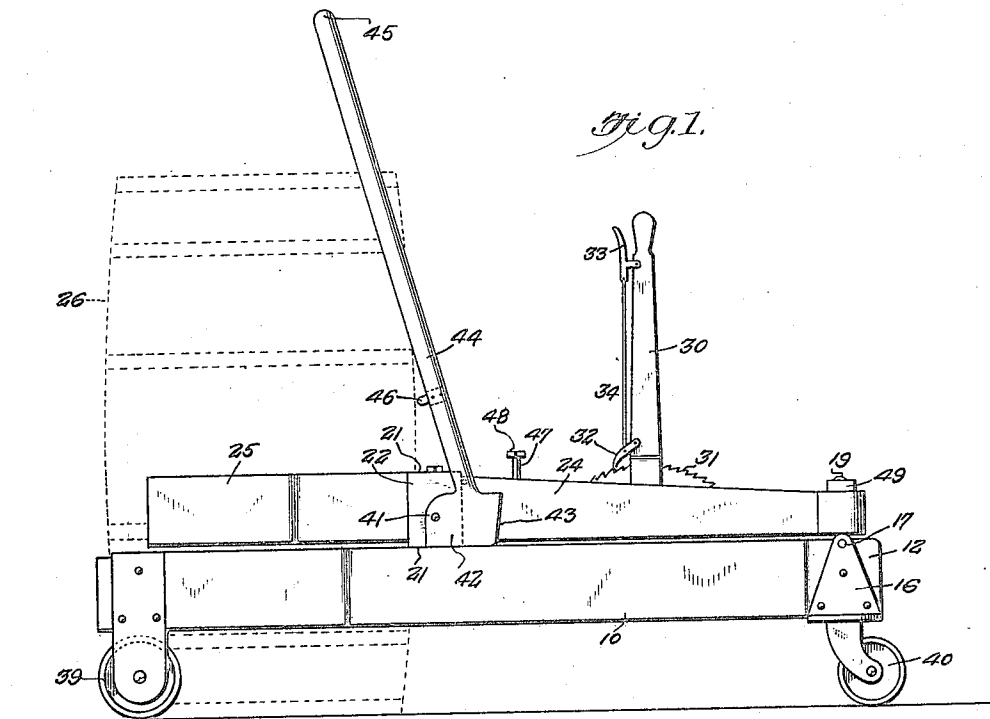
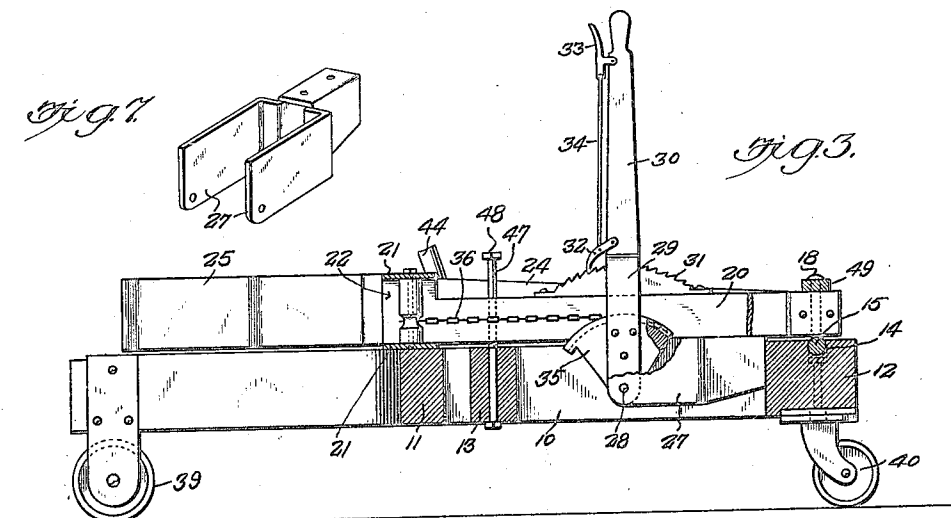


Dec. 26, 1922.

O. L. ENGSTROM. ET AL.  
TRUCK.  
FILED NOV. 3, 1921.

1,440,285

2 SHEETS-SHEET 1



O. L. Engstrom & H. C. Nelson, INVENTOR.

BY  
Geot. Kimmel, ATTORNEY.

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2 SHEETS-SHEET 2

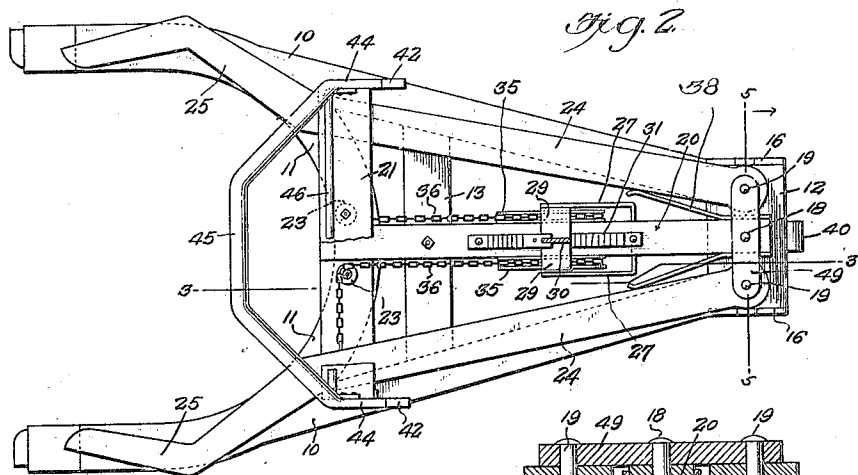


Fig. 2.

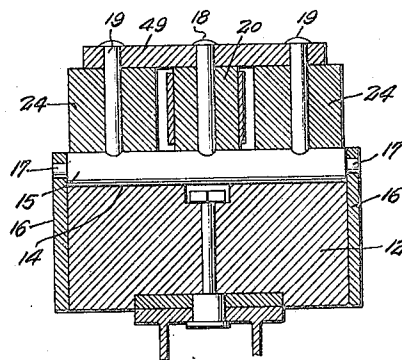


Fig. 5.

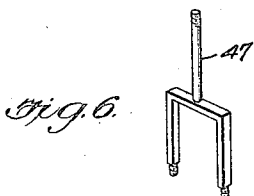


Fig. 6.

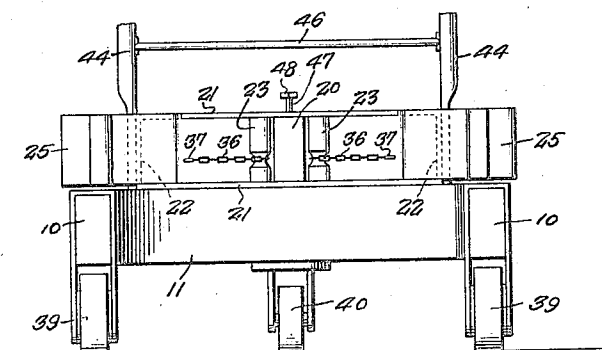


Fig. 4.

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## UNITED STATES PATENT OFFICE.

OTTO L. ENGSTROM AND HERMAN C. NELSON, OF SOUTH BEND, INDIANA.

## TRUCK.

Application filed November 3, 1921. Serial No. 512,541.

*To all whom it may concern:*

Be it known that we, OTTO L. ENGSTROM and HERMAN C. NELSON, citizens of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Trucks, of which the following is a specification.

This invention relates to trucks for gripping and transporting articles, such as barrels and the like, and has for one of its objects to simplify and improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a device of this character whereby the article to be moved is first firmly gripped then elevated clear of the floor, and held in gripped and elevated position while being transported to any required distance, and then restored to its place on the floor or ground and released, and without overturning or disturbing the contents of the container.

With these and other objects in view, the invention consists in certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claims, and in the drawings illustrative of the preferred embodiment of the invention.

Figure 1 is a side elevation, and

Fig. 2 is a plan view, of the improved apparatus.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig. 4 is a front elevation with the handles of the elevating cams broken away.

Fig. 5 is an enlarged sectional detail on the line 5—5 of Fig. 2.

Fig. 6 is a detached perspective view of the guide pin of the central beam.

Fig. 7 is a detached perspective view of the lever supporting bracket.

The improved device is designed for handling barrels, cans, boxes, and the like, and transporting them for relatively short distances, but is more particularly designed for handling and transporting barrels and thus avoid spilling the contents when the nature of the contents requires careful handling.

The improved device comprises a base frame formed of side members 10 diverging

toward one end and connected at their wider separated ends by a curved or segmental member 11 and coupled at their narrower separated ends by a block member 12.

The side frame members are also connected near the curved members 11 by a transverse tie member or strut 13.

Formed in the upper face of the member 12 is a socket or seat 14 in which a pin 15 is rotatably disposed.

Attached to the ends of the member 12 are plates 16 apertured to receive the reduced ends 17 of the pin 15.

Rising from the pin 15 are three studs, one 18 at the center and two 19 spaced from the center stud, as shown in Fig. 5.

Mounted upon the center stud 18 is the rear end of a beam member 20 which extends forwardly and terminates slightly in advance of the inner portion of the curved member 11.

At its forward end the beam member 20 is enlarged laterally and supports a relatively long endless guide keeper formed with spaced upper and lower sides 21 and ends 22.

Guide rollers 23 are mounted for rotation between the upper and lower sides 21 of the keeper at opposite sides of the member 20.

Mounted to swing laterally upon the outer studs 19 are rail members 24 which extend through the guide keeper and terminate in opposing jaw portions 25 between which the barrel or other article is to be gripped, a barrel being indicated by dotted lines 26.

Attached to the beam member 20 is a bracket device including spaced depending branching sides 27 and coupled by a pivot pin 28.

Mounted to swing upon the pivot pin at each side of the beam member 20 is the forked lower end 29 of a lever arm 30. Mounted on the beam member 20 is a notched segment 31 with which a pawl 32 pivoted to the lever 30 engages, the pawl being operable by a hand grip lever 33 and pull rod 34 in the usual manner.

Attached to the forked portions 29 of the lever arm 30 are plates 35 having segmental channeled outer edges to receive pull chains 36, the latter extending forwardly around the guide rollers 23 and attached at their free ends at 37 respectively to the rail members 24.

Springs 38 are arranged between the members 20 and 24 to maintain the jaw portion 25 yieldably in separated position normally and to return them to separated position when released.

Supporting wheels 39 are arranged beneath the forward ends of the base frame members 10, and a caster wheel 40 of suitable construction is mounted upon the under face of the transverse member 12, to enable the device to be easily moved from place to place and in any required direction.

Pivoted at 41 to the end portions 22 of the endless keeper are cam members 42 bearing upon the upper faces of the base frame members 10, each cam member having a flat portion 43 and an operating lever arm 44 extending therefrom. The levers 44 are united at their outer ends to form a hand grip 45, and are coupled intermediate the ends by a stay member 46.

By this arrangement, the forward free ends of the rail members 24 and 25 may be elevated and carry the load with them by simply drawing the lever members 44 to the rear and thus dispose the flat portions 43 of the cams in engagement with the upper faces of the members 10. By this means the cam members will not be disarranged by the jars or jolts to which the device will be subjected when moving from place to place.

Rising from the member 13 of the base frame is a guide pin 47, the latter passing through an aperture in the beam member 20 and terminates in a head 48, and thus serves as a combined guide and stop to the beam member.

At their upper ends the studs 18 and 19 are coupled by a reinforcing and binding plate 49.

When a barrel or other object is to be transported, the device is wheeled to a position near the object and the jaws 25 released by moving the lever arm 30 to its forward position and likewise disposing the handle 44—45 in its forward position to cause the cams 42 to lower the rail members to their lower position. The device is then moved forward to pass the jaws 25 upon either side of a barrel or other object. The lever 30 is then drawn rearwardly to produce a strong pulling force upon the rail members to cause their jaws to firmly grip the barrel between them. The handles 44—45 are then drawn rearwardly to cause the cams to elevate the rail members together with the barrel gripped thereby to dispose the barrel clear of the floor and enable it to be wheeled to any desired point.

When the cam operating members 44—45 are drawn to their rearward position to elevate the barrel, they serve as a handle device to facilitate the handling of the loaded truck.

The flat portions 43 of the cams hold the rail members firmly in either position, and prevent accidental displacement.

The improved apparatus may be constructed of any suitable material and of any required size to adapt it to different sized articles to be handled.

The preferred embodiment of the invention is disclosed in the drawings and set forth in the specification, but it will be understood that modifications within the scope of the claimed invention may be made in the construction without departing from the principle of the invention or sacrificing any of its advantages.

Having thus described the invention, what is claimed as new is:—

1. In an apparatus of the class described, a base frame, rail members terminating in opposing gripping jaws and mounted to swing horizontally upon said base frame, means for forcibly moving said rail members toward each other to cause their jaws to grip an article, and means carried by said base frame for elevating said rail members with their load independently of the base frame.

2. In an apparatus of the class described, a base frame, a beam member swinging on said base frame, a guide keeper carried by said beam member, rail members terminating in opposing gripping jaws and mounted to swing horizontally upon said base frame and operative through said guide keeper, guide rollers supported in said guide keeper, flexible pull members connected to said rail members and extending around said guide rollers, and means for applying pulling force to said flexible members.

3. In an apparatus of the class described, a base frame, rail members terminating in opposing gripping jaws and mounted to swing horizontally upon said base frame, means for forcibly moving said rail members toward each other to cause their jaws to grip an article, a cam device pivoted to each of said rail members and engaging said base, an operating hand lever extending from each of said cam devices, and coupling means between said hand levers.

4. In an apparatus of the class described, a base frame including side members diverging from one end and coupled by a transverse portion intermediate the ends and with a transverse seat at the smaller end, a pivot pin supported upon said base frame and rotative in said seat, said pin having a plurality of studs rising therefrom, a central beam connected to one of said studs, rail members swinging upon the other of said studs and terminating in opposing gripping jaws, a guide keeper connected to said beam at its free end and through which said rails extend, guide rollers within said keeper member, flexible pull members connected to

said rails and extending around said rollers, and means carried by said beam for applying a pulling force to said flexible pull members.

5 5. In an apparatus of the class described, a base frame including side members diverging from one end and coupled by a transverse portion intermediate the ends and with a transverse seat at the smaller end, a  
10 pivot pin supported upon said base frame and rotative in said seat, said pin having a plurality of studs rising therefrom, a central beam connected to one of said studs, rail members swinging upon the other of  
15 said studs and terminating in opposing gripping jaws, a guide pin carried by said base frame and extending through said beam, a guide keeper connected to said beam at its free end and through which said rails extend, guide rollers within said keeper member, flexible pull members connected to said  
20 rails and extending around said rollers, means carried by said beam for applying a pulling force to said flexible pull members, cam elements connected to said guide keeper and engaging said base, and operating handles connected to said cams.

6. In an apparatus of the class described, a base frame including side members diverging from one end and coupled by a transverse portion intermediate the ends and with a transverse seat at the smaller end, a pivot  
30 pin supported upon said base frame and rotative in said seat, said pin having a plurality of studs rising therefrom, a central

beam connected to one of said studs, rail members swinging upon the other of said studs and terminating in opposing gripping jaws, a guide keeper connected to said beam at its free end and through which said rails extend, guide rollers within said keeper member, flexible pull members connected to said rails and extending around said rollers, means carried by said beam for applying a pulling force to said flexible pull members, and means for elevating said rail members at their free ends.

7. In an apparatus of the class described, a base frame, rail members terminating in opposing gripping jaws and mounted to swing horizontally upon said base frame, a beam member extending between said rail members, a bracket device connected to said beam and including spaced side portions, a lever having a forked lower portion pivoted to the side portions of said bracket, segmental members connected to the forked portions of said lever and having peripheral guideways, flexible elements connected at one end respectively to said segmental members and extending through said guideways and connected at their other ends to said jaw bearing rails, whereby the jaw portions may be moved toward each other to grip an object between them.

In testimony whereof, we affix our signatures hereto.

OTTO L. ENGSTROM.  
HERMAN C. NELSON.