

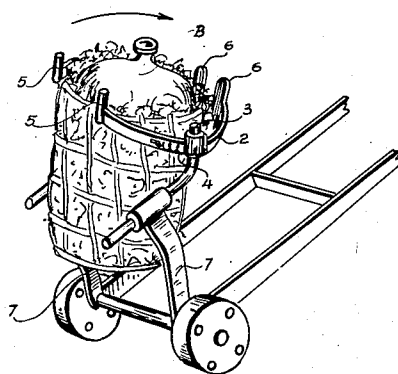
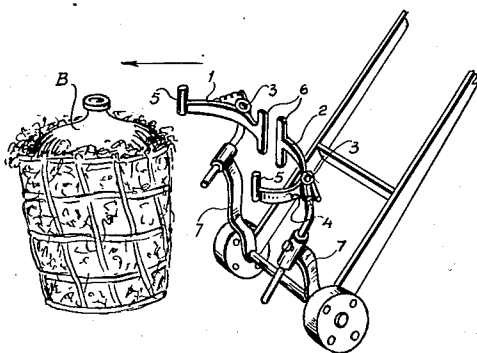
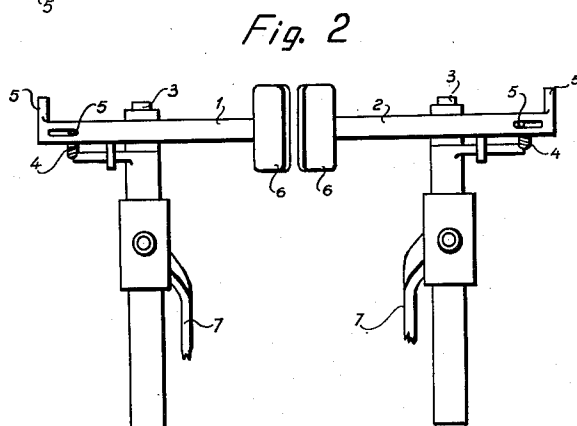
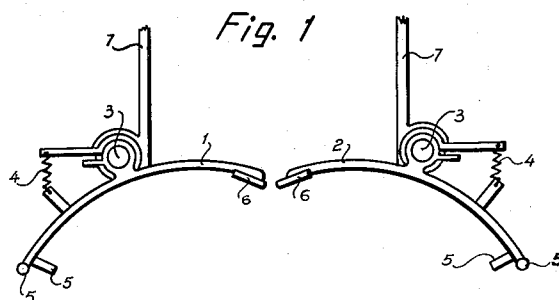
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2,584,918

ELEVATOR CONVEYER TRUCK

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ELEVATOR CONVEYER TRUCK

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2 Claims. (Cl. 214—65.5)

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The present invention relates to an arrangement applicable to elevator conveyor trucks.

This invention is characterized in that it is constituted by an arrangement applicable to such trucks, which have been improved inasmuch as the purpose of the arrangement is to be able to grasp the object automatically before the hoisting is effected and also to deposit the same automatically after it has been conveyed, without any manual intervention being entailed for such manipulations.

To make the explanation more explicit, this specification is accompanied by drawings showing an embodiment merely given by way of example.

In the drawing

Fig. 1 is a plan view of the assembly of the two forks or levers comprising the arrangement;

Fig. 2 is a front elevational view of the forks or levers;

Fig. 3 is a perspective view of a hand-truck equipped according to the invention prior to lifting of an object; and

Fig. 4 is a perspective view of the hand truck with the object mounted thereon.

The arrangement consists of an articulated assembly formed by two forks or levers 1 and 2 oscillating about their respective centres 3, distanced from each other at slightly over the diameter, or largest side, of the object to be picked up. Each fork or lever is provided at a suitable point either on the outside or at its centre of rotation, with a spring 4 the purpose of which is to keep the forks or levers at the maximum frontal aperture.

This property ensures that the truck is always capable of receiving the object which on the other hand, encounters devices attached or joined to the forks or levers at the back, or innermost part of the truck.

Each fork or lever is provided at its point or front portion with a device for grasping the object in question: this device may be a hook 5, suitable for receiving the staple or hoop of the protective bands placed around the glass carboys. It may also be an eccentric for wedging in the lateral surface of a can, or even a set of tackle to grip a bale of cotton, or other suitable arrangements may be provided.

The opposite point of the lever is furnished with a flat crosshead or other adequate means for receiving and supporting the object, shown at 6 in Figs. 1 and 2.

It may also be provided with eccentrics, hooks, or other means for grasping and supporting the object to be picked up.

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The spans of the forks and levers have to be of shape suitable to be adapted to the object to be picked up: thus each truck is suitable for a fixed task also it will be appreciated that the arrangement may be made interchangeable so that one single truck can serve for several purposes or the trucks may be made for special duties.

The forks or levers are sustained by uprights 7 which may form an integral part of the truck or may eventually be joined thereto.

The manner of operation is as follows:

The truck thus equipped (Figs. 3 and 4) is brought up to the object to be lifted (the object B) and it passes between the forks the position of which is then with the arms open and held by the spring the arms 1 and 2 of which can pass freely around the object to be picked up. The truck is advanced until the object strikes the posterior arms 6 of the forks which are closed, thus forcing them to open, whereupon the front ones close, imprisoning the object therewithin. The object is then supported by the arms 1 and 2 and supported on the devices 6, that is, it has four points of contact and is ready to be hoisted, Figs. 3-4.

The truck is slightly tipped or its raising device is operated according to the type, and by this action the object is suspended and able to be then conveyed.

When it is desired to leave it on the ground, it is enough to drop it there by using the most convenient method, operating the truck or the raising and lowering mechanism so that the object rests on the ground. In this position the effect of gravity gives it sufficient firmness to allow of pulling the truck away in the opposite direction to the movement effected to pick the object up. The forks open automatically consequent upon the action of the spring leaving the object free and allowing of pulling the truck back to pick up another object, and so forth.

The arrangement in question is applicable to hand trucks, to hoisting, double-action trucks and the like, and in all cases there is no need to touch the object by hand or to fix it on any part of the truck.

This invention within the extent of its scope may be applied to other embodiments than the one given by way of example, without thereby departing from the protection covered by this invention. The construction may be of any size and dimensions or form and the most suitable materials for the construction may be employed provided that all enters into the scope of the following claims.

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Having now described and ascertained the nature of my invention and in what manner the same is to be performed I declare that what I claim as new and desire to secure by Letters Patent is:

1. A device for elevator conveyor trucks of the type including movable jaws in the form of forks to embrace an object to be lifted, said forks including front portions arranged to form an open angle with the rear portions thereof and having cavities facing one another, flat cross-heads on the ends of said rear portions, said cavities being so formed that the front ends of the same tend to automatically embrace the object when the same pushes said flat cross heads provided in the ends of the said rear portions in longitudinal direction, coupling means for the object at said ends arranged to cooperate with superficial irregularities of the object and intermediate points of rotation for the said forks in combination with spring means normally biasing the front portions to separated position.

2. A device as claimed in claim 1, said points of rotation for said forks comprising a substantially vertical opening with respect to the axis

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thereof, in an intermediate portion of the said forks, supporting shafts for the same separated from one another a distance at least equal to the breadth of an object to be lifted, means for fastening said shafts to a truck, upper ends on said shafts co-operating with said openings of vertical axis to allow of the oscillation thereof around the vertical axis and stops fixed to said forks co-operating with said supporting shafts to limit the position of maximum separation of the front ends of the said forks.

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