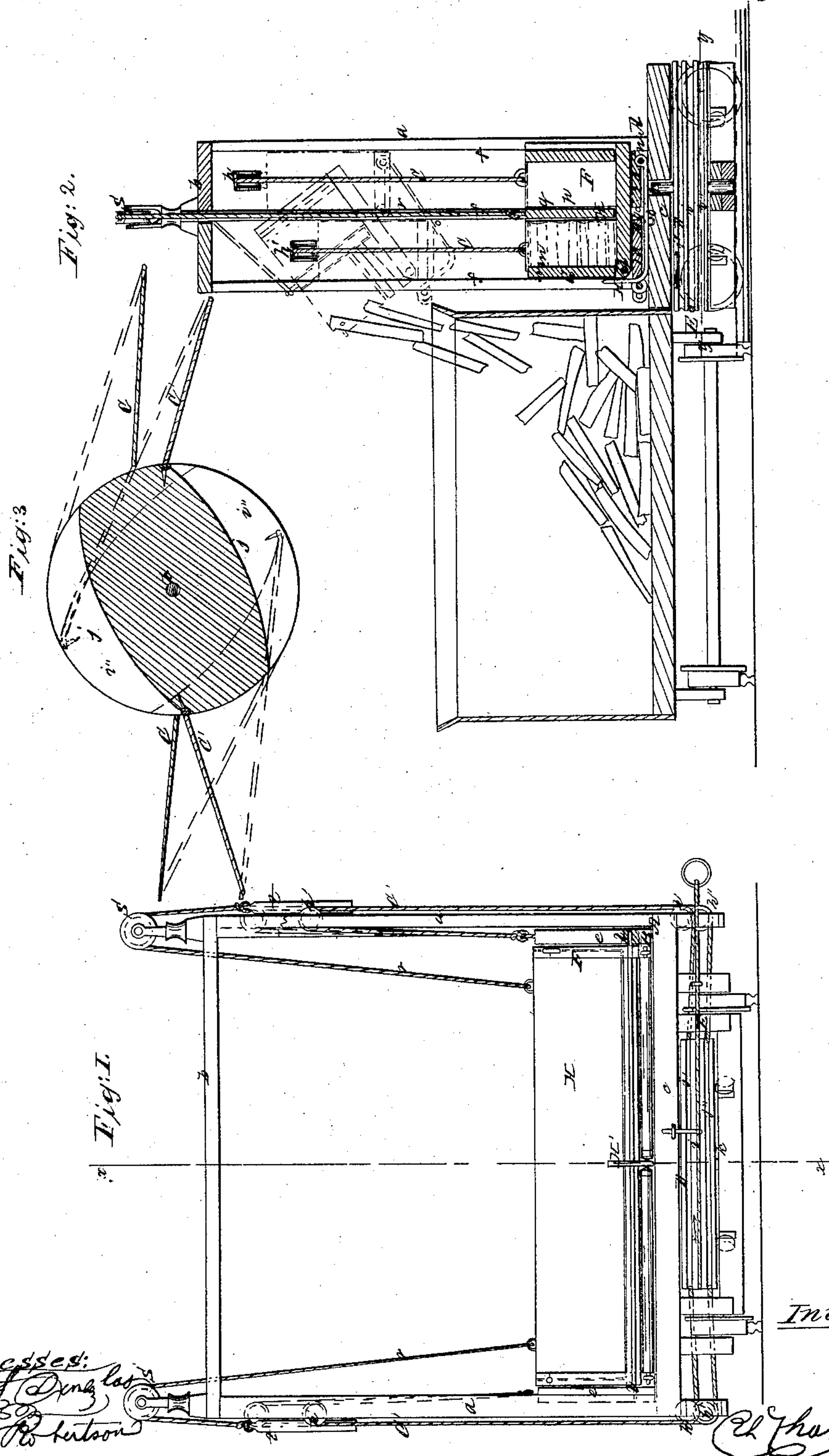


*R. D. Chatterton,  
Loading Cars, &c.*

*N<sup>o</sup> 41,482.*

*Patented Feb. 9, 1864.*



*Witnesses:  
Thos. D. ...  
J. R. ...*

*Inventor:*

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# UNITED STATES PATENT OFFICE.

RICHARD D. CHATTERTON, OF BATH, ENGLAND.

## IMPROVEMENT IN ELEVATORS FOR LOADING CARS.

Specification forming part of Letters Patent No. 41,482, dated February 9, 1864.

*To all whom it may concern:*

Be it known that I, RICHARD D. CHATTERTON, of Bath, in the county of Somerset, in that part of the United Kingdom of Great Britain and Ireland called England, now temporarily residing in Cobourg, in the Province of Canada, have invented a new and improved elevator for loading locomotive tenders and cars and other carriages with wood, coal, and other freight; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of my invention; Fig. 2, a side sectional view of the same taken in the line *x x*, Fig. 1; Fig. 3, a horizontal section of the same taken in the line *y y*, Fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and useful device for loading freight-conveying vehicles, whereby a great saving in labor and time is effected. The invention is more especially designed for loading locomotive-tenders with wood or coal and cars with freight, but it may be advantageously used in many cases for loading other vehicles or carriages.

The invention consists in the employment or use of a rising-and-falling tray operated through the medium of pulleys and ropes, the latter being attached to a wheel or pulley provided with grooves so arranged that when the platform reaches the necessary or desired height it will be automatically tilted to discharge its load.

The invention also consists in the employment or use of a division-board arranged with the tray in such a manner that it may be conveniently adjusted for dividing the tray into two equal compartments when only half of a tray-load is required to be dumped or tilted into a car or carriage, and also be capable of being removed out of the tray when not required for use.

The invention further consists in a self-adjusting fastening to secure the swinging side of the tray in a closed state while the latter is being elevated and admit of said side swinging open when the tray is tilted to discharge its load.

To enable those skilled in the art to fully

understand and construct my invention, I will proceed to describe it.

A represents a framing, composed of two uprights, *a a*, connected at their upper ends by a cross-piece, *b*, and attached at their lower ends to a base plate, *c*.

B is a platform, composed of two distinct or separate longitudinal parts, 1 2, each part being comprised of a horizontal board, *d*, having an upright board, *e*, at each end. The boards *e* at each end of the boards *d* are fitted between guides *f* at the inner side of the uprights *a a*, to insure a vertical rising-and-falling movement of the two parts of the platform B. The rear part, 2, of the platform has friction-rollers *g* at its front edge, as shown in Fig. 2. These two parts 1 2 of the platform B are elevated by separate ropes *C C'*, which pass under and over separate pulleys *h h'* in the uprights *a a'*, but are attached to one and the same hoisting-pulley, D, which is placed horizontally underneath the base-plate *c*. This hoisting-pulley D is provided with three grooves, *i i' i''*, made circumferentially in its periphery. The central groove, *i*, receives a rope, E, by which the pulley D is turned, and the groove *i'* receives the ropes *C*, which are connected with the rear part, 2, of the platform B, while the groove *i''* receives the ropes *C'*, which are connected with the front part, 1, of the platform. The groove *i''* is not a perfect one—that is to say, it does not extend all around the pulley D at the same depth, but has two deep cuts or recesses, *j j*, which are made horizontally into the pulley at opposite sides of its axis *k*, as shown clearly in Fig. 3.

On the platform B there is placed a rectangular tray, F, which is connected by pivots *l* to the front part, 1, of the platform B, the back part of the tray F simply resting on the rear part, 2, of the platform. The pivots *l* are near the front and bottom of the part 1 of the platform, as shown clearly in Fig. 2.

At the front side of the tray F there is suspended a door, G, the pivots *m* of which are at the upper part of the tray. This door or slide G is kept in a closed state when not intended to be open by a catch, H', which is simply a bent rod having its back end fitted loosely on a pin, *n*, at the under side of the part 2 of the platform, the front part of said



rod extending upward in front of the lower part of the door or side G and keeping it in a closed state, the rod passing through a guide, *o*, at the back of the part 1 of the platform.

The inner surfaces of the ends *p p* of the tray F are grooved vertically at their centers, as shown at *q*, to receive the ends of a vertical board, H, which serves as a partition for the tray F. This board or partition H has a cord, *r*, attached to its upper edge, one near each end, and said cords pass over pulleys *s s* at the top of the framing A, and have weights *t* attached to them.

From the above description it will be seen that when the pulley D is turned in the direction indicated by the arrow the platform B will be elevated, the two parts 1 2 of the platform moving upward with the same speed and in the same horizontal plane until the ropes C' reach the ends of the perfect portion of the groove and enter the cuts *j j*, which cause the speed of the ropes C' to be less than that of the ropes C, and consequently the rear part, 2, of the platform B will ascend quicker than the front part, 1, and when the part 2 reaches a certain elevation above the part 1 the tray F will be tilted and the door or side G of the tray will be relieved from the catch H, so that the door or side may swing open and the contents of the tray discharged, as shown in red in Fig. 2.

When the rope E, by which the pulley D is turned, is released from the power that operated it, the platform and tray descend, and, as well as the side or door G, assume their original position.

The board or partition H, when adjusted in

the tray F, admits of one-half a load being discharged from the tray. If, for instance, the tray will hold a cord of wood, one half a cord may be elevated and dumped or tilted into the car or tender.

When the invention is used for loading cars, it is designed to have the rope E operated by the train or locomotive, the framing A being placed by the side of the track, as shown in Fig. 2, the cars being below the platform and tray when the latter are in an elevated state.

It will be understood that the ropes C C C' C' are attached to the pulley D at opposite points, as shown in Fig. 3.

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

1. The rising-and-falling platform B, formed of two separate parts, 1 2, in connection with the pulley D, provided with a groove, *i''*, having cuts or recesses *j j* made in it, the platform being connected to the pulley D by ropes C C C' C', and all arranged to operate either with or without the tray F in the manner substantially as and for the purpose herein set forth.

2. The division or partition board H, suspended and counterpoised substantially as shown, when used in connection with the tray F, for the purpose specified.

3. The swinging door or side G, in combination with the catch H', arranged to operate in connection with the platform B, substantially as and for the purpose set forth.

R. D. CHATTERTON.

Witnesses:

THOS. S. J. DOUGLAS.

D. ROBERTSON.