

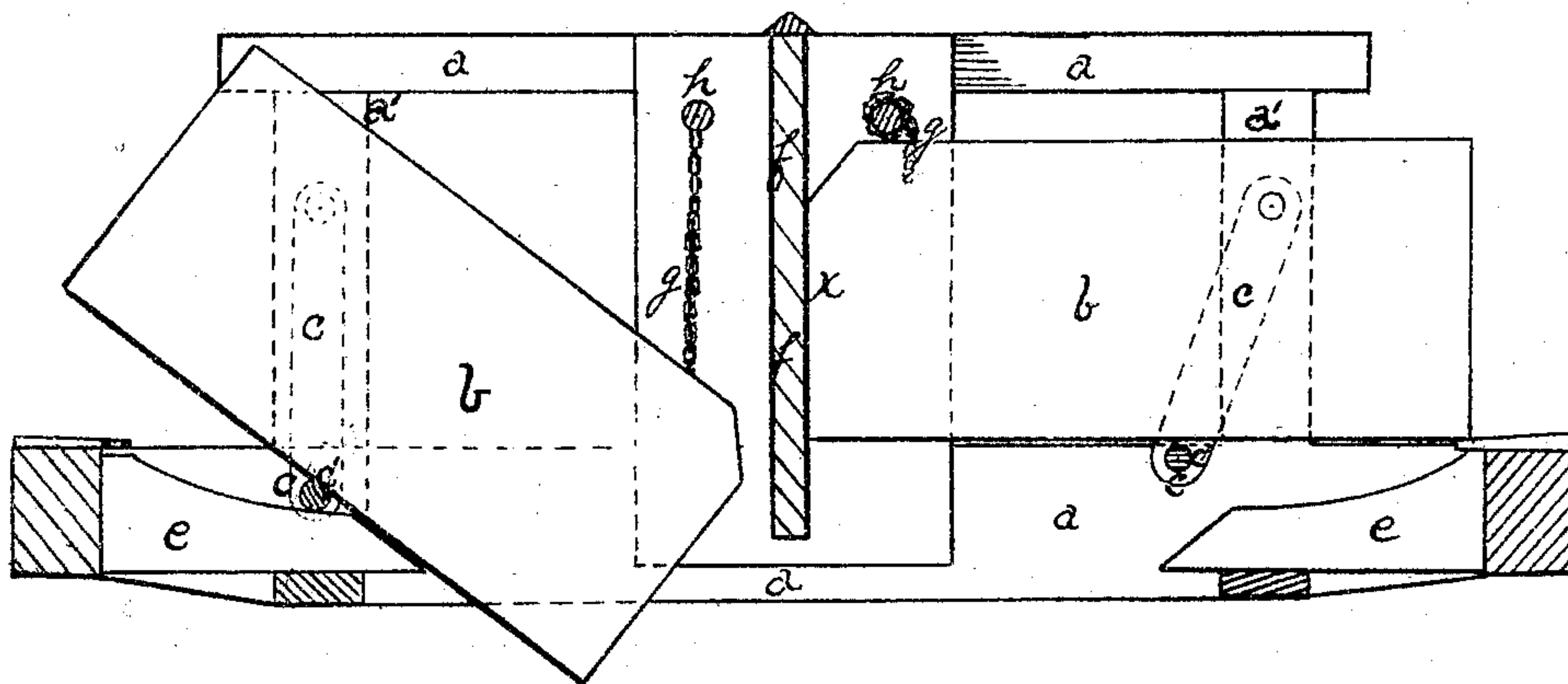
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THOMAS McVAY.

Improvement in Dumping Cars.

No. 118,959.

Patented Sep. 12, 1871.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS McVAY, OF BRADDOCK'S FIELD, PENNSYLVANIA.

IMPROVEMENT IN DUMPING-CARS.

Specification forming part of Letters Patent No. 118,959, dated September 12, 1871.

To all whom it may concern:

Be it known that I, THOMAS McVAY, of Braddock's Field, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Dumping-Cars; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing which forms part of this specification, and which shows in side elevation my improved dumping-car, the side being removed.

My invention consists in the improved construction of a dumping-car, in which I am enabled to make the bottom flat, so as to adapt it for both dumping and shoveling.

To enable others skilled in the art to make and use my improvement, I will describe its construction and mode of operation.

In the drawing, *a* represents the frame-work of my improved dumping-car. In this frame I hang two hoppers, *b b*, by means of the swinging arms *c*, which are pivoted at their upper ends to the uprights *a' a'* of the frame *a*, and at their lower ends to the journals *c'*, at or near the bottom of each hopper. These devices are made loose, so that the hoppers will swing between the arms. The hoppers are preferably hung back of the center for greater ease in tipping them. The stringers *e e* of the car do not extend along under the full length, but run only a short distance inward from the end of the frame *a*, and are beveled off or inclined inward and downward, so as to allow of the swinging of the hopper and the dumping of the load through the bottom of the car, that part of the frame from the inner ends of the stringers *e* to the center of the car being entirely open when the hopper is drawn back. The inner ends of the hoppers *b* are open and abut against the center partition *f*, which forms their fourth side. The hoppers are held in position and kept from vibrating by the chains *g g*, which are attached, one at each side, to the inner ends and to the windlass *h*, which, when it is operated, winds up the chains and draws the hopper *b* upward and inward to a horizontal position, as shown at *x*, in which position the windlass is locked by pins *o o*, ratchet

and pawl, or other suitable devices. When in this position the hopper is filled. When it is desired to empty it the windlass is unwound, and, since the hopper is hung on the vibrating arms *c c* back of the center, the principal weight is on the unsupported inner end, which drops downward and empties the load out at the open end of the hopper, through the open bottom.

In most of the dumping-cars heretofore in use it is impossible to use a shovel, since they are generally built with sloping bottoms which converge to a trap-door.

In my improved car I make the partition *f* removable, so that when it is removed and the two hoppers *b b* are triced up it becomes an ordinary box-car, in which a shovel can be used with ease, the two open ends of the hopper then abutting together. The frame of the removable partition *f* acts as a girder to strengthen the frame of the cars.

The hoppers *b b* may be hung on the vibrating arms *c c* at any desired point, but the one shown is preferable, because of the greater ease in tipping. The hoppers *b b* may be arranged to tip outward at the sides or the ends of the car by simply altering the position of the devices described.

One modification of my invention is to place a pair of rollers either in the sides or bottom of the hoppers to run upon a rail placed in a corresponding part of the frame, and the whole so arranged that the hopper could be run on such rail to a point beyond which the end should be unsupported, and the rollers being set a little back of the center it would tip by its own weight.

By my improvement I am enabled to do away with the trap-doors which are used in many of the dumping-cars heretofore in use.

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

1. In the dumping-car the hopper *B*, hung by means of vibrating arms *c c*, on pivots a little in the rear of the center, so that when the forward end is free the hopper will tip by its own weight and discharge its load, substantially as described.

2. In the dumping-car the hoppers *b b*, hung

on the vibrating arms *c c* so as to swing back and tip forward, whereby the forward or open ends will be depressed and their contents discharged, substantially as described.

3. The windlass device, in combination with the hopper hung on vibrating arms, substantially as and for the purposes described.

4. The removable partition *f*, forming the

fourth side of the hoppers *b b*, substantially as described.

In testimony whereof I, the said THOMAS McVAY, have hereunto set my hand.

THOMAS McVAY.

Witnesses:

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(20.)