H. R. FERRIS.

HAND-TRUCK.

No. 190,020. Patented April 24, 1877.

Fig. 1.

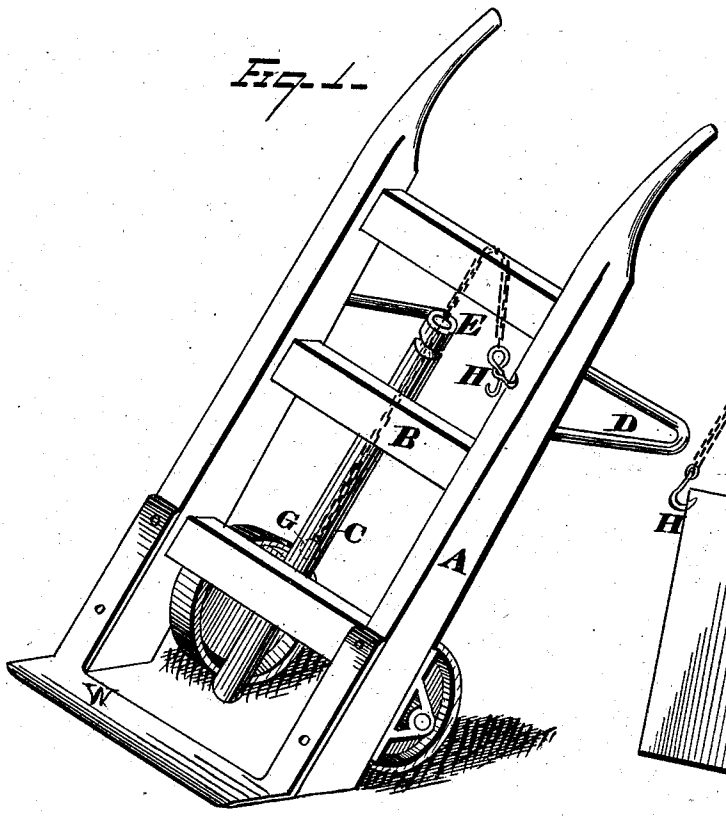



Fig. 2.

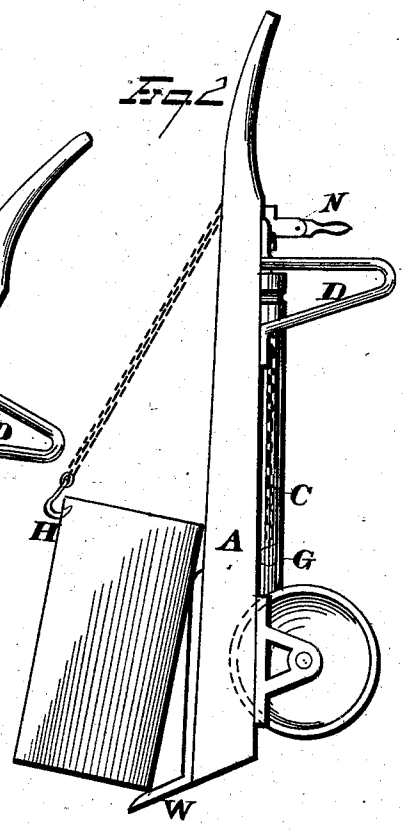
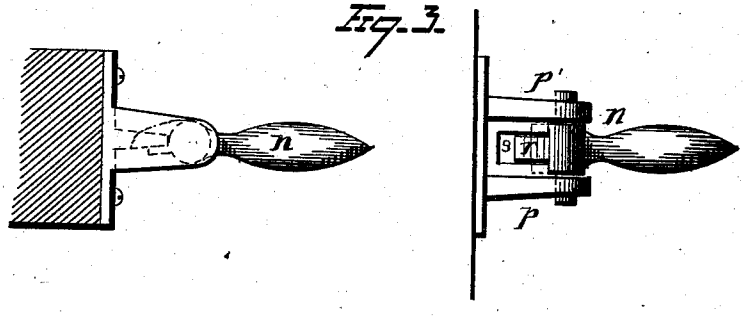



Fig. 3.




WITNESSES

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# UNITED STATES PATENT OFFICE.

HIRAM R. FERRIS, OF CLEVELAND, OHIO.

## IMPROVEMENT IN HAND-TRUCKS.

Specification forming part of Letters Patent No. **190,020**, dated April 24, 1877; application filed February 13, 1877.

*To all whom it may concern:*

Be it known that I, HIRAM R. FERRIS, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Hand-Trucks; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in hand-trucks of the character patented by me January 16, 1877, No. 186,237.

The patented hand-truck above referred to is provided with a pair of chain-receptacles. The outer ends of the chains pass through automatic clamping devices, and the ends are secured to a hook. This construction of truck is defective for the following reason: The box or bale on the truck cannot be released therefrom without first lowering the truck to the floor and disengaging the hook, because the clamps which serve to secure the chains are automatic in their action, and the operator is obliged to drop both handles of the truck in order to manipulate said clamps.

This invention consists in the combination, with a truck, of a single chain-receptacle, chain, and automatic chain-clamping device, whereby the truckman may hold the truck with one hand, while he is enabled to release the clamp with the other hand.

In the drawing, Figure 1 represents an isometric view of a hand-truck embodying my invention. Fig. 2 is a side view showing position of truck and chain when being loaded. Fig. 3 is a detached view of the clamp or clamping device.

The frame of the truck A may be of any suitable construction adapted to carry heavy articles. B are the cross-pieces, to the under side of which the tube, pipe, cylinder, or receptacle C is attached. I prefer to locate said receptacle centrally, as shown in the drawing, but it may be located at any other place where it will not interfere or be in the way of articles loaded on the truck. For instance, a receptacle may be formed in or near the legs D of the truck. Said receptacle may be of any desired and suitable shape, and may be secured to the cross-bars of the truck in any efficient manner. Its purpose is to hold the chain E so that the same may be out of the way when not required, and yet be always at hand when it is needed to be used. One end of this chain E is provided with a weight of any convenient form or size, as shown at G, and the upper part of the tube or receptacle is contracted to such an extent as to prevent the weight from being withdrawn. The lower end of the receptacle is entirely closed, or sufficiently so as to prevent either the weight or chain from passing through. The mouth or open upper end of the receptacle is made flaring, so that the passage of the chain in and out of the same is facilitated or rendered easy. The capacity of the receptacle is such as to contain the whole chain.

When the truck is not in use it is let down into the receptacle, and to enable it to be readily withdrawn, I make the hook H on its other end larger than the mouth of the receptacle, so that it cannot descend into the same. The hook H may be of any shape or construction, and is intended to hook into the box, cask, or package to be moved.

N is the clamping device, two detached views of which are shown in Fig. 3. It is secured to one of the cross-bars in any substantial manner. It consists of a plate provided with two arms, *p*, in which is journaled the handle *n*. Said handle is formed with a cam or projection, *r*, on its inner end, so placed with reference to the position of the handle that when the latter is pressed down the cam *r* will press against the chain that passes through the opening *s* of the clamping device and retain the same firmly in position. I prefer to attach said clamping device to the under side of the cross-bar nearest the handles and about its middle; but it may be secured to either side of the middle if desired.

I do not confine myself to the particular construction of clamping device shown and described, as any other contrivance effectual for the same purpose is within the spirit of my invention.

The operation of loading the truck is as follows: It is leaned over against the box or article to be loaded, so that the projecting cross-

piece W can be made to pass under or abut against the side of the box. The chain is then drawn out of its receptacle, and the hook H on its end is placed on the box, as shown in the drawing. The chain is then drawn tight and is securely retained in position by turning down the handle N, which causes the cam on its inner end to bite or press against the chain.

The cam is so placed that the strain on the chain to pull it out will cause the cam to press on the chain more tightly. The box or package can then be easily tilted over and deposited securely on the truck without the help of any other person or persons. To unload, the handle is turned upward, which loosens the hold on the chain, when the hook can be detached, so as to allow the box or article to be removed.

When the truck is not in use the chain is let down into the receptacle, which action is facilitated by means of the weight attached to its inner lower end. In place of a weight a spring might be employed, one end of which to be attached to the bottom of the receptacle on the inside and the other end to the chain; but I prefer to use a weight, as shown and described.

The receptacle can be larger or wide enough to permit one end of the chain to be fastened on the inside thereof near the upper end, and the chain be of a greater length, so as to allow a part thereof to act as a weight itself to draw the chain inward. This can be used, if desired, instead of the weight or spring described.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with a hand-truck, of a single chain-receptacle, a chain having a spring or weight secured to one end and a hook to the opposite end, and an automatic chain-clamp, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HIRAM R. FERRIS.

Witnesses:

FRANCIS TOUMEY,

EDWARD WALSH.