Ennis & Bosworth,

Drag Saw,

No. 47,404, Patented Apr. 25, 1865.

Fig 1.

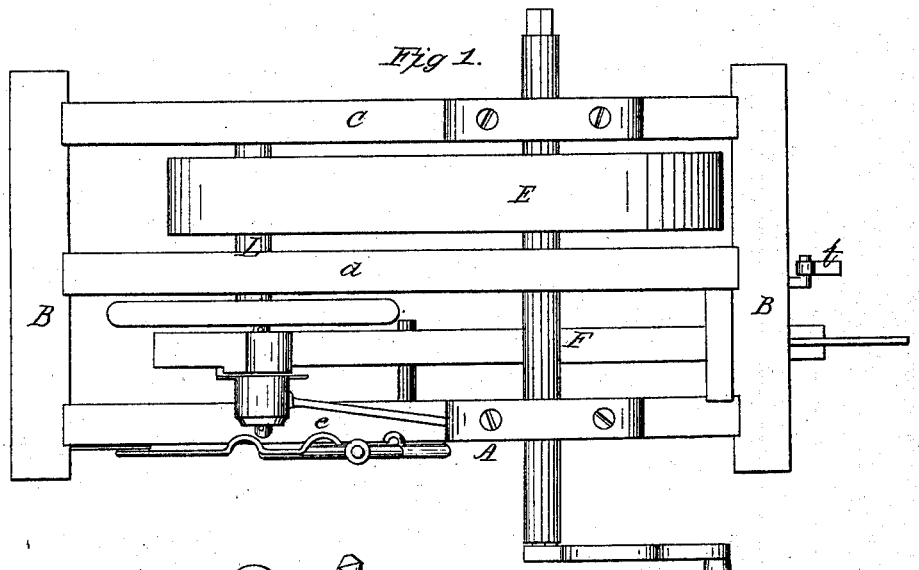
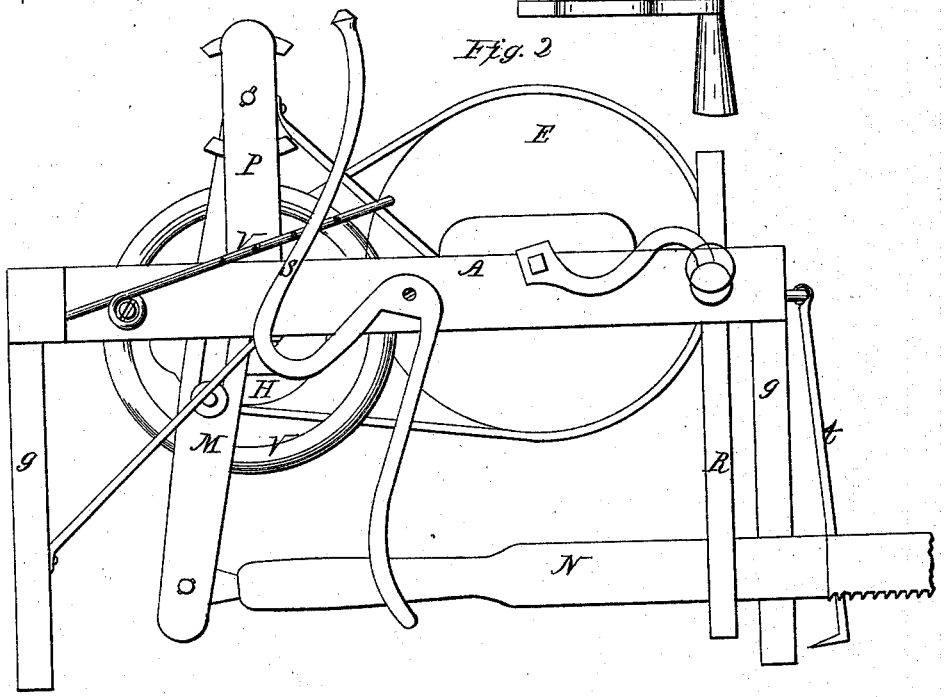


Fig. 2



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM ENNIS AND HENRY J. BOSWORTH, OF HUDSON, MICHIGAN.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. **47,404**, dated April 25, 1865.

To all whom it may concern:

Be it known that we, WILLIAM ENNIS and H. J. BOSWORTH, of Hudson, Michigan, have invented certain new and useful Improvements in Crosscut Sawing Machines; and we hereby declare that the following is a true and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of our invention consists in the use of certain mechanical devices to facilitate the cross-sawing of timber.

Figure 1 in the annexed drawings represents a plan view of our machine. Fig. 2 exhibits a longitudinal vertical section of the same.

The letter A represents the frame of our machine, which consists of the end pieces, B, bound together by the ties *c*, *d*, and *e*, and supported by the legs *g*, two of the legs *g* being at the back end of the frame and one at the front end.

E designates the driving-wheel, with the shaft F passing through its center. The shaft F has its two ends extending sufficiently far beyond the sides of frame A to admit of a crank being attached to each. In a line with wheel E, and between the ties *d* and *c*, is placed the pulley H on the shaft L. Pulley H is operated by a band passing over it from wheel E, and the shaft L, which penetrates it, extends sufficiently far through tie *d* to admit of the balance-wheel K being adjusted to it. The balance-wheel K has a wrist extending from one of its arms. On this wrist the arm M works, M having an oblong mortise through it, in which the wrist plays when the arm is in motion. The wrist is supplied with a friction-roller.

R represents the saw-guide, through which a long mortise is cut, in which the saw can be raised or lowered.

N designates the pitman, the inner end of which plays in a mortise through the lower end of arm M. To the outer end of pitman N the saw is fastened. The arm M plays with a reciprocating motion on an iron bolt, which passes through M near its top and also through upright P.

t represents the dog, which holds the timber while the saw is in motion.

S represents a crooked lever, that works on a fulcrum in the side of tie *e*. The lower end of lever S is bent so as to extend beneath the pitman N, and is intended to regulate the position of the saw when the machine is in operation. The upper end of S rests against spring V, which is confined at its lower end to the side of tie *e* by means of a screw. The spring V has two depressions in it. Into the lower depression the upper arm of lever S is forced when it is desired to raise the saw out of the timber. As soon as the saw has cut through the log the lever is forced into upper depression, and thus disengaged from the timber.

In operating our machine the operator will take his stand by lever S and control the position of pitman N by means of the lever, so as to adapt the cutting of the saw to the nature of the timber. This arrangement is particularly useful in knotty timber, as it prevents too great a strain being thrown on the saw.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

The lever S, in combination with the spring V, when constructed and operated substantially as and for the purpose herein set forth.

WM. ENNIS.
H. J. BOSWORTH.

Witnesses:
L. R. PEIRSON,
EPH. D. KIDDER.