ELEVATING STOCK PICKER TRUCK

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2 Claims. (Cl. 182—12)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to us of any royalty thereon.

Our invention is a continuation-in-part of our copending application, Serial Number 330,205, filed December 12, 1963, and now abandoned, and relates to an elevating stock picker truck for use in selecting and repackaging loose stock in storage bins of varying height.

It is a primary object of our invention to provide a vehicle designed to perform in stock selection and replenishment in bin storage operations where the bins are double tiered and the sides are nearly vertical.

Another object of our invention is to provide a self guided vehicle having an elevated operator's working platform whereby the operator can service bins at either side of the aisle and can control the vehicle at any lift height.

An additional object of our invention is to provide a vehicle having an elevated platform over the area housing the operating mechanism of the truck thereby reducing the overall length of the vehicle and increasing maneuverability.

Still another object of our invention is to furnish a stock picker truck with the operator at the front positionable at varying heights to reduce to a minimum the necessity for bending or stooping in selecting stock from bins or in replenishment thereof.

A further object of our invention is to provide a stock picker truck having adjustable shelves which are foldable to an inoperative position.

Other objects and advantages of our invention will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application and in which like numerals are employed to designate like parts throughout the same:

FIGURE 1 is a side elevational view of our invention showing the platform in the elevated position in broken lines and in the lowered position in full lines;

FIGURE 2 is a front elevational view of our stock picker truck;

FIGURE 3 is a fragmentary top plan sectional view taken substantially on the line 3—3 of FIGURE 2; and

FIGURE 4 is a fragmentary side elevational view of a slightly enlarged, showing the adjustable brackets and shelves.

In the drawings wherein for the purpose of illustration is shown a preferred embodiment of our invention, the numeral 10 indicates the stock picker truck frame generally which includes a horizontal member 11 and a pair of vertical members 12. Rear wheels 13 and 14 are secured to the horizontal frame member 11 by L-shaped brackets 15 and 16 and pins 17. A forward steer-drive wheel 18 is mounted on the underside of the horizontal frame member 11. A liftable platform 19 includes a pair of upright guide portions 20 which engage the outer surface of the vertical frame members 12. A screen 21 carried by a U-shaped frame 22 is secured to the platform and to the guide portions 20. The platform 19 is raised and lowered by a conventional hydraulic forklift type mast assembly (not shown) and operated through a control box 23.

A cabinet 24 having side walls 25 and a top working counter 26 which includes a hinged panel member 27 providing access to the cabinet 24 from the top. Sliding doors 28, 29 having finger grips 30 are provided in one of said side walls 25 for a purpose to be described hereinafter. The operator stands on the platform 19 in front of the cabinet 24 and is enclosed by railed fencing 31. A gate 32 is provided in front of the platform 19 and is equipped with an electric interlock 33 which prevents movement in the working counter 26 unless the gate 32 is closed and will stop the truck automatically if the gate is opened.

A lamp 34 is secured to the upper portion of the U-shaped frame 22.

The shelves 35 and 36 comprise outwardly tapering side members 35a and 36a having a rounded upper rear edge 35b and 36b with an elongated slot 35c and 36c adjacent thereto and a bottom member 35d and 36d. The shelf 36 is carried by the laterally extending rod 37 which extends through the slots 36c. The adjustable sleeve-type brackets 38 and 39 have vertical openings 39 and 39' therethrough to permit same to slide along the frame 22, and are secured to L-shaped braces 40 and 40'. The brackets 38 and 39' and their braces 40 and 40' are held in place on the frame 22 by set screws 41 which extend through holes 38a in the brackets 38 and 39' and 40a in the braces 40 and 40'. The ends of the rod 37 extend through an opening 40b in the brace 40 and are held in place by any suitable means such as a cotter pin (not shown). A spacer 37a is carried on the rod 37 between the side member 36a of the shelf 36 and the inner surface of the adjacent brace 40.

The second shelf 35 is offset from the shelf 36 by providing a flange plate 40c having an opening 40d overlappingly secured to the inner surface of the L-shaped braces 40'. A second laterally extending rod 37 extends through the slots 35c and the openings 40d in the flange plate 40c and is held in place in any suitable manner, such as a cotter pin (not shown).

As seen in FIGURES 3 and 4, the shelf 36 is supported in a horizontal position by the rear portion of the side members 36a being in contact with the brackets 38. The shelf 35 is supported in a horizontal position by the rear portion of side member 35a being in contact with the front edge of the L-shaped brace 40' (see FIGURE 3).

The shelves 35 and 36 are foldable upwardly as indicated by the arrows (see FIGURE 1) and are secured in the folded position as the bars 37 and 37' are seated in the upper portion of the elongated slots 35c and 36c. Additional stabilizers for maintaining the shelves 35 and 36 in the upwardly folded position is provided by the clamp 42 carried by the screen 21 and the clamp 43 carried by the undersurface of the shelf bottom portion 36d.

In operation, the set screws 41 are loosened to enable the brackets 38, and their braces 40 to slide on the frame 22 so that the shelf 36 can be maneuvered to place the bottom portion 36d under the clamp 42. Then the shelf 35 is moved by moving the brackets 38' and their braces 40' to enable the bottom portion 35d to slide under the clamp 43. Once a shelf is in the vertical position as hereinafore described, the set screws 41 are, of course, tightened.

A motor housing 44 is secured to the frame 11, extends through an opening 45 in the platform 19 and is enclosed by the cabinet 24. A mail bag 46 is carried in the cabinet 24 adjacent the motor housing 44. Access to the mail bag 46 is provided by the hinged panel member 27 in the top working counter 26 and from the side by the sliding door 28; and to the motor housing by sliding door 29 and by raising the platform 19.
The vehicle is powered by an industrial type storage battery which is carried in the housing 47 and is equipped with a commercial type electronic sensing device 48 which receives signals from a low energized guide wire 49 embedded in the floor 50.

As will be seen in FIGURE 1, the liftable platform 19 is positioned slightly to the rear of the rear wheels 13, 14 and the battery housing 47 in back of the platform 19 to relieve the single front-steer drive wheel 18 of excessive weight under load and not to impair steering action.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred embodiment of same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of our invention or the scope of the subjoined claims.

We claim:

1. An elevating stock picker truck for use in selecting and replenishing loose stock in storage bins comprising a frame having horizontal and vertical portions, an electronic guidance means incorporated in said frame, a liftable platform having a forward operator's compartment, a rearward storage compartment, and an elevated U-shaped rear portion including opposed leg members positioned adjacent the vertical portion of said frame, a screen carried by said U-shaped portion at least two sleeve bracket members slidably mounted on said leg members on opposite sides of said elevated rear portion, at least one shelf pivotally secured to said bracket members, means maintaining said shelf in a horizontal position, an elongated slot on each side of said shelf, a rod extending through said slots and secured to said bracket members, a clamp carried by said screen holding the forward portion of said shelf, and drive means propelling said truck in cooperation with said guidance means.

2. The structure of claim 1, wherein a second shelf is positioned in offset relation to said first mentioned shelf, and a clamp is positioned on the undersurface of said first mentioned shelf to hold the forward portion of said second shelf in the vertical position.

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