

W. I. WINNE.

JIG SAW.

No. 178,039.

Patented May 30, 1876.

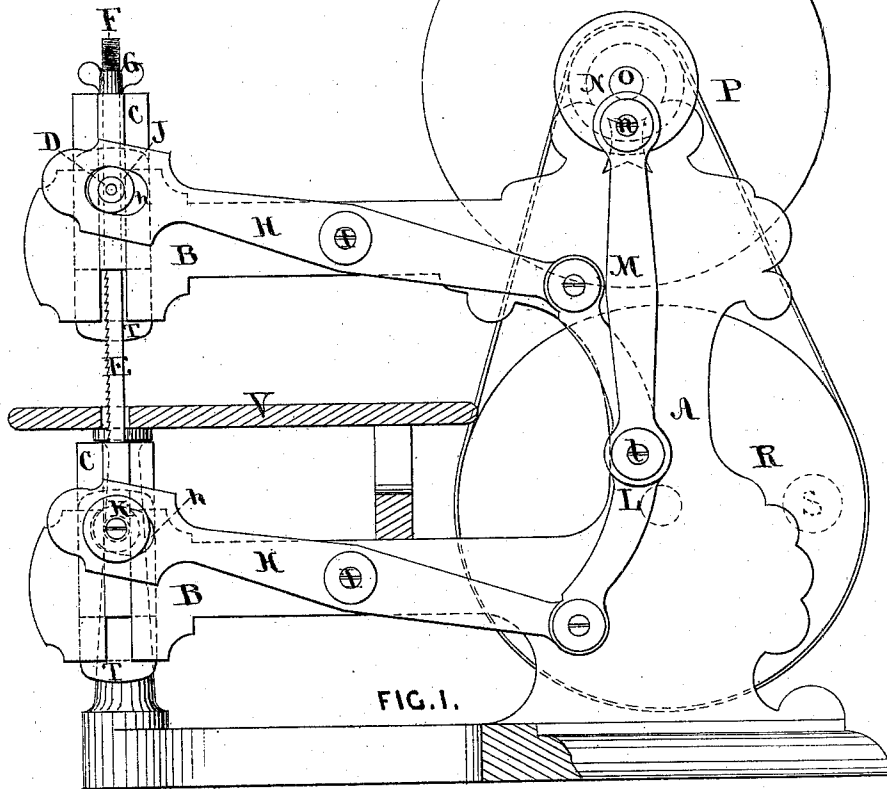


FIG. 1.

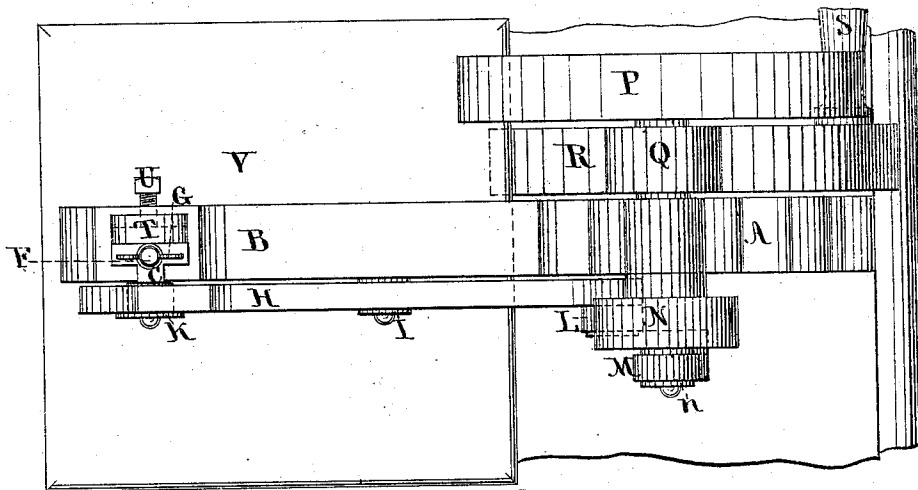


FIG. 2.

Witnesses.

William H. Lorr.
A. H. Lorr

Inventor:

William I. Winne.

UNITED STATES PATENT OFFICE.

WILLIAM I. WINNE, OF ALBANY, NEW YORK.

IMPROVEMENT IN JIG-SAWS.

Specification forming part of Letters Patent No. **178,039**, dated May 30, 1876; application filed April 15, 1876.

To all whom it may concern:

Be it known that I, WILLIAM I. WINNE, of the city and county of Albany, and State of New York, have invented a new and useful Improvement on Jig-Saws, of which the following is a full and exact description, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a side elevation, and Fig. 2 a plan view, of my invention.

My invention relates to the class of jig-saws that are complete within themselves, and not having detached parts, such as guides, springs, &c., secured to the ceiling or other parts of the room wherein they are used; and it consists of the arrangement of parts constructed and operating in the manner herein shown and described.

As shown in the drawing, A is the frame of the machine, having two projecting arms, B, provided at their outer extremities with openings for receiving the slides for guiding the saw. These openings should be in exact line with each other vertically, and may be made of any suitable form, each having a slotted opening cut through at the side of the arms. Preferably I make the openings of the flat quadrangular form shown in Fig. 2. The slides C are made to move freely in the openings of the arms B. They are each provided with a wrist-pin, D, which projects through the slotted openings in the sides of the arms. The lower end of the saw E is attached by means of a pin, or by any of the common and well-known means for forming these connections, to the upper end of the lower slide. The upper end of the saw is connected to the lower end of the upper slide by means of the tension-screw F, which passes vertically through the slide, and is provided with a thumb-nut, G, for applying the requisite strain to the saw. The working-beams H vibrate upon the studs I, fixed to the arms B of the frame. At their outer ends they have the slotted openings *h* for receiving the friction rollers or sleeves J, which are placed upon the wrist-pins D for the purpose of converting the frictional contact of these parts from a sliding to a rolling motion.

The rollers are retained in position by means of the collars K secured to the wrist-pins D. L is a link for connecting the rear ends of the working-beams H together. It is pivoted to the beams by means of wrist-pins or studs to allow for the vibratory motion of the beams. M, a pitman for forming a connection between the wrist-pin *l* of the link L, and the wrist-pin *n* of the crank-wheel N secured to the shaft O. This shaft has its bearing upon the frame A, and is provided with the balance-wheel P, and pulley Q, for receiving the belt from the driving-pulley R, upon which a handle, S, is fixed for imparting motion to the machine.

When desirable, gear-wheels may be substituted for the pulleys Q and R for obtaining the accelerated speed required for driving the saw.

To compensate for any wear of the slides the gibs T are placed behind them in the openings of the arms B, and are adjusted in place by means of the set-screws U.

A table, V, is fixed to the frame A, upon which the material to be sawed is held.

As shown and described herein, this saw is designed for light work of the character commonly done for amusement in domestic circles, usually consisting of ornamental boxes, brackets, &c., for which purpose it may be driven by one hand of the operator, leaving the other hand free for guiding the work; but it may readily be adapted to use for heavier work, and driven by power where required.

It will readily be seen that the slides C, by being guided by the openings in the arms B, cause the saw to travel constantly in a true vertical line, the slotted openings *h* of working-beams compensating for the difference between the circular path of the ends of the working-beams and the straight line in which the slides move. By this, while I secure all the advantage obtained by the use of the working-beams for gaining greater space between the saw and the link L, I avoid the objectionable feature of the raking motion imparted to the saw when such working-beams are used without slides and guides.

I claim as my invention—
The combination, with the working-beams H, provided with slotted openings *h*, and link L, of the slides C, provided with wrist-pins D, and friction-rollers J, guided by the openings in the arms B of the frame A, saw E, and tension-screw F, when constructed and

arranged to operate as and for the purpose specified.

WILLIAM I. WINNE.

Witnesses:

WILLIAM H. LOW,
A. H. LOW.