

UNITED STATES PATENT OFFICE.

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DUMPING OR UNPACKING TRUCK.

1,000,163.

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To all whom it may concern:

Be it known that I, WILLIAM VIRTUS ELLIS, a citizen of the United States, residing at Huntingdon, in the county of Huntingdon and State of Pennsylvania, have invented certain new and useful Improvements in Dumping or Unpacking Trucks, of which the following is a specification.

My invention relates to dumping or unpacking trucks which are designed to receive the contents of a case of merchandise by being inverted upon the top of such open case, and then to receive such contents by tipping the case over so that the said contents will freely pass to the floor of the truck. Such a truck is illustrated in my Patent No. 948,043, dated Feb. 1, 1910.

The particular invention forming the subject matter of this present application will be found useful in connection with the truck illustrated in my said patent, and has for its object to provide portable lifting and moving means for the said truck, whereby its usefulness is increased.

I have illustrated a desirable form in which my invention may be embodied in the accompanying drawings, wherein—

Figure 1 is an elevation of the said truck illustrating my invention applied thereto; Fig. 2 is a section on the line 2—2 of Fig. 1 looking to the left. Fig. 3 is a detail partly in section illustrating the position assumed by the parts when the lifting and moving device is first applied; Fig. 4 is a detail front view of the said lifting and moving device partly broken away. Figs. 5 and 5^a are detail side and end views of the axle, and Figs. 6 and 6^a are similar detail views of the locking dog.

In carrying my invention into effect, I have provided the truck of my former patent with a rear axle which may be freely turned horizontally, and in connection therewith I make use of a separable frame having means for engaging the said axle and carrying a single wheel and a handle whereby the axle-engaging means are inserted in place and upon a pressure downward of the handle, the wheel is brought into place under the truck and the same is lifted and easily propelled, the single wheel acting in connection with the revolving axle to direct the movement of the truck to any desired place.

In the particular form in which my invention is illustrated in the accompanying drawing, the lifting and propelling means are shown as consisting of two plates A which are similar in all respects, and which may be made of any desired material, such as malleable cast iron, which I have found well adapted to the purpose. Each of these plates has a handle post a and a supporting post a^1 . A convenient way of supporting the handle B, I find to be by attaching the said handle to a plate a^2 , which connects the handle posts together. A similar connection a^3 between the said plates A serves as a support or axle for the wheel C. The supporting posts a^1 are each forked at their upper ends at a^4 , forming bearings adapted to receive trunnions for a purpose presently to be described. Each of these posts is likewise provided on its forward side with a notch a^5 , and the material of the plate above said notch is preferably extended as at a^6 forming a locking shoulder.

Upon the rear under side of the dumping truck illustrated in my said patent I provide means for supporting the bearing, as for instance, by an angle iron D. Depending from this angle iron and attached thereto by suitable bolts, is a rectangular frame d which supports a shaft E. The said shaft has an upwardly projecting stem e which passes through the frame d and may enter a hole in the angle iron D for the purpose of holding the said stem perpendicular. Suitable means may be employed for holding the shaft in place, as for instance, a pin e^1 which passes through the stem e above the frame d . It will be perceived that the foregoing construction permits the said shaft to freely turn horizontally. I have provided means upon the said shaft for receiving the bifurcated ends of the supporting posts a^1 , consisting of a reduced shoulder e^2 upon each side forming trunnions which have bearings in the forked ends a^4 of the said posts a^1 . Suitable means may be provided for holding the lifting device and the dumping truck together, as for instance, by a swinging bail-shaped locking dog F which has its ends turned into loops, and the said loops are received one upon each reduced end e^3 of the axle E.

It will be observed that the handle post and handle and the supporting post are at an angle to each other in the case shown,

this angle being approximately 45°. The handle, however, I prefer to bend at *b* so as to increase such angle from the point of the bend outward. The said handle and supporting posts, however, may be otherwise related to each other.

In using my device the bifurcated ends of the supporting posts will be caused to embrace their bearings upon the shaft substantially as illustrated in Fig. 3, whereupon downward pressure being exerted upon the handle the truck will be raised and the wheel C will be caused to pass under the rear portion of the truck and the dog F will swing into the slot *a*⁵ and behind the shoulder *a*⁶, and will tend to prevent the truck tipping forward. The parts being in this position the truck may be easily propelled to any desired locality upon the forward wheels which rest upon the ground. The rear of the truck will then be lifted from the ground and will be supported by the wheel C which, owing to the turning of the shaft E, will cause the truck to be easily guided to any desired point. Should it be desired to leave the lifting device in position, the truck may simply be lowered and permitted to rest upon its bottom frame, whereupon the wheel will remain in position as the weight of the handle will keep the lifting device from passing out of connection with the rear end of the truck. The lifting device might easily be locked in forward position by causing the wheel to pass in front of the axle and providing a stop on the frame to engage the supporting post and thereby lock the device in position with the truck lifted.

Although I have described with some particularity the mechanical details of construction of my lifting device, it is not therefrom to be assumed that I regard my invention as limited in its practical embodiment to such details. The essential details of my invention may be changed and equivalent devices substituted within the limits of the appended claims.

The illustrated means for causing wheel C to turn easily, embracing shaft E, are practicable means for accomplishing the purpose, but other and equivalent means might be employed and I do not regard my invention as limited to the employment of such means illustrated.

What I claim is:—

1. In an unpacking truck, hand-operated means for propelling and guiding the truck and for lifting one end thereof, comprising a frame, a single wheel mounted therein, a handle attached to said frame at an angle which permits it to extend upwardly and rearwardly when the frame is in supporting position, and adapted to operate said frame for lifting and to guide and propel the same, a separable swivel connection between

the frame and the truck whereby the frame may be turned relatively to the truck, permitting the frame to be freely separated from the truck, the said swivel connection adapted to be connected before the truck is raised and to lift one end of the truck when the handle is depressed and swing the frame to supporting position beneath the truck, said frame adapted to be freely disconnected from the truck by raising the handle, whereupon the truck will be lowered.

2. In an unpacking truck, a shaft pivoted to turn about a vertical axis and separable propelling means for said truck, comprising a frame, a wheel mounted therein, a forked supporting post adapted to receive said shaft, a handle, and a swinging dog upon said truck adapted automatically to enter a notch in said supporting post and hold the parts together.

3. In an unpacking truck, a shaft having a vertical pivot and means for supporting same on said truck so as to turn freely with relation to the truck, separable propelling means for said truck adapted to turn freely with relation to said truck and comprising a supporting post having a forked end adapted to receive said shaft, and a guiding and propelling handle connected to said post, and a wheel carried by said propelling means.

4. In an unpacking truck, a shaft mounted therein so as to turn about a vertical axis with relation to the truck adapted to turn freely with relation to said truck and propelling means for said truck comprising a frame consisting of a supporting post and a guiding and propelling handle connected together and located at an angle with respect to each other, a bearing for said shaft in the end of said post, and a wheel carried by said frame.

5. In an unpacking truck, a shaft mounted therein so as to turn on a vertical axis with relation to the truck, separable lifting and propelling means for said truck adapted to turn freely with relation to said truck and comprising a frame consisting of a supporting post and a propelling handle connected together, said post being forked at its end to receive said shaft, and a wheel carried by said frame.

6. In an unpacking truck, a horizontal shaft having a vertical pivot and a support therefor on said truck permitting the shaft to turn freely, a swinging locking dog mounted on said shaft, lifting and propelling means for said truck consisting of a frame, comprising an upwardly and forwardly extending post having a double forked end constituting bearings for said axle, and also having on its forward end a notch for said dog, and a rearwardly and upwardly extending handle, and a wheel mounted to turn in said frame.

7. In an unpacking truck, a lifting and propelling frame for said truck, comprising a pair of parallel oppositely located plates each having integral therewith a supporting post and a handle post, each supporting post terminating in a forked bearing, and connections between the said plates comprising a support for a handle, a guiding and propelling handle mounted in said support, a wheel and a support therefor upon another of the connections between said plates, in combination with a horizontal shaft pivotally mounted in said truck and adapted to enter said forked bearing.

8. In an unpacking truck, hand-operated means for propelling and guiding the truck and for lifting one end thereof, comprising a frame, a single wheel mounted therein, a handle attached to said frame and adapted to operate said frame for lifting and to guide and propel the same, a separable swivel connection between the frame and the truck comprising a shaft turning on a vertical axis attached to the truck and a forked supporting post attached to the frame, whereby the frame is adapted to turn freely relatively to the truck, the said swivel connection adapted to be connected before the

truck is raised and to lift one end of the truck when the handle is depressed and swing the frame to supporting position beneath the truck.

9. In an unpacking truck, hand-operated means for propelling and guiding the truck and for lifting one end thereof, comprising a frame, a single wheel mounted therein, a handle attached to said frame and adapted to operate said frame for lifting and to guide and propel the same, a separable swivel connection between the frame and the truck whereby the frame may be turned relatively to the truck, the said swivel connection adapted to be connected before the truck is raised and to raise the truck when the handle is depressed and to swing the frame to supporting position beneath the truck, and a swinging dog upon said truck adapted to enter a notch upon said frame and hold the parts together.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM VIRTUS ELLIS.

Witnesses:

E. E. C. GIBBS,
K. H. RYMER.