

No. 717,363.

Patented Dec. 30, 1902.

C. W. ECCLESTON.  
CROSSCUT SAW.

(Application filed Apr. 10, 1902.)

(No Model.)

3 Sheets—Sheet 1.

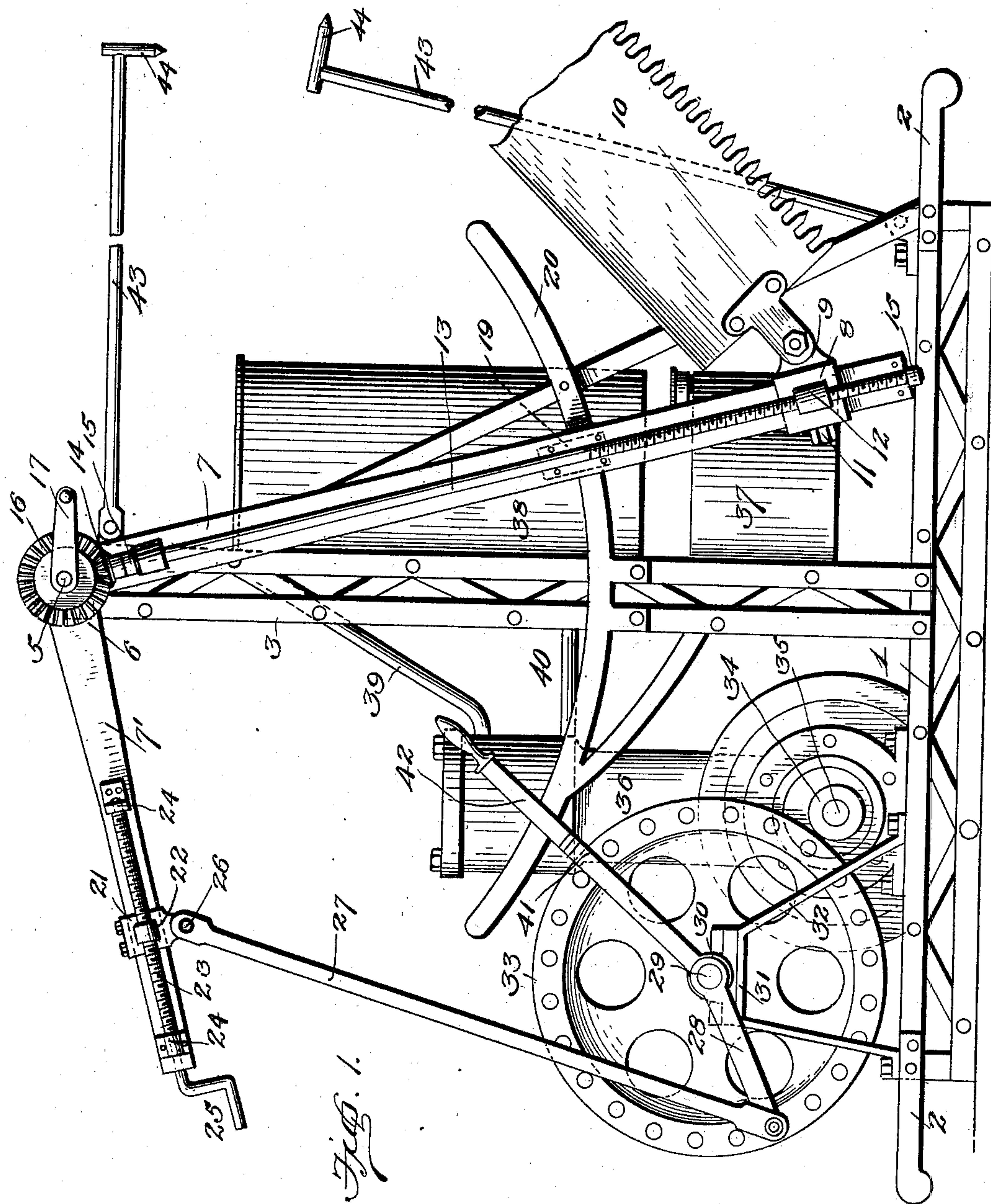


Fig. 1.

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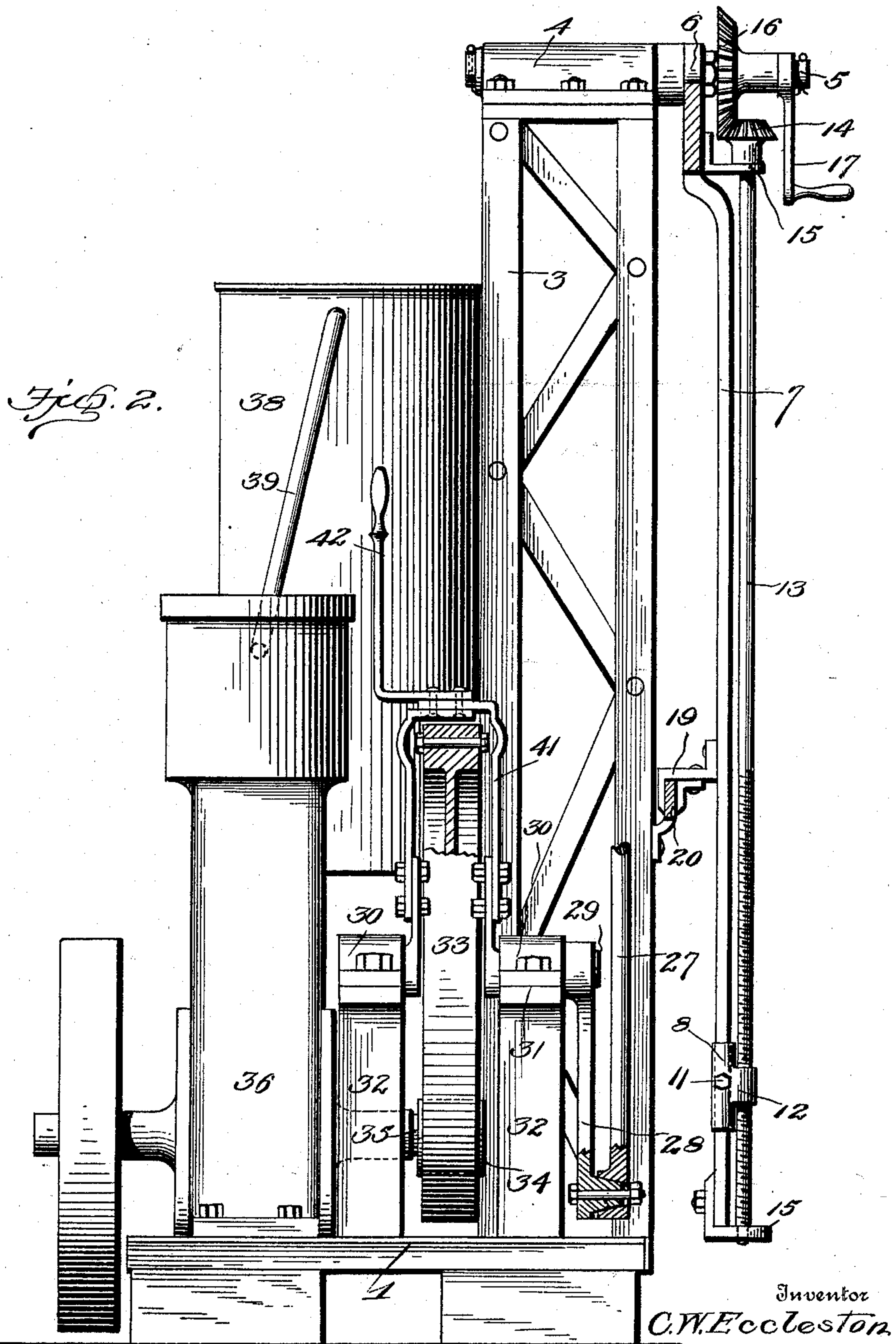
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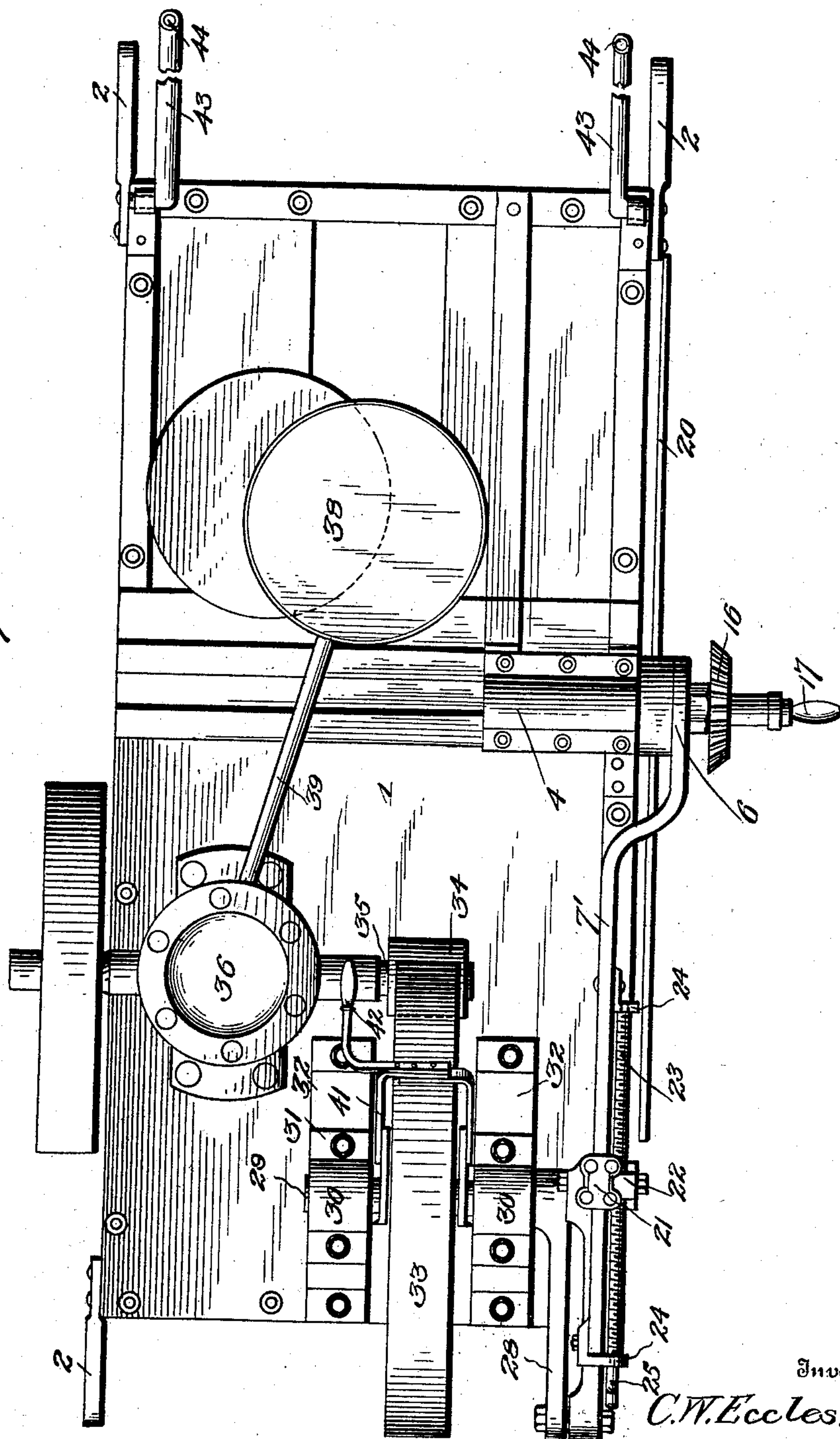
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# UNITED STATES PATENT OFFICE.

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## CROSSCUT-SAW.

SPECIFICATION forming part of Letters Patent No. 717,363, dated December 30, 1902.

Application filed April 10, 1902. Serial No. 102,323. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES W. ECCLESTON, a citizen of the United States, residing at Centralia, in the county of Lewis and State of Washington, have invented certain new and useful Improvements in Crosscut-Saws; and I do 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 a portable power-driven crosscut-saw.

The object of the invention is to provide a saw with means for controlling it, whereby the saw may be adjusted as desired to suit the work, its stroke regulated, and the drive-gearing thrown into and out of action at will without the necessity of stopping the motor. With the above and other objects in view, which will readily appear as the nature of the invention is better understood, said invention consists in certain novel features of construction and combination and arrangement of parts, which will be hereinafter fully described, defined in the appended claim, and illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation of a saw and gearing embodying my invention. Fig. 2 is a rear end elevation of the same, parts appearing in section. Fig. 3 is a top plan view.

Referring now more particularly to the drawings, the numeral 1 represents a base of any approved form and construction, which is provided at its ends with handles 2 for convenience in elevating and transporting the device from place to place. A post or standard 3 rises from this base and is provided at its upper end with a bearing 4, in which a pin or shaft 5 is mounted to turn. Connected at the angle to this shaft is a right-angled oscillating bar 6, having arms of unequal length and whose longer arm 7 has mounted thereon a slide 8, jointed at 9 to the saw 10. This slide 8 is provided with a set-screw 11 for fixedly securing it in adjusted position whenever desired and carries a nut 12, through which works a screw-threaded rod or shaft 13, provided at its upper end with a miter-pinion 14 and journaled in suitable support-

ing-brackets 15 on said arm. Mounted on the extended end of the shaft or axle 5 is a miter-gear 16, which meshes with the pinion 14 and is operated through the medium of a crank-handle 17, whereby the rod or shaft 13 may be operated to adjust the slide 8 up or down on the arm 7, thereby raising or lowering the saw 10 to suit the work to be done. The oscillating bar 6 is provided with a guide-bracket 19, which engages a guide-bar 20 on the standard or post and by means of which said bar is held and guided against lateral vibration.

The shorter arm 7' of the oscillating bar carries an adjusting-sleeve 21, provided with a nut 22, through which works a screw 23, journaled in bearing-brackets 24 and provided at one end with a crank-handle 25, whereby said screw may be operated to adjust said sleeve 21 along said arm 7'. The sleeve or slide 21 is jointed at 26 to a connecting-rod 27, which is attached at its lower end to a crank 28 on the shaft 29, journaled in bearings 30, mounted in boxes 31 upon the upper ends of standards 32. This shaft has fixed thereto a friction-wheel 33, which is adapted to be adjusted into and out of engagement with a friction-pulley 34 on a drive-shaft 35, whereby motion will be transmitted to the rod 27 to impart a rocking or oscillating movement to the bar 6, whereby strokes are imparted to the saw 10. By adjusting the slide 21 through the medium of the screw rod or shaft 23 it will be obvious that the swing of the arm 7' may be varied as desired to regulate the stroke of the saw without the necessity of stopping the machinery. The shaft 35 receives motion from the piston of a suitable motor, preferably a gasolene-motor, 36, mounted upon the base 1 and supplied with gasolene or a hydrocarbon fluid through suitable connections with a supply-tank 37, also mounted upon said base. Above the base and supported by the post or standard is a water-tank 38, from which lead pipes 39 and 40 for the supply of water to and discharge of water from a water-jacket of ordinary construction surrounding the motor-cylinder, thus establishing the circulation of a cooling agent for maintaining the cylinder of the motor at a desired low temperature during the operation of said motor.



The bearings 30 are mounted to turn or oscillate in the boxes 31 and receive the ends of the shaft 29, which turns therein. These bearings are made in the form of eccentrics and are adjustable to throw the friction-wheel 33 in and out of engagement with the friction-pulley 34. To this end the said bearings are connected to a U-shaped bail or yoke 41, attached to a hand-lever 42. By adjusting this lever in one direction the eccentric bearings will be turned to force the wheel 33 into contact with the pulley 34, and by a reverse movement of said lever the eccentric bearings will be adjusted in the opposite direction to move the friction-wheel out of engagement with said pulley, thus stopping the operation of the saw without the necessity of stopping the motor. The arms 43, pivoted, respectively, to the base and post, are provided at their outer ends with spurs or dogs 44 to engage and hold a log while it is being sawed.

In the operation of the apparatus the shaft 35 receives motion continuously from the motor, and when it is desired to transmit motion to the saw the lever 42 is adjusted in the proper direction to cause the eccentrics to throw the wheel 33 into engagement with the friction-disk 34, whereupon through the operation of the crank 28 and connecting-rod 27 the bar 6 will be vibrated and transmit reciprocatory motion to the saw 10, the stroke of the saw being regulated as desired without the necessity of stopping the saw through the medium of the screw-shaft 23, which moves the slide 21 in one direction or the other along the arm 7'. By the adjustment of the slide 8 the saw may be raised and lowered to operate at any desired height, and may then be fixed in adjusted position, if desired, by bringing the clamping-screw 11 into engagement with the arm 7. It will thus be seen that the action of the saw is at all times

under perfect control and that the stroke, as well as the adjustment, of the saw to any determined height may be regulated through the instrumentality of the two screw-shafts while the machine is in operation, thus obviating the necessity of shutting off the gearing and wasting valuable time in order to adjust the saw to suit the work to be done.

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the construction, mode of operation, and advantages of my improved crosscut-saw will be readily apparent without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a power-driven crosscut-saw, the combination of a frame having a supporting-stand carrying a shaft at its upper end, a right-angled bar pivoted at the angle upon said shaft, a gear upon said shaft, a slide upon one of the arms of the bar, a screw-shaft connected to the slide and carrying a pinion meshing with said gear, means for operating the pivoted shaft to drive said screw-shaft, and a crank-driven element connected to the other arm of the bar, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES W. ECCLESTON.

Witnesses:

C. U. HAWLEY,  
GEORGE BASCHLIN.