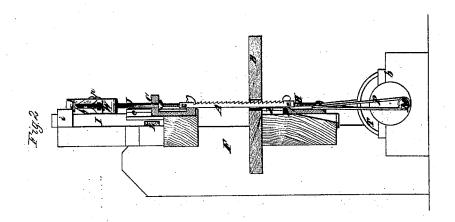
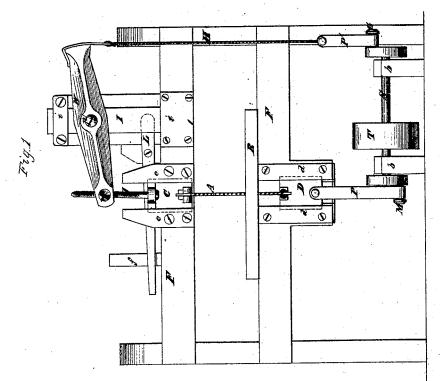
N. Gardiner, Scroll Saw. No. 113,042.

Patented Mar. 28. 1871.





Witnesses Fred: Haynes UJAusko

Milliam Gardner per Brown Combol Attorney

## 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

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 corre-

sponding 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 walkingbeam, 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 screwrod J within the rocking nut n in the walkingbeam, 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.