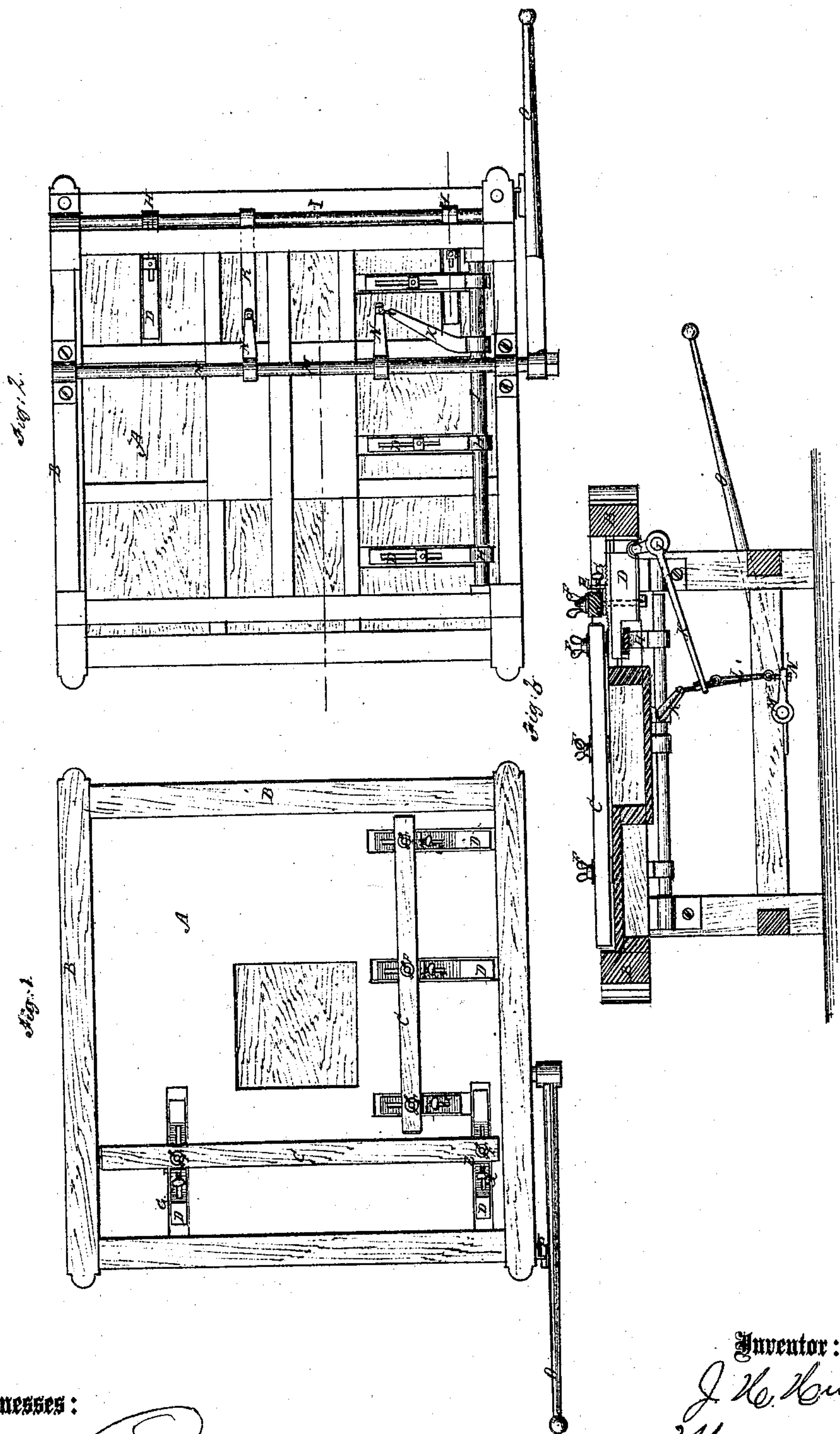


J. H. Humes,

Clamp.

No. 104,315.

Patented June 14, 1870.



Witnesses:

Chas. Nida.
E. S. Mabee

Inventor:

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United States Patent Office.

JAMES H. HUMES, OF EAST SAGINAW, MICHIGAN, ASSIGNOR TO HIMSELF,
R. M. THOMPSON, AND L. H. GRIFFIN, OF SAME PLACE.

Letters Patent No. 104,315, dated June 14, 1870.

IMPROVEMENT IN CLAMPING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES H. HUMES, of East Saginaw, in the county of Saginaw and State of Michigan, have invented a new and improved Clamping-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in machines for clamping sash, and other like frames of wood, for squaring them up, and holding them for fastening; and

It consists in an arrangement on a table having a strong frame around the edge raised above it, of two sliding clamping-bars at right angles to each other, on horizontal slides, working in slots in the table-top, by means of cranked shafts below, operated by treadles or hand-levers, to which slides the bars, are adjustably connected by angle-plates, to be changed for larger or smaller frames, and which have set-screws, for adjusting the clamping-bars to the shape of the frames to be clamped.

Figure 1 is a plan view of my improved clamping-machine;

Figure 2 is a plan of the bottom; and

Figure 3 is a sectional elevation, taken on the line *x x* of fig. 2.

Similar letters of reference indicate corresponding parts.

A is the table, and B, the strong raised frame at the edge.

C represents the sliding clamping-bars, placed on the top perpendicular to each other, one for action on the side of the frame to be clamped, and the other to act on the end, the said frame being placed between, on the table, in the space bounded by the said bars and the beams of the frame opposite.

These bars are attached to the slides D, working in

slots in the table-top, by means of the angle-plates E and thumb-bolts F, the latter pressing down through vertical slots in the slides, which admit of moving them along the slides back and forth, and the angle-plates have serrated lower faces engaging with the serrated upper faces of the slides.

The vertical parts of the angle-plates have set-screws G passing through them horizontally, against the rear sides of the bars C, for adjusting to the required line for the frames to be clamped, or parallel with the frame B.

These slides D are worked back and forth by the arms H of the oscillating shafts I, suitably arranged under the table, and connected by the arms K, links L, and arms N with the shaft M near the bottom of the frame, which is provided with the long operating lever O, which, being forced down, will force the bars C against the frame, and will, by engaging with the notched plate P, hold them in place while the fastening is being done.

This improved clamping-machine is applicable for clamping, holding, and squaring wood frames of all kinds, whether for windows, doors, or the like articles.

The bars C are capable of adjustment within wide limits, for frames of different sizes, but it will be convenient to provide machines of different sizes for frames of different kinds.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent--

The combination with a table, A, having the raised frames B, of the adjustable clamping-bars C, slides D, operating shafts I, arm H K, rock-shaft M, and operating lever, all arranged for operation substantially as specified.

JAMES H. HUMES.

Witnesses:

WILLIAM GILLET,
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