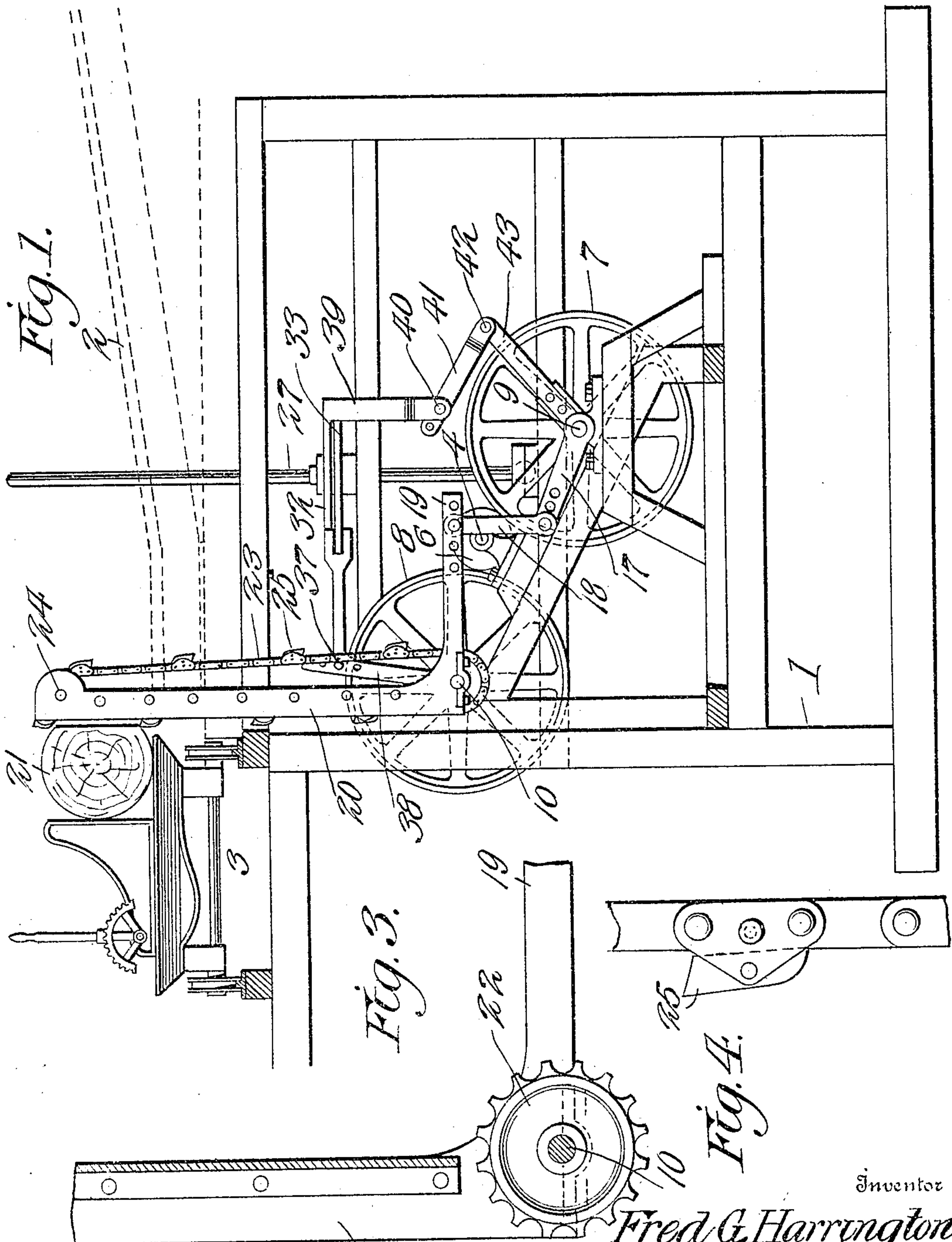


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LOG TURNER.  
APPLICATION FILED SEPT. 15, 1908.

943,875.

Patented Dec. 21, 1909.  
2 SHEETS—SHEET 1.



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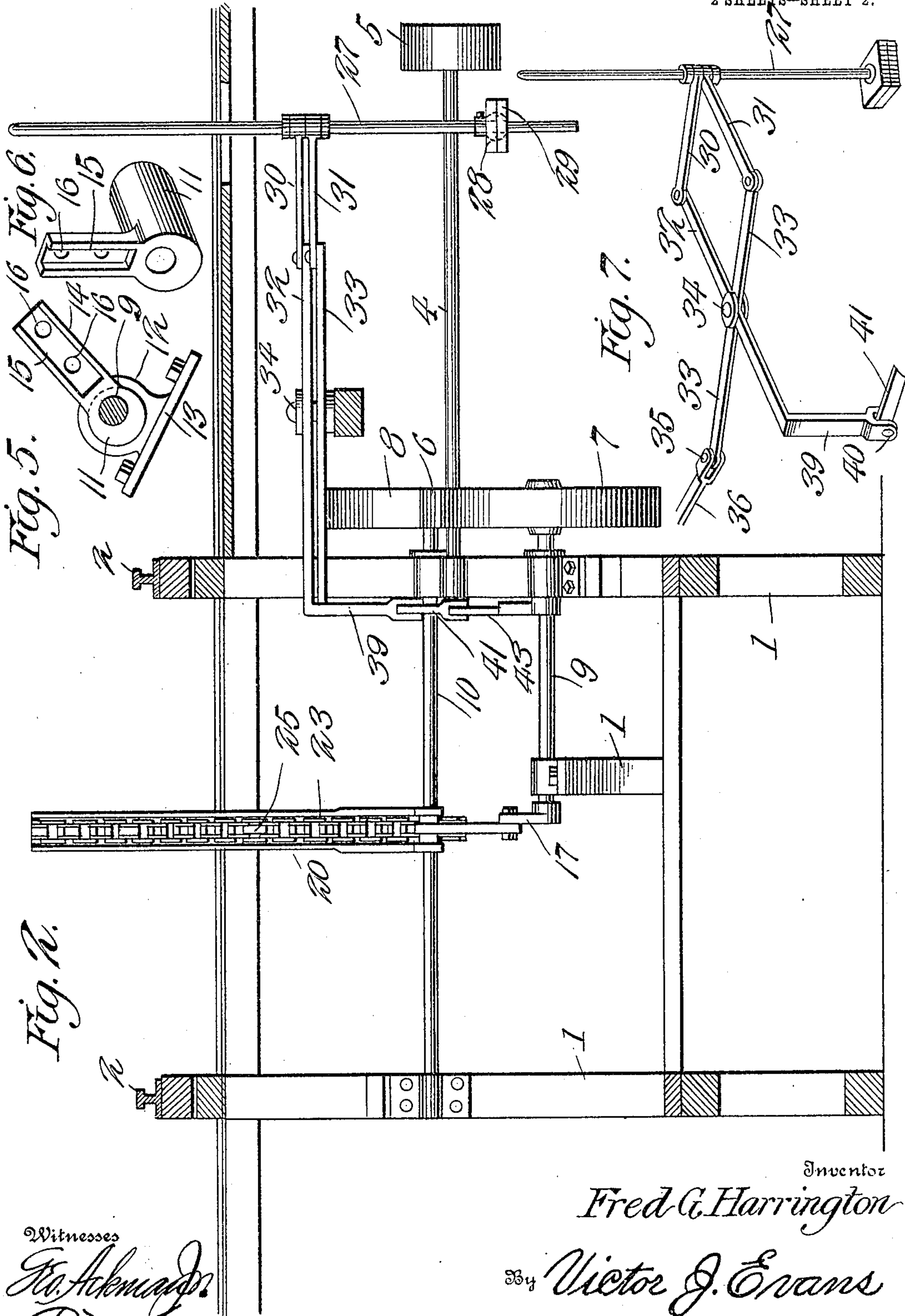
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# UNITED STATES PATENT OFFICE.

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## LOG-TURNER.

943,875.

Specification of Letters Patent.

Patented Dec. 21, 1909.

Application filed September 15, 1908. Serial No. 453,140.

*To all whom it may concern:*

Be it known that I, FRED G. HARRINGTON, a citizen of the United States, residing at Hollins, in the county of Clay and State of Alabama, have invented new and useful Improvements in Log-Turners, of which the following is a specification.

This invention relates to log turners, the object of the invention being to provide a simple mechanical device for turning logs preparatory to their presentation to the saw, the log turner comprising hand operated means and including friction gearing whereby the nigger bar may be moved toward the work and allowed to recede therefrom, and also whereby the log turning chain may be operated at any desired moment and to the requisite extent to effect the turning of the log preparatory to the next cut.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts herein fully described, illustrated and claimed.

In the accompanying drawings, Figure 1 is an end elevation partly in section of a log turner embodying the present invention. Fig. 2 is a vertical longitudinal section through the same. Fig. 3 is a detail vertical section showing a portion of the nigger bar and the nigger arm and the lower sprocket wheel. Fig. 4 is a side elevation of a portion of one of the log turning chains. Fig. 5 is a detail section showing one of the eccentrics and its bearing. Fig. 6 is a detail perspective view of one of the eccentrics. Fig. 7 is a detail perspective view of the lever arrangement for shifting the friction wheels.

The frame 1 of the log turner may be of any suitable construction to support the operative parts of the mechanism hereinafter described. In the drawings, said frame work is illustrated as forming a support for a superimposed runway or series of skids 2 down which the logs travel to the saw mill carriage designated at 3, the latter being of the usual construction and arrangement.

4 designates the main driving shaft which is mounted in bearings supported on the frame, said shaft being provided with a driving belt pulley 5 and being further provided with a friction drive wheel 6, the face of which is composed of any suitable material such as paper, the friction wheel being

adapted to cooperate with other friction wheels 7 and 8 mounted respectively on the shafts 9 and 10 parallel to each other and to the main drive shaft 4 as indicated in Figs. 1 and 2. The friction wheel 7 constitutes the chain operating wheel, while the friction wheel 10 constitutes the nigger bar operating wheel, both of said wheels 9 and 10 being provided with broad faces adapted to cooperate with the friction face of the drive wheel or pulley 6. The shafts 9 and 10 are so mounted as to be capable of a slight lateral shifting movement for the purpose of enabling the wheels 7 and 8 to be independently moved toward and away from the drive wheel 6. In carrying out this part of the invention each of said shafts 9 and 10 is journaled in an eccentric 11 best illustrated in Figs. 5 and 6, which eccentric is journaled in a bearing 12 provided with a suitable base flange 13 by means of which said bearing is secured to the frame of the machine. The eccentric 11 is provided with a radially extending arm 14, one side of which is recessed as shown at 15 to receive a crank arm or lever, as best shown in Fig. 1, said arm 14 being further provided with holes 16 to provide suitable fasteners by means of which said crank arm or lever is secured to the extension 14 of the eccentric. It will be seen that by turning the eccentric 11, the shaft 9 or 10, as the case may be, is shifted toward and away from the plane of the driving shaft 4, which results in moving the respective friction wheel 7 or 8 toward and away from the driving friction pulley or wheel 6.

The shaft 9 which is actuated by the wheel 7 is provided with a crank arm 17 having connected thereto one end of a link 18, the opposite end of which connects to the arm 19 of the nigger bar 20, which is shown in Fig. 1 as extending vertically, in which position it is in readiness to operate on the log indicated at 21, for the purpose of turning said log. It will be noted that the arm 19 and the crank arm 17 are both provided with a longitudinal series of holes to receive the connecting pivots of the link 18, whereby the throw of the nigger bar may be accurately regulated.

The nigger bar 20 is provided at its lower end with a sprocket wheel 22 around which passes a sprocket chain 23, the upper portion of which passes around an upper sprocket wheel at the upper extremity of



the nigger arm, said upper sprocket wheel being mounted on a shaft 24. The chain 23 is provided at suitable intervals with pivoted dogs 25 adapted to engage the log in the manner indicated in Fig. 1, each of said dogs having the engaging point thereof normally held outwardly to engage the log by means of gravity. The sprocket wheel 21 which drives the chain 23 is fast on the same shaft 10 with the friction wheel 8 above referred to, so that when said wheel 8 is moved into engagement with the wheel 6, the chain 23 carried by the nigger bar is set in motion, the dogs 25 moving upward and engaging the log 21 to effect a partial turning of the same preparatory to the next cut.

The mechanism for shifting the eccentrics and moving the wheels 7 and 8 into driving engagement with the wheel or pulley 6, embodies a hand-operated lever 27, the lower end of which is provided with a ball 28 which is adjustable lengthwise of the lever 27 and received in a socket of corresponding shape in a bearing 29, thus enabling the lever 27 to be moved in any direction. As seen in Fig. 7, the lever 27 has connected therewith a pair of diverging links 30 and 31 which connect respectively with crossed levers 32 and 33 having a common fulcrum point 34. The lever 33 is connected pivotally at 35 to a link 36 which is pivotally connected at 37 at its opposite end to a crank arm 38 which is fastened to the arm or extension 14 of the eccentric in which the shaft 10 is journaled. The other lever 32 is provided with an angular extension 39 pivotally connected at 40 to a link 41 which is in turn pivotally connected at 42 to another crank arm 43 fastened to the arm or extension 14 of the other eccentric in which the shaft 9 is journaled.

From the foregoing description, it will be understood that the lever 27 may be moved in any direction whatever and by the arrangement of crossed levers 32 and 33 and their connections, the wheels 7 and 8 may be shifted individually or simultaneously into engagement with the driving pulley or wheel 6 in order to impart motion to the

nigger bar and the chain carried by the nigger bar. By reference to Fig. 7 it will be clear that by moving the lever 27 in the direction of the length of the link 30 or approximately in such direction, motion will be imparted to the lever 32 and not to the lever 33, while by moving the lever 27 in the direction of the length of the link 31 motion will be imparted to the lever 33 and not to the lever 32. Furthermore, by moving the lever 27 directly toward the fulcrum 34 or away from said fulcrum, motion will be simultaneously transmitted to both levers 32 and 33. As these levers 32 and 33 control the shifting of the wheels 7 and 8 toward and away from the driving pulley or wheel 6 it will now be understood that the wheels 7 and 8 may be shifted separately or both simultaneously with the result that the nigger bar and the log turning chain 33 may be operated simultaneously or separately as may be found necessary.

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

A log turner comprising a supporting frame, a nigger bar journaled thereon and movable toward and away from the work, an angle arm or L-shaped extension on said nigger bar, a shaft provided with a crank operatively connected by a pivoted link to the arm of the nigger bar for swinging said nigger bar toward and away from the work with a positive movement, a log turning chain carried by the nigger bar, a second shaft for driving said chain, a main drive shaft, a friction drive wheel fast on the drive shaft, other friction wheels mounted on the first named shafts, and hand-controlled eccentric connections for effecting a relative shifting movement and engagement between the friction wheels and the friction drive wheel on the main drive shaft.

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

FRED G. HARRINGTON.

Witnesses:

J. G. COBB,  
JIM STONE.