R. T. WILLIAMS.

WOOD SAWING MACHINE.

APPLICATION FILED JULY 26, 1912.

1,093,513.

Patented Apr. 14, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

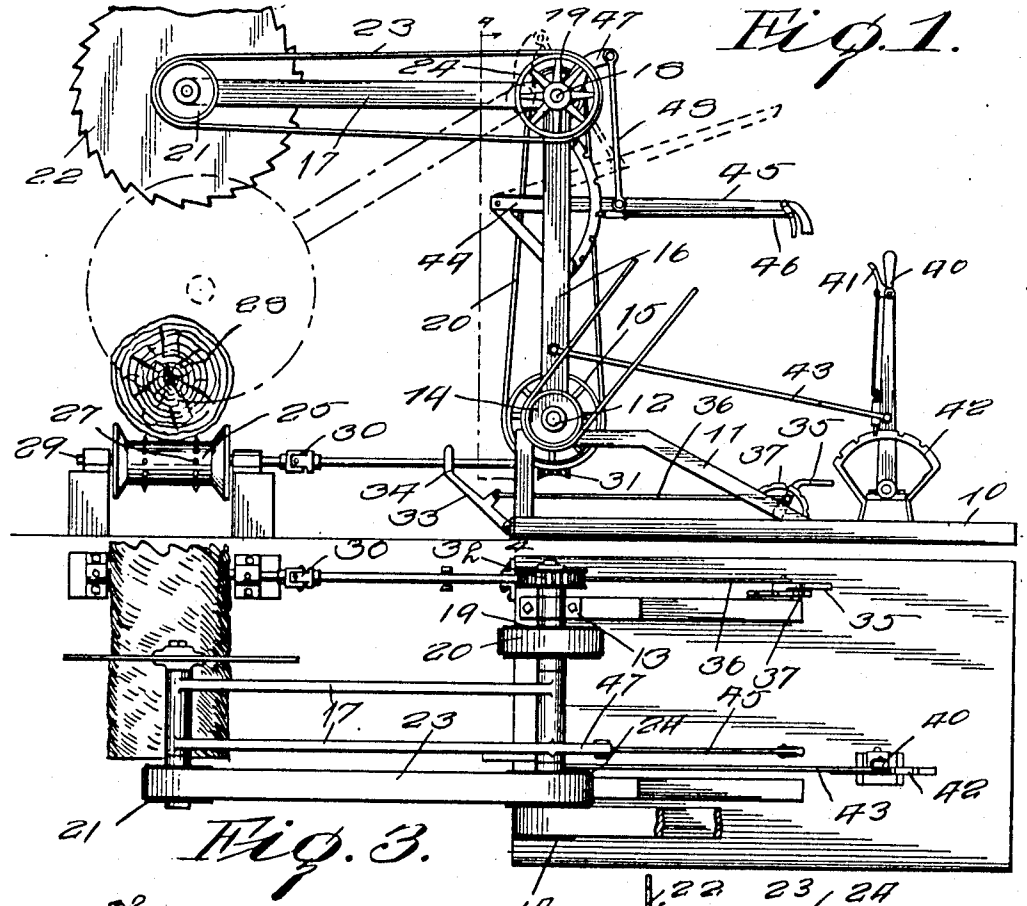


Fig. 3.

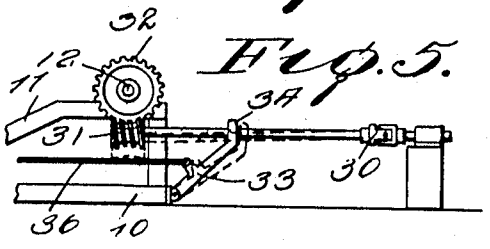


Fig. 5.

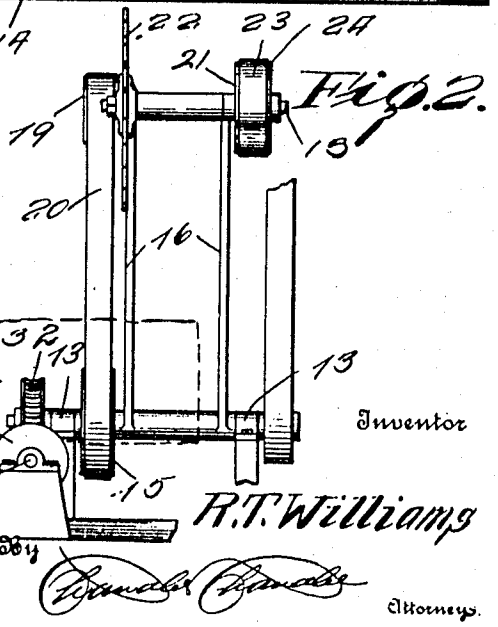


Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 6.

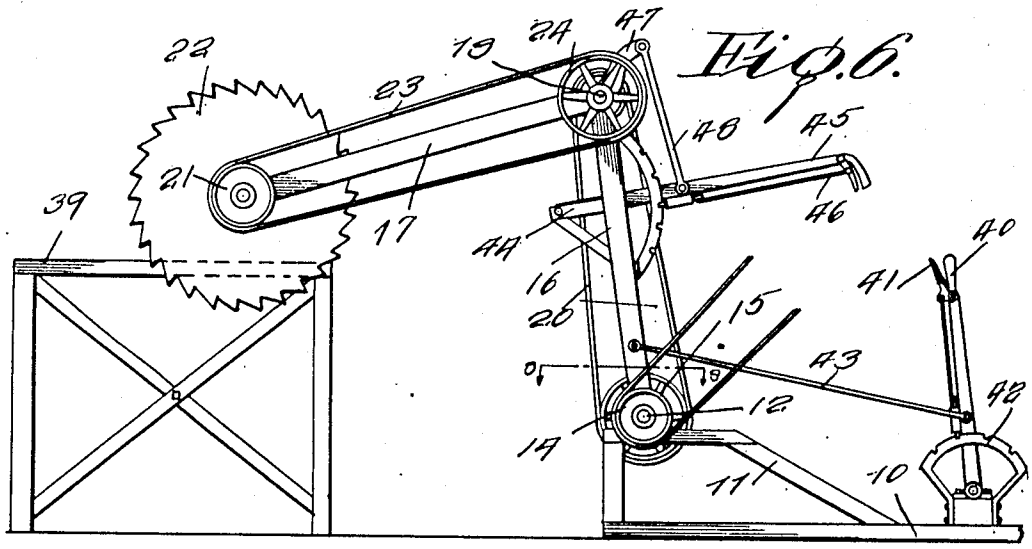


Fig. 4.

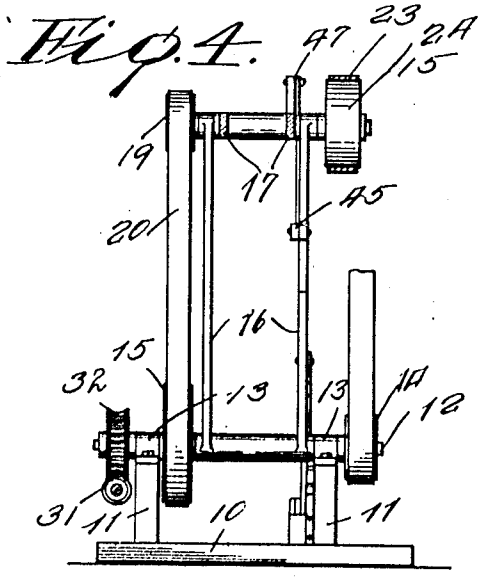


Fig. 7.

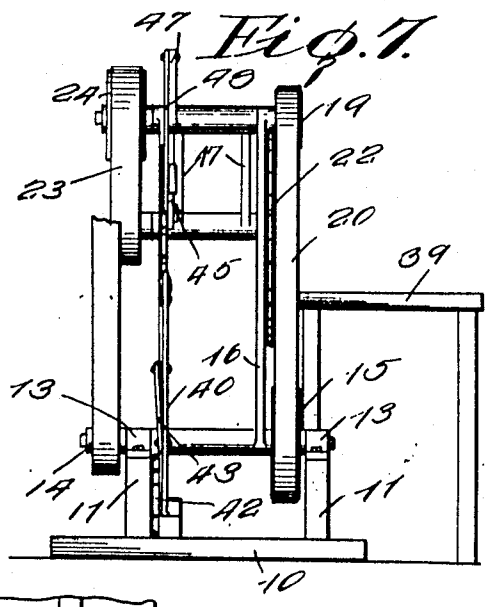
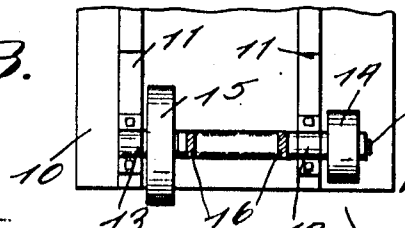


Fig. 8.



Witnesses

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WOOD-SAWING MACHINE.

1,093,513. Specification of Letters Patent. Patented Apr. 14, 1914.

Application filed July 26, 1912. Serial No. 711,697.

To all whom it may concern:

Be it known that I, ROGER T. WILLIAMS, a citizen of the United States, residing at Sandusky, in the county of Cattaraugus, State of New York, have invented certain new and useful Improvements in Wood-Sawing Machines; 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 has special reference to wood sawing machines and more particularly to a machine of this character which is capable of being used for sawing wood or logs supported upon a movable block or a stationary stand or table.

The invention further consists in the provision of a sawing machine embodying a substantially overhanging saw frame capable of vertical and relatively longitudinal adjustment for raising and lowering a circular saw or the like, as well as moving the same toward and away from the wood to be operated on and in which such means are capable of adjustment to permit convenient operation and use of the device with logs or sections of wood varying in diameters and sizes.

A further and important object of the invention consists in the provision of a machine for sawing wood which embodies a plurality of spaced supporting parts for the guide mechanism and saw and for adjusting said parts, and in which novel means are also provided for operating a moving block or means for the driving thereof at a convenient point to the operator.

With the above and other objects in view, the invention consists in certain combinations and arrangements of parts as will be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of my improved wood sawing machine, showing the same in an adjusted position, for sawing wood or logs mounted on a movable block or carriage. Fig. 2 is a front elevation of the machine. Fig. 3 is a top plan view thereof. Fig. 4 is a vertical sectional view taken on the line 4—4 of Fig. 1. Fig. 5 is a detail view of the block driving means. Fig. 6 is a side elevation of the device as employed with a stationary table or stand. Fig. 7 is a rear elevation of the machine as shown in Fig. 6. Fig. 8 is a detail horizontal sectional view on the line 8—8 of Fig. 6.

As illustrated in the drawings, my improved wood sawing machine comprises a platform 10 on which is mounted a sawing frame 11 which rotatably supports a shaft 12 in bearings 13 which is adapted to be driven or rotated in any preferred manner, such as through the medium of a pulley 14. A drive pulley 15 is secured to the shaft 12 between the bearing members of the frame 11 and is arranged between a pair of vertical standards or uprights 16 which form a part of the base structure or frame of the machine and have their lower ends pivotally connected to the shaft on either side of the drive pulley, to move in an arcuate path substantially horizontally relative to and above the drive shaft 12.

Pivotally connected to the upper extremities of the uprights or standards 16 are horizontally extending or overhanging arms 17, the same being connected by a cross member or shaft 18 rotatably supporting a pulley 19 around which and the pulley 15, an endless drive belt 20 is engaged whereby the rotation imparted to the pulley 15 is communicated to the pulley 19. A driven pulley 21 is rotatably carried at the outer ends of the arms and is arranged to detachably connect or support a circular saw or the like 22 while an endless belt 23 is arranged around the pulley 21 and a pulley 24 also carried by the shaft 18 whereby rotation communicated to the pulley 19 will be thereby transmitted to the shaft for continuously driving the latter.

A moving block or roller 25 is rotatably supported in front of the frame structure of the machine and provided with teeth 27 for advancing a log or other section of wood 28 on the same, the said block being rotatably supported upon a shaft 29 which includes an interposed universal link or coupling 30 while the free end of the shaft carries a gear 31 which is engageable with a gear 32 rigidly attached to the shaft 12.

In order to move the gears into and out of mesh, for moving the logs or permitting the same to remain stationary as desired, a pivoted stirrup bearing 33 is supported by the bearing frame 11 and extends in an inclined position to support the inner portion of the shaft through the medium of an arcuate bearing 34 while a foot member or

pedal 35 is pivoted to the other portion of the bearing frame and connected to the bearing 33 above its pivot point by a rod 36 and the foot pedal operates upon a rack member 37 for holding the same in an adjusted position and moving the gears into or out of mesh as is desired.

A truck or carriage 38 is adapted for use in conjunction with the moving block for supporting a log or lumber during the advancement thereof in the successive cutting operations as illustrated in Figs. 1 to 5 of the drawings.

In Figs. 7 and 8, the device is shown as adapted for use in connection with a stand or table 39 which is relatively stationary and adapted to support the logs or lumber above the height at which they are supported by the driven block and truck. Thus, it is necessary to provide means by which the saw may be moved horizontally and vertically to move the same into and out of operative position or engagement with the work operated on and for this purpose a lever 40 is pivotally supported upon the stand or platform and is provided with a catch member or dog 41 which is capable of engagement with notches provided in an arcuate rack 42 concentrically supported relative to the pivot of the lever so that movement of the lever forwardly or backwardly or toward and away from the operator will cause movement of the standards or uprights 16 in an arcuate path substantially horizontally to the base of the machine through the medium of a connecting rod 43 between the lever and said uprights. Thus, the arms and standards may be simultaneously shifted by the lever 40 on the shaft 12 as a pivot but in order to permit independent movement of the arms relative to the uprights or standards 16, said latter members are arranged with a V-shaped rack bar 44 embodying a rack portion which pivotally supports a throw lever 45 in a horizontal position, said throw lever being provided with a latch or spring dog 46 similar to the member 41 and rack bar 42 for holding the lever in an adjusted position. The arms 17 are provided with raised extensions 47 connected by a link or rod 48 to the lever 45 so that vertical movement of the lever 45 will raise and lower the arm and position the saw into and out of engagement with the work.

Having thus described my invention what I claim is:

In a sawing machine a platform, a frame rising from said platform, a pair of standards pivoted at the lower ends on said frame, a lever pivoted on said platform, means for locking said lever in adjusted positions, a link pivotally connecting one of said standards with said lever whereby manipulation of said lever serves to rock said standards to vertical position or to angular positions from the vertical, a pair of arms pivoted at the upper ends to said standards, one of said arms having a projection extending rearwardly from the adjacent standard, a lever pivoted on the last named standard, means on said standard for locking said lever in adjusted positions, a link connection between the last named lever and said projection whereby manipulation of said lever serves to rock said arm to horizontal position or to various angular positions from the horizontal, a saw carried by said arms, and operative connections carried by said standards and said arms for actuating said saw.

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

ROGER T. WILLIAMS.

Witnesses:
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F. S. MERRILL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."