No. 664,288. Patented Dec. 18, 1900.

T. J. PRATT.

LOADING DEVICE.

(Application filed Aug. 30, 1900.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.

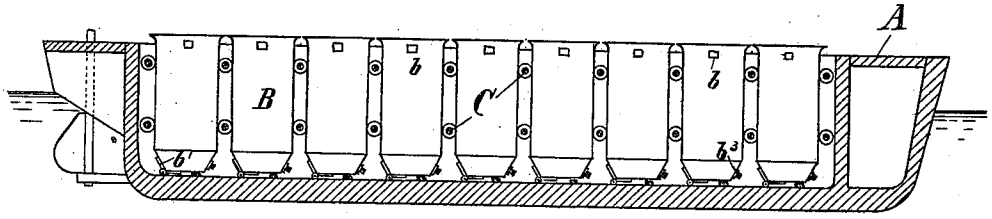


Fig. 2.

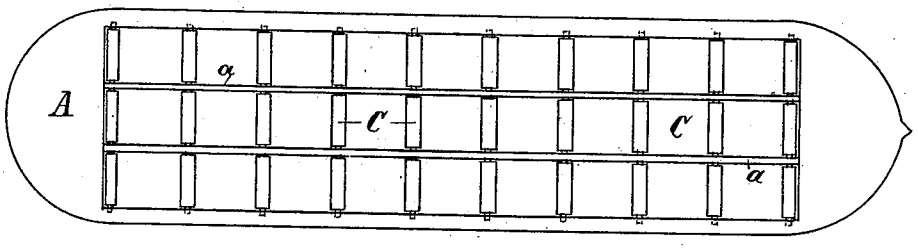


Fig. 3.

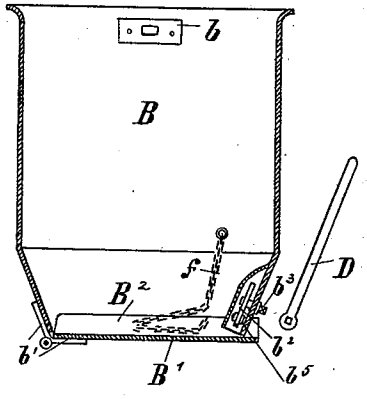


Fig. 4.

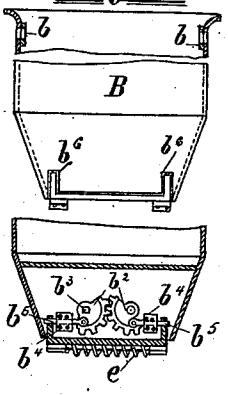
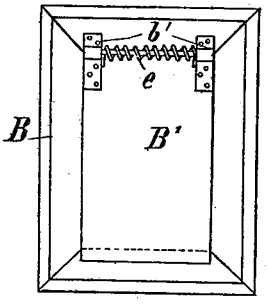


Fig. 5.



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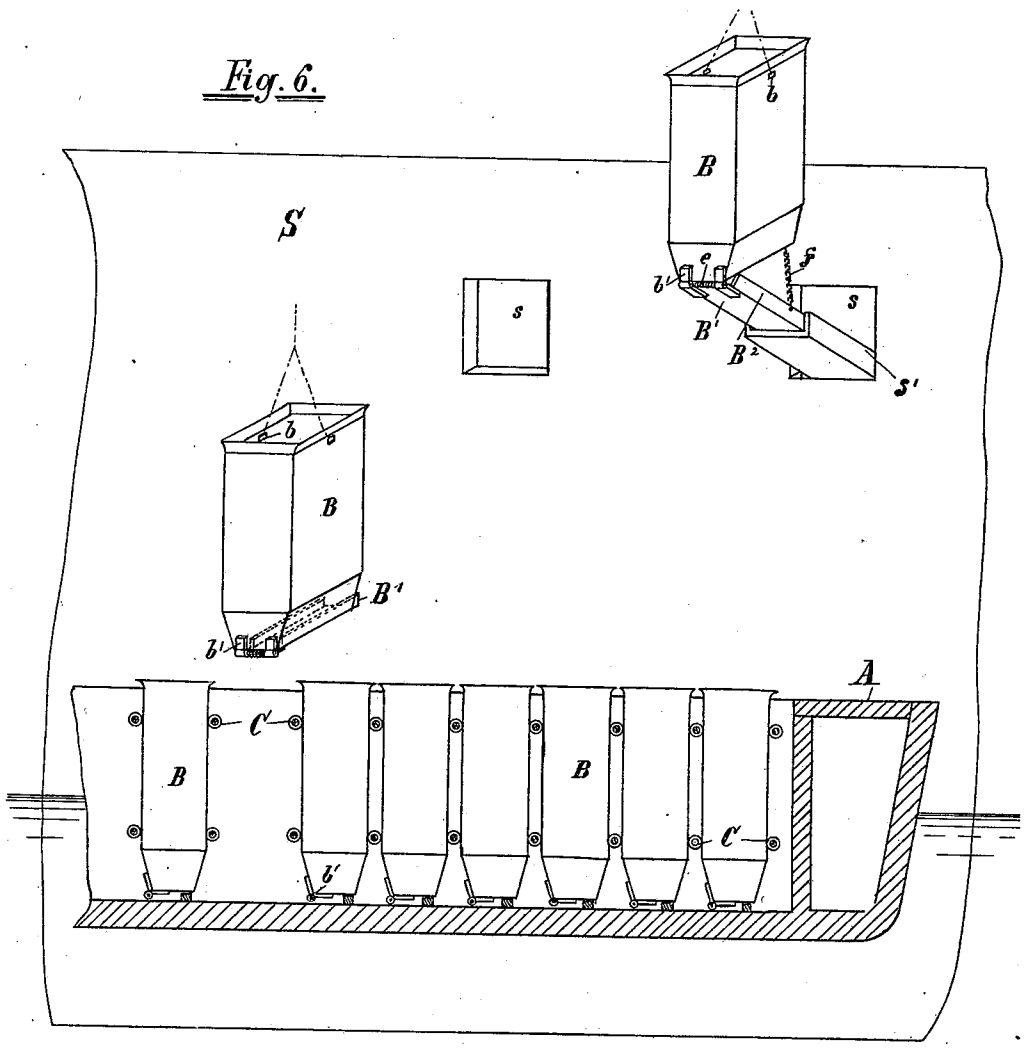
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Fig. 6.



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LOADING DEVICE.

(Application filed Aug. 30, 1900.)

(No Model.)

3 Sheets—Sheet 3.

Fig. 7.

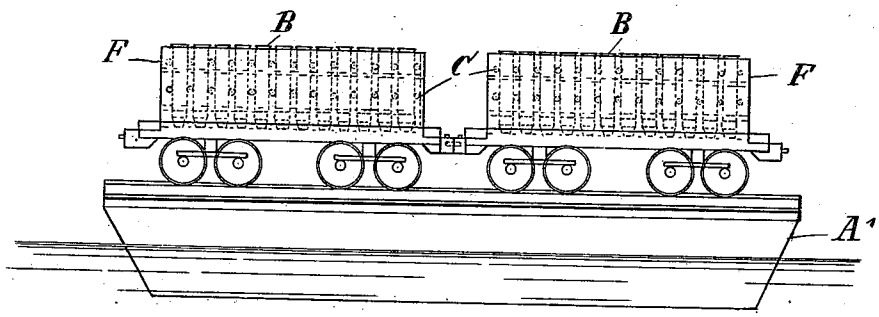
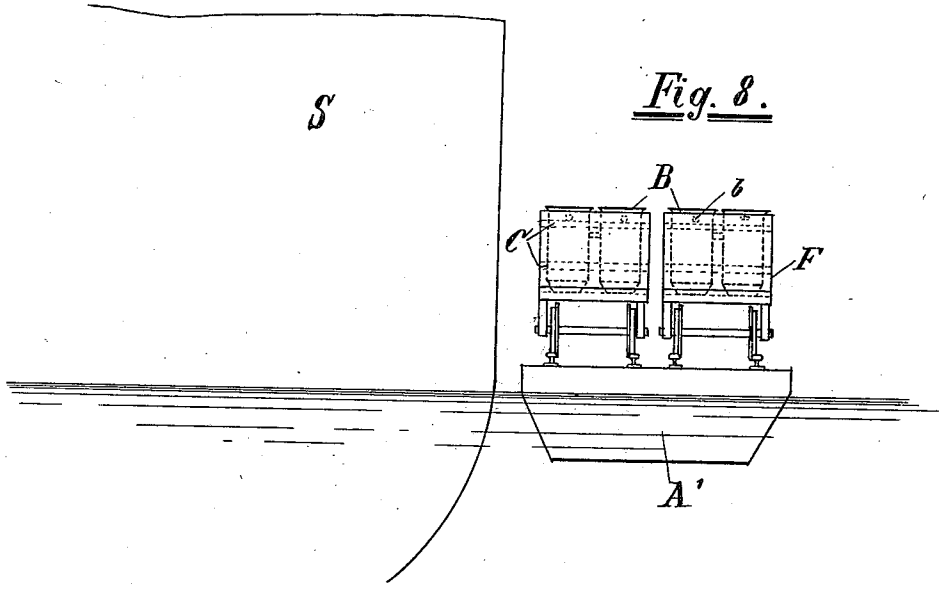


Fig. 8.



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UNITED STATES PATENT OFFICE.

THOMAS J. PRATT, OF PATERSON, NEW JERSEY, ASSIGNOR OF ONE-HALF TO JAMES A. MORRISSE, OF SAME PLACE.

LOADING DEVICE.

SPECIFICATION forming part of Letters Patent No. 664,288, dated December 18, 1900.

Application filed August 30, 1900. Serial No. 28,517. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. PRATT, a citizen of the United States, residing at 155 Oliver street, in the city of Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Loading Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to devices for loading coal, grain, and other articles and substances into ships from barges and other vessels; and the object is to provide a new and improved loading device which is simple and durable in construction and will facilitate the loading of ships and save time and labor.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

My invention may be applied to a railway-car as well as to a barge or other vessel.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a longitudinal sectional view of a coal-barge provided with my improved independent and removable bucket receptacles. Fig. 2 is a top view of barge. Fig. 3 is a sectional view through side of bucket receptacle, showing bottom-locking device inclosed in the lower portion thereof and wrench for locking and unlocking the bottom. Fig. 4 is an end view of same, partly in section, showing in detail the locking device. Fig. 5 is a top view of bucket receptacle, showing spring which closes the bottom when the contents have been discharged. Fig. 6 is a view of portion of side of steamship with port-holes and chute and a part-sectional view of barge, showing one bucket receptacle just hoisted from the barge and one discharging its contents into a chute in the port-hole communicating with the ship's hold. Figs. 7 and 8 are side and end views, respectively, of a barge carrying coal-cars, the cars having the independent bucket receptacles and compartments instead of the barges.

The conveying vessel may be a barge A or a car F, carried on a barge or other supporting means A'. The barge is divided into compartments by the longitudinal bars, walls, or partitions *a*, and rollers C are mounted to revolve in said walls or partitions to facilitate the raising and lowering of the bucket receptacles B to and from the barge or other vessel. The rollers are arranged so as to leave a space between the faces thereof and the sides of the bucket receptacles in order that they may not bind tightly against the sides and be free to revolve when in contact with the rising or lowering bucket receptacle. The lower portion of the bucket receptacle is tapering in form to the bottom B', which is hinged thereto and is provided with a spiral spring *e*, which forces the bottom B' to close when the contents have been discharged. The bottom is provided with the upturned sides B^2, forming a slide or chute to guide the coal or other material to the chute *s'*, which is placed in the port-hole *s* in the steamship S. A chain *f* of strong construction is adjustably connected with the bottom, so as to permit it to be opened the distance required by the nature of the contents of the bucket receptacle. The bottom is securely locked by means of the locking device, comprising the segment-gears b^2, one of which has a square-headed shaft b^3, which is operated by the wire D to insert or withdraw the bolts b^5 in or from the holes in the sides B^2 of the bottom B'. The bolts pass to the holes in the sides B^2 through the guides b^4, and the contents of the bucket receptacle do not clog nor interfere in any way with the locking device, as the locking mechanism is inclosed as shown by the covering in Fig. 3. Nor can the contents interfere with the closing of the bottom, as the lower edge of the front of the bucket receptacle is provided with the vertical slots b^6 to admit the upturned sides of the bottom, and there is no place for the lodgment of material to prevent the bottom from being closed by the strong spiral springs *e* on the connecting-pin of the hinges *b'*.

Each of the bucket receptacles B is provided with two holes *b*, in which adjustable grip or lever tongs engage for the purpose of raising the same from or lowering the same into the barge or other vessel being unloaded or loaded.

My invention is adapted for use in conjunction with a crane or derrick of any known construction and will perform all the functions

of loading or unloading boats, cars, or other vessels or conveyances with a great saving in time and labor. It is obvious that my bucket receptacles may be filled from a chute and that all shoveling is dispensed with. The rollers and partitions or walls separating the bucket receptacles may be differently arranged without departing from the essential features and scope of my invention. Not only barges that are towed, but vessels propelled by their own engines, may be rigged up in portions with my invention applied. Where merchandise of the character above referred to is to be loaded into the hold of a ship through hatchways in the decks, my invention may be employed, as well as where the coal or other material is loaded through port-holes in the side of the ship. The size of the bucket receptacles will be regulated by the nature and quantity of the material desired to be carried in them.

With this description of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a barge, of means for dividing said barge into compartments, rollers mounted to turn in said compartments, and bucket receptacles adapted to be raised from and lowered into said compartments between said rollers, said bucket receptacles having openings therein so that they are adapted to be gripped by hooks of hoisting apparatus, substantially as set forth.

2. The combination with a barge or other vessel, divided into compartments, of bucket receptacles adapted to fit and be carried in said compartments, and also adapted to be raised out of and lowered into the same, said bucket receptacles being constructed so that they may be gripped by a hoisting apparatus, for the purpose of loading or unloading, and lifting them out of, or lowering them into, said compartments, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS J. PRATT.

Witnesses:
JOHN F. KERR,
JOHN WEBSTER.