No. 609,985. Patented Aug. 30, 1898.

L. R. CATHER.

HAND TRUCK.

(Application filed Oct. 14, 1897.)

(No Model.)

Fig. 2.

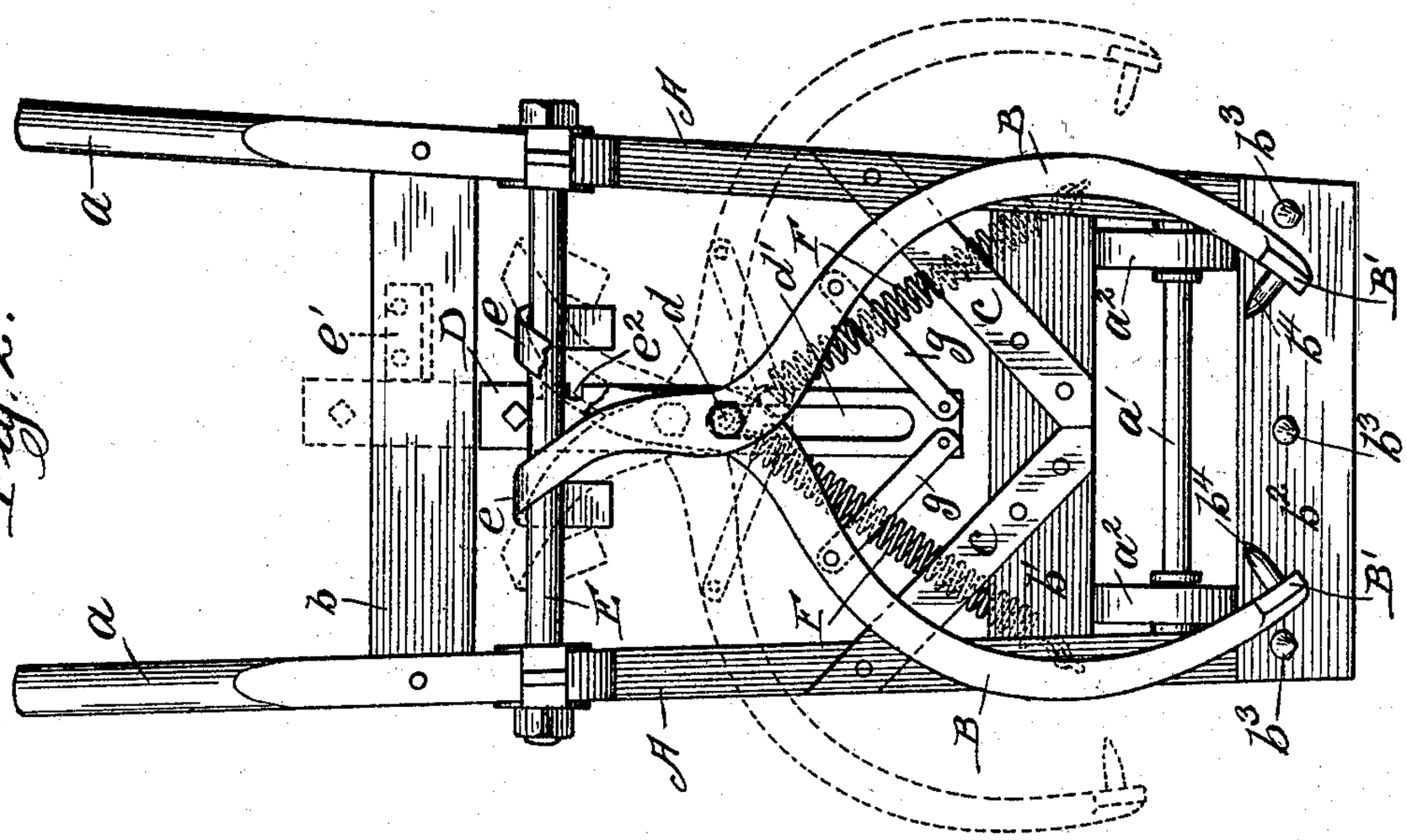

Fig. 3.

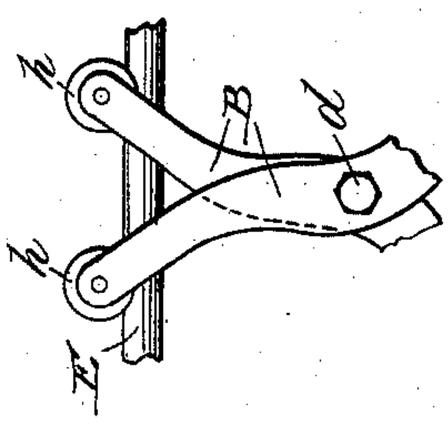

Fig. 4.

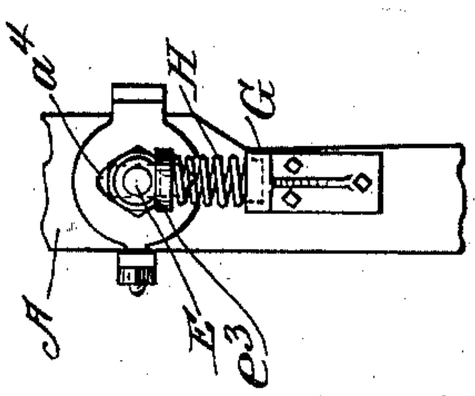

Fig. 1.

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UNITED STATES PATENT OFFICE.

LEONARD R. CATHER, OF CHICAGO, ILLINOIS.

HAND-TRUCK.

SPECIFICATION forming part of Letters Patent No. 609,985, dated August 30, 1898.

Application filed October 14, 1897. Serial No. 655,134. (No model.)

To all whom it may concern:

Be it known that I, LEONARD R. CATHER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hand-Trucks, of which the following is a specification.

This invention relates to improvements in that class of trucks which are provided at one of their ends with handles and at their other ends with wheels or rollers and used for handling or moving packages of various kinds, such as boxes, barrels, and the like; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

In hand-trucks of the ordinary construction and such as are in general use the lower end of the frame, or that end adjacent to the wheels or rollers, is usually provided with a nose-iron, which is bent at an angle to the truck-frame and is inserted under the package which is to be moved. In order to insert the nose-iron under the package, it frequently requires that the package shall be tilted from the truck and afterward must be drawn back toward the truck-frame and held thereto by means of the hand until the truck is in an inclined position. When inserting the nose-iron under the package, it often occurs that the package is overturned, thus causing annoyance and extra labor.

The objects of my invention are, therefore, first, to provide a truck in the construction of which the ordinary nose-iron is omitted and by the use of which there will be no liability of overturning the package or necessity of tilting it from the truck-frame in order to place it on the same, and, second, a truck of the above-named character which shall be provided with an adjustable gripping device and which will firmly hold the package being moved, and thus render it unnecessary to apply the hands thereto.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a view in side elevation of a truck embodying my invention, showing the parts thereof by continuous lines in their normal position and by dotted lines one of the positions to which the tongs or gripping device may be placed. Fig. 2 is a plan view of the truck, showing by dotted lines one of the positions which the tongs may occupy when ready to receive or to be engaged with a package. Fig. 3 is a fragmental view in elevation of the upper portion of the tongs or gripping-levers, showing a modification in their construction; and Fig. 4 is a fragmental view, in side elevation, of a portion of one of the side pieces of the frame of the truck, illustrating a modified manner of securing the supporting-rod for the tongs or gripping-levers.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the side pieces of the truck-frame, which are provided at one of their ends with handles a, by means of which the truck is trundled or moved. Near the other ends of the side pieces A and secured thereto is an axle a', upon which the wheels or rollers a^2 are mounted. The side pieces A are secured together by means of cross-pieces b, b', and b^2, the latter piece being located at the ends of the side pieces adjacent to the wheels or rollers and has on its front surface a number of spurs or pointed projections b^3, which, as is clearly shown in Figs. 1 and 2 of the drawings, are somewhat deflected when the truck is in a raised or vertical position.

Secured on the front surface of the truck-frame and usually diagonally therewith are brace-pieces c, which extend forwardly from the front surface of the frame and serve the double purpose of bracing or strengthening the frame and as a buffer or portion to prevent the package resting against and thereby interfering with the movement of the gripping-levers B or tongs, which, as shown in Fig. 2 of the drawings, are curved in their lower portions and each formed with a forwardly-extending arm B′, provided with one or more spurs or pointed projections b^4 to engage the box or package. The upper portion of the gripping-levers B overlap each other and are pivotally secured together by means of a bolt d, which passes through a slot d' in the operating-bar D, which is located to the

rear of the gripping-levers and is provided on its rear surface with one or more handles d^2, to be used for raising and lowering the same. The upper end of each of the gripping-levers is bent laterally and then rearwardly to form hooks e or overlapping portions for the supporting-rod E, which is secured on the side pieces A of the truck-frame.

Secured to the rear surface of the cross-piece b is a plate e', which is used to engage the notches e^2, formed in one edge of the operating-rod D, and thus to hold the same in a raised position when desired.

Secured at one of their ends to the bolt d are springs F, whose other ends are secured to the rear and lower portion of the truck-frame, and which springs assist in actuating the gripping-levers.

Pivotally secured at one of their ends to the operating-bar D are pieces g, whose other ends are pivotally secured to the gripping-levers below their pivot-point, thus forming a toggle-joint. Instead of forming the upper ends of the gripping-levers B with hooks e to engage the supporting-bar E, I may provide said ends of the gripping-levers with rollers h, as shown in Fig. 3 of the drawings, to rest and travel on the operating-bar, as will be readily understood.

In Fig. 4 of the drawings I have shown a modification in the manner of securing the supporting-rod E in the side pieces A of the truck-frame, which consists in forming the said side pieces with longitudinal slots a^4 to receive the rod E, the ends of which are formed with necks or projections e^3, around and to which are secured springs H, the lower portions of which rest on and are secured to brackets G, secured to the side pieces of the truck. The foregoing manner of securing the supporting-rod in position allows it to yield and will thereby relieve the frame and gripping-levers from the immense strain incident to the tilting of the package.

By reference to Fig. 1 of the drawings it will be seen and understood that the gripping-levers are capable of a forward movement, as shown by dotted lines in said figure, as well as of a lateral movement, as shown in Fig. 2 of the drawings, thus affording a means of securely gripping the package, and especially barrels, at a point of the best advantage to handle the same.

The operation of my device is simple and as follows: The truck is placed near the package to be moved, when the frame thereof is raised substantially to a vertical position, when the spurs or projections b^3 of the cross-piece b^2 may be caused to engage the lower portion of the package, and the gripping-levers B may be separated by raising the operating-bar D, when, if necessary, the arms B', carrying the projections b^4, may be thrust forward, or to the position shown by dotted lines in Fig. 1 of the drawings, by tilting the lever on the supporting-bar E, on which the upper portions of the gripping-levers rest and move, as has been explained. By releasing the operating-bar D the gripping-levers will be lowered by reason of their gravity, as well as by means of the springs F, and their projections b^4 will engage the sides of the package, thus securely holding it to the truck-frame and causing it to be tilted therewith when the frame is lowered to the position for trundling or moving the same.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a truck-frame, of a pair of gripping-levers adjustably secured thereon, and having at their lower ends forwardly-projecting arms provided with means to engage the package, a bar to operate said levers and a toggle-joint connecting the operating-bar and levers, substantially as described.

2. The combination with a truck-frame, of a pair of gripping-levers pivotally secured together and having at their lower ends means to engage the package, and at their upper ends means to engage a supporting-rod, a supporting-rod transversely secured on the truck-frame, an operating-bar having a slot to receive the pivot-bolt of the levers and a toggle-joint connecting said bar and levers, substantially as described.

3. The combination of a truck-frame, provided at one of its ends with spurs or projections, of a supporting-rod located crosswise the frame, a pair of spring-actuated gripping-levers pivotally secured together and having at their lower ends forwardly-extending arms provided with projections to engage the package, and at their upper ends hooks to engage the supporting-rod, an operating-bar having a slot to receive the pivot-bolt of the levers and a toggle-joint connecting the said bar and levers, substantially as described.

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