

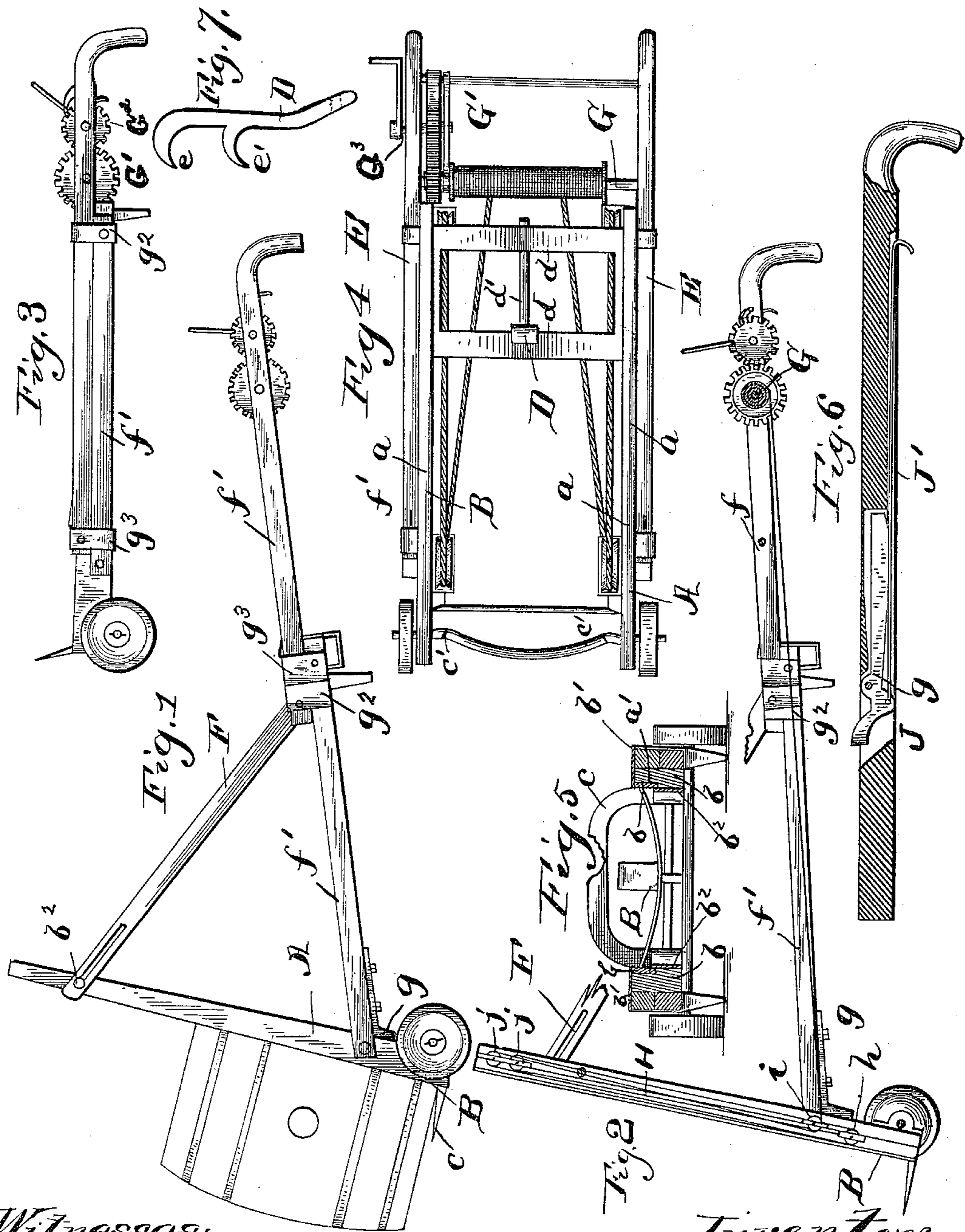
(No Model.)

J. J. HAHN.

HAND TRUCK.

No. 389,383.

Patented Sept. 11, 1888.



Witnesses:  
J. B. McGinn.  
H. E. Peck.

Inventor:  
John J. Hahn.  
per Ed. Duffy  
Att'y

# UNITED STATES PATENT OFFICE.

JOHN J. HAHN, OF OXFORD, KANSAS, ASSIGNOR OF ONE-HALF TO I. J. MAGGARD, OF SAME PLACE.

## HAND-TRUCK.

SPECIFICATION forming part of Letters Patent No. 389,383, dated September 11, 1888.

Application filed May 31, 1888. Serial No. 275,617. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. HAHN, of Oxford, in the county of Sumner and State of Kansas, have invented certain new and useful Improvements in Hand-Trucks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 of reference marked thereon, which form part of this specification.

My invention relates to improvements in hand-trucks especially adapted for handling, raising, or lowering barrels, boxes, packages, &c.

The object of this invention is to produce a cheap, strong, and efficient truck simple in construction, interchangeable in its parts, and economical in space and time. It is readily folded in such manner that it is compact and capable of being handled as an ordinary store-truck, and at the same time it is also capable of elevating a barrel or other article on skids into drays or wagons or up upon other barrels in tiers, as may be required. It is particularly designed for wholesale stores, warehouses, or the like, where barrels, bales, or crates are continuously handled, also on wharves, depots, steamboats, or other such places where rapid transportation and movements of stores are essentially necessary.

To these ends my invention consists in certain novel features of construction and combinations of parts, more fully described hereinafter, and particularly pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a side elevation of the truck with the handles extended and the main frame supporting the sliding frame in position to raise a barrel. Fig. 2 is a longitudinal vertical section, the truck being in the same position as shown in Fig. 1. Fig. 3 is a side elevation of the truck, the various parts of the same being adjusted so that the truck can be used in the common way, as an ordinary truck. Fig. 4 is a top plan, the truck being adjusted as shown in Fig. 3. Fig. 5 is a cross-section of the device. Fig. 6 is a sectional view of one of the extension-handles, illustrating the dog for

holding the handles to their extended position; and Fig. 7 is a detail view of the hook for engaging the chine of the barrel.

In the drawings, the reference-letter A indicates the main frame of the truck, and said frame is composed of the parallel pieces or bars *a*, suitably braced and held the desired distance apart by cross-pieces or the like, and at their lower ends by the axle of the truck, provided upon its outer ends with suitable wheels, as usual. Upon their inner longitudinal edges the side pieces are provided with ways or leads *a'*, and in said ways the side bars *b* of the sliding frame B are wholly or partially confined in sliding adjustment by means of metallic strips *b'* on the top of side bars *a* and by additional metallic strips, *b''*, on inner sides of said bars. Thus the sliding frame is secured to the main frame and can be longitudinally raised and lowered in the ways *a'* of the same. The barrel or other article being raised by the sliding frame can be prevented from rubbing against the side bars of the main frame by metallic strips secured to the inner faces of the side bars of the sliding frame so as to extend above the strips *b'*. The iron side bars *b''* are arranged to support the load on their edges instead of on their flat sides, whereby the truck is strengthened and friction greatly lessened. This sliding-frame is adapted to support and raise or lower a barrel or other article, and is provided at its lower end with a foot or yoke, *c*, to support the article, and having grooves *c'* to hold and receive the chine of a barrel, and near the opposite end of the sliding frame its side bars are connected and braced by suitable cross-bars, two (preferably) of which—such as *d*—removably support a rod, *d'*, longitudinally and centrally between the upper portion of the side pieces of said sliding frame. A double hook, D, is loosely mounted upon said rod by means of an aperture in its shank, through which the rod passes, and the upper portion of said hook D is provided with projecting arms or hooks *ee'*, one located above or longer than the other, as shown. This double hook is adapted to hold the barrel or other article in position upon the sliding frame, and it can be adjusted up and down on the rod to fit barrels of different heights, and barrels of differ-

ent widths are provided for by said two hooks, one longer than the other, the longer hook to engage the chines of larger barrels and the shorter hook the chines of smaller barrels.

5 E E indicate a pair of extension handles, each handle being formed in two sections,  $f$  and  $f'$ . The sections  $f'$  of each handle are pivotally secured at their lower ends to the lower outer faces of the main-frame side bars, as shown, to allow the upper end of the main frame to swing upwardly upon its axle as a pivot. Each section  $f'$  is provided with a laterally-projecting arm or flange,  $g$ , adapted to engage the under edge of the main frame to uphold the same. The sliding sections  $f$  of the extension-handles are provided at their outer ends with the usual hand-grips or handle portions, and said sliding sections are secured to and confined on the pivoted sections  $f'$  in sliding adjustment by sleeves  $g^2$ , rigidly secured to the pivoted sections and loosely embracing the sliding sections, and by sleeves  $g^3$ , rigidly secured to the sliding sections near their ends and loosely embracing the pivoted sections, as clearly shown. Thus it will be seen that the sliding sections are confined upon the upper side of the pivoted sections and can be extended until the sleeves  $g^2$  and  $g^3$  engage; or the two sections can be shoved together until the handle-sections lie full length upon the pivoted sections, as seen in Fig. 3.

The extension-handles are provided with pivoted folding braces F, each sliding section having an end of one of said braces F pivoted to its end, the opposite end of the brace being provided with a longitudinal slot, through which extends a pin,  $b^2$ , secured to the outer face of a side bar of the main frame. Thus it will be seen that when the main frame is tilted to the position shown in Fig. 1 and the handles extended the lower ends of the braces pivoted to the sliding sections are drawn forward to the position shown in said figure, with the pins  $b^2$  at the upper ends of the slots, thereby supporting the main frame in its inclined position, and when the sliding sections are shoved inward the braces will be folded in between the handles and the sides of the main frame.

50 A windlass-shaft, G, is journaled in the sliding sections of the extension-handles near their outer ends, and said shaft is provided with a suitable reel and a gear,  $G'$ , between the sections and at one side of the reel, and said gear meshes with another gear,  $G^2$ , mounted on a shaft,  $G^3$ , extended through a sliding section and provided with a movable hand-crank, and said gear  $G^2$  is normally prevented from rotating in one direction by a suitable pawl.

60 Pulley-blocks  $h$   $h$  are secured at the front ends of the side bars of the sliding frame, one on each side. Pulleys  $i$   $i$  are journaled in metal bands or straps secured to the inner faces of the side bars of the main frame and at the front portions of the same, one pulley being located on each side bar, and at the rear

ends of said main-frame side bars two pairs of pulleys,  $j$   $j$  and  $j$   $j$ , are journaled in suitable metal bands or straps secured to the main frame, one pair of pulleys journaled on one side and the opposite pair on the other side of the main frame, and said pulleys are of greater diameter than the pulleys at the front of the truck.

It will thus be seen that each side of the truck is provided with a separate system of pulleys, over which operate separate ropes or cords H, one of said cords being secured at one end to the eye of a pulley-block,  $h$ , thence extending rearwardly around the surface of the foremost of the pair of pulleys  $j$   $j$ , thence forwardly around the pulley in a pulley-block,  $h$ , thence forwardly again around the surface of the rearmost of said pair of pulleys  $j$ , thence rearwardly again around the pulley  $i$ , journaled to the main frame, and thence the rope or cord extends rearwardly and is secured to the windlass-shaft. The other cord is connected with the similar system of pulleys on the opposite side and the windlass in the same way as the cord just described. Hence it will be seen that when the windlass-shaft is rotated in one direction the cords will be wound upon the same and the sliding frame will be raised, requiring a minimum amount of power applied to the windlass-shaft by reason of the power-multiplying system of pulleys just described. One or both of the extension-handles are provided with a locking-dog, J, pivoted at about its center in a recess in the end of the sliding section, and said dog is composed of an engaging end adapted to normally project above the upper surface of said sliding section, being held normally in this position by the opposite heavier end of the dog. A rod, J', is secured to said dog and extends rearwardly in a groove in said section to the hand-grip, where it is provided with a finger-ring, and by pulling on said rod the upper end of the dog is withdrawn into its seat. Thus it will be seen that when the handles are extended the dog will engage the end of the sleeve secured to the pivoted sections, and thus hold the sliding sections from being shoved together while elevating the article to be raised, and when it is desired to shorten the handles the operator disengages the locking-dog and draws the sections together by winding up the rope on the windlass-shaft.

When it is desired to move and raise a barrel, the foot of the truck is placed under the barrel, as usual, and the hook D placed on the upper chine. The truck is then wheeled to the spot where the barrel is to be located and the handles are extended, and the main frame assumes the position shown in Fig. 1. The barrel is then raised by the windlass, ropes, and system of pulleys operating the sliding frame.

It should be observed that articles of great weight can be raised as well as lowered by this truck.

It is evident that various slight changes and modifications might be resorted to in the form

and arrangement of the various parts described without departing from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the precise construction herein set forth.

What I claim is—

1. In a truck, the combination of the main frame, the sliding frame, and the handles pivoted to the main frame, substantially as and for the purpose described.

2. In a truck, the combination of the main frame, the sliding frame confined in ways on the main frame, and extension-handles pivoted to the main frame and carrying a windlass connected with the sliding frame, whereby the same is raised or lowered, substantially as described.

3. The combination, with the main frame and the sliding frame, of extension handles pivoted to the main frame and pivoted folding braces connected with the main frame and extension-handles, substantially as described.

4. In a truck, the combination, with a frame and cross-pieces, of a rod carried by said cross-pieces between the side bars of the frame and a hook mounted on said rod to freely slide on the same and provided at its free end with one or more hooks to engage the chine of a barrel, substantially as described.

5. The combination, with the main frame and extension-handles, of the herein-described dog pivoted in a section of the extension-han-

dles and adapted to removably hold the handles extended, substantially as described.

6. The combination of the main frame, the sliding frame operating in longitudinal ways in the upper side of the main frame, the windlass-shaft, and the herein-described system of power-multiplying pulleys mounted on the sliding frame and the main frame, and the ropes or cords secured at one end to the sliding frame and operating over said pulleys and secured at their opposite ends to the windlass, substantially as described.

7. A truck provided with extension-handles formed in sections, one section of each handle being pivoted to the side bars of the truck, substantially as described.

8. In a truck, the combination of the main frame, the sliding frame, the handles, and a windlass journaled in and extending between said handles and connected with the sliding frame, substantially as described.

9. In a truck, the combination of the main frame, the sliding frame, and the extension-handles pivoted to the main frame, for the purpose described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN J. HAHN.

Witnesses:

OWEN E. DUFFY,  
CHAS. M. WERLE.