

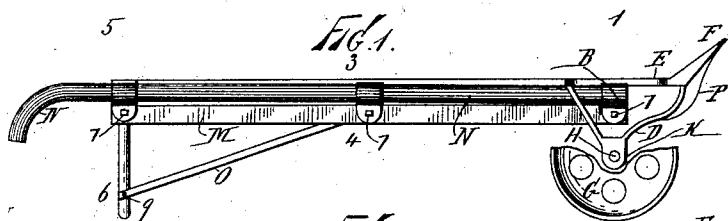
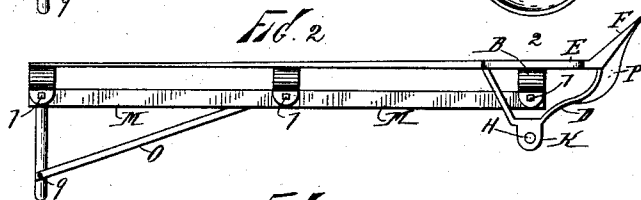
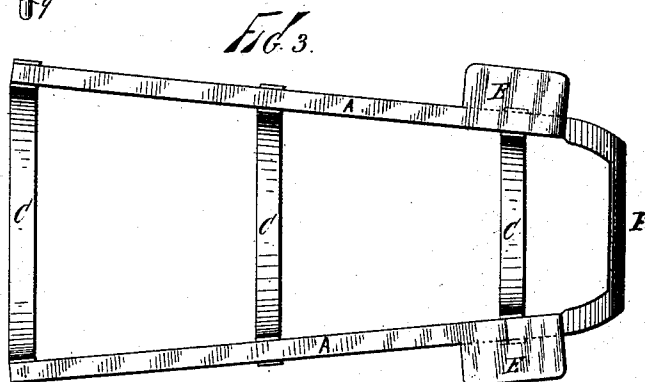
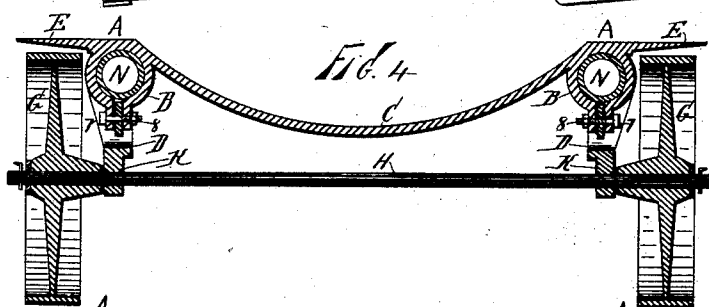
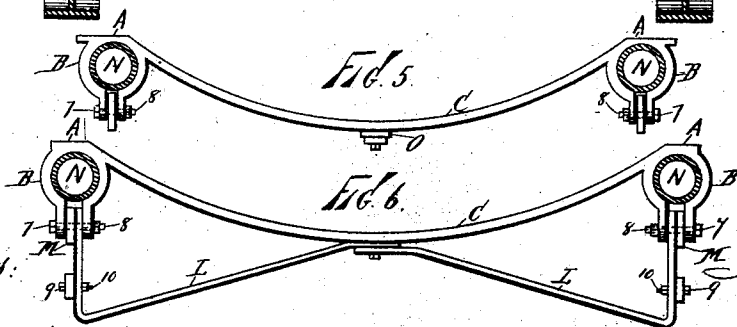
(No Model.)

W. C. WREN.

HAND TRUCK.

No. 374,161.

Patented Nov. 29, 1887.



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HAND-TRUCK.

SPECIFICATION forming part of Letters Patent No. 374,161, dated November 29, 1887.

Application filed January 18, 1887. Serial No. 224,682. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. WREN, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Hand-Truck, of which the following is a full, clear, and exact description.

My invention relates to improvements in hand-trucks for use in stores, warehouses, depots, &c., which trucks are made entirely of metal.

In the accompanying drawings, Figure 1 is a side view of the truck with a portion of the wheel removed. Fig. 2 is a side view of the truck-frame without the handles. Fig. 3 is a top plan view of the frame. Fig. 4 is a cross-section on the line 1 2. Fig. 5 is a cross-section on the line 3 4. Fig. 6 is a cross-section on the line 5 6.

The frame is composed of the flat top sides, A, having attached thereto underneath, on each side, the clamps or thimbles B and the curved flat cross-bars C, connecting the side bars, A, together. The curved pillow or wheel-bridge D and axle-boxes K on each side, the flat wheel-guards E, the nose F, and stay-pieces P in front of the pillow-bridges D and nose F are all formed in and of one piece of metal, preferably cast of malleable iron or steel, for cheapness and durability. The clamps or thimbles B are made in the form shown at Figs. 1, 2, 4, 5, and 6. Said clamps or thimbles B are essentially cylindrical or ring-shaped, being formed by two semicircular jaws, the lower ends of which are separated and provided with downward prolongations, in which coincident holes are formed to receive a screw-bolt, 7, and are drawn together to encircle and clasp the handles N by the bolt 7. The handles N are formed of metal tubing. A thin flat piece of metal, M, nearly the length of the sides of the frame A, extends from the clamp B at one end to the clamp B at the other end, and is secured just below the handles N, one piece on each side of the frame, by the same bolt, 7, that draws the downward ends of the clamps or thimbles B together, thus forming a bridge-frame that is strong and durable, independently of the handles N. A very thin and light piece of metal can be used in that position, and it will be almost impossible to

break or bend the truck, regardless of the weight that may be placed on the body of the truck, and at the same time not materially add to the weight of the truck. When the nose F of the truck is used to raise the load, there is a great strain between the nose F, which is the point of a lever, and the points K, (the axle-blocks,) which is the fulcrum of a lever.

To combine lightness with strength, I carry the wheel-block out to the nose F in the form and manner shown at D, Figs. 1 and 2, and I also have attached thereto a thin piece of metal, P, that presents its edge to the nose F and wheel-block D in the form and manner shown, Figs. 1 and 2, which piece P materially strengthens the nose F without adding materially to the weight of the truck. If the axle-block K is carried downward in one solid piece from the wheel-block D, as shown at Figs. 1, 2, and 4, and coincident holes are made, through which an axle, H, is passed, which axle can project through the blocks K on each side a sufficient distance to form journals for the wheels, a material saving is made over the old fashion of attaching the axle to the body by bolts, as the axle H has only to be a plain straight piece of round steel or iron, as shown at Fig. 4. The legs L are flat pieces of metal bent to the form shown at Fig. 4, with a hole at one end, through which the bolt 7 is passed, which bolt 7 holds the same in place, together with the longitudinal brace M and handle N on each side of the truck. One end of a brace, O, is attached to the leg L by the bolt and nut 9 10 on each side of the truck, and the other end of the braces O are held and fastened together at the center cross-bar, C, at O, Fig. 5, thus making a cheap durable hand-truck.

I do not claim a truck-frame composed of sides, sockets, or clamps to hold the handles, with cross-bars, nose, and wheel-blocks, all formed of one piece of metal, as such a truck is shown in Letters Patent No. 292,609, allowed to me heretofore; but

What I do claim is—

1. In a truck, the combination, with the side bars, N, of the longitudinal brace-bars M, substantially parallel with the same, and a series of clips surrounding the side bars and secured

to the brace-bars at each end of and between the ends of the same, as set forth.

2. In a truck, the combination, with the tubular side bars, of strengthening or brace bars substantially parallel and vertically in line therewith, said brace-bars being situated entirely without the inner circumference of the tubular bars and secured thereto, as set forth.

3. In a truck, the combination, with the tubular side bars, of the brace-bars substantially parallel and in vertical line with the same, the cross-bars C, and clips formed in one piece with said cross-bars and inclosing and clamping said side and brace bars, substantially as set forth.

4. The combination, with a truck-frame composed of sides, cross-bars, thimbles or clamps, nose, and wheel-blocks, all formed of one piece, of the strengthening-piece P, attached to the nose and wheel-blocks, substantially as shown and described.

5. In a truck, the combination, with the side or handle bars, of longitudinal brace-bars, a transverse bar, L, forming the legs, and a series of clips embracing the handle-bars and secured to the brace-bars, the forward pair of said clips including also the ends of bar L, substantially as set forth.

6. In a truck, the frame consisting of the side pieces, A, the nose F, the bridges D, axle-boxes K, transverse bars C, and divided clamps B, all formed integrally, substantially as described and shown, in combination with the handle-bars and the brace-bars M, entering the wheel-bridges and secured in said clamps.

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Witnesses:

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