Sept. 13, 1949. A. L. GANNON 2,481,835

POWER CHAIN SAW

Filed Feb. 7, 1945

3 Sheets-Sheet 1

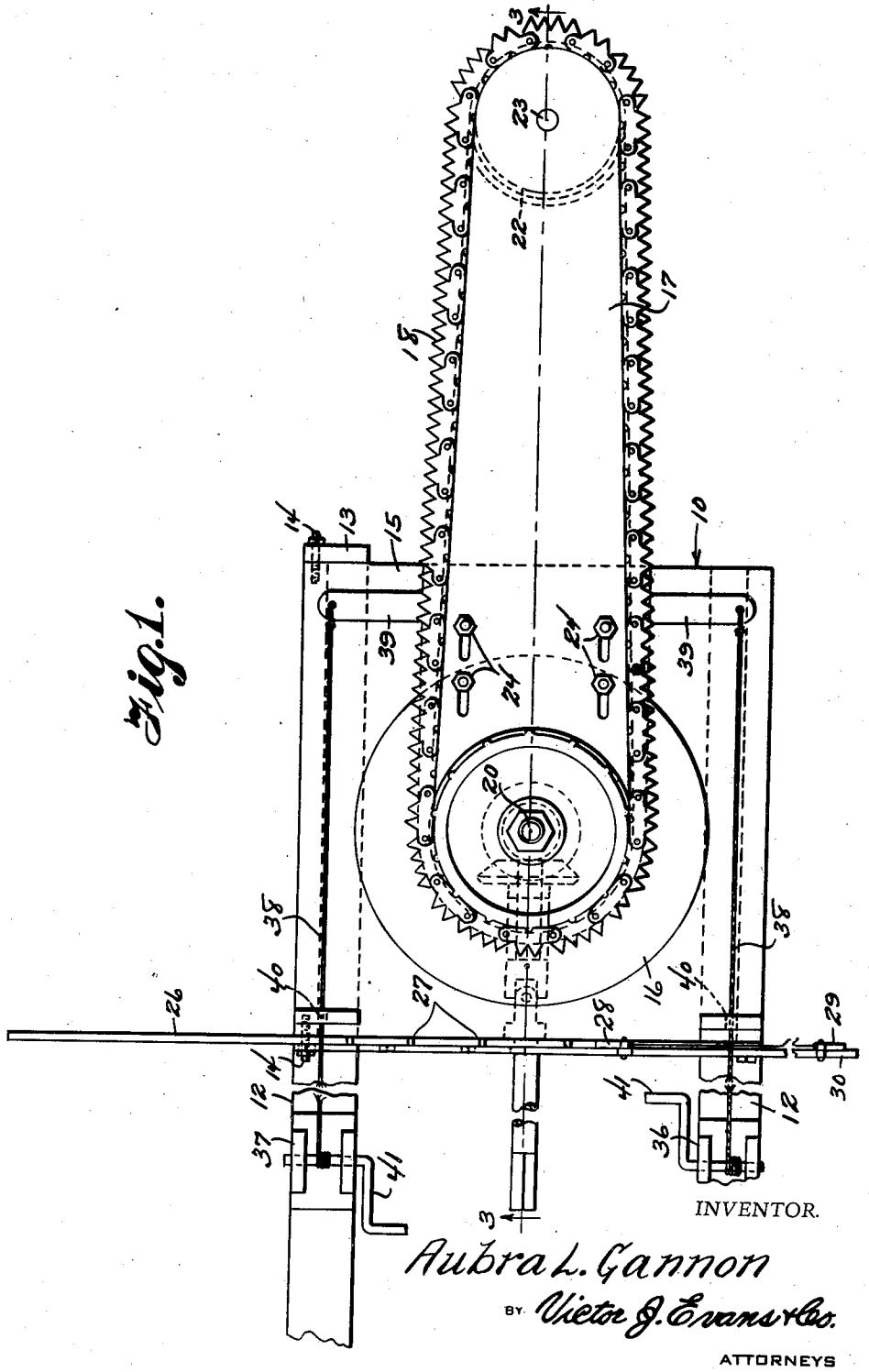


Fig. 1.

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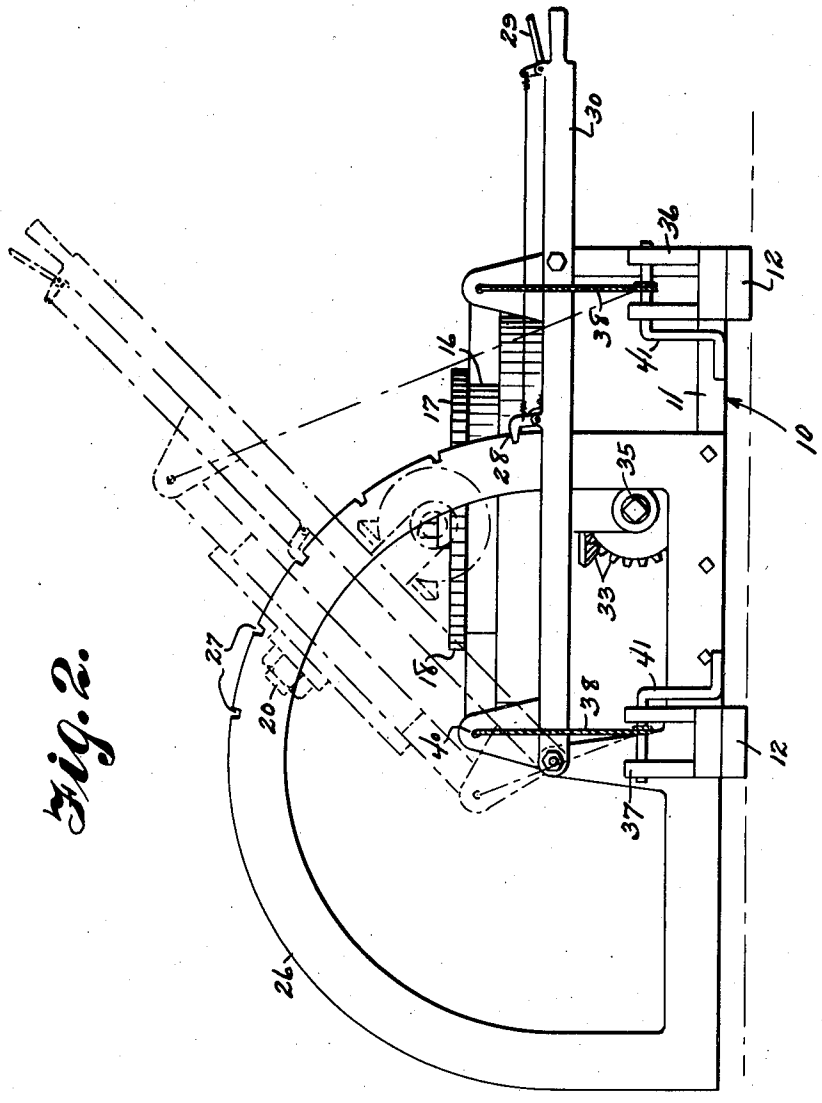


Fig. 2.

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Fig. 4.

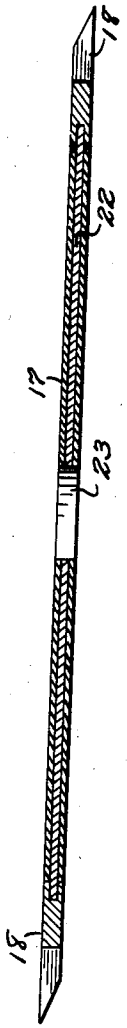


Fig. 3.

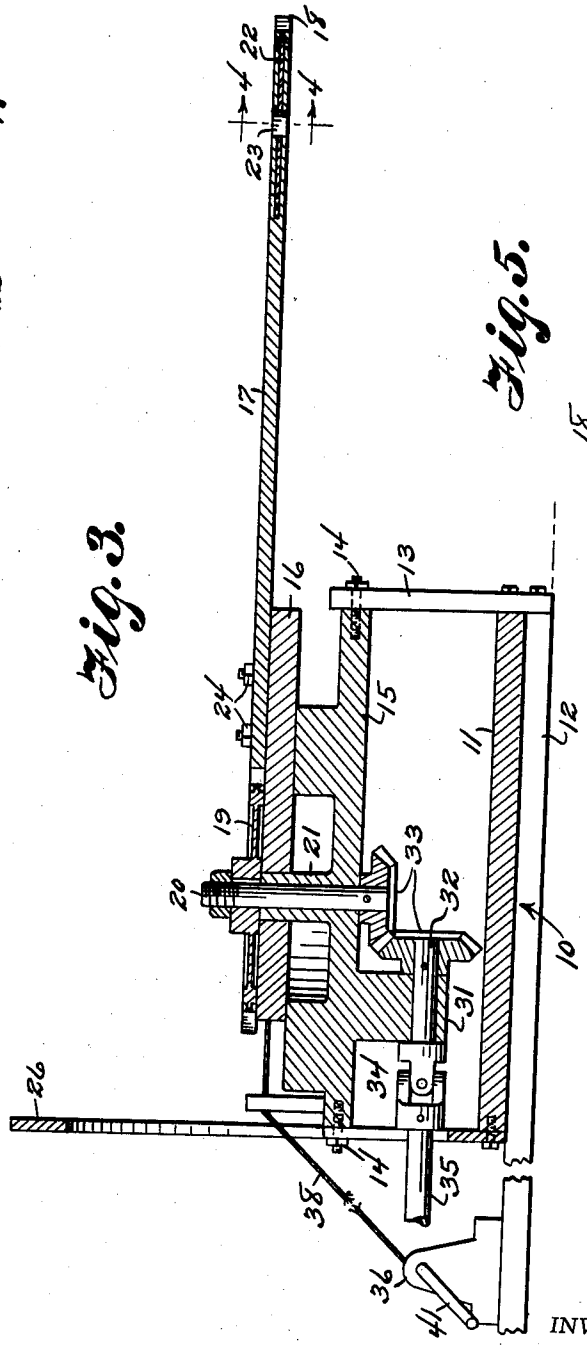
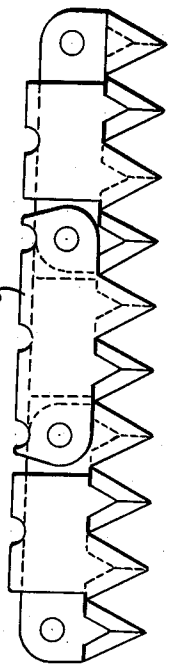


Fig. 5.



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UNITED STATES PATENT OFFICE

2,481,835

POWER CHAIN SAW

Aubra L. Gannon, Alameda, Calif.

Application February 7, 1945, Serial No. 576,601

1 Claim. (Cl. 143—32)

1

The invention relates to rigging, and more especially to a portable chain saw rig.

The primary object of the invention is the provision of a rig of this character, wherein the chain saw proper is of an endless type and can be readily and easily adjusted to have its line of cut disposed at different angles to the horizontal, the mounting of the saw being of novel construction, and will operate with maximum efficiency, with its power taken from a tractor or other type of motor vehicle, so that such rig can be employed for cutting trees and logs or other purposes.

Another object of the invention is the provision of a rig of this character, wherein the feeding of the saw proper and its release thereof with respect to a piece is effected in a unique manner, and under manual control, so that the cutting operation can be perfected with dispatch and without undue labor on the part of an operator.

A further object of the invention is the provision of a rig of this character, wherein the entire assembly is novel and unique, it being susceptible of maximum adjustment to accommodate itself to the work and in the cutting thereof.

A still further object of the invention is the provision of a rig of this character, which is extremely simple in construction, thoroughly reliable and efficient in operation, strong, sturdy, readily and easily controlled, quick of adjustment, durable, one-man operated, portable, and inexpensive to manufacture and install.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings, which show the preferred embodiment of the invention, and pointed out in the claims hereunto appended.

In the accompanying drawings:

Figure 1 is a top plan view of the rig constructed in accordance with the invention.

Figure 2 is an end elevation, showing by full lines one position of adjustment, and by dotted lines another position of adjustment.

Figure 3 is a sectional view taken on the line 3—3 of Figure 1 looking in the direction of the arrows.

Figure 4 is a sectional view taken on the line 4—4 of Figure 3 looking in the direction of the arrows.

Figure 5 is a fragmentary plan view of the chain saw proper.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

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Referring to the drawings in detail, the rig in its entirety, comprises a bed frame 10, including a horizontally disposed board-like platform or base panel 11. Rising from one side beam 12 of the frame 10 is a pair of spaced upright standards 13 in the upper ends of which are fitted pivots or trunnions 14 hinging thereto a vertically swingable casting forming a head 15 for supporting a turn-table 16. This table 16 carries a chain saw carriage 17, for a continuous endless chain saw 18, as best seen in Figures 1, 3, 4 and 5, of the drawings.

The power sprocket 19 for the saw 18 is rotated from a driven arbor 20, vertically journaled in the bearing 21 on the casting or head 15, while the idle sprocket 22 for the saw 18 is journaled at 23 in the carriage 17 at its outer end. The carriage 17 is adjustably fitted to the turn table 16 by adjusting means 24, so that the chain 25 of the saw 18 can be tightened or slackened optionally.

Next to the aft end of the carriage 17 and fixed to the base platform or panel 11, crosswise of the frame 10 with respect to its length, is a vertical segmental shaped keeper rack 26, the axis of movement of the head 15 for vertical swing thereof is centered with respect to the said rack, which at its rack proper is formed with spaced keeper notches 27 for selective engagement therein of a latching device 28, manually controlled at 29, on a throw lever 30, which is unitary with or detachably connected to the casting or head 15, so that such can be conveniently swung in an arcuate vertical direction from normal horizontal position or vice versa. It should be seen from Figure 2 of the drawings that the saw 18 can be angularly adjusted to the vertical on a horizontal axis in a lateral direction to either side of the frame 10.

Depending from the under side of the head 15 is a hanger bearing 31 in which is journaled a stud driving shaft 32, which through gearing 33 is connected with the driven shaft or arbor 20, while this shaft 32 through a universal joint 34 is coupled with a power shaft 35 detachably associated with a tractor or other motor vehicle for the transmission of power from the latter. In this manner, the saw 18 is operated for the cutting of trees and logs or any other purposes. It is, of course, understood that the shaft 35 has suitable universal connection with the power unit, and this with the joint 34 permits proper adjustment of the said saw as before explained.

Located at the side sill or beam sides of the frame 10 are windlasses 36 and 37 respectively, operating cables 38, which are attached to lateral extension arms 39, which are secured to opposite sides of the turn table 16 and are located on opposite sides of the head 15, the windlasses being manually operated and are for the purpose of feeding the saw 18 to and from the work to be cut, there being suitable guide eyes 40 for the cables 38 to play through under adjustment thereof. The windlasses 36 and 37 are provided with hand cranks 41 for the manual control thereof.

The rig by the construction heretofore set forth is readily portable and can be associated with the power unit with which it is to be used, in any desirable manner.

From the foregoing, it is thought that the construction and manner of operation of the rig will be clearly understood and therefore, a more extended explanation has been omitted for the sake of brevity.

Changes, variations and modifications are contemplated as fall properly within the scope of the claim unto annexed, without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed is:

In a portable chain saw rig, a platform, a pair of side beams secured to said platform, uprights projecting from one of said side beams, a head pivotally connected to said uprights, a turntable swingably supported by said head, an elongated carriage adjustably secured to said turntable and

projecting beyond the latter, an idler sprocket arranged adjacent one end of said carriage and rotatably supported by the latter, a rotatable power sprocket arranged contiguous to the other end of said carriage, and endless chain saw trained over said power sprocket and idler sprocket, a driven arbor rotatably supported by said head and connected to said power sprocket, a driving shaft rotatably supported by said head, gear means connecting said driving shaft to said arbor for rotating the latter, a windlass supported by each of said side beams, a pair of opposed arms projecting from said turntable and secured thereto, operating cables extending between said windlasses and said arms, a segment shaped keeper rack provided with a plurality of spaced notches secured to said platform, and a manually controlled latching device secured to said head for selective engagement with the notches in said keeper rack.

AUBRA L. GANNON.

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