

June 4, 1929.

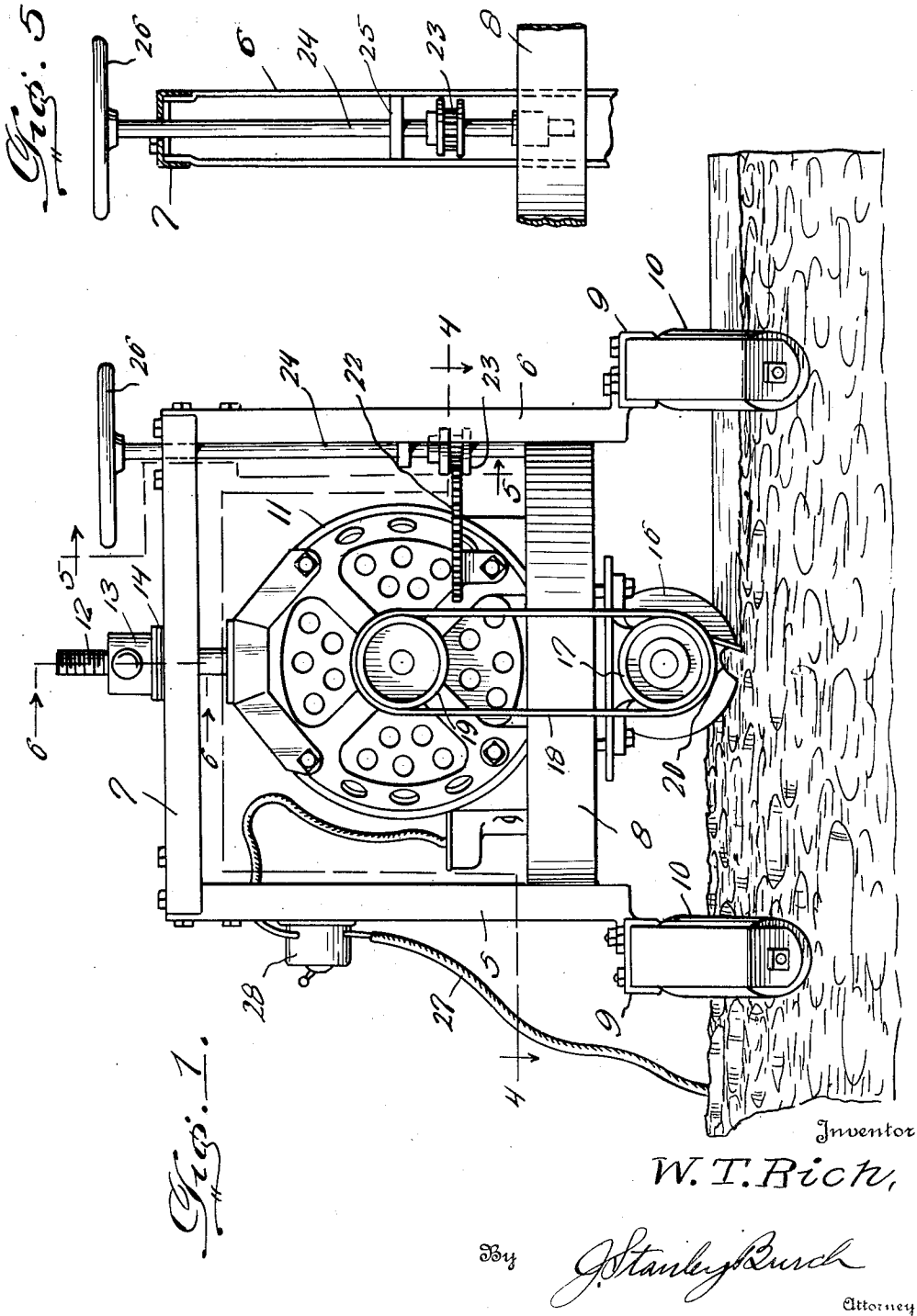
W. T. RICH

1,715,949

LOG TRIMMING MACHINE

Filed June 16, 1928

3 Sheets-Sheet 1



June 4, 1929.

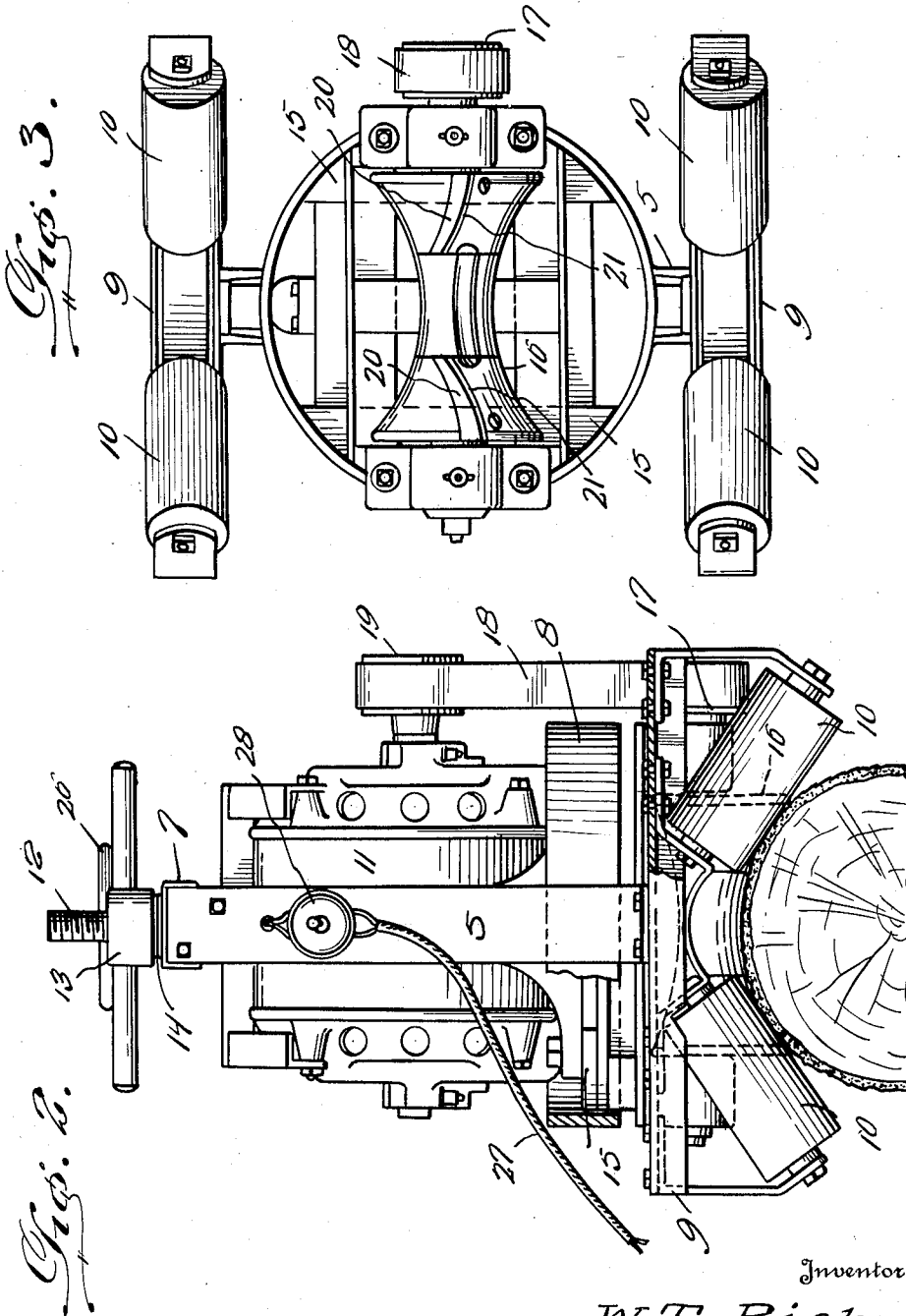
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LOG TRIMMING MACHINE

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3 Sheets-Sheet 2



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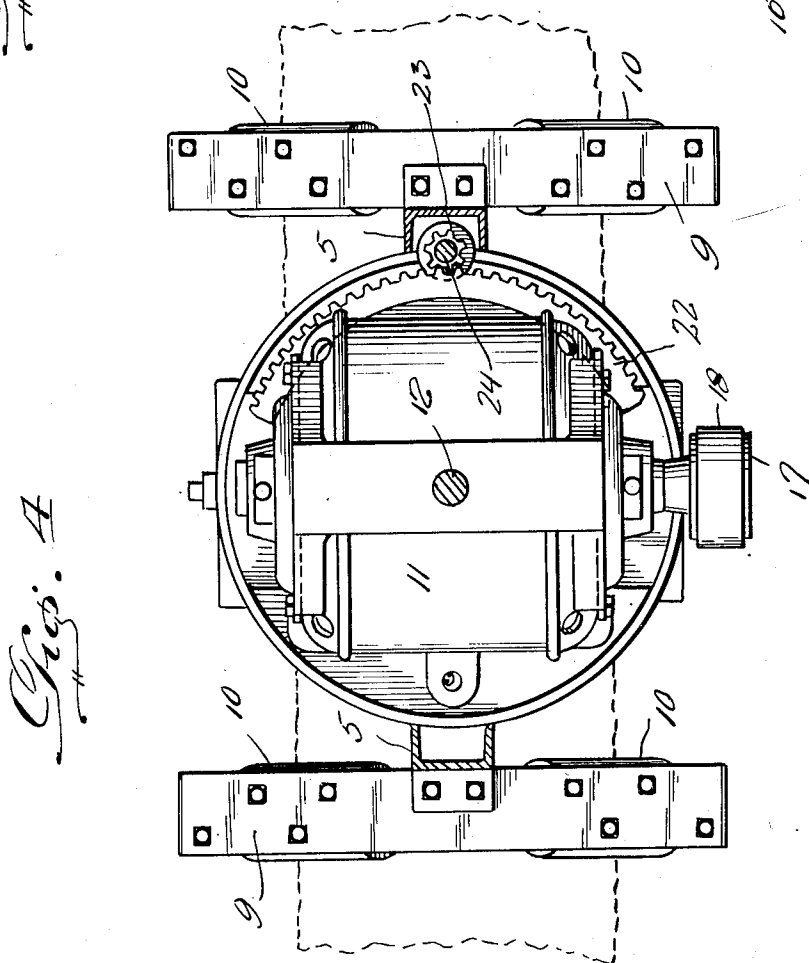
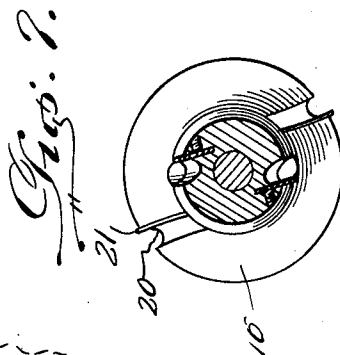
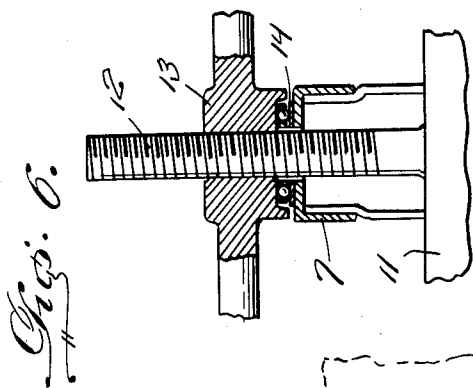
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LOG TRIMMING MACHINE

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE.

WILLIAM T. RICH, OF LUFKIN, TEXAS.

LOG-TRIMMING MACHINE.

Application filed June 16, 1928. Serial No. 285,950.

This invention relates to machines for debarking or trimming logs or posts, and has more particular reference to a portable machine of this kind adapted to be manually moved along the log or post during the debarking or trimming operation.

The primary object of the present invention is to provide a machine of the above kind which is simple and durable in construction, efficient in operation, and capable of ready use for expeditiously trimming logs while stationary or lying on the ground.

A further object is to provide a machine of the above kind embodying a rotary power-driven cutter, means to guide and facilitate movement of the machine along the log, and means to adjust the cutter to vary the depth of cut.

Another object is to provide means for adjusting the cutter toward or from the log, and at different angles relative to the axis of the log or the direction of travel of the machine, whereby logs of various sizes may be effectively trimmed.

Other objects will appear as the nature of the invention is better understood, and the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings:

Figure 1 is a side elevational view, showing a machine embodying the present invention in use upon a log.

Figure 2 is a front elevation of the machine as shown in Figure 1, partly broken away and in section.

Figure 3 is a bottom plan view of the machine.

Figure 4 is a horizontal section on line 4—4 of Figure 1.

Figure 5 is a fragmentary vertical section on line 5—5 of Figure 1.

Figure 6 is an enlarged section on line 6—6 of Figure 1; and

Figure 7 is a transverse section of the rotary cutter.

Referring more in detail to the drawing, the embodiment of the invention illustrated includes a main frame having front and rear uprights 5 and 6 rigidly connected at their upper ends by means of a longitudinal horizontal bar 7 and adjacent their lower ends

by means of a horizontal ring 8. Rigid with the lower ends of the uprights are cross bars 9, each having a pair of supporting rollers 10 journaled on the under side thereof with their axes arranged transverse to the frame and in downwardly diverging laterally inclined relation. The rollers 10 thus support the frame at the front and rear for free travel along the log to be debarked or trimmed, and due to the inclined position of the rollers, the machine is effectively guided along the log irrespective of its size.

A motor 11 is suspended in the frame by means of a vertical adjusting screw 12 attached at its lower end to the top of the motor casing and rotatably and slidably fitting in an opening in the intermediate portion of the bar or beam 7, a nut member 13 being threaded on the projecting upper end of the screw 12 and bearing on the beam 7. An antifriction thrust bearing 14 is preferably provided between the beam 7 and the lower face of the nut 13 to permit the motor to be easily adjusted about its vertical axis which coincides with the axis of the screw 12, and to permit free rotation of the nut to vertically adjust the motor.

A circular frame 15 is fixed to the bottom or base of the motor casing and vertically slidable and rotatably fitted in the ban-like ring 8 to guide the motor in its vertical and turning adjustments. Journaled on the under side of the frame 15 upon a transverse horizontal axis is a concavo-cylindrical cutter 16 whose shaft projects at one end and carries a pulley 17 vertically aligned with and operatively connected by a belt 18 with a pulley 19 on the drive shaft of the motor 11. The cutter 16 is preferably formed of frusto-conical end sections and an intermediate section, as shown, each section having longitudinal grooves 20 in which are secured cutting blades 21. The grooves 20 are of sufficient width and of such spiral form as to provide clearance for the material trimmed from the log and to feed such material laterally to automatically clear the cutter blades during the log trimming operation.

As the rollers 10 will seat differently on logs of different sizes, the motor is adjusted vertically to correspondingly adjust the cutter to suit the size of the log and the depth of cut desired. The turning adjustment of

the motor results in positioning the cutter
 1 at various angles to the longitudinal axis
 of the log so that the same cutter may prop-
 erly operate on logs of various sizes for
 5 rendering it unnecessary to change from one
 size of cutter to another.

Manually operable means is provided to
 angularly adjust the cutter by turning the
 motor about its vertical axis, and this means
 10 may consist of a horizontal gear segment 22
 fixed to the rear side of the motor casing
 and meshing with a cage pinion 23 whose
 flanges engage opposite sides of the gear
 segment so that said pinion is moved verti-
 15 cally with said segment when the motor is
 vertically adjusted. The pinion 23 is fixed
 on the lower portion of a vertical shaft 24
 which is journaled and vertically slidable in
 bearings 25 carried by the rear upright 6.
 20 The shaft 24 slidably projects through the
 rear end of the beam 7 and has a handle 26
 on its projecting upper end for use in
 manual turning thereof and for consequently
 adjusting the angularity of the cutter
 25 through the gearing described.

Current is supplied to the motor by means
 of a cable 27 in which is interposed a con-
 trol switch 28 mounted on the front up-
 right 5.

30 In use, the machine is placed on the log as
 shown in Figures 1 and 2, and the nut 13
 and handle 26 are turned to adjust the cutter
 into contact with and at the proper angle to
 the log for obtaining a full cut at the desired
 35 depth. The motor is then thrown into op-
 eration by closing the switch 28 so as to
 cause the cutter to be rapidly rotated for
 effectively debarking or trimming the adja-
 cent portion of the circumference of the log
 40 as the machine is manually pushed along the
 latter. By partly turning the log and re-
 peating this operation, the entire circum-
 ference of the log may be expeditiously de-
 barked or trimmed while stationary or lying
 45 on the ground.

Minor changes may be made without de-
 parting from the spirit and scope of the in-
 vention as claimed.

What I claim as new is:

50 1. In a portable log debarking or trim-
 ming machine, a frame provided with sup-
 porting rollers to promote travel of and
 guide the same along the log, a power-driven
 55 concave cutter cylinder horizontally mount-
 ed in the frame in position to debark or trim
 the circumference of the log as the machine
 is moved along the latter, said cutter cylin-
 der being mounted on a transverse axis, and
 means to angularly adjust said cutter cylin-
 60 der relative to the line of travel of the ma-
 chine.

2. In a portable log debarking or trim-
 ming machine, a frame provided with sup-
 porting rollers to promote travel of and
 65 guide the same along the log, a power-driven

concave cutter cylinder horizontally mount-
 ed in the frame in position to debark or trim
 the circumference of the log as the machine
 is moved along the latter, said cutter cylin-
 der being mounted on a transverse axis, 70
 means to angularly adjust said cutter cylin-
 der relative to the line of travel of the ma-
 chine, and means to vertically adjust said
 cutter cylinder.

3. In a portable log debarking or trim- 75
 ming machine, a frame provided with sup-
 porting rollers to promote travel of and
 guide the same along the log, and a power-
 driven concave cutter cylinder horizontally
 mounted in the frame in position to debark 80
 or trim the circumference of the log as the
 machine is moved along the latter, said
 rollers being mounted in pairs at the front
 and rear of the frame, the rollers of each
 pair being oppositely laterally inclined and 85
 arranged in downwardly diverging relation.

4. In a portable log debarking or trim-
 ming machine, a frame provided with sup-
 porting rollers to promote travel of and
 guide the same along the log, a power-driven 90
 concave cutter cylinder horizontally mount-
 ed in the frame in position to debark or trim
 the circumference of the log as the machine
 is moved along the latter, a motor mounted
 in the frame and having the cutter cylinder 95
 operatively connected and journaled on the
 under side thereof upon a transverse axis,
 and means to rotarily adjust said motor
 about a vertical axis to angularly adjust said
 cutter cylinder. 100

5. In a portable log debarking or trim-
 ming machine, a frame provided with sup-
 porting rollers to promote travel of and
 guide the same along the log, a power-driven 105
 concave cutter cylinder horizontally mount-
 ed in the frame in position to debark or trim
 the circumference of the log as the machine
 is moved along the latter, said frame em-
 bodying a horizontal ring, a motor rotarily
 suspended in and vertically adjustable rela- 110
 tive to the frame, a circular element attached
 to the bottom of the motor and vertically
 slidable and rotatably fitted in said ring, and
 means to rotatably adjust said motor, said
 cutter cylinder being journaled on the under 115
 side of said circular element and operatively
 connected to the motor.

6. In a portable log debarking or trim-
 ming machine, a frame provided with sup-
 porting rollers to promote travel of and 120
 guide the same along the log, a power-driven
 concave cutter cylinder horizontally mount-
 ed in the frame in position to debark or trim
 the circumference of the log as the machine
 is moved along the latter, said frame em- 125
 bodying a horizontal ring, a motor rotarily
 suspended in and vertically adjustable rela-
 tive to the frame, a circular element at-
 tached to the bottom of the motor and verti-
 cally slidable and rotatably fitted in said 130

ring, means to rotatably adjust said motor, said cutter cylinder being journaled on the under side of said circular element and operatively connected to the motor, said frame
5 further embodying front and rear uprights having a motor-suspending beam connecting the upper ends thereof and connected near their lower ends by said ring, and cross bars carried by the lower ends of said uprights and having said rollers journaled on the 10 under sides thereof in downwardly diverging pairs.

In testimony whereof I affix my signature.

WILLIAM T. RICH.