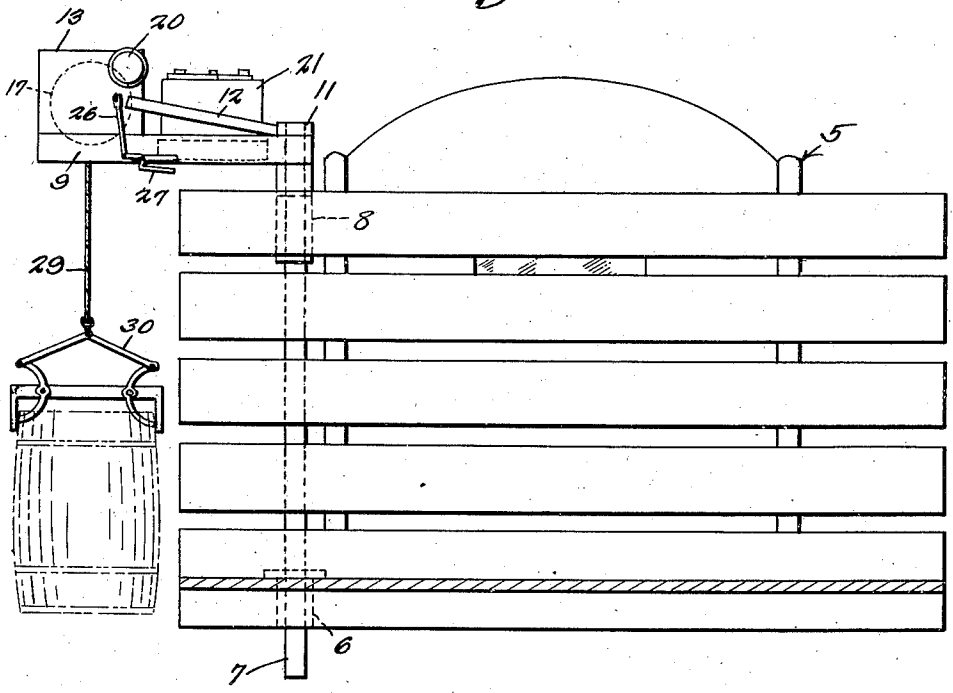
Feb. 19, 1946. G. H. SMITH 2,395,201

PORTABLE ELECTRIC HOIST FOR TRUCK MOUNTING

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Fig. 1.



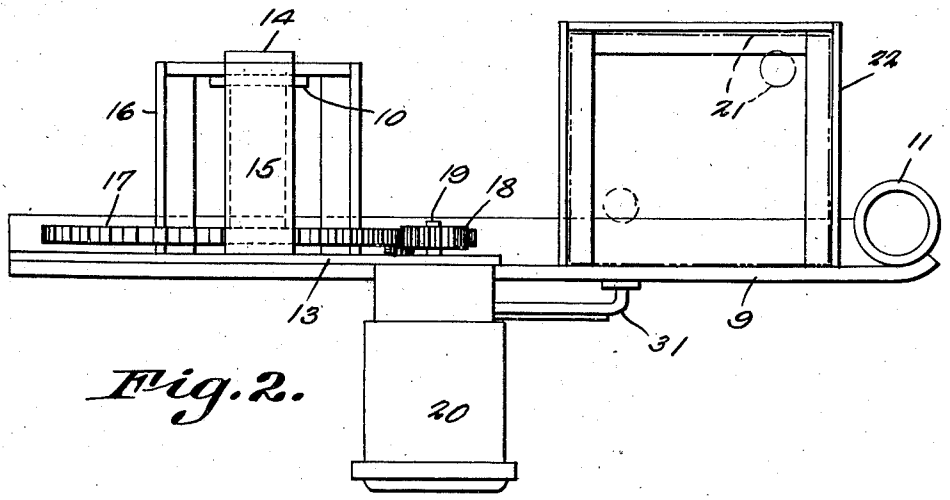


Fig. 2.

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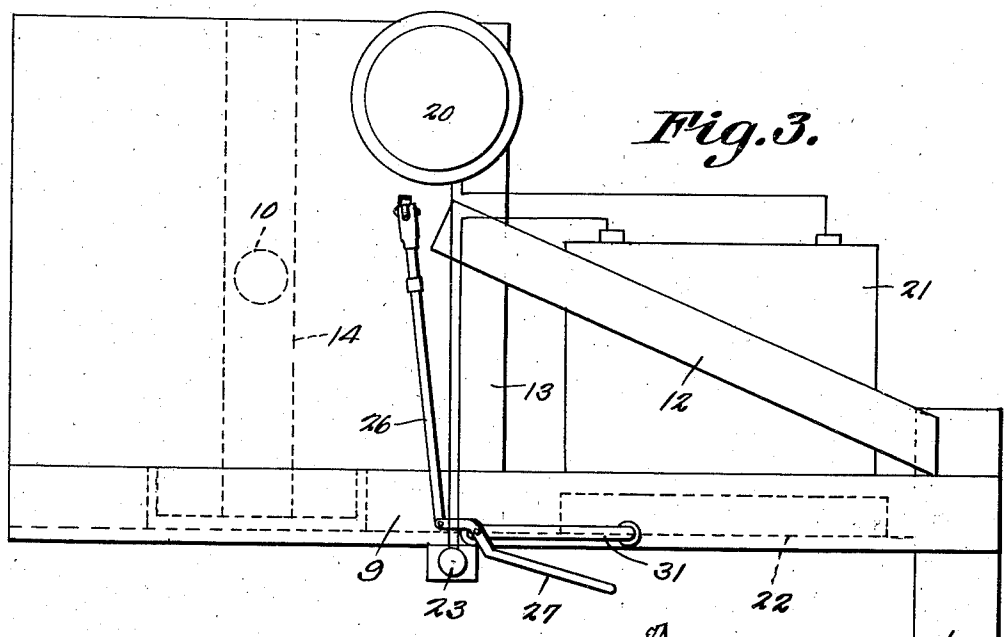


Fig. 3.

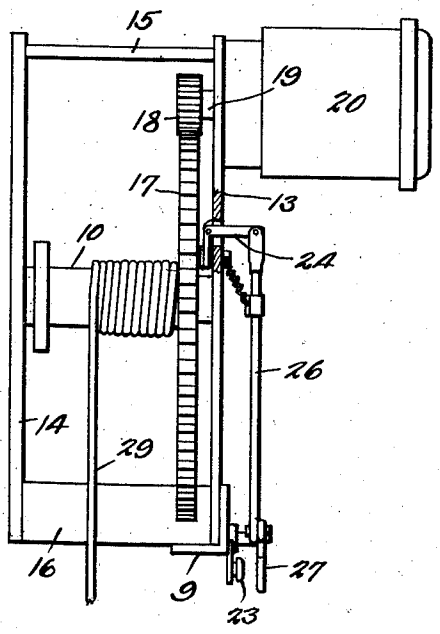


Fig. 4.

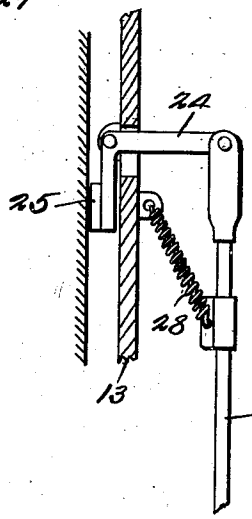


Fig. 5.

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Patented Feb. 19, 1946 2,395,201

UNITED STATES PATENT OFFICE

2,395,201

PORTABLE ELECTRIC HOIST FOR TRUCK MOUNTING

George H. Smith, Houlton, Maine

Application April 23, 1945, Serial No. 589,812

1 Claim. (Cl. 212—65)

This invention relates to portable electric hoists designed for use primarily in connection with motor trucks.

The primary object of the invention is to provide an electric hoist which may be readily and easily mounted on a motor truck, whereby heavy objects such as packing boxes, barrels or the like may be lifted and the hoist swung to a position where the articles being loaded, may be deposited on the truck, thereby facilitating the loading of heavy articles.

An important object of the invention is to provide a device of this character which may be readily and easily positioned on a truck body, and readily removed after the loading operation.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawings:

Figure 1 is a rear elevational view of a truck body, illustrating an electric hoist constructed in accordance with the invention, as positioned thereon.

Figure 2 is a plan view of the electric hoist.

Figure 3 is a side elevational view thereof.

Figure 4 is an end elevational view of the electric hoist.

Figure 5 is a sectional view illustrating the braking mechanism for braking the movements of the hoist.

Referring to the drawings in detail, the reference character 5 designates a motor truck body which is formed with a bearing member 6 in which the lower end of the supporting post 7 is mounted.

An upper tubular bearing 8 is secured to the frame of the truck body in any desirable manner, and this bearing supports the upper end of the supporting post 7, the supporting post 7 being however, of a length to extend an appreciable distance above the upper tubular bearing 8.

The reference character 9 indicates an arm which supports the hoist drum 10, the arm 9 being connected to the bearing sleeve 11, so that the arm together with the hoist drum and operating mechanism may rotate on the support post 7. The brace arm indicated at 12 extends upwardly from the bearing sleeve 11 and connects with the plate 13 that rises from the arm 9, the plate 13 providing a bearing for one end of the hoist drum 10. The opposite end of the hoist drum 10 is mounted in a bearing formed in the plate 14, the plates 13 and 14 being connected by means of bars 15 and 16, which hold the plates in proper spaced relation with respect to each other.

Mounted on the hoist drum at one end thereof, is a substantially large gear 17 that merges with the gear 18 mounted on a motor shaft 19, whereby the hoist drum 10 is rotated by the motor 20, through the gears 17 and 18.

The motor 20 is in circuit with the battery 21 which is mounted on the support 22 that forms a part of the arm 9, there being provided a switch 23 in the form of a button, adapted to control the circuit between the battery and motor.

The reference character 24 indicates a brake arm that has a brake shoe 25 mounted on the inner end thereof, the brake shoe being designed to contact with one side face of the gear 17. An operating lever 26 connects with the brake arm 24 and is provided with a handle 27 which may be operated against the action of the spring 28, to force the brake shoe 25 into engagement with the gear 17 to retard the motion thereof, and hold the hoist drum against reverse movement.

The cable 29 is wound on the hoist drum and carries the grapple 30 which is adapted to grip the articles being loaded, to elevate the articles to a position where the arm 9 may be swung inwardly to deposit the articles on the truck body.

When using the hoist, the arm 9 and post 7 are positioned on the motor vehicle truck, as shown by Fig. 1 of the drawings. The grapple is now positioned over an article being loaded, and the control button to the electric motor 20 is operated to complete the circuit to the motor which results in rotary movement being imparted to the hoist drum 10. The cable 29 is now wound on the hoist drum, and the article with which the grapple is connected, is elevated. The arm is now swung inwardly over the truck body and the load released.

In order that the arm 9 with its load, may be readily swung inwardly, a handle indicated by the reference character 31 is connected with the arm 9.

What is claimed is:

In a portable hoist, a supporting post adapted to be secured to a truck body, a horizontal supporting arm mounted for pivotal movement at the upper end of the post, a pair of spaced plates mounted on the arm, said plates having bearing openings, a hoist drum mounted within the bear-

ing openings, a large gear at one end of the hoist drum, an electric motor mounted on the plates, a substantially small gear meshing with the large gear, and being secured to the shaft of the motor, whereby rotary movement of the motor is transmitted to the hoist drum, a brake embodying a lever extending through one of the plates, a brake shoe on one end of the lever adapted to engage the substantially large gear for retarding movement of the large gear, a lever for operating the brake shoe, a cable adapted to be wound on the hoist drum, and a grapple secured to the free end of the cable and adapted to be positioned over an article to be lifted, securing the article to the cable, and a handle on the arm whereby said arm may be swung inwardly to a position over the truck body to deposit the load lifted by the grapple.

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