

W. A. MAYHALL.
REVERSING MECHANISM.
APPLICATION FILED JULY 24, 1911.

1,048,559.

Patented Dec. 31, 1912.

Fig. 1.

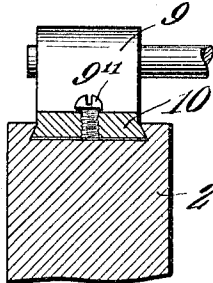
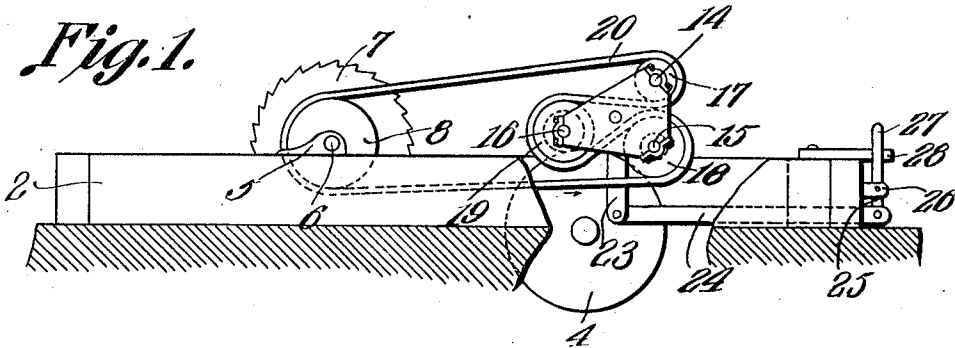


Fig. 5.

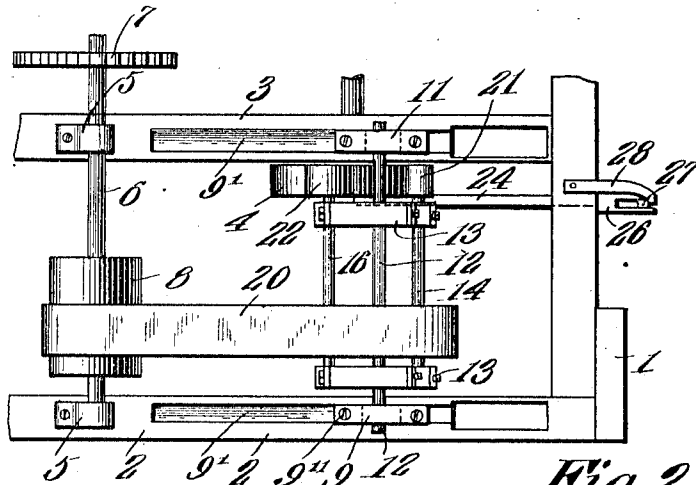


Fig. 2.

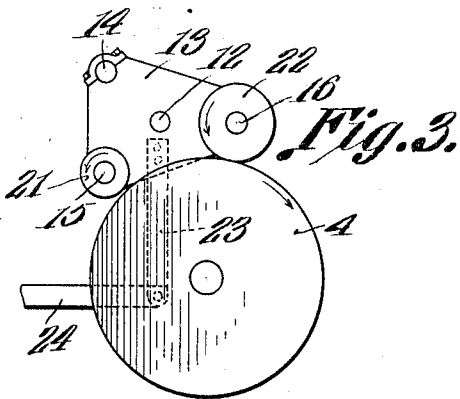
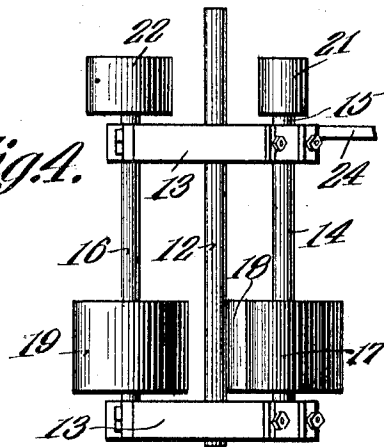


Fig. 3.

Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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REVERSING MECHANISM.

1,048,559.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed July 24, 1911. Serial No. 640,324.

To all whom it may concern:

Be it known that I, WILLIAM A. MAYHALL, a citizen of the United States, residing at Gloster, in the county of Amite and State of Mississippi, have invented a new and useful Reversing Mechanism, of which the following is a specification.

This invention relates to improvements in reversing mechanisms, the primary object of the invention being the provision of a reversing mechanism operated from a continuously one-way rotating driving element to impart a two-way rotation to a driven element.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is a side elevation of a saw mill feed frame employing this invention, a portion of the side frame of which is broken away to show clearly the construction and arrangement of parts for operating the tilting frame. Fig. 2 is a top plan view of the forward end of this machine showing in top plan view the tilting frame, driven wheel and driving shaft. Fig. 3 is a detail view of the tilting frame taken from the driven wheel side thereof, the driven wheel being shown in elevation. Fig. 4 is a top plan view of the tilting frame removed without the belt connection. Fig. 5 is a cross section through the adjustable bearing for the tilting frame.

Referring to the drawings, the numeral 1 designates the support, which is provided with the longitudinal sides or plates 2, and 3, the driven wheel 4 being journaled so as to project between the said plates 2 and 3 as clearly shown in Fig. 2 of the drawings. Mounted in the journal boxes 5 upon the plates or frames 2 and 3 is the driving element, or in this instance, the saw shaft 6, which carries the saw 7 and the pulley 8.

The device for effecting the transmission of power from the pulley 8 of the driving element to the main carriage feed operating wheel 4, comprises the journals 9, which are provided with the dove-tailed portions 10,

which fit in the slots 9' of the sides 2 and 3 of the frame, thus permitting the adjustment of said journals to and from the shaft 6, the screws 9'' locking the said journal boxings in adjusted position.

The frame is composed of the shaft 12 and the plates 13, which are substantially triangular in shape and the said frame is supported in the main frame by the shaft 12 so as to be permitted a tilting movement. Spanning the frame between the plates 13 and journaled in said plates are the shafts 14, 15 and 16. Carried by these shafts between the plates 13, are the belt pulleys 17, 18 and 19, respectively, the endless belt 20, being trained about the pulley 8, pulley 18, pulley 19 and under and over the idle pulley 17, all as clearly indicated in Fig. 1.

Carried by the outer end of the shafts 15 and 16, are the friction wheels 21 and 22, the friction wheel 21 being of a lesser diameter than the friction wheel 22, and both of said wheels being so disposed that when the frame constituted by the plates 13 is tilted that either one of said friction wheels may be brought into contact, with the periphery of the wheel 4, as clearly shown in Fig. 3 of the drawings. By this means the direction of travel of the wheel 4 will be reversed, that is it will move in one direction when the friction wheel 21 is in engagement with the periphery of the same, and in the other direction when the friction wheel 22 is in engagement. In order to operate the tilting frame so as to bring either one of said friction wheels 21 or 22 into contact with the periphery of the wheel 4, the inner frame 13 has connected and depending therefrom an arm 23, which is connected at its lower end by means of a pivotal joint to the link 24, which extends forwardly of the machine and is pivotally connected to the lower end 25 of the hand lever 27, which is pivoted to the frame at 26 and is provided with a pivoted catch 28 whereby the said lever 27 may be locked to hold both wheels 21 and 22 out of engagement with the wheel 4. By this means it will be seen that the operator may tilt the frame so that either one of the friction wheels 21 or 22 will be thrown into contact with the periphery of the wheel 4.

The reversal of the wheel 4 is accomplished through the medium of the pulleys 17, 18 and 19, and the training of the belt therearound, as indicated in Fig. 1, it thus

being possible for the shaft 6 to rotate in the same direction at all times, and cause a forward or reverse rotation of the wheel 4.

What is claimed is:—

- 5 A reversing mechanism comprising a frame, a shaft supported for rocking movement by said frame, triangular plates disposed in spaced relation on said shaft, the said shaft piercing said plates centrally,
10 shafts supported at the vertices of the plates, one of said shafts being idle, the other of said shafts extending through and beyond one of the plates, rollers of different dimensions disposed upon the projecting ends of
15 said latter shafts, pulleys mounted on all of

said shafts between the plates, a belt passing between the rollers of the latter shafts, and over the pulley of said idle shaft, and means for actuating one of the plates to rock both plates and the shafts supported thereby to alternately present the rollers supported at their ends to a driven element. 20

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM A. MAYHALL.

Witnesses:

D. M. BUTLER,

J. L. SEIDENSPINNER.

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