No. 651,931. Patented June 19, 1900.

S. B. PECK.

FUELING BARGE.

(Application filed Oct. 2, 1899.)

(No Model.) 4 Sheets—Sheet 1.

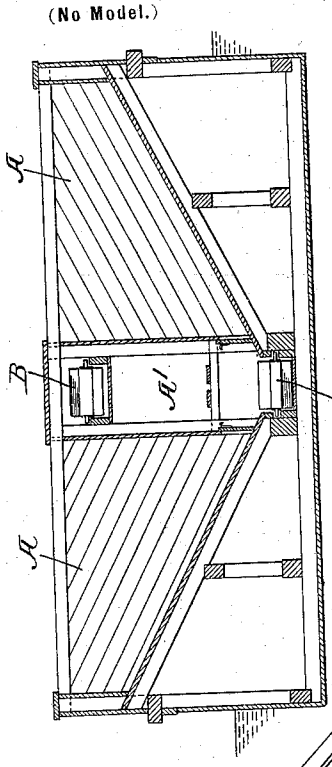

Fig. 4.

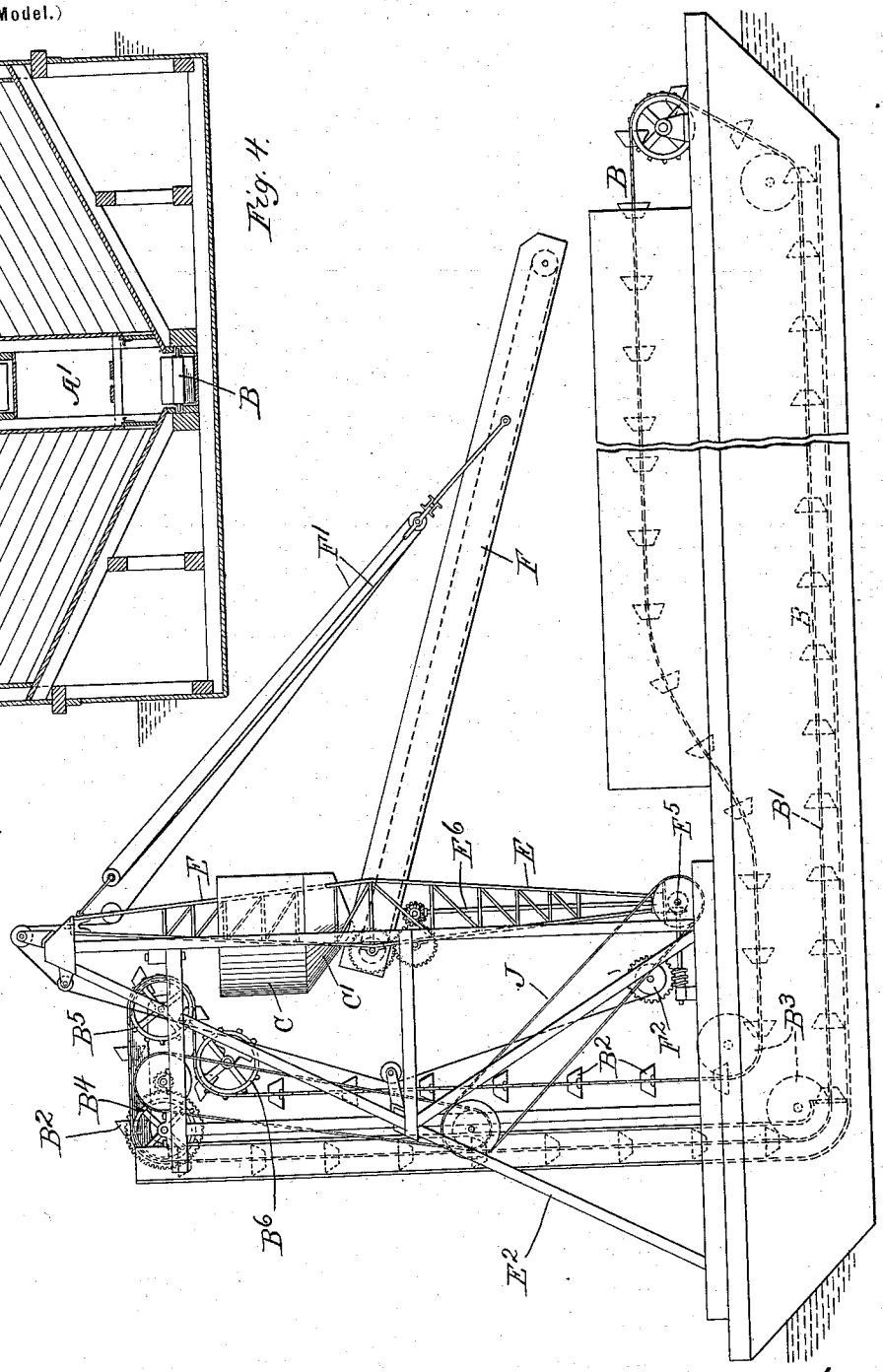

Fig. 1.

Witnesses.
Edward T. Wray.
Donald McCarter.

Inventor.
Claiborne B. Peck

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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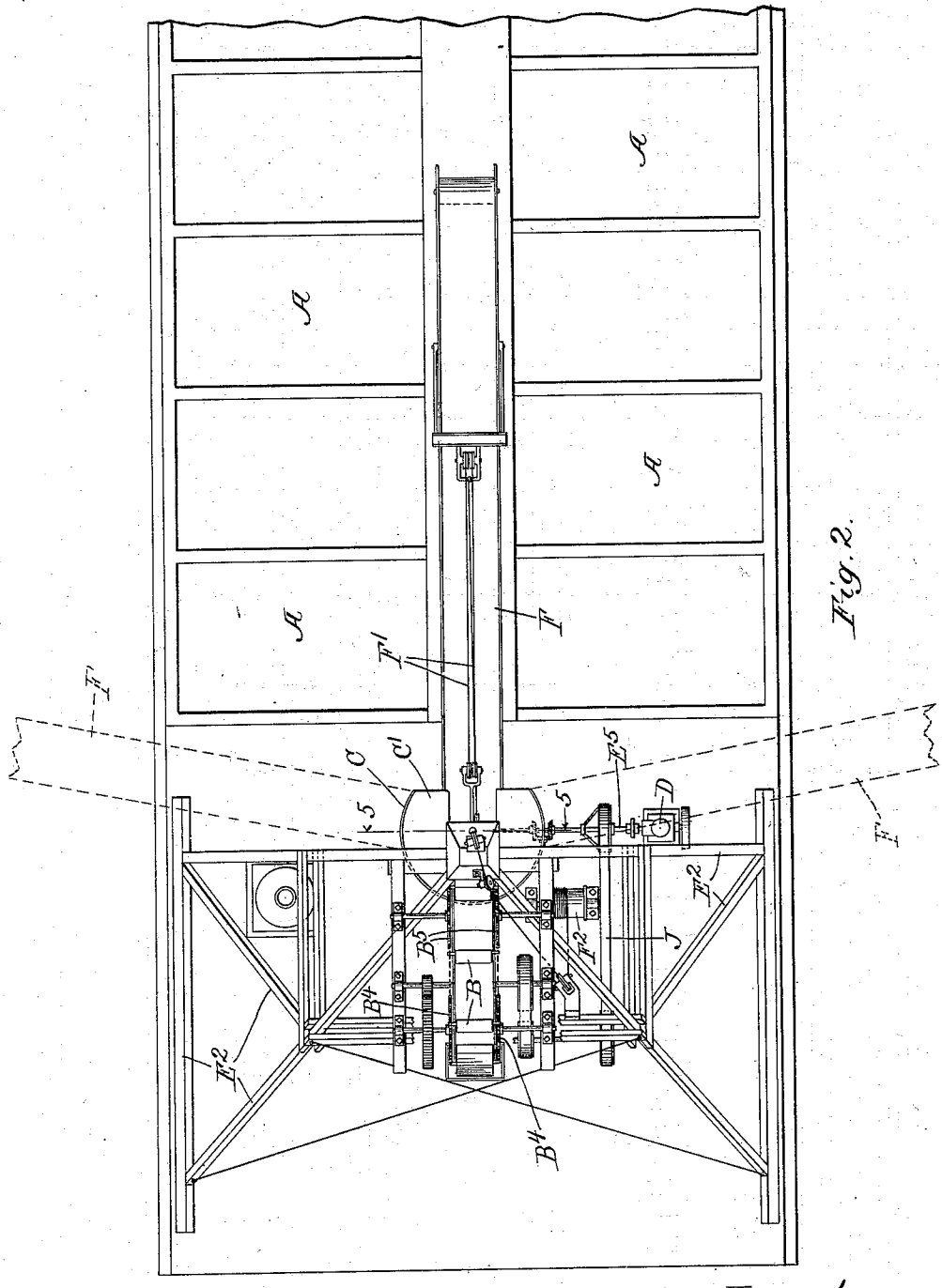

Fig. 2.

Witnesses.
Edward T. Wray.
Donald McCarter.

Inventor.
Samuel B. Peck

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 651,931. Patented June 19, 1900.

S. B. PECK.

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(No Model.) 4 Sheets—Sheet 3.

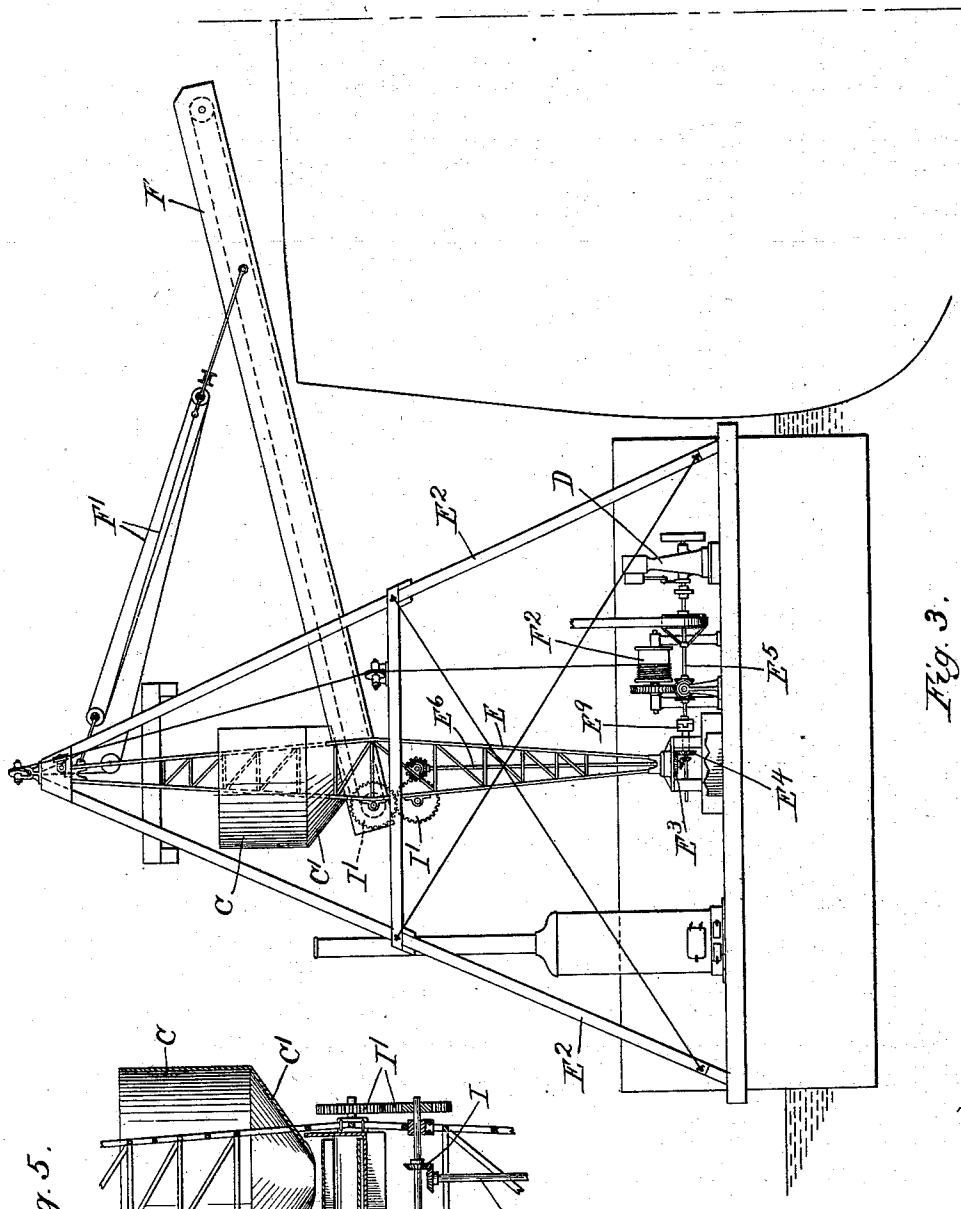

Fig. 3.

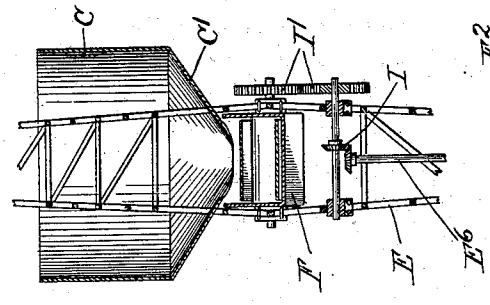

Fig. 5.

Witnesses.

Edward T. Wray.

Donald M. Carter.

Inventor.

Stanton B. Peck

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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S. B. PECK.

FUELING BARGE.

(Application filed Oct. 2, 1899.)

(No Model.) 4 Sheets—Sheet 4.

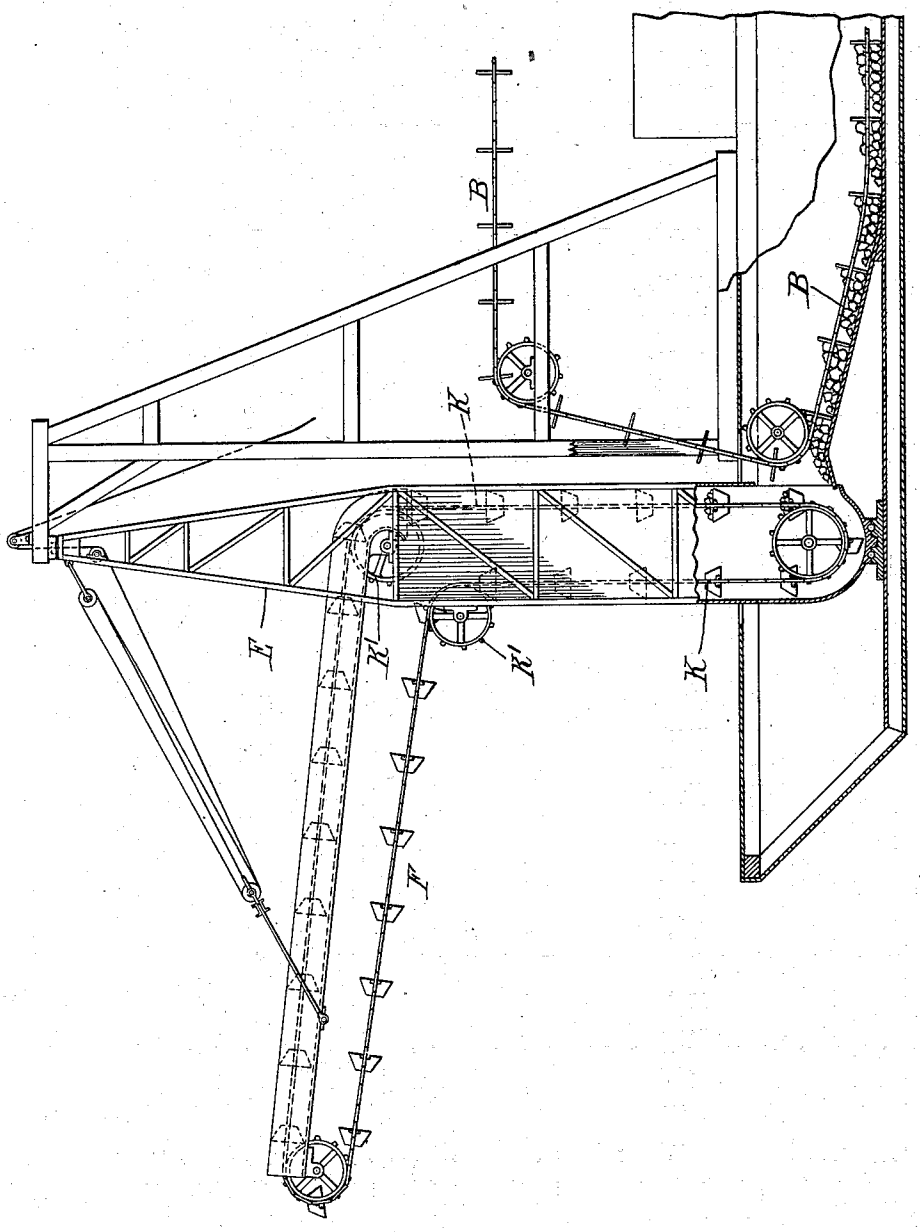

Fig. 9.

Witnesses.
Edward T. Wray.
Donald M. Carter.

Inventor.
Stanton B. Peck

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

STAUNTON B. PECK, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE LINK BELT MACHINERY COMPANY, OF SAME PLACE.

FUELING-BARGE.

SPECIFICATION forming part of Letters Patent No. 651,931, dated June 19, 1900.

Application filed October 2, 1899. Serial No. 732,307. (No model.)

To all whom it may concern:

Be it known that I, STAUNTON B. PECK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Fueling-Barges, of which the following is a specification.

My invention relates to devices for delivering material, such as coal and the like, from one vessel to another, and has for its object to provide a new and improved construction for this purpose.

My invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation, with parts omitted, of a fueling-barge provided with devices embodying my invention. Fig. 2 is a plan view of Fig. 1. Fig. 3 is an end view of the device illustrated in Fig. 1 with the elevator broken away. Fig. 4 is a cross-section through the barge. Fig. 5 is a section through the hopper on line 5 5, Fig. 2. Fig. 6 is a view, with parts omitted, of a modified construction.

Like letters refer to like parts throughout the several figures.

I have illustrated my invention as applied to a fueling-barge to be used in loading vessels of various kinds. It is of course evident that the invention may be applied to any form of barge or vessel used to load any kind of material.

My invention is particularly adapted for handling material such as coal, which is injured by breakage if not handled properly.

The barge herein illustrated is provided with a series of bunkers A, in which the material is stowed, said bunkers being provided with suitably-controlled openings, so that the material contained therein may be gradually emptied into the space A′ between the bunkers, and thus be acted upon by a suitable conveyer B, contained within said space. As herein illustrated, this conveyer consists of a continuous chain B′, provided with a series of engaging devices or buckets B^2. This conveyer is preferably substantially the length of the barge and may be termed a "fixed" conveyer. Located above the fixed conveyer is an adjustable or swinging conveyer F, mounted upon a rotatable support or mast E. This adjustable conveyer is adapted to carry the material to a point where it may be discharged into the receiving vessel. Said conveyer is movably connected to the support E, so that its discharge end may be raised or lowered to discharge with relation to the vessel in connection with which it is used. This result may be attained in any manner—as, for example, by means of a rope or the like F′, passing over a series of pulleys and attached at one end to the winding-drum F^2. The entire conveyer F may be moved from side to side by rotating the support or mast E. This mast or support may be constructed in any desired manner, and, as illustrated in Fig. 3, consists of a series of girders or beams, the entire support or mast being rotatably mounted upon a suitable base and being held in position by the braces E^2. The support is rotated by the engagement of the gear E^3 at its bottom with a suitable gear E^4 on the shaft E^5, operatively connected with the motor D. The gear E^4 may be operatively connected with the shaft by a suitable clutch E^9. The adjustable conveyer F is operated by means of the shaft E^6, which engages the motor-shaft E^5 and which is operatively connected with the continuous chain of the conveyer by means of the beveled gears I and the gear-wheels I′. (See Fig. 5.) A suitable elevating device is provided for carrying the material from the fixed conveyer B to the adjustable conveyer F. This elevating device may be separate from both conveyers, or it may be formed, as shown in Fig. 1, as continuous with the fixed conveyer, the direction of the conveyer being changed at one end of the barge by means of the pulleys B^3, so that at this point it acts as an elevator. The upper end of the conveyer passes over the pulleys B^4 and B^5, and the arrangement is such that the material in the buckets will be emptied into a hopper C, connected with the rotatable support E. The pulleys B^6 are located between the pulleys B^4 and B^5, so as to change the direction of the conveyer when the buckets have been emptied, so that it will not engage the hopper C. Said conveyer is operated by the motor D—as, for example, by being connected with the motor-shaft by the belt J. The hopper C may be of any suitable construc-

tion and is preferably arranged so as to receive the material from the fixed conveyer B during all the various positions of the support E and discharge it into the adjustable or swinging conveyer F. As herein illustrated, said hopper is formed so as to surround the mast and is provided with an inclined or beveled bottom C′, (see Fig. 5,) so as to insure the discharge of the material onto the adjustable conveyer.

As illustrated in Fig. 6, the elevating device instead of being continuous with the fixed conveyer B is continuous with the adjustable or swinging conveyer F. In this construction the fixed conveyer B is adapted to deposit the material at the bottom of the rotatable mast, and a suitable elevator K is connected with the mast, so as to rotate therewith. This elevator is changed in direction by means of the wheels K′, so that the upper part projects outwardly to form the adjustable conveyer. In this construction the material after being engaged by the elevator K is carried out to the point of delivery of the adjustable conveyer without change.

I have described in detail particular constructions embodying my invention; but it is of course evident that these constructions may be greatly varied in many particulars and still be within my invention, and I therefore do not limit myself to the constructions shown.

The use and operation of my invention are as follows: It is customary in loading coal, for example, from a barge into a vessel to elevate the coal some distance above the gunwale of the boat and then deposit it in a chute, along which it is carried by the force of gravity and discharged with great force into the vessel. As the chute must be of some length and as it must be inclined something like forty-five degrees to permit the coal to be started in motion therealong by the force of gravity, it will be seen that the end of the chute attached to the barge must be elevated to a considerable height and that the coal must also be carried up this distance. It will be seen that such a construction is top-heavy and tends to tip the barge over. It will also be seen that when the coal is started in motion down this long chute its speed is gradually increased and it is discharged into the vessel with great force. This is very objectionable in many ways, as the coal is very materially injured by breakage and the vessel is also injured by the blows of the heavier pieces of coal. When my construction is used, all these and like difficulties are obviated. If, for example, it is desired to convey coal from a barge into the vessel, (shown in Fig. 3,) the openings in the bunkers are arranged to allow the coal to gradually enter the passage-way A′, so as to be taken up by the conveyer B. The coal is then carried by the conveyer to the end of the barge, where it is elevated and deposited into the hopper C. The coal is then deposited upon the adjustable conveyer F, which extends over the side of the vessel. This adjustable conveyer mechanically moves the coal to its discharge end, and the coal is then dropped only the comparatively-short distance of the height of the gunwale of the boat without having acquired momentum by the passage down the chute.

It will be seen that by this construction a comparatively-short mast may be used, and the center of gravity of the parts is materially lowered by the fact that the receiving end of the adjustable conveyer may be placed as low, if not lower, than the gunwale of the boat. It will also be seen that the coal need only be elevated a short distance in order to deposit it in the receiving end of the adjustable conveyer. The coal may be deposited in different parts of the vessel by rotating the mast E so as to change the position of the discharge end of the adjustable conveyer. This rotation of the mast also permits the coal to be loaded from either side of the barge. When the fixed conveyer B once engages the coal, it takes it up to the hopper C and avoids the breakage attending the change from the horizontal conveyer to the elevator. It will thus be seen that by the construction herein shown the breakage of the coal is reduced to a minimum. When it is desired to rotate the mast so as to change the point of delivery of the material from the adjustable conveyer, the clutch E^9 is operated so as to connect the mast with the motor. When it is desired to vary the height of the discharge end of said conveyer, the winding-drum is operatively connected with the motor. It will be seen that the coal is carried mechanically to the point of delivery instead of a distance above it and that the injury attending the usual handling of the coal is very materially reduced. When the device is constructed as shown in Fig. 6, the fixed conveyer discharges into the elevator at the bottom of the mast, and the material is then mechanically moved without further handling to the discharge end of the adjustable conveyer.

I claim—

1. A device for handling material, comprising a fixed conveyer, an adjustable conveyer, a movable support to which said adjustable conveyer is movably attached, an elevating device for conveying the material from said fixed conveyer to said adjustable conveyer and a connection between said fixed and adjustable conveyers so that the material is discharged into the adjustable conveyer in all its various positions.

2. A device for handling material, comprising a barge provided with a fixed conveyer, a rotatable support mounted upon said barge, an adjustable conveyer connected with said support so as to rotate therewith, and an elevating device for conveying the material from the fixed conveyer to the adjustable conveyer.

3. A device for handling coal, comprising a

fixed conveyer changed in direction for a portion of its length so as to act as an elevator, a movable support, an adjustable conveyer movably connected with said support, so that its discharge end may be varied in position, the receiving end of said adjustable conveyer in proximity to the discharge end of the fixed conveyer and adapted to receive the material discharged therefrom in all its various positions.

4. A device for transferring material from one vessel to another, comprising a fixed conveyer associated with one vessel changed in direction for a portion of its length so as to form an elevator, a rotatable mast in proximity to the discharge end of the elevator portion of said conveyer, an adjustable conveyer movably connected with said mast and having its receiving end in position to receive the material from said fixed conveyer and convey it to the point desired.

5. A fueling-barge, comprising a fixed conveyer extending substantially the length of the barge and changed in direction at one end thereof so as to act as an elevator, a rotatable mast in proximity to the discharge end of the elevator part of said conveyer, an adjustable conveyer movably connected with said mast and having its end in position to receive the material from the fixed conveyer, and a controlling device for controlling the position of the discharge end of said adjustable conveyer.

6. A fueling-barge, comprising a fixed conveyer changed in direction near one end of the barge so as to form an elevator, a rotatable mast on said barge, an adjustable conveyer movably connected therewith, a hopper interposed between the adjustable conveyer and the discharge end of the elevator portion of said fixed conveyer, said hopper adapted to receive the material from the fixed conveyer when the mast is in various positions and deposit it upon said adjustable conveyer.

7. A fueling-barge, comprising a fixed conveyer changed in direction near one end of the barge so as to form an elevator, a rotatable mast on said barge, an adjustable conveyer movably attached to said mast, a hopper extending part way around the mast and interposed between the adjustable conveyer and the discharge end of the elevator portion of said fixed conveyer, said hopper provided with an inclined bottom which guides the coal onto the adjustable conveyer in all the various positions of said mast.

8. A device for handling material, comprising a barge provided with a fixed conveyer, a rotatable support mounted upon said barge, an adjustable conveyer connected with said support so as to rotate therewith to be adjusted in a horizontal plane, an adjustable device for moving said adjustable conveyer in a vertical plane, and an elevating device for conveying the material from the fixed conveyer to the adjustable conveyer.

STAUNTON B. PECK.

Witnesses:
DONALD M. CARTER,
HOMER L. KRAFT.