(No Model.)

W. H. BERGER.

HAND TRUCK.

No. 394,443. Patented Dec. 11, 1888.

Fig. 1

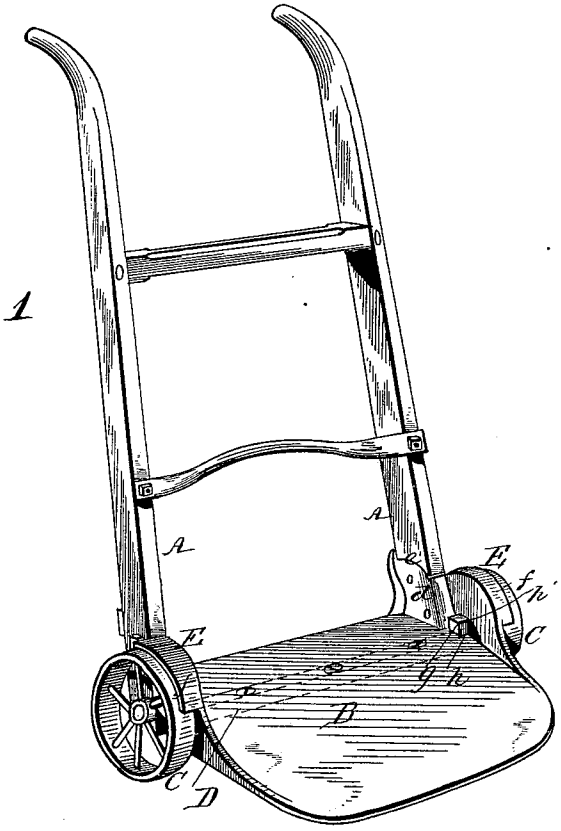


Fig. 2

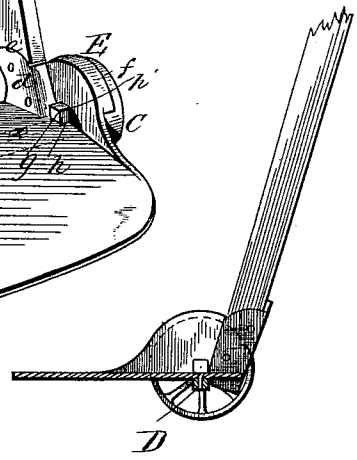


Fig. 3.

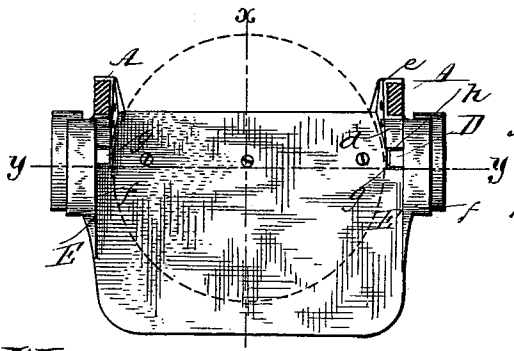
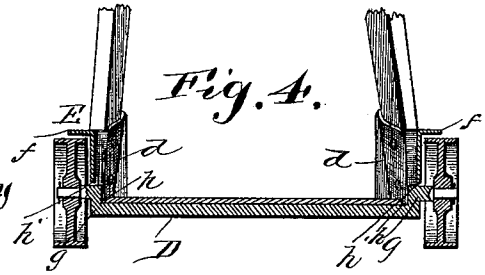


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM H. BERGER, OF PHILADELPHIA, PENNSYLVANIA.

HAND-TRUCK.

SPECIFICATION forming part of Letters Patent No. 394,443, dated December 11, 1888.

Application filed August 22, 1888. Serial No. 283,399. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BERGER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Hand-Trucks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention has relation to hand-trucks of that class used in stores, warehouses, and factories for the handling and conveyance of barrels, boxes, and other packages, and has for its object the provision of certain improvements in the construction and arrangement of the truck-platform, whereby the truck is rendered more serviceable, convenient, and useful than the trucks heretofore constructed.

My invention consists in the novel construction, arrangement, and combination of parts, as hereinafter described and specifically claimed.

In the accompanying drawings, Figure 1 is a perspective view of a truck embodying my improvements. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a plan view of the platform, and Fig. 4 a vertical transverse section through the same on line *y y*.

In an application for patent filed by me on the 21st day of December, 1887, Serial No. 258,589, I have shown and described a novel construction of hand-trucks, wherein the platform consisting of a flat cast plate having sockets at the sides to receive the lower or forward ends of the side bars or handle is arranged so as to extend back over the axle, in order to distribute the weight and allow casks, barrels, and the like to be moved with great ease while in an upright position, instead of, as previously provided, while lying down upon the body of the truck.

My present invention embodies a similar arrangement of the platform and certain modifications of a nature intended to increase the efficiency of the truck and render it more compact, convenient, and serviceable.

In the drawings, A A designate the side bars or handles of truck; B, the platform; C C, the wheels, and D the axle.

The platform, like that shown in my previous application above referred to, consists of a casting of large area having sockets to receive the side bars or handles. The sockets (indicated by the letters *d d*) are, however, in the present instance, located at the back or rear portion of the platform, instead of, as in the previous case, forward of or coincident with the axial line of the wheels. The purpose of this arrangement is to give the barrel-head or package ample standing-space upon the platform without unduly increasing the width of the truck. As will be seen, the platform is approximately barrel-shaped, while the handle-sockets are located outside a circle described from a center above the axle, representing a head of a barrel; hence the width of the platform is materially decreased.

The handle-sockets *d d* are slightly oblique or curved in the direction of the contour of a circle, and are also slightly pitched outward on the line of their inner walls, *e e*, the latter construction being in conformity with the swell of a cask and incidentally a feature which is necessary in the operation of casting, so that the pattern may be readily drawn from the mold.

The handle-sockets are of box-like formation, and are open on their outer sides to receive the handles, which are bolted to the inner walls, *e e*, and extend down and back of the axle, so as to give increased purchase in lifting a load. The front, rear, and side walls of the handle-sockets constitute, respectively, a holdback-brace, against which the strain is imposed in lifting a load, and a push-brace at the back and a connecting-flange. The handles are therefore incased at three sides. The push-brace formed by the back wall extends, as shown, above the level of the front wall or holdback-brace, so as to materially strengthen the handle at the point of greatest strain, where breaking or fracture would otherwise occur.

As before stated, the inner walls of the handle-sockets are oblique—that is, they follow the circle of the barrel-head. The inner surfaces of the sockets are at such an angle to

the surface of the platform that the handles converge toward their upper ends to the proper and convenient position for grasping and handling.

E E represent the guard-walls, cast with and upon the platform immediately forward of the handle-sockets and formed with the segmental flanges *f f* on their upper edges, which concentrically span the wheels on their inner and upper peripheries and prevent the contents of the platform from coming in contact with or obstructing the wheels. Heretofore the wheel-guards on trucks have consisted of flat plates or fingers extending over the wheels and projecting to such a distance as to constitute obstacles to the movement of the truck in certain positions, as in turning in narrow spaces or passing through narrow doorways.

My improvements contemplate the use of larger wheels than those usually employed on hand-trucks, as the larger the wheels the easier it is to propel the truck under a heavy load. In order to accommodate the platform to such large wheels, I drop or suspend it below the axial line by supporting it upon a bent axle, the middle portion of which is below the spindle ends, as shown, and in order to avoid an increase in the width of the platform by reason of the dropping of the platform, I produce the shoulders and bends *g g* of the axle at points inside the marginal line of the platform, and pass the vertical and horizontal extension through slots *h h'* in the horizontal portion of the platform and in the vertical guard-walls E E. Under this arrangement the wheels are brought as close together as possible.

It is obvious that no other arrangement of the platform would be possible where the intention is to use large wheels with a low platform and accommodate the truck within the narrow limits to which they are frequently confined.

The slotting of the platform and side walls and the extension of the axle-bends through such slots has an additional advantage, inasmuch as it prevents the movement of the platform either laterally, vertically, or forwardly, and maintains it in a rigid position irrespective of the bolts which secure the platform and axle together.

The platform, as shown, is a solid plate, and is so constructed, instead of being skeleton or open-work, to prevent nail-heads, hoops, or other objects catching or lodging in the openings or interstices, and preventing the barrel or packages from being easily slid on and off the platform.

The frame of the truck is open at the back of the platform, affording a clear space for the admission of packages or bodies lengthwise.

As will be understood, the truck is intended to stand and be moved while in an upright position. The normal position of the platform is therefore horizontal, or practically so.

In loading the truck the handles are thrust forward sufficiently to bring the front edge of the platform down to the floor-level, in which position it is worked under the barrel or package to be carried, and the latter then shifted until it is disposed or balanced over the axle. The handles are then tilted back, bringing the platform to a horizontal position. The manipulations are simple and easily accomplished.

In application No. 258,589, already referred to, I have shown, described, and claimed certain improvements in hand-trucks, and hence do not herein make any claim to said improvements, nor to any of the features of construction specifically embraced and claimed in said application.

Having described my invention, what I claim is—

1. In a hand-truck, a solid platform located above the axle of the wheels and between the latter, and extending both forwardly and rearwardly beyond the axial line, said platform consisting of a flat plate or casting without openings or interstices, substantially as shown and described.

2. In a hand-truck, substantially as described, the combination, with the wheels and axle of a horizontally-arranged platform on either side thereof, which rests upon said axle and extends forwardly and rearwardly beyond the same, of handles secured to said platform behind the axial line of the wheels, as set forth.

3. In a hand-truck, a platform consisting of a flat plate having cast therewith and thereupon handle-sockets consisting of box-shaped recesses, the inner walls of which converge rearwardly toward each other, said sockets being located back of the axial line of the truck-wheels, substantially as described.

4. In a hand-truck, the combination, with the wheels, of a bent axle upon which the same are mounted, and a horizontal platform mounted upon said axle and located below the axial line of said wheels, said platform consisting of a plate of large area which extends forwardly as well as rearwardly beyond the axial line, substantially as described.

5. In a hand-truck, the combination, with the platform suspended below the axial line of the wheels and having vertical side walls, of the U-shaped or bent axle having its bends or shouldered extensions located outside the marginal lines of the platform, substantially as described.

6. In a hand-truck, the combination, with the wheels and the bent or shouldered axle, of the platform suspended below the axial line, and having its horizontal portion and vertical walls coincidentally slotted for the accommodation of the axle bends or shoulders, substantially as described.

7. In a hand-truck in which the platform is located above the axle and extends rearwardly beyond the same, the combination, with said platform, of the handle-sockets located back of the axial line, and having their inner walls

rearwardly convergent on a horizontal plane and laterally divergent on a vertical plane, substantially as described.

8. In a hand-truck, the combination, with the platform, of the handle-sockets cast therewith and formed with front, rear, and inner walls, said walls having their inner surfaces inclined, and producing a recess having its front and back walls inclined rearwardly and its inner wall at an acute angle with the surface of the platform, whereby the handles will be inclined rearwardly and toward each other, substantially as described.

9. The combination, with a hand-truck platform located above and extending rearwardly beyond the axle, of handles secured to said platform and converging toward their upper ends, substantially as described.

10. In a hand-truck, the combination, with the platform and wheels, of the wheel-guards secured to or cast integral with the platform and having laterally-extending flanges spanning the wheels concentrically, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. BERGER.

Witnesses:

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H. E. GARSED.