

May 15, 1923.

1,454,901

N. D. McARTHUR

SAWING MACHINE

Filed Jan. 24, 1922

3 Sheets-Sheet 1

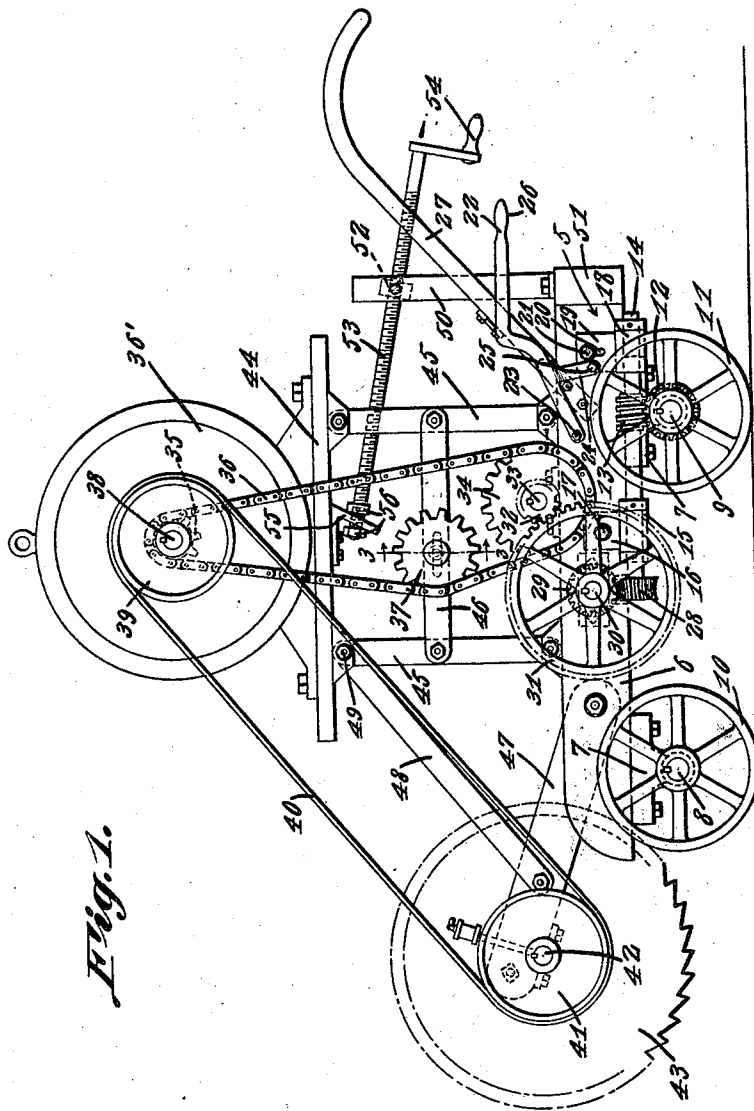


Fig. 1.

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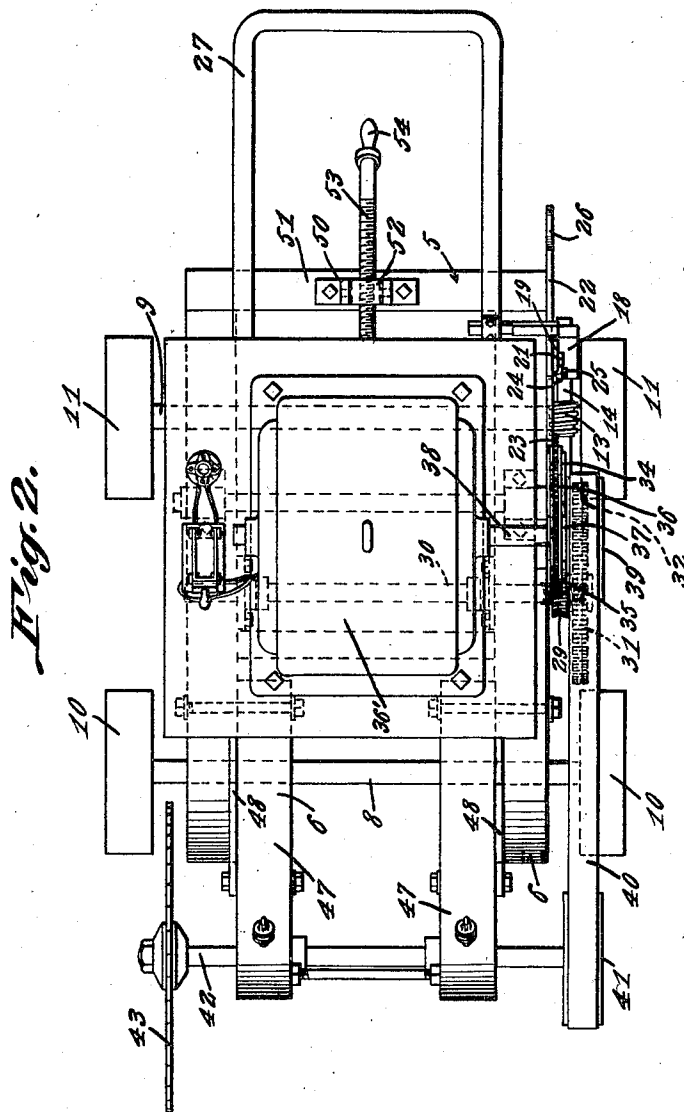
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3 Sheets--Sheet 2



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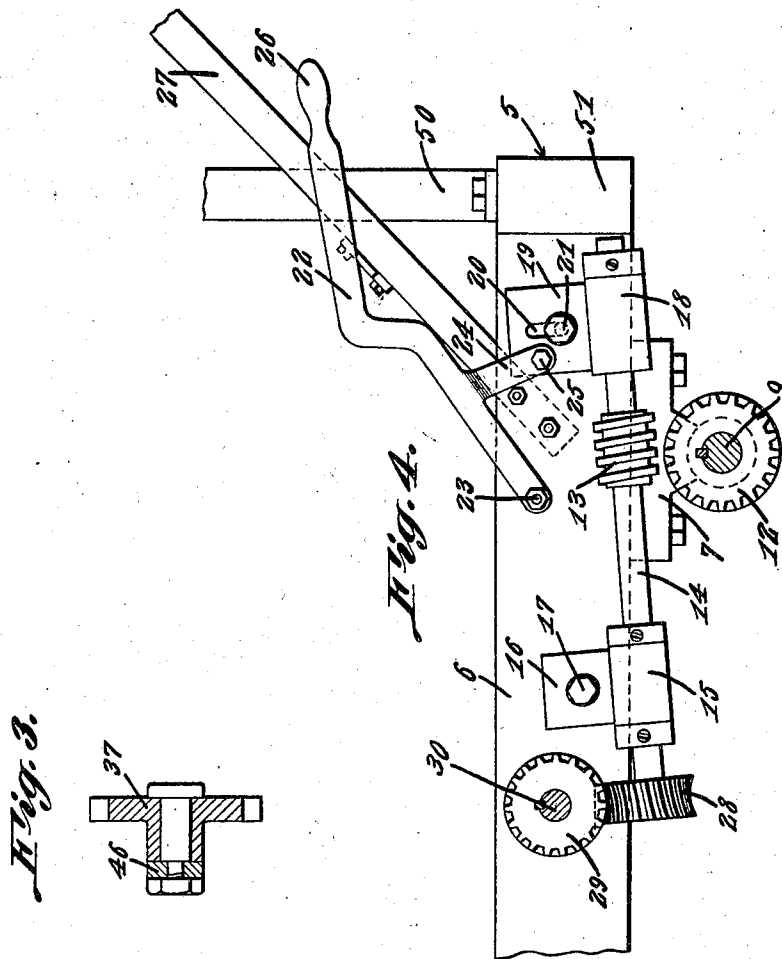
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SAWING MACHINE

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE.

NEILL D. McARTHUR, OF DANVILLE, VIRGINIA.

SAWING MACHINE.

Application filed January 24, 1922. Serial No. 531,446.

To all whom it may concern:

Be it known that I, NEILL D. McARTHUR, a citizen of the United States, residing at Danville, in the county of Pittsylvania and State of Virginia, have invented a new and useful Sawing Machine, of which the following is a specification.

This invention relates to sawing machines, and more particularly to sawing machines of the portable type, novel means being provided for adjusting the saw with respect to its work, to facilitate its use in connection with the cutting out and removal of roof and floor plank where repairs are necessary.

Another object of the invention is to provide novel means for throwing the saw into and out of operation at the will of the operator.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawings:—

Figure 1 is a side elevational view of a sawing machine constructed in accordance with the present invention.

Figure 2 is a plan view of the same.

Figure 3 is a sectional view taken on line 3—3 of Figure 1.

Figure 4 is an enlarged detail view of the means employed for throwing the gearing of the machine into and out of operation.

Referring to the drawings in detail, the body or frame of the machine is indicated generally by the reference character 5 and includes side rails 6, which support the bearings 7 in which the axles 8 and 9 move. Wheels 10 and 11 are supported by the shafts 8 and 9 respectively, and are keyed thereto to move therewith. One of the wheels 11 is provided with a gear 12 which is designed to mesh with the worm gear 13 mounted on the shaft 14 to transmit rotary motion to the gear 12 for propelling the machine, or moving the same from place to place.

This shaft 14 is supported in a movable

bearing 15 forming a part of the bracket 16 that is pivotally connected with one of the side rails of the body of the machine as at 17. The bearing indicated at 18 also accommodates the other end of the shaft 14, the latter bearing being supported by the movable bracket 19, which is formed with an elongated opening 20 that accommodates the bolt 21, whereby the bracket together with its bearing and shaft 14, may be moved vertically to move the worm gear 13 into and out of mesh with the gear 12. An arm indicated at 22 is pivotally connected to one of the side rails of the frame of the machine as at 23, and has a depending arm 24 pivotally connected to the bracket 19, as at 25, one end of the arm 22 extending rearwardly and formed with a handle 26 disposed in proximity to the handles 27 of the machine, whereby the operator of the machine will have easy access to the arm 22 and accomplish the control of the machine.

A pinion 28 is secured at one end of the shaft 14 and normally meshes with the teeth of the pinion 29 carried on the shaft 30, on which shaft the gear 31 is also secured.

This gear 31 meshes with the pinion 32 mounted on the shaft 33, which receives motion from the gear 34, also mounted on the shaft 33, the gear or sprocket 34 receiving motion from the sprocket 35, through the chain 36, there being provided an idle sprocket 37 meshing with the links of the chain 36, to maintain the chain 36 taut, the sprocket 37 being mounted on the stub shaft 37' that moves in the elongated opening 38' to permit of adjustment of the sprocket 35, with respect to the chain 36. The sprocket 35, is mounted on the shaft 38 of the motor 36', there being provided a pulley 39 on the shaft 38, to transmit rotary motion to the belt 40, which also operates over the pulley 41 of the saw supporting shaft 42, the saw being of the rotary or disk type and indicated at 43.

Mounted upon the frame of the machine is an auxiliary support 44 on which the motor 36' is secured, the auxiliary support having connection with the frame of the machine as through the arms 45, which arms have pivotal connection with the frame 5 and auxiliary frame 44 to permit of adjustment of the auxiliary frame with respect to the frame 5. Connecting the arms 45 are

the horizontally disposed bars 46, which bars maintain the arms 45 in proper spaced relation with each other. The saw shaft 42 is supported by means of the pivoted arms 5 47, which arms 47 have connection with the angularly disposed arms 48, that also have connection pivotally with the auxiliary support 44, as at 49. Thus it will be seen that as the auxiliary support 44 is moved with respect to the frame 5, the position of the saw 43 is also moved or changed to adapt the saw for use in sawing floors or surfaces of various thicknesses.

Bolted to the rear of the frame 5 is an upright casting 50 which supports the threaded bearing member 52 which is pivoted to tilt about a horizontal axis. Operating through the threaded bearing 52 is a threaded adjusting rod 53 which is formed with a handle 54 at one end to be gripped by the operator to accomplish the rotation of the threaded rod 53.

One end of the threaded rod 53 is positioned in the bracket 55 which is bolted to the under surface of the auxiliary support 44, adjusting nuts 56 being positioned on the free end of the rod 53 to secure the rod to the bracket 55. Thus it will be seen that by rotating the rod 53, the auxiliary support 44 may be moved with respect to the frame 5, to accomplish the adjustment of the machine.

Thus it will be seen that by rotating the rod 53, the arms 45 may swing with respect to the frame to move the saw 43 towards or

away from the ground surface, or work supported on the ground surface. It might be further stated that the bracket 55 is formed with an elongated opening, to permit of such movement as described.

Having thus described the invention, what is claimed as new is:—

A sawing machine including a wheeled support, an auxiliary support disposed above the wheeled support, vertical supporting arms, having their ends pivotally connected to the supports to permit movement of the auxiliary support with respect to the wheeled support, pivoted arms having connection with the wheeled support and carrying bearings at their outer ends, angularly disposed arms having connection with the pivoted arms and having their upper ends connected to the auxiliary support, a bracket secured to the under side of the auxiliary support, a threaded adjusting rod having its free end supported within the bracket, said adjusting rod adapted to move the auxiliary support to adjust the pivoted arms, a rotary saw mounted in the bearings of the pivoted arms, and means on the auxiliary support for imparting rotary movement to the saw.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

NEILL D. McARTHUR.

Witnesses:

E. B. WOOD.

L. B. CABANISS.