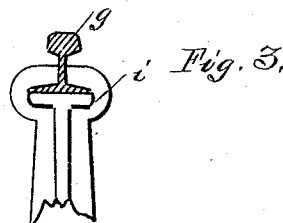
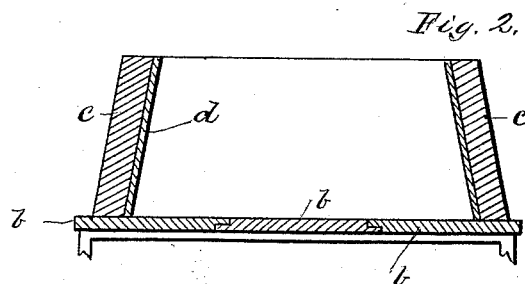
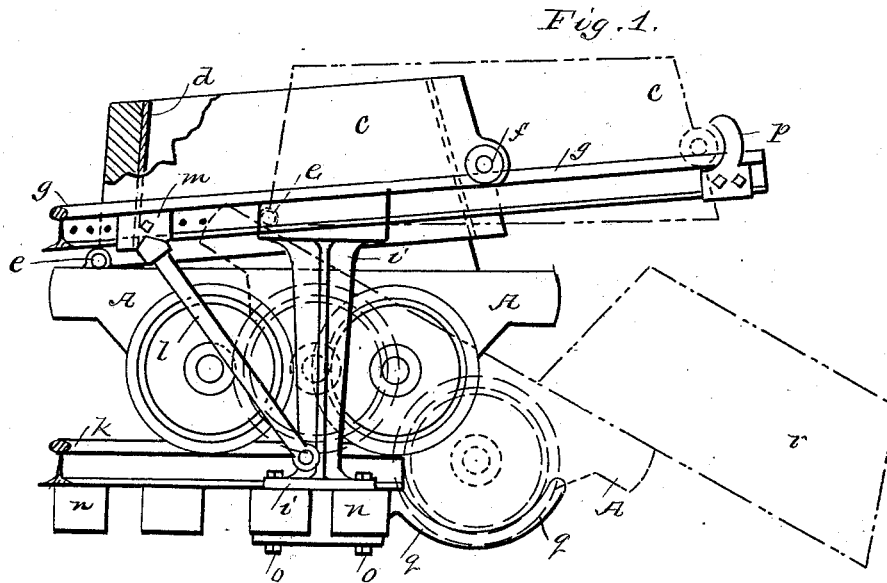


(No Model.)

J. BOWEN.  
CINDER CAR.

No. 418,306.

Patented Dec. 31, 1889.



Witnesses:  
H. E. Harrison, James Bowen  
J. A. Herrow, Per. O. D. Lewis

Attest.

# UNITED STATES PATENT OFFICE.

JAMES BOWEN, OF PITTSBURG, PENNSYLVANIA.

## CINDER-CAR.

SPECIFICATION forming part of Letters Patent No. 418,306, dated December 31, 1889.

Application filed December 20, 1888. Serial No. 294,230. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES BOWEN, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Cinder or Slag Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved cinder or slag car; and it consists of a truck having hinged thereto a box, constructed in the form of a frustum of a pyramid, and a means for elevating the front portion of the box, whereby the cinder or slag may slip or slide from beneath the same when the bed of the car is in an inclined position, together with certain other details of construction and combination of parts, as will be fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of my improved car and the means which I employ for removing the slag therefrom, together with the position of the car in the act of dumping, shown in dotted lines. Fig. 2 is a cross-sectional elevation of the box and floor of the car. Fig. 3 is a transverse section of one of the upper rails, showing the manner of securing the same to the standards.

To put my invention into practice I provide a suitable truck A and secure a flat top to the same, consisting of three metal plates *b*, either one of which may be removed and replaced when worn. On the top of these plates *b* is a pyramidal-shaped box *c*, properly lined with a refractory material and a metal inner shell *d*. This box *c*, I hinge at its rear end, as at *e*, to the floor of the car A in a manner that will admit of the front end of the box *c* being elevated a short distance. At suitable positions on the front of the box *c* are two small wheels or rollers *f*, adapted to engage and move along an inclined track *g*, elevated on the standards *i* some distance above and in the same vertical plane with the track *k*, on which the car A operates. This inclined track *g* may be adjusted to

have a greater or less inclination by means of a brace *l*, pivoted near the base of the standards *i*, and provided at its other end with a sliding grip *m*. The standards *i* are firmly attached to the ties *n* of the track by means of bolts *o*. At the forward end of the small inclined track *g* are placed stops *p*, which prevent the box *c* from moving forward any more than desired. An apron *q* is attached below the end of the track *k*, into which the two front wheels of the car A drop, which gives the floor *b* of the car an inclined position.

The operation of this car may be readily understood by reference to the dotted lines at Fig. 1 on the drawings. The car moving forward with its load, the rollers *f* engage with the inclined track *g*, which elevates the front of the box *c*, and by the time the front wheels of the truck A drop into the apron *q* the floor of the car A is inclined forward, and the front of the box *c* elevated sufficient to allow its contents to slide forward or dump itself, the position of the parts when in the act of unloading being indicated by dotted lines in Fig. 1, and the load discharged from the car being shown in dotted outline at *r* in the same figure. The box *c*, being hinged to the bed or floor *b* of the car A, will resume its former position when the car is drawn back and the pulleys *f* disengaged from the inclined track *g*.

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

1. The combination of the car A, having a flat top constructed of three or more metal plates *b*, the box *c*, hinged to the same, and provided with rollers *f* at its forward end, the inclined track *g* and means for altering the inclination of the same, the standards *i*, for supporting the inclined track *g*, and the apron *q*, placed below the car-track *k* and at the end of the same, substantially as and for the purpose described.

2. In combination with a car A, having a flat top *b*, the box *c*, hinged at the rear end to the same and provided with rollers *f* at its forward end, adapted to engage with an inclined track *g* and elevate the front of the box *c*, as and for the purpose set forth.

3. The combination of a horizontal track, a

truck mounted thereon, a vertically-inclined track elevated above said horizontal track, and a box or receptacle carried by the truck and having means which ride on the inclined  
5 elevated track, substantially as described, for the purpose set forth.

4. The combination, with a horizontal track and a truck mounted thereon, of a vertically-inclined track elevated above said horizontal  
10 track, the supporting-standards for said elevated track, an adjustable brace connected to the inclined track for sustaining the same at different angles with relation to the horizontal track, and a receptacle or box pivoted  
15 to the truck and having friction-rollers which ride on the elevated inclined track, substantially as described.

5. The combination, with a horizontal track and a truck, of a vertically-inclined track elevated above said horizontal track and resting 20 on suitable uprights or standards, the inclined braces pivoted at their lower ends and each having a clamp at its other end which is adjustably connected to the rail of the elevated track, and a receptacle or box pivoted 25 to the truck and having rollers which ride on the inclined track, substantially as described.

In testimony that I claim the foregoing I hereunto affix my signature this 15th day of September, A. D. 1888.

JAMES BOWEN. [L. S.]

In presence of—

P. B. REILLY,  
O. D. LEVIS.