

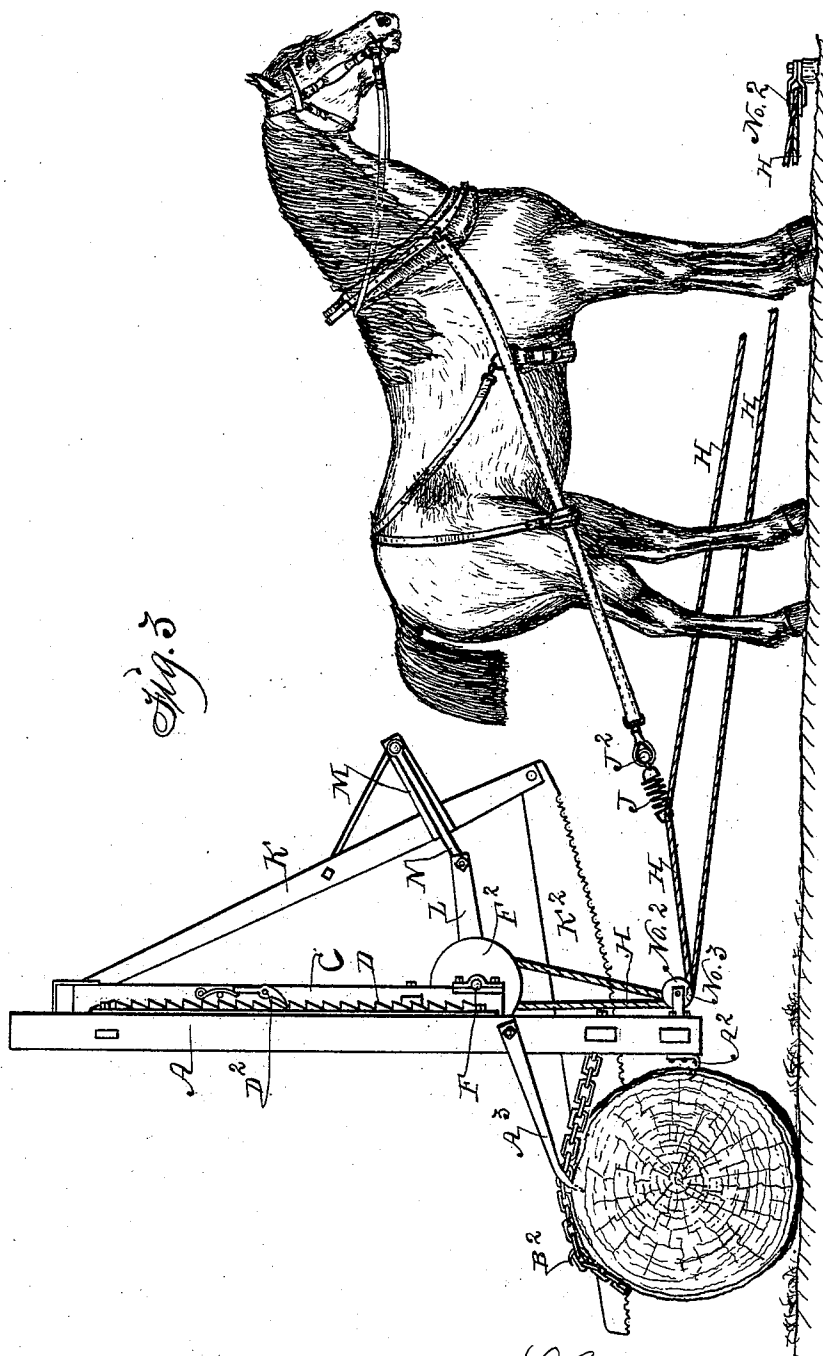
(No Model.)

2 Sheets—Sheet 2.

A. L. GRINNELL.
MACHINE FOR SAWING LOGS.

No. 530,942.

Patented Dec. 18, 1894.



Witnesses:
R. H. Orwig
G. H. Wilson.

Inventor: Amos L. Grinnell,
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UNITED STATES PATENT OFFICE.

AMOS L. GRINNELL, OF CAMPBELL, IOWA.

MACHINE FOR SAWING LOGS.

SPECIFICATION forming part of Letters Patent No. 530,942, dated December 18, 1894.

Application filed November 13, 1893. Serial No. 490,723. (No model.)

To all whom it may concern:

Be it known that I, AMOS L. GRINNELL, a citizen of the United States of America, residing at Campbell, in the county of Polk and State of Iowa, have invented a new and useful Machine for Sawing Logs, of which the following is a specification.

My object is to provide a simple and durable portable machine that is adapted to be fastened to the side of a tree, to extend at right angles to the tree, for the purpose of reciprocating a saw across the trunk of the tree to cut down the tree, and also adapted to be fastened to the side of a log lying on the ground in such a manner that the log will serve as a base to support the machine in a vertical position and extending at right angles to the longitudinal axis of the log to operate a saw across the log by means of a horse hitched to the machine in such a manner that the horse can walk back and forth in a path extending from the log and machine.

My invention consists in a machine adapted to be applied and operated as hereinafter set forth, pointed out in my claims and illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the machine in position as required for sawing a log in a horizontal position. Fig. 2 is a transverse sectional view showing the connection of the auxiliary frame with the main frame. Fig. 3 is a side view of the machine applied to a log and a horse hitched to the rope as required for practical use.

A represents an oblong portable frame that has pointed hooks, A², at the lower ends of its parallel side pieces, adapted to be pressed into the side of a log.

A³ are metal bars pivoted to the side pieces of the frame and pointed at their free curved ends to penetrate the top of a log.

B is a chain fixed to the central part of a cross piece in the frame to engage a hook B² driven into a log for the purpose of anchoring the frame A upon a log as shown in Fig. 3 without any extraneous support. When a tree falls it usually lodges against some object that prevents the trunk from turning and when it is cut off at any point the branches generally prevent any severed part from rolling; but when necessary to prevent a log

from rolling, while the machine is fixed thereto, it is obvious pieces of wood or stones may be readily placed in contact therewith to retain it stationary and the frames A and C in an upright position as required when operating the saw.

C is an auxiliary frame fitted to the sides of the frame A that have grooves in their inside faces, as shown in Fig. 2, in such a manner that the auxiliary frame will have a detachable and sliding connection with the main frame.

D is a rack fixed to the front face of one of the side pieces of the frame A and D² is a spring-actuated pawl pivoted to one of the side pieces of the sliding auxiliary frame C to engage the rack as required to support the sliding frame in a stationary position on the main frame A at any point desired.

F is the axle of a drum F² mounted in bearings fixed to the side pieces of the frame C.

H is a rope fixed to one end portion of the drum F² and extended over a directing pulley No. 1 at the bottom of the frame A and then passed upward and fixed to the end portion of the drum, as shown in Fig. 1, in such a manner that when the drum is rotated one end of the rope will be coiled thereon and the other end will uncoil therefrom.

J is a hitching device in the form of a coiled spring fixed to the rope H and a single-tree J² on the end of the spring to which the traces of a harness on a horse are attached in such a manner that a horse can walk back and forth in a track extending from the pulley No. 1 to the pulley No. 2, as required to pull the rope alternately in opposite directions and therewith rotate the drum F² and to prevent jerking motions of the rope and saw. It is obvious the pulley No. 2 can be located so that the track will be parallel with a log as well as to extend at right angles thereto as shown in Fig. 3.

K is a saw carrier pivoted to the top portion and side of the frame C and K² is a saw pivoted to the lower end of the carrier.

L is a crank on the end of the axle F of the drum F² and M is a bracket fixed to the saw carrier K and N is a link pivotally connected with the end of the crank L and the bracket M in such a manner that the rotary motion of the drum is thereby converted into a recti-

linear reciprocating motion as required to operate the saw to cut a kerf through a log. By thus fixing a bracket to the carrier K and connecting the crank L therewith by means
5 of the link N the length of the stroke of the saw pivoted to the free end of the carrier is increased.

To cut down a tree the frame is fixed to its trunk in such a manner that the machine will
10 project laterally therefrom and a support and guide is improvised for the saw until it has entered the wood deep enough to retain it in horizontal position.

I claim as my invention—

15 1. The combination of the saw carrier K, having the bracket M, with the sliding frame C carrying a drum having a crank at its end and connected with the said bracket by means of a link, for the purposes stated.

20 2. An improved portable machine for sawing logs &c., comprising an oblong frame having means attached thereto for detachably

fastening the frame to the side of a log and in a right angled position to the longitudinal axis of the log, an auxiliary frame having a
25 sliding connection with the main frame and means for retaining it stationary on the main frame, a drum mounted on the auxiliary sliding frame and a crank on the end of the
30 drum, a rope having its ends fixed to the ends of the drum and extended over directing pulleys in the manner set forth, means for moving the rope in reverse ways, a saw carrier pivoted to the auxiliary sliding frame and
35 connected with the crank in the end of the drum by means of a link and a saw connected with the free end of the saw carrier, all arranged and combined to operate in the manner set forth.

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Witnesses:

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