(No Model.)

G. H. GRIGGS.

DUMPING CAR.

No. 383,463. Patented May 29, 1888.

Fig: 1.

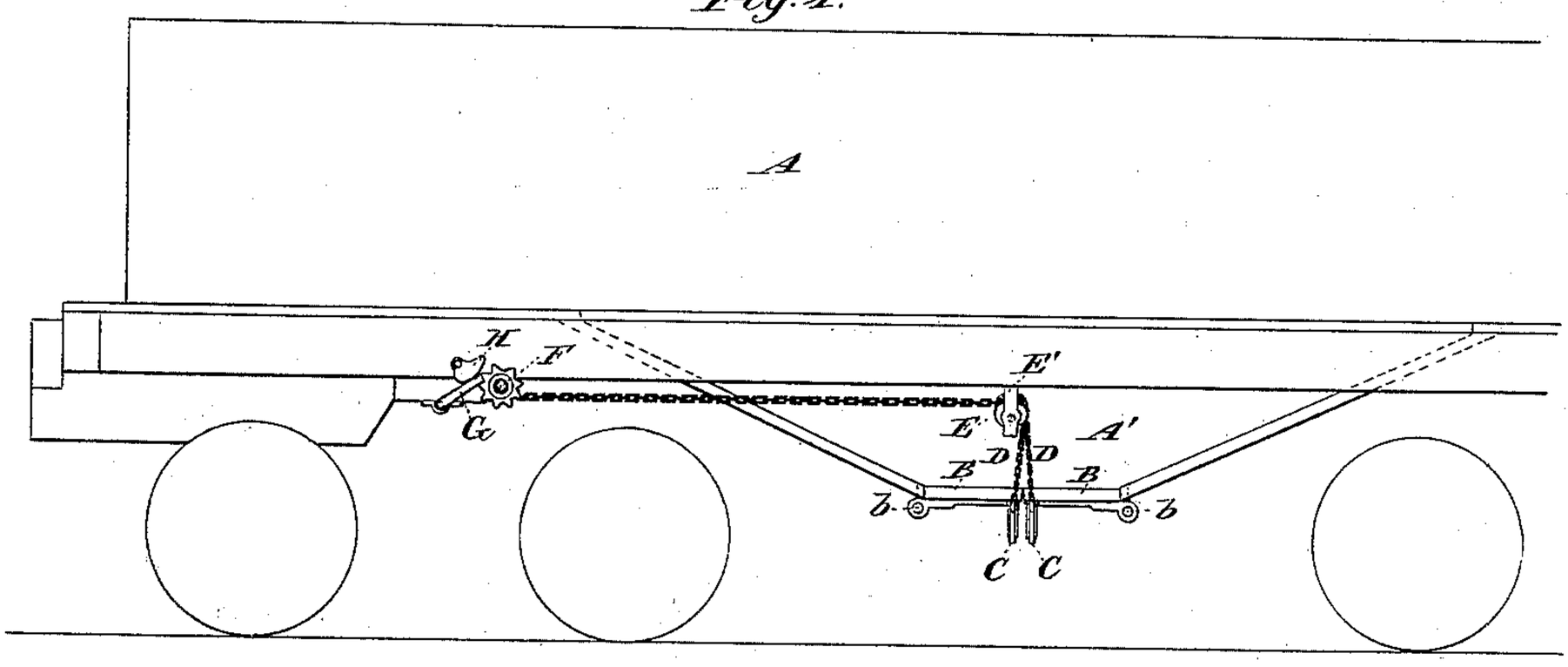


Fig: 2.

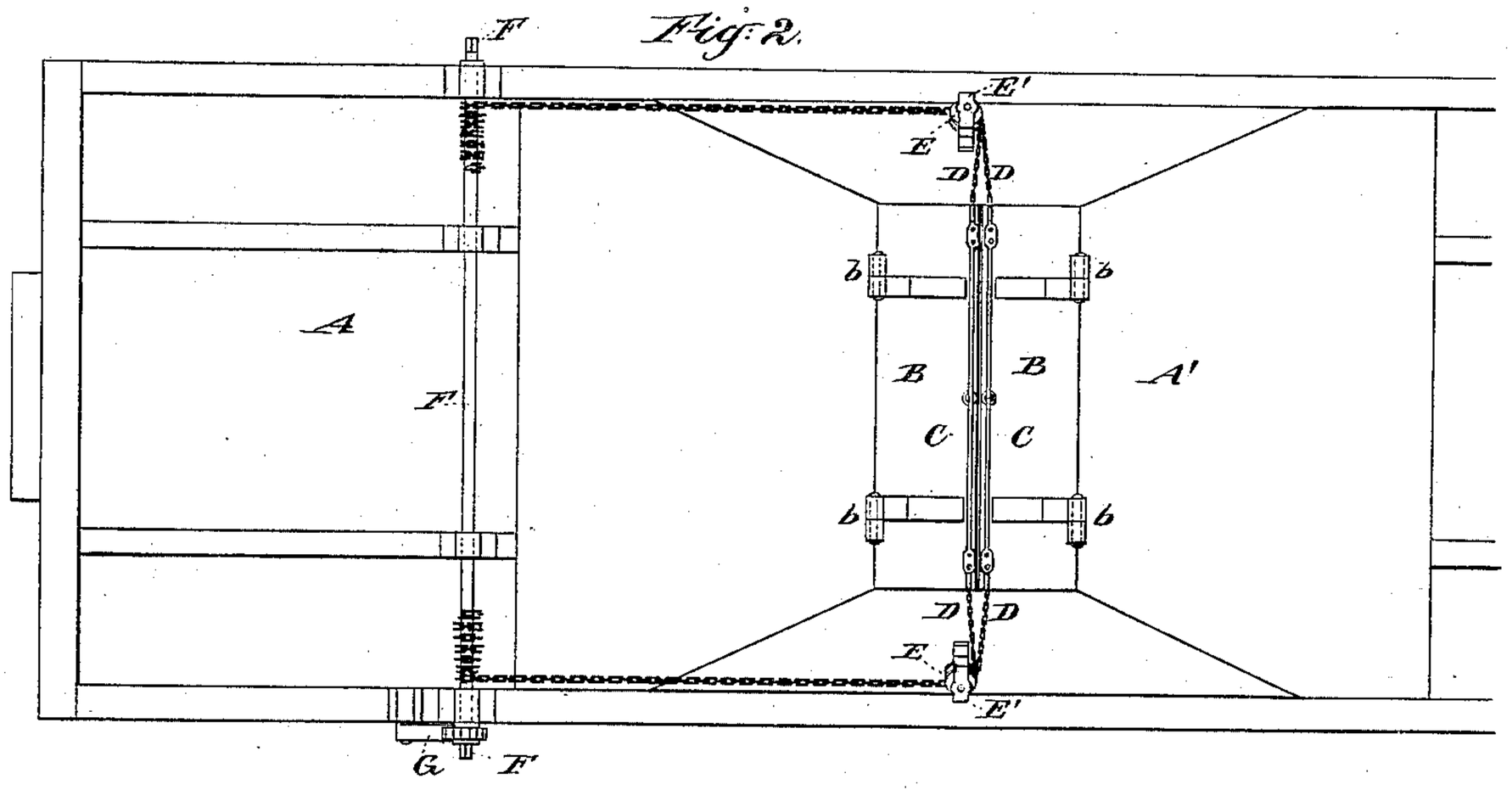
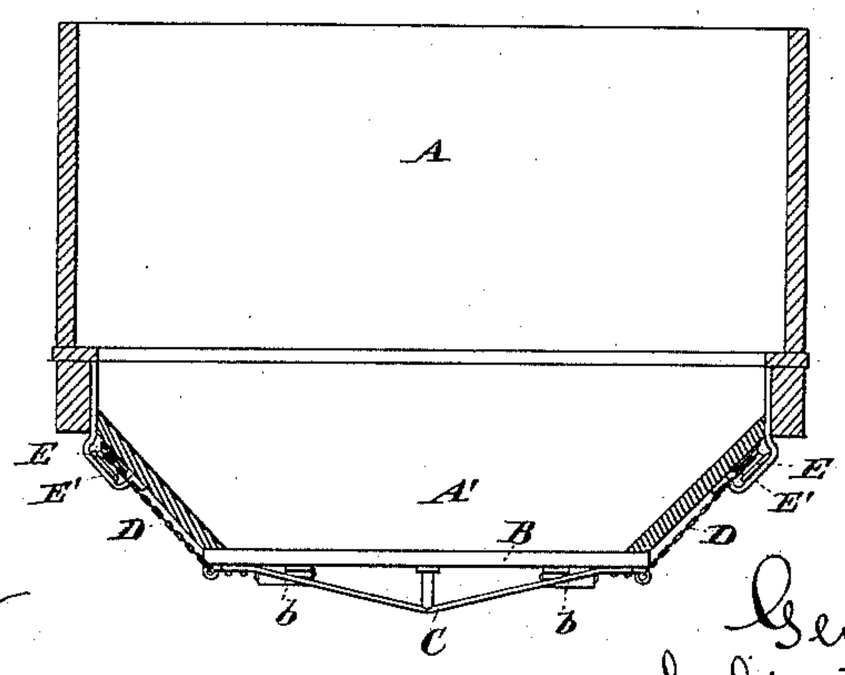


Fig: 3.



Witnesses:
Charles K. Searle,
H. A. Johnstone,

Inventor:
Geo. H. Griggs
by his attorney
Thomas Drew Stetson

UNITED STATES PATENT OFFICE.

GEORGE H. GRIGGS, OF ELIZABETHPORT, NEW JERSEY.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 383,463, dated May 29, 1888.

Application filed September 28, 1887. Serial No. 250,880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. GRIGGS, of Elizabethport, Union county, in the State of New Jersey, have invented a certain new and useful Improvement in Dumping-Cars, of which the following is a specification.

The cars to which this invention relates are used mainly for transporting coal. I will describe the invention as applied to a dumping-car used for transporting coal from the mine to the sea-shore, or between any other points. The coal is introduced in any convenient manner in the open top, and is discharged through a hatchway in the center of the hopper.

The invention relates to the construction of the hatches and the mode of operating them. I employ, as usual, two hatches, hinged one in front and the other in rear of the hatchway or aperture for the discharge of the coal. To close them, the free edges are drawn together and upward, so that the hatches lie in a horizontal position edge to edge. To open them, the hatches are simply dropped and allowed to hang perpendicularly by their hinged edges. This is the long known and approved mode of opening and closing such hatchways. The hatches are drawn into the closed position by chains operated by a windlass. This general plan has been long known and approved. I have discovered that by trussing the free edge of the hatch, to enable a hatch of a moderate thickness and weight to sustain the load, and arranging the chains outside of the hatch and leading them first up over suitable sheaves and then horizontally forward or rearward to a considerable distance, I can keep the operating mechanism entirely clear from coal and where it can be readily inspected. In all the previous devices for this purpose known to me the chains have led upward through the mass of coal, and the windlass which operates them has stood in the midst of the mass of coal. The objections to this are very marked, especially in winter, when snow and ice are liable to fill the interstices and add still further very serious obstructions to the working of the mechanism. By using hinged doors or hatches I operate without appreciable friction and without liability to clog.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a side elevation of the main portion of a car embodying my invention. Fig. 2 is a view from below, and Fig. 3 is a vertical cross-section through the mid-length of the car.

Similar letters of reference indicate corresponding parts in all the figures where they occur.

A is the body of the car, and A′ the hopper through which the coal is discharged.

B B are the hatches, adapted to close the rectangular opening. They are strongly hinged to A′ at *b b*.

C C are light trusses of iron mounted under the inner edge of each hatch B.

D D are chains connected one to each end of each truss C, so as to extend up and down, two on each side of the hopper.

E′ E′ are stout castings fixed on the car and supporting sheaves E in inclined position, as shown. Over these sheaves the chains D are led; and F is a strong windlass, provided with a holding-pawl, G, and a locking-piece, H. The windlass F has squared ends adapted to receive the ordinary operating-cranks, by which they can be turned to close the hatches.

I have shown the chains D as united into one below the sheave E, so that only one chain, which may be a little heavier than the two parts below the point of union, suffices to run over the sheave and extend along horizontally to be wound on the windlass. These points can be varied. I can use two sheaves on each side and run two separate chains, one from each hatch, to be wound on the windlass; or the two chains may run over the two sheaves and be united into one between the sheaves and the windlass.

I esteem it important that there be considerable distance between the sheaves and the windlass to avoid the chain assuming a highly angular position as it is wound up and let off.

One important advantage attained by my invention over the ordinary construction is the preservation of the chains and windlass from oxidation or corrosion. When, as heretofore, the chains and windlass run through the coal, they are rapidly destroyed. It is not necessary to inquire whether this results mainly

or entirely from the mere keeping of the parts wetted, by the fact that the coal prevents the parts from drying after they have become wet, or that the effect is with some kinds of coal greatly hastened by the presence of free sulphuric acid or other corrosive agents in the coal. It is a serious evil. My invention will avoid it.

I attach importance to the fact that the hatches B are hinged and open and close by turning on the hinges, as shown. Experience has demonstrated that sliding doors are liable to be clogged and obstructed. I confine my invention to hinged doors.

I claim as my invention—

1. In a dumping-car, the hatches B, hinged to the car-body at *b*, and each operated by two chains, D, one connected to each end of the hatch, said chains being exterior to the hopper, substantially as herein specified.

2. A dumping-car for coal and analogous material, having, in combination with the body A, hopper A′, and hinged hatches B *b*, the trusses C C, arranged to strengthen the hatches, the chains D D, sheaves E E, and windlass F, all arranged on the exterior of the car, substantially as herein specified.

In testimony whereof I have hereunto set my hand, at New York city, this 26th day of September, 1887, in the presence of two subscribing witnesses.

GEO. H. GRIGGS.

Witnesses:
M. F. BOYLE,
H. A. JOHNSTONE.