No. 875,096. PATENTED DEC. 31, 1907.

J. R. McGIFFERT.

LOG SKIDDING MACHINE.

APPLICATION FILED DEC. 30, 1904.

2 SHEETS—SHEET 1.

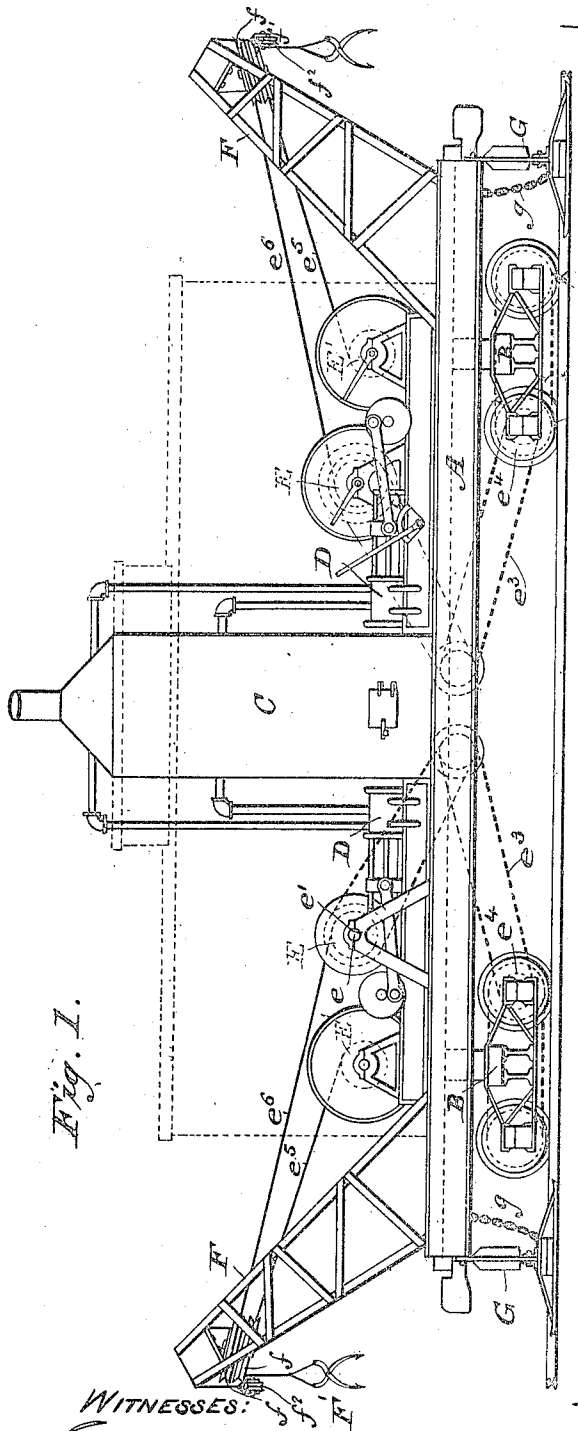


Fig. 1.

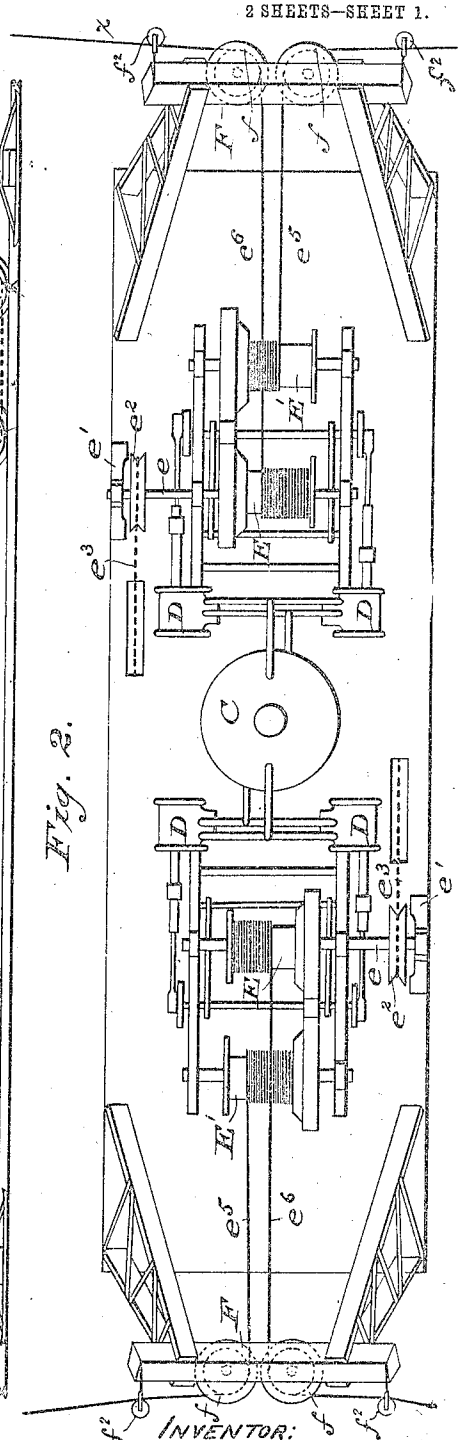


Fig. 2.

WITNESSES:

A. E. Merkel.

C. M. Norling.

INVENTOR:

John R. McGiffert

by his attorney

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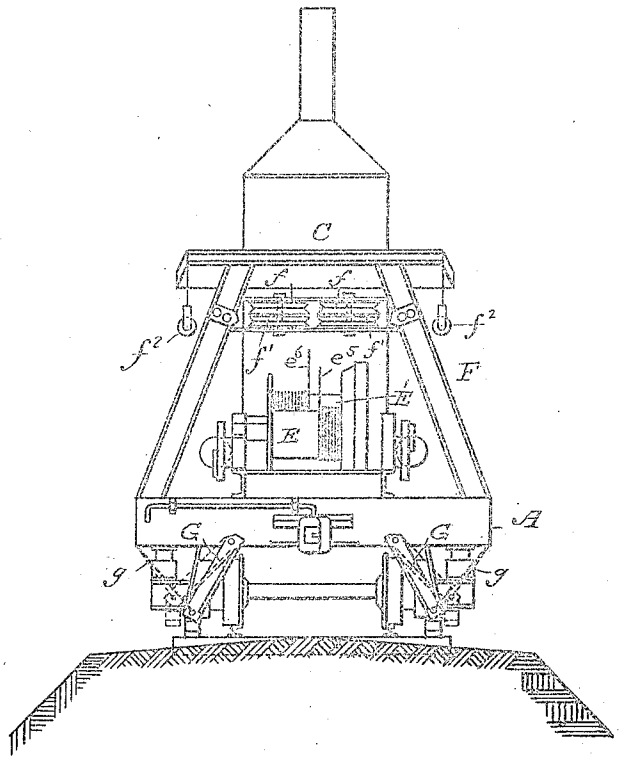
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2 SHEETS—SHEET 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN R. McGIFFERT, OF DULUTH, MINNESOTA, ASSIGNOR TO CLYDE IRON WORKS, OF DULUTH, MINNESOTA, A CORPORATION OF MINNESOTA.

LOG-SKIDDING MACHINE.

No. 875,096. Specification of Letters Patent. Patented Dec. 31, 1907.

Application filed December 30, 1904. Serial No. 238,979.

To all whom it may concern:

Be it known that I, JOHN R. McGIFFERT, a citizen of the United States, resident of Duluth, county of St. Louis, State of Minnesota, have invented a new and useful Improvement in Log-Skidding Machines, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle so as to distinguish it from other inventions.

My invention relates to machines for skidding logs, its object being to effect such skidding in an efficient and economical manner.

The said invention consists of means hereinafter fully described and particularly set forth in the claims.

The annexed drawings and the following description set forth in detail certain mechanism for carrying out the object of my invention; the disclosed means however, constitute but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings:—Figure 1, represents the side elevation of a device embodying my invention. Fig. 2, represents a top plan view of the same, and Fig. 3, an end elevation the automobile mechanism being omitted for the sake of clearness.

The machine illustrated in the drawings is adapted to travel upon a rail-road track and embodies a car-body A, provided with front and rear trucks B; upon the middle portion of the car-body is a boiler C, which supplies steam for two hoisting engines D D; each of these engines drives two cable-drums E E′ and suitable clutch mechanism is provided (not specifically illustrated) whereby each of these drums may be driven independently of the other. The clutch mechanism is also so arranged with reference to the engines, that each pair of drums E E′, may be driven simultaneously; the shaft e, of each drum E, is extended and its outer end is journaled in a bearing e'. Each of these shafts has a sheave e^2, or sprocket-wheel fixed thereto, over which passes a chain e^3. Each of these chains drives a sprocket e^4, shown in dotted lines, and fixed to one of the truck-wheel axles. The two pairs of truck-wheels are preferably connected by means of suitable sprockets and chains. Suitable clutch mechanism (not shown) is also provided for throwing the shafts e e, into and out of gear with the engine. It will therefore be seen that the car is rendered automobile; the character of the automobile mechanism may be any of many well known forms and in itself does not form a part of my invention.

At each end of the car-body is fixedly secured a mast or derrick frame F, preferably constructed as illustrated, of structural steel. In the upper portion of each mast are journaled upon parallel axes, substantially vertical, two oppositely disposed sets of pulleys f f and f' f', forming two pairs of oppositely disposed pulleys, each pair consisting of a pulley f and a pulley f'. Around these pulleys or drums are respectively wound skidding-cables e^5 e^6. The cables on the drums at one end of the machine pass between the oppositely disposed pair of pulleys, supported upon the mast at the corresponding end of the machine, as shown. Cable e^6, passes around one of the two upper pulleys as f, and the other cable e^5, passes around one of the lower pulleys f', and it will be seen that each cable may be caused to pass laterally from either side of the machine and still engage a guiding pulley. The end of each cable is provided with a suitable gripping device F′, which may be caused to grip the end of the log. Two additional swinging pulleys f^2 and f^2 are provided upon each mast to properly guide the cables on to pulleys f' and f^2.

In operating the above described machine it will be seen that by virtue of the arrangement of the pulleys described, a cable may be run laterally from the mast and out from either side thereof, so that the two cables at the same end of the machine may be caused to separately draw in logs at the same time, or both may be attached to the same log. The same arrangement also, as will be readily understood, permits logs to be drawn in simultaneously from opposite sides of the mast and both pairs of cables may be operated simultaneously in either of the above ways or may be operated in each of the two different ways simultaneously. The machine is hence so constructed as to impart to it a very great capacity for skidding logs. When operated as above described, the machine draws in the logs so as to bring them

along the side of the track but in a position substantially perpendicular thereto. In order however, to place the logs in the most advantageous manner for the operation of a loading machine which handles and loads the logs after having been skidded, it is necessary to place them so as to lie in piles parallel with the track and as close thereto as is feasible. To effect this purpose the skidding cables are provided at opposite ends of the machine, as shown and described, whereby a cable from each mast may be attached to the same log and at opposite ends thereof; and by drawing in the cable attached to the end farthest from the track more rapidly than the other, the log may be brought to lie parallel with such track.

In order to increase the stability of the car-body during the skidding operation, each end of the same is provided with two pivoted feet G, which are adapted to engage the ties of the track as shown in Fig. 1. When these feet are not in use, they are swung upwardly and laterally and attached to chains *g*, which hold them in such upwardly swung position, as will be readily understood, and as shown in dotted lines in Fig. 3. These chains are also attached to the feet when the latter are in use, so as to limit their inward movement, suitable means, such as a hook, secured to each foot, being provided, whereby different links of each chain may be attached, as will be readily understood. By means of this limitation, the feet are prevented from working inwardly when the car body is tilted and holding such body in the tilted position.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed provided the means stated by any one of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention—

1. In a log skidding machine, the combination of a car movable upon a track, two masts supported upon opposite ends of said car, pulleys mounted in said masts, two cables passing around the pulleys in each mast, and means interposed between the two masts for winding-in each of the two cables supported upon each mast independently of each other.

2. In a log skidding machine, the combination of a car movable along a track, two masts supported upon opposite ends of said car, guiding means for two cables mounted in each such mast, a cable guided by each of such guiding means and means intermediate the two masts for winding each cable independently of all the others.

3. In a log-skidding machine, the combination of a base; a mast supported thereon; four pulleys mounted upon said mast in oppositely disposed pairs; two cables, one between each two oppositely disposed pulleys; and means for operating said cables.

4. In a log-skidding machine, the combination of a base; a derrick-frame supported thereon; four pulleys mounted upon such frame in oppositely disposed pairs having parallel axes; a cable passing between each two oppositely disposed pulleys; and means for winding in said cables.

5. In a log skidding machine, the combination of a car movable along a track, two masts supported upon opposite ends of said car, two oppositely disposed sets of pulleys mounted upon each mast, a pair of cables guided by the pulleys upon each mast, and means for winding-in said cable.

6. In a log skidding machine, the combination of a car movable along a track, two masts supported upon opposite ends of said car, four pulleys mounted upon each mast in oppositely disposed pairs having parallel axes, a cable passing between each two oppositely disposed pulleys, and means for winding-in said cables.

7. In a log skidding machine, the combination of a car movable along a track, two masts supported upon opposite ends of said car, four pulleys mounted upon each mast, and in oppositely disposed pairs having parallel axes, a cable passing between each two oppositely disposed pulleys, and means for winding-in each of said cables independently of the others.

8. In a log skidding machine, the combination of a car movable along a track, two masts secured to said car and upon opposite ends thereof, cable-guiding means mounted upon said masts, cable-winding mechanism interposed between the two masts and means at each end of the car for engaging the track-bed for fixing the car relatively to said track.

9. In a log-skidding machine, the combination of a car movable along a track, two masts secured to said car and upon opposite ends thereof, cable-guiding means mounted upon said masts, cable winding mechanism intermediate the two masts, a pivoted foot on opposite sides of said car at each end thereof adapted to swing downwardly to engage the track bed, and a chain for each such foot adapted to retain the same out of such engagement.

10. In a log-skidding machine, the combination with a base of a mast independently mounted upon the end thereof, and comprising inwardly and forwardly inclined side members and a cross bar, joining the upper ends of said members, and oppositely disposed pulleys between said side members.

11. In a log skidding machine, the combination with a base of a mast independently mounted upon the end thereof, and comprising triangular side frames inwardly and forwardly inclined so as to approach each

other at their upper ends and project beyond said base, and a cross beam joining the upper ends of said frames, and oppositely disposed pulleys carried by the mast between the side frames thereof.

12. In a log-skidding machine, the combination of a base; an independent mast mounted upon each end thereof and comprising triangular side frames inwardly and forwardly inclined so as to approach each other at their upper ends and project beyond said base, and a cross beam joining the upper ends of said frames; cables guided in said masts; and mechanism interposed between the two masts for separately winding in said cables.

Signed by me, this 10th day of December, 1904.

JOHN R. McGIFFERT.

Witnesses:
E. M. NORLING,
A. E. MERKEL.