

No. 672,587.

Patented Apr. 23, 1901.

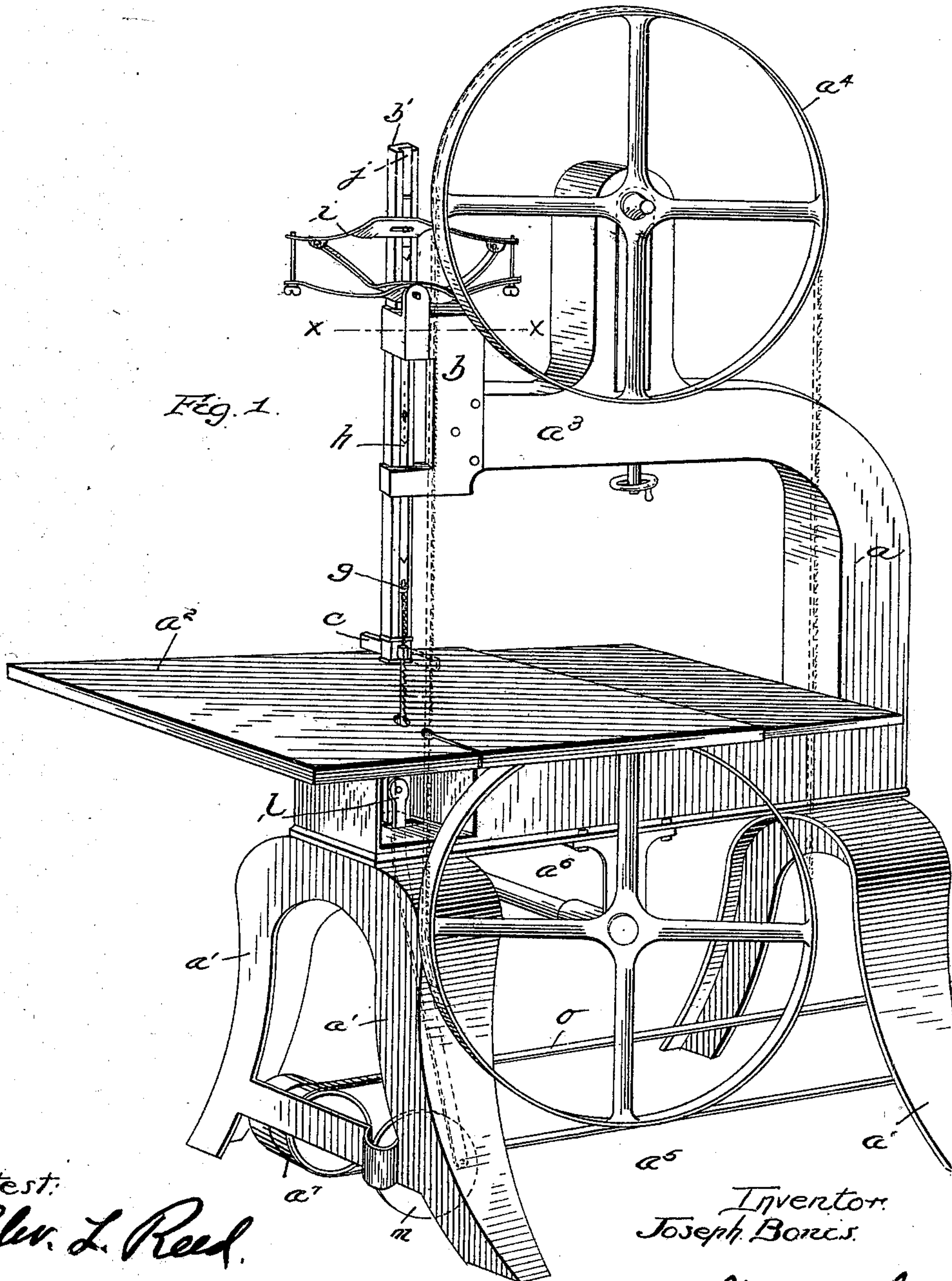
J. BONIS.

SAW.

(Application filed Feb. 12, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

Fig. 4^a



Fig. 4

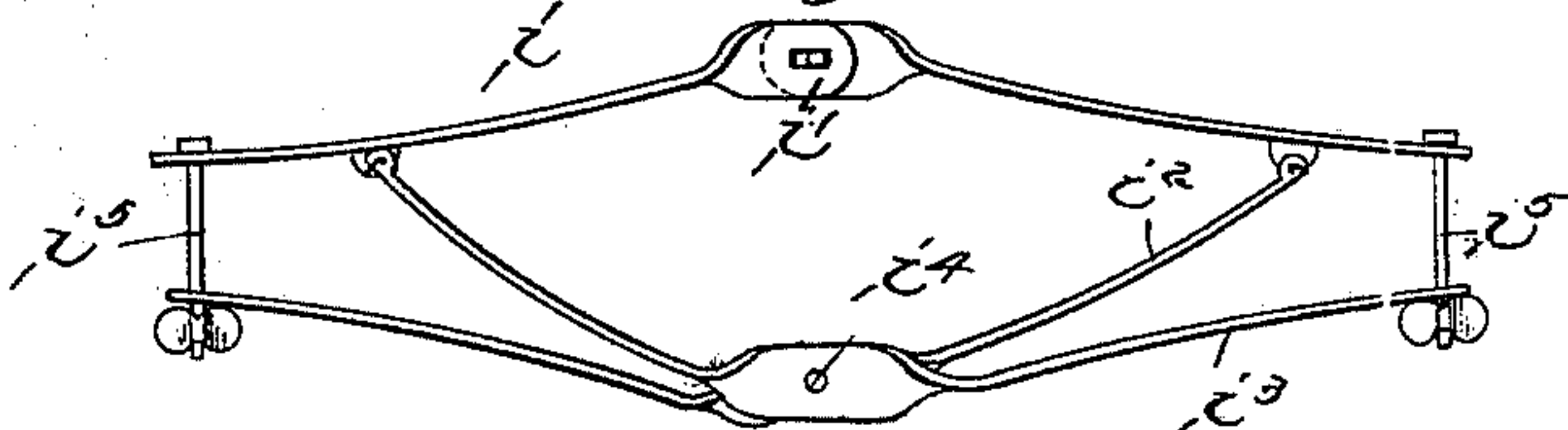


Fig. 4^b

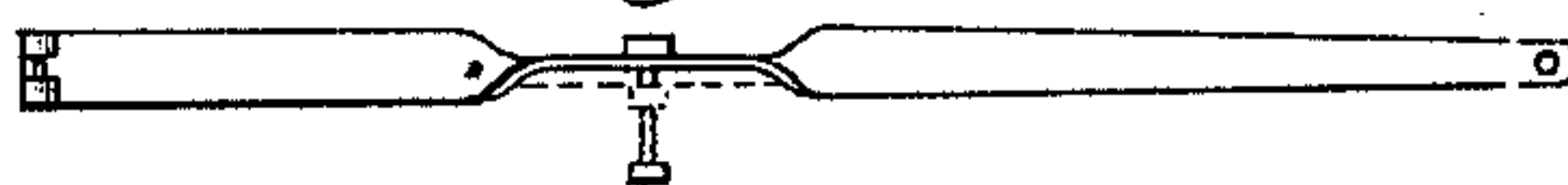


Fig. 3

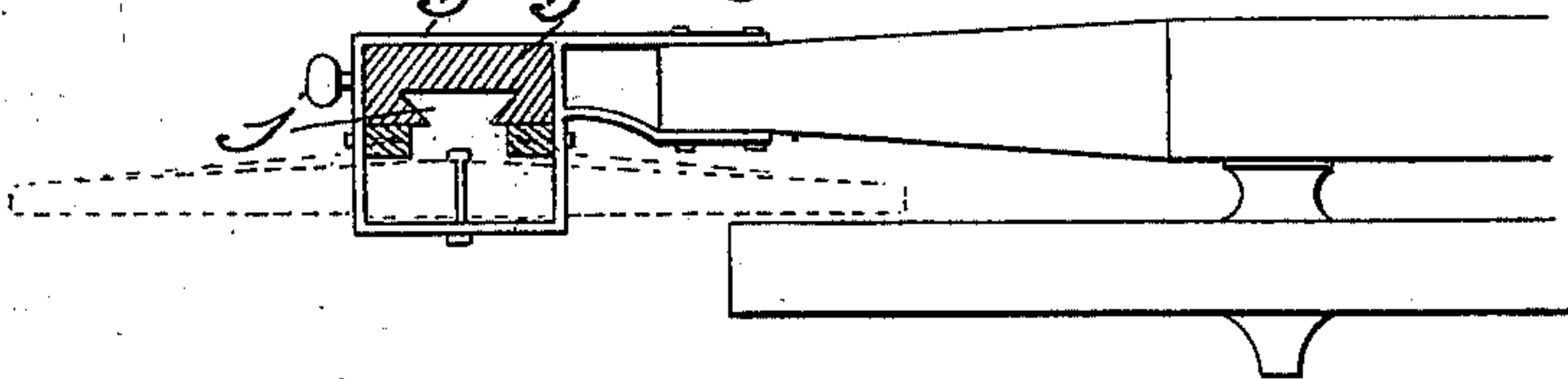
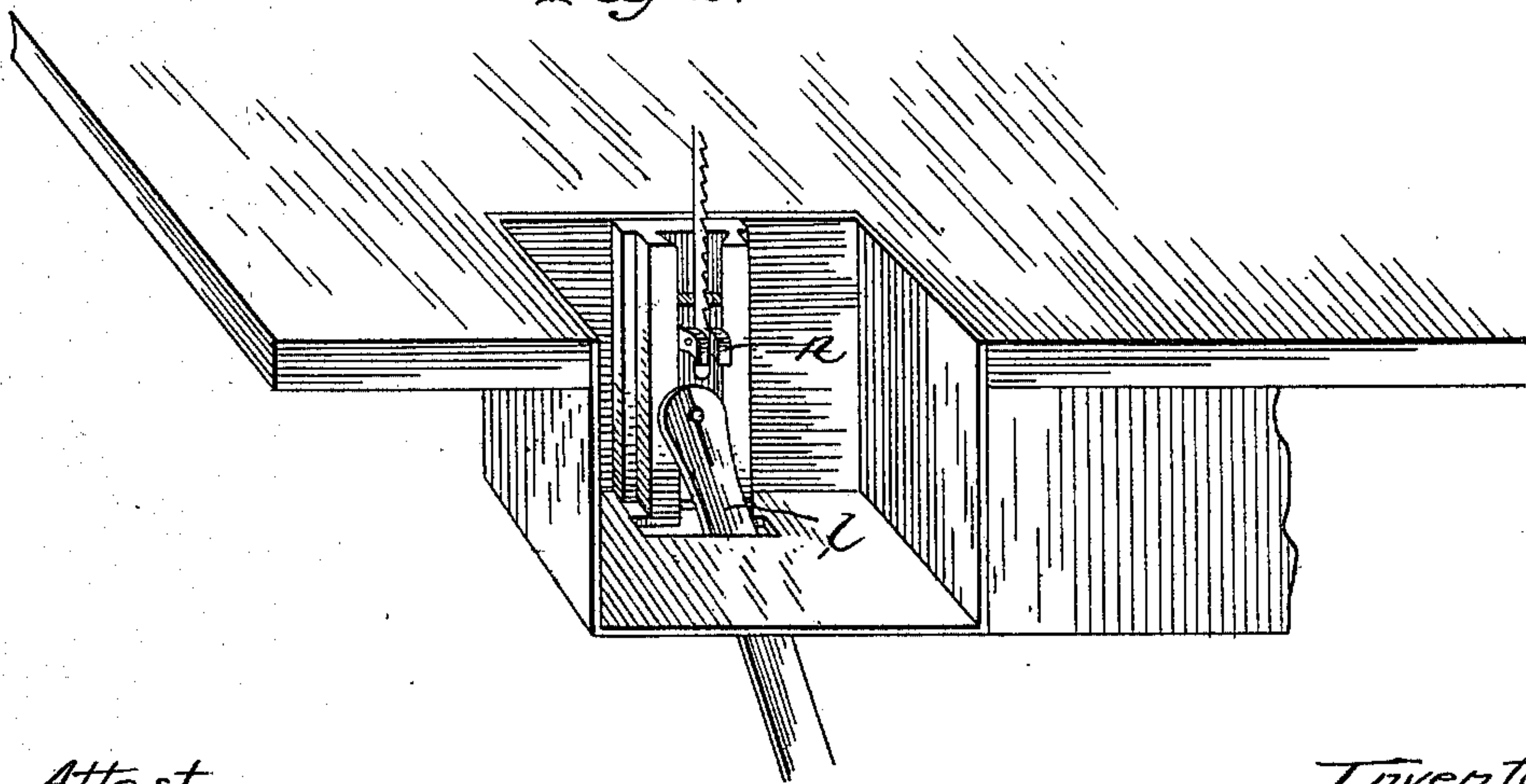


Fig. 2



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UNITED STATES PATENT OFFICE.

JOSEPH BONIS, OF NEW YORK, N. Y.

SAW.

SPECIFICATION forming part of Letters Patent No. 672,587, dated April 23, 1901.

Application filed February 12, 1901. Serial No. 47,041. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BONIS, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Saws, of which the following is a full, clear, and exact specification.

My invention relates to a combined band and jig saw; and the object of the invention is to combine both forms of saw in a single machine.

The invention consists, broadly stated, in a suitable frame carrying pulleys for a band-saw and reciprocating part or parts for operating a jig-saw and means whereby either the band-saw or the jig-saw is rendered inoperative.

The invention also includes the details of construction hereinafter pointed out, and particularly set forth in the claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the combined machine. Fig. 2 is a sectional detail; Fig. 3, a section on line $x x$ of Fig. 1, and Figs. 4, 4^a, and 4^b are detail views of the spring.

In the drawings, a represents a suitable frame mounted upon legs a' , having a table a^2 and a horizontal arm a^3 above the table. An upper band-pulley a^4 is journaled in vertically-adjustable bearings in an extension carried by the arm a^3 , while a lower pulley a^5 is journaled in brackets depending from the table and operated from a shaft a^6 , which in turn is driven by a belt (not shown) from a pulley a^7 , driven from any suitable source of power, as by a belt o . The forward end of the arm a^3 carries an elongated head or bracket b , having a bifurcated portion, and in this head is arranged a saw-guide b' , which is provided with a dovetail groove j in its face. This guide-bar is located on the back of the band-saw and carries at its lower end a guide c , which extends forward to embrace and guide the band-saw. An adjustable strap h is located in the dovetail groove, which has its upper end connected to a spring arrangement, while the lower end of the strap is provided with a suitable attaching device g for connection to the jig-saw. The jig-saw passes downward through the table and is

connected to a slide-block n , operated by a pitman l , connected to a crank-disk m .

For the spring arrangement referred to I prefer to provide a two-part upper leaf-spring i , having vertical twisted portions i' , overlapping at the center and connected by a pin with the upper end of the strap. Two other leaf-springs i^2 and i^3 are pivotally connected with the spring i , near the outer ends thereof, and extend downward and cross each other at i^4 , where they are pivoted to a projection from the bracket b , the metal being given a vertical twist at the crossing-point, as shown. The free ends of the springs i^2 and i^3 are connected by bolts i^5 with the extreme outer ends of the springs i , by means of which more or less tension may be placed on the strap.

Having thus described my invention, what I claim is—

1. A combined band and jig saw comprising a suitable frame, band-saw pulleys carried thereby with means for operating them, a guide-bar for the upper end of the jig-saw supported from said frame, a guide for the band-saw carried by said guide-bar and means for operating the jig-saw, substantially as described.

2. In combination a frame having a table and overhanging arm, a pair of band-saw pulleys carried by said frame, a guide-bar carried by said overhanging arm, a jig-saw having its upper end guided in said guide-bar, and a spring connected with said jig-saw and exerting upward tension thereon, operating means connected with the lower end of said saw and a guide extending from said guide-bar in proximity to the band-saw, substantially as described.

3. In combination, a frame having a work-table and an overhanging arm, band-saw pulleys carried by said frame, a vertical bar supported by said arm having a dovetail groove therein, a strap in said groove having means at its lower end for connection to a jig-saw, a spring exerting upward tension upon said strap, a pitman beneath the table having means for connecting it with the lower end of the jig-saw, with means for operating said pitman and a guide extending from the guide-bar into proximity to the band-saw, substantially as described.

4. In combination, a frame, a guide-bar, a
strap guided thereby, a pair of leaf-springs
pivotally connected at their inner ends to the
strap, a second pair of oppositely-located
5 leaf-springs having their upper opposing ends
pivoted to said first-named springs and cross-
ing each other and pivotally supported at said
crossing-point from the frame, adjusting-
bolts connecting the free outer ends of said
10 last-named springs with the outer ends of

said first-named springs, a jig-saw connected
to said strap and operating means connected
to the opposite end of said saw, substantially
as described.

In witness whereof I have hereunto set my 15
hand in presence of two witnesses.

JOSEPH BONIS.

Witnesses:

H. A. WELTNER,
JOSEPH BARTON.