

Patented Mar. 28. 1871.



William Gardner
per Emma Combs

UNITED STATES PATENT OFFICE

WILLIAM GARDNER, OF GLEN GARDNER STATION, (CLARKSVILLE P. O.,)
NEW JERSEY.

IMPROVEMENT IN SCROLL-SAWS.

Specification forming part of Letters Patent No. **113,042**, dated March 28, 1871.

To all whom it may concern:

Be it known that I, WILLIAM GARDNER, of Glen Gardner Station, (Clarksville P. O.,) in the county of Hunterdon and State of New Jersey, have invented new and useful Improvements in Gig-Saws; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification.

This invention consists in novel means of hanging, straining, and operating a gig-saw, whereby a positive motion is provided for, and it is enabled to be driven more rapidly than when its motion in one direction is produced by a spring.

In the accompanying drawing, Figure 1 is a front elevation of a gig-saw constructed according to my invention, and Fig. 2 is a transverse section of the same.

Similar letters of reference indicate corresponding parts in both figures.

A is the saw, which works through a table, B, and is buckled at its ends to blocks C D, that slide in guides *c c* and *d d* on a stationary frame, F.

W is a beam, whose fulcrum or center *p* is provided on a vertically-arranged post, I, which is fitted to slide in bearings *i i* on the upper portion of the said frame F, but is stationary during the operation of the saw.

The beam is connected at one end with the block C by a rod, J, which is attached to the said block in such manner as to turn freely therein. This rod has a screw-thread formed on its upper part, which operates within a rocking nut, *n*, in the said end of the beam, the other end of which is connected, by a wire-rope or rod, H, and strap P', with a crank, G, on one end of the horizontal driving-shaft S, which is arranged below the saw, parallel with the plane of motion of the beam W.

The post I has pivoted to it the forward end of a lever, L, the fulcrum of which is on the frame F, and by which the said post is operated to change the fulcrum of the walking-beam, its handle or outer end being fitted into and held by a notch in a post, *f*, provided therefor on the frame.

To the lower block, D, to which the saw is buckled, there is attached a strap, P, which connects with a crank, M, which is arranged on the opposite end of the driving-shaft S in exactly the reverse position to that in which the other crank, G, is arranged, so that when one is up the other is down, and vice versa.

The driving-shaft S is supported in suitable bearings *b b*, between which the said shaft is provided with a pulley, T, through which power is transmitted to the shaft.

The saw is strained by adjusting the screw-rod J within the rocking nut *n* in the walking-beam, and by raising the fulcrum *p* of the beam by means of the lever L. The saw is then operated with a positive motion by the cranks M and G, the one, M, producing the downward or cutting stroke, and the other, G, by means of the walking-beam W, producing the upward or return stroke, thereby enabling it to be worked at a much greater speed than when a spring is used to raise it.

When not in operation the saw may instantly be freed of strain by removing the handle of the lever L from the notch in the post *f*, and lowering the fulcrum of the walking-beam W.

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

The flexible connections P and P', arranged to operate the saw through medium of the walking-beam W, as shown and described.

WM. GARDNER.

Witnesses:

FRED. HAYNES,
U. J. TUSKA.