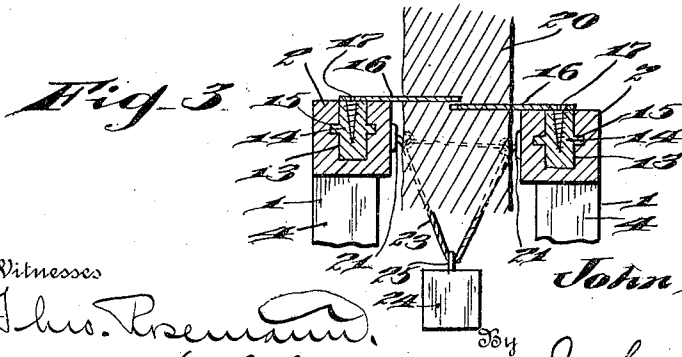
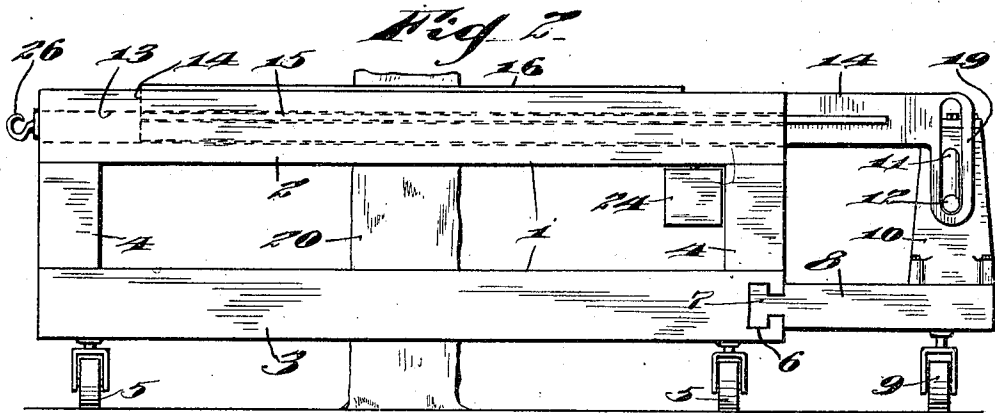
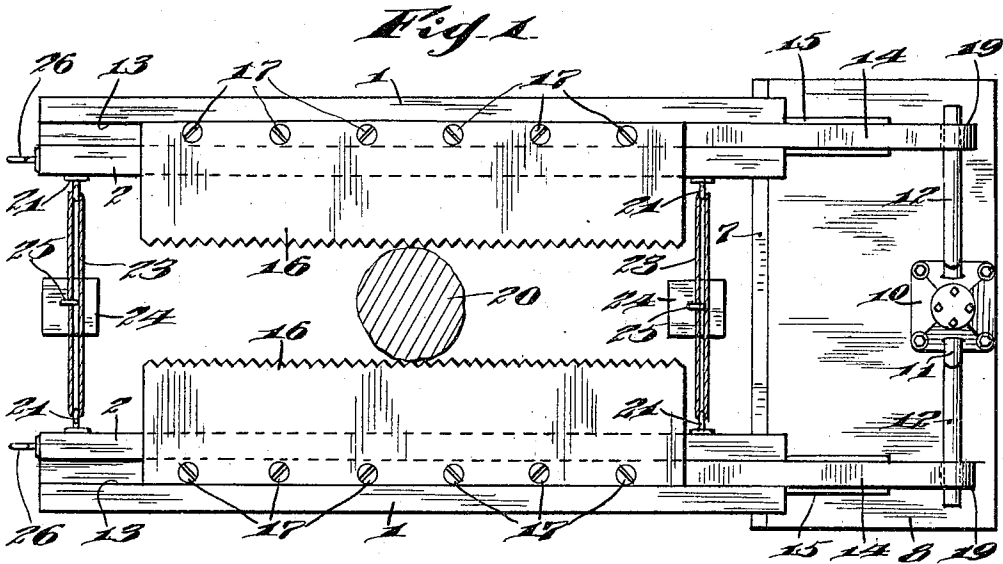


J. H. IRWIN.  
SAWING MACHINE.  
APPLICATION FILED JULY 21, 1910.

974,971.

Patented Nov. 8, 1910.

2 SHEETS—SHEET 1.



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Fig. 4.

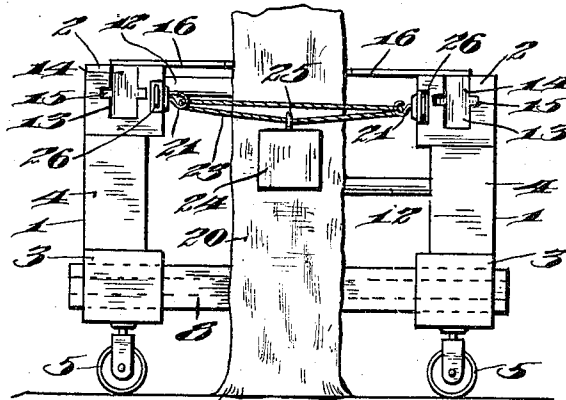


Fig. 5.

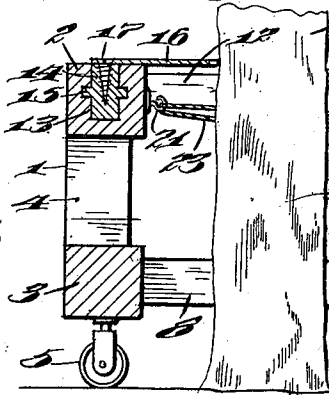


Fig. 6.

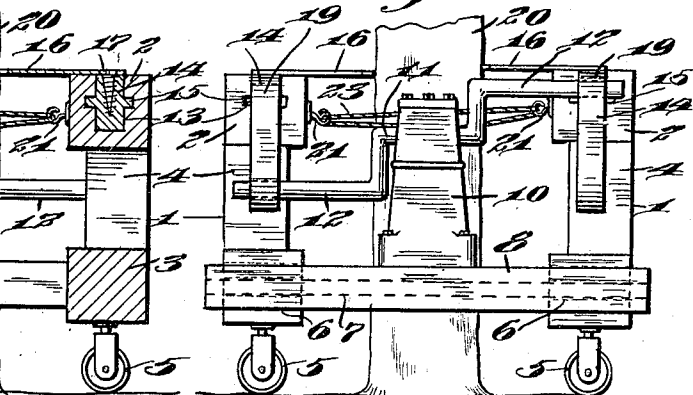


Fig. 7.



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# UNITED STATES PATENT OFFICE.

JOHN H. IRWIN, OF PHILADELPHIA, PENNSYLVANIA.

## SAWING-MACHINE.

974,971.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed July 21, 1910. Serial No. 572,978.

*To all whom it may concern:*

Be it known that I, JOHN H. IRWIN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Sawing-Machines, of which the following is a specification.

My invention relates to improvements in sawing machines, the object of the invention being to provide an improved machine of this character in which two saws are reciprocated in opposite directions, so as to saw through the tree from opposite sides and quickly cut it down.

A further object is to provide improved means for reciprocating the saws, improved means for advancing the saws toward each other, and improved means for mounting the saws, whereby one saw is positioned in a slightly higher elevation than the other, so that when they reach the center of the tree the cutting edges of the saws will not contact.

A further object is to provide an improved machine of this character which may be readily transported from place to place, and moved from tree to tree, and which will operate to quickly cut down the trees, economizing time and labor and most effectually perform the functions for which it is intended.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a top plan view illustrating my improvements in operative position. Fig. 2, is a view in side elevation. Fig. 3, is a broken view in cross section illustrating the positions of the saws after cutting through the tree. Fig. 4, is a view of the left hand end of Fig. 1. Fig. 5, is a view in cross section. Fig. 6, is a view of the right hand end of Fig. 1, and Fig. 7, is a detail view of a rod adapted to hold the saw frames apart.

My improved machine comprises two side frames 1, 1, which consist of horizontal bars 2, and 3, connected by uprights 4, the uprights 4 of one frame being slightly longer than the other, so that the upper face of one frame is slightly higher than the other for a purpose which will hereinafter appear.

Each of these frames is supported upon caster wheels 5, and the lower bars 3 of the frames at one end are provided with dovetail recesses 6, which receive a dove-tail tongue or flange 7 on the end of a platform 8, so that the frames are permitted movement toward and away from each other, guided by the tongue or flange 7. Platform 8 is also supported upon caster wheels 9, and supports an engine 10 preferably of the internal combustion type. This engine 10 turns a drive shaft 11, which shaft is provided with long crank arms 12 disposed oppositely to each other.

The upper bars 2 of the frames 1, are made with longitudinal grooves 13 in which bars 14 are mounted to reciprocate, said bars having tongue and groove engagement as shown at 15, with the bars 2 to prevent any vertical movement of the bars 14. On these reciprocating bars 14, cross cut saws 16 are secured by screws 17, and said bars at one end are provided with slotted yokes 19, in which the crank arms 12 project, so that as shaft 11 revolves, the bars 14 and the saws 16 are reciprocated in opposite directions to cut into the tree, illustrated at 20, from opposite sides, and as above stated one of the frames is slightly higher than the other, so that one of the saws is at an elevation slightly higher than the other saw, and when the saws reach the center of the tree, one will be above the other as illustrated in Fig. 3 and the saw teeth will not strike each other.

To compel the saws to feed toward each other and cut into the tree as they reciprocate, two pairs of hooks 21 are provided on the upper bars 2, and endless ropes or cables 23 are caught over these hooks 21. Weights 24 having hooks 25 thereon are caught over one of the runs of these endless ropes 23, so that the weights tend to pull the frame toward each other, and they roll on the caster wheels 5, and move on tongue 7. When the tree has been felled, both weights 24 are removed and placed on the platform 8, the rope 23 at the free end of the device is detached from one of the hooks 21, when the frames 1 may be pulled apart and the device moved into position on another tree, when the ropes 23 are placed in position as before and the weights 24 thereon, when the device is ready for another operation. On the ends of bars 2, hooks 26 are provided and a rod 27 having eyes 28 at its ends to engage over

said hooks 26, is placed in position to hold the frames 1 against independent movement, when the device can be readily transported from place to place as may be desired.

5 Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth but consider myself  
10 at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a sawing machine, the combination with a frame, of two saws mounted on said frame, and disposed one at an elevation slightly above the other, said saws located in  
20 parallel planes with their teeth toward each other, and means for reciprocating said saws in opposite directions, substantially as described.

2. In a sawing machine, the combination with two frames movable toward and away from each other, saws mounted on said frames, one at an elevation slightly above the other, said saws located in parallel planes with their teeth toward each other, and means  
25 for reciprocating said saws in opposite directions, substantially as described.

3. In a sawing machine, the combination with two frames, wheels supporting said frames, bars mounted to reciprocate in said frames, saws secured on said bars, said saws located in parallel planes with their teeth toward each other, means for moving said frames toward each other, and means for reciprocating said saws in opposite directions,  
35 substantially as described.

4. In a sawing machine, the combination with two frames and wheels supporting the frames, bars mounted to reciprocate in said frames, saws secured on said bars, and one  
45 of said saws located at a higher elevation than the other, said saws located in parallel planes with their teeth toward each other, means for reciprocating said bars in opposite directions, hooks on said frames, cables  
50 connecting said hooks and weights on said cables, substantially as described.

5. In a sawing machine, the combination with a platform having a dove-tailed flange thereon, of two parallel frames having

dove-tailed grooves in one end movable on  
55 said flange, saws mounted to reciprocate on said frames and having their teeth projecting toward each other, wheels supporting said platform and frames, bars mounted to reciprocate in said frames, slotted yokes on  
60 said bars, eyes secured on said bars, an engine on said platform, a crank shaft turned by said engine and having long cranks positioned in said yokes, and means tending to draw said frames toward each other, substantially as described.  
65

6. In a sawing machine, the combination with a platform having a dove-tailed flange thereon, of two parallel frames having  
70 dove-tailed grooves in one end movable on said flange, saws mounted to reciprocate on said frames and having their teeth projecting toward each other wheels supporting said platform and frames, bars mounted to reciprocate in said frames, slotted yokes on  
75 said bars, eyes secured on said bars, an engine on said platform, a crank shaft turned by said engine and having long cranks positioned in said yokes, hooks on said frames, endless cables connecting said hooks and  
80 removable weights on said cables, substantially as described.

7. In a sawing machine, the combination with a platform having a dove-tailed flange thereon, of two parallel frames having  
85 dove-tailed grooves in one end movable on said flange, wheels supporting said platform and frames, bars mounted to reciprocate in said frames, slotted yokes on said bars, said saws located in parallel planes  
90 with their teeth toward each other, saws secured on said bars, an engine on said platform, a crank shaft turned by said engine and having long cranks positioned in said yokes, hooks on said frames, endless cables  
95 connecting said hooks and removable weights on said cables, hooks on the ends of said frames, and a rod having eyes at its ends adapted to be positioned on said hooks, substantially as described.  
100

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN H. IRWIN.

Witnesses:

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CHAS. E. POTTS.