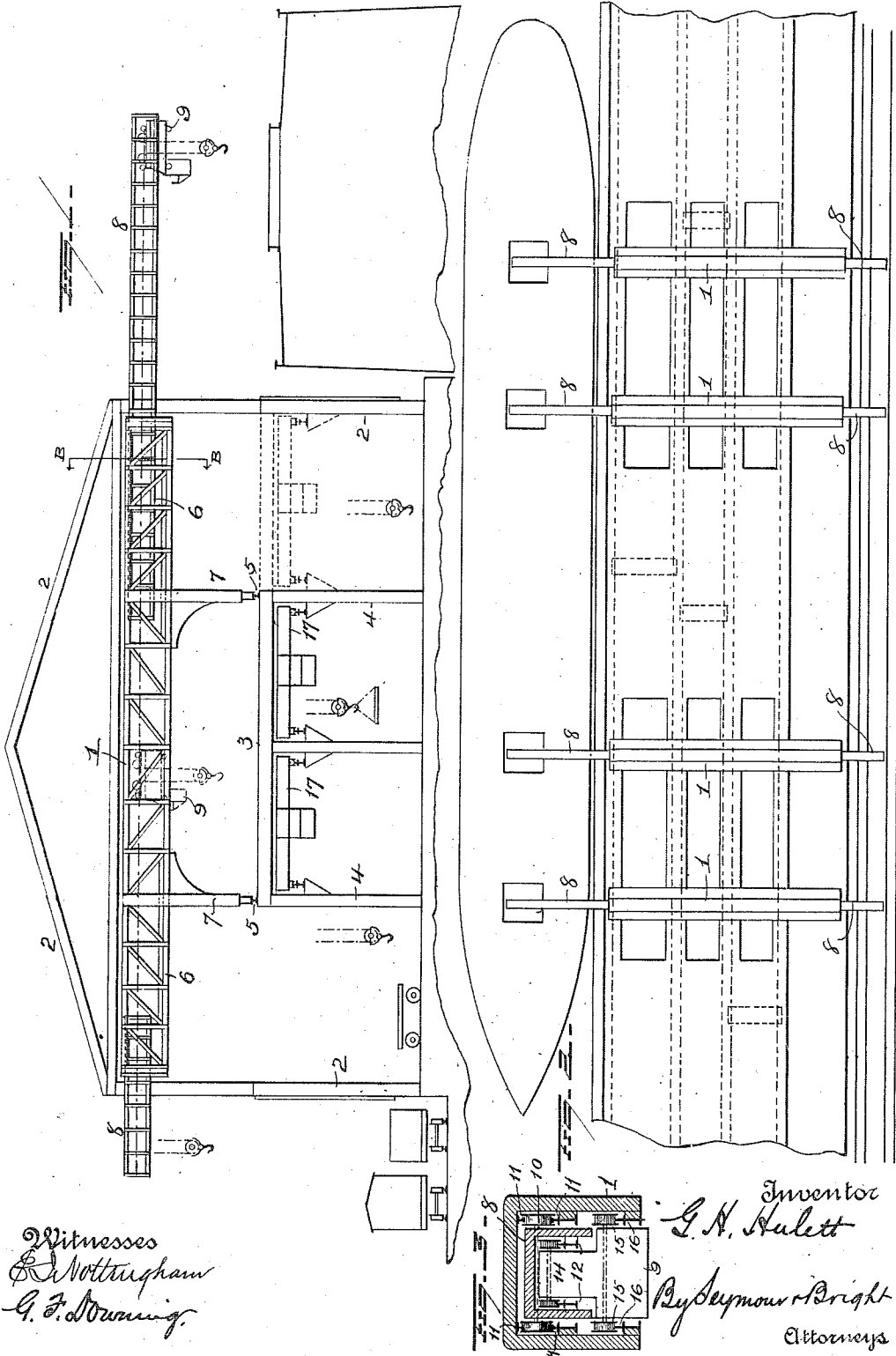


G. H. HULETT.
 WAREHOUSE CRANE.
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1,305,802.

Patented June 3, 1919.



Witnesses
 R. Nottingham
 G. F. Downing

Inventor
 G. H. Hulett
 By Seymour & Bright
 Attorneys

UNITED STATES PATENT OFFICE.

GEORGE H. HULETT, OF CLEVELAND, OHIO.

WAREHOUSE-CRANE.

1,305,802.

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To all whom it may concern:

Be it known that I, GEORGE H. HULETT, a citizen of the United States, and a resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Warehouse-Cranes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in warehouse cranes, the object being to provide a crane adapted to move lengthwise the warehouse and provided with a movable or telescopic boom or booms, adapted to be projected at the ends of the main crane through openings in the sides of the building, so as to overhang, say a vessel at one side and freight cars at the opposite side, whereby freight within the warehouse may be loaded into the vessel or cars; or freight in the vessel or cars can be unloaded and stored in the warehouse, or freight in a car or vessel can be unloaded from one and loaded into the other without rehandling.

My invention consists in a crane having a telescopic boom, and a traveling trolley adapted to travel on said boom and also on the main crane bridge.

My invention further consists in a gauntree crane mounted within a warehouse and provided with rigid end extensions, terminating within the side walls of the building, a boom telescoping with one of said end extensions and adapted to be projected through openings in the side of the building, and a trolley adapted to travel on said boom and also on the bridge of the main crane.

My invention further consists in the details of construction as will be more fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in transverse section through a warehouse, showing a crane overhanging a vessel at one side of the house and a car at the other side; Fig. 2 is a diagrammatic view in plan with the roof of the warehouse removed, showing a series of cranes overhanging the hatchways of a boat at one side and car tracks at the other side, and Fig. 3 is an enlarged view in section on the line B—B, of Fig. 1.

1 represents a gauntree crane mounted within a warehouse 2 and on a gallery 3 with-

in the latter so as to permit free passage to, from and across the main floor of the building without being interfered with by the movements of the crane, and also leaving the entire main floor for storage purposes. This gallery may be located at one side of the building as shown in dotted lines, or it may be in the center, as shown in full lines in Fig. 1. or instead of a gallery it may have simply supports 4 for the runway 5 of the crane 1. The main bridge or crane is preferably of skeleton form, open at its bottom and both ends, with integral end extensions 6 projecting beyond the bridge carrying members 7, and terminating adjacent the side walls of the house 2. This crane is adapted to travel lengthwise the house and is provided at each end with a movable boom 8 adapted to be projected through, and beyond the ends of the extensions 6, and through openings in the side walls of the house 2, so as to overhang say a vessel at one side of the house and freight cars at the other side. These booms are moved by any suitable gearing, and like the main crane 1, are open at their undersides as clearly shown in Fig. 3, so as to permit the trolley 9 and its hoist cables to have free and unrestricted travel therein.

The booms 8 are preferably supported on rollers 10 which move between track rails 11 secured to and within the main crane bridge 1, and they are provided internally at the sides, with the tracks 12 on which the flanged wheels 14 of the trolley 9 run. The trolley is also provided with a second set of carrying wheels 15, located in a plane below the wheels 14, and adapted to engage and travel on rails 16 secured to the main crane bridge 1 at the sides and near the lower edge of the latter. The rails 12 on the booms bear a fixed relation to the rails 16 on the main crane bridge, and the two sets of trolley-carrying wheels 14 and 15 bear fixed relation to each other and to their respective track ways, so that when the trolley enters the booms from the main bridge it will be supported on both trackways until it passes beyond the end of the bridge and will then be supported solely on the boom and as it leaves the boom on its inward travel it will be wholly carried by the main bridge. With this construction the trolley can travel from one boom to the bridge and lengthwise the bridge to the other boom so

that after the booms have been set, the trolley can travel from a point outside of the building at either side, to the other side, and thus unload freight from, say a vessel moored in a slip at one side of the house and deposit it directly on cars on tracks at the opposite side of the house, or can deposit it within the warehouse, or can take freight from the warehouse and load it directly onto cars or boats as the case may be.

In the drawing I have shown the main crane mounted on a gallery at the center of the warehouse, and have provided each berth or bay under the gallery with a small traveling crane 17 hence by providing the gallery with openings as shown in Fig. 2, the main crane 1 can be permanently set over the hatchways of a boat and any freight that is to be stored in the warehouse can be lowered through any one of the hatches or openings in the gallery to the floor, and then picked up by one of the smaller cranes 17 and carried to any point covered by the travel of such crane;

By providing each house with a series of main cranes, the latter can be set to work over a hatchway or car, but when necessary, the booms can be drawn into the main crane and the latter then moved longitudinally of the house so as to deposit its load at any desired point covered by the travel of the main crane.

The trolley on the main crane is preferably provided with an operator's car containing the controllers for the several motors, so that the operator may always be within sight of the load carried by the trolley, and the house 2, is preferably provided with sliding frames for closing up the openings in the sides thereof through which the booms project.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention. Hence I would have it understood that I do not wish to confine myself to

the exact construction and arrangement of parts herein shown and described, but

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

1. In a warehouse plant, the combination of a house having openings through which a crane member may be projected so as to handle freight outside of the house, runways within the house, the said runways being elevated to permit of free access to and from said main floor under them, a crane mounted on said runways, one end of said crane terminating within the house adjacent the side having openings therein, a boom telescoping with said end and adapted to be projected through said openings, and a trolley adapted to travel on the crane bridge and also on the boom.

2. In a warehouse plant, the combination of a house, having openings through which a crane member may be projected so as to handle freight outside of the house, runways within the house the said runways being elevated to permit free access to and from the floor under them, a crane proper mounted on said runways, the ends of said crane terminating within the house, and one end terminating adjacent the side of the house having the openings therein, a boom telescoping with said end and adapted to be projected through said openings, a trolley adapted to travel on tracks within the boom and also on tracks within the crane proper, and a second crane located below the main crane and adapted to travel lengthwise the house, for picking up and transporting goods delivered into the house by the main crane.

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

GEORGE H. HULETT.

Witnesses:

S. G. NOTTINGHAM,
R. S. FERGUSON.