Apr. 17, 1923.

1,451,773

E. N. HESCOCK

PORTABLE ELEVATOR

Filed March 6, 1922 2 Sheets-Sheet 1

Fig 1

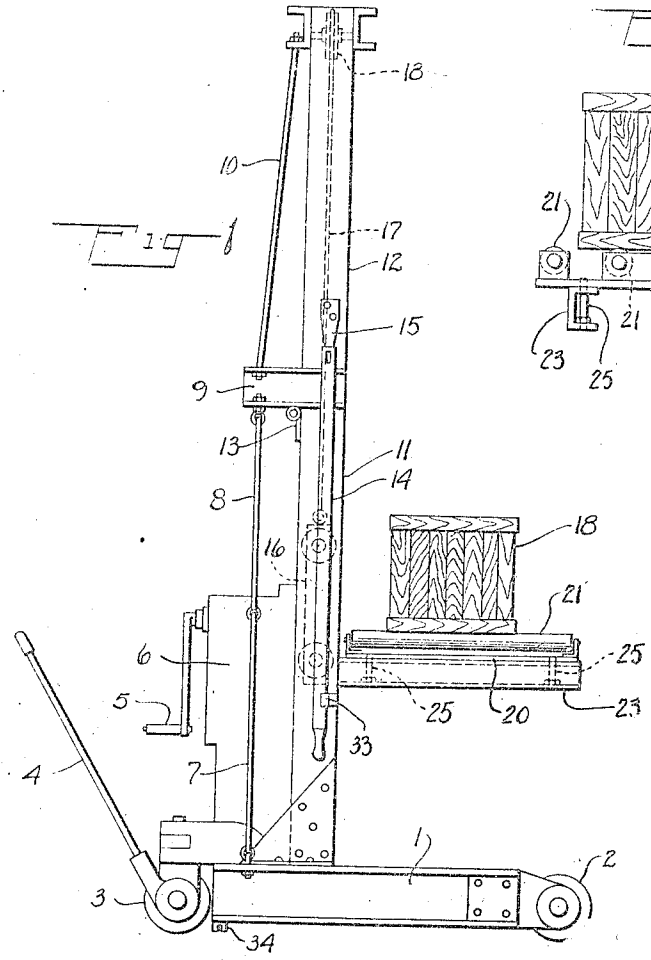


Fig 2

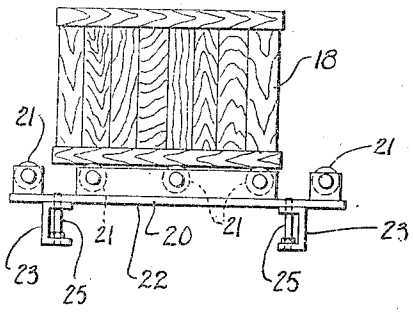


Fig 4

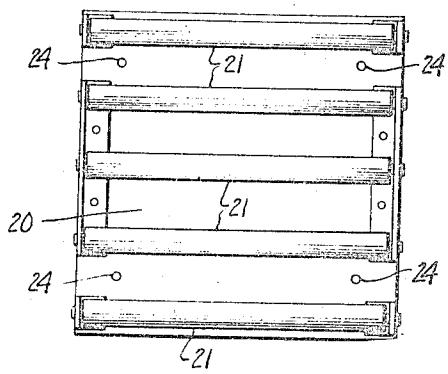
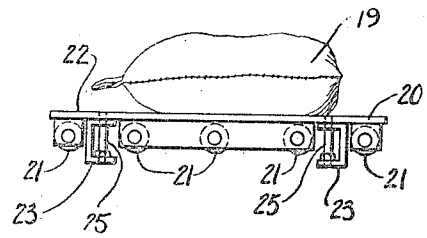


Fig 3



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E. N. HESCOCK

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Fig 5

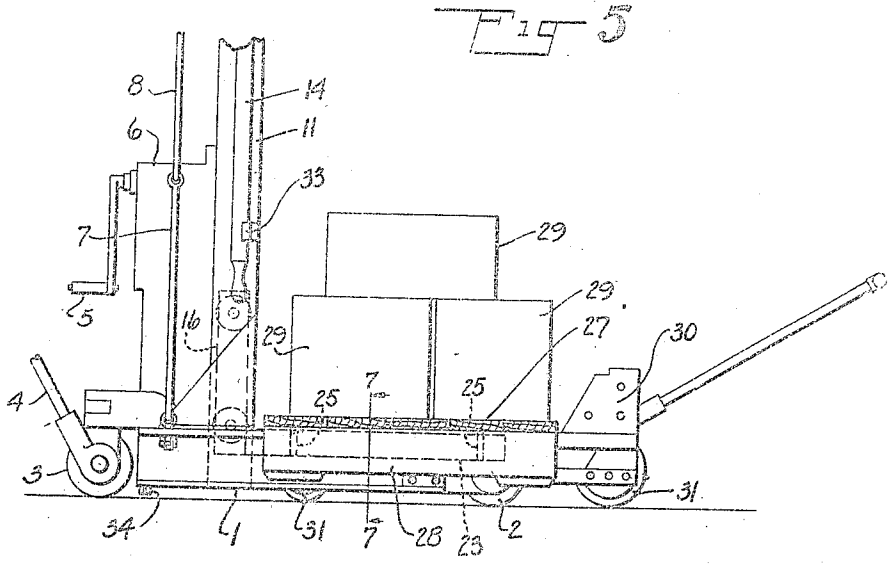


Fig 6

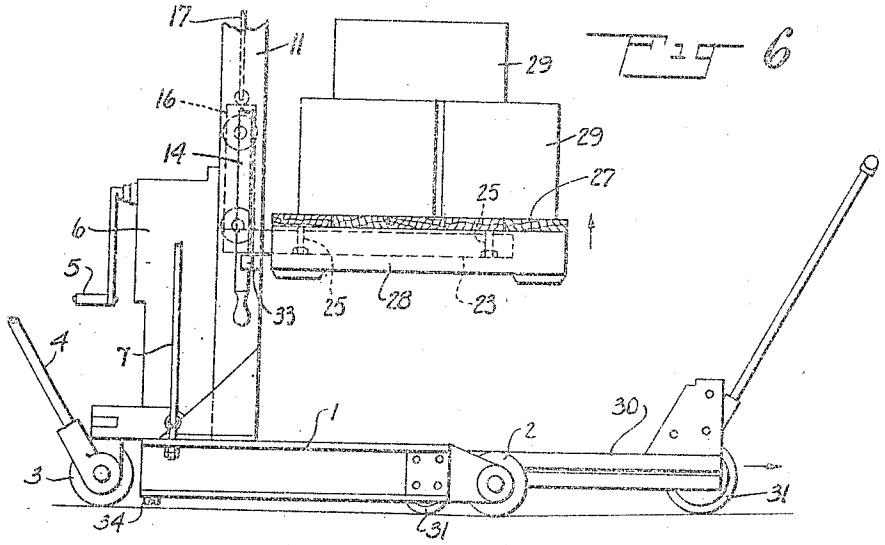
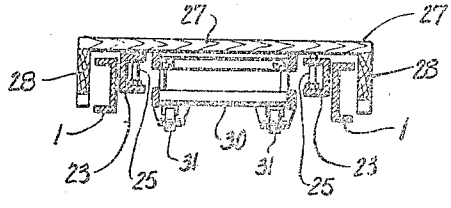


Fig 7



INVENTOR
Ethan N. Hescock

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Patented Apr. 17, 1923. 1,451,773

UNITED STATES PATENT OFFICE.

ETHAN N. HESCOCK, OF WESTFIELD, NEW JERSEY, ASSIGNOR TO NEW JERSEY FOUNDRY AND MACHINE COMPANY, A CORPORATION OF NEW JERSEY.

PORTABLE ELEVATOR.

Application filed March 6, 1922. Serial No. 541,553.

To all whom it may concern:

Be it known that I, ETHAN N. HESCOCK, of Westfield, in the county of Union and State of New Jersey, have made certain new and useful Improvements in Portable Elevators, of which the following is a specification, taken in connection with the accompanying drawings.

My invention relates to portable elevators and more particularly to a single elevator which can readily stack, tier or pile bags, bundles, parcels or similar soft containers, and also boxes and barrels, or other similar hard containers, with the minimum exertion on the part of the operator and wear on the container.

My invention further relates to a portable elevator which will raise and lower a load initially placed upon its platform, as well as a load stacked or placed upon a movable platform, at a distance from the elevator, and brought to it, without re-handling the goods or articles, thereby saving such additional labor and expense.

My invention further relates to a removable platform and also to a reversible platform, the two surfaces of the platform being provided with means to cooperate with the particular class of articles to be stacked, tiered, or piled.

My invention further relates to certain articles of manufacture, details of construction and combination, which will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings, I have shown one embodiment of my invention, by way of example, and in connection with a particular type of movable elevator. My invention however, is not to be limited to the particular construction shown or the particular type of elevator.

Fig. 1 is a side elevation of a portable elevator equipped with my invention;

Fig. 2 is a detail fragmentary end view showing the platform equipped for handling boxes or similar containers;

Fig. 3 is a detail fragmentary end view showing the platform equipped for handling bags or similar containers;

Fig. 4 is a plan view of the reversible platform;

Fig. 5 is a fragmentary side elevation showing my invention cooperating with a lift truck and a lift truck platform;

Fig. 6 is a side elevation, similar to Fig. 5, showing the lift truck platform lifted from the lift truck, without disturbing the articles previously stacked or placed upon the lift truck platform:

Fig. 7 is a vertical section substantially on the line 7, 7 of Fig. 5.

My invention is adapted for universal application. For purposes of illustration I have shown it in connection with a movable elevator covered by my Patent 1,381,552 of June 14, 1921, though, of course, it is not to be limited to such a movable elevator.

In the drawings the movable carriage 1, traction wheels 2, 3, handle 4, crank 5, hoist mechanism 6, tension rods 7 and 8, arm 9, tension rod 10, rigid upright section 11 secured to the movable carriage 1 and the pivoted upright section 12, hinge 13, lever 14, spring catch 15, catch 33, and legs 34 all cooperate in the manner fully set forth in my patent previously referred to, and form no part of my present invention.

In my present invention I employ a riser 16 which is raised and lowered by the rope 17 passing over the pulley 18 to the hoist mechanism 6. I form this riser so that it will support a removable platform. This removable platform may be variously formed to accomplish the functions desired. A platform which will readily handle boxes 18, or similar hard receptacles or containers, Fig. 2, will not readily cooperate with soft containers, such as bags 19, Fig. 3. I, therefore, equip my removable platform 20 with rollers 21, 21 so that the boxes or barrels or other containers can be readily rolled on to the elevator and rolled off after they have been raised or lowered to the position desired to stack or tier the goods or otherwise dispose of them. A platform equipped with such rollers, however, is objectionable when stacking, piling or tiering bags or other soft materials 19, for the bags will slip down between the rollers 21, 21, thereby increasing

the labor and making it very difficult to handle them, besides unnecessarily wearing the soft container.

By my invention I entirely avoid this objection by providing the riser 16 with the removable platform 20 which is preferably provided with reversible surfaces. On one surface the rollers 21, 21 are mounted, while the other surface 22 is left plain or smooth so that it may readily cooperate with the bags or similar containers 19. This removable platform 20 may be mounted upon the riser 16 in any suitable manner. Preferably I provide the riser 16 with two side arms 23, 23 so that the entire riser 16 with its arms 23, 23 may be called a skeleton riser. To prevent relative movement of the reversible platform 20 on the riser side arms 23, 23, I provide any suitable interlocking mechanism, such for example as holes 24, 24 in the removable platform 20 and pins 25, 25 in the side arms 23, 23.

In using my invention when it is desired to change temporarily from stacking, piling or tiering one class of goods to raising, piling or tiering another class having a different kind of receptacle or container, it is merely necessary to lift the removable platform 20 by hand from off the riser side arms 23, 23 so that it will be clear of the pins 25, 25. By then reversing it and repositioning it on the side arms 23, 23 the operator has either the smooth surface 22 for use with bags, such as 19, Fig. 3; or, the surface provided with the rollers 21, 21 to be used with boxes or similar containers 18, Fig. 2.

A portable elevator equipped with my invention is adapted to raise and lower articles initially piled or stacked or placed upon the removable platform. It is moreover adapted to be used with platforms on which the goods have been piled or stacked at a distance from the portable elevator and brought to it by devices known in the trade as lift trucks.

It is now quite common in the art to use a plurality of lift truck platforms 27 having side legs 28, 28 on which are placed or stacked articles such as boxes 29, 29, Figs. 5 and 6, usually by different workmen or different groups of workmen. These lift truck platforms 27 are then, when loaded, removed by any suitable form of lift truck 30 which is slipped beneath the lift truck platform and then lifts the legs 28, 28 free from the floor by any suitable mechanism (not shown). The loaded lift truck platform is then wheeled on the traction wheels 31, 31 to a different location in the warehouse, factory or other location.

By my invention I adapt any form of portable elevator to cooperate with such lift trucks platforms 27 and lift the goods 29, 29 so that they may be stacked, piled or tiered without being again rehandled and loaded upon the platform of the movable elevator.

I accomplish this, in the particular form of the invention shown by way of example, by removing the removable platform 20 so that the lift truck 30 with its loaded lift truck platform 27 may be wheeled or backed in between the riser side arm 23, 23 and the sides 1, 1 of the movable carriage, as shown for example in Figure 7. After the lift truck has been backed into the movable elevator as shown in Fig. 5 the loaded lift truck platform 27, is deposited upon the side arms 23, 23 of the movable elevator either by lowering the machanism (not shown) of the lift truck 30, or by operating the hoist mechanism 6 of the movable elevator. The lift truck platform 27 with its boxes 29, 29 will then be lifted directly from the lift truck 30, as shown in Fig 6, to the elevation desired to stack, pile or tier these boxes 29, 29, or other articles which may have been loaded upon the lift truck platform 27 without rehandling of the boxes or other articles.

The lift truck 30 can then be wheeled to another position, removed from the movable elevator, to get another loaded lift truck platform 27, when the operation just described is repeated. While the lift truck is getting the next loaded lift truck platform, the boxes 29, 29 are stacked, piled or tiered and the riser 16, with its side arms 23, 23 is brought back into the position shown in Fig. 5, the empty lift truck platform 27 being removed by hand so that the next loaded lift truck platform can be received between the side arms 23, 23 and the operation repeated.

It will be clear, therefore, that there is no re-handling of the boxes 29, or other containers, which may be upon the loaded lift truck platform, for the entire platform with its load is lifted bodily from the lift truck 30.

It will, therefore, be clear that by my invention a single standard portable elevator can be made to perform three uses; (1) handling boxes, barrels or other hard containers; (2) handling bags, bundles, bales, parcels or other soft containers; (3) by simply removing the removable platform it can be made to cooperate with lift trucks and stack, pile or tier goods loaded on lift truck platforms at a distance from the portable elevator without rehandling the goods.

I believe myself to be the inventor of this broad invention.

Having thus described this invention in connection with an illustrative embodiment thereof, to the details of which I do not desire to be limited, what is claimed as new and what is desired to secure by Letters Patent is set forth in the appended claims.

What I claim is:—

1. A new article of manufacture for a

portable elevator comprising a reversible platform, one surface of the platform being smooth to receive bags and bundles or similar soft containers, and the other surface provided with rollers to cooperate with boxes, barrels and similar hard containers and permit their more ready handling.

2. The combination in a portable elevator of a riser, means to raise and lower the riser, and a reversible platform and locking surfaces between the riser and reversible platform to prevent it slipping on the riser.

ETHAN N. HESCOCK.

Witnesses:
BENJ. J. HAUN,
REUBEN IRWIN.