July 28, 1925. 1,547,223

G. A. LYNDALE

COMBINED TRUCK AND ELEVATOR FOR HANDLING BEEF QUARTERS AND THE LIKE

Filed Jan. 9, 1924 2 Sheets-Sheet 1

Fig. 1

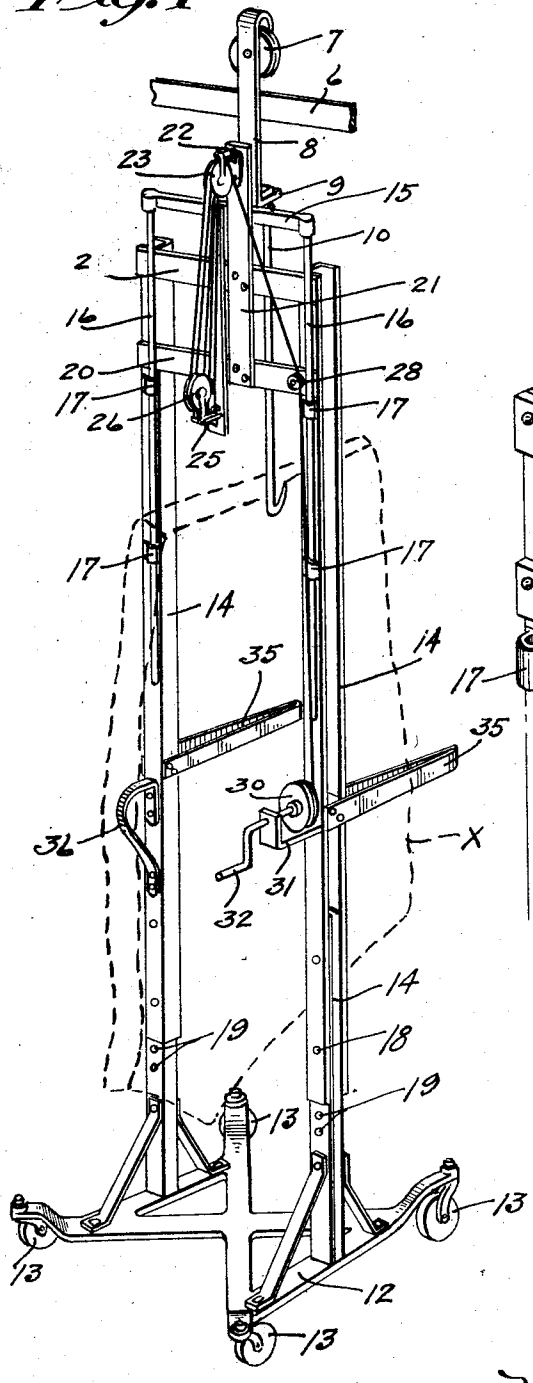
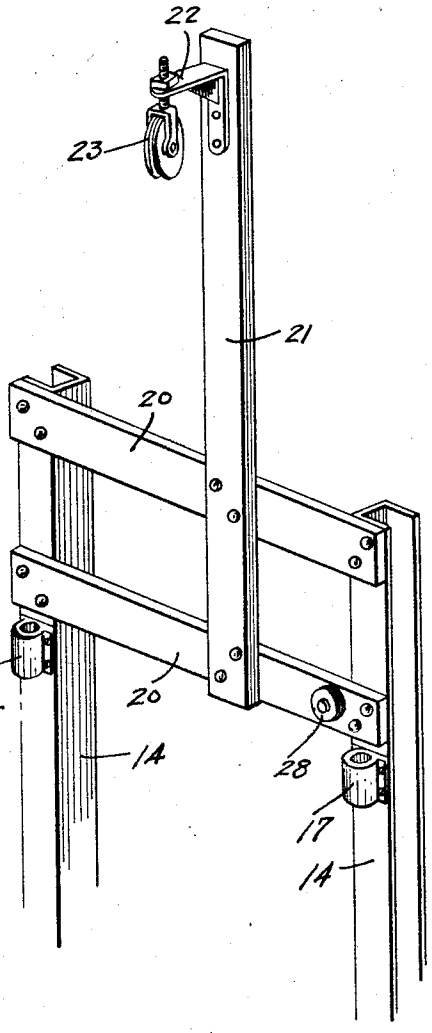


Fig. 2



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Fig. 5

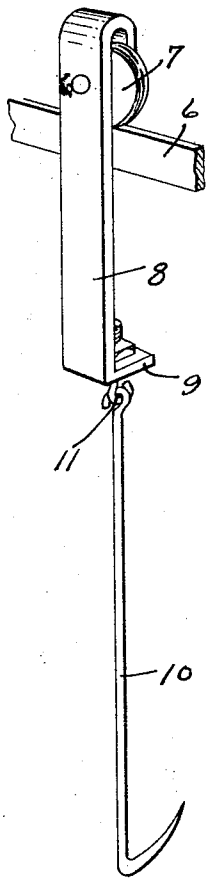


Fig. 3

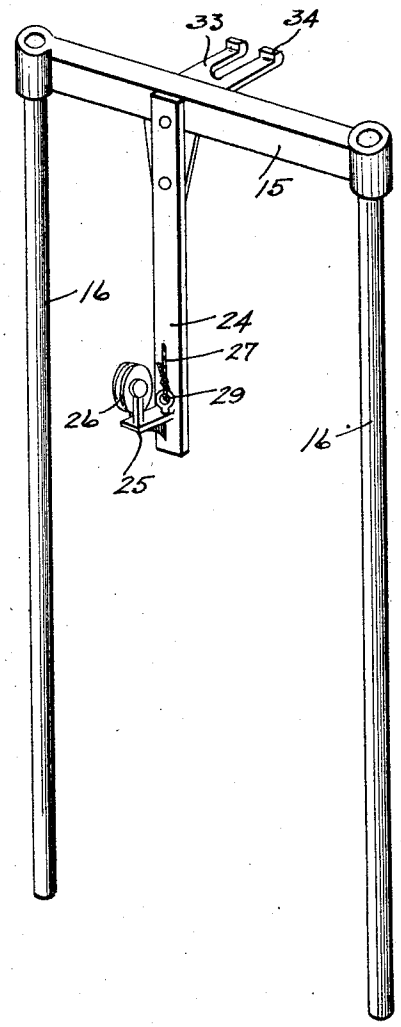
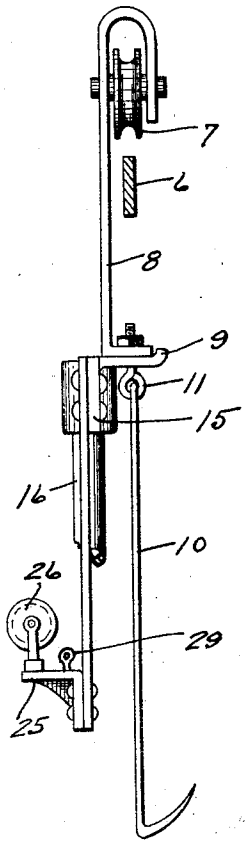


Fig. 4



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Patented July 28, 1925. 1,547,223

UNITED STATES PATENT OFFICE.

GEORGE A. LYNDALE, OF MINNEAPOLIS, MINNESOTA.

COMBINED TRUCK AND ELEVATOR FOR HANDLING BEEF QUARTERS AND THE LIKE.

Application filed January 9, 1924. Serial No. 685,139.

To all whom it may concern:

Be it known that I, GEORGE A. LYNDALE, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Combined Trucks and Elevators for Handling Beef Quarters and the like; 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 has for its object to provide a combined truck and elevator for handling beef quarters and the like, and to this end it consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

As is well known, beef quarters are usually stored close together and held suspended from an overhead track rail by means of travelling grapple-equipped hangers mounted thereon. In removing a beef quarter from its hanger it is necessary to lift the same to disengage the grapple therefrom, which often results in lifting the hanger from the track rail, thus causing the same to fall which usually results in striking the operator unless the hanger is held by one hand while handling the beef quarter with the other. This is difficult to do as the beef quarters are very heavy to handle. Two men are often required to handle a beef quarter, the one to hold the hanger and disengage the grapple, and the other to lift the beef quarter.

By the use of my invention, a hanger with a suspended beef quarter may be lifted from an overhead track rail conveyed to any desired point and placed on another track rail, or the beef quarter lowered and the grapple detached therefrom with very little effort on the part of the operator.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings

Fig. 1 is a perspective view of the invention having a beef quarter suspended therefrom;

Fig. 2 is a perspective view of the upper end portion of the elevator frame;

Fig. 3 is a perspective view of the elevator head and cross head;

Fig. 4 is a fragmentary side elevation of the cross head and travelling hanger supported thereon; and

Fig. 5 is a perspective view of the travelling hanger.

The numeral 6 indicates an overhead track rail on which is mounted a travelling hanger comprising a grooved wheel 7 journaled in the yoke-like upper end of an upright frame bar 8, the lower end of which is laterally offset to afford a foot 9 that extends under the track rail 6. A depending hook-like grapple 10 is attached to the foot 9 by an eye bolt 11 for holding a beef quarter *x*, as indicated by broken lines in Fig. 1. The above described hanger and grapple are standard equipment, used in storage and refrigerator plants and the like, for hanging and conveying beef quarters and other meats.

The improved truck comprises a skeleton frame 12 supported on four large caster wheels 13.

Carried by the truck is a pair of laterally spaced longitudinally adjustable uprights 14 on which is mounted an elevator in the form of a crosshead 15 having at its ends a pair of depending guide rods 16 slidably mounted in upper and lower guides 17 on said uprights. Each upright 14 comprises two channel bars telescoped, the one on the other, and adjustably connected by a pair of nut-equipped bolts 18 adapted to be inserted through longitudinally spaced holes 19 in said uprights.

The lower members of the uprights 14 are rigidly secured to the truck frame 12 and suitably braced.

The uprights 14, above the upper pair of guides 17, are rigidly connected by a pair of cross tie-bars 20 to which is secured a mast 21 having on its upper end a bracket 22 that carries a pulley 23. Edgewise offset from the mast 21 is a depending bar 24 rigidly secured to the crosshead 15 and having on its lower end a bracket 25 to which is secured a pulley 26. A hoisting cable 27 is arranged to run over the pulleys 23 and 26 and a guide sheave 28 on the lower cross tie-bar 20. One end of the cable 27 is attached to an eye 29 on the bracket 25 and its other end is secured to and arranged to be wound on a drum 30 journaled in a bearing 31 secured to one of the uprights 14. The shaft of the drum 30, outward of the bearing 31,

is provided with a hand crank 32 by which said drum may be rotated.

A bifurcated coupling bracket 33 is rigidly secured to the crosshead 15 and projects on the opposite side thereof from the bracket 25. On the outer ends of the coupling bracket 33 is a pair of upstanding stop lugs 34. The bifurcated coupling bracket 33 is adapted to receive the eye bolt 11 and support the hanger when lowered thereon. The foot 9 of the hanger is adapted to rest directly on the coupling bracket 33, and the frame bar 8, stop lugs 34 and eye bolt 11 hold the foot 9 against sliding movement on said bracket in all directions.

A pair of V-shaped divider fingers 35 is rigidly secured to the uprights 14 and projects horizontally in the same direction as the coupling bracket 33. Attached to the opposite upright 14 from the one on which the drum 30 is mounted is a hand-hold 36 by which the truck may be moved.

The operation of the combined truck and elevator may be briefly described as follows: The truck, due to its large caster wheels 13, may be easily wheeled from place to place, and when a beef quarter is to be removed, the truck is wheeled toward the same so that the divider fingers 35 will enter between the selected beef quarter and the beef quarters on each side thereof, and separate the same from the selected beef quarter and permit the same to enter between the two uprights 14, and also permit said uprights to enter between the beef quarters, as shown in Fig. 1. At this same time, the eye bolt 11, from which the grapple 10 is suspended, will enter between the prongs of the coupling bracket 33 and position the foot 9 of the hanger frame bar 8 over said coupling bracket.

By operating the hand crank 32, the cable 27 may be wound on the drum 30 to elevate the crosshead 15 and thereby cause the coupling bracket 33 to engage the foot 9 of the hanger frame bar 8 and lift the grooved wheel 7 from the track rail 6. Then, by taking hold of the hand crank 32 and handhold 36 the truck, together with the hanger and beef quarter, may be moved to any desired position and the hanger lowered onto another overhead track rail, or the beef quarter removed from the grapple. By making the upright 14 longitudinally adjustable, the crosshead 15 may be set for track rails located at different elevations.

What I claim is:

1. A combined truck and elevator for handling beef quarters and the like comprising a track rail, a roller-equipped hanger removably mounted on the track rail, a traveling truck, an elevator on the truck having means for releasably carrying the roller-equipped hanger, and reversible means for operating the elevator to cause the same to deposit said hanger on a track rail or lift the same therefrom.

2. A combined truck and elevator for handling beef quarters and the like comprising a track rail, a roller-equipped hanger removably mounted on the track rail, a traveling truck, an elevator on the truck having a vertically adjustable head for releasably carrying the roller-equipped hanger, and means for operating the elevator to cause its head to deposit said hanger on a track rail or lift the same therefrom.

3. A combined truck and elevator for handling beef quarters and the like comprising a track rail, a roller-equipped hanger removably mounted on the track rail, a traveling truck, an elevator on the truck including a vertically adjustable head provided with a coupling bracket for releasably carrying the roller-equipped hanger, and means for operating the elevator to cause said bracket to deposit the hanger on a track rail or lift the same therefrom.

4. The structure defined in claim 3 in which the hanger is provided with a depending grapple and in which the coupling bracket is bifurcated, said coupling bracket being arranged to interlock with the hanger when on a track rail by a travelling movement of the truck to cause said grapple to enter the bifurcation in said bracket and to position the coupling bracket under the hanger and by a lifting movement of the elevator.

5. A combined truck and elevator for handling beef quarters and the like comprising a track rail, a roller-equipped hanger removably mounted on the track rail, a traveling truck, an elevator on the truck including a vertically adjustable frame and a vertically adjustable head on the frame having a coupling bracket for releasably carrying the roller-equipped hanger, and means for operating the elevator to cause said bracket to deposit the hanger on a track rail or lift the same therefrom.

6. A combined truck and elevator for handling beef quarters and the like comprising a track rail, a roller-equipped hanger removably mounted on the track rail, a traveling truck, an elevator on the truck including a pair of uprights and a vertically adjustable head on the uprights having a coupling bracket for releasably carrying the roller-equipped hanger, and means for operating the elevator to cause said bracket to deposit the hanger on a track rail or lift the same therefrom.

7. The structure defined in claim 6 in further combination with a pair of divider fingers on the uprights.

8. A combined truck and elevator for

handling beef quarters and the like comprising a track rail, a roller-equipped hanger removably mounted on the track rail, a traveling truck, an elevator on the truck including a pair of uprights, a crosshead, guide rods supporting the crosshead from the uprights for vertical adjustment, a mast on the uprights, pulleys on the crosshead and mast, a hoisting cable arranged to run over said pulleys, and a coupling bracket on the crosshead for releasably supporting said hanger.

In testimony whereof I affix my signature.

GEORGE A. LYNDALE.