(No Model.)

F. PETELER.

DUMPING CAR.

No. 370,651. Patented Sept. 27, 1887.

Fig. 1.

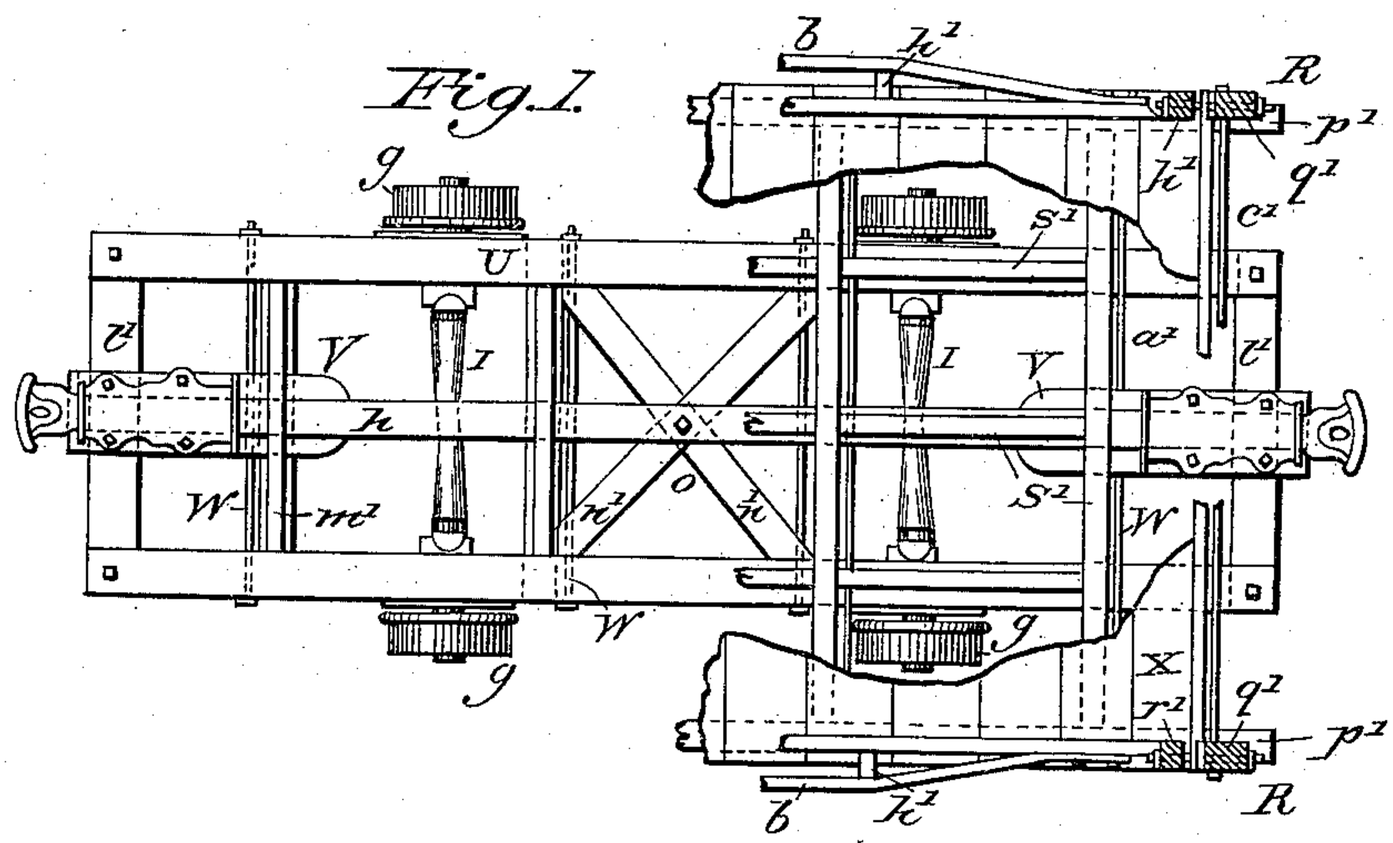


Fig. 2.

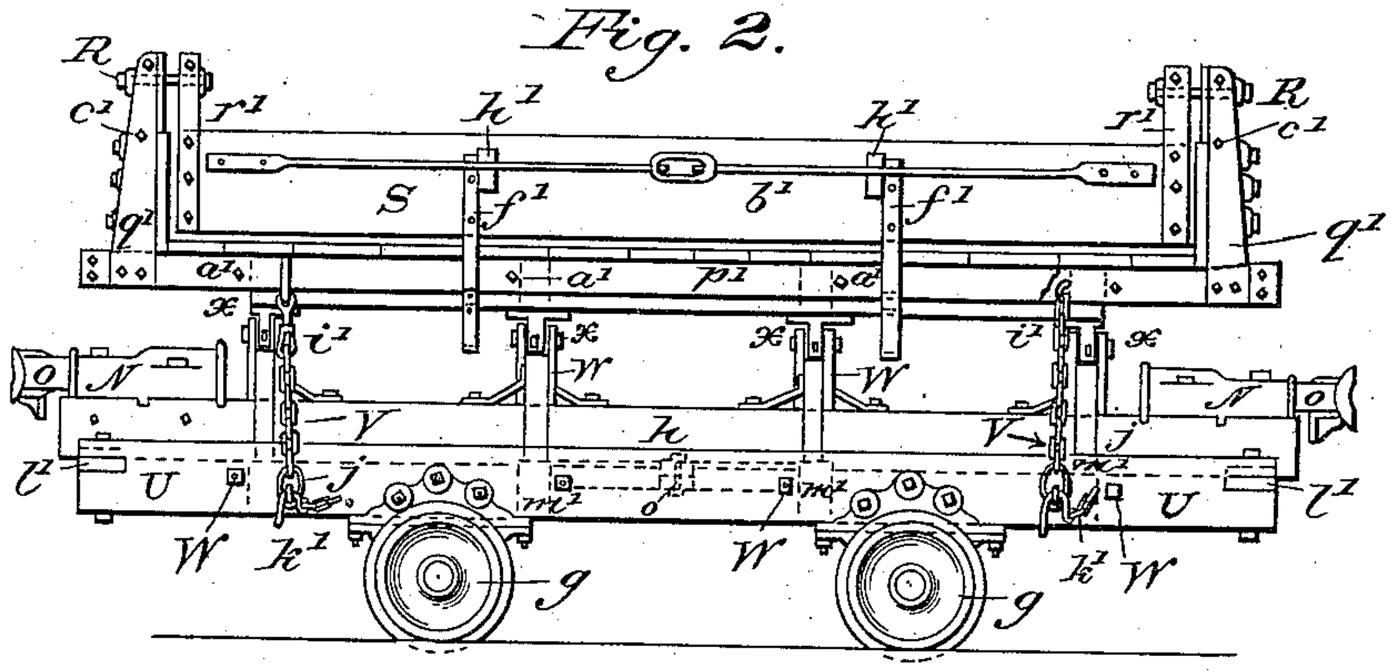


Fig. 3.

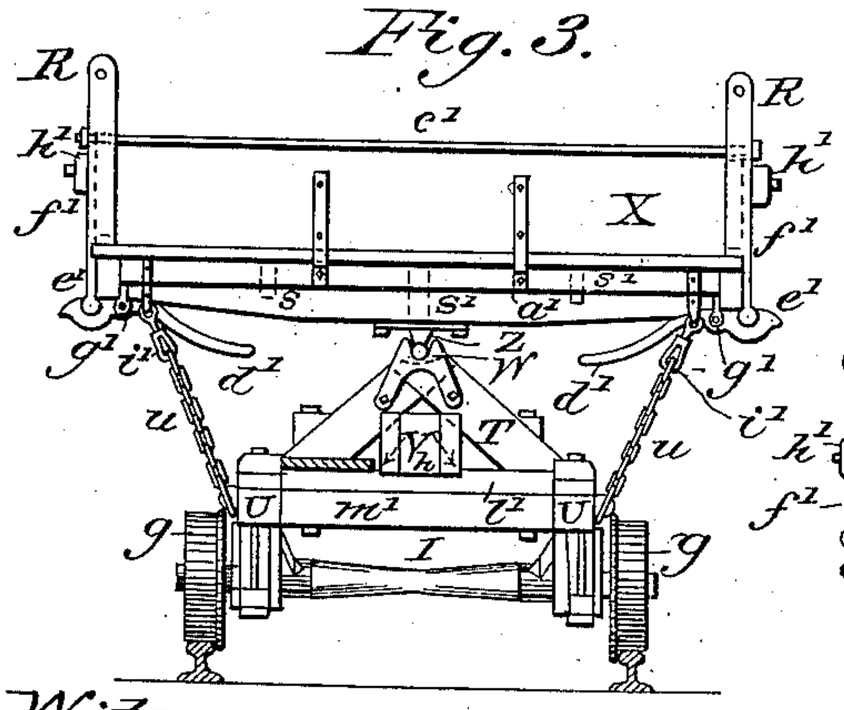
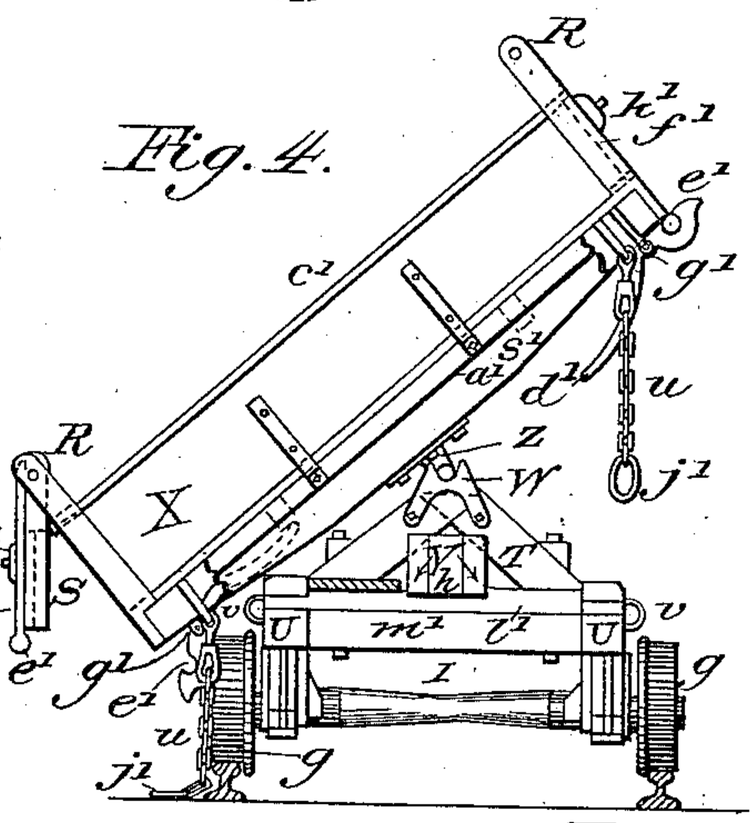


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANCIS PETELER, OF MINNEAPOLIS, MINNESOTA.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 370,651, dated September 27, 1887.

Application filed January 7, 1887. Serial No. 223,708. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS PETELER, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Dumping-Cars, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 represents a plan of the car and truck frame and car-body and frame to same. Fig. 2 is a side elevation of the same. Fig. 3 is an end view of the same, and Fig. 4 an end view showing the position of the same when dumped.

The same letters are used on all the figures.

U U are the side timbers of the frame, and they are united by bolts to the end timbers, *l'*. Cross-pieces *m' m' m' m'* are mortised at the ends of same into the side timbers U U, and so are also the diagonal braces *n' n'*. Strong bolts or rods W W W W firmly bind the whole together and in shape. The diagonal braces *n' n'* are halved where intersecting, and there connected by a small bolt, *o'*, passing vertically through said braces. A longitudinal timber, *h*, extends along the center of the top of truck and passes over the end pieces, *l' l'*, and cross-pieces *m' m' m' m'*. Resting on each of the cross-pieces *m' m' m' m'* are a pair of rafters, T T T T, halved together at top of same, and bearing on the longitudinal timber *h* and on the ends of the cross-pieces *m' m' m' m'*. These rafters T T T T bear brackets *w w w w*, securely bolted to said rafters. These brackets *w w w w* receive the bearers *x x x x*. The bearers *x x x x* are bolted beneath the car-body, and as two cylindrical projections of *x x x x* bear into two similar recesses in *w w w w*, the car-body is capable of being tipped, as shown in Fig. 4.

The car-body consists of a floor resting upon a frame in which *p' p'* are the side timbers. *s' s' s' s' s' s'* are the cross-timbers or interior longitudinal timbers, all mortised together at intersections of same and securely bound by stout bolts or rods *a' a' a' a'*. At the ends of the side timbers *p' p'*, and bolted to same, there extend upward four posts, *q' q' q' q'*, that serve as supports for the bolts R, (spoken of again soon,) and also serving as supports for the plank forming the ends of the car-body.

When the car is in use in transit, full or empty, it has the position shown in Figs. 2 and 3. To prevent, then, the car from tipping, four stout chains, *u u u u*, are employed, one end being securely bolted beneath the car-body to the cross-beams forming the framework to said car-body. At the other end of the chains *u u u u* there is a link, *j'*, larger than the others, which slips over a staple, *v*, attached to the side timber U. A fid or pin hook, *k'*, is then slipped into the staple *v* and the car cannot tip. The pin or fid hook *k'* is secured by a small short chain to the side timber U, to secure against loss. A small swivel, *i'*, serves to lengthen or shorten the chains *u u u u* if too tight or too slack after securing car in position in Fig. 3.

The side doors, S, to the car have at each end a cleat, *r'*. A short post, before referred to as *q'*, extends up from the four corners of the car-body. A strong bolt, R, enables the side doors, S, to swing outward, according to the direction the car is tipped. To prevent the door S from swinging out when in position of Fig. 3, one or more bars or straps, *f' f'*, are bolted to the outside of doors S. These bars or straps *f'* extend to a little below the side timber of the car-body, and there are made to the shape as shown at *e'* in Figs. 3 and 4. This projection engages into a recess of similar shape formed on short end of a lever, *d'*, that swings on a fulcrum, *g'*. *g'* is bolted to the timbers of the car-body. The other end of the lever *d'* is sufficiently far from the fulcrum *g'* to hold by its leverage the short end up against the straps or bars *f'* at the ends of same having the shape as at *e'*, and thereby the side doors, S S, are secured from swinging outward.

When it is desired to tip the car-body in either direction, as shown in Fig. 4, the pin or fid hooks *k'* on the side of the car to be raised are withdrawn from the staples *v*, and link *j'* of the chains *u u* slipped off from said staple *v*. A slight upward pressure of the hands is then sufficient to allow the tipping of the car-body as far as it can go. Before, however, the limit of tipping is reached the ends of the levers *d' d'* impinge against the side timbers U of the truck-frame. This action releases the ends *e'* of the straps *f'*, secured to the side doors, S, of the car-body, and there-

upon the door S swings outward and the contents are dumped. On restoring the car-body to its normal position, as shown in Fig. 3, the weight of the car-door S swings the same shut, and at the same time the catch or hook end of the lever *d'* latches over the ends *e'* of the straps *f'*, and the door is again closed and secured. The ends *e'* of the straps or bars *f'* are formed at such an inclination as to facilitate the latching or unlatching of the door S, as shown in Figs. 3 and 4. So in all cases the releasing, opening, closing, and securing of the door S is self-acting whenever done in connection with tipping the car-body. It may here be remarked that the fact that these straps *f'* extend down beyond and outside the side timbers U enables said straps also to act as stops to prevent the doors from closing too far inward if the car-body should happen to be placed in a horizontal position, as shown in Fig. 3, with any undue violence. The car-body is secured and trussed in rigid shape by the bolts or rods *a'*, and also by the bolts *c'*, that extend across the car from post to post *q'* *q'* at either end of car. The side doors, S, are stiffened by means of trussed rods *b'*, with turn-buckle in same, and passing over short struts *h'*, bolted to door S.

Cars are made upon this system of construction for different sizes of cars and to suit any width of track.

In the above I disclaim anything that may be covered by the prior Patent No. 151,156, dated May 19, 1874, and issued on that date to me; but

What I desire to claim and secure by Letters Patent of the United States is as follows:

1. In an improved dumping-car, the truck-frame formed of the side timbers U, bolted to the end timbers, *l'*, also formed of cross-pieces *m'*, mortised into said side pieces U, and stiffened by the diagonal braces *n'*, and also formed of a longitudinal center timber, *h*, resting on end pieces, *l'*, and cross-pieces *m'*, all bound together with rods W, and having rafters in pairs, T, that bear on said center timber, *h*, and on cross-pieces *m'*, and all substantially as described.

2. In an improved dumping-car, the car-body frame composed of side timbers *p'*, cross and longitudinal timbers *s'*, mortised together, and of upright pieces *q'*, extending up from near ends of side timbers *p'*, and all bound together with rods *a'* and *c'*, substantially as described.

3. An improved dumping-car in which are combined the car-truck frame, the car-body frame, the side doors, S S, that have on same the shafts *f'*, with doubly-beveled ends *e'* to engage in similarly-beveled recess in lever *d'*, said lever *d'* being also beveled on the outer and upper edge of same, so as to facilitate the closing of door S, all individually and severally substantially as hereinbefore set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRANCIS PETELER.

Witnesses:

REUBEN TOMLINSON,

WM. W. REDFIELD.