No. 825,175. PATENTED JULY 3, 1906.

J. B. AUSTIN.

MEANS FOR STARTING AND STOPPING MACHINERY.

APPLICATION FILED DEC. 29, 1905.

2 SHEETS—SHEET 1.

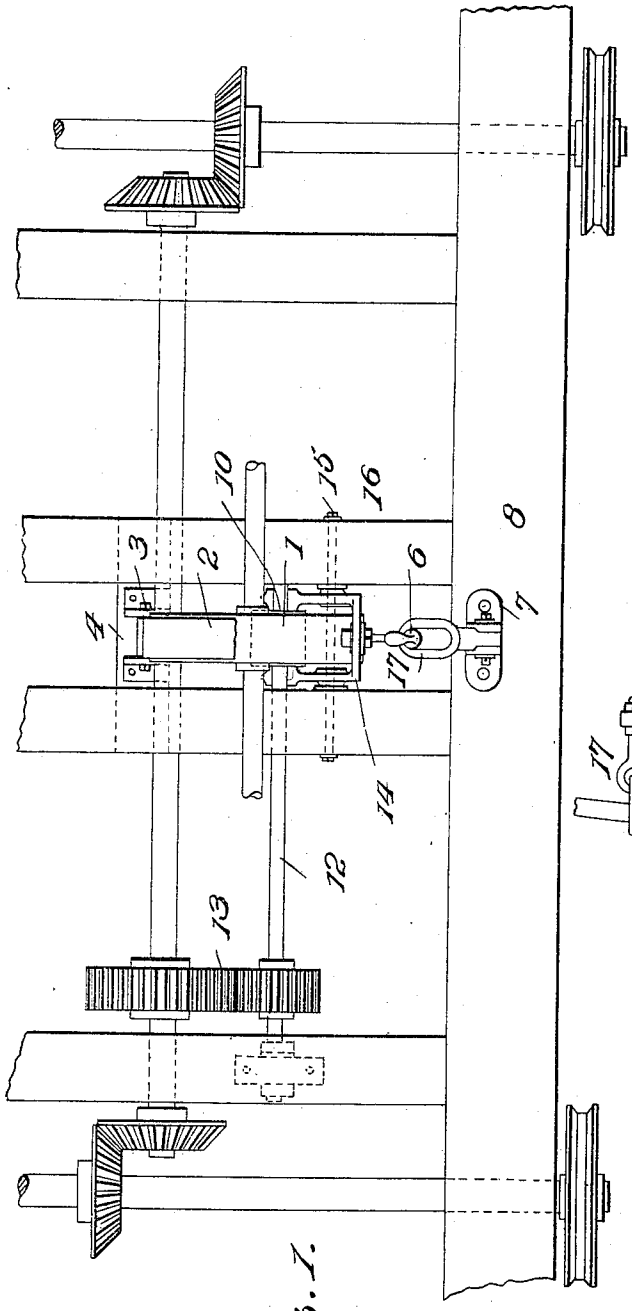


Fig. 1.

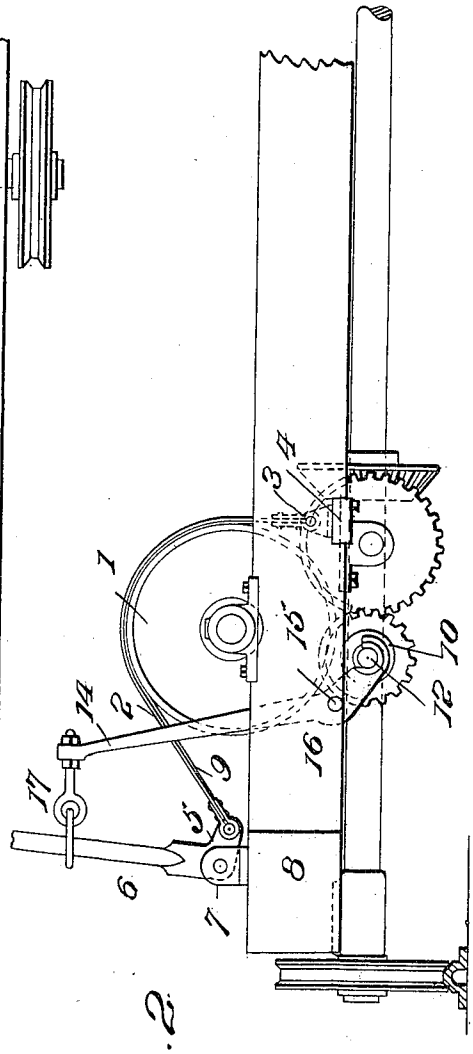


Fig. 2.

Witnesses

Lemon C. West

Inventor

Joshua B. Austin

By

Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

Fig. 5.

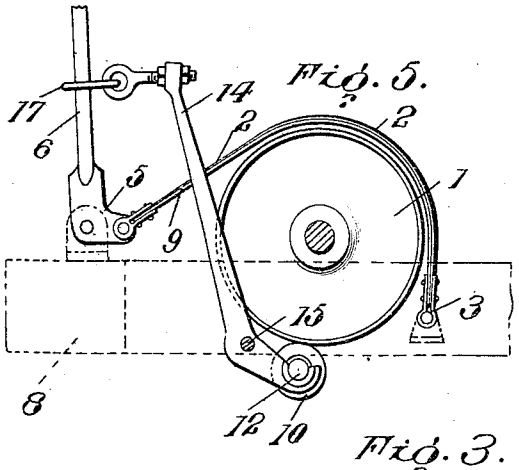
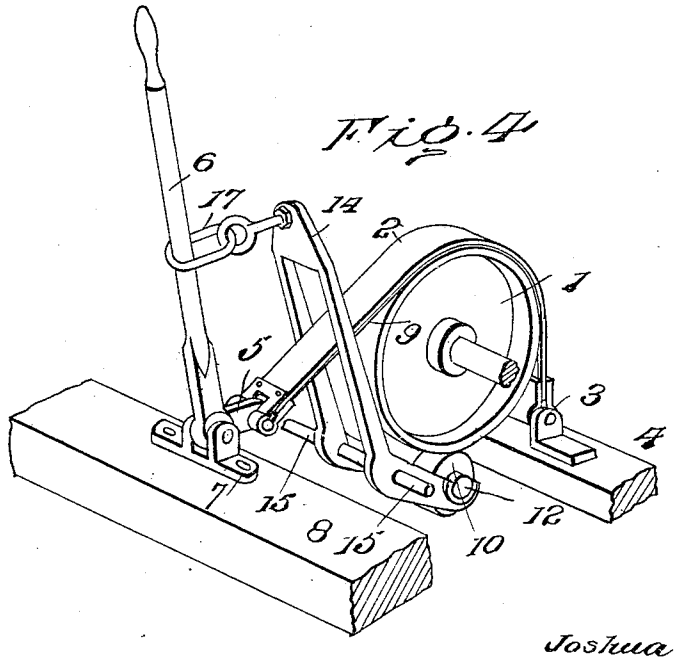


Fig. 3.

Fig. 4.



Inventor

Joshua B. Austin

Witnesses

Geo. Murie

Lemon E. West

By

Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSHUA B. AUSTIN, OF NEW ORLEANS, LOUISIANA.

MEANS FOR STARTING AND STOPPING MACHINERY.

No. 825,175. Specification of Letters Patent. Patented July 3, 1906.

Application filed December 29, 1905. Serial No. 293,865.

To all whom it may concern:

Be it known that I, JOSHUA B. AUSTIN, of New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Means for Starting and Stopping Machinery; and I do hereby 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.

The primary object of this invention is to so construct and combine the coöperating parts of the controlling device of a sawmill-carriage or other machine that repairs in the event of ordinary break downs may be made without interrupting the work of the entire plant, all of the parts being readily accessible; and further objects are to secure the application of increased power without undue strain on any of the parts and also to allow of the use of a brake-band faced with frictional material, so as to increase its hold on the driven pulley, such brake-band when released standing clear of the latter.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of a portion of a sawmill-carriage with my improvements. Fig. 2 is a side view showing the brake-band applied and the driving-pulley disengaged. Fig. 3 is an elevation partly in section. Fig. 4 is a view in perspective. Fig. 5 is a side view showing the band released.

Referring to the drawings, 1 designates the driven pulley of a sawmill-carriage or other machine designed to be intermittently operated. Partly encircling this driven pulley is a brake-band 2, which is pivotally secured at one end, as at 3, to a fixed support 4, its other end being secured to the short angular arm 5 of a lever 6, fulcrumed in a bracket 7, mounted on a second fixed support 8. As heretofore constructed these brake-bands have had but very slight play and when liable to be in constant contact with the driven pulley have been made entirely of metal; but by my invention I am enabled to equip this brake-band with a facing 9 of leather or other material for increasing the frictional resistance, since the break-band when not applied stands clear of the pulley. Here it might be noted that both ends of the brake-band are always in view and capable of being readily reached in the event of a break down. By throwing the operating-lever 6 to the right the brake-band will be applied; but when the lever is moved in the reverse direction the brake-band will be released.

10 designates a driving-pulley fast on a shaft 12, which is constantly operated by gearing 13 in Figs. 1 and 3, the bearing for such shaft allowing slight play in the latter, so that the pulley 10 may be moved into and out of engagement with pulley 1. This shaft 12, at the opposite sides of its pulley 10, is engaged by the hooked ends of the short arms of a lever 14, fulcrumed on a rod 15, supported by studs 16, projecting from the fixed support 8. This lever 14 is bifurcated, so as to span pulley 1 and the brake-band, and at its upper end is loosely connected, preferably by links 17, to the long arm of the main lever 6. When this latter lever is turned to release the brake-band from pulley 1, the lever 14 is turned on its fulcrum sufficiently to slightly raise shaft 12 so as to throw the driving-pulley 10 into frictional engagement with the driven pulley 1. The power thus applied for holding the driving-pulley in engagement with the driven pulley may be increased by moving the connection between the levers farther out on the long arm of lever 6. In stopping the operation of the driven pulley the moment lever 6 is moved to the right to effect the application of the brake-band the weight of shaft 12 and its pulley 10 will automatically turn the lever 14 on its fulcrum, thereby instantly disengaging the driving-pulley from the driven pulley, enabling the carriage-knees to be brought to a quick stop. The loose connection between the two levers permits the shaft 12 to lower the instant the main lever 6 releases its pull through the link connection 17.

The advantages of my invention will be apparent to those skilled in the art. It will be seen that all of the strain of the brake-band is applied to the main operating-lever 6, the pulley-controlling lever 14 being entirely relieved therefrom. Hence I avoid the possibility of the driving-shaft 12 jumping from the hooked ends of this latter lever, as would occur if the strain accompanying the application of the brake-band were communicated thereto. Furthermore, in the event of any breakage between the brake-band and the operating-lever access may be readily had thereto and repairs quickly made. I have found in actual practice that by reason of this accessibility of all the parts

in the event of a break down there is a delay of but a very few minutes in making repairs, thus avoiding the necessity of throwing the entire plant out of use, whereas with devices heretofore employed for controlling and stopping machinery, such as saw mill-carriages, ordinary repairs have required so much time as to necessitate the stopping of the entire plant. Although I have especially designed this device for controlling sawmill-carriages, yet it is manifest that it may be used in other connections.

I claim as my invention—

1. The combination with a driving-shaft and its pulley, of a driven shaft and its pulley, a brake-band for the latter, a lever to which such brake-band is secured, and means actuated by said lever for throwing said driving-pulley into engagement with the driven pulley when the brake-band is released.

2. The combination with a driving-shaft and its pulley, of a driven shaft and its pulley, a brake-band for the latter, a lever for throwing said driving-pulley into engagement with the driven pulley, and means for operating said brake-band, said lever automatically disengaging the driving-pulley from the driven pulley when the brake-band is applied to the latter.

3. The combination with a driving-shaft and its pulley, of a driven shaft and its pulley, a brake-band for the latter, a main operating-lever to which such brake-band is secured, a second lever for throwing said driving-pulley into engagement with the driven pulley, and means connecting said latter lever to the main lever, whereby as the brake-band is released the driving-pulley will be thrown into engagement with the driven pulley.

4. The combination with a driving-shaft and its pulley, of a driven shaft and its pulley, a brake-band for the latter, a main operating-lever to which such brake-band is secured, a second lever for throwing said driving-pulley into engagement with the driven pulley, and means loosely connecting said latter lever to the main lever, whereby as the brake-band is released the driving-pulley will be thrown into engagement with the driven pulley, and as the brake-band is applied the driving-pulley will be automatically disengaged from the driven pulley.

5. The combination with a driving-shaft and its pulley, of a driven shaft and its pulley, a brake-band for the latter secured at one end to a fixed support, an angular lever to the short arm of which the other end of said brake-band is secured, said lever being fulcrumed on a fixed support, a second lever also fulcrumed on a fixed support and having hooked ends engaging said driving-shaft on opposite sides of the pulley, and a loose connection between said second lever and said main lever.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOSHUA B. AUSTIN.

Witnesses:
JAMES E. JUNTS,
FELIX J. DREYFOUS.