

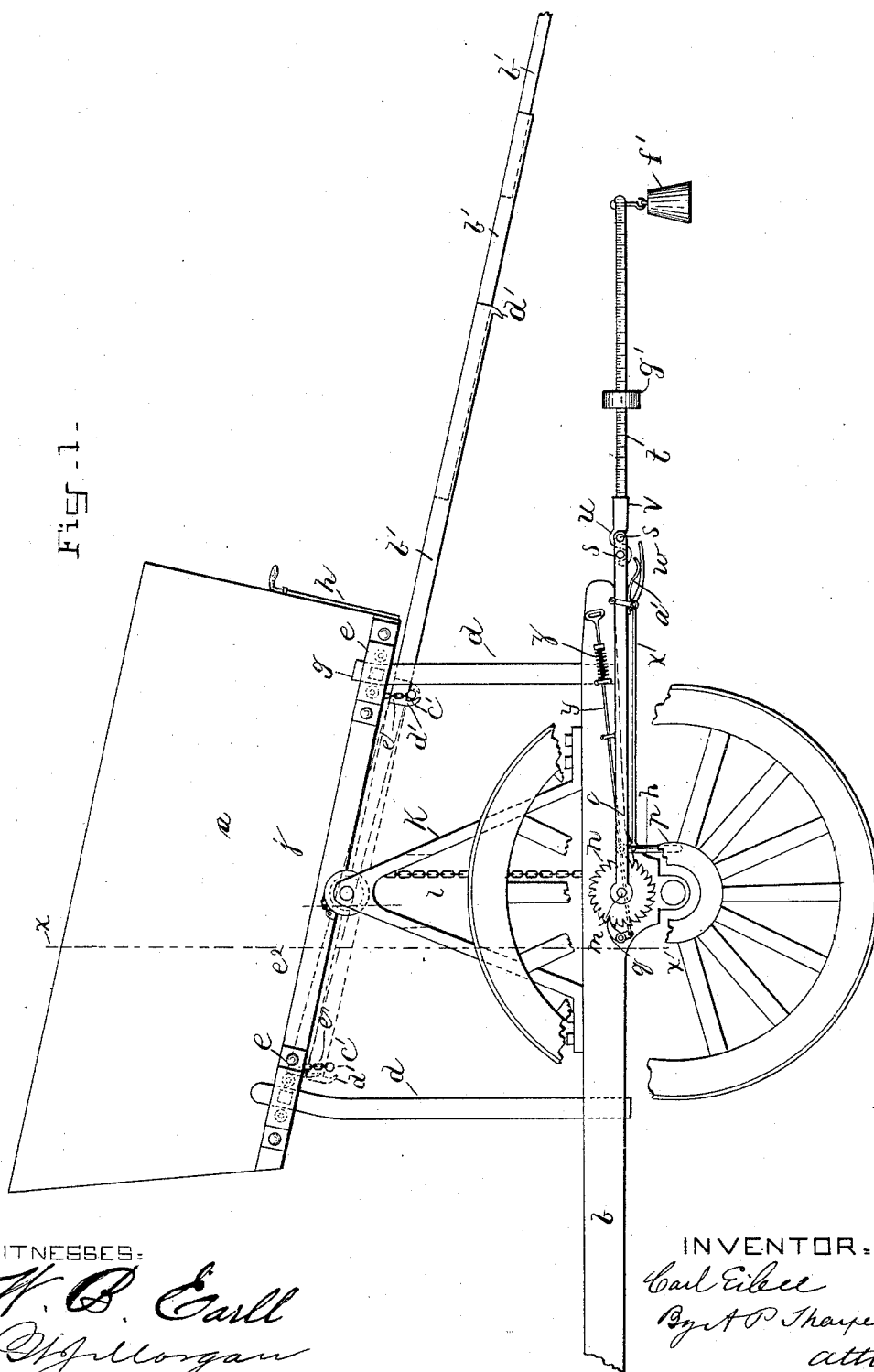
(No Model.)

3 Sheets—Sheet 1.

C. EIBEE.
COAL CART.

No. 474,374.

Patented May 10, 1892.



WITNESSES:

W. B. Earll
W. J. Morgan

INVENTOR.

Carl Eibee
By A. P. Thayer
att'y.

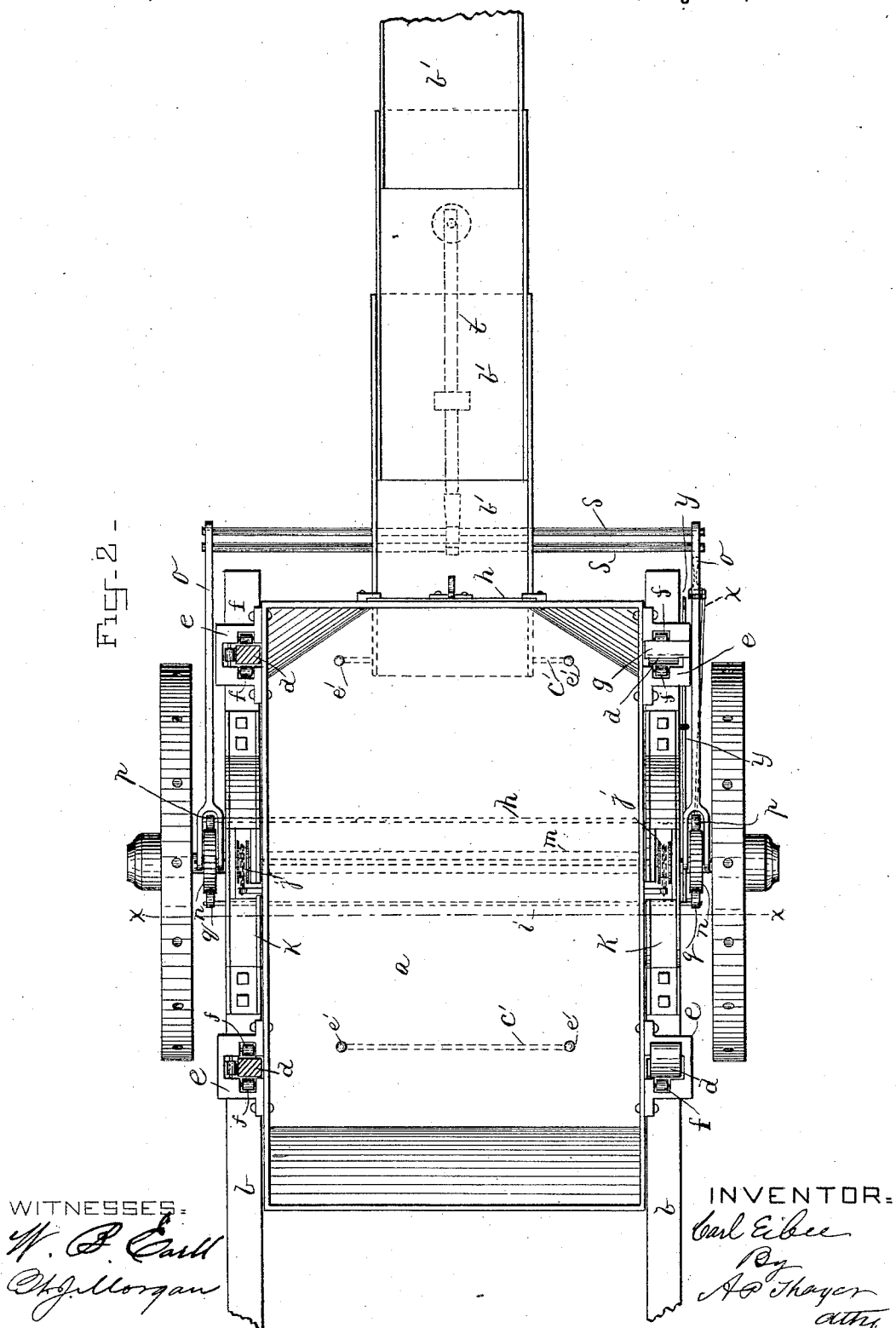
(No Model.)

3 Sheets—Sheet 2.

C. EIBEE.
COAL CART.

No. 474,374.

Patented May 10, 1892.



(No Model.)

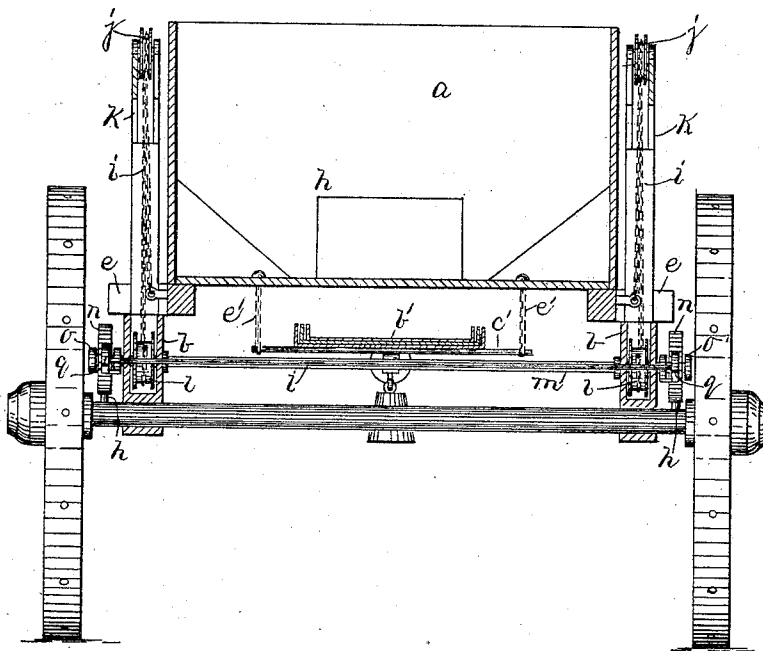
3 Sheets—Sheet 3.

C. EIBEE.
COAL CART.

No. 474,374.

Patented May 10, 1892.

Fig. 3.



WITNESSES =

W. B. Carr
W. J. Morgan

INVENTOR =

Carl Eibee
By A. P. Thayer atty

UNITED STATES PATENT OFFICE.

CARL EIBEE, OF BROOKLYN, NEW YORK.

COAL-CART.

SPECIFICATION forming part of Letters Patent No. 474,374, dated May 10, 1892.

Application filed April 4, 1891. Serial No. 387,691. (No model.)

To all whom it may concern:

Be it known that I, CARL EIBEE, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Coal-Carts, of which the following is a specification.

The invention consists in improvements in apparatus for discharging the coal by raising the box upward from the bed-frame and tilting it downward at the hind end, so as to shoot the coal outward through an opening of the tail end of the box, as hereinafter fully described, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of the improved coal-cart, with the box raised preparatory to discharging the coal. Fig. 2 is a plan view of the cart. Fig. 3 is a transverse section on line *x x* of Figs. 1 and 2.

The box *a* is seated on the frame *b* between the standards *d*, rigidly fixed in the frame, so as to be raised and lowered, and has cleats *e*, guiding it on said standards, said cleats preferably having rolls *f*, bearing against the standards to lessen the friction, and the rear standards have a head *g* to limit the rise of the box at the proper point, the front standards being higher than the rear ones to allow the front end to rise higher for tilting the box suitably for discharging the coal through an opening at the hind end when the gate *h* is raised. The standards are suitably curved at the upper ends, as seen in Fig. 2, for thus allowing the box to rise higher at the front than the rear. For thus raising the box the chains *i* are connected to it at the middle of each side or thereabout, which chains are suspended from the sheaves *j*, supported on the standards *k*, said chains being attached at their other ends to drums *l* on the shaft *m*, mounted under the frame, so as to extend across from side to side and project thereat, and having the ratchet-wheels *n*, pawl-levers *o*, and pawls *p* for turning them to raise the box with the usual holding-pawls *q*, said pawls being coupled together by the rods *p' q'*, respectively. The pawl-levers extend rearward beyond the frame *b* and are connected at the ends by one or more cross-bars *s* for a hand-bar, by which both levers may be worked together. The pawls *n* and pawl-levers *o* have the usual disconnect-

ing-lever *w* and rod *x* for releasing the ratchet-wheels when lowering the box after discharging the load, and pawls *q* also have a rod *y* to disconnect them at the proper time in the process of lowering the box. The spring *z*, thrusting on the rod *y*, holds pawl *q* in engagement with the ratchet-wheel, and spring *a* similarly holds pawl *n*. The box is raised by lifting the pawl-levers upward for re-engagement with the ratchet-wheels, while the winding-drums are held by pawls *q* and then pressing down on said levers and turning the drum-shaft, and it is lowered by disengaging pawls *q* and allowing the box to descend by gravity, pawl-levers *o* being raised a stage thereby, then pawls *q* are engaged to hold, while the pawl-levers are readjusted for like movement another stage, and so on until the box is returned to its resting-place.

One ratchet-wheel, pawl-lever, and pawl may serve with a sufficiently-rigid drum-shaft *m* to avoid springing by the torsional stress, and the invention is not therefore limited to the duplicate arrangement which is shown; but it is preferred. The pawls *p* and *q* of the opposite sides of the box in the duplicate pawl-lever arrangement are preferably mounted on shafts *h i*, respectively, so that they work together, and are controlled by working rods and springs at one side only of the box for greater convenience than if separately mounted. Shaft *h* is bent downward below frame *b* to permit the pawl-levers to rise without conflict of said shaft with said frame.

An extension-chute consisting of three sections *b'* is employed for receiving the coal from the box and conducting it to the coal-hole and it is suspended on rods *c'* by chains *e'*, said rods being slung under the box suitably for enabling the spout to be shoved forward and lodged at the front end on the front rod when not in use, as indicated by the dotted lines in Fig. 1, and be withdrawn therefrom and extended at the rear, as in full lines, for use. At each end there is a hook *d'* to prevent the end from escaping from the suspending rod or chains. The front end has to be raised to pass the hook *d'* over the support, as indicated by the dotted lines *e''*, Fig. 1, for which there is space inside of the beams of the base-frame of the box. The front end can be thus raised by pressing down on the partly-extended sec-

tions of the chute, which will in practice be dovetailed or tongued and grooved, as usual in such sliding extension-joints. The ratchet lever or levers extend along between the wheels and box and beyond the wheels for being accessible to the attendant. They may be extended forward from the drum-shaft instead of rearward, if preferred.

I am aware that dumping-boxes have been arranged to be raised by chains and drums, the drums being worked by a crank-shaft geared with the drum-shaft. My invention is distinguished from such arrangements in the use of the ratchet-lever and pawls for working the drum, which affords greater leverage for raising the heavy loads and clears the truck-wheels better for the greater convenience of the operator.

I claim—

1. The combination of the truck-frame, standards rigidly supported thereon, box fitted to be raised and lowered along said standards, drum-shaft for raising and lowering said box mounted in the truck-frame under the box, chains connecting said drums and the box, the sheaves over which the chains are suspended, ratchet-wheel on the drum-shaft, lever and pawl for raising and lowering the box, holding-pawls, and the rods controlling the pawls, said rods and the lever ranging along and projecting beyond the wheels, substantially as described.

2. The combination, with the box adapted

to be raised and lowered, the drum-shaft, chains, and chain-suspending sheaves, of the duplex ratchet and lever mechanism, and a bar connecting the ends of the ratchet-levers behind the box, substantially as described.

3. The combination, with the box adapted to be raised and lowered, the drum-shaft, chains, and chain-suspending sheaves, of the ratchet and lever mechanism for working the drum-shaft, consisting of a ratchet-wheel, pawl-lever and pawl for working it, holding-pawl, the disconnecting rod and lever connected with the pawl-lever and its pawl, and the disconnecting-rod of the holding-pawl, all constructed and arranged substantially as described.

4. The combination of the vertically-moving dumping-box, front and rear guiding-standards and guiding-cleats on the box, said rear standards having heads or stops to limit the rise of the rear of the box and the front standards having the curved upper portions, permitting the front end of the box to rise higher than the rear end for dumping, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 18th day of March, 1891.

CARL EIBEE.

Witnesses:

W. J. MORGAN,
W. B. EARLL.