

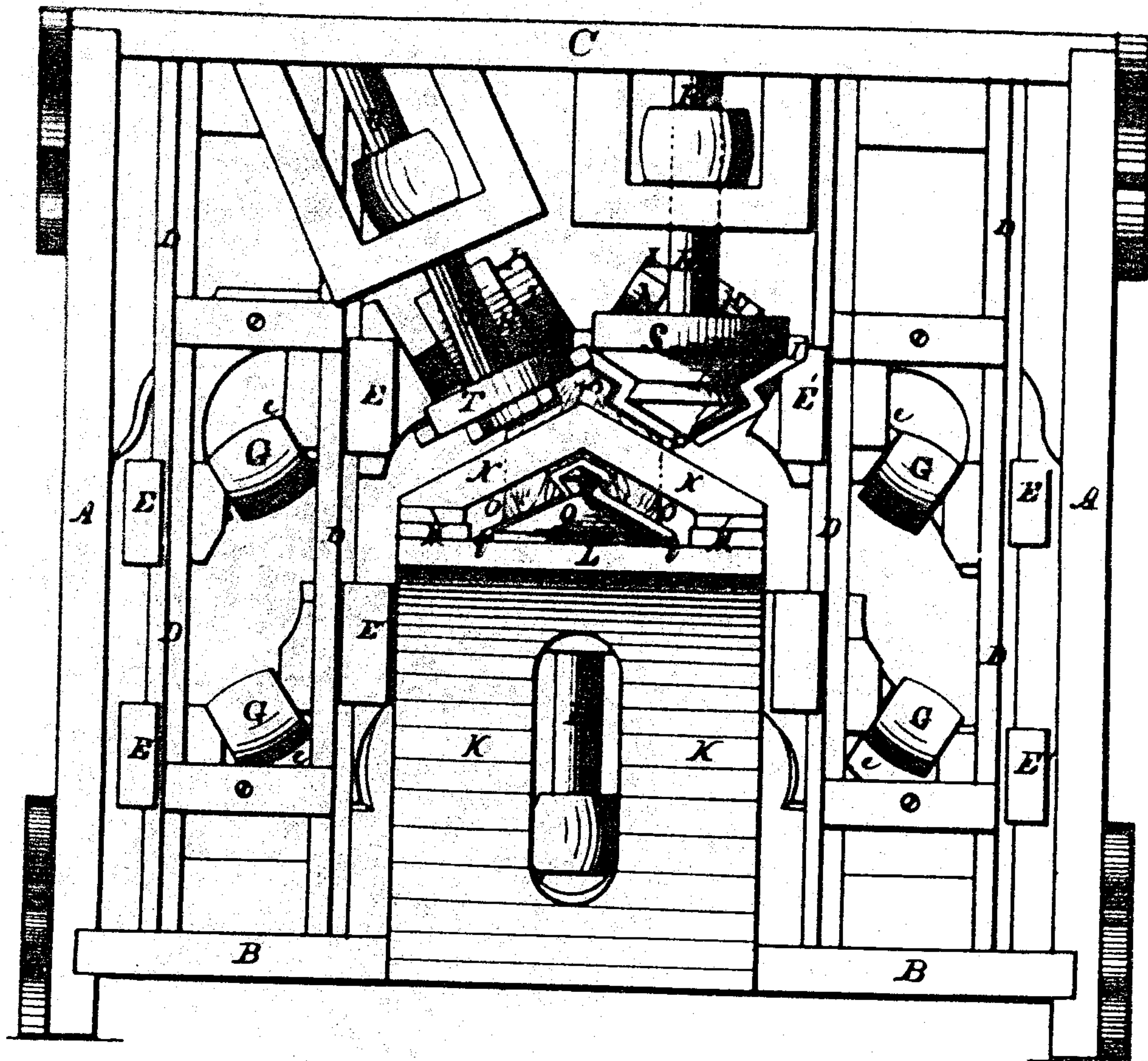
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W. J. BODA.  
Molding-Machines.

No. 142,890.

Patented September 16, 1873.

Fig. 1.



WITNESSES:

Gas. E. Hutchinson  
John R. Young

INVENTOR.

Wm. J. Boda, by  
Orinelle and Co., his Attys.

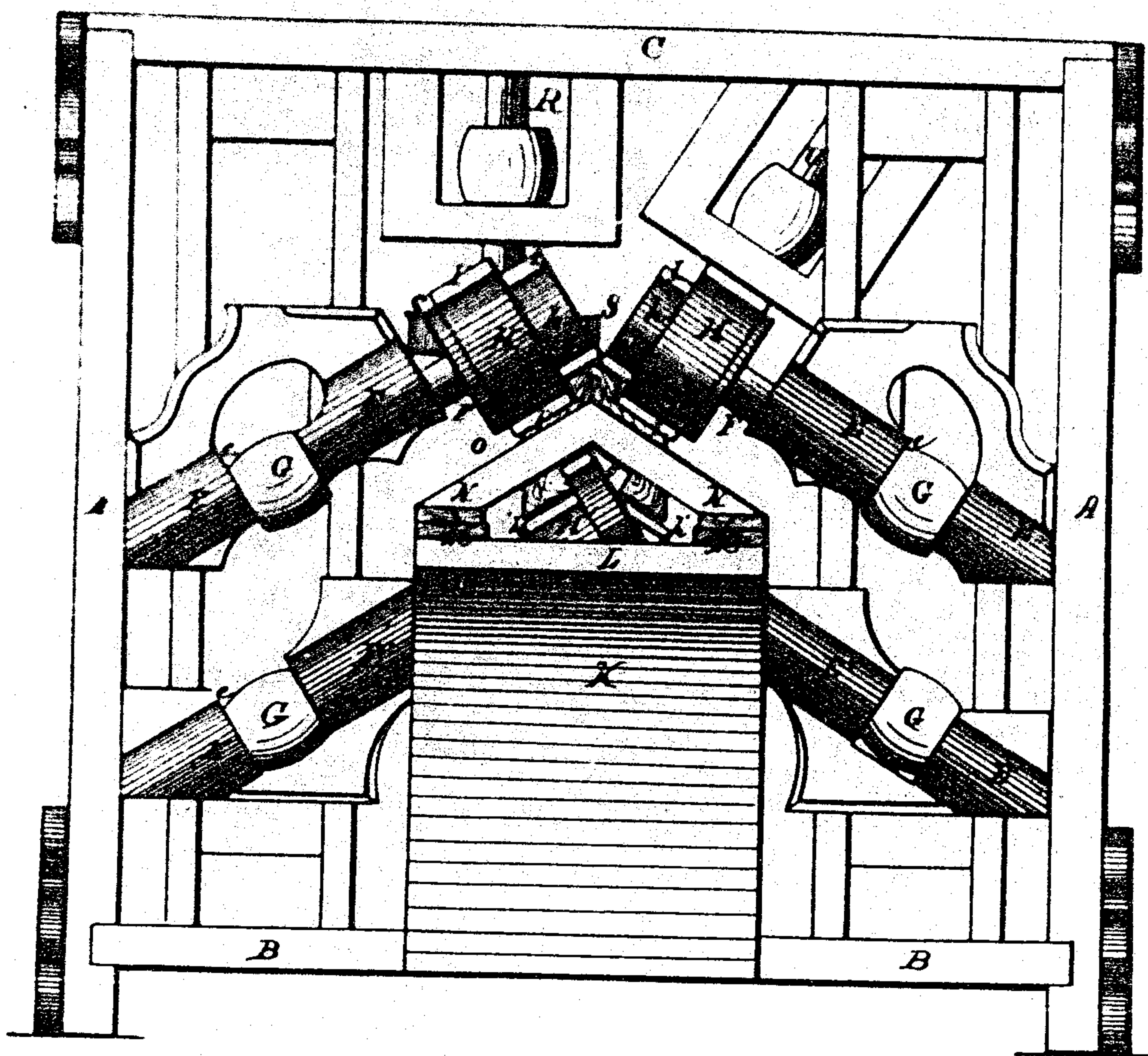
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Fig. 2.



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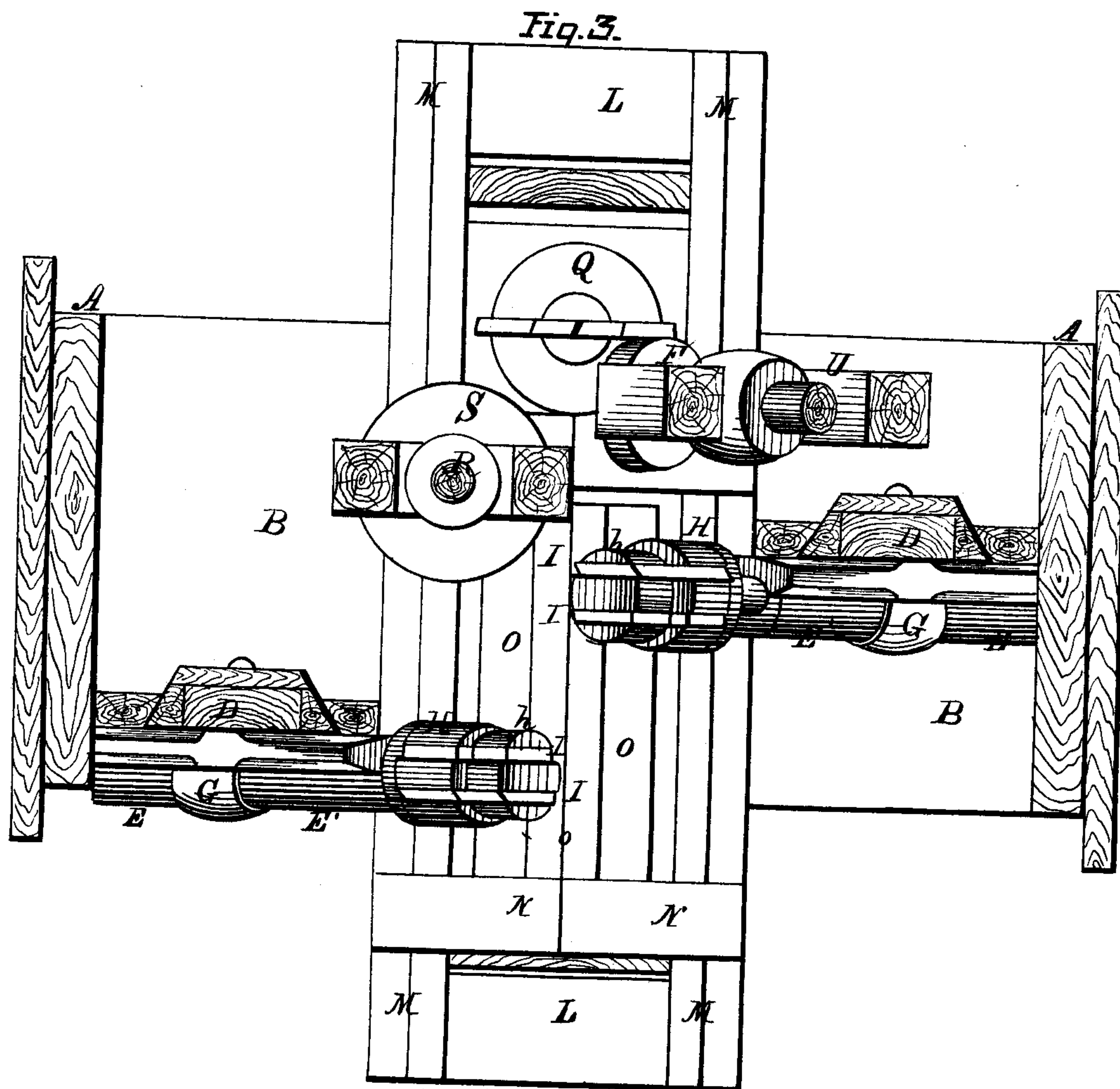
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WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM J. BODA, OF DAYTON, OHIO.

## IMPROVEMENT IN MOLDING-MACHINES.

Specification forming part of Letters Patent No. **142,890**, dated September 16, 1873; application filed August 5, 1873.

*To all whom it may concern:*

Be it known that I, WM. J. BODA, of Dayton, in the county of Montgomery and in the State of Ohio, have invented certain new and useful Improvements in Machinery for Manufacturing Extension-Table Slides; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification; in which—

Figure 1 is a front elevation of my improved apparatus. Fig. 2 is an elevation of the rear side of the same. Fig. 3 is a plan view of the upper side of said device, the upper portion of the casing or frame being removed, upon line *xx* of Fig. 1; and Fig. 4 is an end view of one of the completed table-slides.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to enable table-slides, similar to those covered by my Patent No. 127,302, of May 28, 1872, to be produced in an expeditious and accurate manner; to which end it consists, principally, in the construction, combination, and relative arrangement of the cutter-heads which form the upper faces of the slide, substantially as and for the purpose hereinafter specified. It consists, further, in the construction, combination, and relative arrangement of the cutter-heads which form the lower faces of the slide, substantially as and for the purpose hereinafter shown. It consists, further, in the combination and relative arrangement of the cutter-heads for forming and completing the slide, substantially as and for the purpose hereinafter specified. It consists, finally, in the machine as a whole, when its several parts are constructed and combined to operate substantially as and for the purpose hereinafter set forth.

In the annexed drawings, A and A represent two uprights, secured at their lower ends to or upon a suitable base, B, and at their upper ends connected by means of a cross-bar, C, the whole forming the main or supporting frame of the machine. Extending between, and secured to the base B and cross-bar C upon each side of the transverse center of the main frame, is an open frame, D,

upon the face of which are secured two boxes or bearings, E and E', that contain each a mandrel, F, and are made vertically adjustable. The mandrels F are arranged in parallel lines, and have an inclination of about thirty degrees from a horizontal line, such inclination being upward and inward. Within a central opening, *e*, in each box E, a pulley, G, is secured upon the mandrel F, and serves the double purpose of a bearing for a driving-belt, and to confine said mandrel in its longitudinal position. Upon the upper inner end of each of the upper mandrels F is secured a cylindrical cutter-head, H, which, near its end, is reduced somewhat in size; and within the peripheries of such reduced portion *h*, and of the main or larger portion of said head, is placed one or more radial cutters, I, which have a line parallel to that of said mandrel. Upon the inner end of each lower mandrel F is secured a head, H', provided with a cutter or cutters, *h'*, which head and cutters are exactly the opposite of that attached to the upper corresponding mandrel, the largest portion being at its outer end. Resting upon suitable supports K is a horizontal frame, L, upon which are secured suitable slides M that correspond to and receive a frame, N, the arrangement of parts being such as to enable said frame to move horizontally to and fro in a line having a right angle to the line of the mandrels F. Transversely, the frame N has an upward and inward inclination from each side that corresponds to the inclination of the mandrels F.

If, now, a suitable piece of wood, O, is secured to and between the ends of the frame N, and said frame moved between the cutter-heads F while the latter are caused to rotate, said piece will be cut to the form shown in Figs. 1 and 2, its upper side being provided with a tongue, *o*, while its lower side has a corresponding groove, *o'*, the faces of said groove and tongue and of said piece upon either side of the same being in a line with or at a right angle to the lines of the mandrels.

If desired, the cutters described may be employed for the purpose of roughing out the table-slide O, and other cutters used for finishing or sizing the same.

For the purpose named a mandrel, P, is



journaled in a vertical position at the transverse center and near the rear end of the frame, and is provided at its upper end with a cutter-head, Q, the upper end of which corresponds in shape to the transverse shape of the lower face of the slide O. A cutter, q, placed within a groove that extends across the face of said head, dresses the face of said slide when the latter is moved over the same. For dressing the upper face of the slide O a vertical shaft, R, is journaled above and at one side of the same, and is provided at its lower end with a cutter-head, S, that upon its lower side from its center outward is exactly the reverse of the corresponding portion of the upper face of the head Q.

Another form of cutter-head, T, shown in Fig. 1, is attached to or upon the lower end of a shaft, U, which is journaled above and at one side of the slide O, and has such an inclination as to cause its right-angled faces to coincide to the angles of one half of the upper face of said slide.

The mechanism thus described is simple in construction, efficient and accurate in operation, and enables the slides to be produced

at a very small cost as compared with the means heretofore employed.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The cutter-heads H, H', S, and T, when constructed as shown, and combined and relatively arranged to operate substantially as and for the purpose specified.

2. The cutter-heads H', H', and Q, constructed, combined, and arranged to operate substantially as and for the purpose shown.

3. The combination and relative arrangement of the cutter-heads H, H', Q, S, and T, substantially as and for the purpose set forth.

4. The apparatus, as a whole, when its several parts are constructed and combined to operate in the manner and for the purpose substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 31st day of July, 1873.

WILLIAM J. BODA.

Witnesses:

JOHN D. SHEEHAN,  
FREDK. B. SHULL.