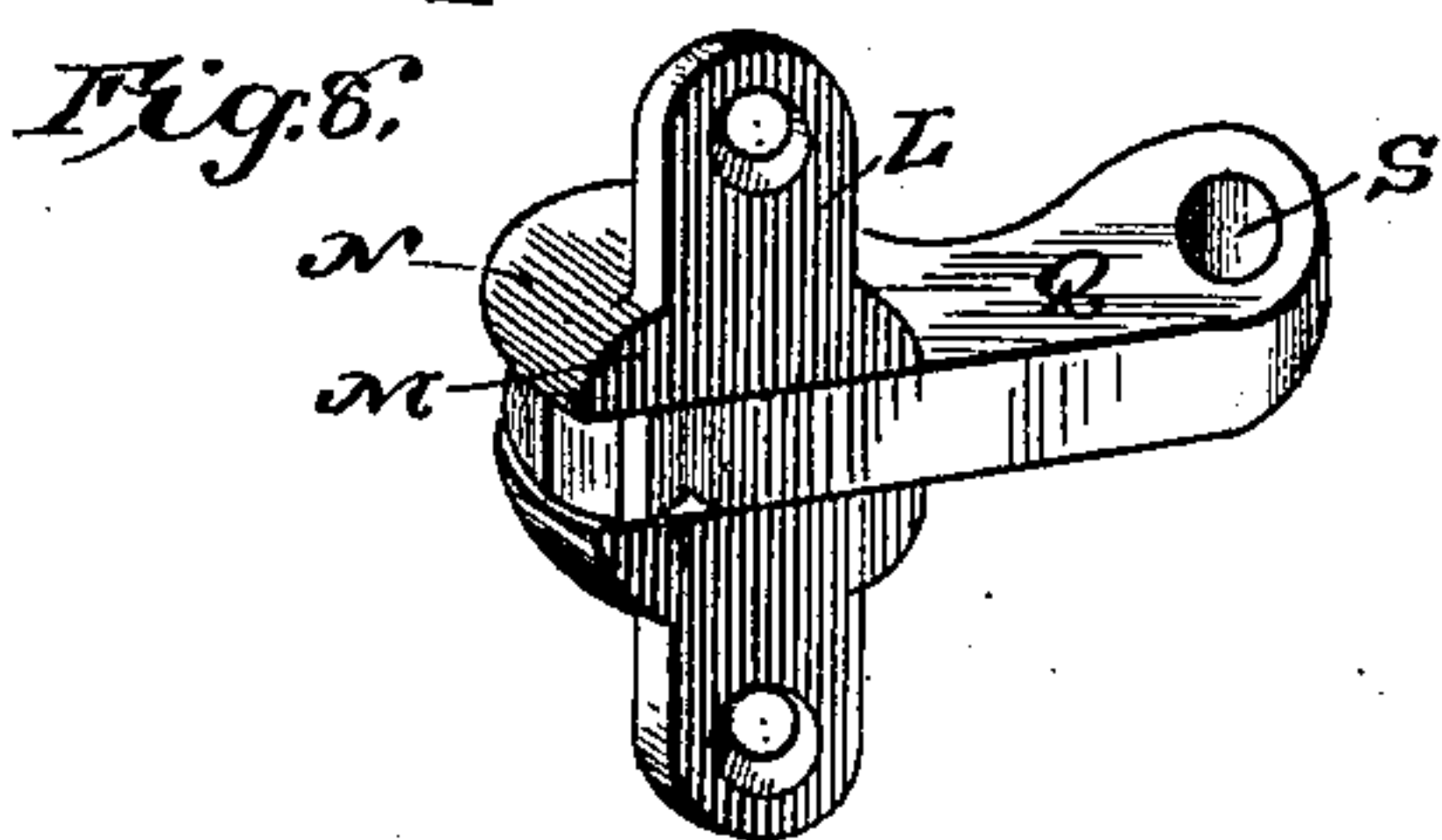


Fig. 8.

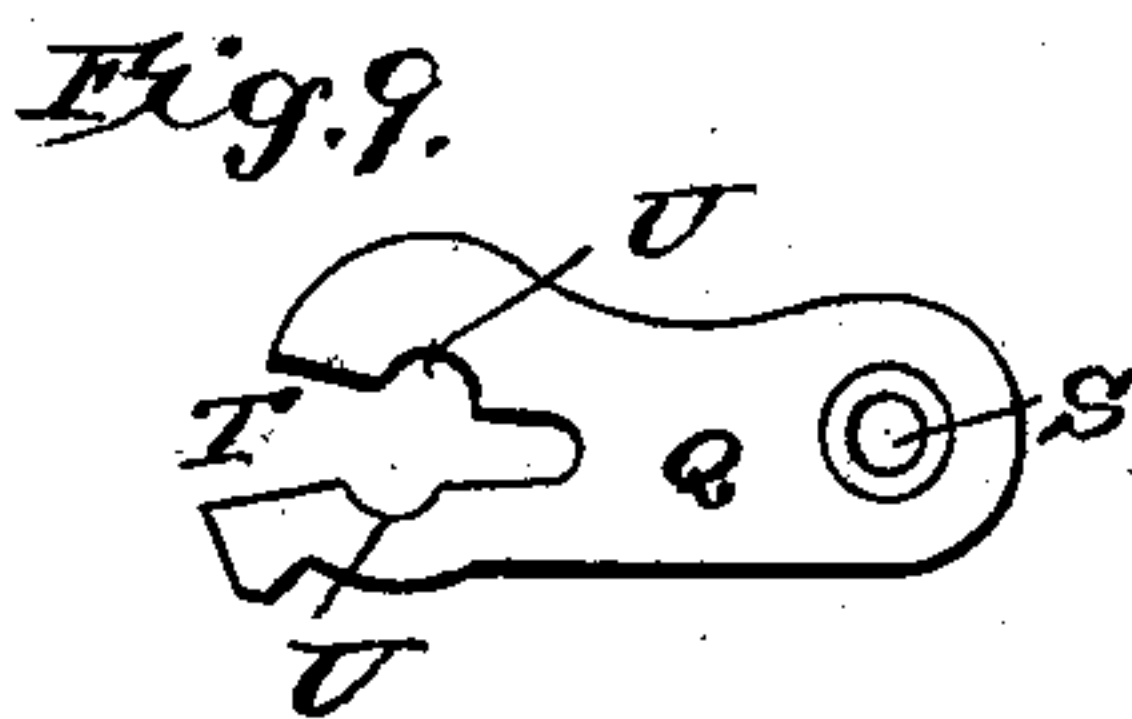


Fig. 9.

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(No Model.)

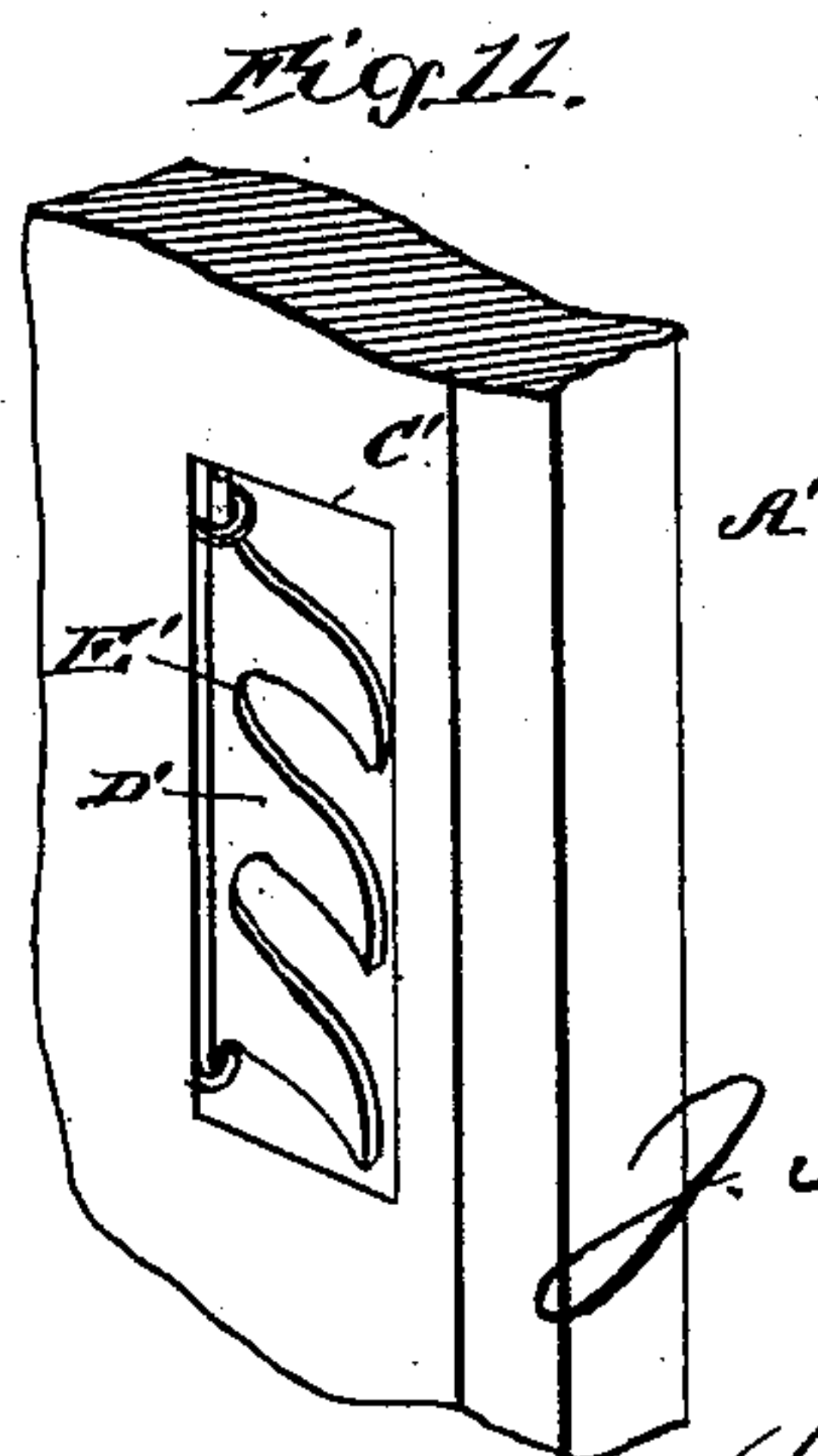
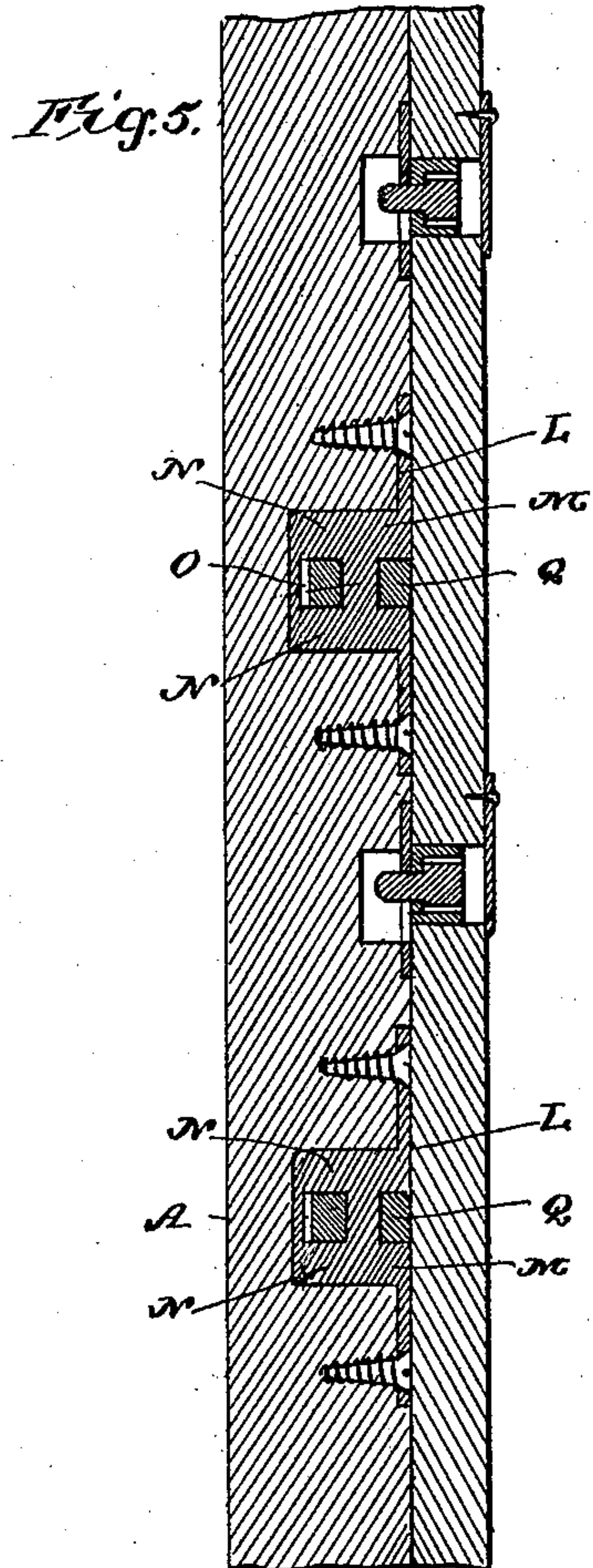
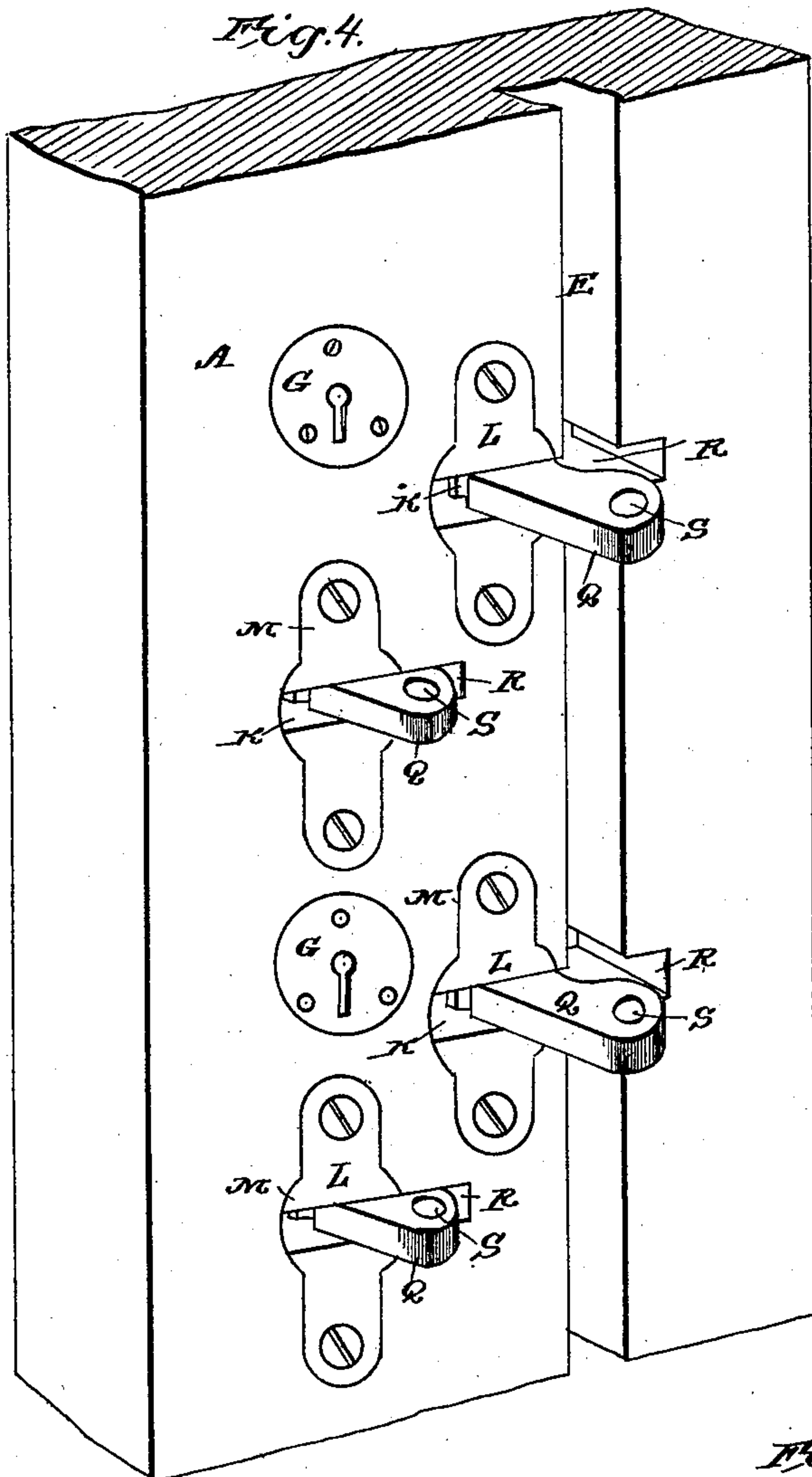
3 Sheets—Sheet 3.

J. S. PIHLSTRÖM.

WINDOW.

No. 321,245.

Patented June 30, 1885.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN S. PIHLSTRÖM, OF CHICAGO, ILLINOIS.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 321,245, dated June 30, 1885.

Application filed April 11, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. PIHLSTRÖM, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Windows; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view showing the lower sash of a window equipped with my improvements swung open and ready for cleaning. Fig. 2 is a perspective view showing a window-frame equipped with my improvements, both sashes being swung open. Fig. 3 is an elevation of the inner side of the lower end of a window-frame equipped with my improvements, the sashes having been removed. Fig. 4 is a perspective view of the same, the beads having been removed and the hinges swung out in position for operation. Fig. 5 is a vertical sectional view taken on the line xx in Fig. 3. Fig. 6 is a horizontal sectional view taken on the line yy in Fig. 3. Fig. 7 is a horizontal sectional view taken on the line zz in Fig. 3. Fig. 8 is a perspective view of one of the hinges detached. Fig. 9 is a plan view of one of the hinge-plates prior to its adjustment in the hinge-casting. Fig. 10 is a perspective view of the hinge end of one of the sashes; and Fig. 11 is a perspective view of the lower end of the window-frame opposite to the hinge end of the sashes, the bead being removed, so as to expose the sash-cord holder and its operation.

The same letters refer to the same parts in all the figures.

My invention has relation to that class of windows in which the sashes may slide as in the usual style of windows, while at the same time swinging arms in the frame may be brought out to engage pintles upon the sashes, enabling the sashes to be swung inward; and it consists in the improved construction and combination of parts of the same, as herein- after more fully described and claimed.

In the drawings hereto annexed, A A' design-

nate the sides, and B the sill, of an ordinary window-frame. The center beads, C, and the inner beads, D, of the sides of the window-frame are each made in two pieces, and their lower parts, comprising in each case something more than one-half of the entire length, are made detachable from the window-frame. The detachable parts of the center beads are simply seated in grooves or recesses E in the sides A A', and the lower parts of the inner beads when in position are retained by means of suitable turn-keys, F, engaging slotted plates G, secured over recesses H in the sides of the window-frame. Said keys may be provided either with permanent or detachable handles, as shown at I and J, respectively.

The side A of the window-frame, which for convenience may be denominated the "hinge" side, is provided with suitably-shaped mortises or recesses, K K, to accommodate the hinging devices L L, of which two may be used for each sash, located directly in front of the sashes when the latter are lowered, and they consist each of a casting, M, comprising two lugs, N N, connected by a backing, O, and in front of said backing by a pintle, P, on which is journaled the hinge-arm Q, which, when not in use, is embedded in a lateral extension, R, of the mortise K. These hinge-arms consist of flat plates the outer ends of which are provided with perforations S, and the inner ends of which are provided with slots T, the adjoining sides of which are provided with semi-circular openings U, so that they may be readily adjusted and clamped or compressed upon the pintles P. By this construction the hinges may be produced in a simple, durable, and inexpensive manner.

It will be observed that the hinge-arms Q for the outer or upper sash are somewhat longer than those for the inner or lower sash, in order that the said outer sash may be swung inward over the inner sash, as shown in Fig. 2 of the drawings. In other respects the construction is identical.

The stiles V of the sashes adjoining the side A of the window-frame are provided with mortises W, in which are secured leaves or plates X, having downward-extending pintles Y, adapted to enter the perforations S in the hinge-arms Q when the latter are swung

out of their respective recesses for this purpose. The upper ends of the stiles at both sides of the sashes are also provided with recesses Z, in which are secured the forked sash-cord holders B'. The latter are so constructed that the sash-cords may be readily detached from the free or swinging ends of the sashes.

The side A' of the window-frame is provided with a recess, C', located under the detachable part of the inner bead, D. In said recess is hinged a plate, D', having downwardly-inclined slots E' E', in which the knotted ends of the sash-cords may be adjusted and retained securely when detached from the sashes for the purpose of enabling the latter to be swung inward.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood.

When it is desired to swing the sashes into the room, for the purpose of gaining access to the outer sides of the panes, the lower ends of the inner beads, D, are first detached from the window-frame. The lower sash is then raised until the hinge-arms Q may be swung out under the pintles of said sash, which is then lowered, so as to cause the pintles to engage the respective hinge-arms. The free end of the sash may then be swung out until the sash-cord may be detached and adjusted in one of the notches of plate D', after which the said lower sash may be swung to the position shown in Fig. 1 of the drawings. The center beads, C C, may then be removed, and the upper sash connected to its hinges, and, after detaching the sash-cord from its free end and connecting it with plate D', swung to the position shown in Fig. 2 of the drawings. The outer sides of the panes are thus rendered conveniently accessible, and the sashes may, when desired, be easily lifted off their respective hinges and detached from the frame.

To return the sashes to their original position the operation is simply reversed.

This device is exceedingly simple and convenient, and may be readily applied to windows of ordinary construction.

I am aware that windows have been made having the sliding sashes provided with pintles, which may engage the outer perforated

ends of arms pivoted to swing outward from the jambs of the window-frame, and I do not wish to claim such construction broadly; but

I claim as my improvement—

1. In a window, the herein-described sash-hinging device, consisting of a plate or casting comprising two lugs connected by a backing and by a pintle, in combination with the hinge-arm consisting of a plate having a perforation at its outer end, and provided at its inner end with a slot having semicircular recesses, whereby it is adjusted and compressed or clasped upon the pintle, substantially as and for the purpose herein set forth.

2. The combination of the window-frame, the center and inner beads having detachable lower ends, the hinge-plates having horizontally-swinging perforated arms, said plates and arms being normally embedded in one of the inner sides of the window-frame and retained by the beads, and the sashes having plates or leaves provided with downward-extending pintles, substantially as set forth.

3. The combination, with the swinging sashes having detachable sash-cords, of a plate hinged in a recess in the side of the window-frame adjoining the free ends of the sashes, and provided with downward-extending notches, substantially as and for the purpose herein set forth.

4. As an improvement in windows, the combination of the frame, the center and inner beads having detachable lower ends, the hinges embedded in one of the inner sides of the frame and having horizontally-swinging arms perforated at their outer ends, the sashes having leaves or plates provided with downward extending pintles, the sash-cords connected detachably to the sashes, and a plate hinged to the side of the window-frame adjoining the free ends of the sashes, and having downwardly-inclined notches, all arranged and operating substantially as and for the purpose herein shown and specified.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN S. PIELSTRÖM.

Witnesses:

LARS P. NELSON,
KNUTE NELSEN.