

No. 617,784.

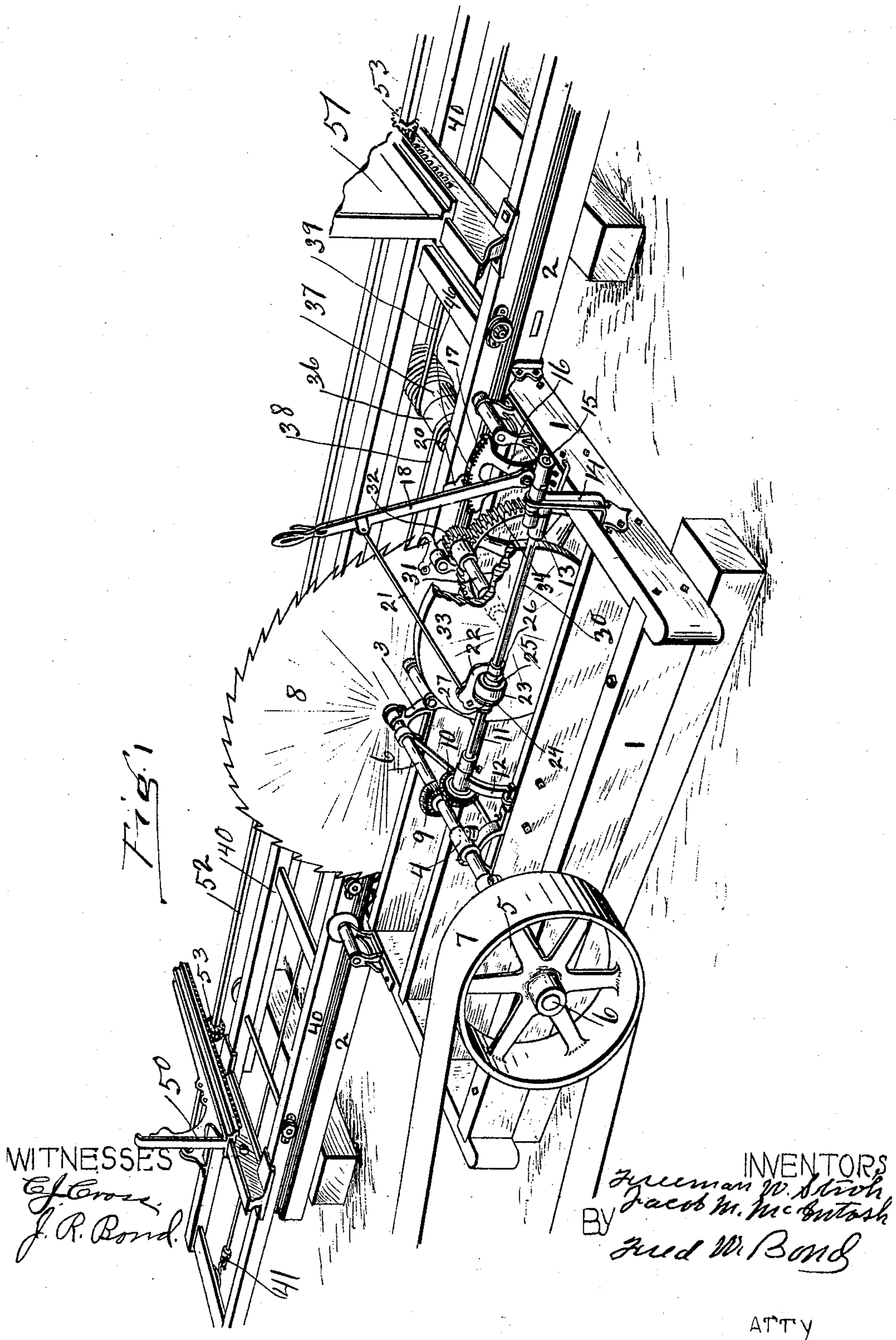
Patented Jan. 17, 1899.

F. W. STROH & J. M. MCINTOSH.  
SAWMILL.

(No Model.)

(Application filed Apr. 14, 1898.)

3 Sheets—Sheet I.



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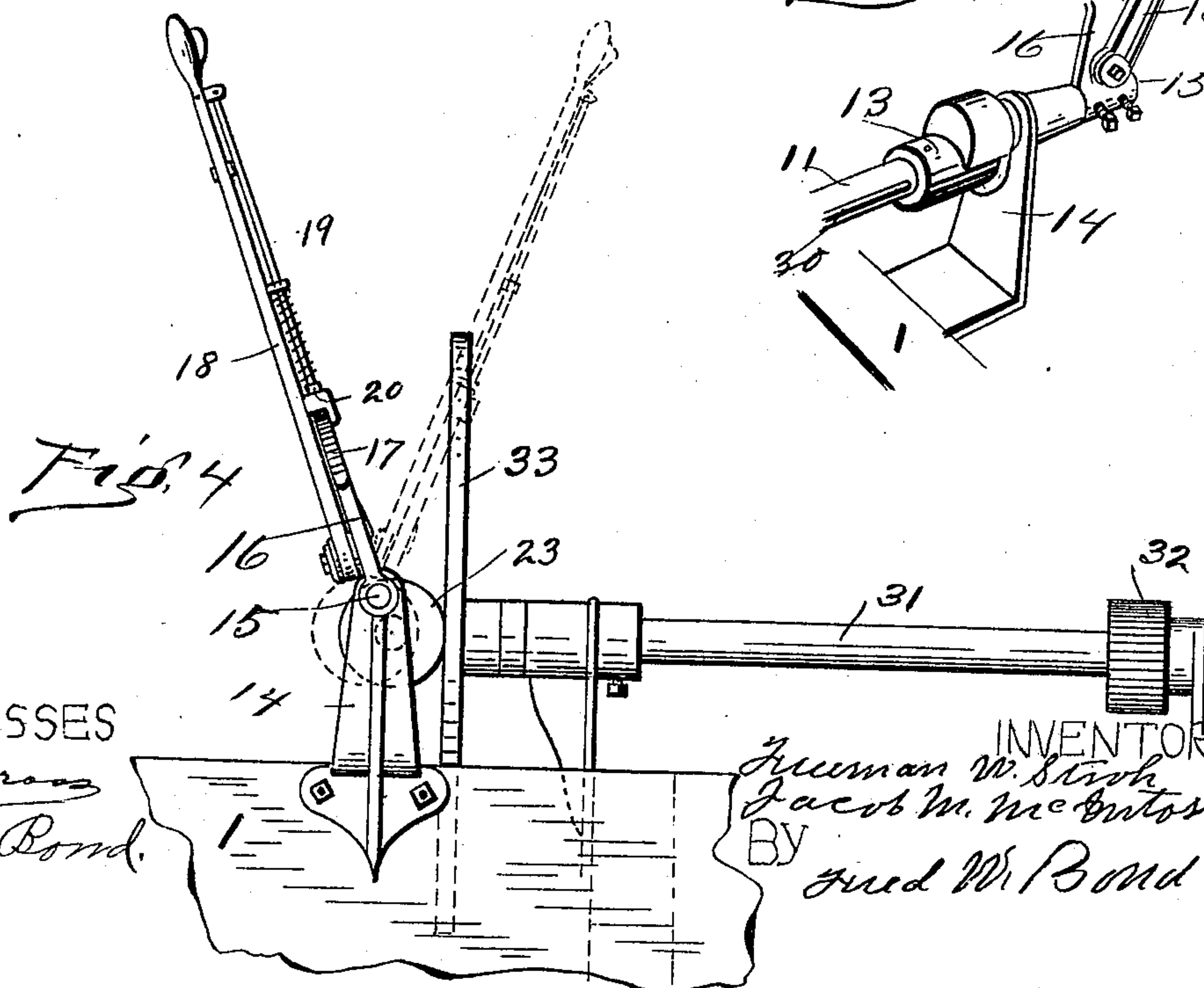
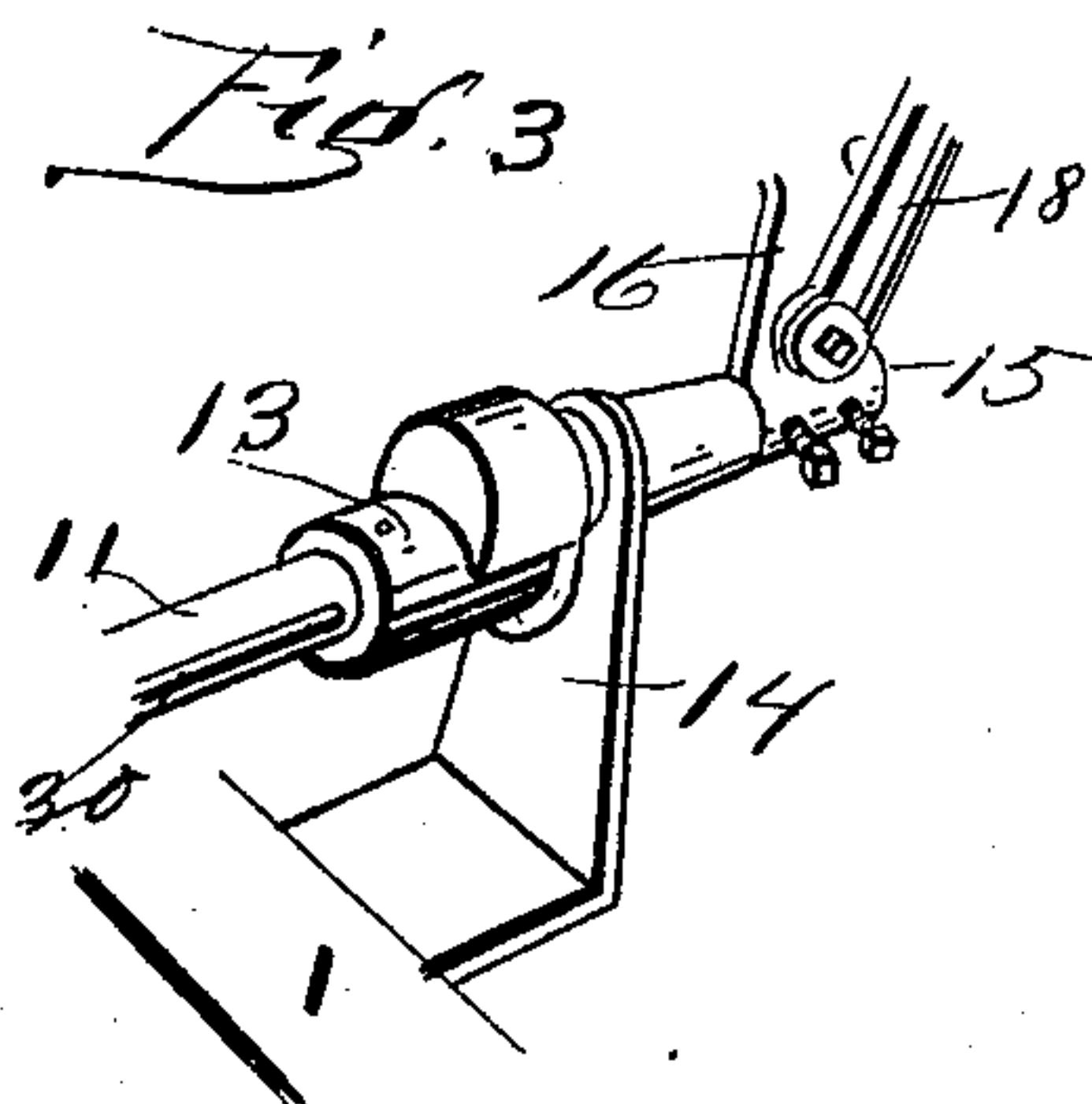
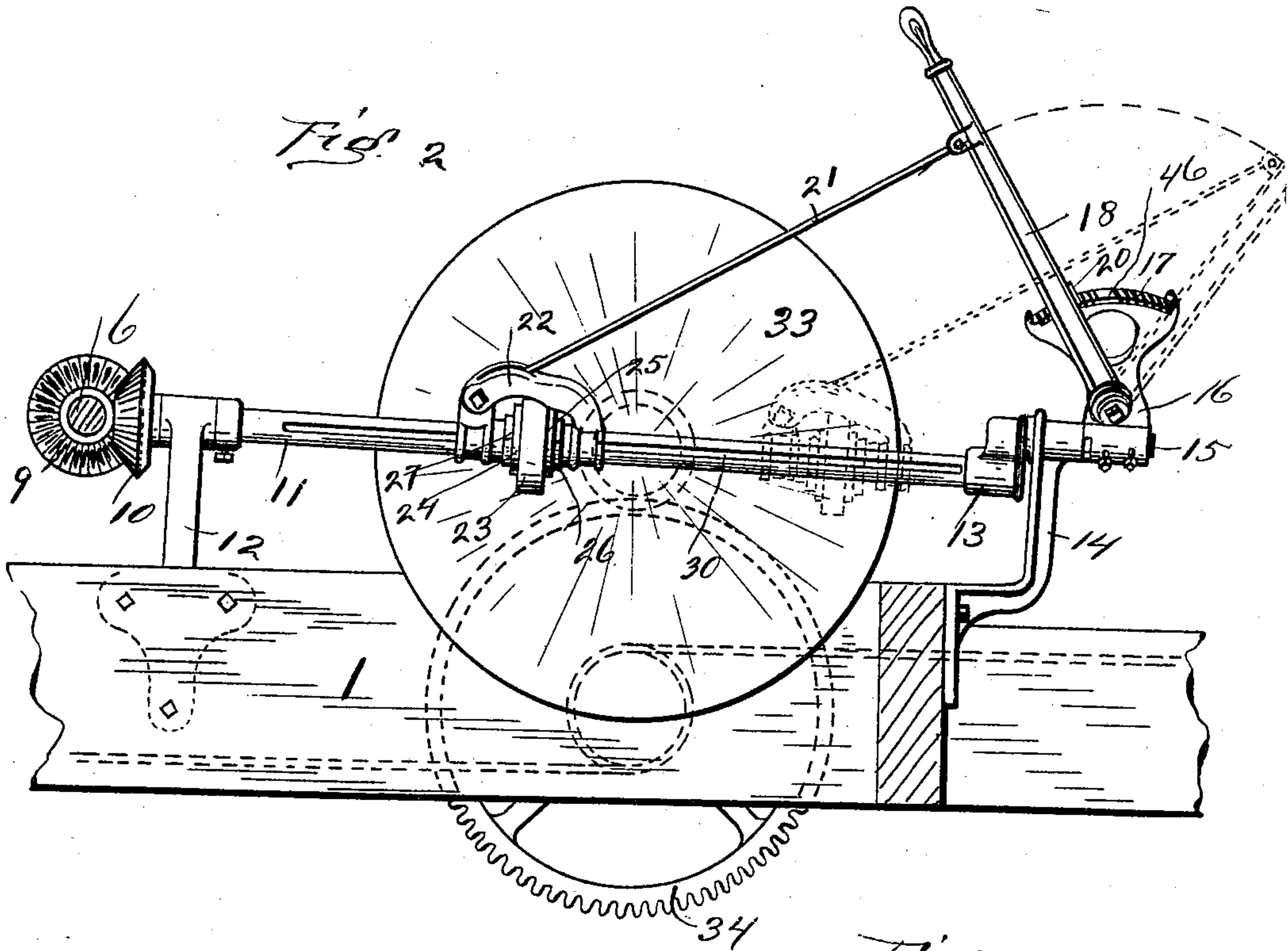
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WITNESSES

*J. R. Bond*

INVENTORS

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Jacob M. McIntosh  
BY Fred W. Bond*

ATTY



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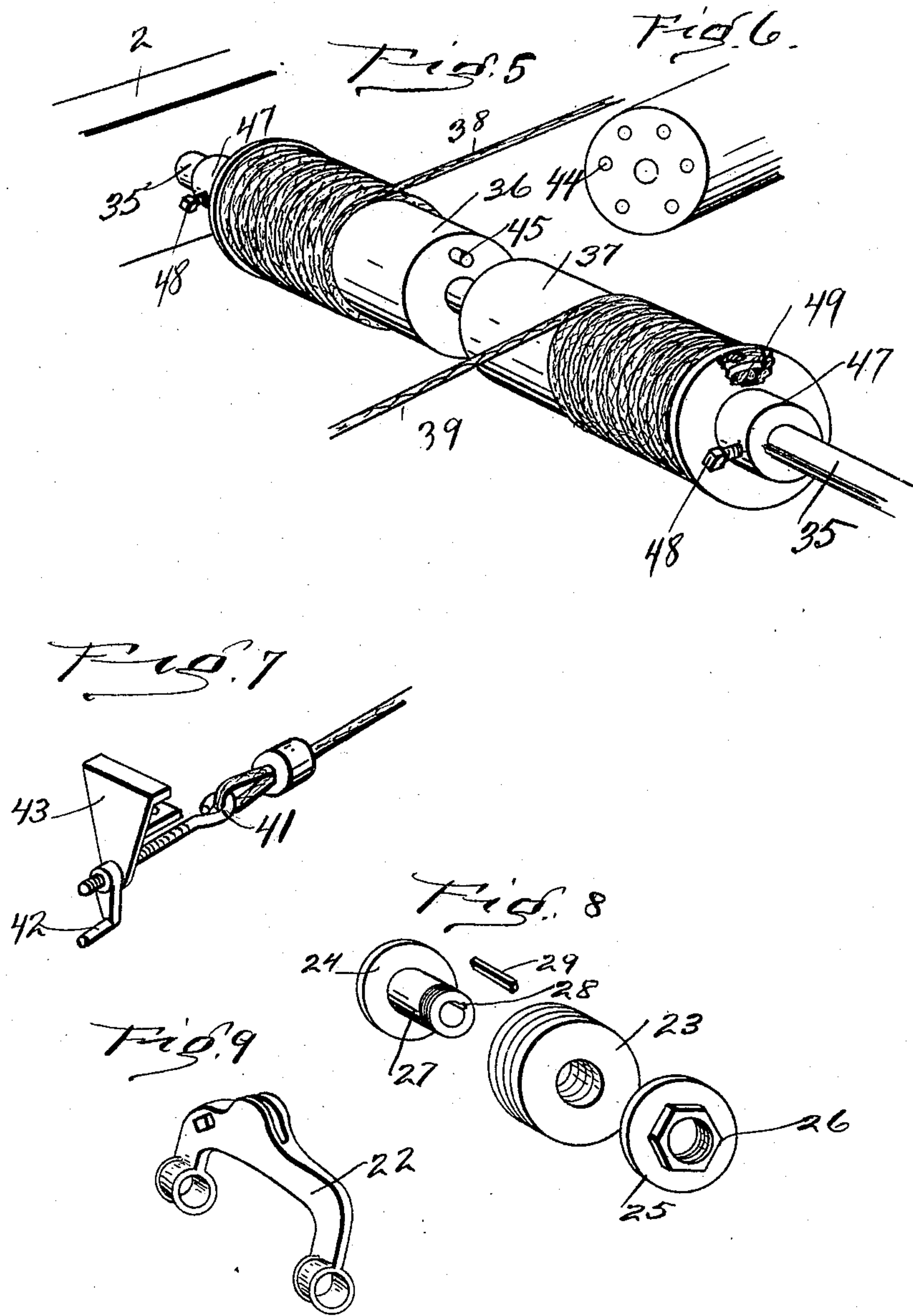
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3 Sheets—Sheet 3.



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# UNITED STATES PATENT OFFICE.

FREEMAN W. STROH AND JACOB M. MCINTOSH, OF BARBERTON, OHIO.

## SAWMILL.

SPECIFICATION forming part of Letters Patent No. 617,784, dated January 17, 1899.

Application filed April 14, 1898. Serial No. 677,617. (No model.)

*To all whom it may concern:*

Be it known that we, FREEMAN W. STROH and JACOB M. MCINTOSH, citizens of the United States, residing at Barberton, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Sawmills; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures of reference marked thereon, in which—

Figure 1 is a perspective view. Fig. 2 is a view showing a portion of the sawmill-frame, showing a front view of the feed-disk, also showing the feed-shaft and its different parts in proper position. Fig. 3 is a detached view of the feed-shaft eccentric, showing portion of the operating-lever. Fig. 4 is a detached view of the feed-disk, showing the friction-wheel in proper position to rotate the feed-disk. Fig. 5 is a view of the carriage-moving drum, showing the sections of the drum detached from each other. Fig. 6 is an end view of one of the drum-sections. Fig. 7 is a view showing one of the cable connections to the carriage. Fig. 8 shows detached views of the friction roll or wheel. Fig. 9 is a detached view of the sliding yoke for the friction roll or wheel.

The present invention has relation to sawmills; and it consists in the different parts and the novel arrangement hereinafter described and claimed.

Similar numbers of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the mill-frame, which is constructed in the ordinary manner, reference being had to properly attaching and arranging our improvements. The carriage frame or track 2 is constructed in the ordinary manner and is to be securely attached in any convenient and well-known manner to the mill-frame 1. To the mill-frame 1 are attached suitable bearings, such as 3, 4, and 5, which bearings carry the saw-shaft 6, to which saw-shaft is securely attached the power-wheel 7 and the saw 8, which parts are connected in the usual manner.

The shaw-shaft 6 is provided with the beveled gear-wheel 9, which gear-wheel meshes with the beveled gear-wheel 10, said gear-wheel being securely attached to the feed-shaft 11, which feed-shaft is journaled to the bracket 12 at its forward end and at its rear end to the eccentric 13. The eccentric 13 is journaled to the bracket 14 or its equivalent.

To the eccentric-shaft 15 is securely attached the arm 16, the outer end of which is the segment of a circle, and, as shown, it is provided with the teeth or notches 17, which teeth or notches are for the purpose hereinafter described.

To the arm 16 is pivotally attached the lever 18, which lever is provided with the sliding rod 19, said sliding rod being provided at its bottom or lower end with the engaging head 20, which head is formed at its bottom or lower end so that it will engage with the notches 17 and hold the lever 18 at the desired point of adjustment.

To the lever 18 is pivotally attached the rod 21, which rod extends forward and its forward end pivotally connected to the yoke 22, said yoke being mounted upon the feed-shaft 11 in such a manner that it can be moved back and forth upon said shaft by means of the lever 18 and the rod 21. Upon the feed-shaft 11 is mounted the friction-roller 23, which roller is so connected that it will revolve with the feed-shaft.

The friction-roller 23 is formed of material commonly used for friction rolls or wheels, which may be either disks of leather or other suitable material clamped together by means of the plates 24 and 25, which plates are held in proper position by means of the screw-threaded nut 26 and the screw hub or thimble 27, which hub or thimble is provided with a groove 28, which groove receives the key 29, said key being located partially in the groove 28 and the groove 30, formed in the feed-shaft 11, by which arrangement the friction roll or wheel revolves with the shaft without any reference to its location. To the mill-frame or its equivalent is properly journaled the shaft 31, which shaft is provided with the pinion 32 and the disk 33, which disk is located so that the friction roll or wheel 23 can be



brought into contact with said disk, as hereinafter described.

The pinion 32 meshes with the wheel 34, which wheel is located upon the shaft 35 and upon which shaft is mounted the drum-sections 36 and 37 and upon which drum-sections are wound the cables 38 and 39, said cables being so arranged that when the drum proper is rotated one of said cables will be wound upon the drum and the other will be unwound therefrom, by which arrangement the carriage 40 is moved back and forth by reason of the cables being attached to the ends of the carriage. For the purpose of adjusting the length of the cables so that there will be no slack between the drum and the ends of the carriage one of the cables is connected to the screw-threaded eye 41, which screw-threaded eye has mounted upon it a screw-threaded crank 42, located adjacent to the plate 43, which plate is connected to one of the cross-pieces of the carriage.

For the purpose of providing a means for adjusting the length of the cables to correspond substantially with the length of the carriage when the carriage length is changed by adding to or taking from said carriage sections thereof the drum proper is formed in two sections and the sections connected together by means of a series of holds, such as 44, and a pin or pins, such as 45, said parts being so located that when the inner ends of the drum-sections are brought together the pin 45 will enter one of the holds 44, thereby causing the two drum-sections to rotate in unison.

It will be understood that when the friction-roller is detached from the disk 33 said disk will remain at rest, as well as all parts to which motion is to be communicated by the rotation of said disk.

When the friction-roller is brought into contact with the disk 33 by means of the lever 18, the disk will be rotated, which in turn imparts longitudinal movement to the carriage by means of the pinion 32, the wheel 34, the drum-sections, and the cables.

When it is desired to change the speed of the carriage, the friction-roller 23 is brought to or from the center of the disk 34, as it will be understood that when the friction-roller is brought toward the center of the disk a more rapid motion will be imparted and when carried from the center a slower motion will be given to the disk, thereby changing the speed of the carriage, by which arrangement the feed can be regulated for heavy and light sawing and a rapid motion imparted to the carriage upon its return.

For the purpose of preventing the friction-roller 23 from being set directly upon the center of the disk the wide tooth 46 is formed upon the segment formed upon the outer end of the arm 16.

In use when it is desired to move the carriage so as to carry the material designed to be sawed toward the saw the lever 18 is moved

so as to bring the friction-roller on the hand side of the center of the disk, which will cause the cable 38 to be wound upon the drum-section 37 and the cable 39 to be unwound from the drum-section 36, said drum-sections being formed of the same diameter, so that the winding and the unwinding will be the same. For the purpose of holding the drum-sections 36 and 37 together the collars 47 are provided, which collars are held at the desired point of adjustment by means of the set-screws 48, it being understood that one of the collars 47 is to be loosened at the time when it is desired to adjust the cables for different lengths of the carriage. For the purpose of preventing any slipping of the cables upon the drum-sections the ends of the cables are to be securely connected to the drum-sections, as indicated at 49, Fig. 5. The lever 18 has two movements, one of which is to bring the roller in and out of contact with the disk 33, which movement is a lateral one. The other movement is for the purpose of changing the speed of the carriage or reversing said carriage, which movement is a longitudinal one.

In heavy sawing it may become necessary to press the lever 18, so as to force the friction-roller against the disk 33, but in ordinary sawing the weight of the lever will be sufficient, inasmuch as it is thrown out of a perpendicular line, as indicated in Fig. 4.

It will be understood that the carriage is to be provided with ordinary head and tail blocks, the knees 50 and 51, which are constructed in the ordinary manner, and for the purpose of setting said knees the shaft 52 is provided, which shaft is formed square throughout its entire length, by which arrangement the pinions 53 will rotate with the shaft without reference to their location.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of a mill-frame, a carriage-frame connected thereto and a carriage located upon the carriage-frame, the saw-shaft journaled to the mill-frame and provided with a power-wheel and a beveled gear-wheel located upon the saw-shaft and between the saw and the power-wheel, a bevel-wheel meshing with the gear-wheel mounted upon the saw-shaft and mounted upon a shaft located at an angle to the saw-shaft, and journaled at its power end to a fixed bearing, the eccentric 13 having journaled thereto the shaft 11 and provided with the segmental arm 16 having teeth upon its outer end, a lever pivotally attached to the segmental arm and provided with a catch-bolt to engage the teeth and hold the lever, a yoke mounted upon the shaft 11, a friction-roller mounted upon the shaft 11 and carried by the yoke, a rod connecting the yoke and lever together, the shaft 31 provided with the smooth-faced disk 33 and the pinion 32, the wheel 34 mounted upon the shaft 35 and meshing with the pinion 32, the detach-



able drum-sections mounted upon the shaft  
35 and one of said sections provided with the  
apertures 44 and the other provided with the  
pin 45, cables 38 and 39 wound in opposite  
5 directions upon the drum-sections and con-  
nected to the carriage, substantially as and  
for the purpose specified.

In testimony that we claim the above we

have hereunto subscribed our names in the  
presence of two witnesses.

FREEMAN W. STROH.  
JACOB M. MCINTOSH.

Witnesses:

GEO. F. DURANT,  
CHAS. AMMERMAN.