J. M. Toy,
Drag Saw.

No. 6,398. Patented Apr. 24, 1849.

Fig. 2.

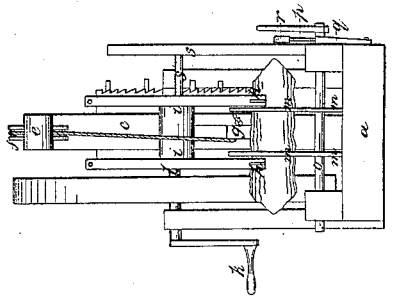


Fig. 1.

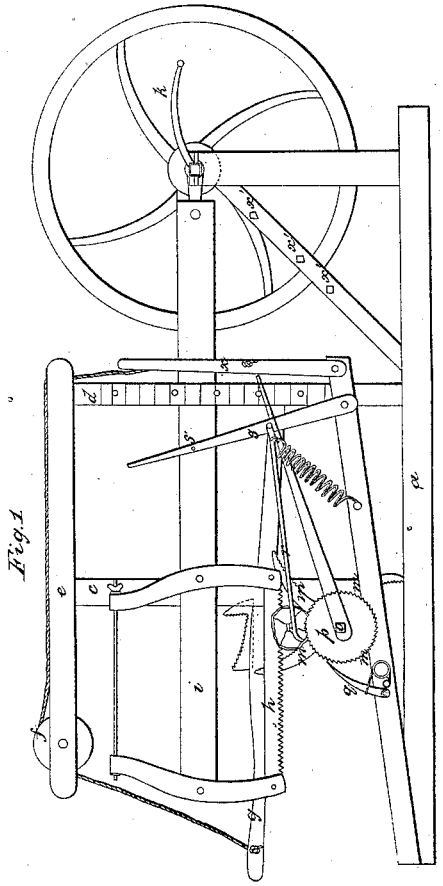
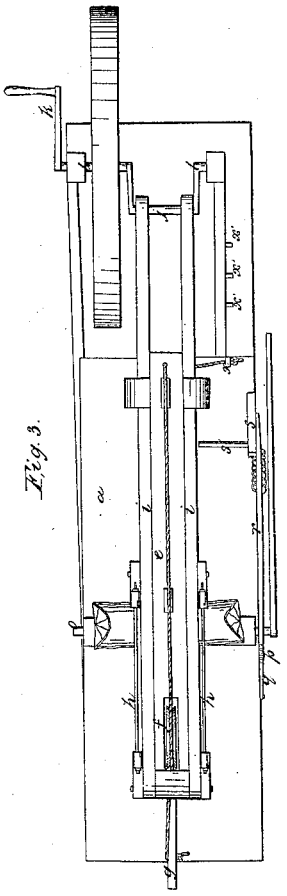


Fig. 3.



UNITED STATES PATENT OFFICE.

J. M. TOY, OF GREENFIELD, OHIO, ASSIGNOR TO DAVID BONNER.

MACHINERY FOR SAWING WOOD.

Specification of Letters Patent No. 6,398, dated April 24, 1849.

To all whom it may concern:

Be it known that I, JOSEPH M. TOY, of Greenfield, in the county of Highland and State of Ohio, have invented certain new and useful Improvements in Machinery for Sawing Wood, of which the following is a full and exact description, reference being had to the annexed drawings of the same, making part of this specification, in which—

Figure 1 is a side elevation, Fig. 2 is an elevation of the front end, and Fig. 3 is a top view.

The same letters indicate the same parts in all the figures.

The nature of my invention and improvements in the portable machine for sawing fire wood, consists, in constructing a series of revolving toothed arms, and arranging them so that they will take the logs up from the platform, elevate them to a suitable height, and in combination with a press beam, ratchet wheel, and pawls hold them firmly until sawed in two or more pieces. In case a stationary saw should be used the revolving arms, and press beam would perform the treble office of elevating the logs, clamping them firmly while being sawed, and feeding the saw by raising the log gradually against it.

In the accompanying drawings, *a* is the platform upon which the apparatus is mounted, the uprights *c* and *d* are of equal width in order that the saw frame which slides upon them may be guided with certainty and regularity while carrying the saws down to cut through a log, or raising them up again after the log is cut off.

e is a beam which connects the tops of the uprights and projects forward over the saws to support the pulley *f*, over which a cord passes which raises and suspends the saws and press beam, while one piece of wood is being taken out of the clamp or rest, after having been sawed and another put in its place, this operation is very conveniently performed by pressing down the lever *x* to which the cord is attached, and placing it under one of the pins or notches *x'*, when the saws and press beam are required to be lowered again, it is simply necessary to discharge the lever *x* from the pin *x'* when they immediately descend by their own gravity. The press beam *g* is hinged to the post *d* and passes through a slot in the post *c*, being free to raise and fall. The saws *h h* are strained in the usual manner, and secured to the alternating frame *i* by any convenient and substantial means, the frame *i* and the attached saws are put in motion by the crank *j* to which they are connected. This crank is formed on the axle *l*, which is put in motion by manual, or other power, and to which a fly wheel may be adapted.

The revolving toothed arms *m m*, are of the form represented, and radiate at equal distances from the periphery of the hubs, which are firmly secured to the axis *o* in such a position, that they will turn freely between the saws, these arms are provided with teeth on their concave edges that they may grasp and hold the wood more firmly, *p* is a ratchet wheel firmly secured to the end of the axis *o*, a pawl *q* takes into its front to hold the wood at any point to which it may be elevated by the action of the hooked reaching arm *r* which is operated by the lever *s* the pin *s'* Fig. 2 projecting on the inner side of this lever, is for the purpose of being acted upon by the frame of the saw, which pushes it back at each stroke, so as to turn the wheel one or more notches, which gradually turns the arms and elevates the wood while the operation of sawing is progressing. A lever *t* in the position represented by the red lines in Fig. 1 might be attached to the axle to raise the logs and hold them in order to do which it would have to be raised first to the vertical position to depress the arms to receive the log, and lowered to a horizontal position to raise and hold it while being sawed.

On the upper side of the press beam *g* a piece of iron having a large notch in it with serrated edges, is secured—this notch is used to aid in holding the wood, when the press beam is turned so as to bring this piece on its under side, and immediately over the revolving arms *m*.

The frame may be formed and arranged as herein described or in any other way deemed by the constructor to be more suitable, and convenient, and the propelling power may be applied directly to the axis of the balance wheel, or it may be applied through cog wheels, pulleys, and bands, for the purpose of increasing the speed of the moving parts.

The operation is very simple—the log is rolled or carried upon the platform and placed over the openings through which the arms *m* pass up, and then, is raised by means

of the reaching arm r operated by putting the winch k and saw in motion, or by laying hold of the lever s, and operating it directly by the hand. After having raised the log the lever x is detached from the pins x' which allows the saws and press beam to rest upon the wood to be cut, the saws are now put in motion by turning the winch k and rapidly divide the log, as many times as there are saws attached to the frame i, then the saws and press beam being raised out of the way, the pieces are removed, another log is hoisted up, and the operation repeated, as often as may be necessary.

Having thus described the construction and operation of my improved sawing machine, what I claim therein as new and desire to secure by Letters Patent, is

The combination of the turning arms (m), with the press beam (q) ratchet wheel (p), reaching arm (r) and lever (s) for the purpose of raising holding and feeding the wood to be sawed substantially as herein set forth.

In testimony whereof I have hereunto signed my name.

JOSEPH M. TOY.

Witnesses:
JAMES P. LEAKE,
ROBERT S. LEAKE.