Feb. 10, 1942. C. E. TRAXEL 2,272,447

TRUCK

Filed March 5, 1941 3 Sheets-Sheet 1

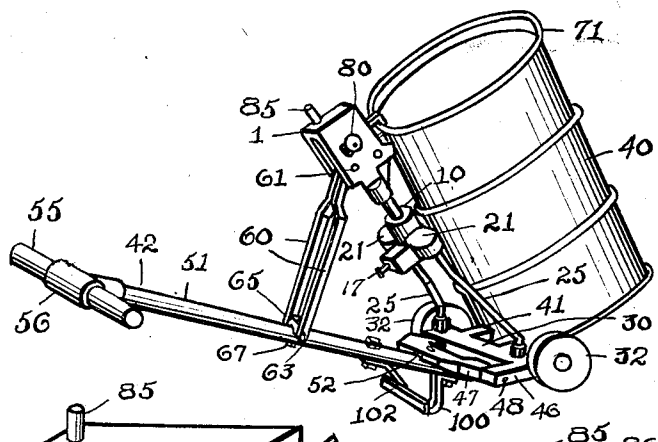


Fig 1

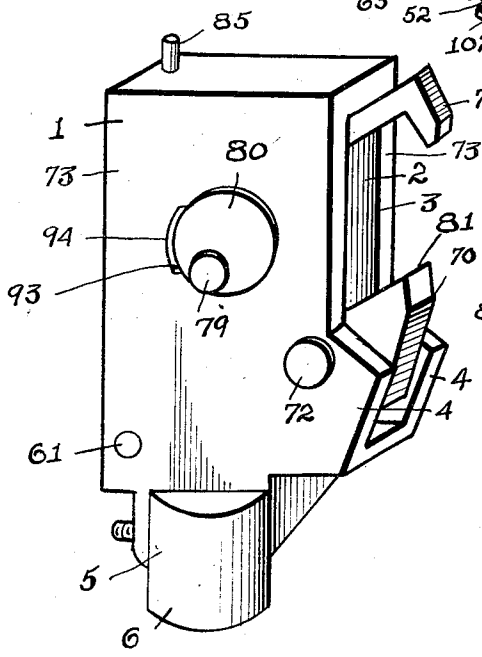


Fig 2

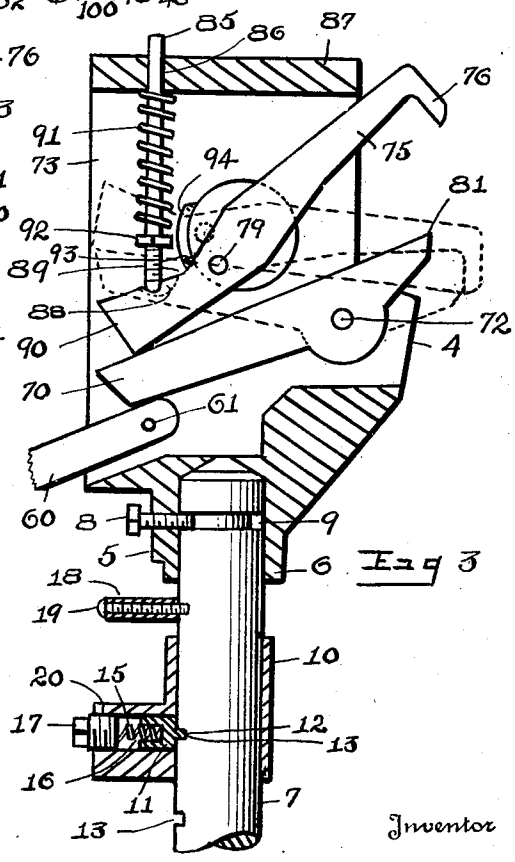


Fig 3

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TRUCK

Filed March 5, 1941 3 Sheets-Sheet 2

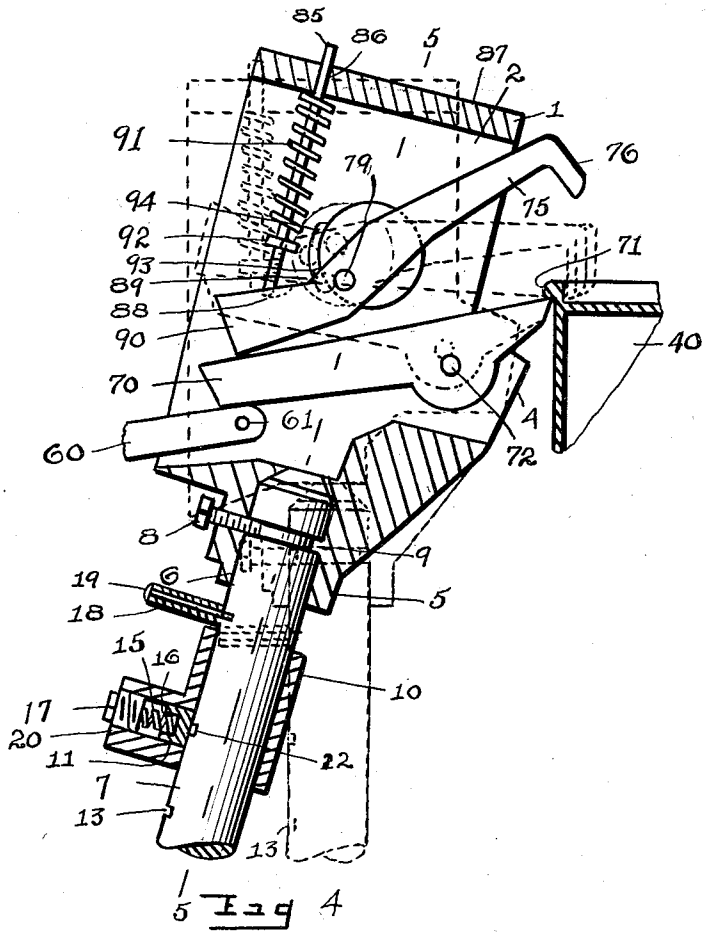


Fig 4

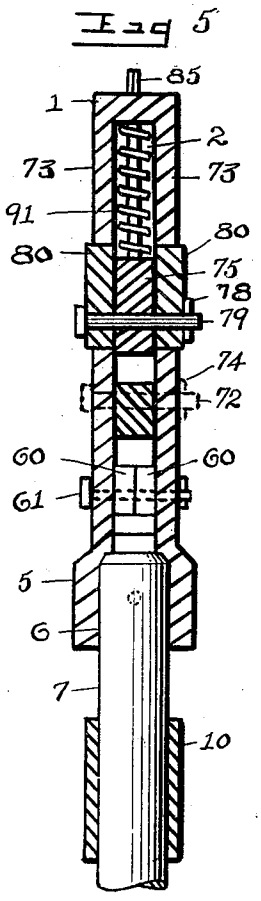


Fig 5

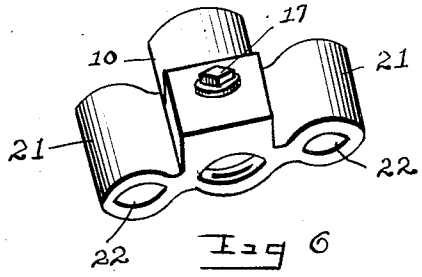


Fig 6

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TRUCK

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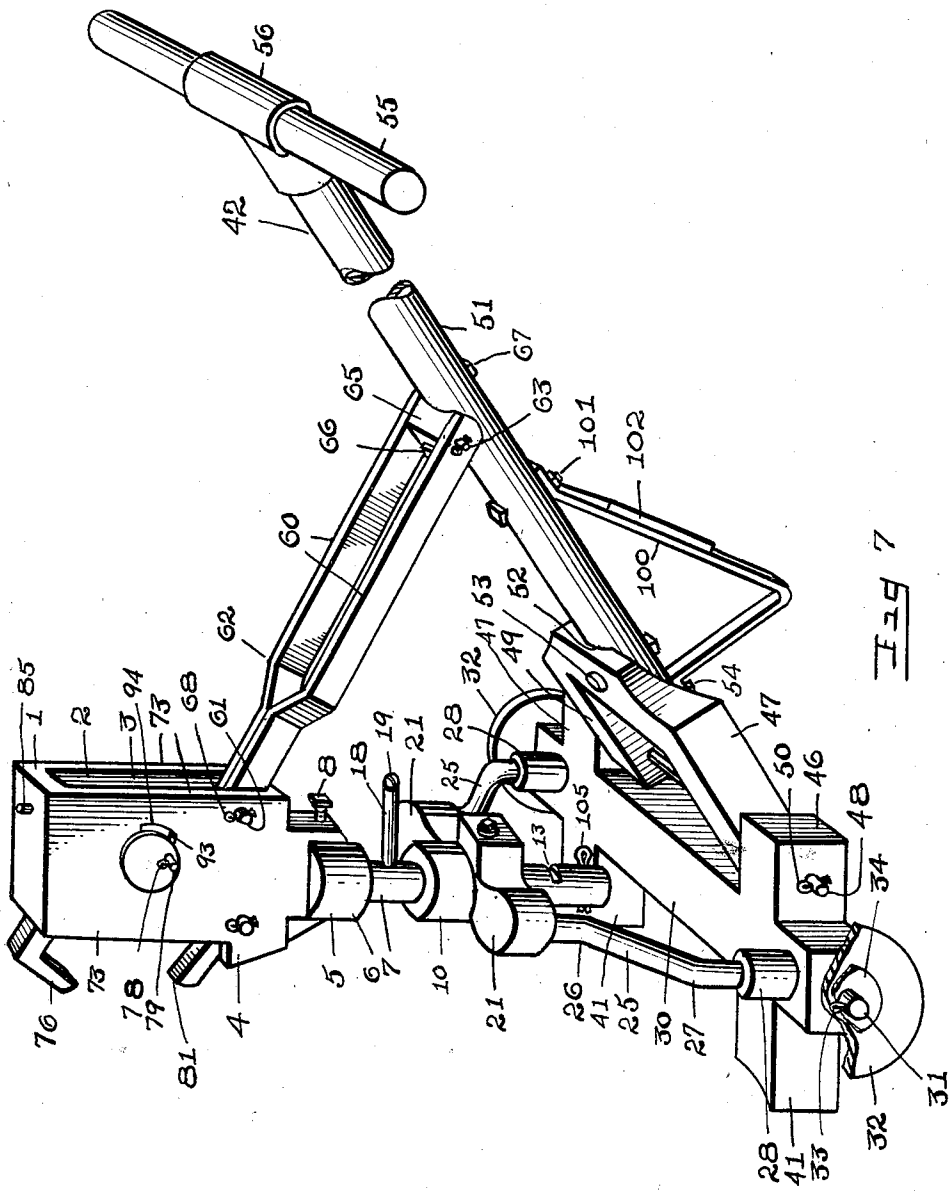


Fig 7

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Patented Feb. 10, 1942 2,272,447

UNITED STATES PATENT OFFICE

2,272,447

TRUCK

Charles E. Traxel, Rome, N. Y.

Application March 5, 1941, Serial No. 381,881

7 Claims. (Cl. 214—65.4)

My invention relates to a truck and I declare the following to be a full, clear, concise and exact description thereof sufficient to enable anyone skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings in which like reference characters refer to like parts throughout the specification.

The object of the invention is to provide a truck that can be used in moving still drums containing oil or other substances that are stored in warehouses.

It is often found desirable to select certain of the drums thus stored for shipping. To this end the truck is made in such manner that it can be adjusted readily to the particular vertical heights of the drums that are to be moved and after loading the drum on the truck it can pass easily with the drum through a narrow lane formed by the remaining stored drums to a shipping platform for transportation.

The object will be understood by referring to the drawings in which

Fig. 1 shows the device in perspective carrying a drum.

Fig. 2 is a detail view enlarged showing a perspective of one of the members employed in the structure.

Fig. 3 is a detail view enlarged showing a central vertical section of the member illustrated in Fig. 2 with other parts, some in full.

Fig. 4 is a detail view enlarged showing a central vertical section in full lines in one position and the same device in dotted lines in another position.

Fig. 5 is a transverse sectional view of the device taken on the line 5—5 of Fig. 4.

Fig. 6 is a detail enlarged view showing a perspective of a fitting employed.

Fig. 7 is a perspective view of the truck.

Referring more particularly to the drawings the device embodies a channel shaped casting member 1 having a central chamber 2 that is open at each end 3, 3. Casting 1 has projecting parts 4, 4 and a depending part 5 forming a socket 6 for housing the rotatable rod 7. Rod 7 is held in place in socket 6 by a screw bolt 8. The inner end of bolt 8 projects into an annual groove 9 made in the upper end of rod 7, whereby to hold said rod in said socket 6 and yet allow it to turn relative thereto.

The means for varying the height of member 1 embodies an adjustable fitting 10 mounted on rod 7 below part 5. Adjustable fitting 10 is held to one of several predetermined locations on rod 7 by a spring pressed plunger member 11. Member 11 has formed integral with its inner end a rectangular tongue 12 that projects into a horizontal groove 13 several of which are made at predetermined intervals by notching a sector of the outer surface of rod 7. Tongue 12 of member 11 is held yieldingly in said horizontal groove 13 of rod 7 by a coiled spring 15 having one end housed in socket 16 of member 11 and the other end engaging the inner surface of screw plug 17 that is threaded to the internal threads of socket 20. A hollow handle member 18 is fastened at right angles to rod 7 by a headed screw bolt 19 that projects through the hollow handle member 18 and engages a threaded aperture in rod 7.

In order to move adjustable fitting 10 along rod 7, whereby to engage the tongue 12 of plunger member 11 with any one of the several notches 13, it is necessary only to turn rod 7 about ninety degrees by means of handle 18, whereupon tongue 12 will ride out of its engaging groove 13. The operator then can push fitting 10 along rod 7 to the desired groove 13 and again turn rod 7 by means of handle 18 in the reverse direction about ninety degrees, whereby tongue 12 will be pushed into said groove 13 by coiled spring 15.

Fitting 10 has formed integral therewith and in alignment with each other twin socket members 21, 21. Members 21, 21 have sockets 22, 22 open at their lower ends. The interior walls of said sockets 22, 22 are threaded for the reception of the upper threaded ends of supporting tubes 25, 25. The upper ends of each of said tubes 25, 25 extends straight down from sockets 22, 22 is bent at 26, whereby they diverge from each other. The lower ends of each of said rods 25, 25 is again bent at 27, 27, whereby to extend straight downward into socket 28, 28 made integral with and upstanding from casting 30. An axle 31 extends clear through a suitable aperture in casting 30. Wheels 32, 32 are mounted on those parts of the ends of axle 31 that project beyond casting 30 and are held in place by cotter pins 33, 33 extending through suitable apertures in the respective extended ends of axle 31. Washers 34, 34 are mounted on axle 31 on the outside of wheels 32, 32, whereby to protect the bearings from dust and other foreign matters.

The means for engaging the lower portion of the oil drum 40 embodies the forwardly projecting lugs 41, 41 are formed on the arc of a circle to conform with the contour of said drum 40.

The means for pivotally mounting the handle bar 42 contemplates rearwardly extending lugs 46, 46 formed integral with opposite ends of cast-

ing 30. A U-shaped casting 47 is fulcrumed to lugs 46, 46 by a headed shaft 48 that extends through aligned apertures in lugs 46, 46 and the cooperaitng parts 49, 49 of casting 47. A cotter pin 50 is projected through the extended portion of shaft 48 to hold it in place.

The handle bar 42 embodies a hollow tube 51 resting in a suitable annular groove 52 made on the under side of casting 47. A headed bolt 53 and nut 54 is used to hold tube 51 to casting 47. A handle 55 is held to the free end of tube 51 by a T shaped fitting 56.

The means for connecting tube 51 with casting member 1 embodies forks or links 60, 60. The upper ends of links 60, 60 project into chamber 2 of casting 1 and are pivoted on a shaft 61 having bearings in the lower part of casting 1. Links 60, 60 are bent at 62, 62, whereby they diverge from each other. The upper ends of links 60, 60 disposed in chamber 2 of casting 1 form a rest for the free end of lower rock jaw 70 hereinafter referred to. The lower ends of links 60, 60 are pivoted to a headed shaft 63 which has a bearing in block 65 that is secured to tube 51 by a headed bolt 66 and nut 67. The under surface or block 65 is curved to conform to the curvature of tube 51. Cotter pin 68 passes through shaft 61 to hold it in place.

The means for gripping the end of bead 71 of oil drum 40 embodies said lower rock jaw 70 which is fulcrumed on a headed shaft or pin 72 extending through aligned apertures in the parallel walls 73, 73 of casting 1. A cotter pin 74 is projected through the part of pin 72 that extends beyond one of the outside walls 73, 73, whereby to hold it in place.

An upper jaw 75 having a hook portion 76 cooperates with the lower jaw 70, whereby to grip the bead 71 of oil drum 40. Upper jaw 75 is pivoted on a movable headed shaft or pin 79 that has eccentric bearings in discs 80, 80 mounted to turn in walls 73, 73 of casting 1. A cotter pin 78 is projected through an aperture in the part of shaft 79 that extends beyond the adjacent wall 73 whereby to hold said shaft 79 in place. Shaft 79 being mounted in said discs 80, 80 is movable from full to dotted line position illustrated in Fig. 3. When said discs are rotated in a clockwise direction they will allow upper jaw 75 to move longitudinally or rearwardly relative to lower jaw 70 as shown in Fig. 3, whereby to clamp bead 71 of oil drum 40 between the outer edge 81 of lower jaw 70 and the hook 76 of upper jaw 75 as seen in dotted lines in Fig. 3.

The means for returning upper jaw 75 and lower jaw 70 to normal or full line position illustrated in Fig. 3 contemplates a vertically disposed shaft 85 having a sliding fit in an aperture 86 in the upper horizontal part 87 of casting 1. The lower end of shaft 85 rests in an open recess 88 made in the rear end of upper jaw 75, which is cut away on a reentrant angle at 89. Shaft 85 exerts a normal downward pressure against the rear end 90 of upper jaw 75 by reason of a coiled spring 91 that surrounds said shaft 85 and bears at its upper end against the lower surface of horizontal part 87 and at its lower end against an adjustable nut 92 screw mounted to said shaft 85.

The means for limiting the amount of rotation of discs 80, 80 embodies pins or studs 93, 93 welded or otherwise fastened adjacent the peripheries of each of said discs 80, 80. Said pins 93, 93 may be forced with a tight fit into suitable apertures in the periphery of discs 80, 80. Said pins 93, 93 project into arc shaped slots 94, 94 made in walls 73, 73 of casting 1. Said slots 94, 94 are adjacent to and open into the annular open apertures that house said discs 80, 80.

A floor support for holding hollow handle bar 42 in elevated position embodies a V shaped bracket 100 that is bolted at 101 and 53 to said tube 51 near its lower end. The lower part of bracket 100 is adapted to rest on the floor or other external support, not shown. A foot pedal 102 is welded or otherwise secured to bracket 100.

The operator after adjusting casting 1 as to height of selected drum 40 pushes the truck towards said selected drum 40 until lugs 41, 41 are a short distance from its exterior lower part and tilts the handle 42 forward, whereby the outer end of lower jaw 70 will engage the lower surface of bead 71 of drum 40 before the lugs 41, 41 of casting 30 engage the lower part of drum 40. He then puts his foot on pedal 102 and pushes the said lower casting 30 towards drum 40 and simultaneously brings handle 42 backward, whereby to tilt casting 1 in the reverse direction and thereby force the outer edge of lower jaw 70 upwards against the lower surface of bead 71 of drum 40. This movement will exert a pressure on said lower jaw 70 which will cause it to rock on its pivot 72 into dotted line position illustrated in Figs. 3 and 4, whereby the rear end of lower jaw 70 will exert a pressure on the rear end of upper jaw 75 whereby to rock it on its movable pivot 79 into dotted line position shown in Fig. 4. During this interval the force of coiled spring 91 on shaft 85 will be sufficient to prevent discs 80, 80 from turning on their bearings, when upper jaw 75 has reached its dotted line position in Fig 2. A further push on pedal 102 will overcome the resistance of coiled spring 91 and thereby allow discs 80, 80 to turn clockwise on their respective bearings, whereby to cause pivot 70 to move therewith into dotted line position illustrated in Fig. 4 and draw upper jaw 75 rearwardly relative to lower jaw 70 into gripping contact with the inner surface of bead 71 of drum 40 shown in dotted lines in Fig. 4. By further tilting the handle 42 the drum 40 will rest on the truck and can be carried to any desired location for transportation.

In order to release the drum 40 from the truck the above movements in the reverse order are made.

Cotter pin 105 will limit the movement of shaft 7 in fitting 10.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is as follows:

1. In a truck, an engaging member comprising a casing, a jaw member pivotally mounted in said casing, another jaw member pivotally mounted in said casing and adopted to cooperate with said first named jaw member and said second named jaw member mounted on an eccentrically mounted pivot, whereby said jaw member can move longitudinally relative to said first named jaw member to grip an object.

2. In a truck, a member for engaging a drum, said member mounted to a truck, jaws in said first named member for engaging the rim of said drum and a rod projecting from said first named member and having notches formed therein, a fitting mounted on said rod, a plunger mounted in said fitting for engaging said notches in said

rod, whereby to hold said fitting in predetermined position relative to said rod, means for supporting said fitting on said truck and means for allowing said rod to turn, whereby to disengage said plunger from said notches.

3. In a truck, a member for engaging a drum, said member having jaws mounted therein and adopted to move relative to each other, a rod projecting from said first named member, notches formed in said rod, a fitting mounted on said rod, a plunger mounted in said fitting for engaging said notches, whereby to hold said fitting in an adjusted position relative to said rod and means for allowing said rod to turn, whereby to disengage said plunger from said notches.

4. In a truck, a member having jaws mounted therein, means for allowing said jaws to move relative to each other, whereby to engage a rim of a drum, a rod projecting from said member and having notches formed therein, a fitting mounted on said rod, a plunger member mounted in said fitting for engaging said notches in said first named rod, whereby to hold said fitting in predetermined position relative to said rod and means for supporting said fitting on said truck.

5. In a truck, a member having jaws mounted therein for engaging the bead of a drum, one of said jaws movable longitudinally relative to the other jaw, a rod projecting from said first named member and having notches formed therein, a fitting mounted on said rod, a plunger member mounted in said fitting and adopted to engage said notches, whereby to hold said fitting in predetermined position relative to said rod, means for allowing said rod to turn, whereby to disengage said plunger from said notches and spring means for holding the jaws in said first named member in normal position.

6. In a truck, means for engaging the bead of a tank, said means comprising a pair of cooperating levers and one of said levers mounted on an eccentrically mounted shaft carried by disks for allowing one of the levers to move longitudinally relative to the other, whereby to grip an object.

7. In a truck, a member having a pair of cooperating engaging jaws, one of said jaws being actuated by the other and one of said jaws being mounted eccentrically on a shaft carried by disks for allowing it to move longitudinally relative to the other.

CHARLES E. TRAXEL.