M. HENDRICKSON,

TRUCK CRANE.

APPLICATION FILED DEC. 4, 1916.

1,235,472.

Patented July 31, 1917.

2 SHEETS—SHEET 1.

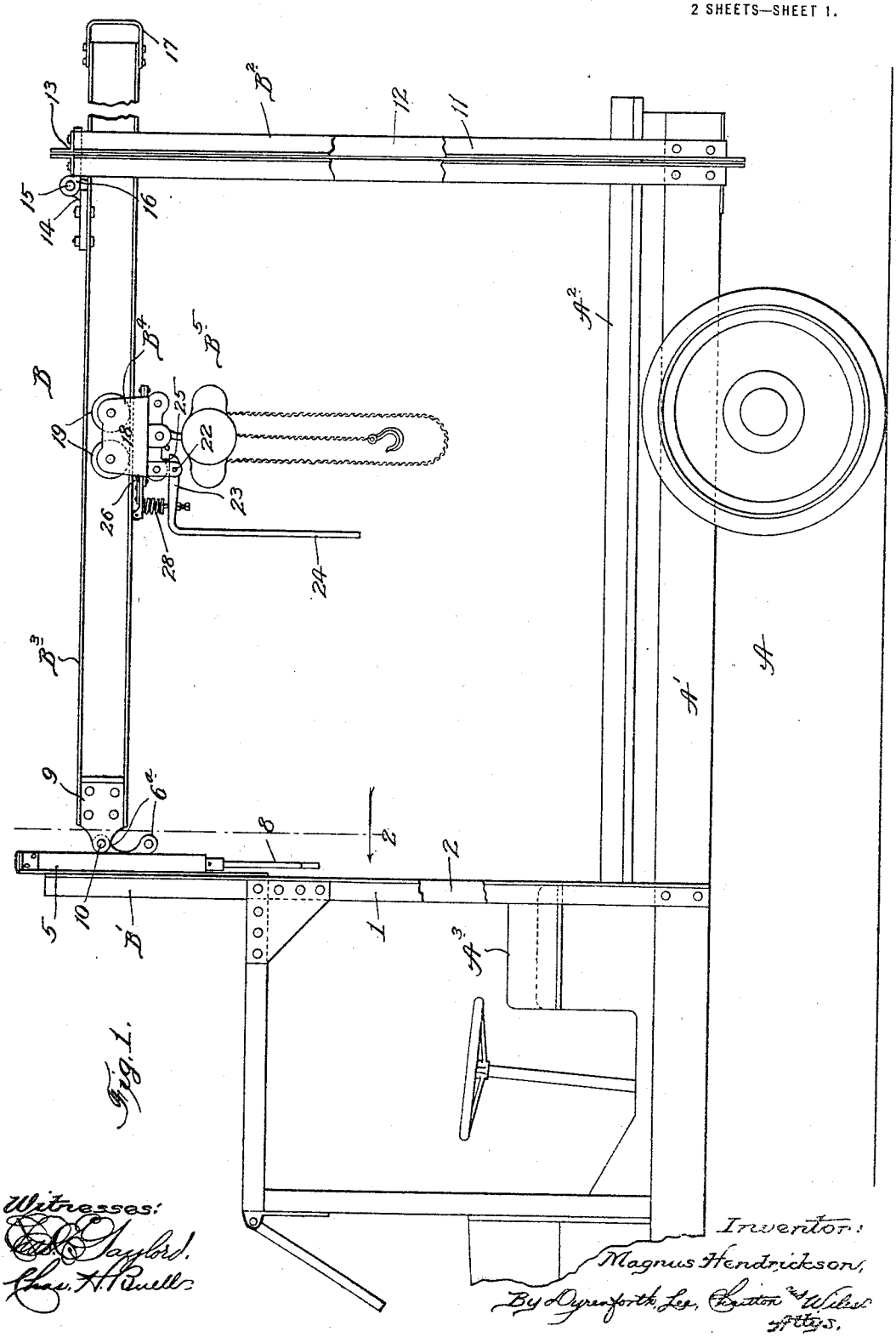


Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 3.

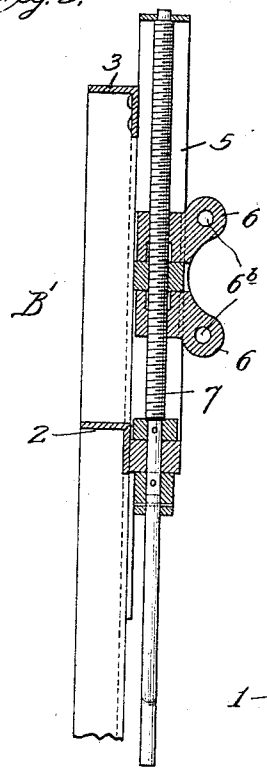


Fig. 2.

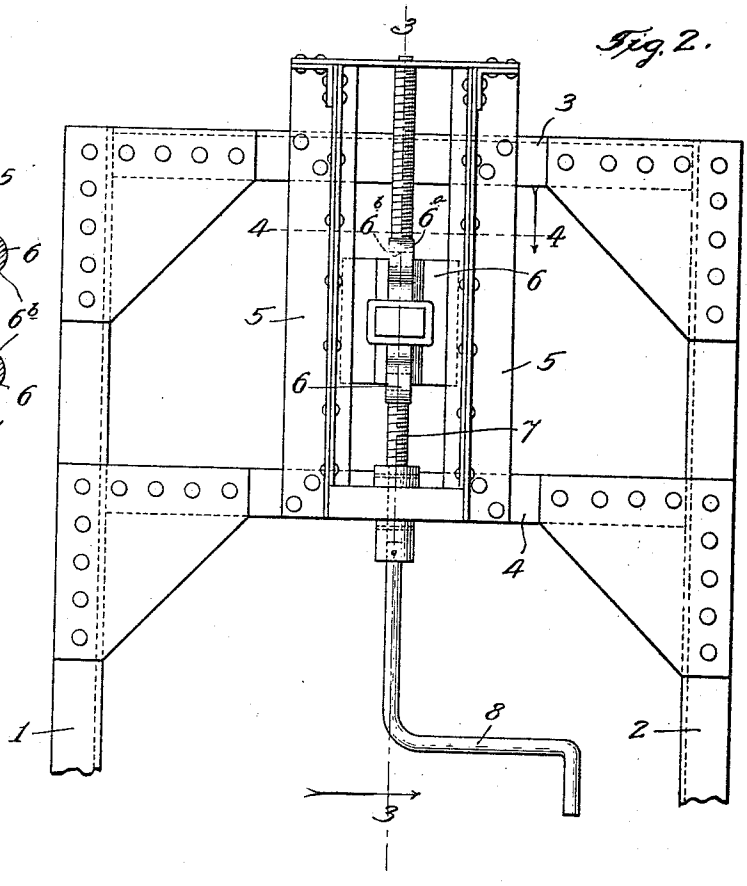


Fig. 4.

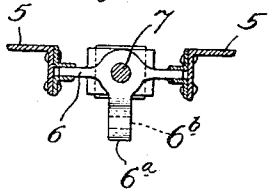
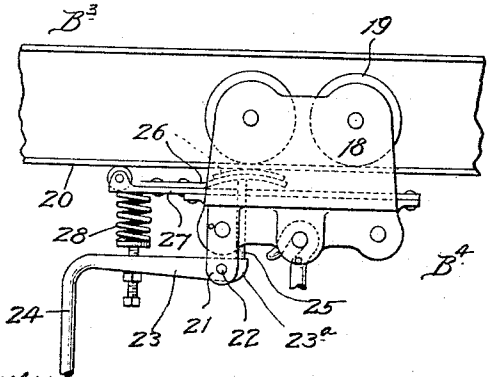


Fig. 5.



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UNITED STATES PATENT OFFICE.

MAGNUS HENDRICKSON, OF CHICAGO, ILLINOIS.

TRUCK-CRANE.

1,235,472. Specification of Letters Patent. Patented July 31, 1917.

Application filed December 4, 1916. Serial No. 135,043.

To all whom it may concern:

Be it known that I, MAGNUS HENDRICKSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Truck-Cranes, of which the following is a specification.

This invention relates particularly to trucks, such as auto-trucks; and the primary object of the invention is to provide a truck with a crane of a simple and durable construction, which is well adapted to the purpose of loading and unloading the truck.

The invention is illustrated in its preferred embodiment in the acompanying drawings, in which—

Figure 1 represents a broken side elevational view of an auto-truck equipped with my improvement; Fig. 2, a broken elevational view taken substantially as indicated at line 2 of Fig. 1; Fig. 3, a broken vertical sectional view taken as indicated at line 3 of Fig. 2; Fig. 4, a horizontal sectional view taken as indicated at line 4 of Fig. 2; and Fig. 5, a broken side elevational view of the beam and carriage mounted thereon.

In the construction illustrated, A represents an auto-truck having a frame A^1, a load-platform A^2, and a seat A^3; and B, a crane, or loading and unloading device, mounted on the truck.

The frame A^1 of the truck may be of any approved construction. It is preferably provided with a load-supporting platform A^2 and equipped near its front end with a seat A^3.

The crane B preferably comprises a front-supporting frame B^1; a rear-supporting frame B^2; a longitudinal beam B^3 mounted in the upper portions of the frames B^1, B^2 and disposed over the longitudinal center of the platform A^2, the beam B^3 normally occupying substantially a horizontal position but capable of adjustment so that the beam will incline either forwardly or rearwardly somewhat, at the will of the operator; a carriage B^4 mounted on the beam; and a block-and-tackle, or hoist, B^5, supported by the carriage B^4.

The front frame or standard B^1 preferably comprises vertical angle-bars 1 and 2, which rise from the sides of the main frame in the vicinity of the seat A^3 and which are connected at their upper portions by suitable brace cross-bars 3 and 4. The cross-bars 3 and 4 support an auxiliary frame 5 which affords a vertical guide in which is mounted a vertically adjustable slide 6, which may be actuated by a vertical screw 7 journaled in the frame 5 and equipped at its lower end with a crank 8. The vertically movable slide 6 is provided with rearwardly projecting ears 6^a, having perforations 6^b. The block, or slide 6 may be raised or lowered by turning the screw 7 through the medium of the crank 8. The front end of the beam B^3 is equipped with pivot-plates 9, connected by a bolt or pivot 10 with one of the pivot-lugs 6^a.

The rear standard or frame B^2 comprises upright bars 11 and 12, which rise from the rear corners of the truck-frame and are rigidly connected at their upper ends by a cross-bar 13. Thus, the rear frame B^2 is an open rectangular frame through which the beam B^3 may extend, and through which the heavy objects which are to be loaded or unloaded may pass.

The beam B^3 has its rear portion extending rearwardly through the frame B^2, the rear extremity of the beam being at any desired distance in the rear of the said frame. The beam is equipped near the cross-member 13 with a pivot-plate 14, which is connected by a pivot 15 with the pivot-plate 16 with which the cross-bar 13 is equipped at a central point. The rear end of the beam B^3 is provided with a clevis, or loop 17, which may be used for any desired purpose.

The carriage B^4 may be of any desired construction. It has a frame 18, which depends from wheels 19, mounted on flanges 20 with which the beam B^3 is provided. The frame 18 is provided with depending lugs 21, with which is connected, by a pivot 22, the short arm 23 of an angular lever, which has a depending arm or handle 24. The arm 23 has a portion 23^a which projects beyond the pivot 22 and is equipped with an upward extension or stud 25, which engages a friction-stop 26. The friction-stop is in the form of a leaf-spring, which is secured by rivets to a bracket 27, which is rigid with the frame 18 and projects from one end thereof above the arm 23 of the angular lever. Interposed between the bracket 27 and the arm 23 of the lever is a coil-spring 28, whose function is to normally depress the lever and cause the stud 25 to force the friction-stop into engagement with the lower surface of the beam B^3.

The block-and-tackle B^5 may be of any

suitable construction. Preferably it is of such a nature as to enable large blocks of stone or other heavy objects, to be readily lifted, by manipulating the chain by hand.

From the description given, it will be understood that the carriage B^4 may travel from the front end of the beam B^3 to the rear end thereof; also that the beam B^3 may be readily adjusted to give either a forward or a rearward inclination to the beam; and that the carriage B^4 may be easily controlled in its movements, even when under a heavy load, by the friction-stop or brake-shoe and the controlling lever described. Thus, when the carriage is under load, the beam B^3 may be tilted so as to give a down grade in either direction, according to whether one is loading or unloading, and the carrier may be allowed to move by gravity, the brake-shoe being relieved from its braking action through the medium of the controlling lever 24. An adjustment of a few inches at the front end of the beam is sufficient to give the desired inclination, and such adjustment is readily permitted by the natural looseness in the pivotal connections of the beam.

The construction described is simple, and well adapted to its purpose. It enables massive stone or other heavy objects to be loaded and unloaded by one man with greatest facility; and this can be accomplished without the necessity of power-actuated mechanism.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitation should be understood therefrom, but the appended claims should be construed as broadly as permissible in view of the prior art.

What I regard as new and desire to secure by Letters Patent is:

1. In means of the character set forth, the combination with a trunk-body equipped with supporting frames, of a longitudinal beam, disposed above the truck-body, connections between said beam and said frames, whereby the beam may be adjusted with reference to the horizontal, a gravitating traveling hoisting device mounted on said beam, a brake-shoe carried thereby and adapted to engage the beam, and a controlling lever for said brake-shoe.

2. In means of the character set forth, the combination with a truck-body equipped with supporting frames, of a longitudinal beam, disposed above the truck-body, connections between said beam and said frames, whereby the beam may be adjusted with reference to the horizontal, a gravity carriage mounted on said beam and equipped with a hoisting device, a brake-shoe mounted on said carriage, and means normally holding said brake-shoe in engagement with said beam, said means equipped with a releasing device.

3. In means of the character set forth, the combination with a truck-body, of a rectangular rear frame rising from the rear corners of the truck-body, a longitudinal beam extending through said frame and pivotally connected with the cross-member thereof, a front vertical frame, equipped at its upper portion with a guide, a screw-actuated slide connected with said guide, pivotal connections between said slide and the front end of said beam, a gravity carrier mounted to travel on said beam and equipped with a manual hoisting device, and a normally engaged brake mounted on said carrier and equipped with releasing means, including a depending arm which may be grasped by the operator, whereby the gravitating movement of the carrier may be regulated at will when the beam is inclined.

MAGNUS HENDRICKSON.

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