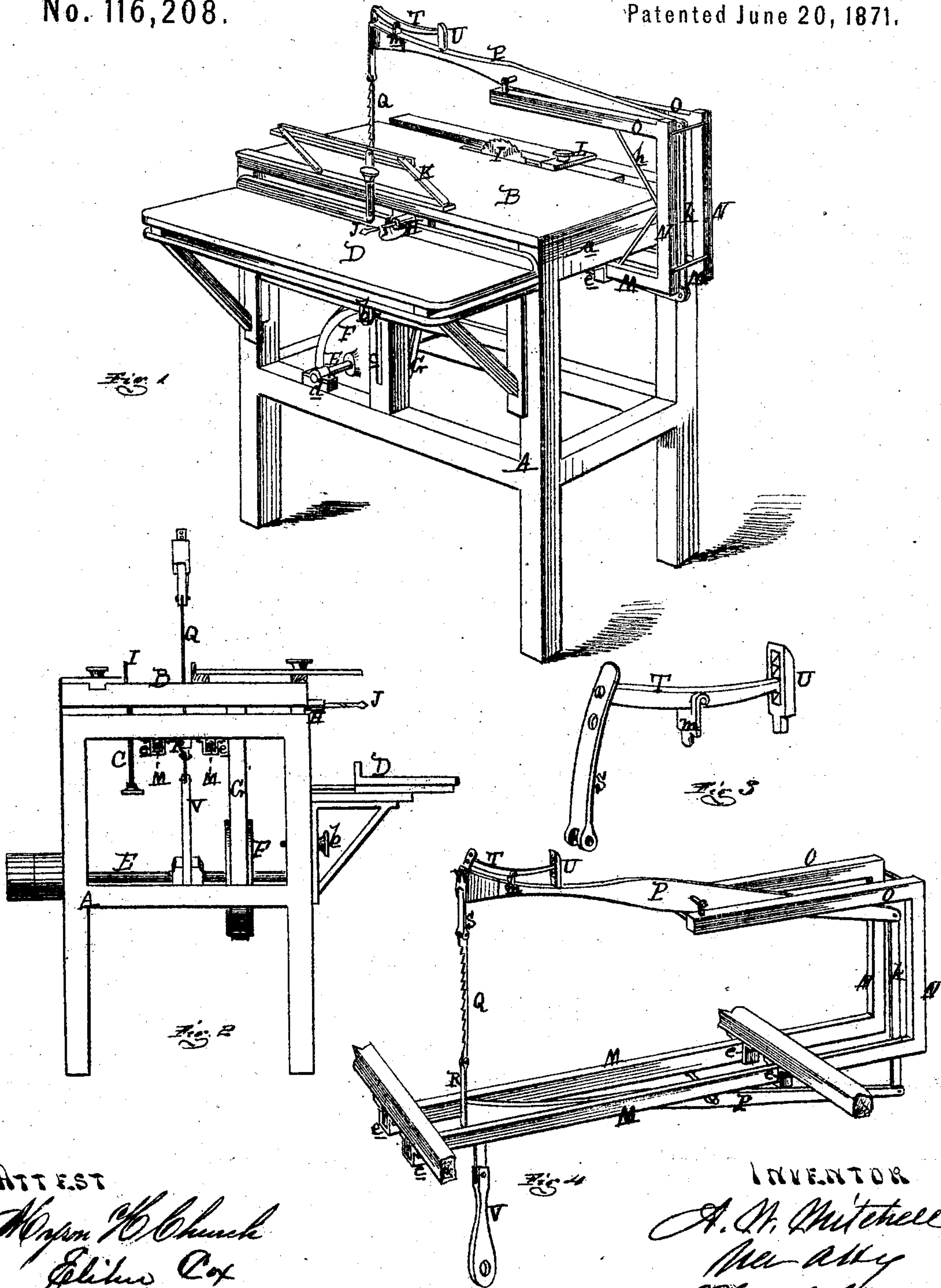


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Improvement in Scroll-Sawing Machines.

No. 116,208.

Patented June 20, 1871.



ATTEST
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ANDREW W. MITCHELL, OF DETROIT, MICHIGAN, ASSIGNOR TO HIMSELF
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IMPROVEMENT IN SCROLL-SAWING MACHINES.

Specification forming part of Letters Patent No. 116,208, dated June 20, 1871.

To all to whom it may concern:

Be it known that I, ANDREW W. MITCHELL, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in a Combined Jig and Circular-Sawing and Boring Machine; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my machine. Fig. 2 is an end elevation of the same. Fig. 3 is an enlarged perspective of the straining device for the jig-saw detached. Fig. 4 is a detached view of the working-beams in perspective, with the frame to which they are pivoted.

Like letters indicate like parts in each figure.

The nature of this invention relates to the construction of a combined jig and circular-sawing and boring machine, so arranged that each of the operations may be carried on at the same time, or separately, as may be desired. The invention consists, first, in the peculiar construction and attachment of two parallel working-beams to an adjustable frame, and the manner of securing the latter to the main frame of the machine; second, in combination with the working-beams, the device for straining the jig-saw; and third, in the combination and arrangement of the various parts, as more fully hereinafter described.

In the accompanying drawing, A represents the main frame of the machine, which carries the working parts, and which is provided with a suitable bed or table, B, hinged at *a* to the frame, while the opposite end is adjustable vertically by means of the set-screw C, in the usual manner. D is a supplementary table attached to the side of the frame, and adjustable vertically, by means of the set-screw *b* and slot *c*, in one of the vertical posts of the main frame. E is a shaft, journaled in suitable boxes *d* to the main frame, and is provided with a pulley, F, by means of which, and a belt, G, motion is communicated to the shaft H, which carries the circular saw I. This latter shaft is properly journaled to the main frame, immediately below the bed or table B, and in one of its ends is a socket to receive the

boring-tool J. K and L are guides or rests, secured to the top of the table in such a manner that, when desired, they may readily be detached therefrom. M are bars, arranged parallel with each other. N are parallel vertical posts, secured at one end to the bars M, and O are overhanging bars, also parallel, and secured at one end to the top of the posts N, the bars M O and posts N being secured together by braces *h*, and the whole forming a frame to which the working-beams are pivoted at their centers. The bars M are secured to the main frame A, by means of the eyes or hooks *e*, in such a manner that, when desired, the entire frame just described may be withdrawn and removed from the main frame. P are working-beams, the outer ends of which are secured together by the straps *k*; one of these beams is suitably pivoted to the inner ends of the overhanging bars O, and the other one at a corresponding point to the bars M. The jig-saw Q is secured in a vertical position between the inner ends of the working-beams, in the following manner: R is an elastic strap, secured to the underside of the end of the lower working-beam; thence, passing upward over the end of the same, is secured to the lower end of the saw by any suitable buckle. Another elastic strap, S, is similarly secured to the top of the saw, and thence passes upward through a guide, W, secured to the end of the upper working-beam. This strap S is provided with a series of holes, which is designed to engage with the point of the lever T, which has its fulcrum at *m*, secured to the top of the upper working-beam. U is a rack or other equivalent device, the lower end of which is pivoted, as shown, to the upper working-beam, and the teeth of the rack are designed to engage with the end of the lever. One end of the lever is engaged with one of the holes in the strap, the opposite end is then depressed, and when the tension upon the saw is sufficient the pivoted rack is compelled to engage with that end of the lever and keep the saw at its proper tension. The pitman V is secured in the usual manner to the lower working-beam, and its opposite end is secured by a suitable strap to the crank of the shaft E. This shaft may be driven by any suitable power.

The machine thus constructed can be oper-

ated for scroll-sawing, for the usual functions performed by a circular-saw, and for a boring-machine, simultaneously. When the work to be done by a circular saw requires the whole face of the table, the pitman, which connects the main driving-shaft E with the jig-saw, may be disconnected, and the frame, and working-beams sustained by that frame, may be removed, first disconnecting the jig-saw at its upper end.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The arrangement of the frame, composed of the bars M O and posts N, and braces h, with the working-beams P, and the eyes or hooks e of the frame A, substantially as and for the purposes set forth.

2. In combination with the working-beams P, jig or scroll saw Q, and elastic strap R, the elastic strap S, guide W, lever T, and rack U, substantially as and for the purposes set forth.

3. The arrangement of the parts named in the two preceding paragraphs with the frame A, shafts E H, belt G, circular saw I, boring-tool, J, and supplementary table D, when the parts are combined to operate substantially as set forth.

ANDREW W. MITCHELL.

Witnesses:

THOS. S. SPRAGUE,
MYRON H. CHURCH.