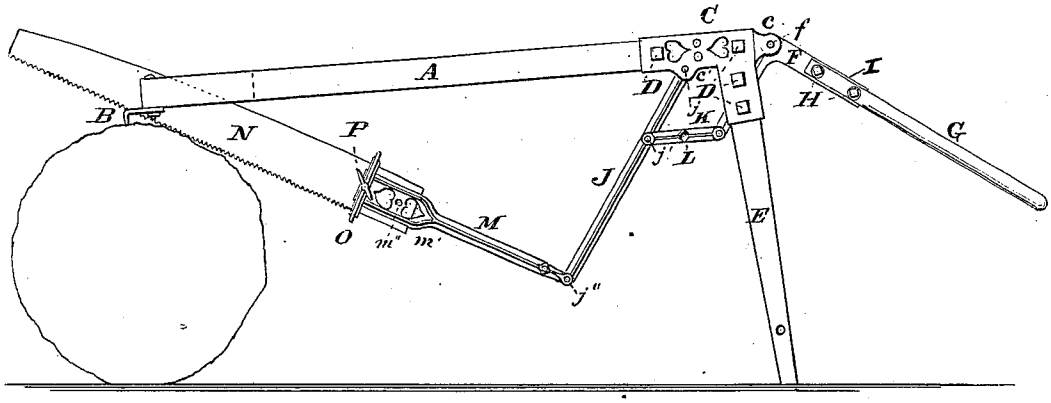
(No Model.)

N. M. LAWRENCE.

Hand Sawing Machine.

No. 241,031. Patented May 3, 1881.

Fig. 1.



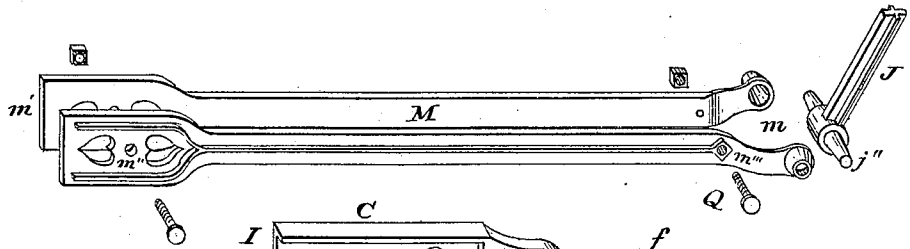
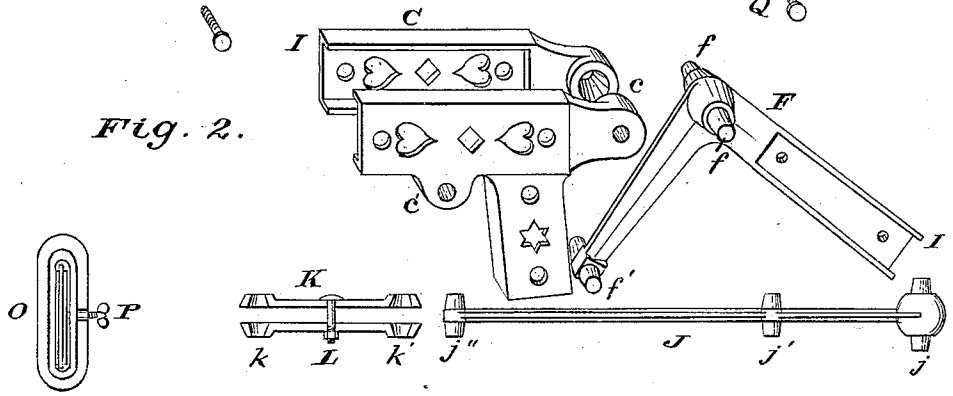


Fig. 2.



Attest

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UNITED STATES PATENT OFFICE.

NATHAN M. LAWRENCE, OF CLARKSVILLE, OHIO.

HAND SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 241,031, dated May 3, 1881.

Application filed October 1, 1880. (No model.)

To all whom it may concern:

Be it known that I, NATHAN M. LAWRENCE, of Clarksville, Clinton county, Ohio, have invented new and useful Improvements in Hand Sawing-Machines, of which the following is a specification.

My invention relates to improvements in those hand sawing-machines in which the saw-blade is supported and guided in a suitable frame, one of whose ends rests upon the ground, while the other end rests upon and dogs the log; and my improvements consist in a construction of the metallic portions, as hereinafter explained, which is designed to combine economy of material and manufacture with efficiency of operation.

In the accompanying drawings, Figure 1 is a side elevation of a machine embodying my improvements. Fig. 2 represents, in detail and to a larger scale, the metal portions of my machine.

A is a wooden beam having the customary front slot to receive the saw-blade and to guide it at the initiation of its work.

Attached to the under side of beam A, near its front end, is a spur or dog, B.

C are two similar L-formed cheeks, perforated for bolts D, which fasten them to the beam and to legs E, of which one leg only is shown.

Projecting from the cheeks C are conically-perforated bearings *c*, for conical gudgeons *f* on the L-formed casting F, which constitutes the heel of my bent lever F G, whose wooden portion or handle G is fastened to the said heel F by bolts H. Flanges I, that project from the castings C and F, coact with said bolts in securing the wooden members thereto.

J is my saw-hanger, of cast metal, and having conical gudgeons *j j' j''*, of which gudgeons *j* occupy correspondingly conical bearings *c'* of cheek-plates C. Gudgeons *j'* on same hanger occupy conical eyes or sockets *k* in the plates K, whose similar sockets *k'* at their other extremities receive conical gudgeons *f'* on the extremity of the L-formed heel F. A bolt, L, serves to secure to said gudgeons the plates which constitute, when thus secured, my duplex connecting-link between the heel F and my saw-hanger J. The conical gudgeons *j''* at the lower extremity of the hanger J occupy sockets *m* at the forward extremities of bars M, which constitute my duplex saw-helve. The rear extremities, *m'*, of said bars are widened vertically, to constitute jaws which receive and hold the heel of the saw-blade N.

O is an oblong ring, which fitting over and embracing the rear extremities, *m'*, of the two bars which constitute my saw-helve M, and which being provided with a thumb-screw, P, enable the saw-blade to be firmly clamped within said rear extremities. By these means an unperforated saw-blade is capable of being securely clamped in its helve; but for additional security orifices *m''* are provided for the application of a customary clamping-bolt when so desired. Other orifices, *m'''*, receive a bolt, Q, which serves to fasten the front extremities of the bars M securely upon the conical gudgeons *j''*.

The duplex construction of the saw-helve M, with its described conical sockets *m* and its expanded jaws *m'*, enables it to be easily and cheaply cast, and, by simply tightening the bolts P Q, to be properly closed upon the saw-blade at its rear and upon the hanger-gudgeons at its front end. In like manner the construction of the cheeks C, with their conical sockets *c*, casting F, flanges I on said cheeks C and casting F, and bolts D and H, relatively to the beam A, legs E, and handle G, enables the secure attachment of the said legs and handle to the beam by the same action of said bolts, which secures the proper snugness of fit and bearing between the gudgeons and their sockets. Should the gudgeons by long use become slack in their sockets, the slack can be taken up by a slight forward turn of the attaching-screws.

I claim as new and of my invention—

1. In a hand sawing-machine, the saw-helve consisting of the two similar bars M, whose rear extremities are broadened to form clamping-jaws for the saw-blade and occupy an oblong ring or band, O, provided with thumb-screw P, and whose front extremities have con-

ical sockets *m*, for the corresponding gudgeons *j''* of the driving-arm or hanger J, substantially as set forth.

2. In a hand sawing-machine, the combination, with beam A, legs E, and the L-formed gudgeon-plate F of handle, and with the conical gudgeons *j j' j''* of the saw-driving arm J, of the L-formed connecting-cheeks C, having the conical sockets *c c'*, and the bolts D, substantially as set forth.

In testimony of which invention I hereunto set my hand.

N. M. LAWRENCE.

Attest:

GEO. H. KNIGHT,

J. L. LOGAN.