

(No Model.)

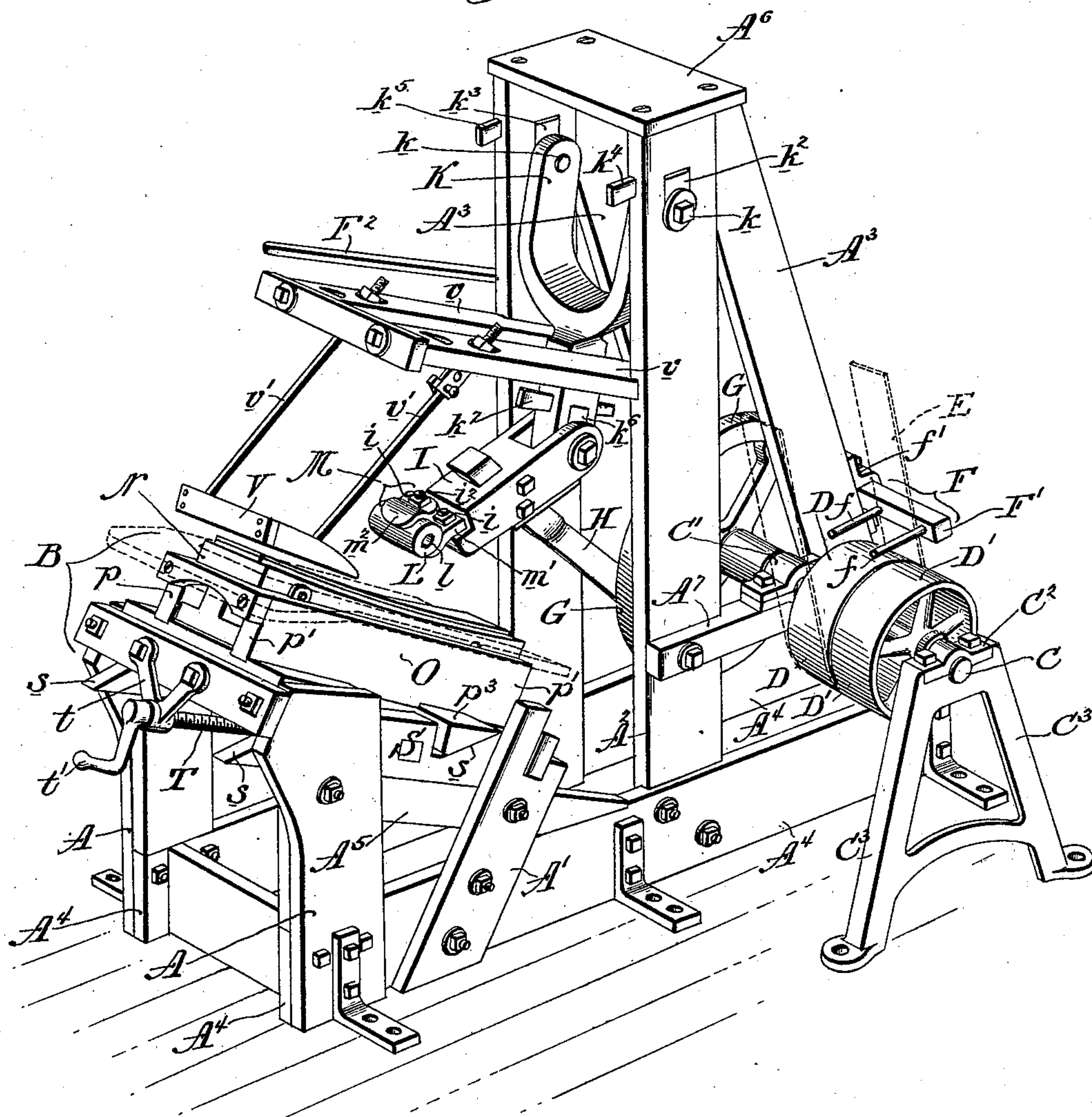
2 Sheets—Sheet 1.

E. T. EMS.  
MOROCCO GLASSING MACHINE.

No. 589,123.

Patented Aug. 31, 1897.

*Fig. 1.*



WITNESSES:

*Charles Sanderson*  
*Thomas J. Emsack Jr.*

INVENTOR

*Edward T. Ems.*  
*by his Attorney*  
*David Williams*

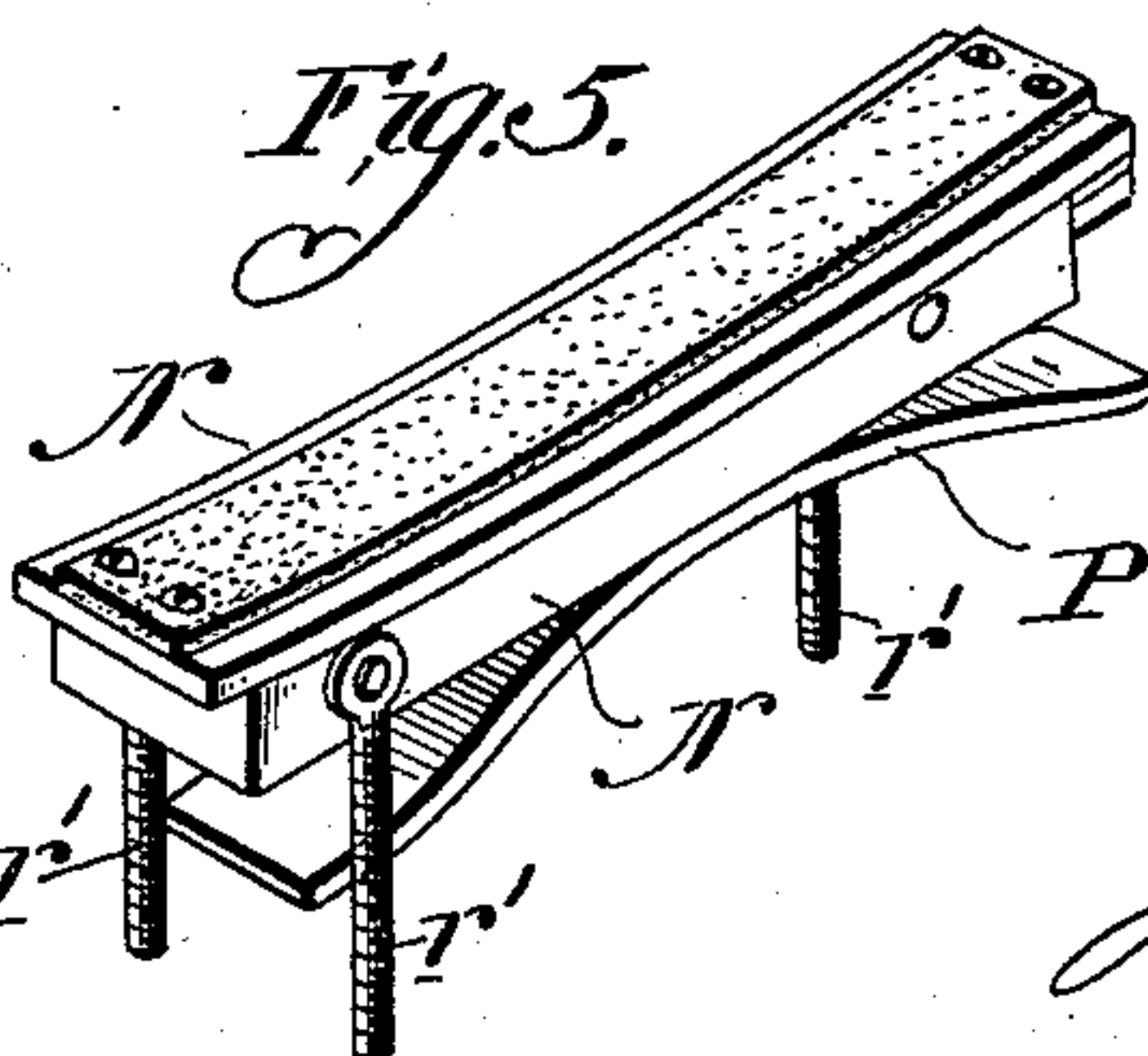
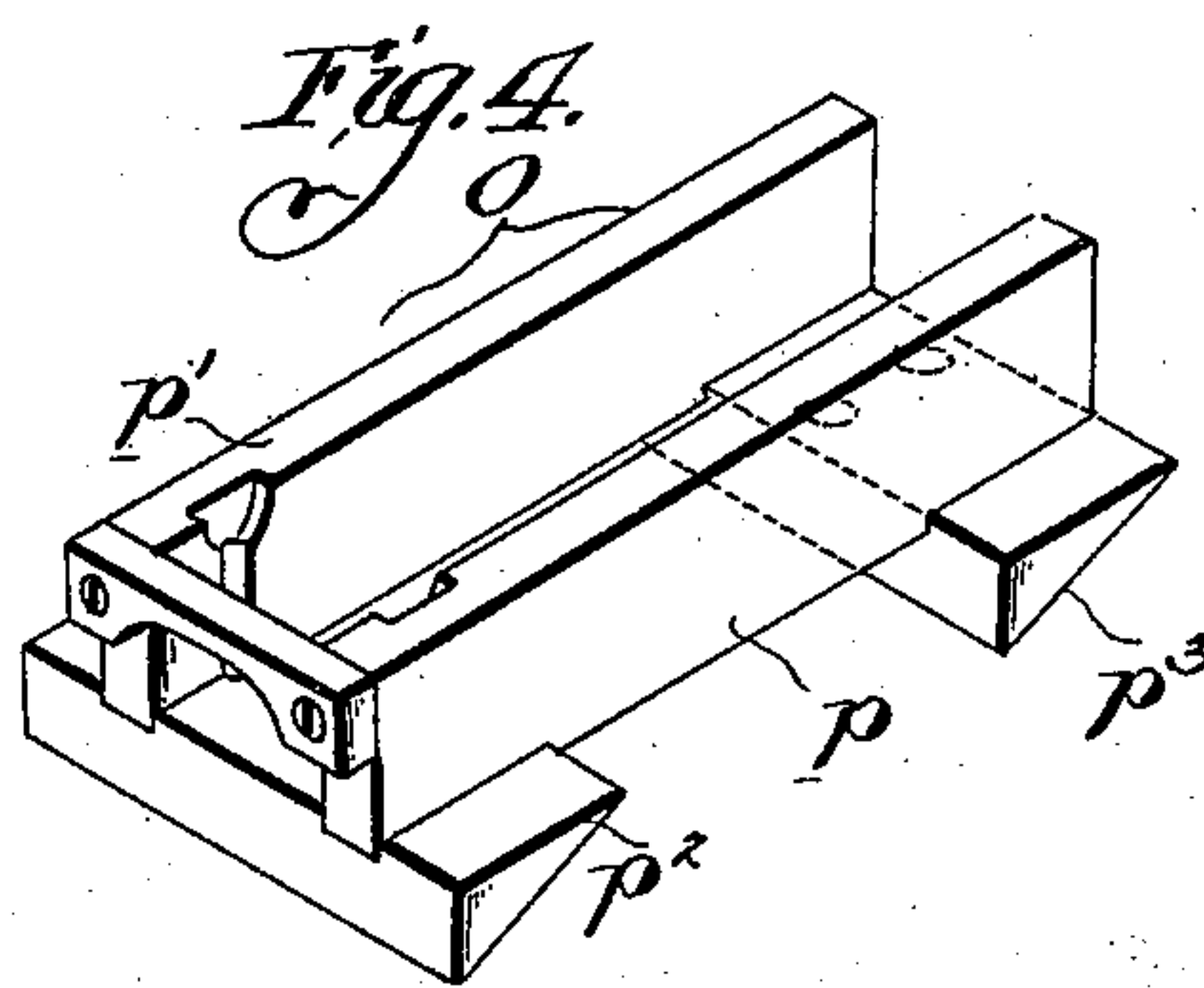
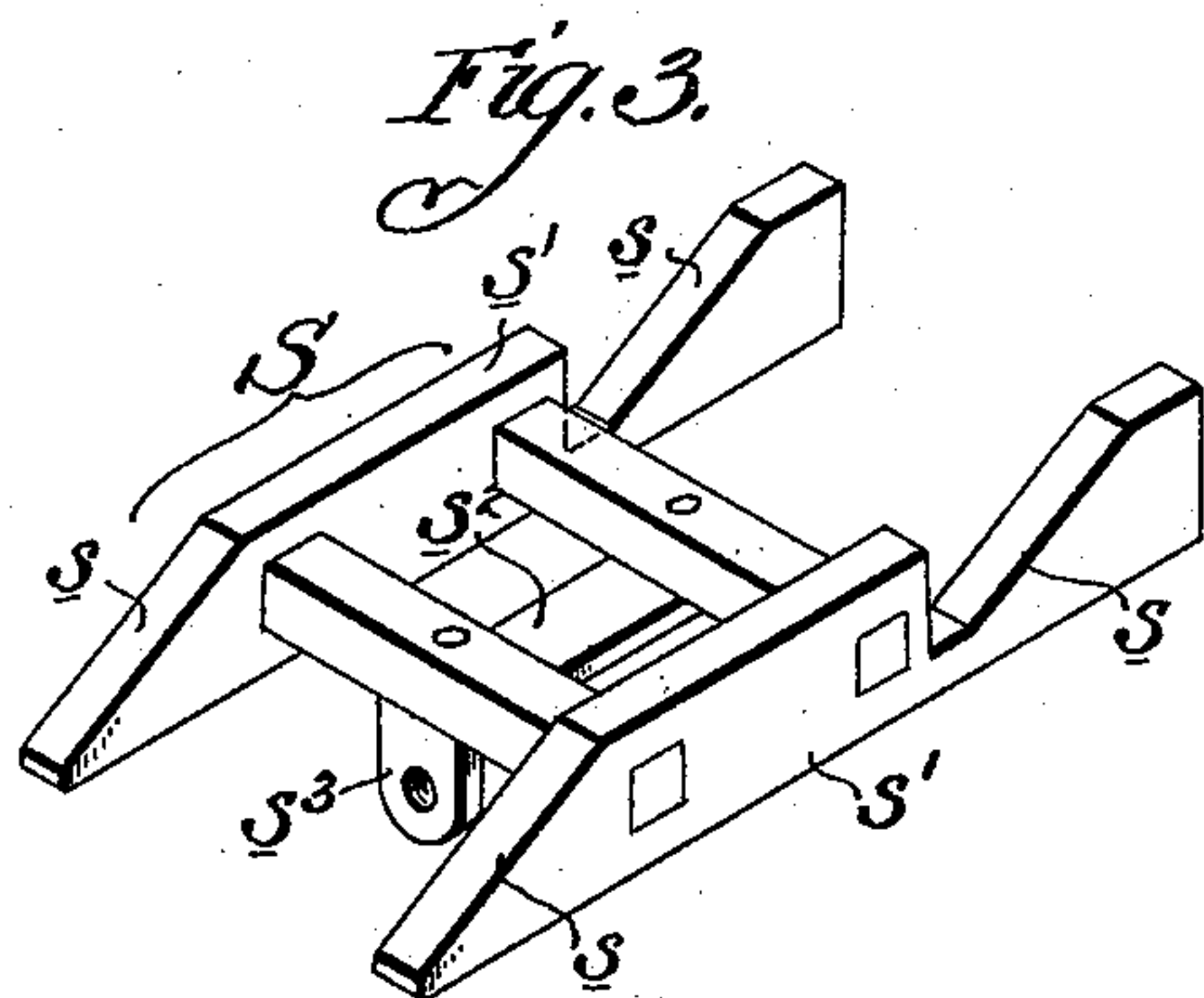
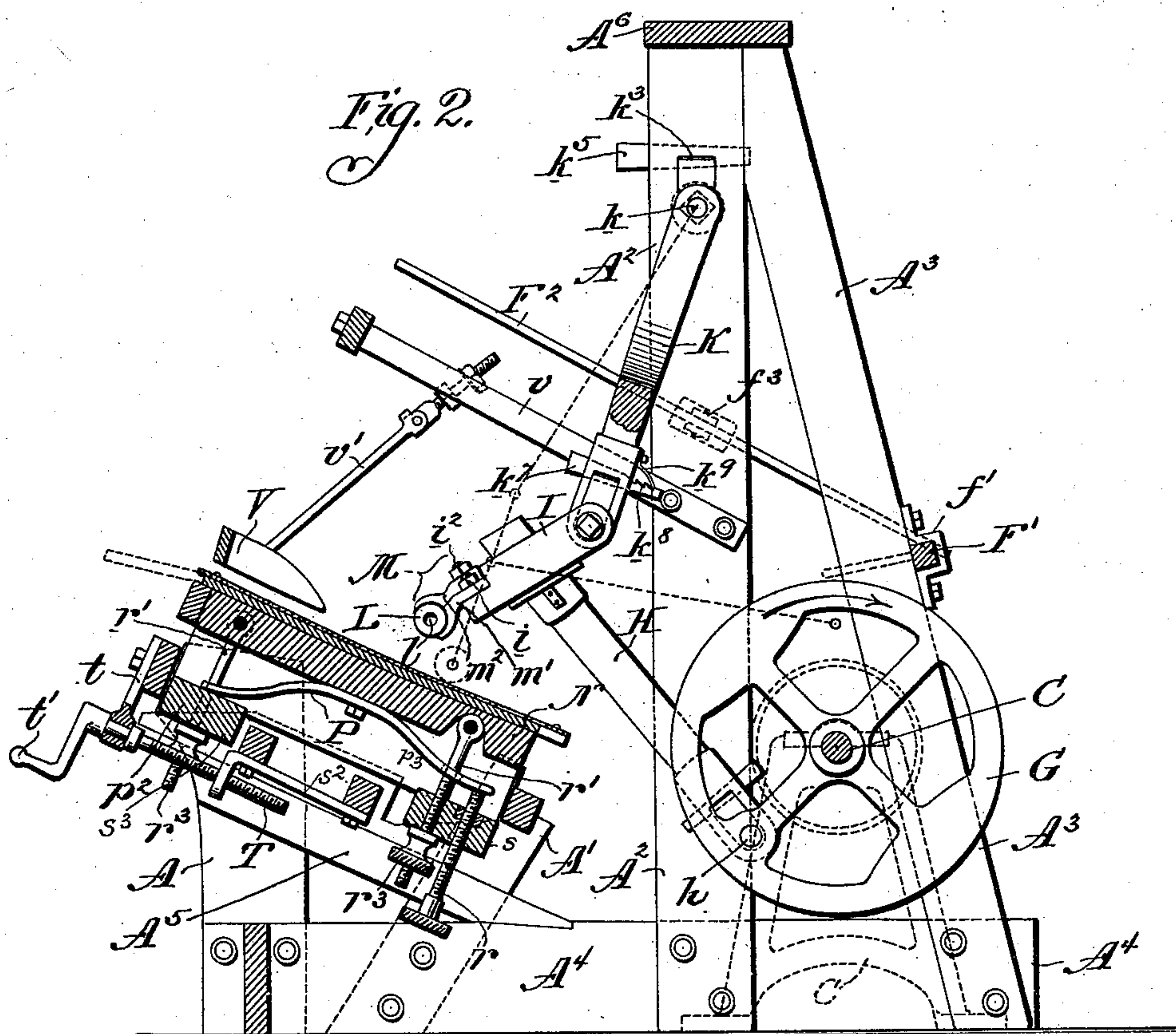
(No Model.)

2 Sheets—Sheet 2.

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MOROCCO GLASSING MACHINE.

No. 589,123.

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WITNESSES:

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# UNITED STATES PATENT OFFICE.

EDWARD T. EMS, OF PHILADELPHIA, PENNSYLVANIA.

## MOROCCO-GLASSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 589,123, dated August 31, 1897.

Application filed October 27, 1896. Serial No. 610,196. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD T. EMS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Morocco-Glassing Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in morocco-glassing machines in which a reciprocating tool operates in conjunction with a yielding table; and the objects of my invention are, first, to provide means for operating the polishing-tool in such a manner that greater pressure will be brought to bear upon the leather when the tool is traveling in one direction and to raise the tool from contact with the leather when the same is moving in the opposite direction; second, to afford facilities for the proper shape and adjustment of the table for holding the work, and, third, in means to lessen the liability to injury of the person operating the machine. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a machine constructed in accordance with my invention. Fig. 2 is a vertical section through the center of the machine. Fig. 3 is a detached perspective view of the movable portion of the table, by which means the same may be raised or lowered. Fig. 4 is a detached perspective view of another portion of the table, which is carried and acted upon by the portion shown in Fig. 3; and Fig. 5 is a detached perspective view of the block upon which the leather rests during the operation of glassing.

Similar letters of reference refer to similar parts throughout the several views of the drawings.

The framework of the machine is preferably constructed of wood, and each side comprises uprights A, A', A<sup>2</sup>, and A<sup>3</sup>, united together at the bottom by horizontal strips A<sup>4</sup>. The uprights A and A' are provided with inclined cross-pieces A<sup>5</sup>, which support the ad-

justable table B, and the uprights A<sup>2</sup> and A<sup>3</sup> are braced at the top by a cross-piece A<sup>6</sup>.

The main or driving shaft C is supported in suitable bearings C<sup>1</sup> and C<sup>2</sup>, the former being supported by a cross-piece A<sup>7</sup> and the latter carried by an iron standard C<sup>3</sup>. Mounted upon said shafts are fast and loose pulleys D and D', respectively, the former being tightly secured to the shaft by a set-screw or key and the latter being free to turn independent of said shaft. Power for driving said shaft is transmitted by a belt E, which may be conveyed to either the loose or tight pulley by a belt-shifter F, comprising a bar F', having pins *f f*, embracing the belt, guides *f'*, mounted upon the uprights A<sup>2</sup>, and a lever F<sup>2</sup>, pivoted to the end of the bar F' and fulcrumed in a bracket *f*<sup>3</sup>, by means of which the belt-shifting device is operated. A crank-wheel G is secured upon the shaft C and operates an arm H, working on a crank-pin *h*, secured to the crank-wheel G.

The arm H is fastened to a cross-head I, which is guided in its forward and backward movement by bifurcated lever K, suspended from the framework by pins *k* and *k'*, passing through metal boxes *k*<sup>2</sup> and *k*<sup>3</sup>, capable of being adjusted by means of tapered keys *k*<sup>4</sup> and *k*<sup>5</sup> to compensate for wear. In like manner the lower end of the arm K is provided with a box *k*<sup>6</sup> and tapered key *k*<sup>7</sup>, the latter having a series of notches *k*<sup>8</sup>, to which is adapted a spring-finger *k*<sup>9</sup>, for the purpose of holding the tapered key in position.

The polishing-tool L is a smooth cylinder of glass, having an opening *l* passing through its center. Said tool is held in position by a clamp M, the lower jaw *m'* of which is secured to the cross-head I by bolts *i*. The upper jaw *m*<sup>2</sup> is detachably connected to the lower jaw by a suitable bolt and nut *i*<sup>2</sup>.

The bed or table of the machine comprises a work-block N, preferably formed of wood and having its upper face concaved or curved to correspond to the path described by the polishing-tool. Underneath the work-block N and serving partly to guide the same is a frame O, having two side bars *p p'* and small cross-bars *p*<sup>2</sup> *p*<sup>3</sup>, the lower surfaces of which at each end are inclined or wedge-shaped. To the block N is centrally secured a plate-spring P, one end of which rests upon the



central portion of the cross-bar  $p^2$  and the opposite end upon an adjusting-screw  $r$ , carried by the cross-bar  $p^3$ , the screw being turned when necessary to increase or decrease the pressure exerted by the spring. The upward tendency given to the work-block by the spring is checked by bolts  $r'$ , pivoted at their upper ends to the sides of the block and passing through the cross-bars  $p^2 p^3$ , being provided with thumb-screws  $r^3$ , which may be turned to regulate the vertical height of the table.

The inclined ends of the cross-bars  $p^2 p^3$  rest upon similarly-inclined surfaces  $s$ , formed on the longitudinal bars  $s'$  of a frame  $S$ , and to the under side of the smaller cross-bars of this frame is secured a plate or bar  $s^2$ , having one end bent at right angles to form a lug or ear  $s^3$ , through a threaded opening in which passes an adjusting-screw  $T$ , guided by a bracket  $t$ , secured to the fixed frame of the machine and having a handle or crank  $t'$ , by turning which the frame  $S$  may be moved to and fro. As the frame  $S$  rests upon the bars  $A^5$  of the fixed frame of the machine, any movement of the frame  $S$  will, owing to the inclined planes  $s$ , raise or lower the work-table, and the latter may be very accurately adjusted to suit different classes of work.

The standards  $A^2$  of the frame carry bars  $v$ , to which is hung, by adjustable bolts  $v'$ , a guard  $V$ , surrounding the front portion of the work-table to prevent accidents to the operator.

The operation of the machine is as follows: Considering the parts to be in the position shown in Fig. 2 and the crank-wheel  $G$  rotating in the direction of the arrow, the cross-head  $I$  will continue to move toward the front of the machine, where the operator is located, until the polishing-tool, the crank-pin, and the axle are on the same line, and owing to the pivotal connection of the cross-head to

the lever  $K$  the polishing-tool will on such back stroke be kept clear of the morrocco on the work-table and will not commence to descend until the crank-pin  $h$  has passed upwardly beyond the line, assuming and maintaining on the backward or working stroke the position indicated by dotted lines in Fig. 2 and forcibly pressing against the material, which it rapidly strokes in one direction only, the operator shifting the material, which lies loosely on the work-table, until the entire surface is polished or "glassed."

The pressure given by the polishing-tool is regulated by the frame  $S$  and the spring  $P$  and may be increased or diminished, as may be desired.

The glassing-tool, being held in the clamp  $M$ , may be readily removed when necessary and a tool of the same or of different character substituted therefor, and as all the parts are adjustable the machine may be made to accommodate a tool of any size. When a smaller tool is to be used, the notched pin  $k'$  is pushed farther into the opening on the lever  $K$  and the spring carried by said lever will engage in the proper notch of the key and hold it in position.

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

The combination of the work bed or table, the polishing-tool  $L$ , a clamp carrying the same, means for reciprocating said tool, and a guard  $V$  hung on a support at the front of the table and having its lower edge some distance above the table to permit free movement of the material being acted upon.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD T. EMS.

Witnesses:

ROBERT W. LLOYD,  
HERBERT I. LLOYD.