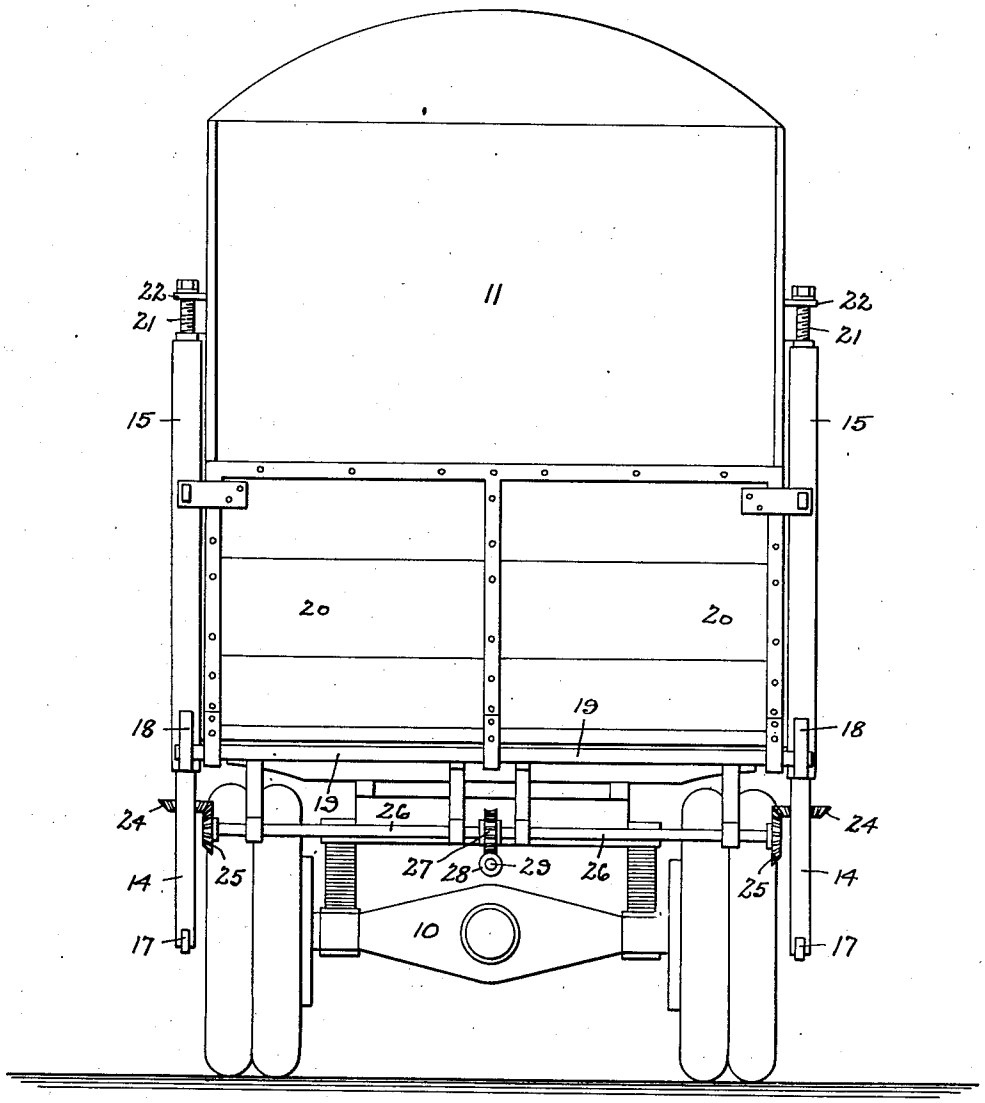
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MECHANICAL HOIST END GATE

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Fig. 1.



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Fig. 2.

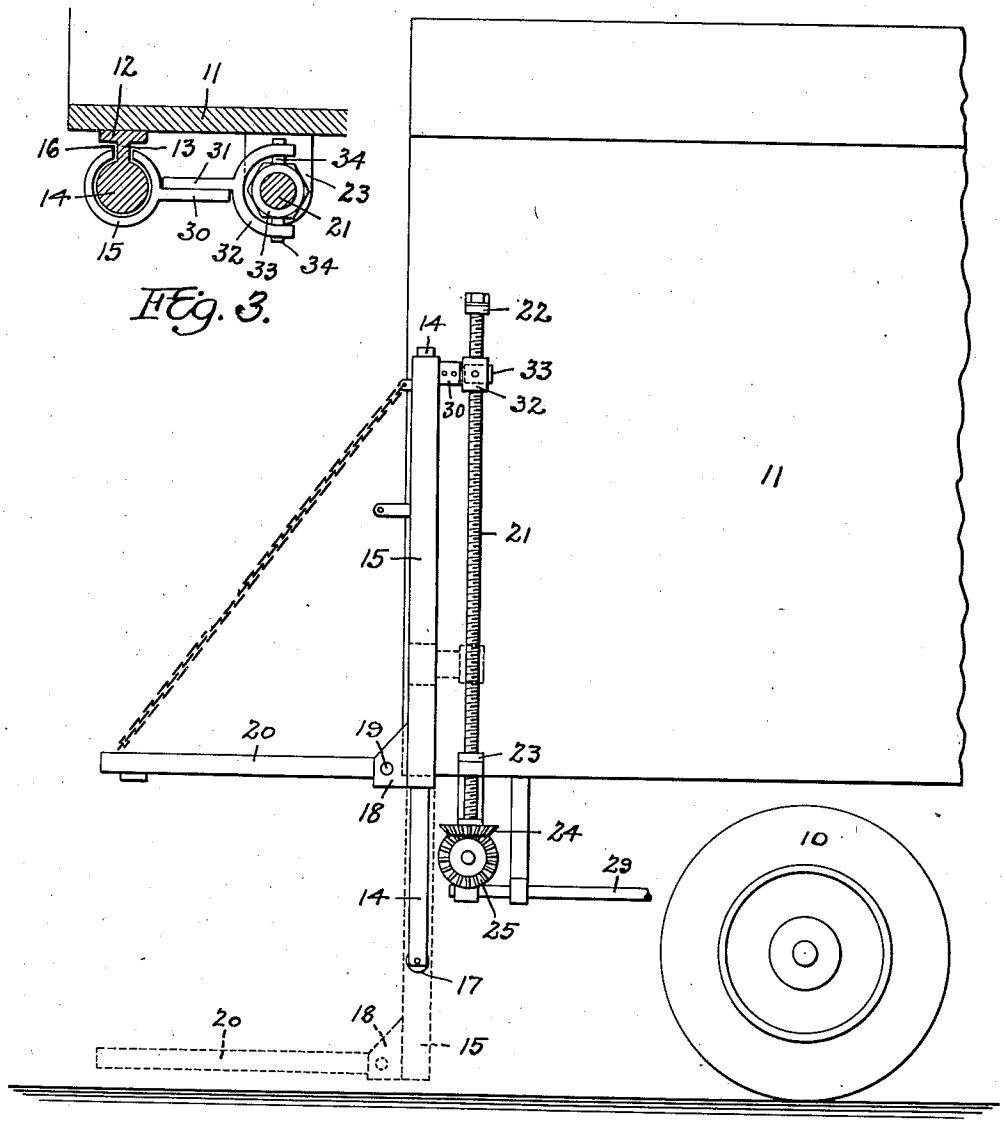


Fig. 3.

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MECHANICAL HOIST END GATE

Application filed June 11, 1930. Serial No. 460,499.

This invention relates to certain new and useful improvements in hoists of a type designed for raising and lowering a vehicle endgate while disposed in a horizontal plane.

One of the principal objects of the invention embodies an operating means for the endgate to be included upon and operable from the vehicle power plant.

Another object of the invention consists in the arrangement of guides for the endgate to obviate undue interference to the elevating mechanism and distortion of the endgate while in use.

More specifically stated the guides are provided with journals whereby the endgate may be swung to occupy the conventional positions.

With the above and other objects in view, the invention further consists of the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:

Figure 1 is a rear elevation of a motor vehicle truck body showing the endgate in elevated position and swung in a vertical plane to partially close the rear end of the wagon box.

Figure 2 is a fragmentary side elevation of the truck body illustrating by full and dotted lines the respective positions capable of being attained by the endgate through the operation of the hoist.

Figure 3 is a horizontal sectional view taken through portions of the guide and hoist mechanism respectively.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the reference character 10 indicates generally a motor vehicle chassis having a truck or delivery body 11 of conventional construction.

Attaching plates 12 secured upon the outer and opposite sides of the body 11, in vertically disposed planes and immediately adjacent the rear entrance to the body or wagon box, are provided with outstanding ribs or fins 13. Bars 14 of circular contour are carried upon the outer portions of the fins or ribs 13 spaced from the attaching plates 12.

Sleeve members 15 split, as at 16, to accommodate the fins 13 are telescopically associated with the bars 14 in loose fitting relation, the purpose of such connection will be presently apparent in the following description of the invention. Disk members or wheels 17 journaled within the ends of the bars 14 in the manner shown in Figures 1 and 2 of the drawings have the peripheries therefor extended outwardly for appreciable distances beyond the outer surface of the immediate bars for contacting engagement with the inner walls of the sleeve members 15 at right angles to the split portions 16. Ears 18, carried by and rearwardly projecting in spaced parallelism in the lowermost end of the sleeve members 15, are provided with aligned openings to accommodate the extremities of a fulcrum bar 19 carried adjacent the lowermost edge of the body end or tailgate 20 and from which the latter may be swung to occupy vertical and horizontal planes.

The hoisting or elevating mechanism, alluded to in the foregoing, comprises revolvably mounted square threaded lifting shafts 21 passed through bearings 22 and 23 located at spaced intervals upon the truck body 11. Bevel gears 24 are carried upon the lowermost ends of each of the lifting shafts 21 for engagement with correspondingly constructed right angularly disposed ears 25 carried upon the extreme ends of a shaft 26 appropriately journaled beneath the floor of the wagon box or vehicle body. A worm gear 27 carried by the shaft 26 is meshingly engaged with a worm 28 carried upon a power transmitting rod 29 leading from a power take-off mechanism, not shown, to be in-

cluded upon the particular equipped vehicle. Operative connection between the sleeve members 15 and revolvably mounted hoisting or elevating shafts 21 is accomplished through the provision and arrangement of overlapped ears 30 and 31 respectively carried by the sleeve members 15 and forks 32 respectively. Traveler nuts 33 carried by and operating from the shafts 21 have oppositely projecting diametrically opposed trunnions 34 passed through and pivotally connected with the extremities of the forks 32, substantially as illustrated in Figure 3 of the drawings.

From the foregoing description and accompanying drawings, it is understood that rotary motion of the shafts 21 in different directions will cause the endgate 20 to occupy a horizontal position. When the endgate is disposed in the full line position, packages of great weight may be rolled or otherwise shifted along the floor of the wagon box or body and on to the endgate which now forms an extension for the floor.

The hoist mechanism is then actuated to lower the endgate until same is disposed in a position similar to that suggested in dotted lines in Figure 2 of the drawings. The parcels may then be removed. It is also to be noted that heavy parcels may be placed upon the endgate when in the lowered position and elevated to occupy a position in alignment with the floor or bottom of the wagon box and subsequently rolled within the wagon box with the utmost ease. It is to be noted that the truck driver or deliveryman will be relieved from all of the customary lifting strain in the removing and replacing of articles of drayage.

As suggested in Figures 1 and 2 of the drawings, the conventional forms of latch mechanisms and supports may be employed to hold the endgate in a vertical position shown in Figure 1 and against displacement from the horizontal position shown in Figure 2.

The invention is susceptible of various changes in its form, proportions and minor details of construction, and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention, what is claimed is:

1. An endgate hoist comprising spaced bars having longitudinally disposed ribs attached to a support, longitudinally slotted sleeves slidably mounted upon the bars, the slots of the sleeves receiving the ribs of the bars, an endgate pivotally connected with the sleeves, rotary lifting shafts, traveler means carried by the shafts and connected with the sleeves and means for simultaneously actuating the shafts.

2. An endgate hoist comprising spaced bars provided with longitudinally disposed ribs attached to a support, rollers journaled at the lower ends of the bars and disposed in planes at right angle to the ribs, sleeves slidably mounted upon the bars, said sleeves being provided with longitudinally disposed slots which receive the ribs, said sleeves adapted to receive the rollers, rotary lifting shafts disposed parallel with the sleeves, traveler members carried by the shafts and connected with the sleeves and means for simultaneously rotating the shafts.

In testimony whereof I affix my signature.

EDDIE LEWIS FOSDICK.