Oct. 24, 1944. C. F. ERNST 2,360,858

CONTAINER HANDLING DEVICE

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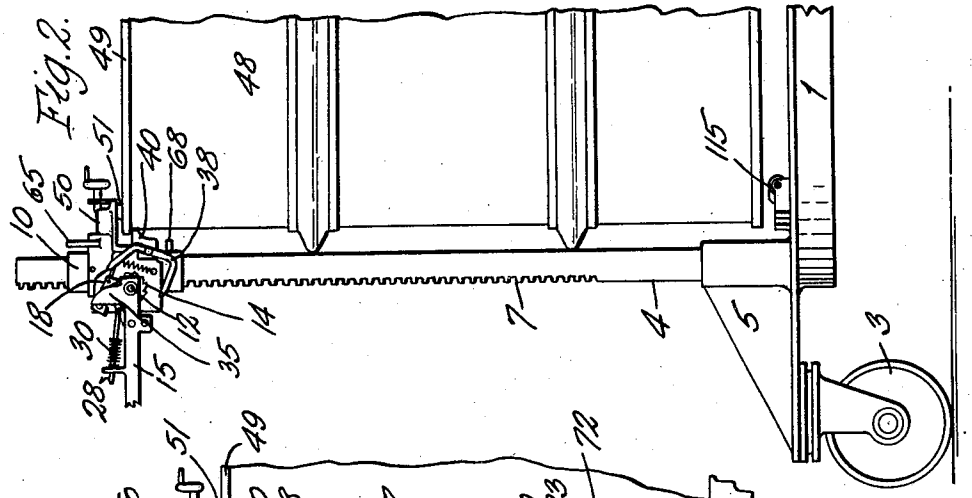


Fig. 2.

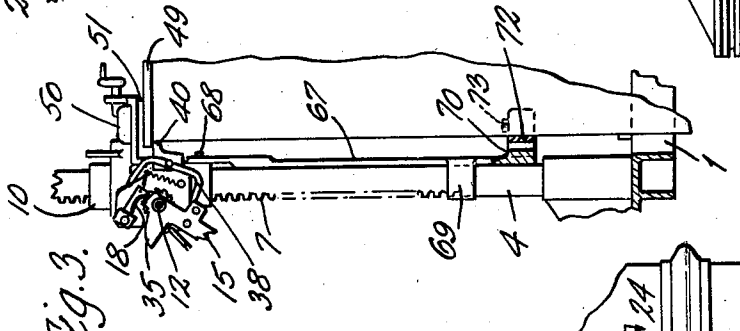


Fig. 3.

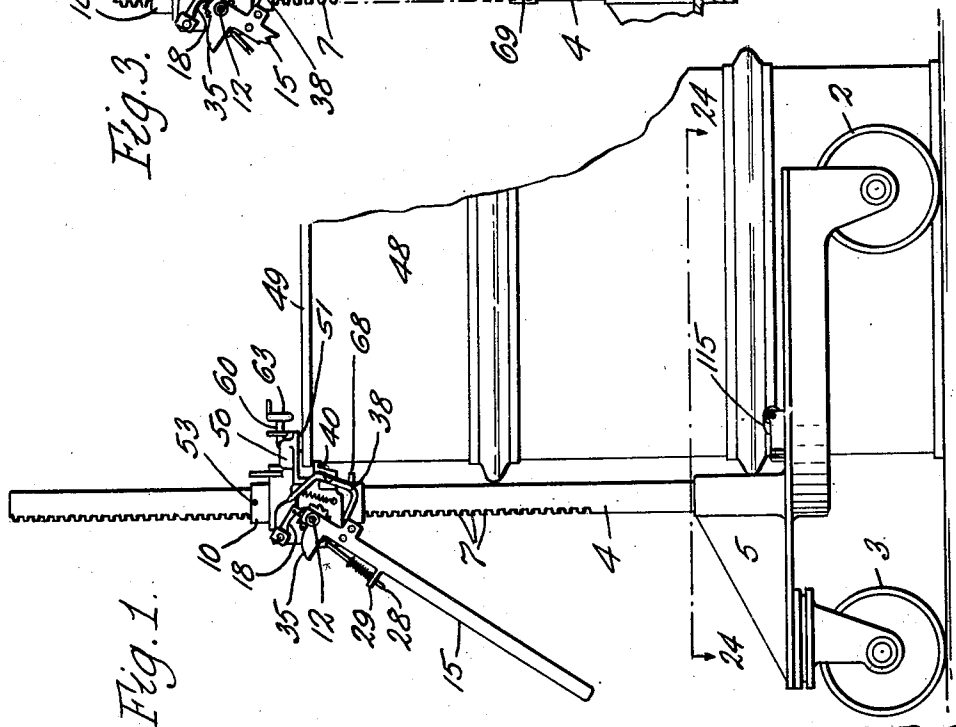


Fig. 1.

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Fig. 4.

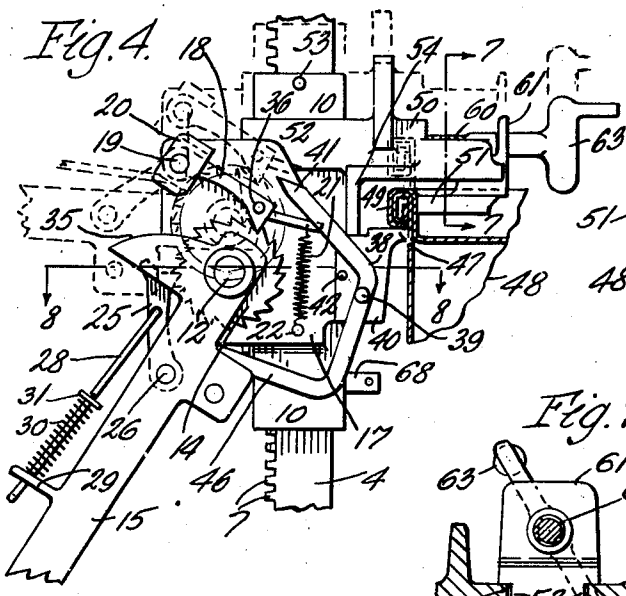


Fig. 5.

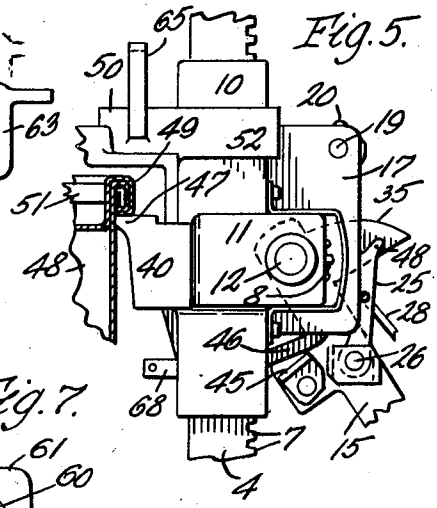


Fig. 7.

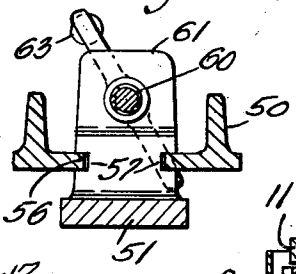


Fig. 8.

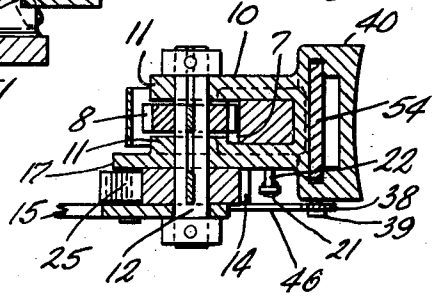


Fig. 6.

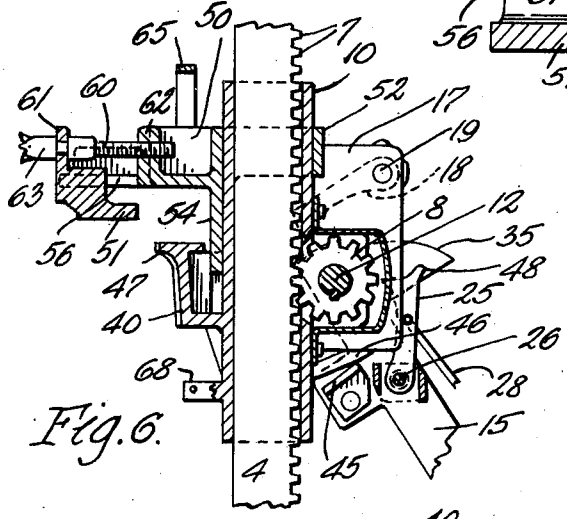


Fig. 10.

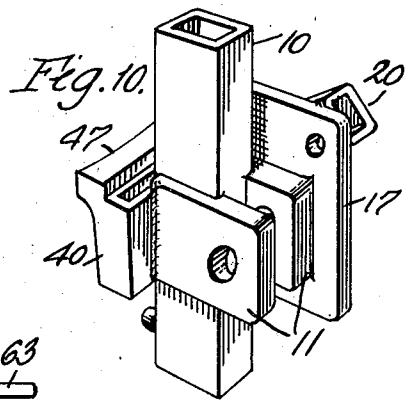
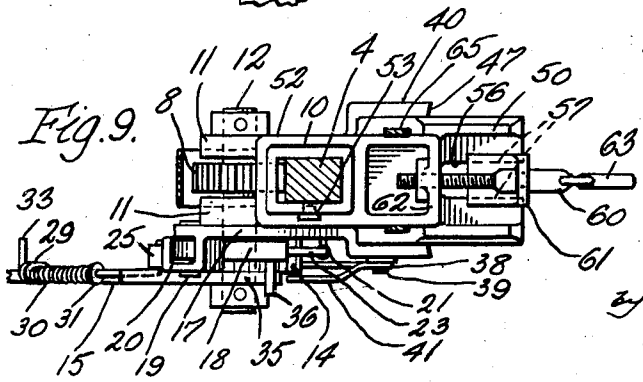


Fig. 9.



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CONTAINER HANDLING DEVICE

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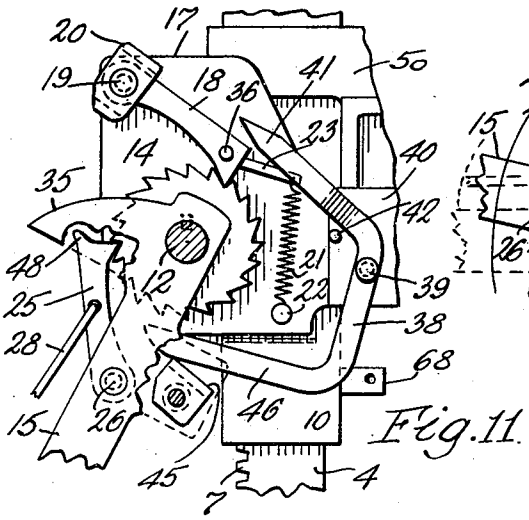


Fig. 11.

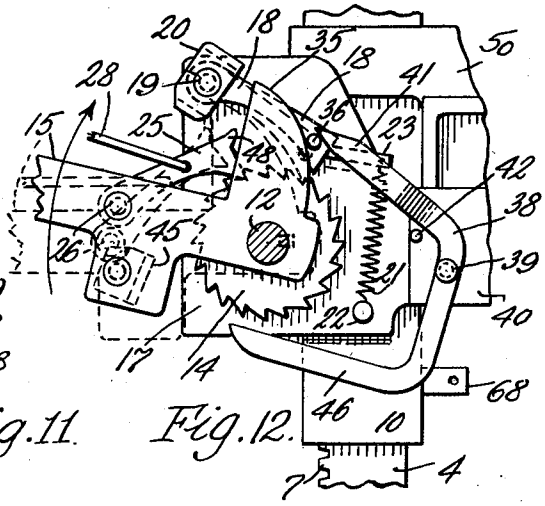


Fig. 12.

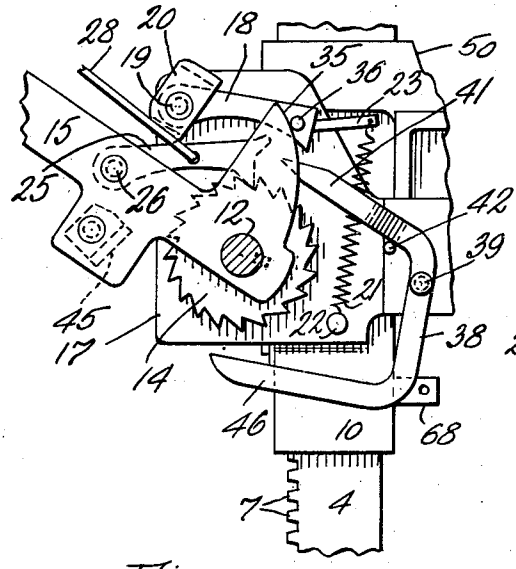


Fig. 13.

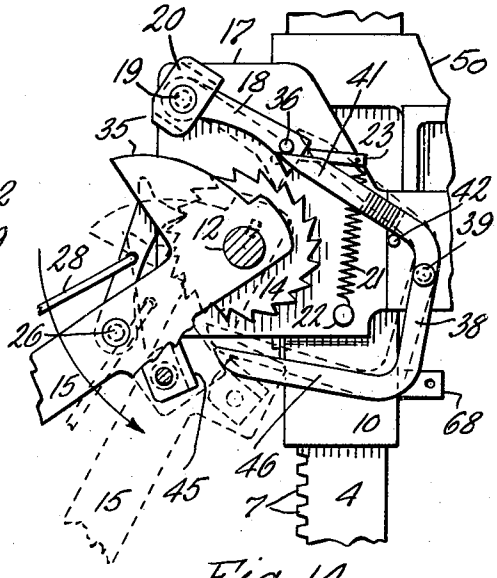


Fig. 14.

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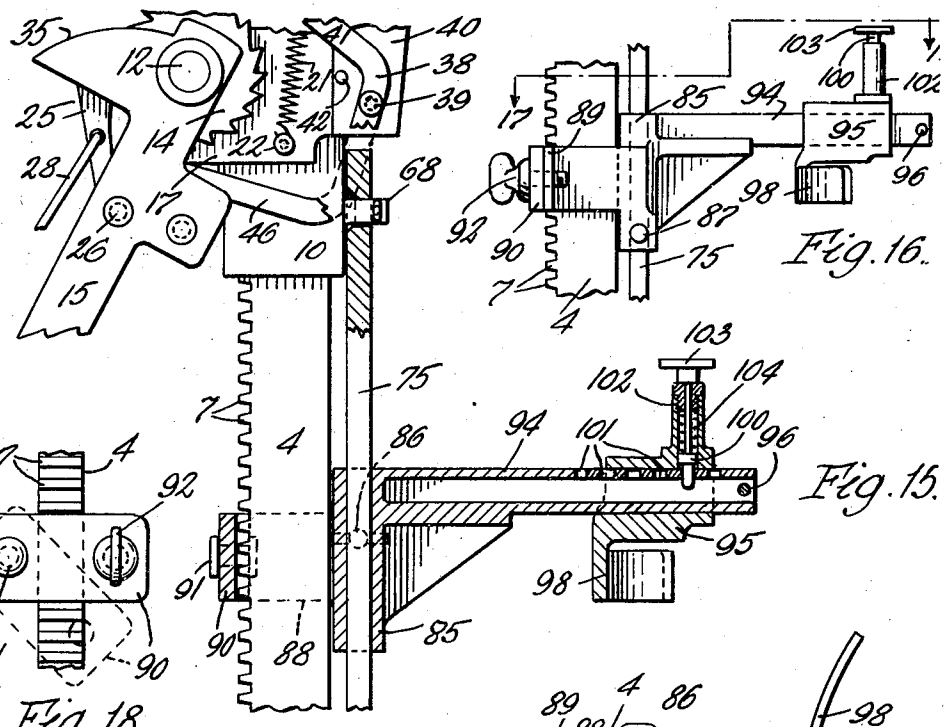


Fig. 16.

Fig. 15.

Fig. 18.

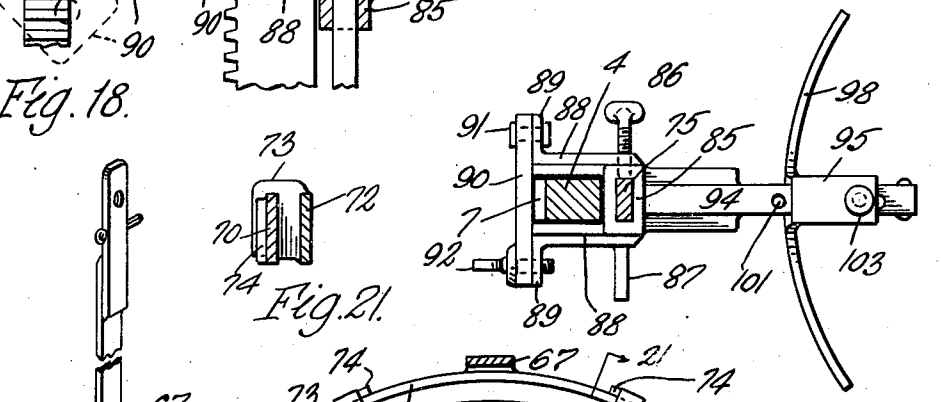


Fig. 21.

Fig. 17.

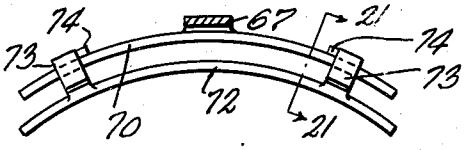


Fig. 20.

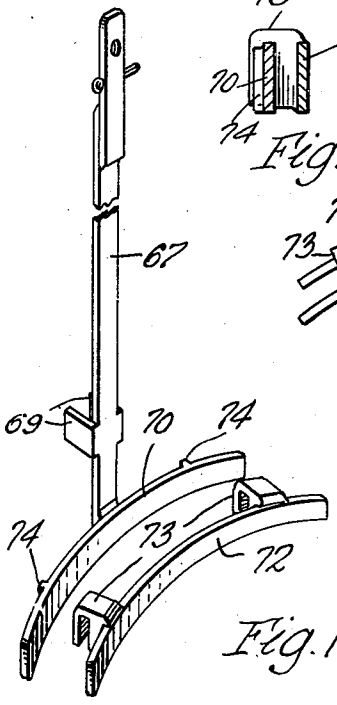


Fig. 19.

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CONTAINER HANDLING DEVICE

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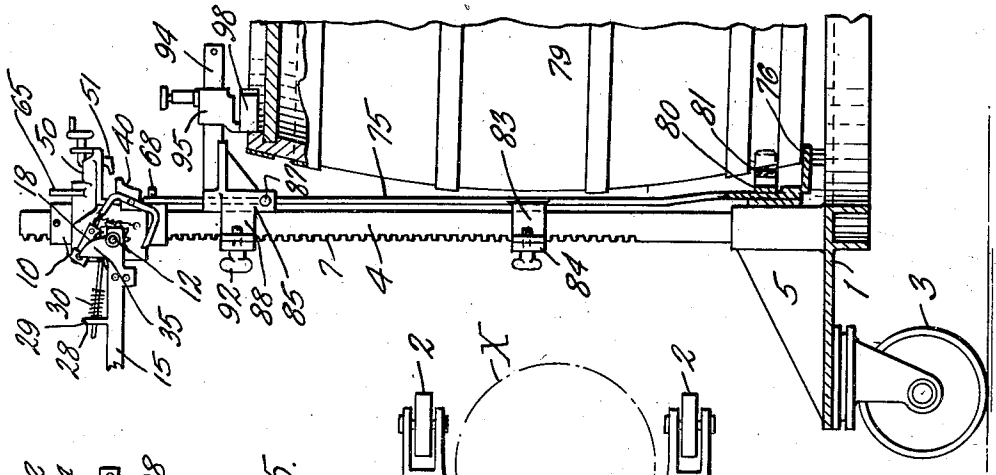


Fig. 23.

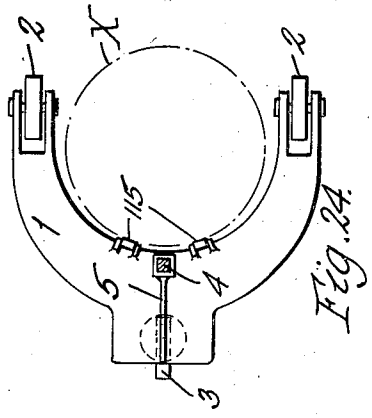


Fig. 24.

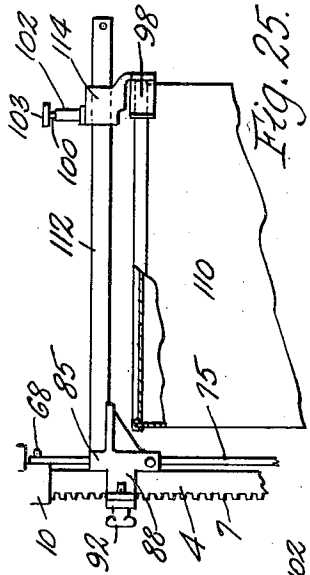


Fig. 25.

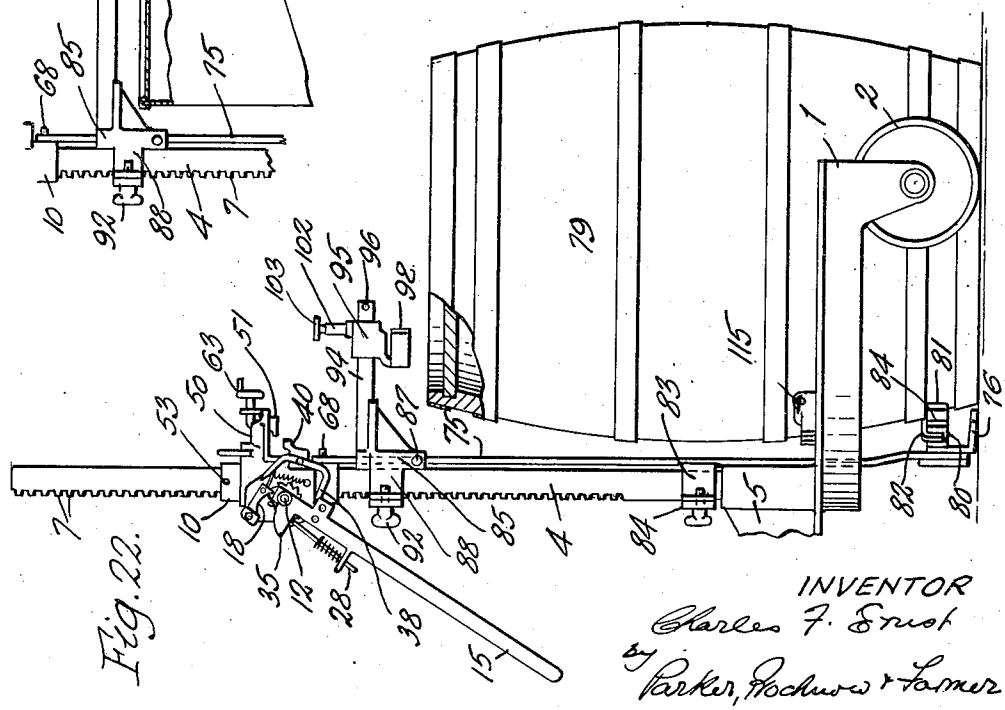


Fig. 22.

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UNITED STATES PATENT OFFICE

2,360,858

CONTAINER HANDLING DEVICE

Charles F. Ernst, Buffalo, N. Y.

Application July 8, 1942, Serial No. 450,145

17 Claims. (Cl. 214—65.4)

This invention relates to improvements in trucks or transporting devices for raising rigid containers, such as barrels, drums, cans, boxes, and the like, and then transporting them.

One of the objects of this invention is to provide a truck or transporting device with an improved raising and lowering device by means of which drums, barrels, or other containers may be raised to various elevations. Another object of this invention is to provide a device of this kind which is adaptable for handling various types of containers with the minimum of adjustments of the truck or transporting device. Another object of this invention is to provide a transporting device or truck with a container gripping means of improved construction. Another object of this invention is to provide a device of this kind with improved means for supporting containers on the truck. Other objects and advantages of this invention will be apparent from the following description and claims.

In the accompanying drawings:

Fig. 1 is a side elevation of a truck or transporting device embodying this invention, showing the same in operative relation to a container which is shown only in part.

Fig. 2 is a fragmentary side elevation thereof, showing the container supported thereon.

Fig. 3 is a fragmentary sectional elevation of the truck or transporting device having an attachment thereon for use in connection with a different type of container.

Fig. 4 is a fragmentary side elevation thereof, or an enlarged scale, showing the raising and lowering mechanism.

Fig. 5 is a fragmentary elevation of the opposite side of the raising and lowering mechanism shown in Fig. 4.

Fig. 6 is a central sectional elevation of the mechanism shown in Fig. 4.

Fig. 7 is a fragmentary sectional elevation thereof, on line 7—7, Fig. 4.

Fig. 8 is a section thereof, on line 8—8, Fig. 4.

Fig. 9 is a top plan view thereof.

Fig. 10 is a perspective view of the body portion of the elevating and lowering mechanism.

Fig. 11 is a side elevation on a larger scale of the raising and lowering mechanism.

Figs. 12 and 13 are views thereof, similar to Fig. 11, but showing the parts in position for lowering the container.

Fig. 14 is a similar view showing the position of the parts near the end of a downward movement of the container.

Fig. 15 is a fragmentary, sectional side elevation of the post or standard of the truck or transporting device provided with an attachment for use in connection with hoisting barrels or other containers.

Fig. 16 is a fragmentary side elevation of part of the mechanism shown in Fig. 15.

Fig. 17 is a sectional plan view thereof, on line 17—17, Fig. 16.

Fig. 18 is a fragmentary end elevation of the attaching means for the mechanism shown in Figs. 15 to 17.

Fig. 19 is a perspective view of the container spacing member shown in Fig. 3.

Fig. 20 is a sectional top plan view of the spacing member shown in Fig. 19.

Fig. 21 is a section thereof, on line 21—21, Fig. 20.

Fig. 22 is a fragmentary side elevation of the apparatus shown in Figs. 1 and 2 provided with an attachment for supporting a container from the bottom thereof.

Fig. 23 is a fragmentary sectional elevation thereof, showing a barrel held in an elevated position on the truck.

Fig. 24 is a sectional top plan view on a reduced scale, on line 24—24, Fig. 1.

Fig. 25 is a fragmentary sectional elevation thereof, showing an attachment for use in connection with containers of another type.

In the particular embodiment of the invention shown by way of example in the drawings, my improved truck or transporting device includes a base 1 supported at its forward end by means of a pair of rollers or wheels 2 which preferably have their axles in alinement, and adjacent to its rear end and approximately in the longitudinal center thereof a swivel mounted roller caster 3 is provided. The base 1 at its front end is of U-shape and the wheels 2 are mounted at the free front ends of the arms of the U as clearly shown in Fig. 24, and the wheels 2 are also located a substantial distance forward of the hrizontal axis or center of any container X which may be transported by the truck, so that when a container is supported on the truck, a part of the weight thereof will be carried by the caster wheel 3. The base 1 is provided with an upstanding post or standard 4 which may be suitably secured to the base 1 and which may be reinforced by means of one or more suitable braces 5 which may be welded to or formed integral with the base 1 and the post 4. The upright post or standard 4 may extend substantially vertically, as shown in the drawings, or may slope either

forwardly or rearwardly as may be desired to use the truck to best advantage.

An elevating and lowering mechanism for the containers is arranged on the post or standard 4 and preferably this mechanism is constructed to raise the container to a greater height than is necessary to transport the same, so that the container may, for example, be placed on a weighing scale or on an elevated platform or other support. This elevating and lowering mechanism is constructed to move up and down on the post 5 and may be of any suitable or desired construction, and in the particular form shown, this mechanism is constructed to cooperate with rack teeth 7, which are preferably formed on the rear face of the column or post 4. A pinion 8, Figs. 6, 8 anw 9, is mounted on the raising and lowering mechanism and engages the rack teeth 7. This raising and lowering mechanism includes a frame or body portion having a substantially rectangular hollow tubular part or guide sleeve 10 which extends about the post or standard 9, so that the sleeve may slide up and down on this post. The body portion also includes a pair of rearwardly extending arms or brackets 11 which are preferably formed integral with the sleeve 10 and which are apertured to receive a shaft 12 on which the pinion 8 is secured. This shaft preferably extends beyond one of the arms or brackets 11 and a ratchet wheel 14 is rigidily secured thereto to this extending portion of the shaft, and a lever 15 is preferably pivotally mounted on this shaft.

The raising and lowering device is provided with a holding dog cooperating with the ratchet wheel 14 to hold the container in raised position and the lever 15 is also provided with a dog for turning the ratchet wheel. The holding dog may be supported on the raising mechanism in any suitable manner. In the construction shown for this purpose, the body portion of the standard includes a plate 17 secured to or forming an extension of one of the arms or brackets 11, and a holding dog 18 is mounted on a pivot pin 19 on the plate 17 and engages the teeth of the ratchet 14. The plate 17 may be provided with a U-shaped extension or bracket 20 for supporting the pivot pin 19 of the holding dog and this dog may drop by gravity into its engaging position with the teeth of the ratchet 14, or if desired, a spring 21 may be employed, one end of which is fastened to a pin 22 secured to a plate or extension 17 of the sleeve 10, and the other end of the spring may be secured to a pin 23 secured to and extending outwardly from the dog 18. A holding dog of any other construction may be employed, if desired.

The lever 15 is provided with a dog 25 pivoted thereon at 26 and urged by a spring to engage with the teeth of the ratchet wheel 14. For this purpose in the construction shown, one end of a rod 28 is pivotally secured to the dog 25, the other end of the rod passing through a hole in a guide bracket 29 extending outwardly from the lever 15. The dog is urged into a position to engage the ratchet wheel by means of a spring 30 disposed between the extension 29 of the arm and a disk 31 which is suitably secured to the rod 28. The spring 30 is, consequently, under compression and urges the rod to slide relative to the bracket 29 in a direction to move the dog 25 into engagement with the teeth of the ratchet wheel 14. The rod 28 preferably has the free end thereof bent over to form a handle 33, Fig. 9, by means of which the dog 25 may be manually moved out of engagement with the ratchet wheel 14, against the action of spring 30. As a result of this construction, when the lever 15 is raised from the position shown in Figs. 1, 4 and 11, the dog 25 will cause the ratchet wheel to turn in a clockwise direction in these figures, and thus through the action of the pinion 8 engaging with the rack teeth 7, will cause the sleeve 10 to be raised on the post or standard 4. Since the container to be transported is supported by the elevating mechanism of the truck, as will be hereinafter explained, this movement of the lever will cause the container to be elevated from the floor or other supporting device so that it will be supported by the truck or transporting device. If it is desired to raise the container to a greater extent, the lever 15 is again lowered, during which time the sleeve 10 will be held against lowering by means of the holding dog 18 so that the dog 25 on the lever may engage another ratchet tooth of the wheel 14, and upon again raising the lever 15, the container will be moved to a higher position. This operation may be repeated until the container is supported at the desired elevation.

Suitable means are also provided for gradually lowering the container by means of the lever 15. In the particular construction shown by way of example for this purpose, the holding dog 18 may be temporarily moved out of engagement with the ratchet wheel 14 while the dog 25 is in engagement therewith so that by swinging the lever 15 downwardly from an upper position, the sleeve 10 and the container supported on the elevating mechanism may be lowered, and these lowering means also include mechanism for returning the holding dog 18 into engagement with the ratchet wheel when the lever 15 has been swung to a lowered position. The mechanism shown by way of example for accomplishing these results includes a cam 35 on the lever 15, which is adapted to engage a pin 36 on the holding dog 18, when the lever approaches its upper position, as shown in Fig. 12, and move the holding dog 18 out of engagement with the ratchet wheel 14. In Fig. 12, the cam is shown in engagement with the pin 36 of the holding dog and this dog has been partly moved into its upper position. Upon farther upward movement of the lever 15, the cam 35 moves the holding dog 18 into a higher position, as shown in Fig. 13, while the dog 25 of the lever is in engagement with the teeth of the ratchet wheel 14.

In order to retain the holding dog 18 in its upper position while the container is being lowered by means of the lever 15, a dog holding and releasing lever 38 is provided which is pivoted at 39 on a container engaging projection 40 which is secured to or formed integral with the sleeve 10 of the body of the elevating member. This lever 38 has an arm 41 which is normally held by a stop or pin 42 in an inoperative position by the weight of the lever, as shown in Fig. 4. When the cam 35 of the lever moves the holding dog 18 into the position shown in Fig. 13, the pin 36 of the holding dog moves past the point or end of the arm 41 of the lever 38, causing the lever to swing about its pivot 39 until the pin 36 passes beyond the end of the part 41 of the lever 38, whereupon the lever drops again into its normal position in contact with its holding pin 42, as shown in Fig. 13. The lever 15 may then be lowered to lower the container supported by the

truck and during this lowering of the container, the cam 35 moves out of engagement with the holding pin 36 of the holding dog 18 so that the pin 36 rests upon the upper face of the arm 41 of the lever 38 as shown in Fig. 14, and is thus held out of engagement with the ratchet wheel 14.

As the lever 15 approaches its lowest position, the holding dog 18 is released to permit it to move into engagement with the ratchet wheel 14 to support the load. Any suitable means may be employed for this purpose, and in the construction shown, the lever 15 is provided with an extension or shoulder 45 which engages the lower face of the lower arm 46 of the dog holding lever 38. When this shoulder 45 of the lever 15 engages the arm 46 of the dog holding lever 38, this latter lever is moved from the full line position shown in Fig. 14, into the position shown by broken lines. During this movement, the end of the arm 41 of the holding lever swings out of engagement with the pin 36 of the holding dog, and thus releases this dog so that the same moves by gravity or by the action of the spring 21 into engagement with a tooth of the ratchet wheel 14. The load supported by the truck will, consequently, be supported by the holding dog, and if it is desired to further lower the load, the lever 15 may again be swung into an upper position after its dog 25 has been moved manually out of engagement with the ratchet wheel 14, for example, by pulling the rod 28 against the action of the spring 30, by means of the handle portion 33 of this rod.

In order to prevent the operator from actuating the lever 15 in such a manner as to disengage the holding dog from the ratchet wheel 14 before the dog 25 of the lever engages the ratchet teeth, the dog 25 is preferably provided with an extension 48 which would strike the U-shaped member 20 on which the holding dog 18 is pivoted, unless the dog 25 is released by the operator. Upon releasing the rod 28, the dog 25 engages with a tooth of the ratchet wheel 14, as shown in Fig. 12, and consequently, during the engagement of the cam 35 with the pin 36, the operator turns the ratchet wheel through the medium of the dog 25 to a slight extent and thus relieves the holding dog 18 of the pressure of the load, so that this dog may be easily raised out of engagement with the ratchet wheel 14 by means of the cam 35.

Other means for raising and lowering the sleeve 10 and the mechanism mounted thereon may be provided, if desired.

The body portion of the raising and lowering device is adapted to cooperate with various types of containers. For example, in Figs. 1 to 7, the holding device is shown cooperating with a steel drum 48 having a bead 49 at the upper edge thereof. The container engaging projection 40 is, consequently, provided with a jaw or ledge 47 formed to engage the underface of the bead 49, as clearly shown in Figs. 1 to 6 inclusive. These beads may, however, be of various forms and shapes, and it is, consequently, generally desirable to provide means for insuring the maintaining of the bead in engagement with the jaw 47 of the load supporting projection 40. In the construction shown for this purpose, I provide an improved container gripping mechanism for engaging the inner surface of the bead 49 in such a manner as to prevent the same from slipping off of the jaw 47. This mechanism is movable vertically with reference to the hoisting mechanism to a limited extent, and preferably also has an adjustable jaw for engaging the inner surface of the top of the container. In the particular construction shown by way of example, this part of the container gripping mechanism includes an arm or projection 50 which is arranged to extend over the top edge of the drum or other container, and which has a container gripping jaw 51 which is adjustable toward and from the inner edge of the container. The arm or projection 50 is slidable vertically relatively to the lifting mechanism, and in the construction shown for this purpose, the arm is provided at its inner end with an integral collar 52 extending loosely about the upper portion of the sleeve 10 so as to be movable up and down thereon, a stop pin 53 on the sleeve limiting the upward movement of this collar on the sleeve. The arm or projection 50 is preferably also provided with a downwardly extending plate or brace 54 which engages along the front face of the sleeve 10 so as to prevent binding of the collar 52 on the sleeve. Any other means for guiding this container gripping device for vertical movement relatively to the post or standard 4 may be employed.

The arm 50 may be of any suitable or desired construction for adjustably supporting the container engaging jaw 51 thereon. In the construction shown, this arm is of substantially U-shape and has a guide slot 56 formed in the bottom thereof which serves as a track on which the container gripping jaw 51 may be guided for movement toward and from the upper inner edge of the container. The adjustable jaw 51 is provided with grooves or slots 57 in the opposite sides thereof, as clearly shown in Fig. 7, which cooperate with the arm or projection 50 at the edges of the slot 56 therein.

In order to move the gripping jaw 51 toward and from the inner edge of the container, I provide an adjusting screw 60 rotatably journalled in an upright flange 61 of the jaw 51, the screw engaging in a threaded hole in a transverse web 62 of the U-shaped arm or projection 50. A hand crank 63 may be provided on the end of the adjusting screw 60. Any other means for adjusting this container gripping jaw 51 toward and from the top of the container may be provided, if desired.

In the use of the container gripping mechanism thus far described, when a truck is moved into operative relation to the container, the hoisting mechanism is adjusted by means of the hand lever 15 so that the lower jaw 47 is in position to engage the underface of the bead 49 on the container, as clearly shown in Fig. 1. The mechanism for gripping the inner surface of the container may be raised by means of a handle 65 to permit the container gripping jaw 51 to enter into the interior of the top of the container, and this jaw may be adjusted by means of the crank 63 so that it will prevent the bead 49 of the container from slipping off of the lower jaw 47. When these parts are in container-gripping positions, the hoisting mechanism may be actuated as hereinbefore described.

It may, at times, be necessary, in order to elevate a container, to hold the same in spaced relation to the upright post 4 to prevent shoulders or projecting parts of the container from catching on edge portions of the base 1. In Figs. 3, 19, 20, and 21, I have shown a spacing device usable for this purpose, and which includes a bar or rod 67 mounted for movement along the post or standard 4 with the lifting mechanism and with the container which is being lifted. For this purpose, the upper end of the bar 67 may be provided with a hole, and the lower portion of

the sleeve 10 is provided with an outwardly extending stud or projection 68, which may enter the hole in the upper end of the bar 67 for suspending the bar from the sleeve 10. In order to guide the bar 67 in its movement relatively to the post or standard 4, a pair of guide arms 69 may be provided which may slidingly engage the opposite sides of the post or standard. The lower end of this rod or bar 67 is provided with a barrel-engaging abutment or projection 70 which may be of a substantially arc-shape to engage the side of the container.

It is also possible that the container may be of such shape that the abutment or container-engaging part 70 of the spacer does not extend far enough from the bar or rod 70 to engage the container, and if this is the case, an extension member 72 may be provided which has a pair of rearwardly extending hooks 73 which may hook over the upper edge of the abutment 70, preferably between two lugs 74 thereon to prevent lateral shifting of the extension member 72. Figs. 3 and 20 show the extension member mounted on the container-engaging member 70. By using either the abutment 70 or the extension 72, an intermediate portion of the container may be engaged by the spacer while the upper edge of the container is secured to the lifting mechanism, so that the container will be held in the desired spaced relation to the base, for elevating and lowering the container.

My improved truck or container transporting device may be used in connection with containers which do not have beads on the upper edges thereof by means of which the containers may be lifted. It may, for example, be desired to lift and transport barrels or other containers which must be engaged at the lower edge thereof in order to lift the same, such a container being shown in Fig. 22. In the construction shown in Figs. 15 to 18 and 22 and 23, I have provided a device for engaging the lower edge of the container and which is raised and lowered by means of the hoisting mechanism which has been described.

These container-supporting means include a bar 75 which extends substantially lengthwise of the standard or post 4, and which may also be suspended from the stud or projection 68 of the sleeve 10. This bar is of sufficient length to extend to the floor on which the container to be transported rests and is provided at the lower end thereof with a substantially horizontally extending wedge or foot 76, Figs. 22 and 23, which may be inserted under a barrel or other container to be transported. As will be obvious from an inspection of Fig. 22, if the barrel 79 is slightly tilted, the truck may be moved toward the barrel sufficiently to insert the foot 76 under the edge of the barrel. The bar 75 may also be provided above the foot 76 with a substantially arc-shaped barrel engaging abutment or spacer 80, which may be similar in form to the part 70 shown in Figs. 19 and 20, and if desired, an extension member 81, corresponding to the extension member 72 shown in Figs. 19 and 20 may be applied to the barrel engaging part 80 by means of hooked shaped members 82 corresponding to the members 73 of Figs. 19, 20, and 21. These arc-shaped barrel engaging members serve to hold the barrel in correct spaced relation to the truck. For some types of containers or barrels, the extension member 81 is not necessary, but when the sides of the staves of the barrel have considerable curvature, it may be necessary to use the extension 81. These arc-shaped spacers also serve to support the container substantially centrally on the truck and prevent lateral swaying or swinging of the container during transport of the same.

The bar 75 may be provided with guide means engaging the post or standard 4, which may be similar to those employed on the spacer shown in Fig. 19, or which may, in addition to two guide arms 83, slidably engaging opposite sides of the post 4, have a cross bar 84 secured to flanges formed at the rear ends of the guide arms 83, so as to hold the bar 75 in correct sliding relation to the post 4.

In order to hold the barrel in substantially upright position while being lifted from the bottom thereof, adjustable means are provided for engaging the upper end of the barrel, and this engaging means is adjustably mounted on the bar 75.

In the construction shown in Figs. 15 to 17, 22 and 23 this barrel holding member includes a sleeve 85 slidably arranged about the bar 75. This sleeve may be provided with a set screw 86 for clamping the sleeve in the desired position on the bar 75, and the sleeve may be provided with an extension or handle 87 by means of which this barrel holding member may be readily raised or lowered on the bar 75 when the set screw 86 is released. The holding member is preferably also slidably mounted on the post or standard 4 and for this purpose may be provided with a pair of arms 88 extending to opposite sides of the post 4. Preferably this slidable connection with the post 4 is similar in construction to the connection of the bar 75 with the post 4, which has already been described, the arms 88 corresponding to the arms 77 of the connection already described. These arms 88 are provided with outwardly extending flanges 89 to one of which a cross bar 90 may be pivotatlly connected by means of a pivot pin 91, and the other end of the bar 90 may be secured to the other flange 89 by means of a thumb screw 92, so that the device for holding the top of the barrel may be supported by the post or standard 4, as well as by the bar 75, and may be readily detached from the post 4 when the bottom supporting device is not needed.

The holding device for the upper end of the barrel also includes an arm secured to or formed integral with the sleeve 88 and adapted to extend over the top of the barrel, this arm in the construction shown being in the form of a tube 94 having a barrel engaging slide mounted thereon. This slide preferably has a sleeve-like portion 95 mounted to slide lengthwise of the arm or tube 95, and is held against movement beyond the end of this tube by means of a pin 96 extending through the end portion of the tube. The sleeve part 95 has a depending barrel top engaging member secured to the lower portion thereof, that shown being in the form of an arc-shaped bar 98 adapted to fit into the inner side of the upper edge of the barrel or other container.

In order to compensate for differences in curvature of the staves or sides of different barrels, the barrel engaging slide may be secured in different positions lengthwise of the tubular arm 94. Any suitable means for adjustably securing this barrel engaging slide on the tubular member may be provided, and in the construction shown, a spring pressed plunger 100 is provided which may enter into any one of a series of holes 101 formed in the tubular member 94. The plunger is provided with a stem extending through a tubular

spring housing 102 which may be formed integral with the sleeve 95 and a handle or knob 103 at the upper end of this stem facilitates the withdrawing of the plunger 100 from any one of the holes 101, against the action of spring 104.

In the use of this device for engaging the top of the barrel, it will be obvious that after an edge of the lower portion of the barrel has been positioned on the foot 76, the device for engaging the top of the barrel will be moved downwardly from the position shown in Fig. 22 until the arc-shaped barrel top engaging part 98 is in position to engage the inner face of the barrel 79, whereupon the knob or handle 103 is moved upwardly and the slide is moved to the left in Fig. 22 into a position in which the depending container engaging part 98 engages the inner surface of the container, whereupon the knob 103 is released to permit the plunger 100 to drop into the nearest hole 101. The device will then be in a position approximately as shown in Fig. 23, whereupon the barrel may be lifted by means of the lifting mechanism through the medium of the lever 15 as heretofore explained.

With some types of containers, the holding device shown in Figs. 15 to 17, 22 and 23, cannot be employed to hold the upper end of the container. For example in Fig. 25, is shown a container of this type, in the form of a drum 110 which may be made of a body portion of a fiber board or similar material having a top 111 with a relatively shallow groove or bead engaging the upper edge of the drum. For handling containers of this type, a holding device may be provided which differs from the one described in connection with Figs. 15 to 17, 22 and 23, in that the arm or tubular part 94 extending over the container is replaced by a longer arm 112. Consequently, the holding device including a sleeve 114 slidable on the arm 112 may engage the part of the upper end of the container which is farthest removed from the post or standard 4. In order to enable the arc-shaped container engaging bar 98 to engage this part of the container, the entire holding member which is slidable on the tube 112 is reversed from the position in which it is shown in Figs. 15 to 17, 22 and 23, as is clearly shown in Fig. 25. The upper edge of the tubular arm 112 may be provided with holes suitably located to cooperate with the plunger 100. It will be obvious that the operation of this mechanism is the same as heretofore described, except that a different portion of the drum or container is engaged by the arc-shaped bar 98.

The usual anti-friction rollers 115 are mounted on the base 1 as shown, to engage and facilitate the up and down movements of certain types of containers with respect to the base.

I claim as my invention:

1. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, rack teeth on said standard, an elevating device slidably mounted on said standard, a pinion journalled on said elevating device for cooperation with said rack, a ratchet wheel mounted in fixed relation to said pinion, a lever pivoted on said elevating device, a dog on said lever for engagement with said ratchet wheel for turning said pinion, another dog mounted on said elevating device engaging said ratchet wheel for holding the same and said pinion against turning in a direction to lower said elevating device, and means on said elevating device for engaging a container to elevate the same.

2. A truck for transporting containers, said truck having a base mounted on wheels, a standard fixed to and extending upwardly from said base and having rack teeth thereon, an elevating device slidably mounted on said standard, a pinion journalled on said device and engaging said rack teeth, a ratchet wheel rigidly connected with said pinion, a lever for turning said ratchet wheel, a dog pivotally mounted on said elevating device and movable into and out of engagement with said ratchet wheel for holding said elevating device against downward movement when said dog is in engagement with said ratchet wheel, and means actuated by said lever for moving said dog into and out of holding relation to said ratchet wheel.

3. A truck for transporting containers, said truck having a base mounted on wheels, a standard fixed to and extending upwardly from said base and having rack teeth thereon, an elevating device slidably mounted on said standard, a pinion journalled on said device and engaging said rack teeth, a ratchet wheel rigidly connected with said pinion, a lever for turning said ratchet wheel, a dog pivotally mounted on said elevating device and movable into and out of engagement with said ratchet wheel for holding said elevating device against downward movement when said dog is in engagement with said ratchet wheel, means actuated by said lever when in one position to move said dog out of holding relation to said ratchet wheel, and other means actuated by said lever when in another position to return said dog into holding relation to said ratchet wheel.

4. A truck for transporting containers, said truck having a base mounted on wheels, a standard fixed to and extending upwardly from said base and having rack teeth thereon, an elevating device slidably mounted on said standard, a pinion journalled on said device and engaging said rack teeth, a ratchet wheel rigidly connected with said pinion, a dog movable into and out of engagement with said ratchet wheel for holding said elevating device against downward movement when said dog is in engagement with said ratchet wheel, a dog holding member mounted on said elevating device, for holding said dog out of operative relation to said ratchet wheel, a lever pivoted on said elevating device for turning said ratchet wheel, means on said lever for moving said dog out of engagement with said ratchet wheel and into position to be held out of engagement therewith by said dog holding member when said lever is in one position, means on said lever for releasing said dog holding member for engagement with said dog when said lever is in another position, to permit said dog to move into holding engagement with said ratchet wheel, and means on said lever for raising and lowering said elevating device.

5. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device including a sleeve slidably mounted on said standard, lever actuated means on said elevating device for moving said sleeve up and down on said standard, a container lifting device mounted on said sleeve, a container holding device for holding said container against tilting while being lifted and also mounted on

said sleeve, and means for adjusting said holding device substantially horizontally into and out of position to hold the container.

6. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device including a sleeve slidably mounted on said standard, lever actuated means on said elevating device for moving said sleeve up and down on said standard, a container lifting device mounted on said sleeve, a container holding device for holding said container against tilting while being lifted and adjustably mounted on said sleeve for vertical adjustment, and means for adjusting said holding device substantially horizontally into and out of position to hold the container.

7. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device including a sleeve slidably mounted on said standard, lever actuated means on said elevating device for moving said sleeve up and down on said standard, a container lifting device mounted on said sleeve, and a container holding device including an outwardly extending arm adjustably mounted on said sleeve, and a container engaging member adjustably mounted on said arm.

8. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device, including a sleeve slidably mounted on said standard, lever actuated means on said elevating device for moving said sleeve up and down on said standard, a container lifting device mounted on said sleeve, and a container holding device including an outwardly extending arm adjustably mounted on said sleeve, a container engaging member adjustable lengthwise of said arm, and an adjusting screw moving said container engaging member lengthwise of said arm into and out of holding engagement with the container.

9. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device including a sleeve slidably mounted on said standard, lever actuated means on said elevating device for moving said sleeve up and down on said standard, a jaw on said sleeve adapted to engage under a shouldered part of a container, an arm mounted on said sleeve for vertical movement thereon, a second jaw for engaging another part of said container and movably mounted on said arm, and a clamping screw for securing said second jaw in gripping engagement with the container.

10. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device slidably mounted on said standard, means on said elevating device for holding a container in fixed relation thereto, means mounted on said elevating device for moving the same up and down on said standard, and a spacing member supported on said elevating device and slidable up and down on said standard and extending into position to engage a container to hold the same in spaced relation to said standard and base.

11. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device slidably mounted on said standard, means mounted on said elevating device for moving the same up and down on said standard, and a spacing member supported on said elevating device and slidable up and down on said standard and having an arc-shaped part adapted to engage a container to hold the same in correct spaced relation to said standard and base.

12. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device slidably mounted on said standard, means for moving said elevating device up and down on said standard, a spacing member supported on said elevating device and slidable up and down on said standard and having an arc-shaped part and a substantially arc-shaped extension member formed to be removably secured to said arc-shaped part to engage a container for holding the same in correct spaced relation to said standard and base.

13. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device slidably mounted on said standard, means on said elevating device for moving the same up and down on said standard, and a bar suspended on said elevating device and extending downwardly therefrom along said standard and having an outwardly extending foot adapted to be placed under the bottom of a container.

14. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device including a sleeve slidably mounted on said standard, lever actuated means on said elevating device for moving said sleeve up and down on said standard, a bar suspended on said sleeve and extending downwardly therefrom along said standard and having an outwardly extending foot adapted to be placed under the bottom of a container, and means adjustably supported from said sleeve for engaging an upper portion of the container to hold the same from tilting when lifted by said foot.

15. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device slidably mounted on said standard, means for moving said element device up and down on said standard, a bar suspended on said elevating device and extending downwardly therefrom along said standard and having an outwardly extending foot adapted to be

placed under the bottom of a container, an arm extending outwardly from said elevating device over the container, and a container holding member adjustably mounted on said arm for engaging a part of the upper portion of the container to hold the same against tripping when lifted by said foot.

16. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device slidably mounted on said standard, means for moving said elevating device up and down on said standard, a bar suspended on said elevating device and extending downwardly therefrom along said standard and having an outwardly extending foot adapted to be placed under the bottom of a container, an arm extending outwardly from said elevating device over the container, a container holding member adjustably mounted on said arm for engaging a part of the upper portion of the container to hold the same against tipping when lifted by said foot, and means for releasably locking said container holding member on said arm.

17. A truck for transporting containers, including a base having wheels mounted thereon, a standard fixed to and extending upwardly from said base and positioned on said truck to be moved with said base into close proximity to a container, an elevating device slidably mounted on said standard, means for moving said elevating device up and down on said standard, a bar suspended on said elevating device and extending downwardly therefrom along said standard and having an outwardly extending foot adapted to be placed under the bottom of a container, an arm extending outwardly from said elevating device across the top of the container, and means on said arm for engaging the upper edge of the container farthest removed from said standard for holding said container against tipping when lifting by said foot.

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