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Patented Mar. 11, 1902.

E. CARNEY.
PORTABLE SAWMILL.

(Application filed July 5, 1901.)

(No Model.)

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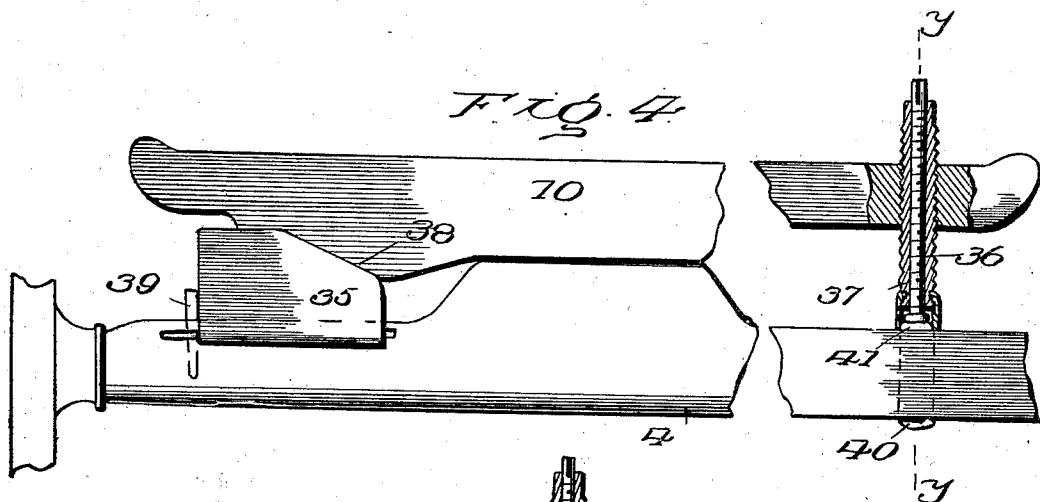
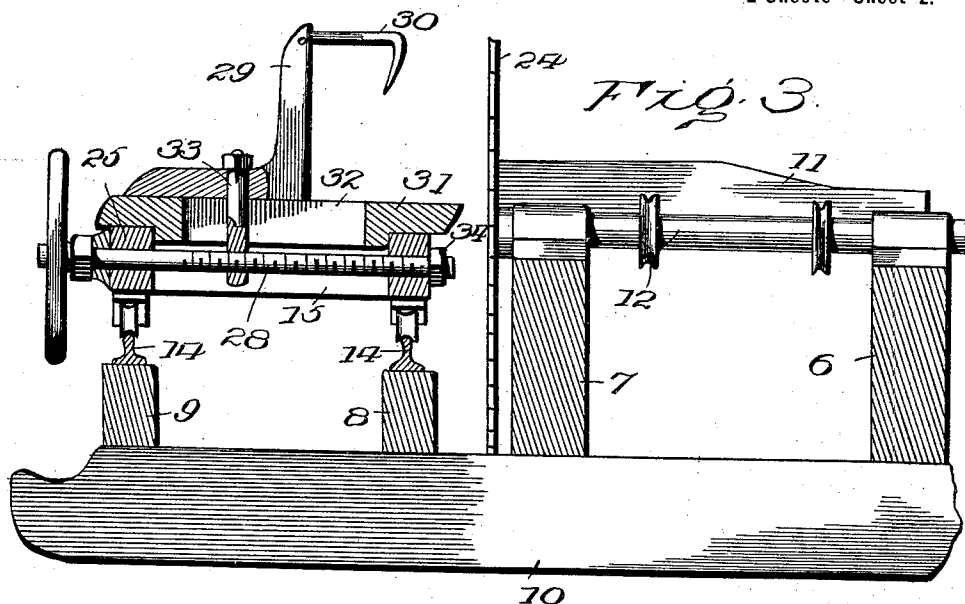
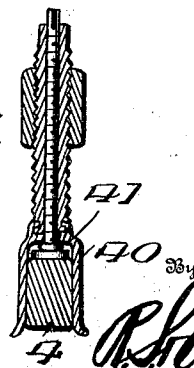


Fig. 5.



Witnesses

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PORTABLE SAWMILL.

SPECIFICATION forming part of Letters Patent No. 695,194, dated March 11, 1902.

Application filed July 5, 1901. Serial No. 67,191. (No model.)

To all whom it may concern:

Be it known that I, ESTES CARNEY, a citizen of the United States, residing at Prairiegrove, in the county of Washington and State of Arkansas, have invented certain new and useful Improvements in Portable Sawmills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to woodworking machinery, and particularly to the class for sawing logs into slabs or boards, and aims to provide a sawmill involving structural features and which is readily portable, so as to be transported from place to place and set up for use with the greatest despatch possible, thereby saving time and labor and enabling a maximum amount of work to be performed in a given time. The machine is specially adapted for use in rural districts where a limited amount of timber is to be cut up for available service, the machine being moved from one pile to another in a circuit or as required.

For a full description of the invention and the merits thereof, and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are necessarily susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of a sawmill embodying the invention. Fig. 2 is a side view thereof. Fig. 3 is an enlarged transverse section of the carriage and framework about on the line X X of Fig. 1. Fig. 4 is a front view of the forward axle and front end of the frame, showing more particularly the means for securing the front axle and leveling the frame, a portion of the axle and frame being broken away. Fig. 5 is a section on the line Y Y of Fig. 4.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The sawmill is mounted upon ground-wheels

1 and 2, secured to the arms of axles 3 and 4 in any desired way. The rear axle 3 is fixed, whereas the front axle 4 is adapted to turn to admit of proper guidance of the sawmill when drawing it over the road or field. For this purpose a tongue 5 is connected with the front axle 4 in the usual manner and is adapted to have the team hitched thereto. The frame for supporting the operating parts is approximately of rectangular form and comprises a series of longitudinal timbers 6, 7, 8, and 9 and cross-timbers 10, connecting the series of longitudinal timbers. The timbers 6 and 7 are higher than the timbers 8 and 9 and are connected by transverse timbers 11 and are provided at a point between their ends with bearings in which the saw-mandrel 12 is mounted for rotation. A band-pulley 13 is provided at the outer end of the mandrel 12 and is adapted to be driven from a portable engine or other source of power in any convenient way. The timbers 8 and 9 are provided with rails 14, which constitute a track for the carriage 15 to travel upon. This carriage, carrying the log to be cut up into slabs, stubs, and the like, is caused to travel backward and forward upon the track by any well-known form of feed mechanism, and, as shown, this feed mechanism is of the rope type and consists of a rope or cable 16, connected at its ends to opposite ends of the carriage and passing over a guide-pulley 17 at each end of the track and having its middle portion wrapped around a drum 18 on a shaft 19, geared to the saw-mandrel 12 by means of an open and crossed belt in the usual way, the carriage being automatically tripped by any style of trip mechanism. In order that the track may be of proper length, it is provided with end sections 20, detachably fitted thereto, so as to be readily removed for reducing the length of the machine either for transportation or storage. These track-sections 20 are supported at their outer ends by props 21, and their inner ends are halved at the extremities of the central portion of the track, hooks 22 and eyes 23 being employed as fastening means for connecting the end sections with the middle section when the machine is set up for use. These hooks 22 are extremely heavy and stout and are placed with reference to the eyes 23 so as to be driven into

the latter, thereby drawing the end and middle sections together when the hooks are driven home into the eyes. The track is lower than the top edge of the timbers 6 and 7, so as to admit of the saw-mandrel being about in the plane of the upper surface of the carriage 15, whereby a maximum amount of the saw 24 projects above the plane of the carriage.

10 The carriage consists of longitudinal bars 25 and tie-bars 26, the bars 25 having longitudinal slots 27 near their opposite ends to receive the end portions of the feed-screws 28, whereby the knees are adjustable upon the carriage to adapt the distance between them to logs varying in length. The knees 15 29, provided with dogs or holding means 30, are slidably mounted upon base-pieces 31, having their ends notched to receive the bars 25, upon which the base-pieces 31 are supported and held for movement crosswise of the carriage by the shoulders at the inner end of the notches engaging with the inner sides of the bars 25, as shown most clearly in Fig. 3.

25 The base-pieces 31 have longitudinal slots 32, in which a pin or bolt 33 operates, each pin or bolt having its lower end threaded for the reception of the feed-screw 28, by means of which the knees are adjusted transversely of the carriage to set up the log after a slab has been cut therefrom. The end portions of each feed-screw 28 snugly fit within corresponding longitudinal slots 27, and by engagement with the pin or bolt 33 holds both 30 the knee and the supporting-base therefor from vertical displacement. Prior to placing the log in position upon the carriage the knees can be adjusted upon the carriage to any desired distance apart, and after the log 40 has been placed upon the carriage and the dogs 30 or other holding means engaged therewith the knees cannot be separated or moved together. Should it become necessary to clamp the feed-screws to hold the knees 45 against casual displacement, the nuts 34, fitted upon the projecting threaded ends thereof, can be turned up, thereby clamping the side bars of the carriage between the shoulder at one end of each feed-screw and the nut 34 at the opposite end. This will be 50 apparent in Fig. 3.

As previously stated, the sawmill is mounted upon wheels, so as to be readily transported. Hence it is necessary to secure the front axle 55 and to provide for leveling of the frame. Referring to Fig. 4 of the drawings, it will be seen that a wedge-block 35 is provided at one end of the axle 4 to come between it and the adjacent end of the cross-timber 10, and con-

centric screws 36 and 37 are provided at the 60 opposite end of the axle 4 to cooperate therewith and with the adjacent end of the beam 10. The wedge-block 35 is slidably mounted upon the end portion of the axle 4 and is adapted to be driven inward upon the axle, 65 so as to come beneath the inclined portion 38 of the timber 10 and secure the parts 4 and 10, a pin 39 securing the wedge-block 35 after it has been forced into wedging engagement with the part 38. The screw 37 is tubular 70 and is mounted in a threaded opening provided near the end of the timber 10, and its lower end has a fork 40, connected by a swivel-joint therewith to embrace opposite sides of the axle 4. The screw 37 is backed when it 75 is required to withdraw the fork 40 from engagement with the axle 4. The screw 36, threaded within the screw 37, has a footpiece 41 at its lower end to engage with the top side of the axle 4, so as to act in conjunction with 80 the wedge-block 35 to enable the frame to be leveled when required.

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

1. In a sawmill, a carriage having its longitudinal bars slotted, longitudinally-slotted 85 base-pieces fitted to the carriage, knees slidably mounted upon the base-pieces, bolts or pins pendent from the knees and passing through the longitudinal slots in the base-pieces, and feed-screws mounted in the longitudinal slots of the carriage having screw-thread connection with the pins or bolts pendent from the knees to hold the latter in place and provided for transverse adjustment 95 thereof upon the carriage, substantially as set forth.

2. In combination, a carriage having its bars longitudinally slotted, and base-pieces fitted upon the carriage and having a longitudinal slot, a knee slidably mounted upon the 100 base-pieces and having a pendent portion passing through the slot thereof, a feed-screw passing through the longitudinal slots of the carriage and having screw-thread engagement 105 with the pendent portion of the knee for holding the latter and the base-piece in place and admitting of transverse adjustment of the knee, and a clamp-nut fitted to the projecting end of the feed-screw for preventing possible 110 movement of the latter in the longitudinal slot, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ESTES CARNEY. [L. S.]

Witnesses:

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