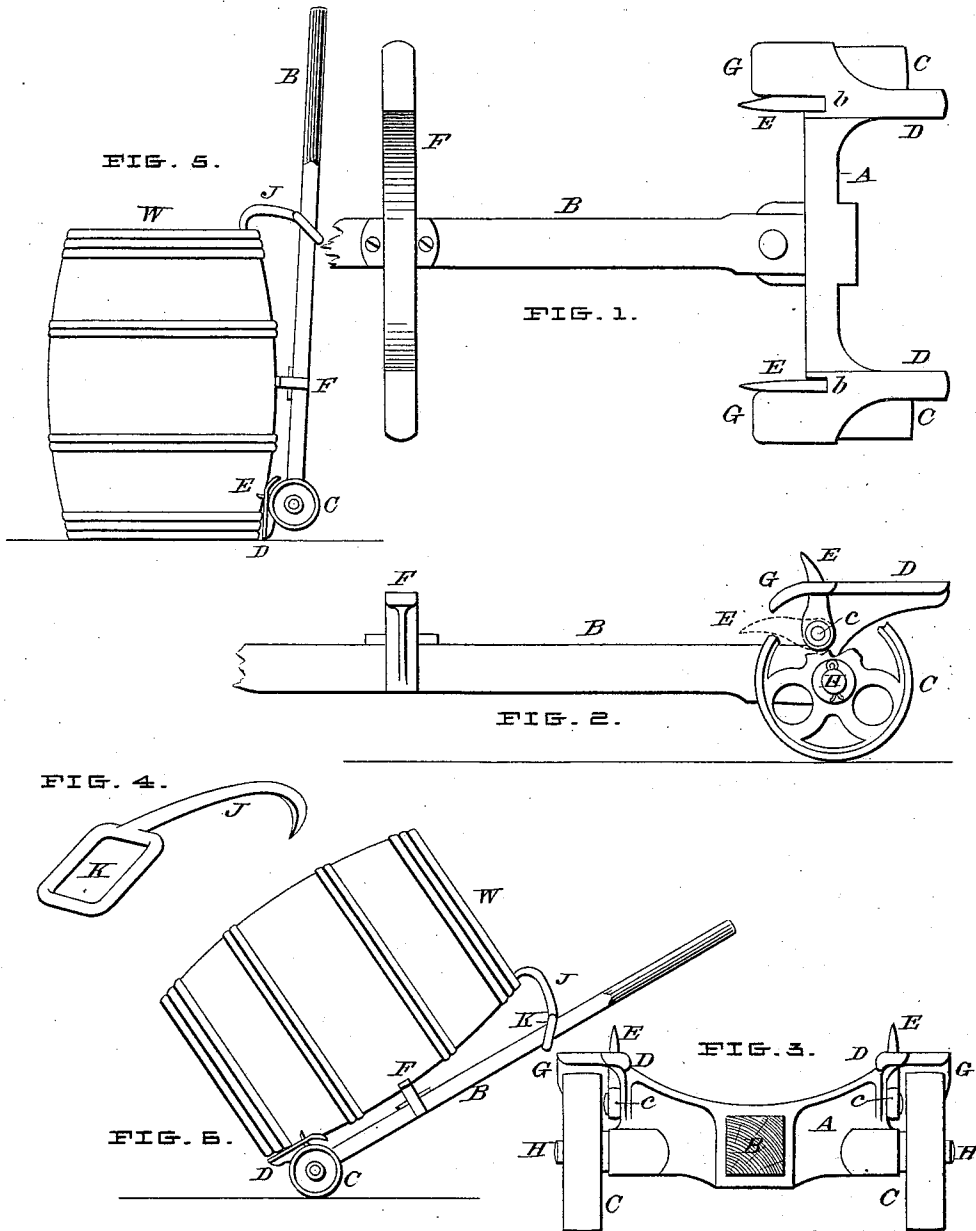


(No Model.)

B. H. HASKINS.
HAND TRUCK.

No. 461,433.

Patented Oct. 20, 1891.



WITNESSES:

E. B. Hatcher
Geo. D. Houghton.

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UNITED STATES PATENT OFFICE.

BENJAMIN H. HASKINS, OF MECHANICSVILLE, NEW YORK.

HAND-TRUCK.

SPECIFICATION forming part of Letters Patent No. 461,433, dated October 20, 1891.

Application filed March 31, 1888. Serial No. 269,132. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN H. HASKINS, of Mechanicsville, in the county of Saratoga and State of New York, have invented certain Improvements in Hand-Trucks, of which the following description, in connection with the accompanying single sheet of drawings, constitutes a specification.

This invention is designed to facilitate the transportation of articles of freight like barrels, boxes, heavy sacks, or bags of material which are too heavy or cumbersome to be moved conveniently by hand.

It consists in a novel proportion and arrangement of parts whereby a better initial hold upon the article to be moved is obtained, so that very little outlay of strength is called for to load it onto the truck ready for transport.

My invention is fully shown in the drawings, wherein my improvement is shown in plan in Figure 1, in side elevation in Fig. 2, in end elevation in Fig. 3. Fig. 4 is a perspective view of the grappling-hook. Fig. 5 shows the position of the truck as elevated to take on a cask, and Fig. 6 shows the same cask as loaded in and position for transport.

The constituent parts of my truck are an axle-head A, which is a solid casting having the two axle-studs H H cast integral therewith and centrally perforated with a socket for the reception of the handle B. Over each wheel is a fender G, having a forwardly-projecting extension D, which reaches somewhat beyond the front of the wheel and which I term a "fulcrum-point." These two fulcrum-points project forwardly in lines substantially parallel with the handle, but in any event so that when the handle is elevated they will strike the floor, and their ends are so made that they will stick there and not slip backwardly when the wheels are lifted off their bearings, as shown in Fig. 4. At either end of the axle-head and just inside of the fender G a spur E is pivoted, so as to turn forwardly and backwardly. When turned up it rests against the shoulder b, which prevents its turning forward any farther. In carting filled sacks or bags these spurs are turned back; but in moving barrels and boxes they are

thrown up, so that when the load is tilted back it will rest on the spurs, as seen in Fig. 6.

The cross-bar F is attached to the handle at about an average distance from the axle to accommodate the average sizes or dimensions of such packages as the truck is adapted to handling. It may be rigidly attached or made adjustable on the handle.

The grappling-hook J has a square or rectangular handle or eye K, which just slips over the handle and may freely slide up and down thereon, as seen in Figs. 5 and 6. The width of the eye K is such as to barely admit the free passage of the handle B; but it is somewhat longer the other way than the corresponding dimensions of the handle. This is so as to permit the hook to slip up and down on the handle when the point of the hook is engaged with or hooked onto any object to be moved. This hook is separable from the handle and may be used like any other hand-hook.

The objects and advantages of my invention are apparent from its mode of use. As hand-trucks are commonly constructed, when moved up to a box or cask considerable outlay of strength is requisite to lift the object so as to get the truck under it in such a way as to bring the bottom part of the load under control of the truck. One feature of construction of my truck which is designed to aid in overcoming this difficulty consists in the fulcrum-points D D projecting forward of the wheels. The advantage accruing from this peculiar construction results from this fact, that when the truck-handle B is elevated to nearly a vertical position the points D D strike and rest upon the floor or ground, points downward, and further lifting takes the wheels off their bearing, as seen in Fig. 5. In this condition the truck cannot run back when the load is pulled over toward or against it in the act of loading, for the reason that the points D D act on the floor or ground as spikes to resist backward slip. Another advantage accrues from the fact that in loading a box, cask, or any similar article when the truck is elevated and run up against it, as in Fig. 5, the spurs engage with or enter the wood of the package, while the points D D rest on the floor. Hook J is then struck into

the box or cask, and the rectangular eye is crowded down on the handle until the hook cramps the load firmly against the cross-bar F, which result is aided by the bent shape of the hook, and thus the truck becomes attached, as it were, to the load. Then with the handle B as the long arm of a lever and the point D as a fulcrum, it only remains to tilt the load toward the truck by rocking the load on its bottom front corner nearest fulcrum-point D, which is very easily done, as the load is not lifted off its base at all until the wheels strike the floor and the fulcrum-point is shifted from the points D D to the bearing-points of the wheels on the floor. As the load is further canted, it is prevented from sliding back by spurs E E. In other words, the points D D engage the floor and are as sharp as they can be made and maintain a bite on the floor without slipping or damaging the floor. When the truck is hooked onto the cask or box, as shown, these points are in the closest possible proximity to the chine of the cask nearest the truck or the lower back corner of the box. Now when the backward tilting movement starts the cask or box is not lifted off the floor at all, but is simply tipped over toward the truck and balanced on its chine or corner until its center of gravity is approximately over the wheels at the moment they strike the floor. From this position but a trifling effort is necessary to draw the truck down into position to be trundled along, for after the center of gravity of the load has passed the point of contact of the base with the floor it will, by its own weight, fall over toward the truckman, carrying the truck down with it. This feature of operation whereby the center of gravity of the load is drawn over back behind its base or point of contact with the floor before the load is lifted, in combination with the means for holding the load bound to the truck, distinguishes this truck from all other existing types.

It sometimes becomes convenient to slip off hook J and invert its position so that the hook will hang down under the handle for the purpose of lifting articles from the ground or floor.

From experience it has been found that the improvements in leverage, as developed in this invention, enable one freight-handler to

manage alone and with ease articles which often require two persons to manage with safety.

I therefore claim as my invention and desire to secure by Letters Patent—

1. The combination, in a hand-truck, of an axle-head mounted on two wheels, a handle attached thereto for manipulating the same, a grapnel-hook connected with said handle for attaching the upper end of the handle to a bundle, sack, or other object to be loaded, and two fulcrum-points which project from said head in a direction opposite to said handle for purposes of engaging the ground or floor, substantially as specified, the relative position and arrangement of said fulcrum-points and wheels being such that when the truck is moved up to a bundle, sack, or other object, and the fulcrum-points are by the elevation of the handle depressed until a bite of the same is secured upon the floor or ground close to the base of the load, and the grapnel is hooked onto the top of the bundle or sack, the drawing back of said handle will tip the load toward the operator until its center of gravity is carried well over the wheels before in their descent they touch the floor, as a condition precedent to the lifting the load off its base, substantially as set forth.

2. The combination, in a hand-truck, of the fulcrum-points D D, spurs E E, pivoted to turn over, substantially as shown, and grapnel-hook J, arranged to co-operate substantially in the manner described, and for the purpose specified.

3. The combination, in a hand-truck, of the spurs E E, pivoted on the frame, the cross-bar F, attached to the handle, and removable hook J, adapted to co-operate with the handle, substantially in the manner described, and for the purposes set forth.

4. The combination, in a two-wheeled hand-truck, of the projecting fulcrum-points D D, the spurs E E, cross-bar F, and grapnel-hook J, adapted to slide on the truck-handle, substantially as described and set forth.

In testimony whereof I have hereto subscribed my name at North Bennington, Vermont, this 3d day of January, A. D. 1888.

BENJAMIN H. HASKINS.

In presence of—

FRANKLIN SCOTT,

E. H. WORTHINGTON.