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J. W. SEAVER, C. H. WELLMAN & T. R. MORGAN.

WHARF CRANE.

APPLICATION FILED MAR. 15, 1901.

NO MODEL.

Fig. 2.

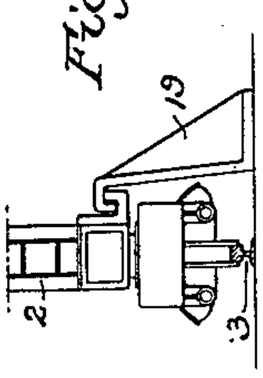

Fig. 1.

Fig. 3.

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No. 731,231. Patented June 16, 1903.

UNITED STATES PATENT OFFICE.

JOHN W. SEAVER, CHARLES H. WELLMAN, AND THOMAS R. MORGAN, OF CLEVELAND, OHIO, ASSIGNORS TO THE WELLMAN SEAVER ENGINEERING COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

WHARF-CRANE.

SPECIFICATION forming part of Letters Patent No. 731,231, dated June 16, 1903.

Application filed March 15, 1901. Serial No. 51,265. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. SEAVER, CHARLES H. WELLMAN, and THOMAS R. MORGAN, all citizens of the United States, and residents of Cleveland, Ohio, have invented certain Improvements in Wharf-Cranes, of which the following is a specification.

Our invention consists of a crane especially adapted for wharf purposes and intended for fitting up vessels lying in the dock at the side of the wharf, or generally for transferring loads to or from such a vessel, special features of the invention being the provision afforded for the effective handling of either light, medium, or heavy loads, or for handling masts, stacks, or other objects longer than could conveniently be handled by an ordinary form of wharf-crane with projecting boom.

In the accompanying drawings, Figure 1 is a side elevation of a wharf-crane constructed in accordance with our invention, and Figs. 2 and 3 are views illustrating certain modifications in the construction of parts of the crane.

In Fig. 1 a crane of the gauntree type is represented at 1, this crane having opposite legs 2 running upon parallel rails 3, laid along the wharf upon which the crane is mounted, the front legs 2 of the crane being carried upward, so as to form a tower 4, and the main girders of the crane forming the trolley-runways, which are extended forwardly through the tower, as shown at 5. To these projecting portions 5 of the main girders are hinged or pivoted supplementary girders 6, forming a continuation of the same and constituting a hinged jib or boom which can be raised or lowered by means of a winding mechanism 7 on the main crane, the winding-drum operating one or more ropes or chains 8, preferably one for each girder, which pass over sheaves 9 at the top of the tower 4 and are suitably connected to the girders of the hinged or pivoted boom or jib 6 of the crane, near the outer end of the same. The said hinged or pivoted jib is also connected to the top of the tower by means of one or more hinged braces 9, preferably one for each girder, so as to enable it to withstand the strains to which it is subjected and relieve the hinge connection from these strains.

Upon the runways formed by the main and hinged girders of the crane traverse two hoisting-trolleys 10 and 11, the trolley 10 being the main lifting-trolley, intended for heavy weights, and the trolley 11 being a lighter lifting-trolley. As shown in Fig. 1, the heavy trolley traverses on runways formed by the upper flanges of the crane-girders and the lighter trolley traverses on runways formed or carried by the lower flanges of said girders, so that the lower trolley can be moved into such relation to the upper trolley that both can be used together for lifting a load heavier than can be handled by the heavy trolley alone.

To prevent excessive strain upon the hinged jib of the crane, such as would be caused by the running of the heavy trolley with its load to the outer end of said jib, the latter has at any desired point outward from the hinged inner end of the same a stop or abutment 12, which limits the outward run of said main trolley.

At the outer end of the pivoted jib of the crane is a lifting tackle or sling 13, the hauling-rope of which passes around a sheave 14 at the outer end of the pivoted jib, thence up to and around a sheave 15 at the top of the tower 4, and thence back to suitable hoisting mechanism 16 on the main crane, this lifting tackle or sling being especially available in setting masts, stacks, &c., as it can by raising the jib be lifted to any desired height, depending upon the length of the masts or stack which is being handled. (See dotted lines, Fig. 1.) In order to overcome any overturning tendency which the heavy load on the pivoted jib might exert upon the crane, the rear legs of the crane may be provided with counterweights 17, which can be placed in position by means of the trolley 10, or in place of these counterweights suitable anchorages 19 for the rear legs of the crane may be provided, as shown in Fig. 2, which will not interfere with the longitudinal traversing of said crane along its rails. If desired, also,

both of the trolleys may be mounted upon the upper flanges of the girders, as shown in Fig. 3.

Having thus described our invention, we claim and desire to secure by Letters Patent—

1. A gauntree-crane consisting of a framework supporting a main girder, a portion of said girder being pivoted to the remainder, two trolleys movable on the girder and a stop on the pivoted portion thereof constructed to prevent one of said trolleys being moved to the end thereof, the second trolley being free to run beyond said stop, substantially as described.

2. A gauntree-crane consisting of a framework supporting a main girder, a portion of said girder being pivoted to the remainder, two sets of tracks on the girder, trolleys for each set of said tracks and a stop on the pivoted portion of the girder whereby the limit of action of one of said trolleys is restricted relatively to the other, substantially as described.

3. A gauntree-crane having a horizontally-pivoted projecting portion and a tower, tracks on the crane and on said pivoted portion, a trolley operative upon said tracks, means for raising and lowering the pivoted portion and hoisting-tackle on the end of said portion independent of that of the trolley, said tackle having its operating-cable extending over the tower and means for operating the same whereby said pivoted portion is made to fulfil the double function of a hoisting-boom and a trolley-support, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN W. SEAVER.
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THOMAS R. MORGAN.

Witnesses:
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