To all whom it may concern:

Be it known that I, WILLIAM DEQUEDE, a subject of the Emperor of Germany, and a resident of the city of New Orleans, Orleans parish, State of Louisiana, have invented certain new and useful Improvements in Log Hauling and Loading Machines, of which the following is a specification.

My invention relates to certain novel and useful improvements in a machine for hauling and loading logs and comprises a novel construction, combination and arrangement of parts set forth in and falling within the scope of the appended claims.

In the accompanying drawings, like characters of reference indicate like parts in all the views.

Figure 1 is a view in elevation of my improved machine; Fig. 2 is a plan view; Fig. 3 is an end elevation; Fig. 4 is a detail sectional view showing the manner of operating the lifting parts.

As will be understood by those acquainted with mechanism of this character, my machine is adapted to be moved along a track to various points, according to the location of the logs, and to haul such logs from a distance to a point alongside the machine and then load said logs upon the cars.

In the accompanying application, I have shown and described one particular embodiment of my invention but I do not wish to limit myself to the precise structure which, for the sake of illustration, I have delineated.

Referring to the drawings, A indicates a platform and frame of any preferred character and of sufficient strength to carry the weight of the mechanism mounted thereon.

B and C are two engines arranged on the platform, each having a plurality of drums, and both engines are supplied with steam from the single boiler D.

E is a mast vertically mounted near one end of the platform, and is preferably composed of two inclined members which form a shear leg. e, e, are rear guys securing said mast and having a turnbuckle e'. Rigidly secured to the mast intermediate its ends, is a block f to which is pivoted the hauling boom F. The pivoted connection can be of any form and is here in the form of a pin coupling f'. The upper end of this boom is supported by a guy f' connected to the mast near the top thereof.

f', f are side guys connected to staples or eyes f*, f at the sides of the boom and may be secured at their other ends at any desired point.

The manner of supporting and arranging the hauling boom, which is employed in hauling the logs to the cars, forms an important feature of my invention inasmuch as pivotally mounting it on the mast enables all strain on the guys and connection at the mast to be compensated for and relieved by the flexible coupling or joint. At the outer end of the boom, I suspend the sheave-block g through which the skidding or hauling ropes G, G' and G'' pass. These ropes are wrapped around and actuated by the drums h, h' and h'' of the engine B and are adapted to be carried out to the logs in any desired and well known manner.

H is the hoisting-boom of the apparatus and is adapted for use in loading the logs onto the cars. This boom, which is also preferably in the form of a shear leg, is rigidly secured to the turntable I by the angular channel iron side pieces i and i', which preferably extend the length of the sides of such table.

h and h' are check-lines or cables for the boom which pass over guide-pulleys i and i' respectively secured at the sides of the frame.

The turntable I is operated as follows:

To the drum e' of the engine C is secured one end of the swinging line K and after making several wraps around the drum, said line extends back along the body of the turntable around the guide-sheaves k and k' and is secured at k'' to the side of the frame. Similarly, a companion swinging line K' is secured to the companion drum e' and passing around the sheave k' is secured at k'' to the frame. Thus, by winding in one rope with its drum and paying out the other rope, the turntable and its boom may be swung as desired.

To the outer end of the boom H is secured one end of the guy cable j; the other end being made fast to the top of the mast.

The frame of the machine upon which all the mechanism is mounted is intended to be transferred to various points along the line of the car, and at a selected point of use, it is elevated to clear the car so the logging cars may pass beneath the platform. To accomplish this raising or jacking of the frame A, I employ supports or legs which are independently adjustable, and the means for accomplishing such adjustment forms an
important feature of my invention. A longitudinal beam \( a \) is placed beneath each side of the platform and \( a \) are blocks at each end of such platform. The adjustable legs \( h \) and \( c \) rest on the ground blocks \( N \). These jacks or supporting legs are raised and lowered as follows: \( O \) is a power shaft journaled on and extending transversely of the platform and is driven from the shaft \( b \) of engine \( B \), through the meshing gears \( b', b'' \). \( b' \) is a friction-clutch for throwing the gears into and out of operation. At one end of the shaft \( O \) is the drive pinion \( o \) meshing with the gears \( p \) and \( p' \) fast on the sprocket shafts \( P \) and \( P' \) respectively, carrying sprockets \( p \) and \( p' \). At the opposite end of the shaft are the sprockets \( q \) and \( q' \) connected by the drive chain \( q' \) for driving the sprockets \( q \) and \( q' \), \( p \) and \( p' \) and \( q' \) and \( q' \) are the four sprocket chains which respectively pass over the large sprocket wheels \( R, R', S, S' \) mounted on the short worm shafts \( r, r' \), and \( s, s' \), each of which shafts passes through the sleeve of its respective jack and engages through the gear-wheel \( W \) with the vertical lifting screw \( W \) to move the tubular sleeve up and down the standard portion \( M' \) of the jack. Thus, when the friction clutch \( b' \) is set and the drum \( b' \) is driven, the supports or jacks will be raised or lowered, as desired, through the mechanism just described. Thus, it will be seen that in addition to operating the skidding lines, the engine \( B \) is used to actuate the jack raising and lowering mechanism at any time, and when the frame has been suitably placed and the jacks suitably adjusted, the friction clutch can be thrown out and one of the skidding lines operated by the drum \( b' \).

As the engines \( B \) and \( C \) are of a well known type, they need not be described here, although I might state that the various drums of the engine are operated by friction devices, and are controlled by brakes after the manner usual in engines of this character.

The loading line \( T \) which passes through the sheave-block \( t \) at the end of the loading boom is operated from the main drum \( c \) of the engine \( C \).

The operation of this improved apparatus and the purposes it is intended to serve, are substantially the same as shown in the patent to Miller & Dickinson No. 763325 dated April 28, 1903, my invention appertains to certain improvements in the structural features of said patent, so it is unnecessary to describe the operation of the machine as a whole, as it will be readily understood by those skilled in the art.

Having thus described my invention, what I claim is:

1. In a log hauling and loading machine the combination with a mast, an upper boom flexibly coupled to said mast, a turntable, a boom, and side angle-irons connecting the boom with the turn-table.

2. In a log hauling and loading machine the combination of a mast, a turntable, a boom rigid with the turntable, a hauling boom flexibly connected to said mast intermediate its end, a power mechanism mounted on the frame for operating the turntable.

3. In a log-hauling and loading machine, the combination with the frame thereof, means for raising and lowering the frame, of a turn-table mounted on said frame, a mast, a boom flexibly connected to said mast intermediate the ends of the latter, a loading boom, and side angle-irons rigidly connecting the boom to the turn-table.

4. In a log hauling and loading machine the combination with the frame thereof, of a mast, a turntable, a loading boom, means rigidly securing the loading boom to the turntable, a hauling boom flexibly coupled to the mast, an engine, and means driven by and controlled from the engine for swinging said turntable.

5. In a log hauling and loading machine, the combination with the frame thereof, of a mast, a turntable, an engine having a plurality of drums, a loading boom, a loading line connected to the boom, and actuated from the engine, a flexible hoisting boom, a skidding or hauling line connected to said boom, an engine for operating said hauling line and guides for both the loading boom and the hauling boom.

6. In a log hauling and loading machine the combination with the frame thereof, of a mast, a hauling boom connected to the mast, a turntable on said frame, an engine having a plurality of drums, a line extending from the drums to the turntable and adapted to be operated to swing said table.

7. The combination of a frame, a mast, a hauling boom flexibly connected to the mast, means for supporting said frame over a train of cars, power mechanism mounted on the frame for actuating such means to raise and lower the frame, a hauling or skidding line operated from the power mechanism, a boom therefrom, and an engine for swinging the turntable.

8. In combination, a portable frame, hauling and loading apparatus carried thereby, means for raising and lowering the frame to permit the passage of a car therebeneath, a turntable, and means for operating said turntable comprising an engine mounted on the table, and lines secured to the drum of the engine at one end and to the frame at their opposite ends.

9. In a log hauling and loading machine the combination with a fixed mast, a hauling boom flexibly connected to the mast at approximately midway the length thereof,
a turntable, a loading boom connected to said turntable, an engine, and rope connections operated by the engine for swinging said turntable, means for supporting the frame in an elevated position over a train of cars, an engine mounted on the frame and connections between said engine and the frame supporting means for actuating the latter to raise and lower the frame.

10. In a log-hauling and loading machine, the combination with hauling and loading apparatus including a turntable, a mast, a hauling boom, flexibly supported midway the mast, a loading boom connected to the turntable, of means for supporting the frame over a train of cars, and mechanism for operating the supporting means to raise and lower the frame, such mechanism including an engine mounted on the frame, and connections between the engine and the supporting means whereby when the engine is operated the supporting means may be actuated to raise and lower the frame.

11. In a log hauling and loading machine the combination of a frame, means for raising and lowering said frame, a mast, a hauling boom connected to said mast, hauling lines connected to said boom, an engine for operating said hauling lines, a loading boom, a loading line supported from said boom, an engine for operating said loading line, a turntable, and a rope connection between the engine of the loading line and the frame, whereby said turntable may be swung as desired.

12. In combination a portable platform, mechanism for supporting it over a train of cars, an engine, a mast, an upper hauling boom flexibly connected to the mast, a lower loading boom, a sheave near the outer end of said lower loading boom, a turntable to which said boom is secured, and a swinging line extending from the engine to the platform and adapted when operated by the engine to swing said turntable.

13. The combination of a frame, a swinging loading boom, a mast, and a relatively short hauling boom pivoted to the mast at a point intermediate the ends of the latter.

14. The combination of a frame, means for elevating the frame to permit the passage of a car thereunder, a loading boom, a mast, and a hauling boom pivoted to the mast approximately midway of the latter.

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

WILLIAM DEQUEDE.

Witnesses:

J. H. DICKINSON,

JAY V. BAPTIST.