(No Model.)

2 Sheets—Sheet 1.

J. A. MEAD.

HAND TRUCK.

No. 461,522. Patented Oct. 20, 1891.

Fig. 1.

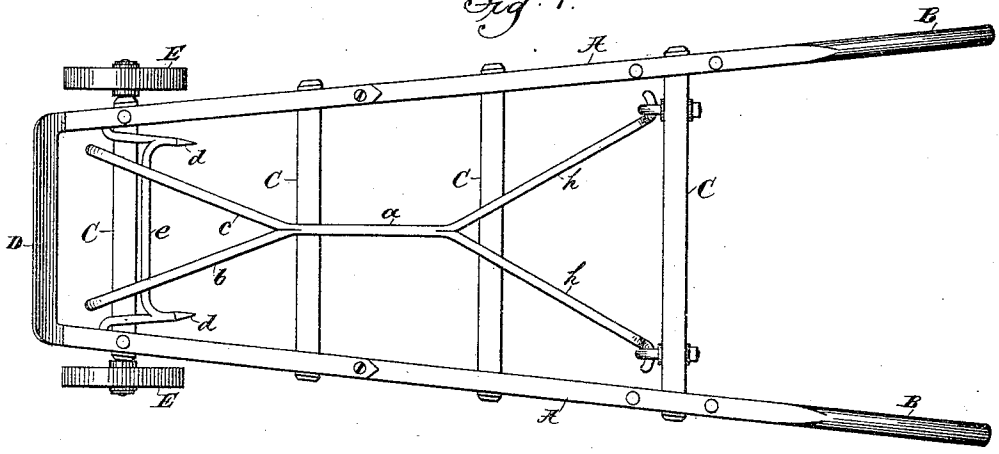


Fig. 2.

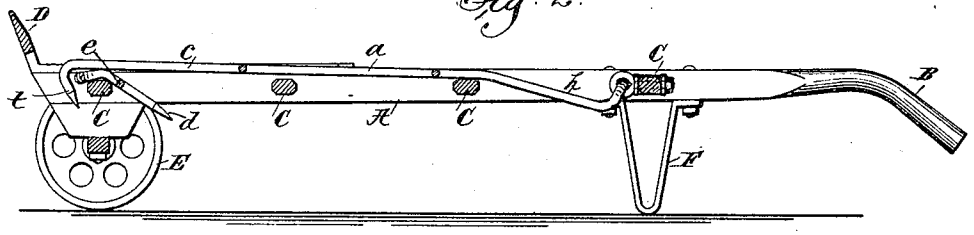
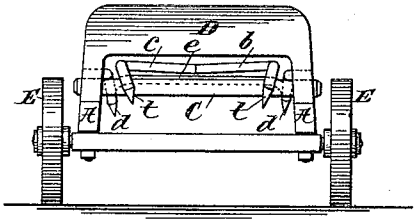


Fig. 3.



Attest:
Geo. H. Bottle
J. Kennedy

Inventor:
John A. Mead
by Philipp Phelps & Howe
Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

J. A. MEAD.

HAND TRUCK.

No. 461,522. Patented Oct. 20, 1891.

Fig. 4.

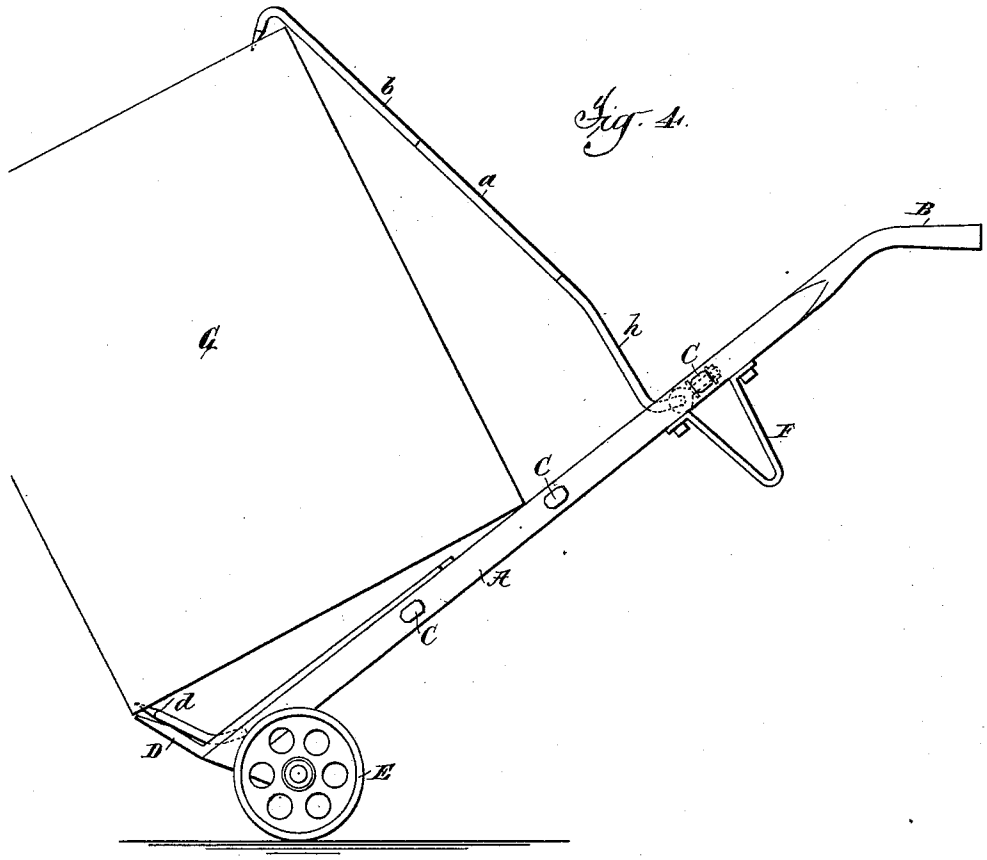
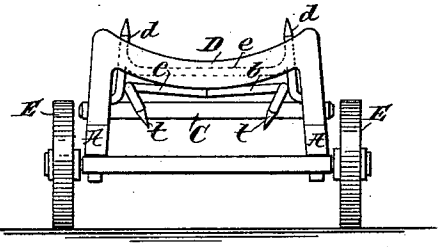


Fig. 5.



Attest:
Geo. H. Pitts
J. J. Kennedy

Inventor:
John A. Mead
by Philipp Phelps & Hung
Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN A. MEAD, OF RUTLAND, VERMONT.

HAND-TRUCK.

SPECIFICATION forming part of Letters Patent No. 461,522, dated October 20, 1891.

Application filed March 21, 1891. Serial No. 385,914. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. MEAD, a citizen of the United States, residing at Rutland, county of Rutland and State of Vermont, have invented certain new and useful Improvements in Hand-Trucks, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to improvements in hand-trucks, the improvements of the present invention being directed particularly toward the provision of devices for grasping the article to be carried on the truck and for holding it securely thereon against falling, the devices provided for this purpose by the present invention performing these offices more perfectly than those heretofore devised and relieving the truck-manipulator of much of the labor entailed by the use of old forms of trucks, and also rendering unnecessary, to a considerable extent, the attention and care which in the old trucks it has been necessary to bestow upon the article carried during transportation in order to prevent its displacement upon the truck and the consequent liability of falling and damage to the article carried or to its contents. The devices provided by the present invention for this purpose consist of prongs at the forward end of the truck, which, upon the movement of the truck toward the article to be carried, pierce the lower portion of the article, which is then canted back upon the truck in the usual manner, such lower portion of the article being held securely against movement in any direction by these grasping devices, assisted, preferably, by additional grasping devices consisting of similar prongs pivoted to the rear end of the truck, which engage the upper portion of the article carried, both of these upper and lower grasping devices being adapted to be moved to and from their position of use, in order to permit of the truck being used as a common hand-truck. There is also combined with the grasping-prongs at the foot of the truck a guard, which may be the foot-plate for limiting the extent to which the article carried is pierced by the prongs, this guard being also adapted to act as a support for the prongs in their raised or operative position.

In the accompanying drawings, Figure 1 is a plan view, Fig. 2 a longitudinal section, and Fig. 3 a front end view, of a truck embodying the improvements of the present invention. Fig. 4 is a side elevation of a hand-truck in which the grasping devices of the present invention are shown in engagement with a box loaded upon the truck. Fig. 5 is a front end view of a truck containing a foot-plate of a shape adapted for receiving articles of cylindrical form, such as a barrel, keg, or the like, the grasping device at the foot of the truck being shown in position for use, with the foot-plate acting as a support and guard.

Referring to said drawings, it will be seen that the truck therein illustrated is, as to the side frames A, terminating in handles B, the cross-bars C, the foot-plate D, and rest F, of familiar construction.

The truck is provided with a bar *a*, the rear end of which is bifurcated and pivoted to the rearmost cross-bar C near the side frames, and the forward end of which is provided with arms *b c*, which extend outward toward the side frames, with their ends bent downward and terminating in prongs *t*, which, in the position in which the arms *b c* are shown in Fig. 5, pierce the box G of that figure or other article on the truck, so as to prevent sidewise movement of the box or other article, or movement of the box or other article longitudinally away from the truck. In addition to this grasping device, which engages the upper portion of the article, I provide a grasping device located at the front of the truck upon the rear side of the foot-plate D, consisting of a pair of prongs *d*, (though the number of prongs may be increased,) pivoted in the side frames A, so as to be capable of a swinging movement lengthwise, preferably, of the truck into and out of position for use. The prongs *d* are united for the purpose of strengthening them by a tie-bar *e*, and in their position of non-use rest upon the foremost cross-bar C, which is in a lower plane than the side frames A, so that when in this position the prongs *d* and tie-bar *e* are out of the way and permit of the use of the truck as an ordinary hand-truck when grasping devices are not necessary or desired. The bar *a* also is, as best shown in Fig. 2, adapted to be swung down upon the cross-bar C for the same pur-

pose, and when in this depressed position the bar *a* will rest upon the tie-bar *e*, so as to retain the prongs *d* and tie-bar *e* in their depressed position against any tendency which they might have to swing from this position when the rear end of the truck is raised to a perpendicular or nearly perpendicular position, as it is in loading.

It is desirable to provide a guard for the prongs *d* which will limit the extent to which the article to be carried is pierced, as if the whole length of the prongs were permitted to pass into a box or barrel the contents of the box or barrel would probably be damaged. Such provision is made in the present case, the foot-plate D being utilized for this purpose, although in the absence of such plate a guard may be specially provided.

It will be noticed by reference particularly to Figs. 2, 4, and 5 that the foot-plate D is made of such height and the prongs *d* of such length relatively that in their raised position the latter extend slightly above the foot-plate, which thus acts as a guard, preventing the prongs from piercing the article loaded upon the truck to a greater extent than is necessary for properly grasping it. By reference to Fig. 4 particularly it will be seen also that the prongs *d* rest against the foot-plate, which thus acts as a support for the prongs, preventing them from bending under the weight of the load. This is a feature of importance, as in many cases the articles to be carried upon the trucks are of such character that if the prongs were permitted to pierce them to any great extent damage would be done to them or their contents. This would be the case, for example, with dry-goods boxes, the wood of which is comparatively thin, and if the prongs were permitted to pass entirely through the side of the box, as they probably would do if the box were heavy, they would of course damage the contents of the box.

In Fig. 5 I have shown a foot-plate having a concave upper edge, which is especially adapted for the carrying of articles—such as barrels, kegs, &c.,—of a cylindrical form, the curved side of the barrel or keg resting upon this concave edge and being prevented from rolling sidewise of the truck by the ends of the foot-plate and the engagement of the prongs *d*, which latter also prevent any movement of the barrel or keg lengthwise of the truck.

What I claim is—

1. The combination, with a hand-truck, of devices consisting of prongs at the forward end of the truck for grasping the lower end of the article to be carried and similar devices at the rear end of the truck for grasping the upper portion of the article to be carried, both of said grasping devices being adapted to be swung into and out of position for use, and the latter devices engaging the former to prevent their movement from their position of non-use, substantially as described.

2. The combination, with a hand-truck, of the prongs *d*, pivoted at the forward end of the truck and adapted to be swung into and out of position for use, the foot-plate D, acting as a support and guard for the prongs, and the pronged bar *a*, pivoted at the rear end of the truck for grasping the upper side of the article to be carried, said prongs *d* and bar *a* being adapted to be swung into and out of position for use, substantially as described.

3. The combination, with a hand-truck having side frames A and cross-bars C, of the prongs *d*, pivoted at the forward end of the truck and united by the tie-bar *e* and the pronged bar *a*, pivoted at the rear of the truck, said prongs *d* and bar *a* being adapted to be swung into and out of position for use, and said bar in the latter position engaging the tie-bar *e*, so as to prevent the movement of the prongs *d* out of this position, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN A. MEAD.

Witnesses:
WILLIAM R. PAGE,
CHAS. JOHNSON.