

No. 654,449.

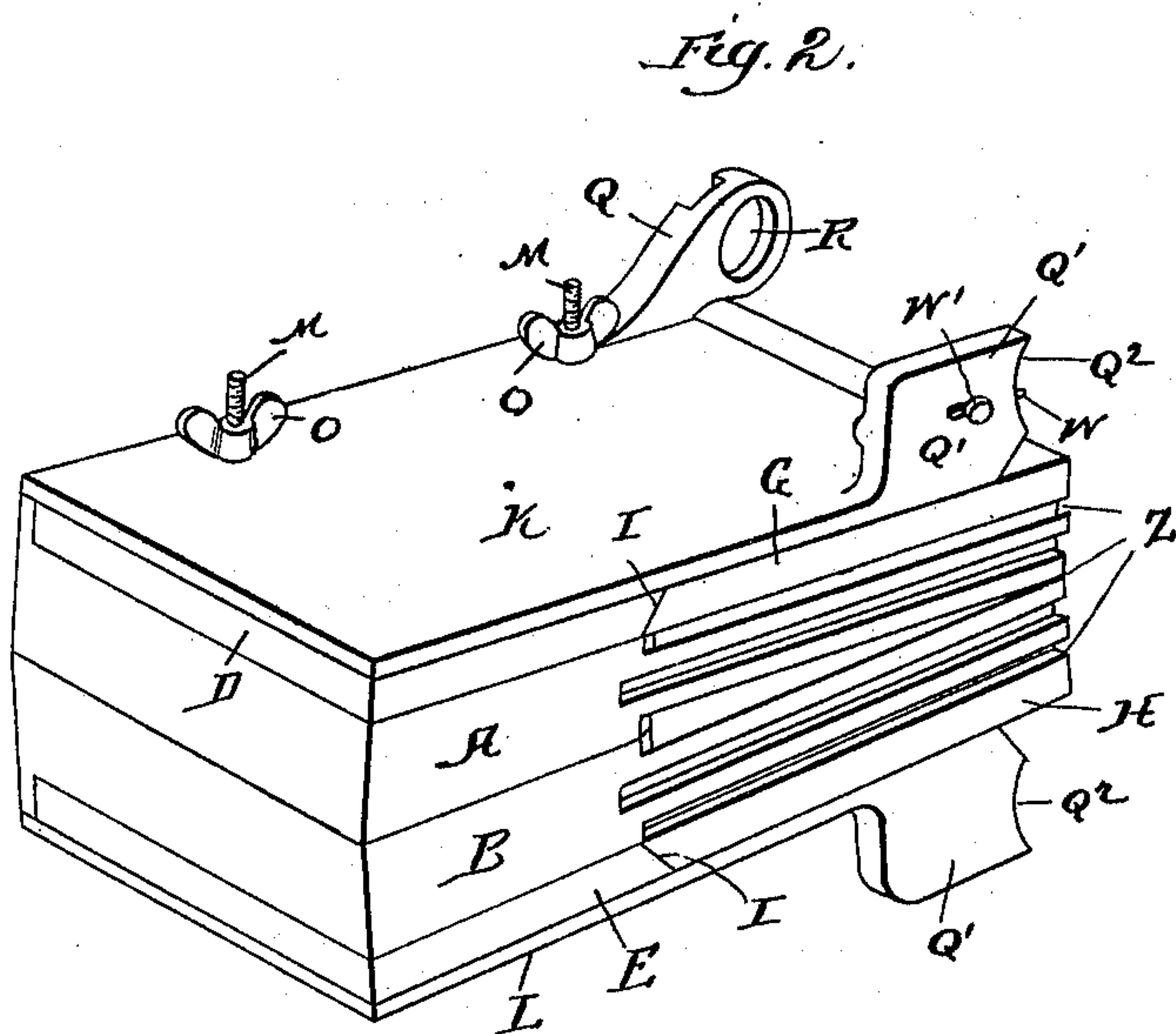
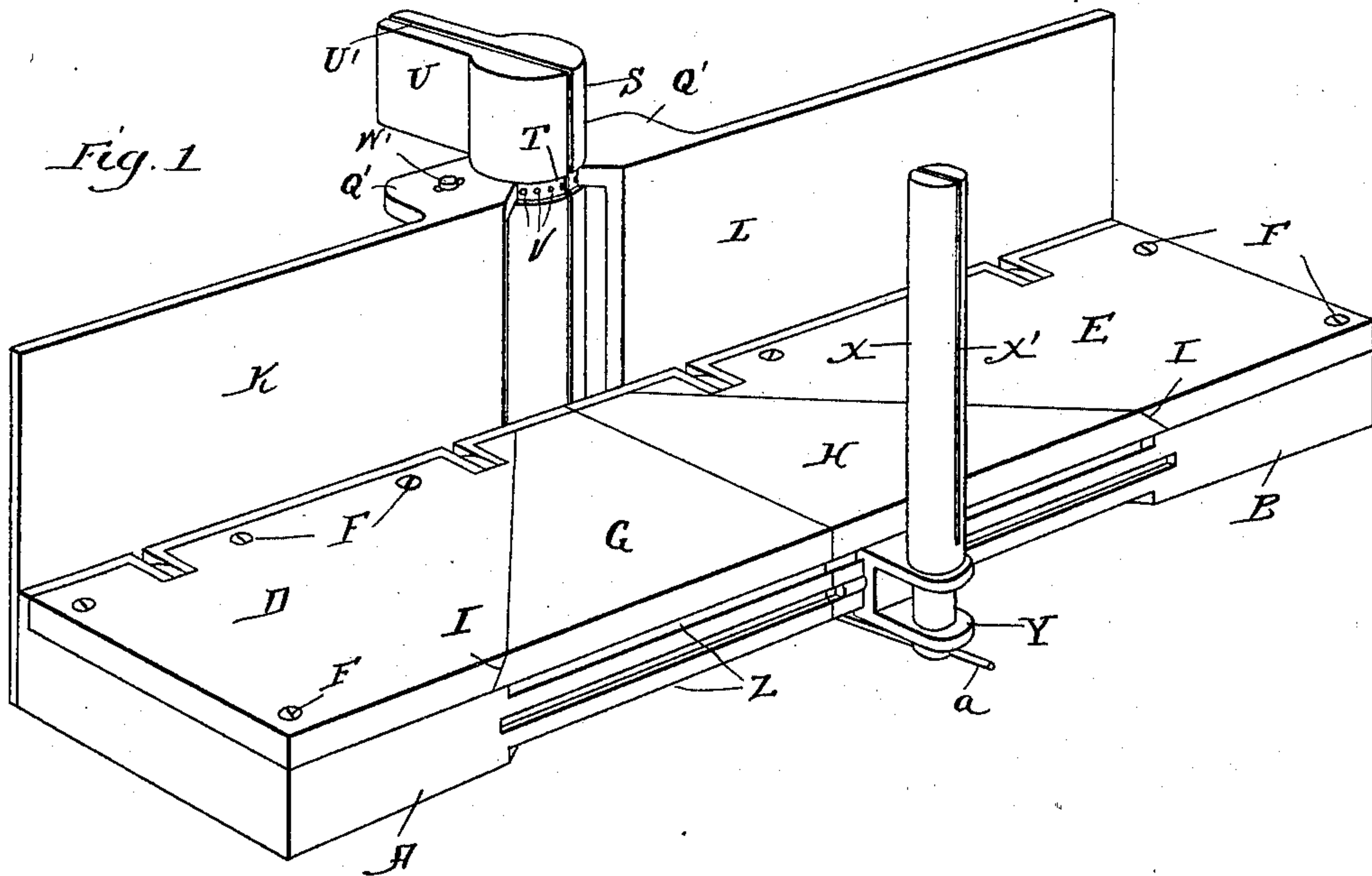
Patented July 24, 1900.

G. GRUNWALD.
FOLDING AND ADJUSTABLE MITER BOX.

(Application filed May 2, 1900.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses:

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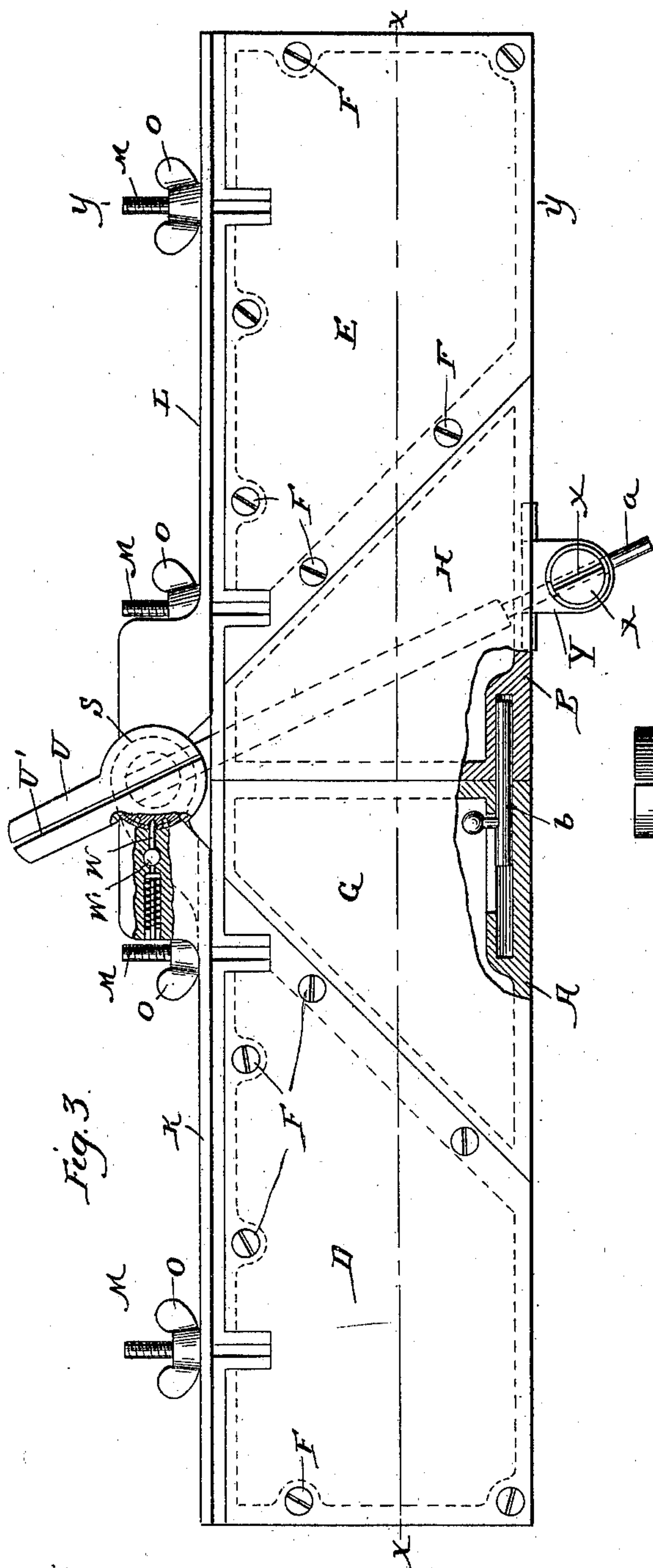


Fig. 3.

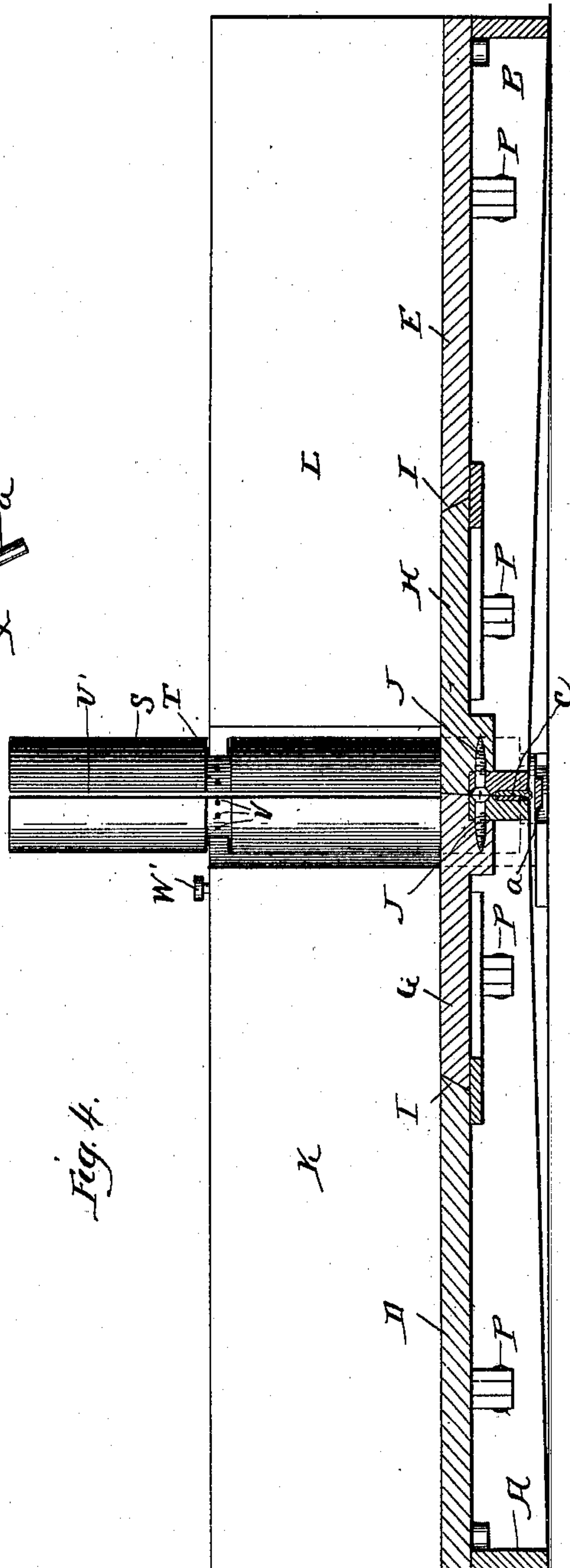


Fig. 4.

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Fig. 5.

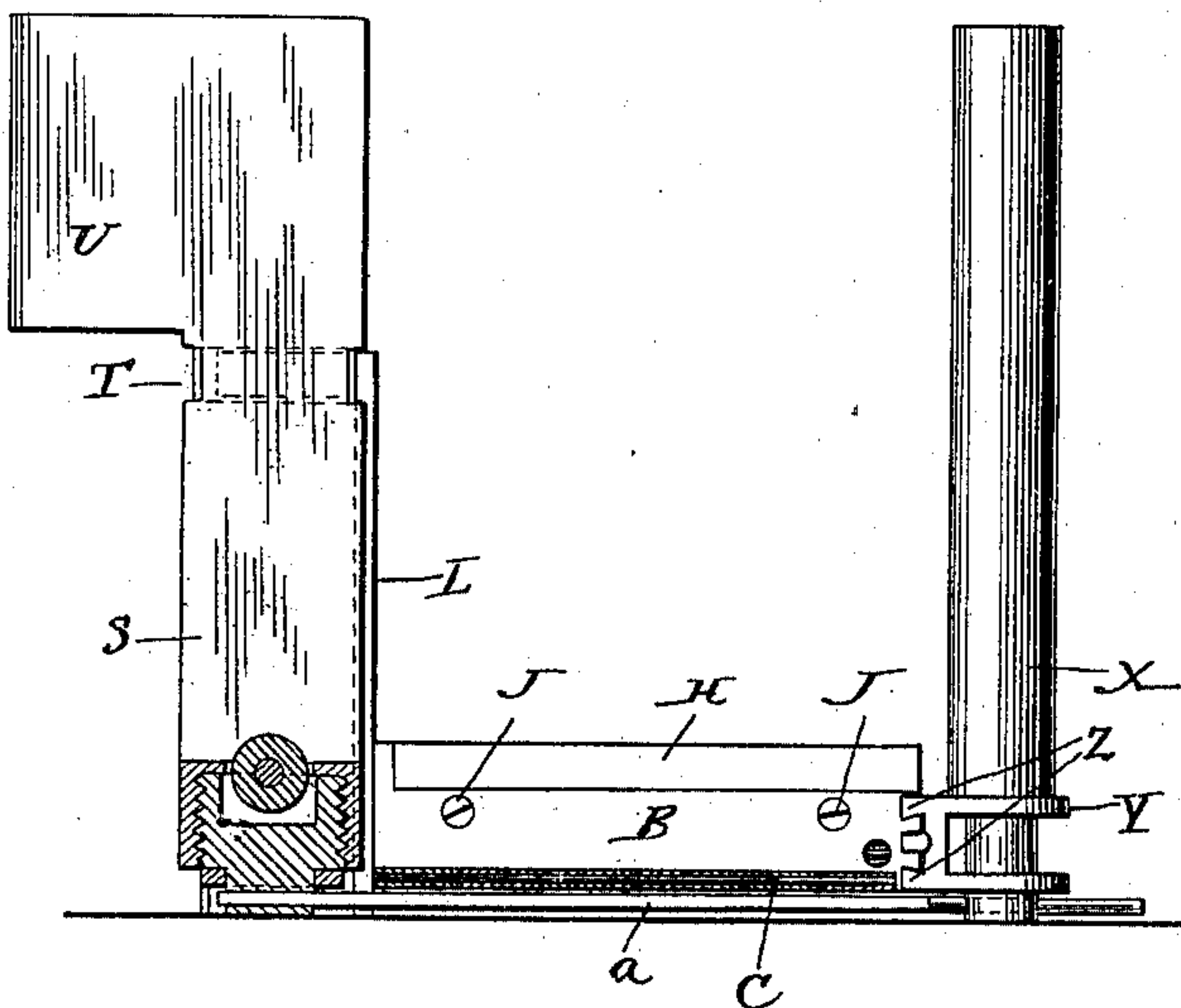


Fig. 6.

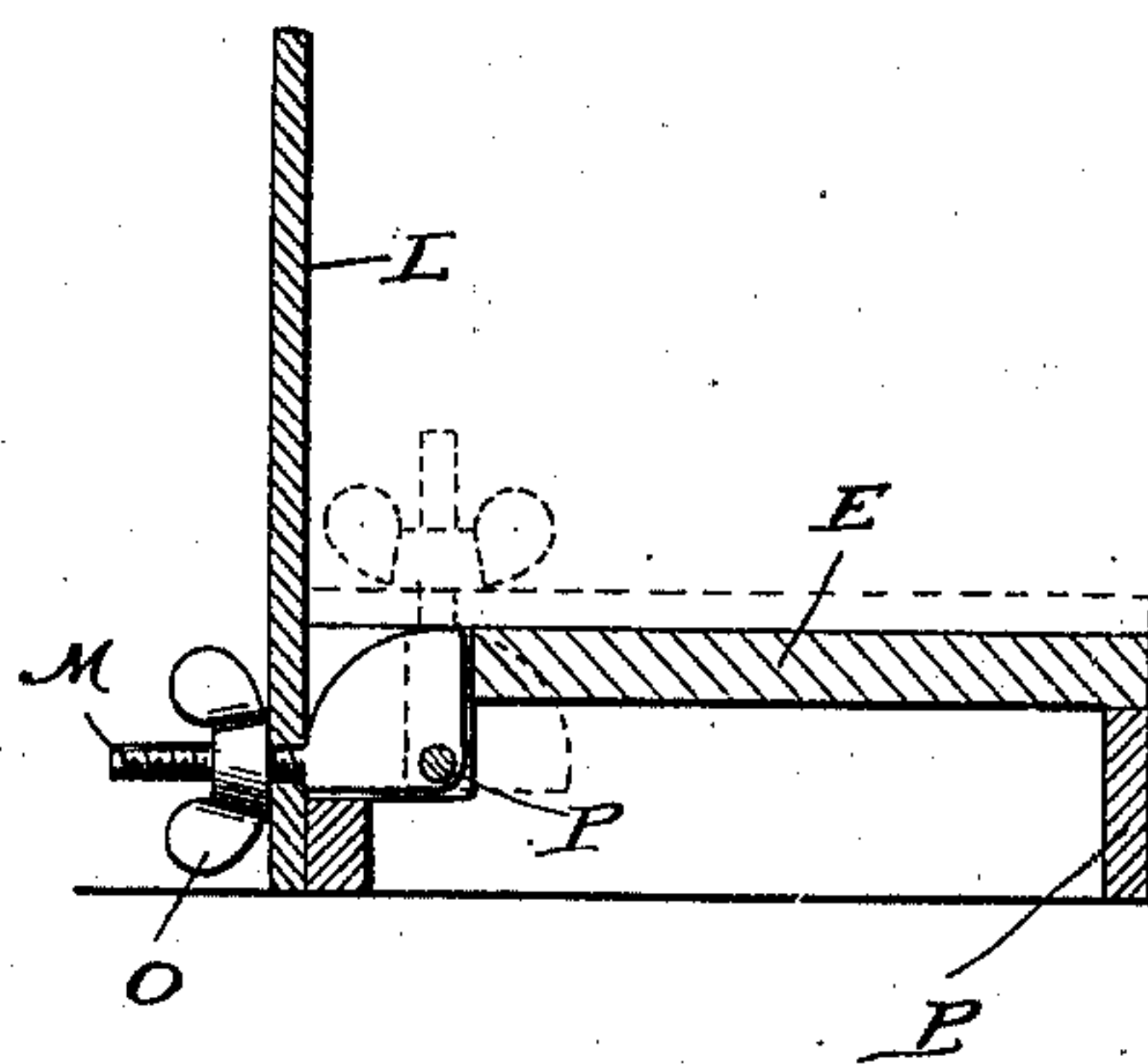
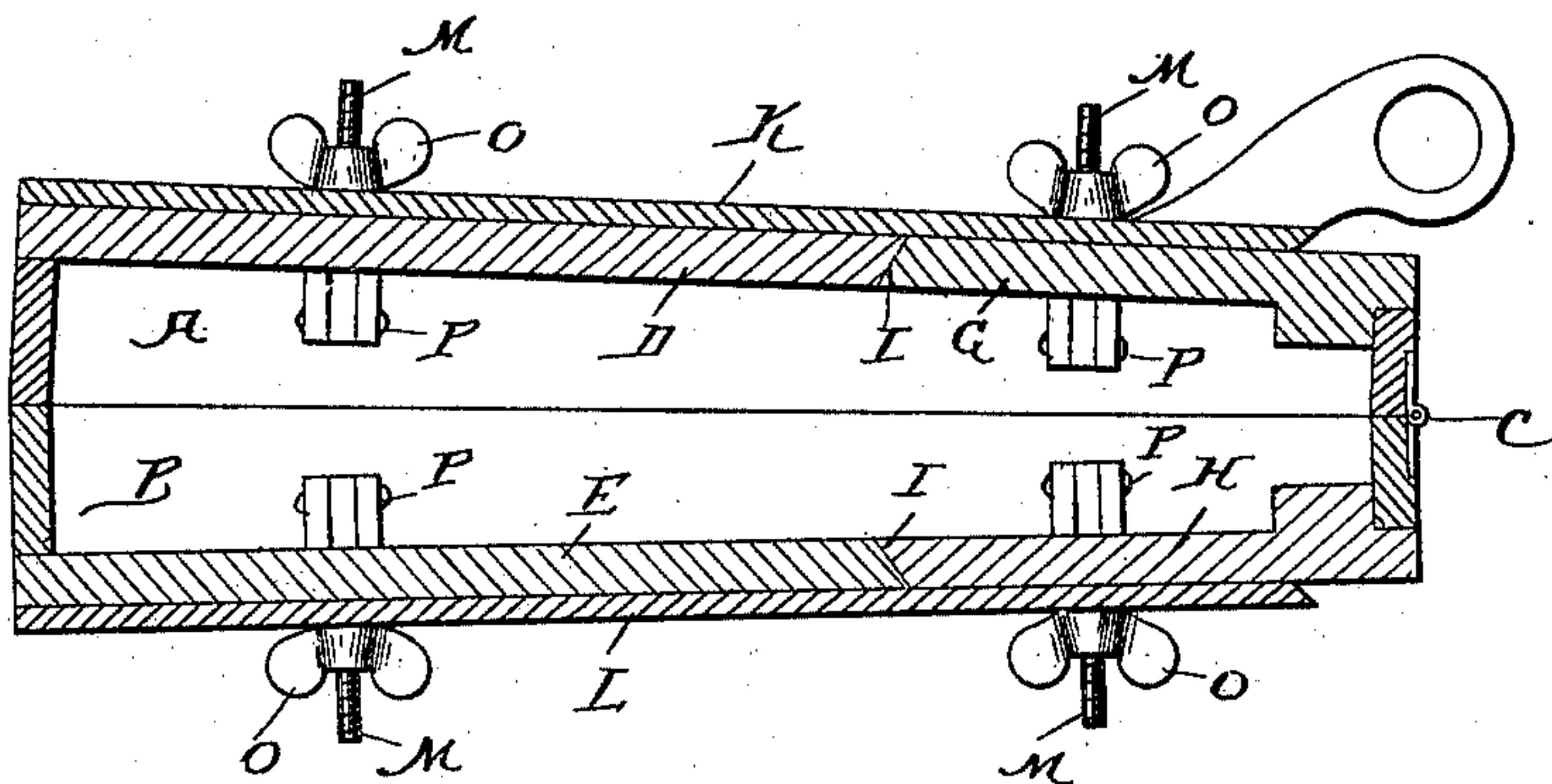


Fig. 7.



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UNITED STATES PATENT OFFICE.

GUSTAVE GRUNWALD, OF PHILADELPHIA, PENNSYLVANIA.

FOLDING AND ADJUSTABLE MITER-BOX.

SPECIFICATION forming part of Letters Patent No. 654,449, dated July 24, 1900.

Application filed May 2, 1900. Serial No. 15,284. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE GRUNWALD, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Folding and Adjustable Miter-Boxes, of which the following is a specification.

My invention relates to a new and useful improvement in folding and adjustable miter-boxes, and has for its object to provide an exceedingly simple and effective arrangement of this description which when not in use may be folded into an exceedingly-small compass for storing or transportation and when adjusted for use may be adapted for cutting upon various angles and for the accurate guiding of the saw-blades.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective of my improvement adjusted for use, showing the guide-post set to cut a square end; Fig. 2, a similar view of the box in its folded position; Fig. 3, a plan view, portions thereof being sectioned to fully illustrate the device. Fig. 4 is a longitudinal section upon the line *xx* of Fig. 3, showing the main guide-post and wings in elevation; Fig. 5, a cross-section taken through the center of the miter-box and through the slot of the main guide-post; Fig. 6, a similar view at the line *yy* of Fig. 3, and Fig. 7 a cross-section of the box when folded.

In carrying out my invention as here embodied A and B represent the two base-sections of the box, which are hinged together at C, as clearly shown in Fig. 7. These sections are preferably made of metal and have secured thereon the wooden blocks D and E by means of suitable screws F, and it is to be noted that these blocks do not extend over the entire upper surface of the sections, but

that portion of the surface of these sections over which the saw acts is covered by the blocks G and H, each of which is beveled at I to fit the undercut formed upon the edges of the blocks D and E, so as to hold them in place, and these blocks G and H are finally secured in place by the screws J, which latter pass through the inner ribs of the base-sections and into the inner edges of these last-named blocks. The object of this is to permit the ready removal of these inner blocks when they have become worn by use without disturbing the main blocks D and E.

K and L represent the backs of the sections A and B and are hinged thereto by the threaded bolts M, which have the thumb-nuts O run thereon, these threaded bolts being pivoted at P to the base-sections, as clearly shown in Fig. 6. The result of this arrangement is that the backs may be swung inward upon the base-sections, as clearly shown in Figs. 2 and 7, or may be entirely removed therefrom by first removing the thumb-nuts, as will be readily understood. The back K has a bracket Q formed therewith, with the hole R therein for the reception of the lower end of the guide-post S, while both of the backs K and L have the brackets Q' formed therewith, the inner edges of which are curved, as indicated at Q², so as to fit within the groove T, formed in the upper portion of this guide-post. Thus when the backs are secured at right angles to the base-sections by the proper manipulation of the thumb-nuts the guide-post S will be firmly held in an upright position, while at the same time being permitted to swing upon its axis for the purpose hereinafter set forth.

Guide-wings U are formed with the upper portion of the post S, so as to give a sufficient bearing to the saw-blade to guide it for ordinary purposes, a slot U' being formed both in these wings and in the post to permit the running of the saw therein when in operation. In order that this post may be locked in any adjustment, so as to serve as a rigid guide for the saw, a series of holes V are formed within the groove T and adapted to receive the nose of the spring-actuated bolt W, the latter having a knob W', which projects through the wing Q' for its steady manipulation.

In cases where heavy work is to be cut it is

desirable to have a secondary guide in order that the blade of the saw may not be deflected in its operations, and I therefore have provided the secondary post X, having the slot X' therein for the guidance of the saw, and this post is swiveled in the sliding block Y, said block being fitted in a dovetailed groove Z, formed in the front edge of the base-sections, thereby giving a range of movement equal to the greatest angle at which the cut is to be made. This secondary post is connected with the main guide-post S by the rod a, which is secured in the lower end of the post S and passes freely through a hole in the lower end of the secondary post X, which arrangement will cause the slot X' in the last-named post to always aline with the slot U' in the main post at whatever angle the block Y may be set, and this block will also by this arrangement be held in its adjustment when the post S is locked, as before set forth.

From the foregoing description it follows that when my improved miter-box is adjusted for use by the base-sections thereof being turned to the position shown in Fig. 1 and locked in this position by the bolt b any angle of cut may be made from a right angle to forty-five degrees in either direction by simply adjusting the guide-posts and locking them in their adjustment by the spring-actuated bolt W, and should the sections G and H become worn or mutilated by use they may be readily removed and others substituted therefor by the removal of the screws J. When the box is out of use, it may be folded for storing or transporting by first backing off the thumb-nuts O, removing the posts S and X, folding the backs down upon the base-sections, and then placing all of the smaller parts, such as the posts, within these sections, and folding them together, so as to produce the result shown in Figs. 2 and 7. When this has been accomplished, the box may be easily stored or transported, as it then occupies less than half the space it originally occupied, and

the parts thereof are not likely to be injured by rough usage.

Of course I do not wish to be limited to the exact details of construction here shown, as these may be varied to a certain extent without departing from the spirit of my invention, the gist of which rests in the broad idea of providing a folding miter-box which may be collapsed into a small compass and used as a receptacle for the small parts.

Having thus fully described my invention, what I claim as new and useful is—

1. A miter-box consisting of two base-sections hinged together so as to be folded upon each other, two back sections hinged to the base-sections, a main guide-post journaled in the backs, means for locking said post in various adjustments, a secondary guide-post, a sliding block in which the last-named post is swiveled, and means for connecting the main and secondary posts so as cause them to turn in unison, as specified.

2. A miter-box consisting of two base-sections hinged together so as to be folded against each other, blocks D and E secured upon said sections, blocks G and H also secured upon the sections and adapted to be readily removed therefrom, backs hinged to the base-sections, a main guide-post journaled in the backs, guide-wings formed with the post, a spring-actuated bolt for locking the post in various adjustments, a block fitted to slide upon the front edges of the base-sections, a secondary guide-post swiveled within said block, and a rod secured to the lower end of the main post and freely sliding in the lower end of the secondary post, substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

GUSTAVE GRUNWALD.

Witnesses:

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JAS. E. DWYER.