

(No Model.)

R. C. DAVISON.
DUMPING CAR.

No. 524,580.

Patented Aug. 14, 1894.

Fig. 1.

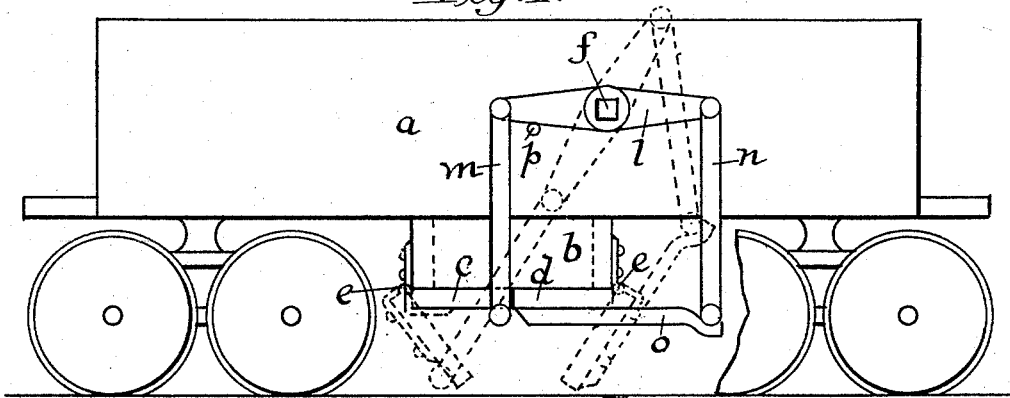


Fig. 2.

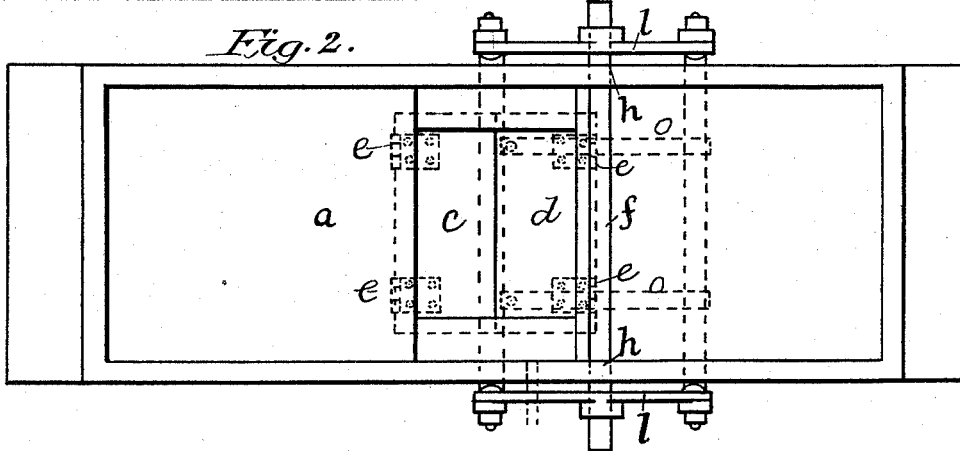
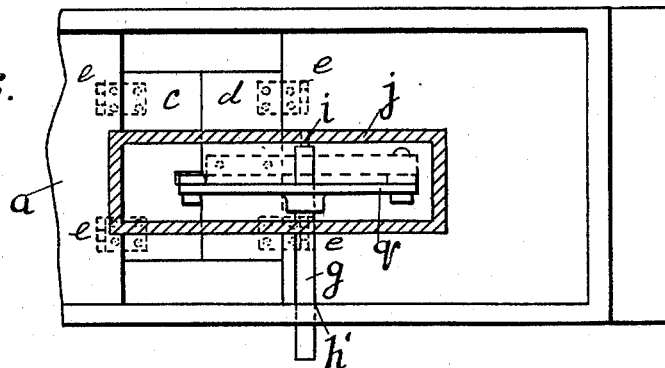


Fig. 3.



WITNESSES.

W. J. Morgan
E. H. Morgan

INVENTOR.

Ralph C. Davison
By A. P. Thayer
att'y

UNITED STATES PATENT OFFICE.

RALPH C. DAVISON, OF WESTFIELD, NEW JERSEY.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 524,580, dated August 14, 1894.

Application filed March 19, 1894. Serial No. 504,163. (No model.)

To all whom it may concern:

Be it known that I, RALPH C. DAVISON, a citizen of the United States, and a resident of Westfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Dumping-Cars, of which the following is a specification.

My invention relates to dumping apparatus such as commonly employed on coal cars for discharging the load through the doors opening downward from the bottom and it consists of improved apparatus for operating the doors, as hereinafter described reference being made to the accompanying drawings, in which—

Figure 1, is a side elevation of a car of the kind commonly used for coal, with my improved door operating apparatus applied to it, the doors being represented as closed in the full lines, with dotted lines indicating the position of the respective parts when the doors are open. Fig. 2, is a plan view of the car and dumping apparatus as shown in Fig. 1, and Fig. 3, is a plan view of part of the car with a detail in section showing a modified arrangement of the apparatus for operating the doors.

The car body *a*, has the usual recess *b*, of the bottom, with doors *c* and *d* hinged to the bottom of said recess as at *e*, for opening and closing it, said doors meeting at the middle of the recess and swinging downward as indicated in the dotted lines to open for the discharge of the coal. For a simple, efficient and reliable means of opening and closing these doors and of securing them when closed, I provide a rock shaft as *f*, or *g*, or any equivalent at a suitable height above the doors parallel with them, and in suitable bearings as at *h*, in the sides of the car body where the shaft extends through both sides as in Figs. 1 and 2, or as at *h'* in one side of the body and at *i* where the shaft extends through one side of the body only and terminates in a box as *j*, Fig. 3. On both ends of this shaft projecting outside of the body as in Figs. 1 and 2, I arrange oppositely projecting rocking arms *l*, the extremities of which are connected with the doors *c*, *d*, by rods *m* and *n*, respectively,

rods *m* being so connected as to open and close door *c* by descending and rising movements respectively, and rods *n*, so connected to door *d*, as to open and close it by rising and falling movements respectively, that is by arms *o*, extending backward of the hinge joints *e* on which the door swings. It will now be seen that with a lever applied to one end of shaft *f*, both doors may be opened by rocking said shaft in one direction and may be closed again by rocking it in the other direction, and when set in the position for closing the doors they may be secured in the closed condition by any approved means, as a pin *p*, in case the lever is made detachable from the shaft, but if securely connected to the shaft the lever may be fastened by the pin or the usual latch and notched sector may be employed.

Instead of thus extending the shaft entirely through the box and connecting it at both ends with both ends of the doors a single pair of rocking arms *q* may be employed at the middle of the car, connecting with the doors at their middle and being protected from the coal by a box *j* covering them. This would be somewhat simpler in the apparatus employed and would also be preferable to some extent because of the location of the rocking arms and connections inside of the box where they are protected to better advantage from accidents, and from snow and ice. But it is to be observed that the apparatus as arranged on the outsides of the box is very favorable for avoidance of interference with free operation by freezing or by clogging with coal dust and the like.

I claim—

1. The combination with a pair of dumping doors under the car, of the rock shaft located above and parallel with the doors, oppositely extended arms on the rock shaft, and rods connecting said arms and doors respectively, one door having its free edge connected, and the other door connected back of its pivot joint substantially as described.

2. The combination with a pair of dumping doors under the car, of the rock shaft located above and parallel with the doors, op-

positely extended arms on each end of the shaft, and rods connecting said arms and doors respectively, at each end of the doors, one door having its free edge connected, and
5 the other door connected back of its pivot joint substantially as described.
Signed at New York city, in the county and

State of New York, this 20th day of January,
A. D. 1894.

RALPH C. DAVISON.

Witnesses:

W. J. MORGAN,
S. H. MORGAN.