

No. 656,185.

Patented Aug. 21, 1900.

F. W. FRITZ.  
HAULING TRUCK.

(Application filed Dec. 30, 1899.)

(No Model.)

2 Sheets—Sheet 1.

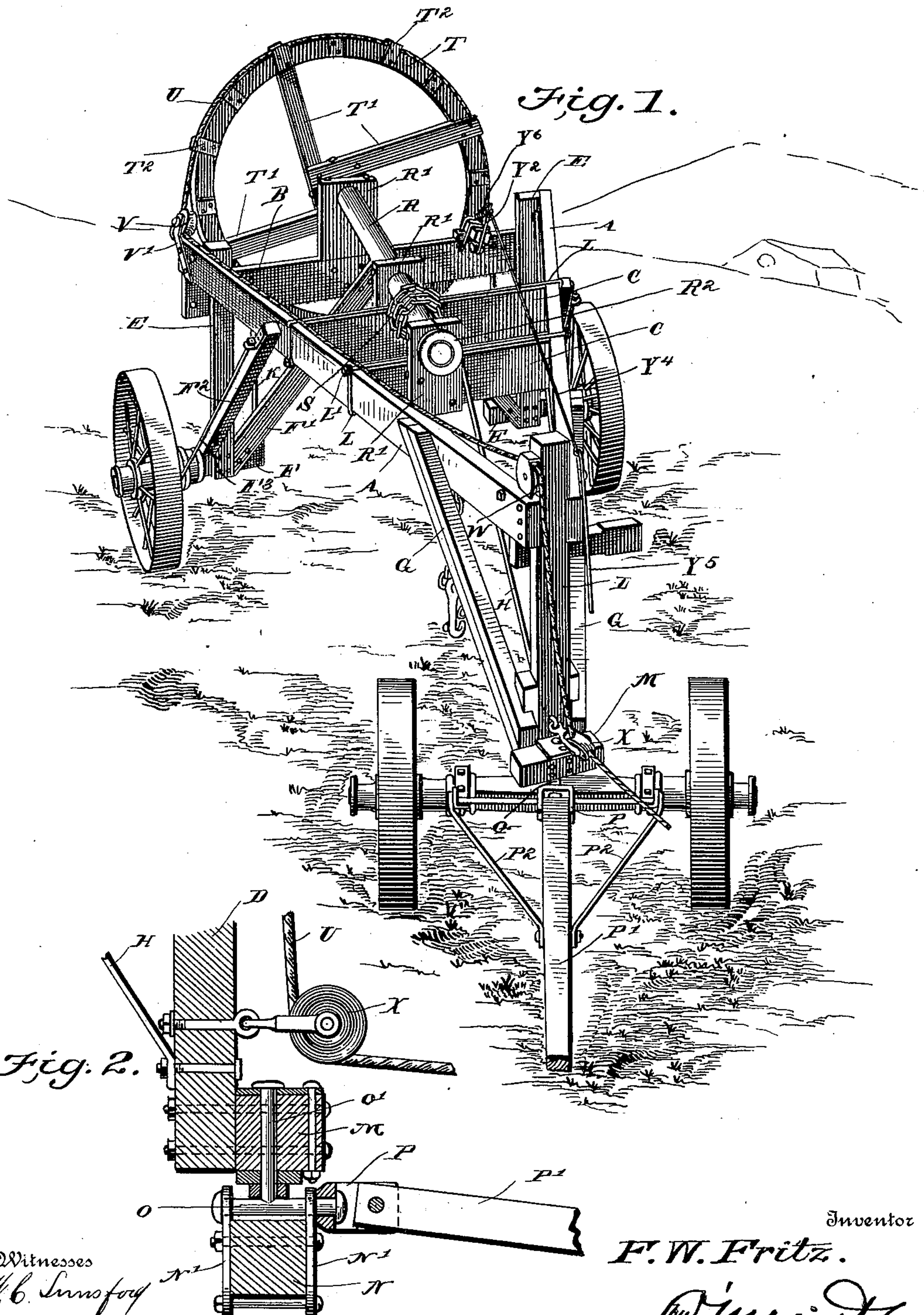


Fig. 2.

Witnesses

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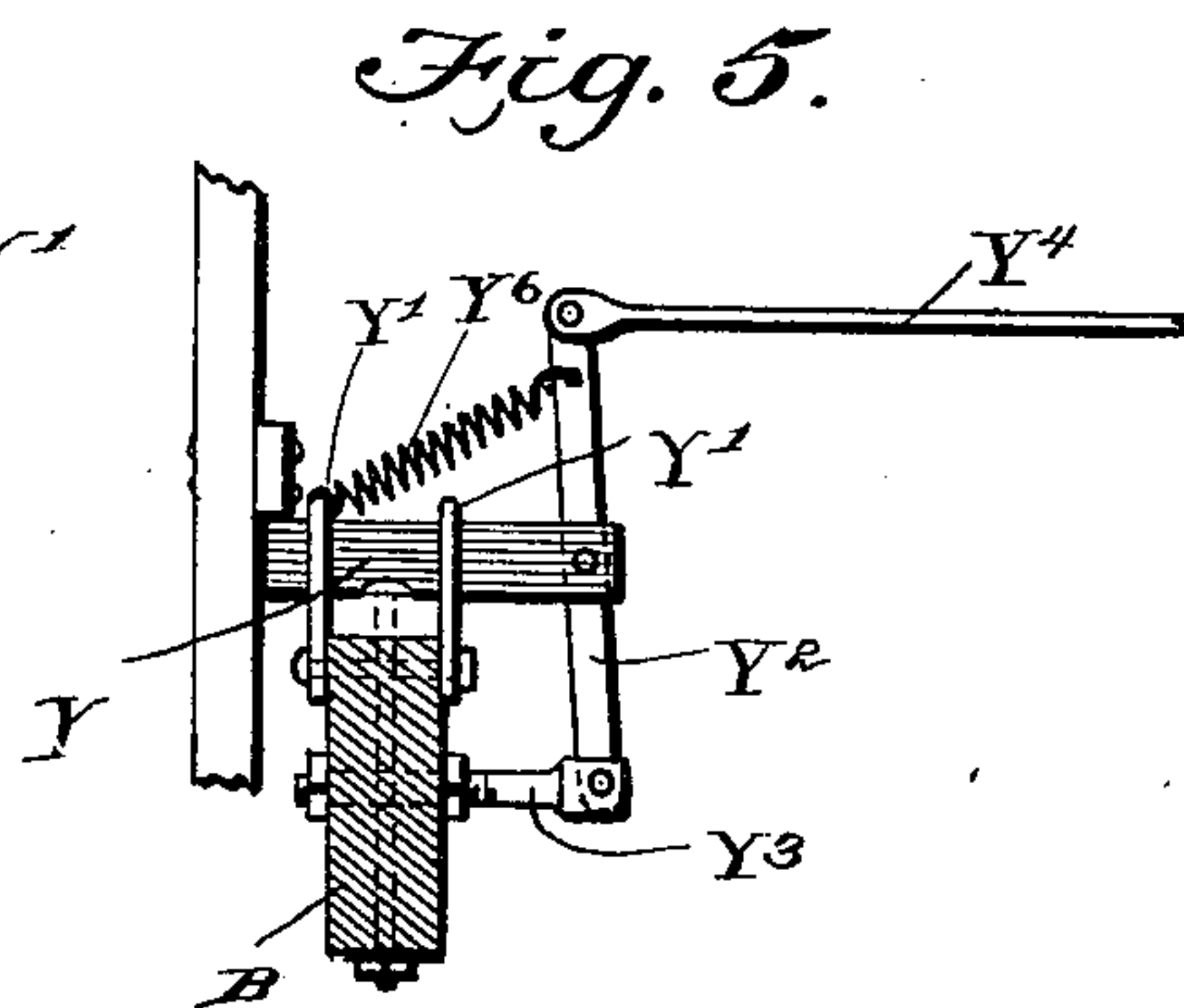
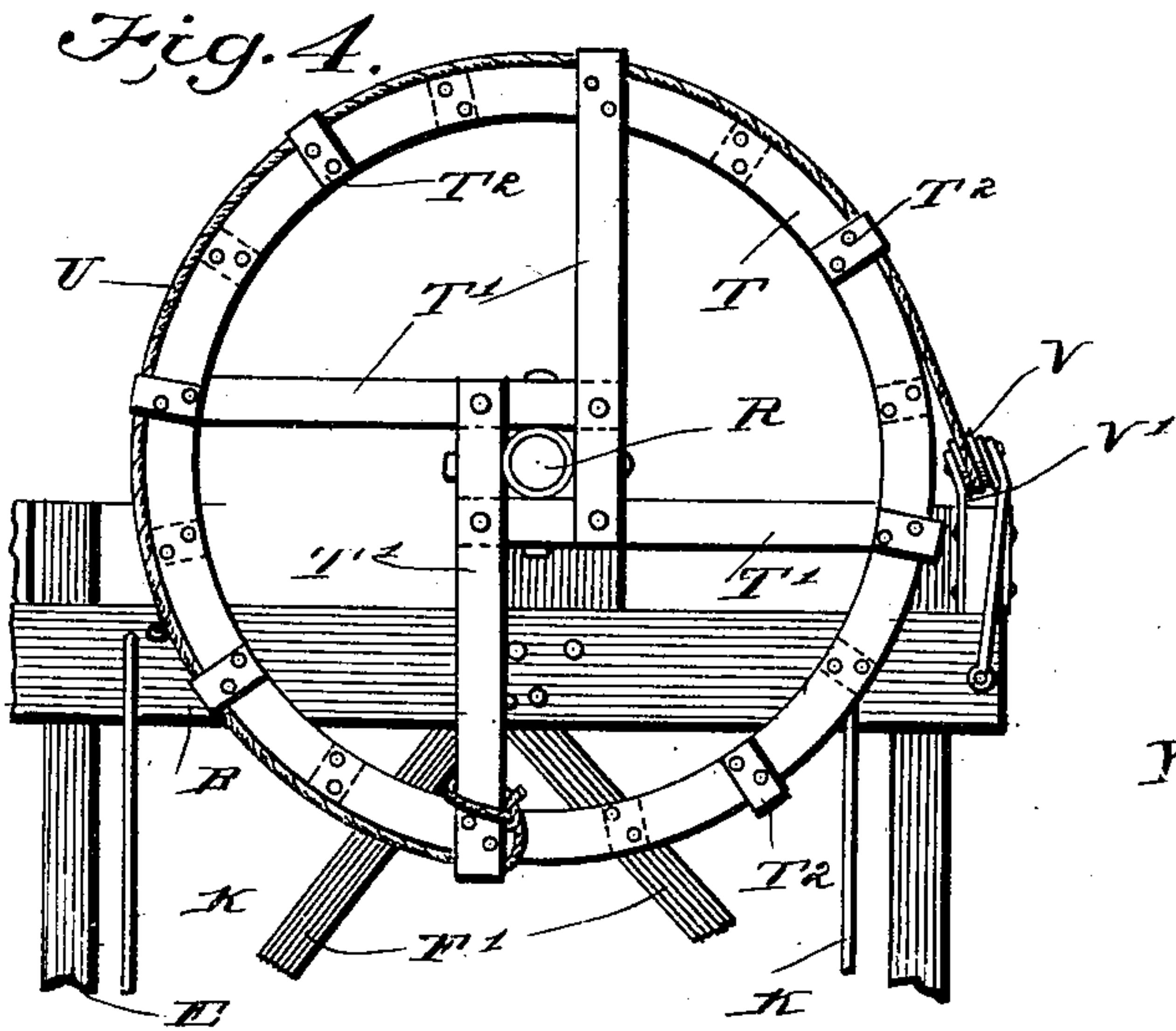
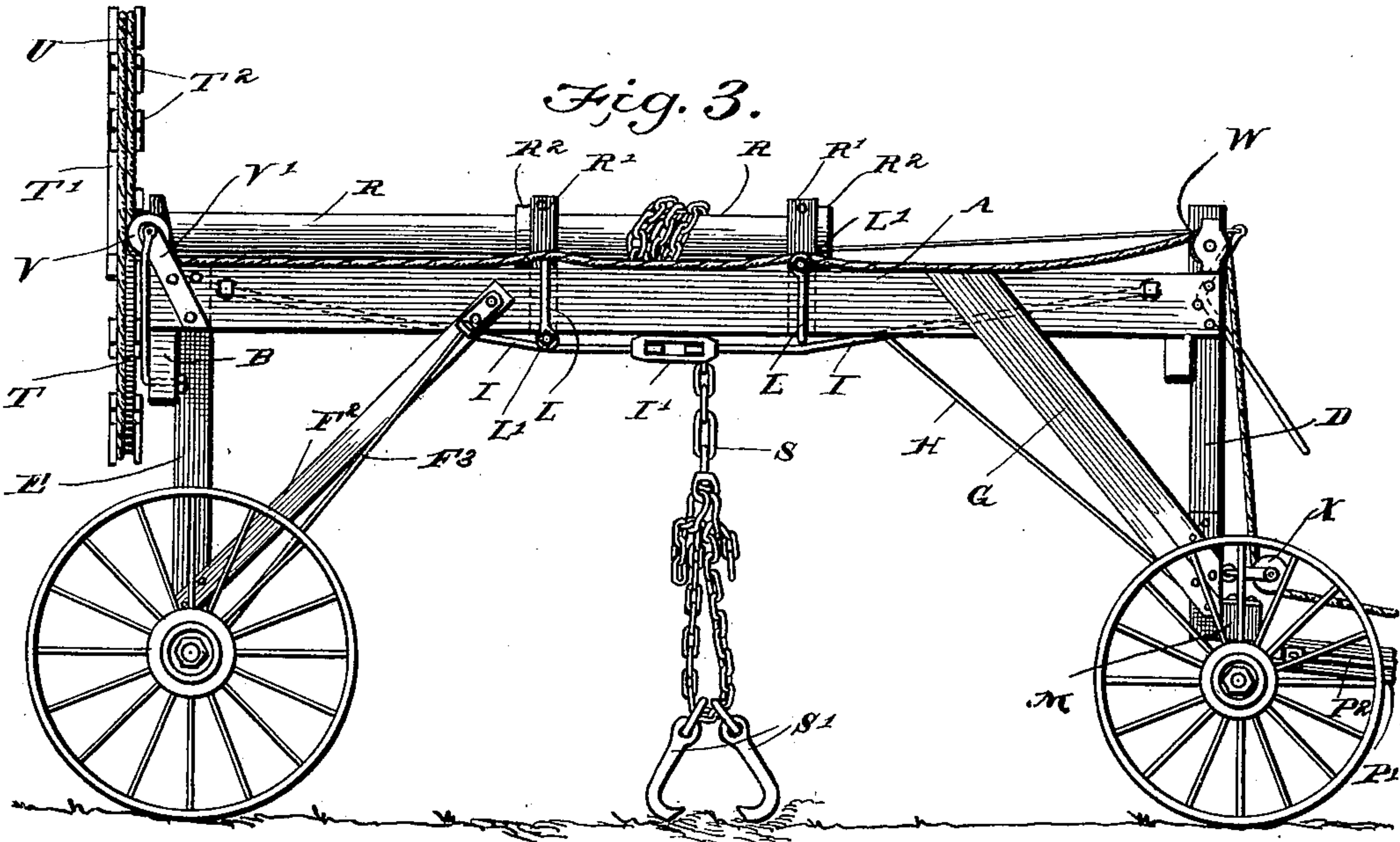
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# UNITED STATES PATENT OFFICE.

FRANK W. FRITZ, OF DEWAR, IOWA.

## HAULING-TRUCK.

SPECIFICATION forming part of Letters Patent No. 656,185, dated August 21, 1900.

Application filed December 30, 1899. Serial No. 742,029. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK W. FRITZ, a citizen of the United States, residing at Dewar, in the county of Black Hawk and State of Iowa, have invented a new and useful Hauling-Truck, of which the following is a specification.

This invention is an improved construction of machine for lifting and hauling heavy articles, such as boulders, and it can also be employed for abstracting stumps, roots, and the like.

The principal object of the invention is to provide a machine of this character which shall be exceedingly strong and durable and at the same time very light in construction, so that it can be easily transported from place to place; and another object of the invention is to so construct and arrange the parts that the machine can be easily operated to perform its various functions.

With these objects in view the invention consists in the peculiar construction of the various parts and in the novel manner of arranging and combining the same, all of which will be fully described hereinafter and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a perspective view of a machine constructed in accordance with my invention. Fig. 2 is a detail sectional view showing the connection between the front axle and the front end of the frame. Fig. 3 is a side elevation of the device. Fig. 4 is a detail view of the operating-wheel, and Fig. 5 is a detail view of the stop for checking the movement of the said wheel.

In constructing a machine in accordance with my invention I employ a main frame comprising side beams A, the rear beam B, and the intermediate cross-beams C. The side beams approach each other at their forward ends and are securely fastened to a vertical post D, which extends some distance below the side beams A.

The rear end posts E are secured to the rear ends of the side beams A and also to the ends of the rear beam B, said posts extending also down from the side and rear beams and are fastened at their lower ends to the stub-axles F, which axles are further braced by the inclined brace-strips F', which extend

from the stub-axles to the rear cross-beam D, being attached to said cross-beam at its center. Brace-strips F<sup>2</sup> extend also from the lower ends of the posts E to the side beams A, and the rear portion of the frame is still further braced by means of tie-rods F<sup>3</sup>, fastened at their upper ends to the brace-strips F<sup>2</sup> and connected to a collar surrounding the stub-axles, which carry the rear wheels. The front portion of the machine is braced by means of strips G, which extend from the side beams to the lower end of the post D, and the entire machine is braced by means of a truss-rod H, which is fastened at its forward end adjacent to the lower end of the post D. Each side beam is also braced by the truss-rods I, secured upon the inner sides of the beams adjacent to their front and rear ends and passing beneath the intermediate cross-beams, said truss-rods being made in sections and connected by means of a turn-buckle I', as most clearly shown in Fig. 3. The inner end of the stub-axle is also supported by means of a rod K, extending from said rear end to the rear beam B. Each intermediate cross-beam is reinforced by a metal rod L, which extends along the upper and lower edges of the said beam and also upon the exterior of the side beams A, said rod being preferably composed of two sections connected together by means of nuts and eyes L', as most clearly shown in Figs. 1 and 3.

A bolster M is securely bolted to the post D, upon the forward side of its lower end, the upper face of said bolster being sheaved by means of a metal plate. The front axle N has the plates N' secured upon opposite sides at its center, said plates projecting some distance above the top of the axle and perforated to receive the horizontal member O of a T-shaped bolt, the vertical member O' passing out through the bolster and serving as a king-bolt, suitable washers being interposed between the bottom of the bolster and the horizontal member O. A suitable bracket P is securely fastened upon the forward end of the member O, and a tongue P' is pivotally secured in said bracket. In this manner the tongue is securely connected to the machine, and stay-rods P<sup>2</sup> also extend from the tongue to the axle adjacent to its front end. It will thus be seen that I provide an exceedingly



strong and durable main frame which is very light in weight and can therefore be easily moved about from place to place.

A winding shaft or drum R is mounted upon the rear portion of the frame, longitudinally of the same, and slightly to one side of the longitudinal center of the frame, said shaft or drum being journaled in suitable boxes or brackets R', attached to the intermediate and rear beams C and D, and a collar R<sup>2</sup> is fastened upon the said shaft or drum adjacent to said bearing in order to prevent any longitudinal movement of the shaft or drum.

In practice I prefer to use a tubular shaft or drum of metal and fill same with a core of wood. A lifting-chain S is attached to the winding shaft or drum between the intermediate cross-beams, said chain having any construction of grapple or lifting device S' at its lower end, and by arranging the shaft or drum slightly to one side of the center I am enabled to have the chain and grapple depend exactly from the longitudinal center of the machine, thereby placing the strain upon the center of the frame.

In order to rotate the winding shaft or drum, I arrange a wheel upon the rear end of the said shaft or drum, said wheel comprising a rim T and a series of spokes T', which cross each other at their inner ends, as shown in Fig. 4, and provide a hub or bearing for the wheel. The rim T is of considerable thickness, and upon both sides of said rim are arranged a series of guide-strips T<sup>2</sup>, the outer ends of which project beyond the periphery of the rim, and thereby serve as guides to hold the operating-rope U upon the rim, said rope being fastened at one end to one of the spokes, and is then passed one or more times around the wheel and then beneath the sheave V, journaled in a suitable bracket V' and arranged at an angle to properly receive the rope from the rim. After passing under the sheave V the rope is carried forwardly along one of the side beams and through another sheave W, mounted upon the side of the post B, and then downwardly through a pulley X, swiveled to the lower end of the post which is above the bolster. Draft-horses are attached to the forward end of the rope in the usual and well-known manner, and by pulling upon the same it will be readily understood that the wheel will be revolved by the rope being unwound, and as the wheel revolves the winding shaft or drum will be operated, causing the chain to be wound thereon, and the object to be lifted will be elevated a sufficient distance from the ground so that it can be readily transported. By arranging the pulleys in this manner and swiveling the lower one x to the lower end of the post the train can be driven straight forward or to either side, to suit conditions or locations, and the strain upon the rope from the team will be located so near the ground

that there will not be the danger of straining the parts of the wagon by a lateral pull, as if the strain were located higher. In order to check the movement of the wheel at any desired point, I employ a stop-bar Y, sliding in suitable guides Y', mounted upon the rear beam B, said stop-bar being connected to a lever Y<sup>2</sup>, which is pivoted at its lower end to an arm Y<sup>3</sup>, extending forwardly from the rear beam B, the stop being connected to the said lever at or near its center, and the operating-rod Y<sup>4</sup> is connected to the upper end of said lever, said operating-rod extending forwardly and connected to the lever Y<sup>5</sup>, pivoted adjacent to the forward end of the said beam, and by operating the said lever Y<sup>5</sup> the stop-bar can be thrown into or out of the path of one of the guide-strips, and thereby stop the wheel or permit it to revolve, according to the necessities of the case, and a spring Y<sup>6</sup> is connected to the upper end of the lever for the purpose of throwing the said lever rearwardly, and consequently projecting the stop-bar into the path of the guide-strip. By this means the wheel is normally held against rotation and can be immediately released whenever it is desired to operate the said wheel for the purpose of rotating the winding-shaft.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hauling-truck, the combination, with a triangular frame provided with cross-pieces, of a wheeled standard at each corner of the frame, three sheaves, one at the forward end of the frame, one at the rear end and one at the lower end of the front standard, a shaft journaled on the rear end of the frame and on the cross-pieces, the forward end of which is adapted to receive a lifting-chain, a pulley-wheel mounted on the rear end of said shaft, the rim of which is adjacent to the rear sheave, and a rope over the pulley and through the sheaves, substantially as described.

2. In a hauling-truck, the combination with a frame, of a shaft journaled thereon, the forward portion of which is provided with lifting-chains and the rear end is provided with a wheel, the periphery of the wheel being provided with stops, guides on the frame adjacent to the said stops, a spring-actuated lever pivotally secured to the frame adjacent to the guides, a bar pivotally secured to the lever and projecting through the slides in position to engage with the stops on the wheel, a rod connected with the lever, and a rope around the operating-wheel, substantially as described.

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Witnesses:

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