

No. 638,620.

Patented Dec. 5, 1899.

T. BOOTSMAN.

MITER BOX.

(Application filed Sept. 11, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

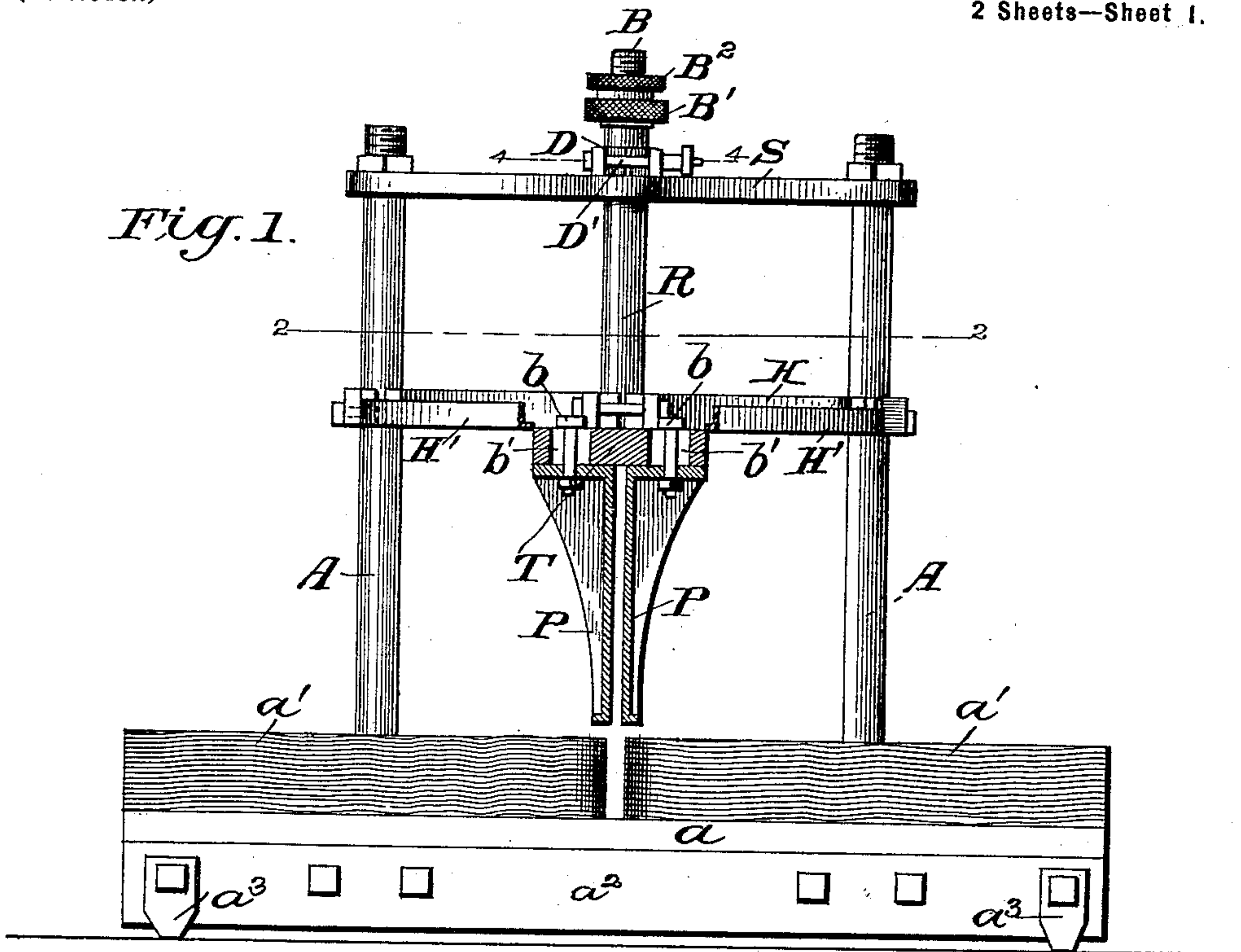


Fig. 4.

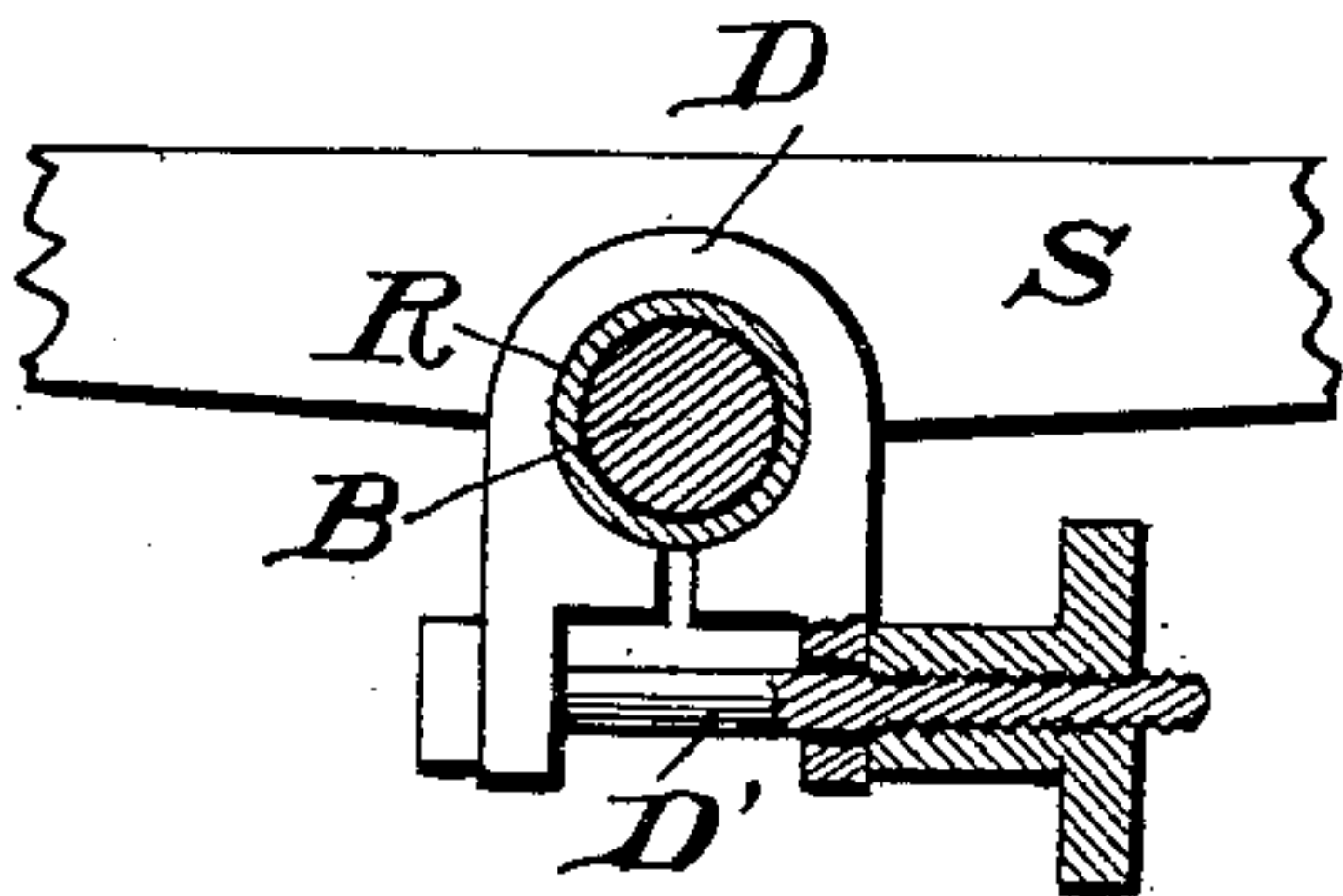
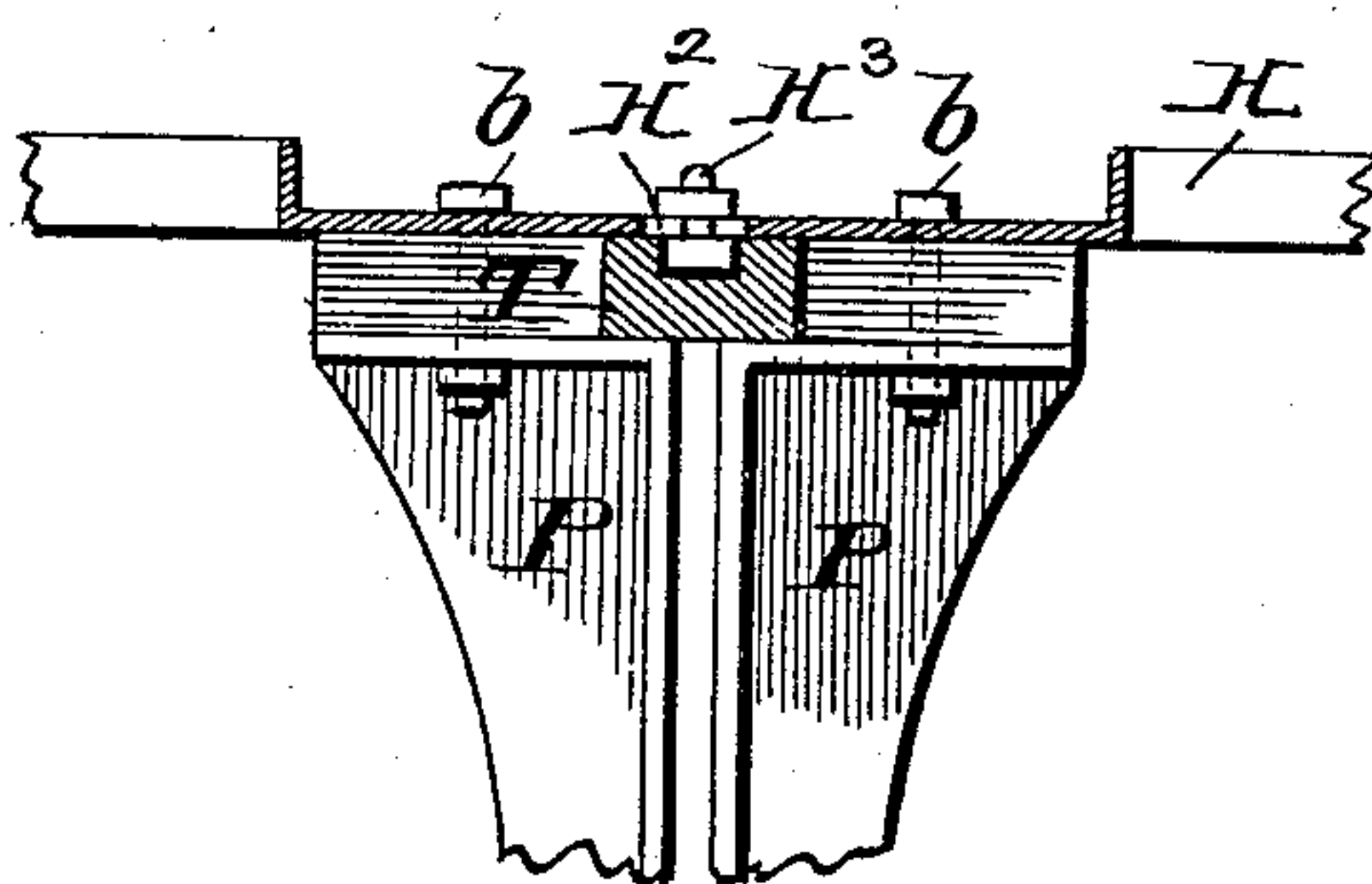


Fig. 5.



WITNESSES:

Jos. A. Ryan
G. S. Stett.

INVENTOR

Theodore Bootzman.

BY Munroe & Co.

ATTORNEYS.

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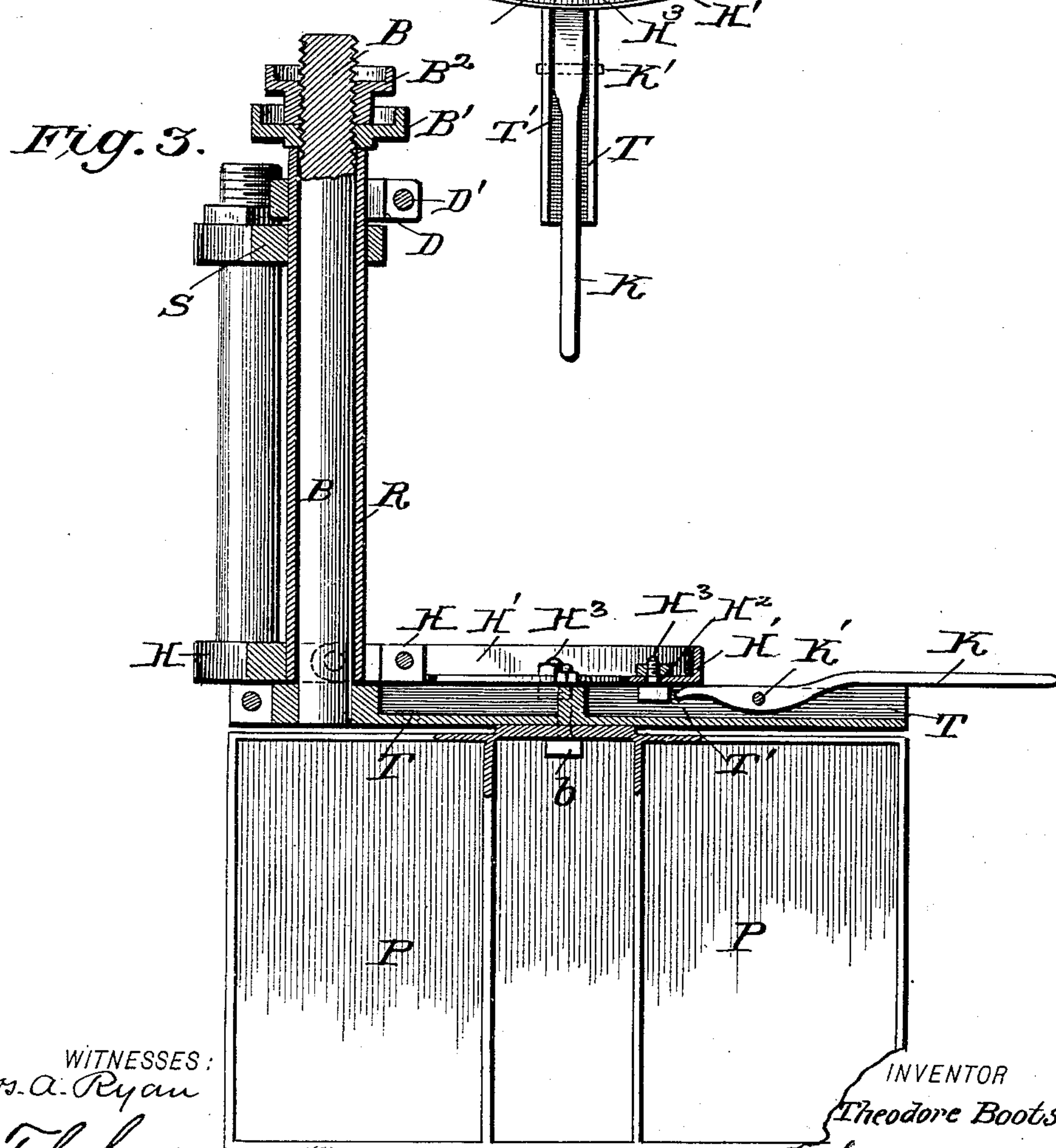
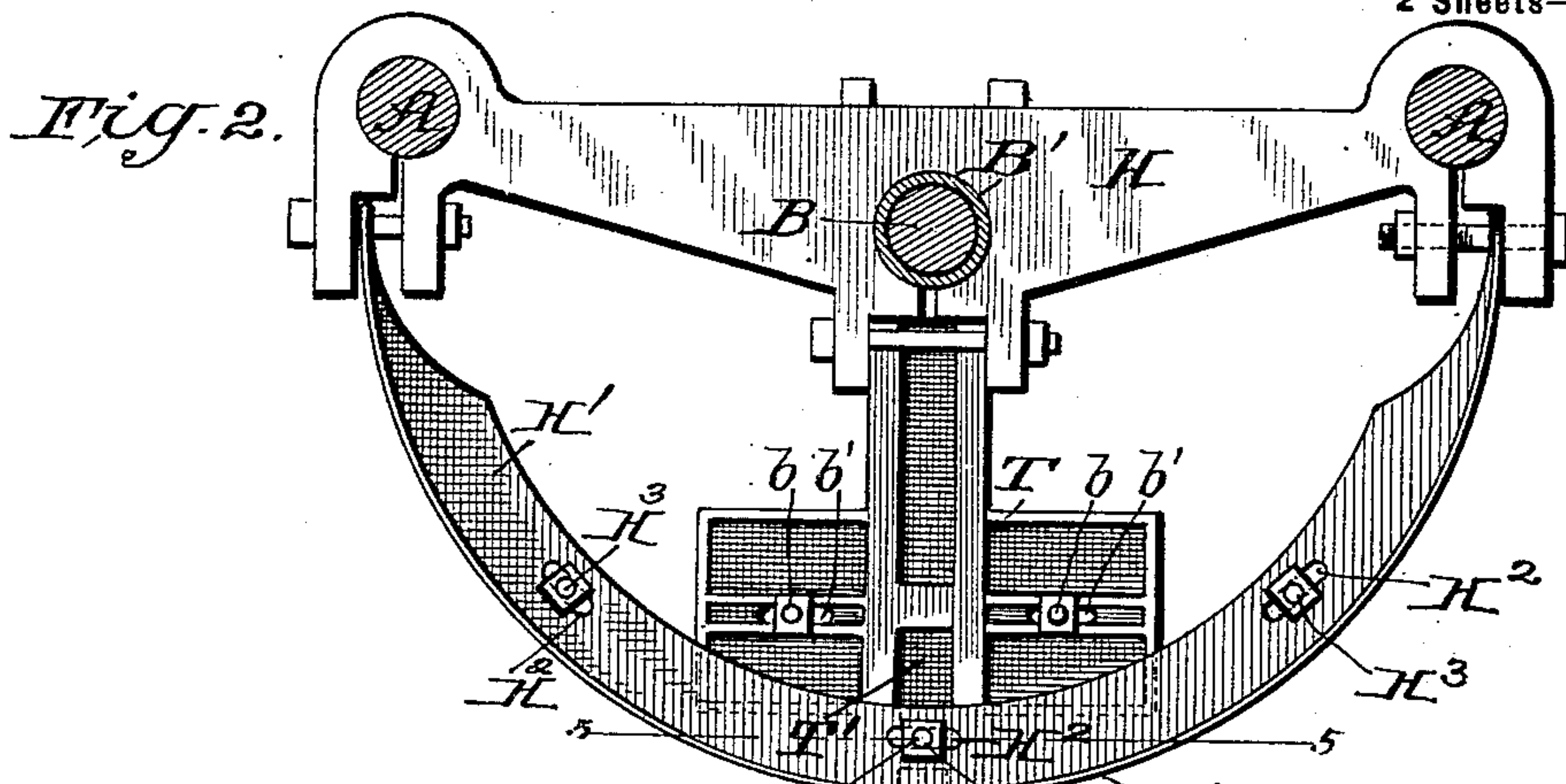
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WITNESSES:
Jos. A. Ryan
J. S. Stitt

INVENTOR
Theodore Bootsmann
BY *Munn & Co.*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

THEODORE BOOTSMAN, OF ARTIC, WASHINGTON.

MITER-BOX.

SPECIFICATION forming part of Letters Patent No. 638,620, dated December 5, 1899.

Application filed September 11, 1899. Serial No. 730,159. (No model.)

To all whom it may concern:

Be it known that I, THEODORE BOOTSMAN, of Artic, in the county of Chehalis and State of Washington, have invented a new and useful Improvement in Miter-Boxes, of which the following is a specification.

This invention is in the nature of an improvement on my prior patent, No. 624,745, dated May 9, 1899, and relates particularly to the means for locking the saw-guides at different angles and the means for holding said guides at different elevations.

The invention consists in the details of construction and arrangement of the parts, which I shall now describe, and then particularly point out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which like characters of reference indicate corresponding parts in all the views.

Figure 1 is a front view of the miter-box, with parts in section. Fig. 2 is a horizontal section on the line 2 2 of Fig. 1. Fig. 3 is a vertical transverse section through the center of the box. Fig. 4 is a detail horizontal section on line 4 4 of Fig. 1, and Fig. 5 is a vertical section on the line 5 5 of Fig. 2.

The base-frame a^2 , supported by short legs a^3 and provided with thrust bearing-strips a' for the work that is to be sawed, has secured thereon the horizontal bed a , the upright posts A , connected at their upper ends by the cross-bar S , and a cross-bar H , slidable vertically on the said posts, all as in my Patent No. 624,745 referred to above.

To the cross-bar H and at the middle thereof is fixedly secured in any suitable manner the vertically-extending steel or other metal tube R , which extends through and rises above the cross-bar S , and within such tube R is fitted a shaft B , which extends through the cross-bar H and up through the tube R , beyond the upper edge of the same, and is formed with a screw-thread at its upper end adapted to receive an adjusting and bearing nut B' , bearing on the upper edge of the tube R , and a lock-nut B^2 thereabove.

The horizontally-swinging arm T is secured at its inner end to the lower end of the shaft B , and the spaced-apart saw-guides P are adjustably secured to and suspended from said arm by headed bolts b , fitted in elongated

slots b' in the arm. By this arrangement of parts—that is, by connecting the arm T with the shaft B —the arm may be swung around in a horizontal plane to guide the saw for cuts of different angles, and in order to lock the saw in different angular positions I provide a semicircular gage-bar H' , hinged to the cross-bar H , as shown best in Fig. 2, and capable of being swung in a vertical plane. This bar H' is formed with three or more elongated slots H^2 , in which are received headed bolts or studs H^3 , and any one of these studs is adapted to enter a recess T' on the upper face of the arm T , whereby to hold the saw-arm locked in adjusted position. In order to release the arm to change its position, the lever K is fulcrumed thereon, as at K' , and the forward end of said lever lies underneath the gage-bar H' , so that when the handle end of the lever is depressed the forward end thereof will raise the gage-bar and draw the bolt H^3 out of the recess T' , when the arm T may be swung as desired.

It is desirable to enable the saw-guides to be raised to various elevations, whereby to allow the work to be placed underneath the same, and to this end a split clamping-ring D , provided with a clamping-bolt D' , surrounds the tube R and rests on the upper cross-bar S , so that when desired the tube R and the parts which it supports may be held raised at different elevations.

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

1. In a miter-box, a support for the work, a horizontally-swinging arm carrying saw-guides and held over said support, and a vertically-swinging gage-bar arranged for locking engagement with said arm, as set forth.

2. In a miter-box, a support for the work, upright posts on said support, a cross-bar between said posts, a second cross-bar therebelow and slidably fitted on said posts, a shaft extending through said cross-bars, a horizontal arm carrying saw-guides and secured to said shaft, and a semicircular gage-bar hinged about a horizontal axis to the lower cross-bar and arranged for engagement with said arm, as set forth.

3. In a miter-box, a support for the work, a horizontally-swinging arm provided with

saw-guides and held over said support, the said arm being formed with a recess, a vertically-swinging gage-bar having a series of studs on its lower face any one of which is adapted to
5 enter said recess, and a lever fulcrumed on said arm and arranged to raise said gage-bar whereby to withdraw the studs, as set forth.

4. In a miter-box, a support for the work, upright posts on said support, a fixed cross-
10 bar connecting said posts, a second cross-bar slidably fitted on said posts below the fixed cross-bar, a tube secured to the lower cross-bar and extending up through the fixed bar, a shaft fitted in said tube and supporting

saw-guides, the upper end of said shaft extending above the tube and being formed with screw-threads, a nut on such end and bearing on the upper edge of the tube, and a split clamp surrounding said tube and resting on the fixed cross-bar, as set forth. 15 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THEODORE BOOTSMAN.

Witnesses:

R. H. FALCONER,
L. M. ROSER.