2 Sheets—Sheet 1.

W. F. MORROW.

Improvement in Freight Elevators.

No. 123,189. Patented Jan. 30, 1872.

Fig. 2.

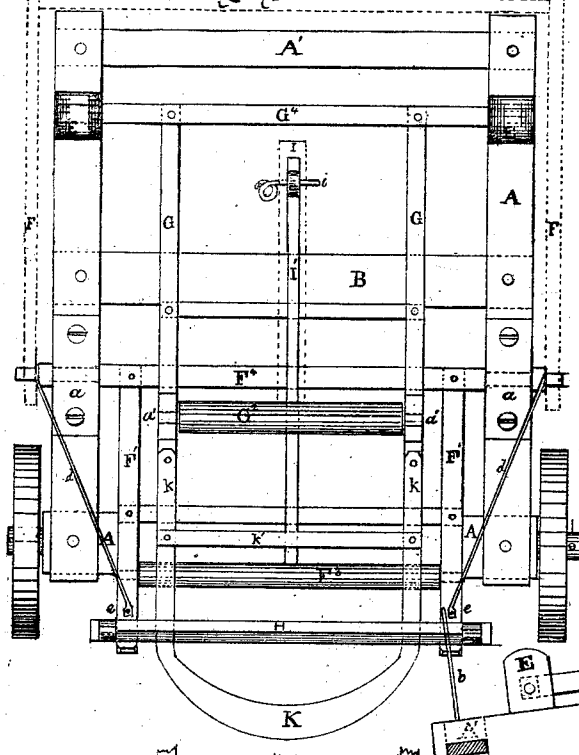


Fig. 1.

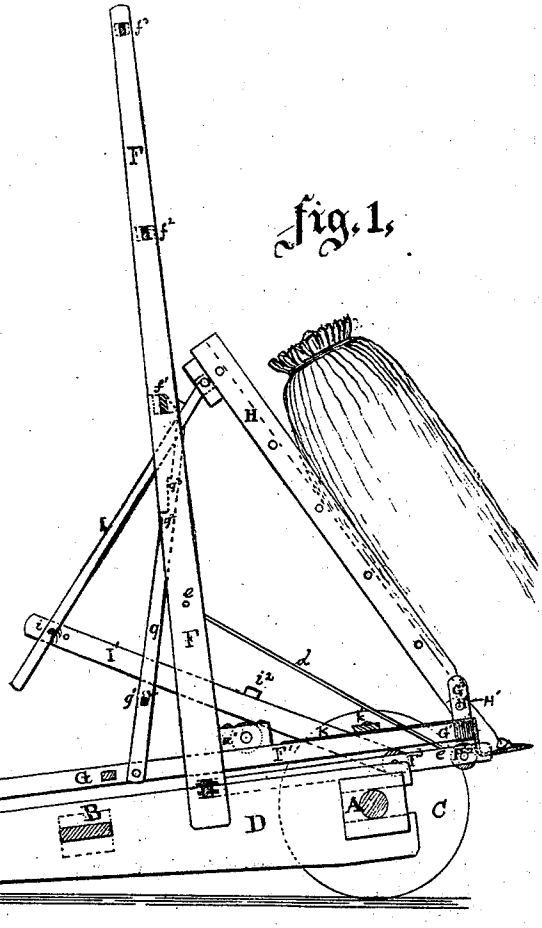
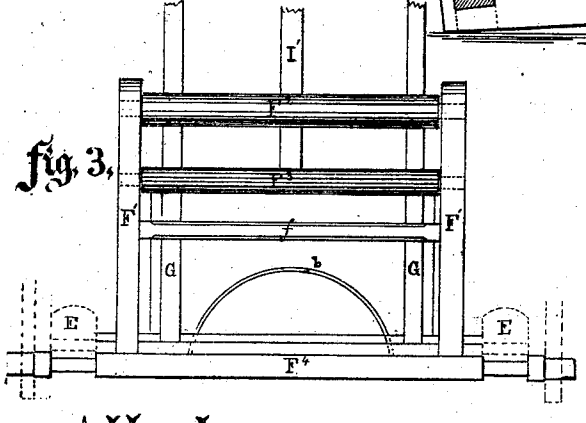


Fig. 3.



Attest

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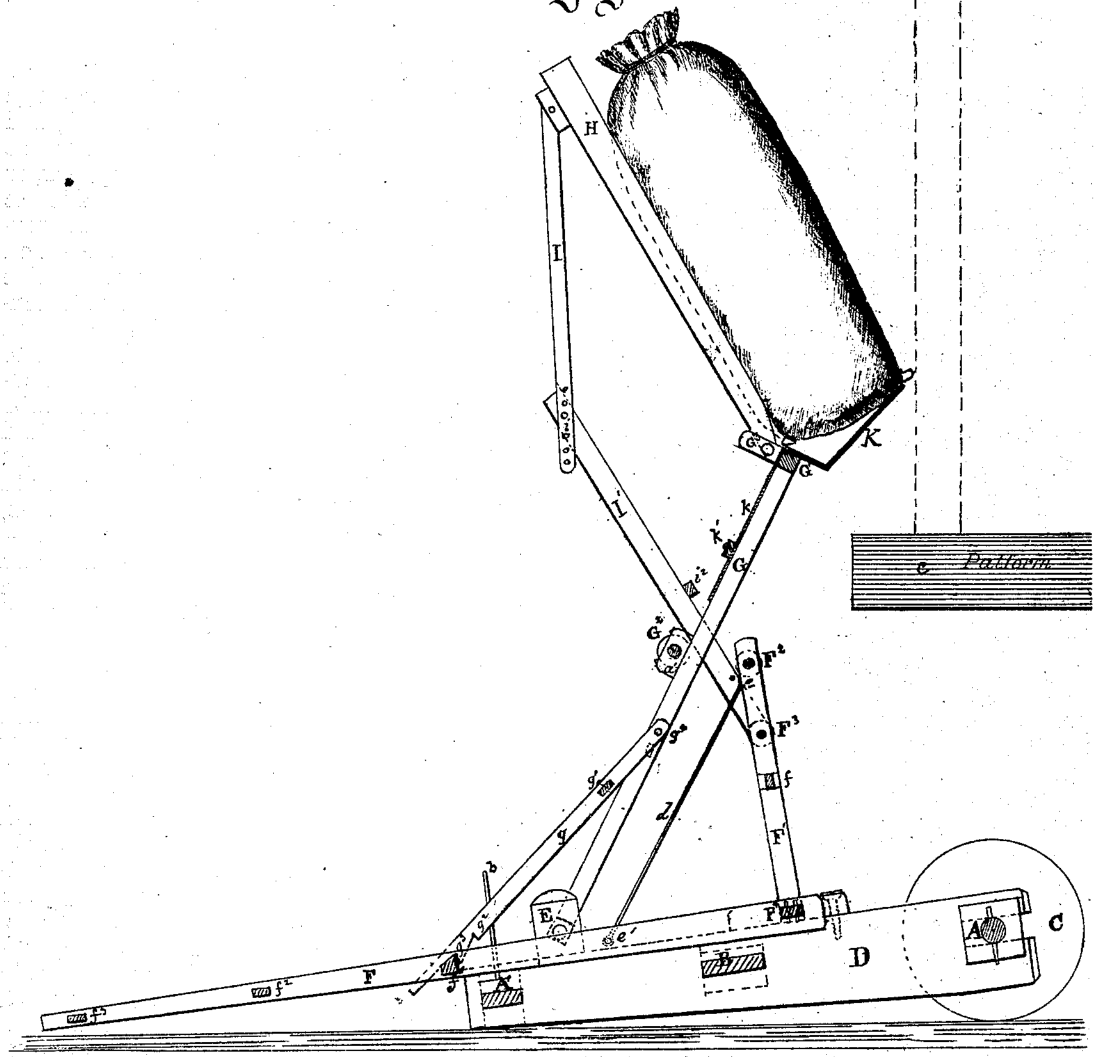
Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM F. MORROW, OF SHIPPENSBURG, PENNSYLVANIA.

IMPROVEMENT IN FREIGHT-ELEVATORS.

Specification forming part of Letters Patent No. 123,189, dated January 30, 1872.

SPECIFICATION.

To all persons to whom these presents may come:

Be it known that I, WILLIAM F. MORROW, of Shippensburg, in the county of Cumberland and State of Pennsylvania, have invented a new and useful Machine for elevating and Lowering Freight; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawing, of which—

Figure 1 is a side elevation with the freight down. Fig. 2 is a plan view of the truck. Fig. 3 is an elevation of the lifting-frame. Fig. 4 is a side elevation with the freight up.

The nature of this invention relates to the application of an apparatus composed of movable pivoted frames to an ordinary freight-truck, whereby the freight can be hoisted from its ordinary place of deposit to a man's shoulder, so that he may be saved the severe labor of lifting by stooping, or the reverse process may be effected by its operation to take the freight from his shoulder and lower it to the ground. It serves, also, consequently, to elevate freight or lower it to and from any other points to suit the convenience of those employing the same, and according to its limits from low to high level.

In the drawing, A is the front frame piece of an ordinary freight-truck, extended beyond the sides and on the ends, having axle-trees for the wheels. A′ is the rear end frame piece; B, the middle piece. C C are the truck-wheels; D D, the side pieces into which the end and middle pieces are framed and properly fastened. E E are standards, in which the ends of the frame piece G^4 are pivoted; F F, the sides of the lever-frame, which are connected by cross-braces f^1 f^2 f^3, and at the base fastened securely by a tenon-joint to the cross-frame F^4, thus making the whole frame F and F^1 one bent lever-frame, pivoted in the journal-boxes *a a*, one on each side of the truck. F^1 F^1 are the sides of the lever-frame, firmly joined by tenon and mortise-joint to cross-frame F^4, and braced by cross-piece f^1, above which are the roller F^2 and rock-shaft F^3. In F^3 is fastened the bar I′, which is joined to I through a slot in I by a pin, *i*. G G are the elevator side frames having the outer end piece G^1, which carries the standards G^3, in which is pivoted the bottom rail H′ of the freight-board H. G^2 is a roller, supported by the side frames in bearings *a′ a′*. G^4 is the pivot-rail of the frame G, and is pivoted in the standards E E. H is the freight-board, which supports the bag, box, or other package, as shown in drawing. I is the rod supporting the upper end of H, and is pivoted to a rock-shaft supported in brackets on the under side of H. In the lower end of I is a mortise-slit, in which the end of I′ is fastened by a pin, *i*, through holes which are in I and I′, so that proper adjustment may be made to suit the angle of the freight-board to particular purposes. K is the iron curved shoe which depends from frame G, and is formed and curved to suit the height of the truck, so that it may be readily run under the freight, as in the ordinary store-truck. *a a* are journal-boxes, in which are pivoted the frame F^4. f^1, Fig. 4, is a brace-piece between lever-frames F F, and so beveled on the upper side as to catch the notches g^2 g^3 of drop-pawl *g g*, which is pivoted on the side frames G G at g^4, and is braced by a cross-piece, g^1. *d d* are brace-rods fastened by bolts at *e e′* on the frames F and F^1. *b* is a curved rod, to be used as a handle by which to move the truck. *c* is a platform, wagon, or railroad car, on which the package can be deposited.

Having fully described the various parts of the elevator, I now explain the method of operation: In Fig. 1 the truck with elevator attached is represented as having a bag upon the frame, a little above the ground. The lever-frame F is nearly vertical. By pulling F to the left the frame F^1, to which it is firmly attached, will lift up the outer end of frame G, the roller F^2 bearing up the side frames G until the whole frame with the package is elevated, as shown in Fig. 4. The brace I′, bearing upon roller G^2, sustains the support I which holds up the upper end of board H. The drop-pawl *g* falls by its own gravity from its position in Fig. 1 to that in Fig. 4, and prevents the frame F from rising by the cross-bar *f* catching in the notches g^2 or g^3 of *g*. The cross-bar i^2 on the support-bar I′ extends on either side beyond the side frames G G, so that the said frame G cannot fall backward with its weight, as the strain is then thrown upon I′, and its bearing-bar F^3 pivoted in side frames

F^1. The curved rod *b* serves for a handle at the rear end of the truck.

In this elevator there are peculiar advantages over the ordinary truck, as when the package is once placed on the shoe K the freight can be elevated to a wagon, railroad car, or platform, or the shoulder of a man, thus saving the strain of the man in lifting.

Having described my invention, what I claim as new therein, and desire to secure by Letters Patent of the United States, is—

1. The combination of the elevating-frame with a freight-truck, substantially as and for the purpose described.

2. The frame F F^1 with roller F^2, combined with the frame G, substantially as and for the purpose described.

3. The combination of the frames F F^1 and G with roller G^2, freight-board H, bars I and I′, and drop-pawl *g*, all constructed substantially as and for the purpose described.

WILLIAM F. MORROW.

Witnesses:
SEBASTIAN SHOVER,
R. M. ROWLES.