

Model.)

3 Sheets—Sheet 1.

W. S. SEAMAN.
CARVING MACHINE.

No. 470,450.

Patented Mar. 8, 1892.

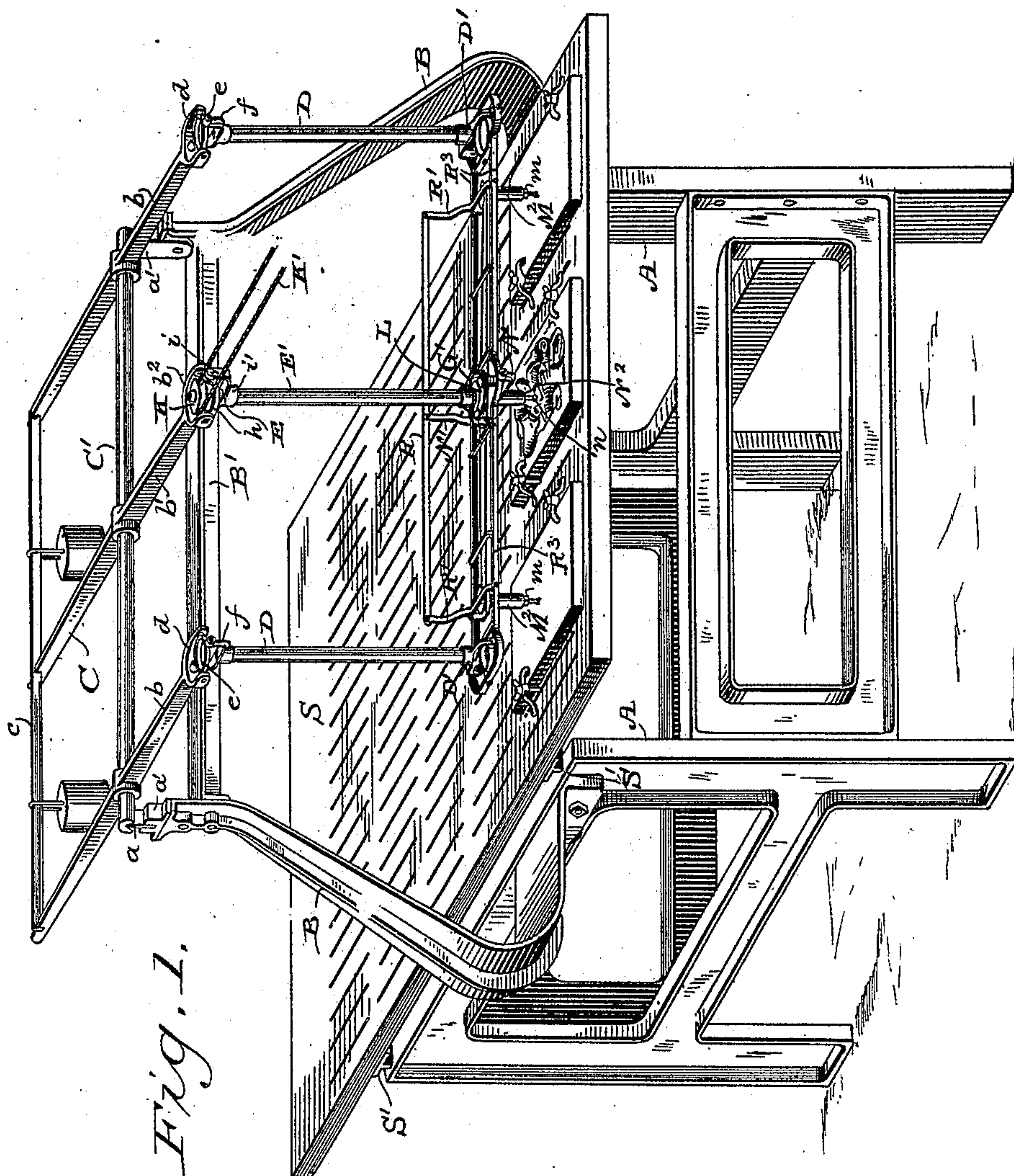


Fig. 1.

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Wm. Kellogg

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By *Amos H. Woodward*
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(No Model.)

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Fig. 2.

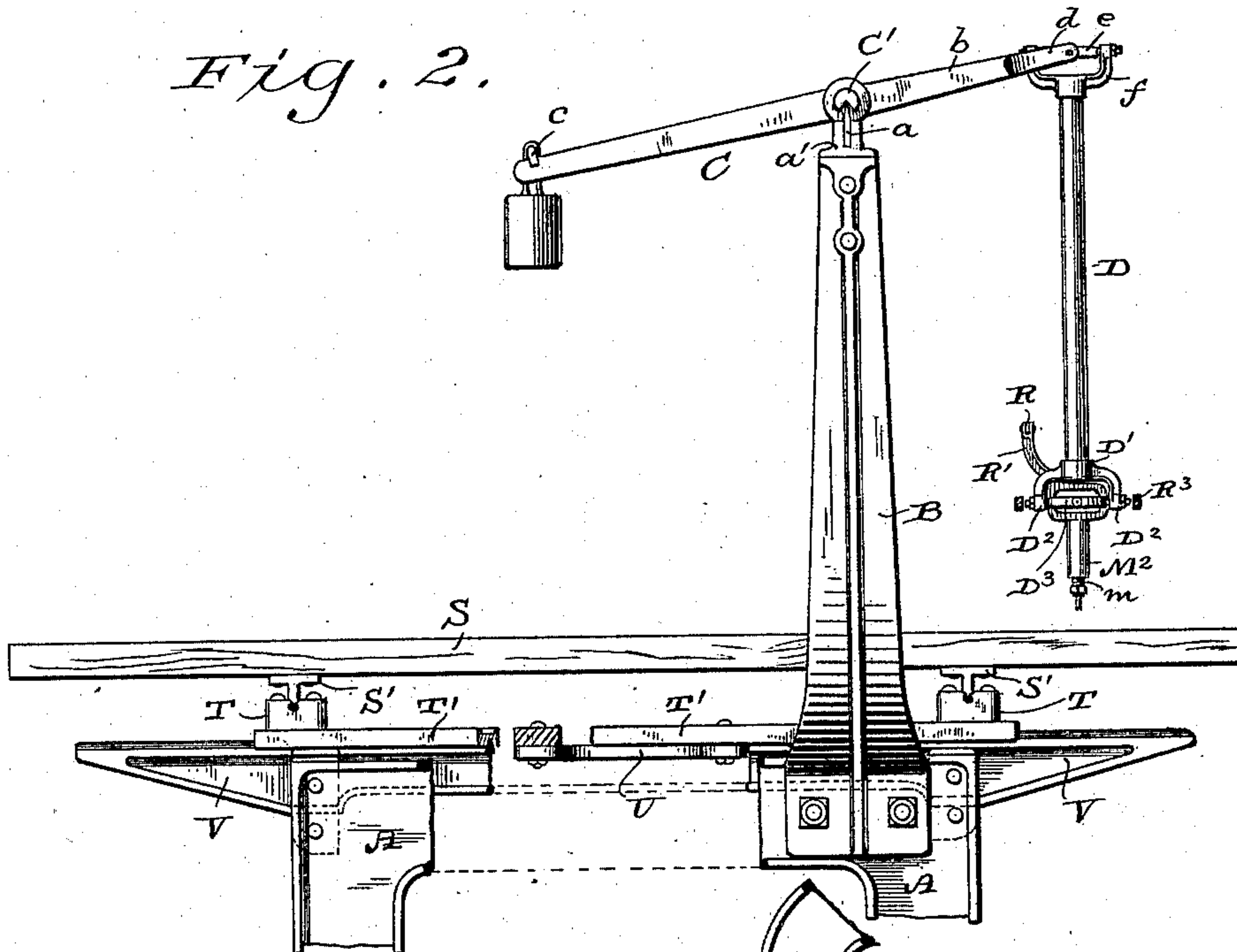


Fig. 3.

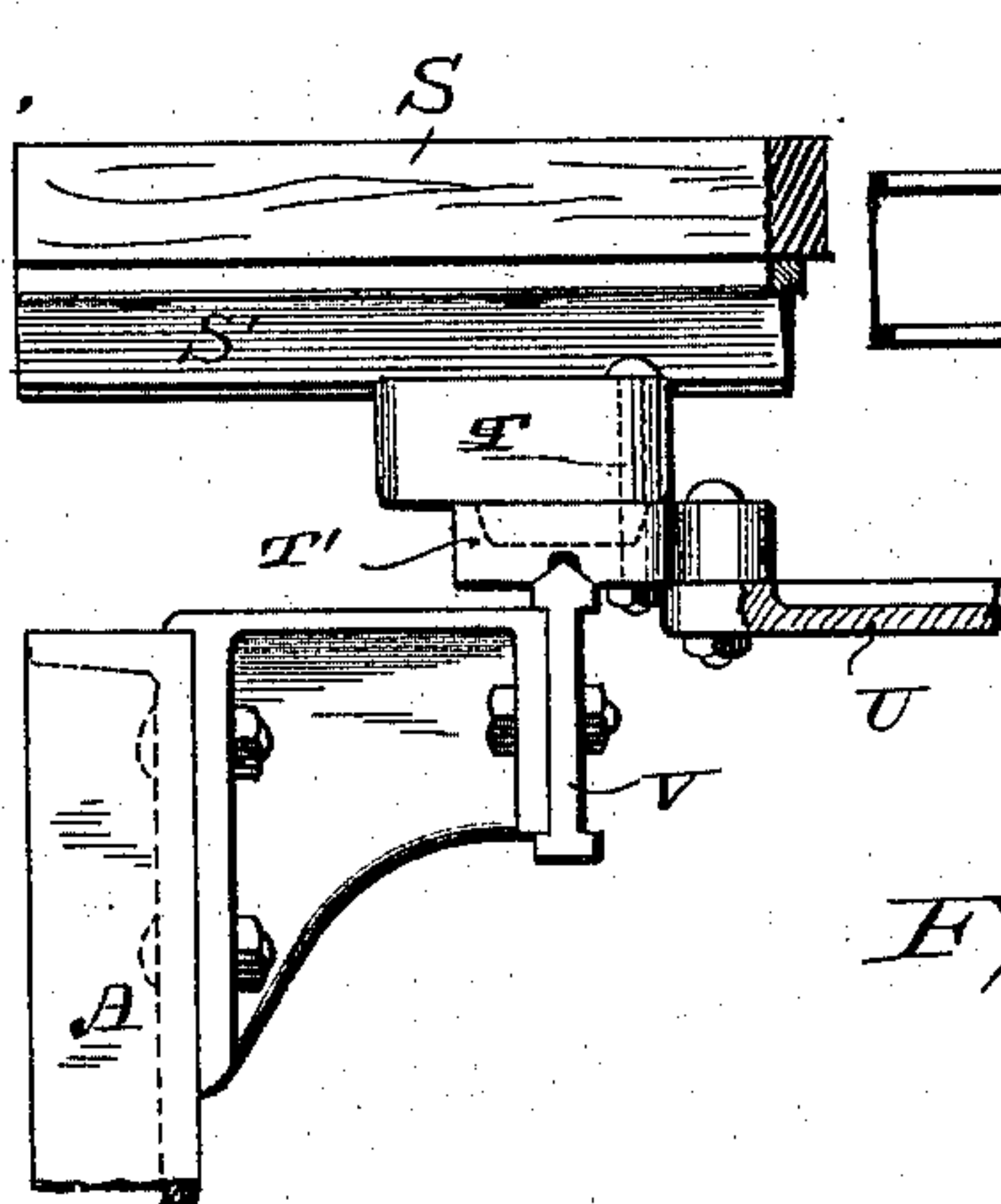
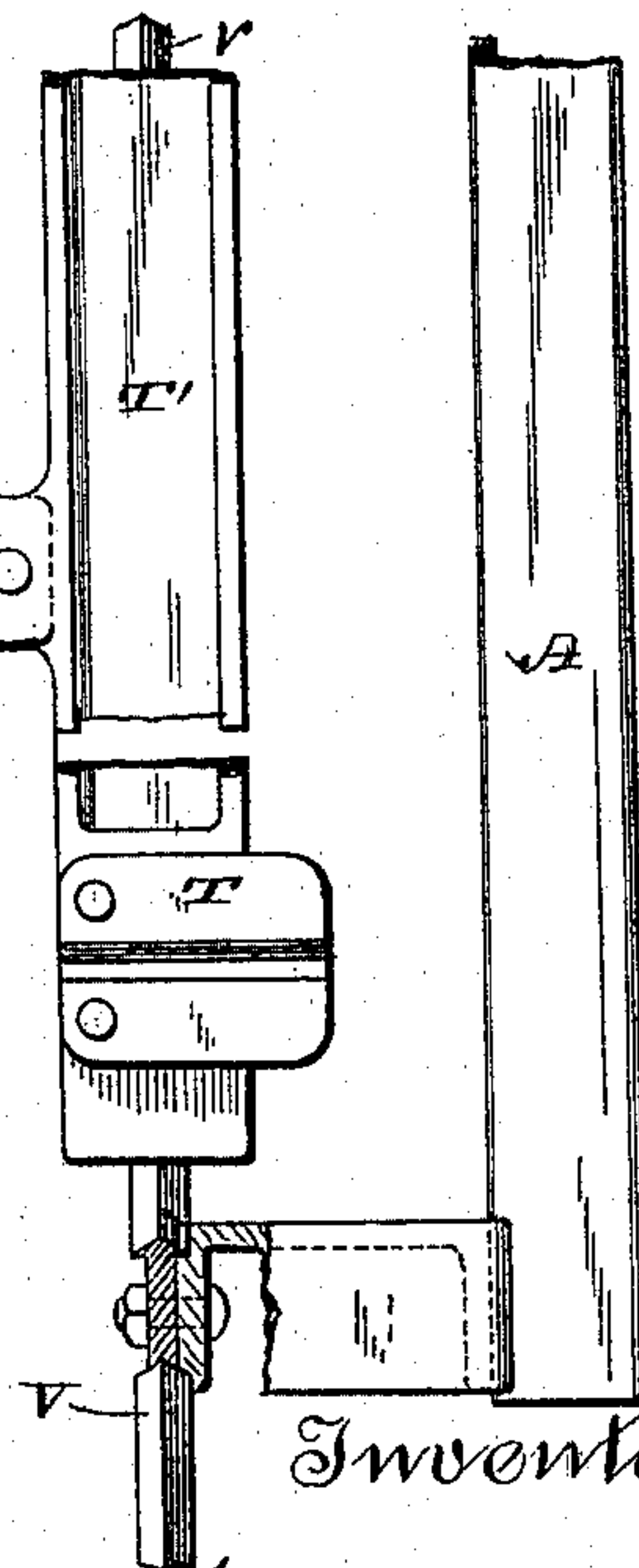


Fig. 4.



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Fig. 5.

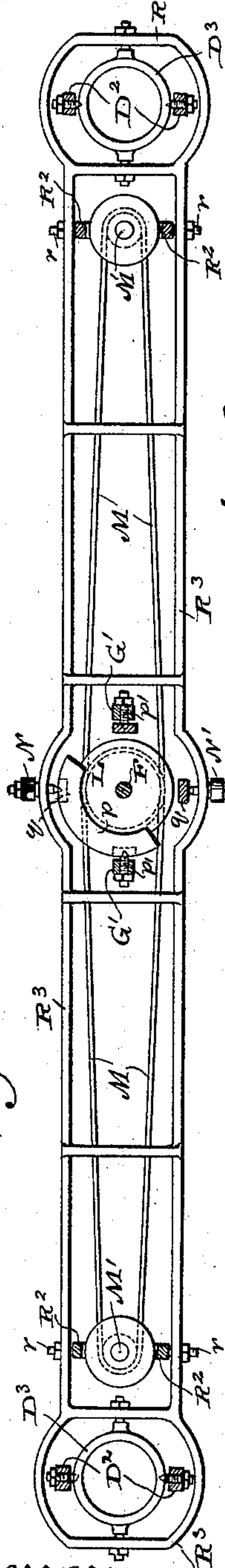


Fig. 9.

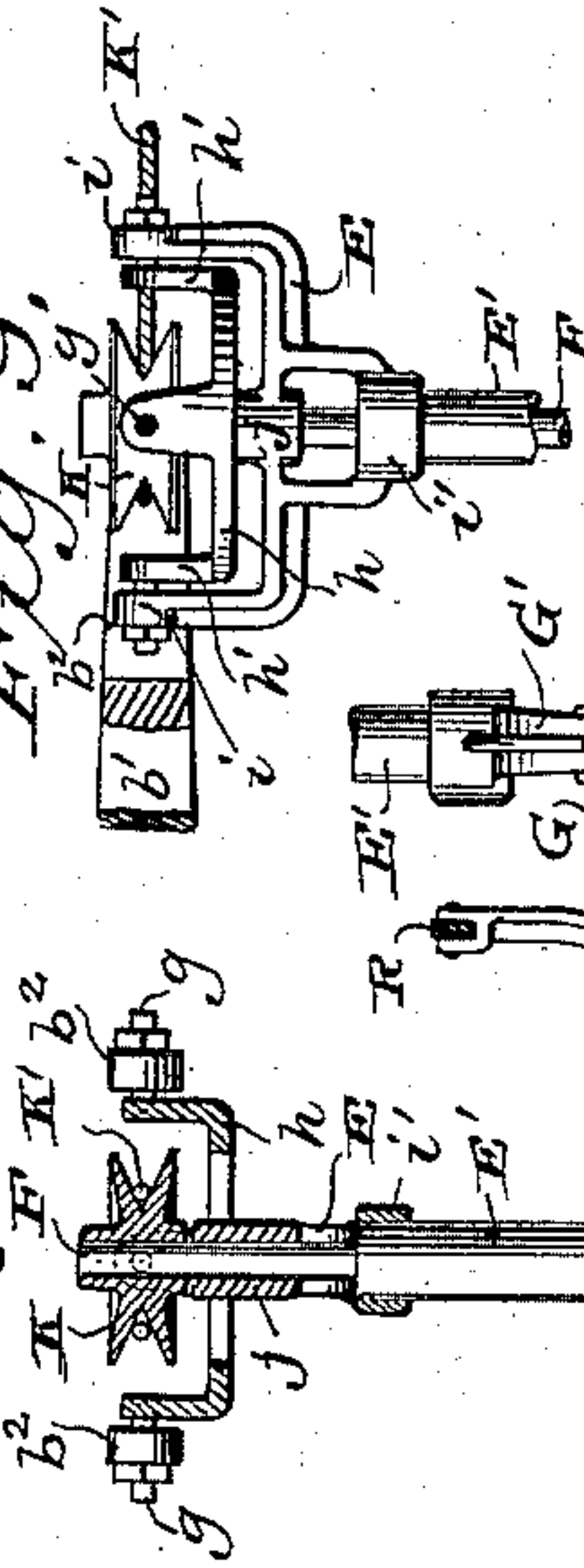


Fig. 8.

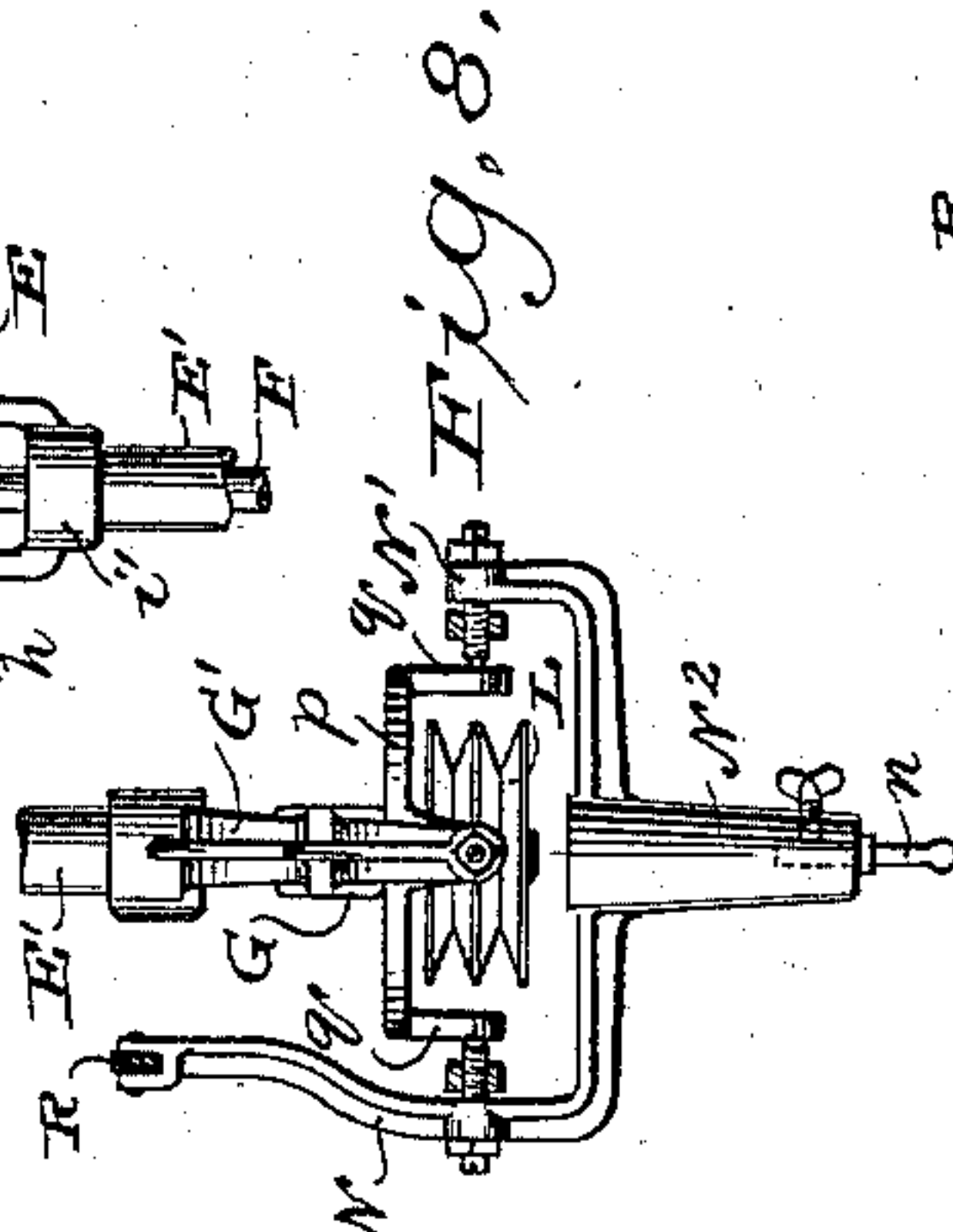
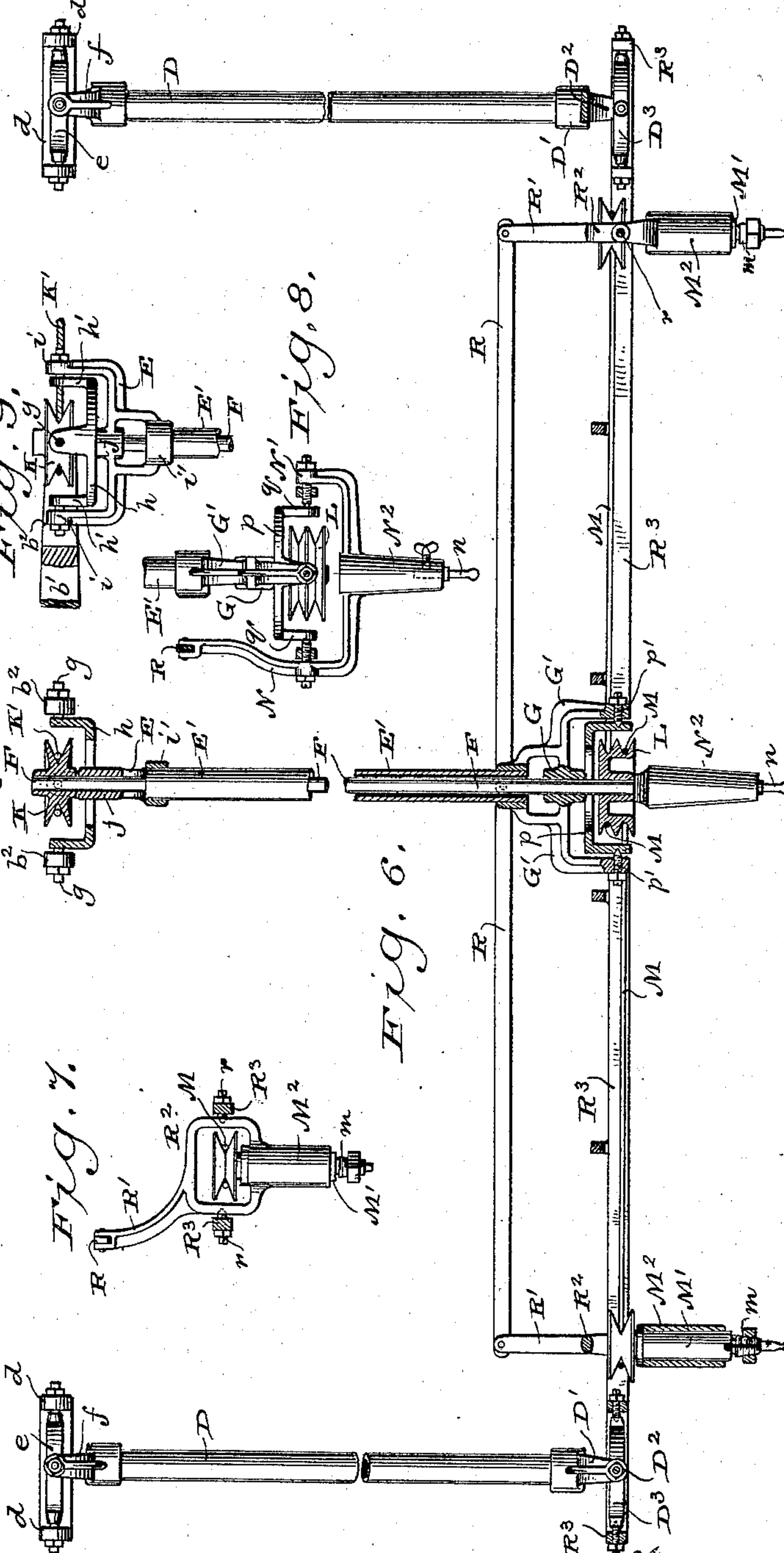


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM S. SEAMAN, OF MILWAUKEE, WISCONSIN.

CARVING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 470,450, dated March 8, 1892.

Application filed August 27, 1888. Serial No. 283,858. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. SEAMAN, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Carving-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to wood-carving machines, and will be fully described hereinafter.

In the drawings, Figure 1 is a perspective view of my invention. Fig. 2 is an end view. Fig. 3 is a front elevation of one front corner of the machine. Fig. 4 is a plan view of this corner with the table removed. Fig. 5 is a broken plan of the tool-frame. Fig. 6 is a front sectional elevation of the tool-frame and the connections by which it is suspended from a balanced supporting-frame. Figs. 7, 8, and 9 are details.

A is the stand of my machine, and B are arms that extend out and up from it to support a balanced frame C, from which the tool-frame is suspended. The arms B are solidly connected by a bar B', and a knife-edged plate *a* is set firmly in a lug *a'*, that is bolted to the upper end of each arm B, on each of which knife-edges rests one end of the central shaft or bar C' of the frame C, each of which ends is formed with a wide V-shaped groove to receive the knife-edge. The arms of frame C, of which there are three, *b b'*, are preferably connected at their rear ends by a cross-bar *c*, and the front ends of arms *b b'* are formed or provided each with a spanner *d*, and in each of these spanners is swiveled a gimbal-ring *e*, to which in turn is swiveled the arms of a spanner *f*, from which an arm D is hung. The arm *b'* is also formed or provided with a spanner *b²*, and in this spanner the studs *g* of a hanger *h* are trunnioned, and lugs *h'* of spanner *h* are swiveled to the arms *i* of a spanner E, from the base *i'* of which the central supporting-arm E' of the tool-frame is suspended. The hub *j* of spanner E forms the upper bearing of a shaft F, and the lower bearing of this shaft is formed by a hub G in an arch G', which arch is suspended from the arm E', in which latter the shaft F is housed. On its upper end shaft F carries a single sheave K, which is connected by belt K' with any suitable driving-power. On its lower end

the shaft F carries a double sheave L, which double sheave is connected by belts M with the shafts M' of the tool-holders *m*. The lower ends of the arch G' have swiveled to them an arched gimbal-ring *p* by means of pointed bolts *p'*, and to arms *q* of this gimbal-ring *p* are swiveled the arms N N' of a guiding-tool holder N², in the lower end of which is fixed the guiding or tracing tool *n*. The arm N of the guiding-tool holder N² projects up higher than arm N' and is pivoted to a bar R, which in turn is pivoted at each end to an arm R' of a sleeve M², which sleeves M² form the bearings that the shafts M' of the tool-holders *m* revolve in. The arms R' and their sleeves are connected by a rectangle R², that receives the sheave of each carving-tool holder, and these rectangles are swiveled between the arms of the frame R³ by pointed bolts *r*.

Each of the rods D has an arch or spanner D' secured to its lower end, and the lower ends of the arms D² of this arch or spanner are swiveled to a gimbal-ring D³, which in turn is swiveled in the end of frame R³.

S is the table, on which the pattern and blanks are secured in any suitable manner. T-ribs S' are bolted to the under side of the table, and the lower ends of these ribs, which are beveled, fit in grooved cleats T, that rest on and are secured to other grooved cleats T', which are bolted to a frame U and slide on the beveled upper edges of girders V, that are bolted to the frame A. By my construction the tracer and the tools are so connected that any movement of the former is positively communicated to the carving-tools.

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

1. The combination, in a carving-machine, of a suitable stand, arms extending up from the stand, a bar connecting the arms, a lug secured to the upper end of each of said arms, a plate projecting from each lug, a shaft having both of its ends formed with a groove for engagement with the plates, a balanced supporting-frame carried by the shaft, arms suspended from the frame, a tool-frame suspended from the arms, swiveled connections between said arms and supporting-frame and the tool-frame, a guiding-tool and its holder,

the latter swiveled to said tool-frame and its central supporting-arm, carving-tool holders and their bearing-sleeves, the latter pivoted to said tool-frame, a bar pivoted to arms of the bearing-sleeves and to an arm of the guiding-tool holder, a shaft arranged in the central supporting-arm of said tool-frame, pulleys carried by the shaft, pulleys also carried by the shafts of the tool-holders, and belting connecting the driving-shaft with a suitable driving-power and with the pulleys of the tool-holder shafts, substantially as set forth.

2. The combination, in a carving-machine, of a balanced supporting-frame comprising three arms, a cross-bar connecting the rear ends of the arms and spanners extending from the front ends of said arms, a gimbal-ring having its bearings in each of the two outside spanners of the frame-arms, two depending arms having spanners at their upper ends swiveled to the gimbal-rings, similar spanners projecting from the lower ends of said arms, a tool-frame, gimbal-rings connecting the latter spanners with the outer ends of the tool-frame, a centrally-depending hollow arm having a spanner at its upper and lower end, a hanger swiveling the upper spanner of the hollow arm to the spanner of the inner arm of the supporting-frame, a guiding-tool and its holder, the latter being swiveled to said tool-frame and the spanner at the lower end of said hollow arm, carving-tool holders and their bearing-sleeves, the latter pivoted to said tool-frame, a bar pivoted to arms of the bearing-sleeves and to an arm of the guiding-tool holder, a shaft suitably arranged in the central depending hollow arm, pulleys carried by the shaft, pulleys also carried by the shafts of the tool-holders, and belting connecting the driving-shaft with a suitable driving-power and with the pulleys of the tool-holder shafts, substantially as set forth.

3. The combination, in a carving-machine, of a suitable stand, girders secured to the stand, cleats having grooves for engagement with the upper edges of the girders, a frame fastened to the cleats, other grooved cleats secured to the first-named cleats, and a table

provided on its under side with ribs for engagement with the grooves in the last-named cleats, substantially as set forth.

4. The combination, in a carving-machine, of a suitable stand, arms extending up from the stand, a bar connecting the arms, a lug secured to the upper end of each of said arms, a plate projecting from each lug, a shaft having both of its ends formed with a groove for engagement with the plates, a balanced supporting-frame carried by the shaft and comprising three arms, a cross-bar connecting the rear ends of the arms and spanners extending from the front ends of said arms, a gimbal-ring having its bearings in each of the two outside spanners of the frame-arms, two depending arms having spanners at their upper ends swiveled to the gimbal-rings, similar spanners projecting from the lower ends of said arms, a tool-frame, gimbal-rings swiveling the latter spanners of the arms to the outer ends of the tool-frame, a centrally-depending hollow arm having a spanner or arch at its upper and lower end, a hanger swiveling the upper spanner of the hollow arm to the spanner of the inner arm of the supporting-frame, a guiding-tool and its holder, the latter being swiveled to said tool-frame and the spanner at the lower end of said hollow arm, carving-tool holders and their bearing-sleeves, the latter pivoted to said tool-frame, an arm projecting from each of the bearing-sleeves and from the guiding-tool holder, a bar pivoted to the arms, a shaft suitably arranged in the central depending hollow arm, pulleys carried by the shaft, pulleys also carried by the shafts of the tool-holders, and belting connecting the driving-shafts with a suitable driving-power and with the pulleys of the tool-holder shafts, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

WILLIAM S. SEAMAN.

Witnesses:

N. E. OLIPHANT,
WILLIAM KLUG.