

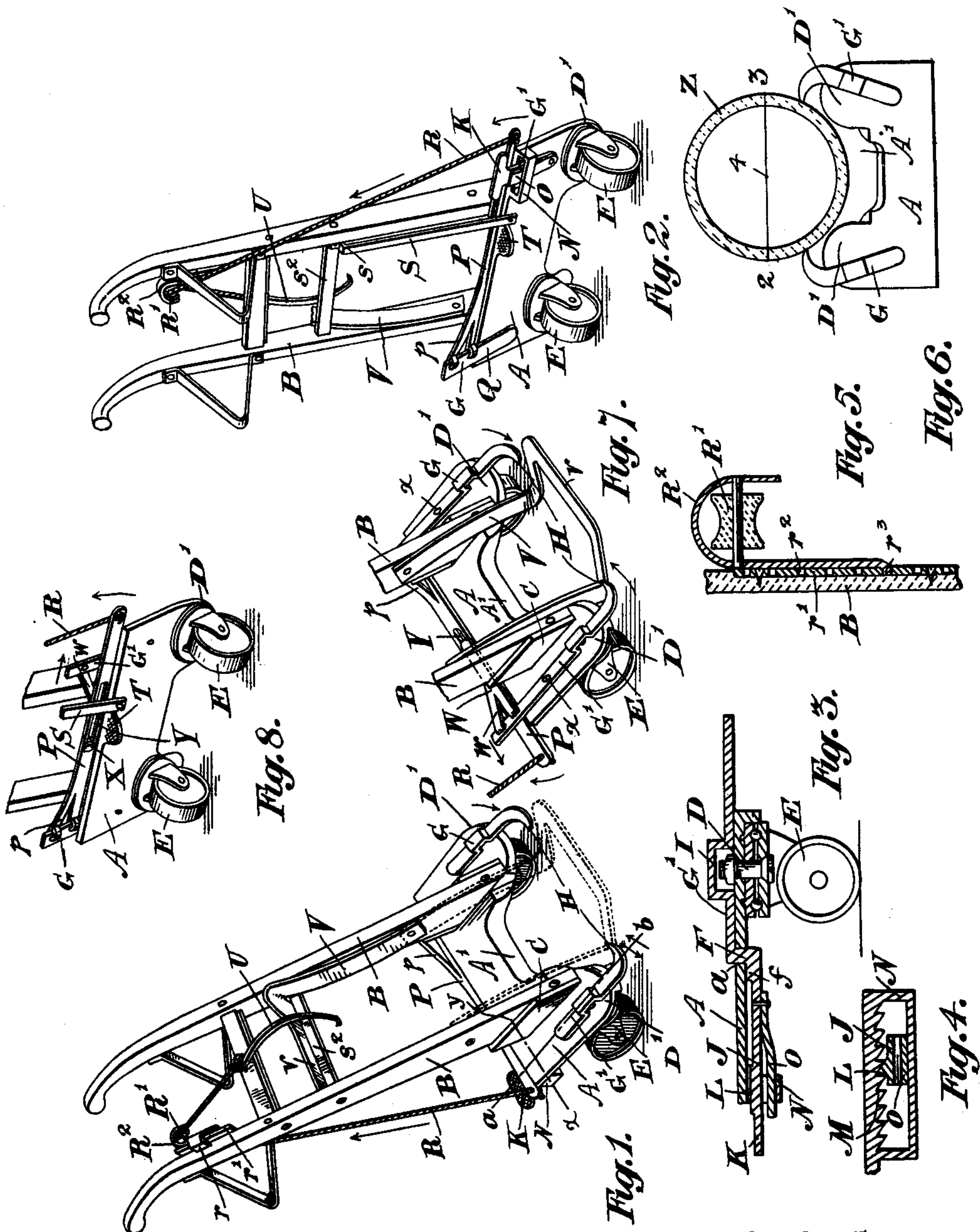
No. 675,896.

Patented June 11, 1901.

J. A. MARTIN.
TRUCK.

(Application filed Oct. 29, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOHN ARTHUR MARTIN, OF TORONTO, CANADA.

TRUCK.

SPECIFICATION forming part of Letters Patent No. 675,896, dated June 11, 1901.

Application filed October 29, 1900. Serial No. 34,710. (No model.)

To all whom it may concern:

Be it known that I, JOHN ARTHUR MARTIN, a subject of the Queen of Great Britain, residing at Toronto, in the county of York, Province of Ontario, Canada, have invented certain new and useful Improvements in Trucks, of which the following is a specification.

My invention relates to improvements in trucks; and the object of my invention is to more particularly design a truck for moving barrels; and it consists, essentially, of a suitably-shaped base-plate, to which are secured the ordinary handles, the said base-plate being preferably provided with caster-wheels, gripping-arms provided at each side of said base-plate for the purpose of gripping a barrel, and other details of construction, as hereinafter more particularly explained.

Figure 1 is a front perspective view of my truck. Fig. 2 is a rear perspective view of my truck. Fig. 3 is a vertical section on the line *a b*, Fig. 1. Fig. 4 is a vertical section on the line *x y*, Fig. 1. Fig. 5 is a longitudinal section through the adjustable frame for adjusting the length of the cord or rope used with the truck. Fig. 6 is a plan view of the base-plate with parts removed, showing the gripping-arms pivoted therein and grasping a barrel, which is shown in section, the said section being on the same plane as the gripping ends of the gripping-arms. Fig. 7 is a front perspective view of an alternative form of gripping-jaw and an alternative form of means for operating same. Fig. 8 is a rear perspective view of the alternative form shown in Fig. 7.

In the drawings like characters of reference indicate corresponding parts in each figure.

My truck is also constructed as to be used for the purpose of moving boxes, &c.

A is the base-plate, and B B the handles thereof, secured thereto in any well-known manner and provided with the usual legs and cross supporting-bars. Near the secured end of each handle and embracing the same is a supporting-flange C, secured to or forming part of the said base-plate. I preferably make the base-plate A with a recessed portion A', beyond which the forward outer portions D' project, to allow a portion of the barrel to extend thereinto, as shown, in order to support the weight of the barrel as near as

possible over the center of the casters. Secured to the forward outer end portions D' by the king-bolts D are ordinary ball-bearing casters E. I preferably provide my truck with these ball-bearing casters, but of course can use any suitable kind of wheels. Pivoted in the base-plate A, as at *a*, by its shank F are gripping-arms G and G', whose forward end H is provided with a suitably-formed point or gripping-surface which will enable the said arms to grip the barrel. As shown in the drawings, each gripping-arm is constructed with an offset I, which enables the said arms to operate upon the base-plate A. Underneath the said offset is the top of the king-bolt D. I do not confine myself to manufacturing the said gripping-arms with this offset, as I may dispense with the same altogether by so securing the ball-bearing casters E to the base-plate A that the top of the bolts D will be flush with the top surface of the said base-plate. The lower rearwardly-extending arm J of the gripping-arm G', Figs. 3 and 4, is provided with a foot-plate K and an engaging-lug L, which engages with the teeth of the toothed rack M, cast on the under side of the base-plate A and in such position so as to be engaged by the said lug L when the arm J is moved around its shank.

Secured to or forming part of the base-plate A is a bracket N. Resting upon the bracket N and secured to the under side of the arm J is a spring O, which keeps the lug L of said arm in contact with the teeth of the toothed rack M, and thus keeps the gripping-arm G' in position. Near the shank F is formed on the gripping-arms G and G' a shoulder *f*, which gives additional bearing for the said arms against the under side of the base-plate A.

P is a lever hinged by its bifurcated end *p* to the end of the lower rearwardly-extending arm Q of the gripping-arm G. The free end of this lever is controlled by a rope or chain R, which passes over the pulley R', journaled in the adjustable plate R². This adjustable plate is provided with short side-receiving flanges *r*, which slide over the edges of the rack *r'*, suitably secured near the upper end of one of the handles B and on the inner side thereof. Made in the rack *r'* are a number of teeth *r*², with which engages the spur *r*³,

secured to or forming part of the lower end of the adjustable plate R^2 . When it is desired to lengthen or shorten the rope or chain R , so as to accommodate the truck to different-sized barrels, the said adjustable plate R^2 , on account of its short receiving-flanges r , (which allow for play,) is tilted so as to throw its spur r^3 out of engagement with one of the teeth r^2 and moved down or up, as the case may be.

Secured to the under side of the base-plate A and by its offset end s to the cross-piece s^2 is a bar S , by which the lever P is supported.

Secured to or forming part of the base-plate A is a foot-plate T , against which the foot is placed when operating the truck in order to keep the same in place.

My truck can be used for carrying different-sized barrels. The arm G' , by means of its lug L and the means before described, is kept firmly in position and need not be moved when barrels of the same size or approximately the same size are to be handled.

Z is the barrel. The distance apart the ends H of the gripping-arms G and G' open is always less than the diameter $2\ 3$ of the barrel, which is in the same plane as the end H of the gripping-arms G and G' when gripping the barrel, as shown in the drawings. Consequently, supposing the center of gravity of the said barrel be operating through the point 4 the said barrel has always a tendency to move away from the truck and around the gripping-points H . When the barrel is in the position shown in Fig. 6 and the gripping-arms G and G' have been moved into the position shown, so as to touch the barrel at their respective points, the hook U , secured to the rope R , is hooked over the nearer edge of the barrel and the handles depressed into the usual position, raising the barrel from the floor. This operation moves the rope R in the direction indicated by arrow, throwing the lever P upwardly in the direction indicated by arrow and moving the arm G in the direction indicated by arrow and firmly gripping the barrel between the two said gripping-arms.

In placing the barrel upon the floor the handles of the truck are elevated until the barrel Z is set down. When the said barrel is set down, it ceases to of course move around the points H , and consequently does not exert a force upon the rope R , which force, as shown, keeps the gripping-arms G and G' firmly in contact with the barrel. When the barrel is set down, the hook U is removed from the barrel and the lever P falls back to the position shown in the drawings, thus entirely reducing the pressure of the gripping-arms G and G' against the barrel, so that the truck can be taken away. If I am handling barrels of different sizes, (within the capacity of my truck,) I must adjust the distance apart of the gripping end of the gripping-arms G and G' .

I operate the gripping-arm G as follows:

The foot is placed upon the foot-plate K , depressing the arm G' , thus moving the lug L out of contact with the teeth of the toothed rack M , and move the said arm in the direction indicated by arrow without tail for small barrels. To increase the distance between the gripping end of said gripping-arms, the gripping-arm G' is released, as before described, and moved in the direction indicated by arrow with tail the required distance. The gripping-arm G is then operated, as before described, to firmly grip the barrel.

It will be understood that I can (and would preferably make this one stationary) make the gripping-arm G' stationary and allow the arm G to be operated, as before described, if I manufacture trucks to be used only for certain sized barrels or barrels of approximately this certain size; but I prefer to manufacture the truck with both gripping-arms movable.

The lever P is preferably hinged, as shown, to the lower rearwardly-extending arm Q , so that when said lever is moved upwardly it will move against the under side of the handle nearer its free end, and when it is released the said lever will move upon the bar S , as before described. Thus it will be seen that the lever P can change its plane of operation without affecting the working of any of the other parts of the truck.

I do not confine myself to the particular construction of the lever P , nor its form of hinge connecting it to the arm Q , nor the gripping-arms G and G' (shown in the drawings) in carrying out my invention.

Pivoted to the inside of the handles $B\ B$ is a frame V , provided with a forwardly-projecting lip v . When the truck is used for removing barrels, this frame rests against the cross-piece s^2 , as shown. When the truck is used for moving boxes, the frame V is thrown into the position shown in dotted lines in Fig. 1 and in full lines in Fig. 7.

The gripping-arms G and G' (shown in Figs. 7 and 8) are alternative in form. They are pivoted to the base-plate A at x and rest upon the upper surface thereof. The lever P is secured by its bifurcated end p to the gripping-arm G , as before described. The rearwardly-extending end of the arm G' is hinged to an arm W by the bifurcated end w of this arm. The single end of the arm W is provided with a stud X , which operates in the longitudinal slot Y , formed in the lever P . When the rope R is pulled in the direction indicated by arrow, (in attaching the hook U to the barrel and by the depression of the handles $B\ B$,) the lever P is moved in the direction before described, throwing the end of the arm G in the direction indicated by arrow. When the lever P is moving, the bifurcated arm W is moved by its stud X operating in the slot Y in the direction indicated by arrow, thus moving the arm G' in the direction indicated by arrow without fail. This operation, it will be seen, causes the said

arms to firmly grip the barrel. When the barrel is set down, the truck is released from the barrel, as before described.

It will be seen from the specification and drawings that I preferably provide my truck with caster-wheels, though they need not necessarily be ball-bearing ones. I find that trucks provided with casters are much more easily handled than when they are provided with the usual wheels held in rigid bearings. I of course may, if I wish, provide my truck with the usual wheels held in the usual rigid bearings.

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. A truck comprising a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end portions, and handles secured to said base-plate, of two gripping-arms held in said base-plate with their gripping end extending forwardly beyond the axles of said casters, means attached to one of said gripping-arms and detachably securable to the body to be moved, and when connected thereto and by the depression of the said handles, operating said gripping-arms so that their gripping end will firmly grasp the body to be moved and raise it from the floor, as and for the purpose specified.

2. A truck comprising a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end portions, and handles secured to said base-plate, of two gripping-arms held in said base-plate with their gripping end extending forwardly beyond the axles of said casters, means attached to one of said gripping-arms and detachably securable to the body to be moved, and when connected thereto and by the depression of the said handles, operating said gripping-arms so that their gripping end will firmly grasp the body to be moved and raise it from the floor, and adjustable means secured to one of said handles for supporting the means, (detachably securable to the body to be moved,) attached to the said one of said gripping-arms, as and for the purpose specified.

3. A truck comprising a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end portions, and handles secured to said base-plate, of a gripping-arm adjustably held on one side of said base-plate, another gripping-arm pivoted to the other side of said base-plate, and means attached to this gripping-arm and detachably securable to the body to be moved, and when connected thereto and by the depression of the said handles, operating this gripping-arm so that its gripping end moves toward the gripping end of said adjustably-held gripping-arm so that the said gripping ends will firmly grasp the body to be moved and raise it from the floor, and adjustable means secured to one of said handles for supporting the means,

(detachably securable to the body to be moved,) attached to the said one of said gripping-arms, as and for the purpose specified.

4. In a truck, the combination with a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end portions, and handles secured to said base-plate, of a gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, a lever hinged to the end of the lower rearwardly-extending arm of said gripping-arm, another gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, means for maintaining said gripping-arm in position, and means attached to the free end of said lever for operating the first-mentioned gripping-arm and detachably securable to the body to be moved, and when connected thereto and by the depression of the said handles, operating said gripping-arm so that the gripping end of said gripping-arms will firmly grasp the body to be moved and raise it from the floor, as and for the purpose specified.

5. In a truck, the combination with a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end portions, and handles secured to said base-plate, of a gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, a lever hinged to the end of the lower rearwardly-extending arm of said gripping-arm, another gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, means for maintaining said gripping-arm in position, means attached to the free end of said lever for operating the first-mentioned gripping-arm and detachably securable to the body to be moved, and when connected thereto and by the depression of the said handles, operating said gripping-arm so that the gripping end of said gripping-arms will firmly grasp the body to be moved and raise it from the floor, and a bar secured at one end to one of the cross-pieces of the truck, and at the other end to the base-plate for supporting said lever, as and for the purpose specified.

6. In a truck, the combination with a base-plate provided with a recessed center forward portion and two forward outer end portions,

casters pivoted in said forward outer end portions and handles secured to said base-plate, of a gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, a lever hinged to the end of the lower rearwardly-extending arm of said gripping-arm, another gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, means for maintaining said gripping-arm in position, a rope attached to the free end of said lever for operating the first-mentioned gripping-arm, a hook secured to the free end of this rope and detachably securable to the body to be moved, and when connected thereto and by the depression of said handles, operating said gripping-arm so that the gripping end of said gripping-arms will firmly grasp the body to be moved and raise it from the floor, an adjustable frame supported by one of said handles, and a pulley having bearing in said adjustable frame, said rope passing over said pulley, as and for the purpose specified.

7. In a truck, the combination with a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end portions and handles secured to said base-plate, of a gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, a lever hinged to the end of the lower rearwardly-extending arm of said gripping-arm, another gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, means for maintaining said gripping-arm in position, a rope attached to the free end of said lever for operating the first-mentioned gripping-arm, a hook secured to the free end of this rope and detachably securable to the body to be moved, and when connected thereto and by the depression of said handles, operating said gripping-arm so that the gripping end of said gripping-arms will firmly grasp the body to be moved and raise it from the floor, an adjustable frame supported by one of said handles, a pulley having bearing in said adjustable frame, said rope passing over said pulley, and a bar secured at one end to one of the cross-pieces of the truck, and at the other end to the base-plate, for support-

ing said lever, as and for the purpose specified.

8. In a truck, the combination with a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end portions and handles secured to said base-plate, of a gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, a lever hinged to the end of the lower rearwardly-extending arm of said gripping-arm, another gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, a bracket secured to said base-plate, a toothed rack forming part of said base-plate, a locking-lug secured to said lower rearwardly-extending arm of the second-mentioned gripping-arm and engaging with said toothed rack, means for keeping said second-mentioned gripping-arm in place so as to keep said locking-lug in engagement with said toothed rack, a foot-plate forming the rear end of said second-mentioned gripping-arm to facilitate operation of same, and means attached to the free end of said lever for operating the first-mentioned gripping-arm and detachably securable to the body to be moved, and when connected thereto and by the depression of said handles, operating said gripping-arm so that the gripping end of both gripping-arms will firmly grasp the body to be moved and raise it from the floor, as and for the purpose specified.

9. In a truck, the combination with a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end portions and handles secured to said base-plate, of a gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, a lever hinged to the end of the lower rearwardly-extending arm of said gripping-arm, another gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, a bracket secured to said base-plate, a toothed rack forming part of said base-plate, a locking-lug secured to said lower rearwardly-extending arm of the second-mentioned gripping-arm and engaging with said toothed rack, means for keeping said second-men-

tioned gripping-arm in place so as to keep said locking-lug in engagement with said toothed rack, a foot-plate forming the rear end of said second-mentioned gripping-arm to facilitate operation of same, means attached to the free end of said lever for operating the first-mentioned gripping-arm and detachably securable to the body to be moved, and when connected thereto and by the depression of said handles, operating said gripping-arm so that the gripping end of both gripping-arms will firmly grasp the body to be moved and raise it from the floor, and a bar secured at one end to one of the cross-pieces of the truck and at the other end to the base-plate, for supporting said lever, as and for the purpose specified.

10. In a truck, the combination with a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end portions and handles secured to said base-plate, of a gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, a lever hinged to the end of the lower rearwardly-extending arm of said gripping-arm, another gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, a bracket secured to said base-plate, a toothed rack forming part of said base-plate, a locking-lug secured to said lower rearwardly-extending arm of the second-mentioned gripping-arm and engaging with said toothed rack, means for keeping said second-mentioned gripping-arm in place so as to keep said locking-lug in engagement with said toothed rack, a foot-plate forming the rear end of said second-mentioned gripping-arm to facilitate operation of same, a rope attached to the free end of said lever for operating the first-mentioned gripping-arm, a hook secured to the free end of this rope and detachably securable to the body to be moved, and when connected thereto and by the depression of said handles, operating said gripping-arm so that the gripping end of said gripping-arms will firmly grasp the body to be moved and raise it from the floor, an adjustable frame supported by one of said handles, a pulley having bearing in said adjustable frame, said rope passing over said pulley, and a bar secured at one end to one of the cross-pieces of the truck, and at the other end to the base-plate, for supporting said lever, as and for the purpose specified.

11. In a truck, the combination with a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end por-

tions and handles secured to said base-plate, a gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, a lever hinged to the end of the lower rearwardly-extending arm of said gripping-arm, another gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon and its gripping end extending forwardly beyond the axles of said casters, the lower rearwardly-extending arm thereof extending underneath said base-plate, means for maintaining said gripping-arm in position, a rope attached to the free end of said lever for operating the first-mentioned gripping-arm, and a hook secured to the free end of said rope and detachably securable to the body to be moved, and when connected thereto and by the depression of said handles, operating said gripping-arm so that the gripping end of said gripping-arms will firmly grasp the body to be moved and raise it from the floor, of an adjusting device comprising a toothed rack secured to one of said handles, an adjustable plate, an engaging spur formed at the lower end of said adjustable plate and engaging the teeth of said rack, short flanges formed on said plate to slidably engage the edges of said toothed rack, and a pulley journaled in said adjustable plate, the said rope passing over said pulley with its hook in such position as to be readily connected to the edge of the barrel, as and for the purpose specified.

12. In a truck, an adjusting device comprising a toothed rack, an adjustable plate, an engaging spur formed at the lower end of said adjustable plate and engaging the teeth of said rack, short flanges formed on said plate to slidably engage the edges of said toothed rack, and a pulley journaled in said adjustable plate, all arranged as and for the purpose specified.

13. In a truck, the combination with a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end portions, and handles secured to said base-plate, of a frame pivoted on the inside of said handles and near the lower end thereof, said frame being provided with a lip bent at about right angles thereto, the said frame being designed to be thrown down when in use so that this lip will project below and beyond said base-plate and forward of the axles of said casters, as and for the purpose specified.

14. In a truck, the combination with a base-plate provided with a recessed center forward portion and two forward outer end portions, casters pivoted in said forward outer end portions, handles secured to said base-plate, and a gripping-arm pivoted in said base-plate and designed to be moved by the foot, of another gripping-arm pivoted in said base-plate and

means attached to this gripping-arm and detachably securable to the body to be moved, and when connected thereto and by the depression of the handles, operating said gripping-arm so that its gripping end moves toward the gripping end of said gripping-arm designed to be moved by the foot, so that the said gripping ends will firmly grasp the body to be moved and raise it from the floor, as and for the purpose specified.

15. In a truck, the combination of the base-plate, bracket secured thereto, and a toothed rack forming part of said base-plate, of a gripping-arm pivoted in said base-plate, the upper forwardly-extending arm thereof resting thereon, the lower rearwardly-extending arm thereof extending underneath said base-plate, a locking-lug secured to said lower rear-

wardly-extending arm of said gripping-arm, and engaging with said toothed rack, a spring secured to the under side of said lower rearwardly-extending arm, with its free end resting against said bracket so as to keep said gripping-arm in position, and a foot-plate forming the rear end of said lower rearwardly-extending arm of said gripping-arm, to facilitate operation of same, as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN ARTHUR MARTIN.

Witnesses:

EGERTON R. CASE,
LAWRENCE REYNOLDS.