Artemus H. Whitney's Jig Saw.

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PATENTED AUG 15 1871

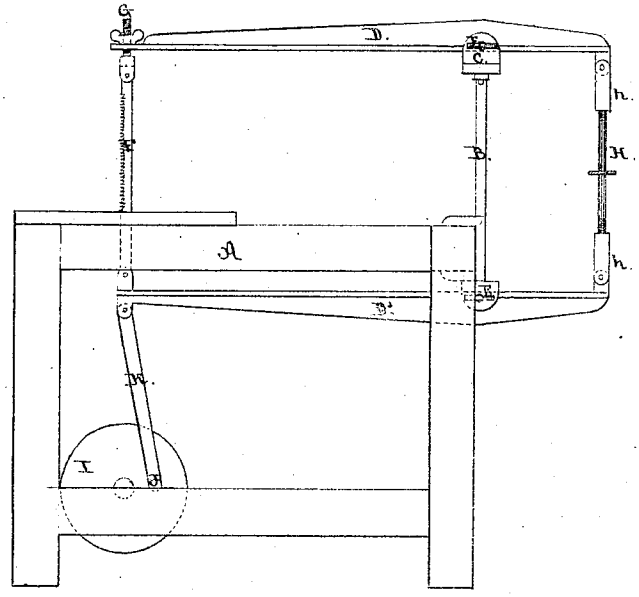

Fig. 1.

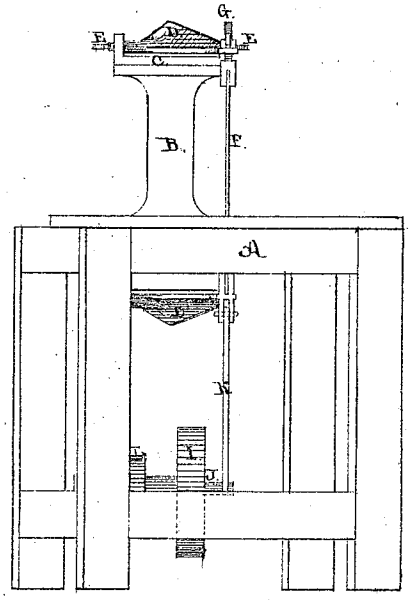

Fig. 2.

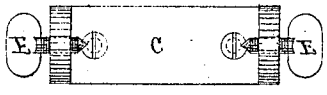

Fig. 4.

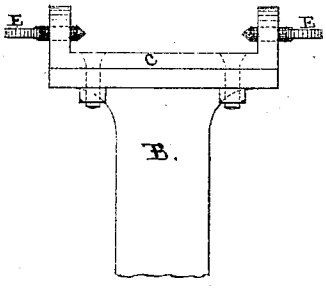

Fig. 5.

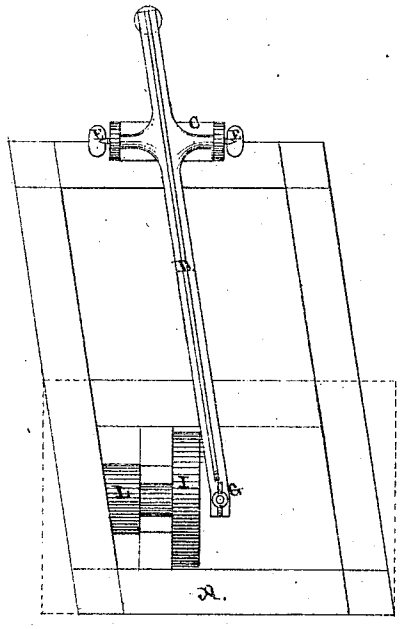

Fig. 3.

Fig. 6.

William H. Sons
L. Wright

Witnesses.

Artemus H. Whitney

UNITED STATES PATENT OFFICE.

ARTEMUS H. WHITNEY, OF ESSEX, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN L. RANDALL, OF ALBANY, NEW YORK.

IMPROVEMENT IN JIG-SAWS.

Specification forming part of Letters Patent No. 118,087, dated August 15, 1871.

To all whom it may concern:

Be it known that I, ARTEMUS H. WHITNEY, of Essex, in the county of Essex and State of New York, have invented certain Improvements in Upright or 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; Fig. 2, a front elevation; Fig. 3, a plan view with the table removed; Fig. 4, an enlarged plan view of the top of the stand and for holding the upper arm; Fig. 5, a front elevation of the same; and Fig. 6, an enlarged view of the adjustable tightening-connection between the two arms.

The nature of my invention relates to the hanging and operating an upright saw between two parallel arms; and consists in devices for adjusting the movement of the saw so as to give it greater range and efficiency.

A is the frame-work, at the back end of which is the standard B, having at its lower end two lugs or ears for receiving the lower arm for operating the saw. At its upper end an adjustable bearing, C, is secured, having similar ears for receiving the upper arm. D is the upper and D′ the lower arm, each having trunnions diagonally across them so as to throw the line of the cut of the saw to one side of the standard B, so as to give the saw greater range for its work. These trunnions should be arranged so as to divide the arms in such a manner that the long ends may be about three times the length of the shorter ones. E E are screws with conical points, which pass through the ears of the standard and enter into corresponding holes in the ends of the trunnions of the arms, forming bearings upon which the arms oscillate. F is the saw, the lower end of which is secured to the lower arm D′ by a pin. At its upper end it is fastened to the upper arm D by the tightening-screw G′. H is the adjustable tightening-connection, consisting of a right-and-left-handed screw working into the jaws *h h*, which are fastened to the short ends of the arms D D′. I is the driving-crank wheel, into which the wrist-pin J is fastened, carrying the pitman K, which connects with the lower arm D′, and to which it imparts its motion. L is the pulley on the shaft of the wheel I for driving the saw. When desirable to do so the upper end of the saw may be set forward so as to throw it a little beyond a vertical line. This I effect by moving the screw G in the slot in the end of the arm D. By means of the adjustable bearing C the ends of the arms D D′ can readily be brought into exact line with each other. The saw, as shown in the drawing, is secured to the long ends of the two parallel horizontal arms D D′, each of which is provided with three working-points, to wit, at the short end for the adjustable connection H, at the trunnions for oscillating the arm, and at the long end where the saw is secured. All of these should be arranged in a true horizontal plane and in exact parallel lines with each other. By this means an equal strain is kept upon the saw at every point of the stroke, and prevents its "buckling up." This saw, being complete within itself, can be set up without being secured to the building wherein it is used. This, together with its great effectiveness and low price, makes it a most desirable adjunct to the shops of small manufacturers.

I am aware that saws have heretofore been constructed having two pairs of arms above and below, with their trunnions arranged diagonally across them and working upon two standards. This arrangement, while it involves a greater cost of construction than mine, does not admit of so great a range of work, as it will prevent the sawing of long curves by reason of the material striking in its course one of the standards. Therefore I do not claim, broadly, such construction; but

What I claim as my invention is—

1. The arms D D′, having their trunnions arranged diagonally across them, as herein described, and for the purposes herein set forth.

2. The adjustable bearing C, when arranged in relation to the standard B and arms D D′, as and for the purpose herein set forth.

3. The combination of the standard B, adjustable bearing C, arms D D′, screws E E, saw F, tightening-screw G, adjustable tightening-connection H, crank-wheel I, wrist-pin J, and pitman K, when constructed and arranged as herein described and for the purposes specified.

ARTEMUS H. WHITNEY.

Witnesses:

WILLIAM H. LOW,

S. J. HAIGHT.