

(No Model.)

J. D. MADEIRA.

COAL CAR.

No. 292,336.

Patented Jan. 22, 1884.

Fig. 1.

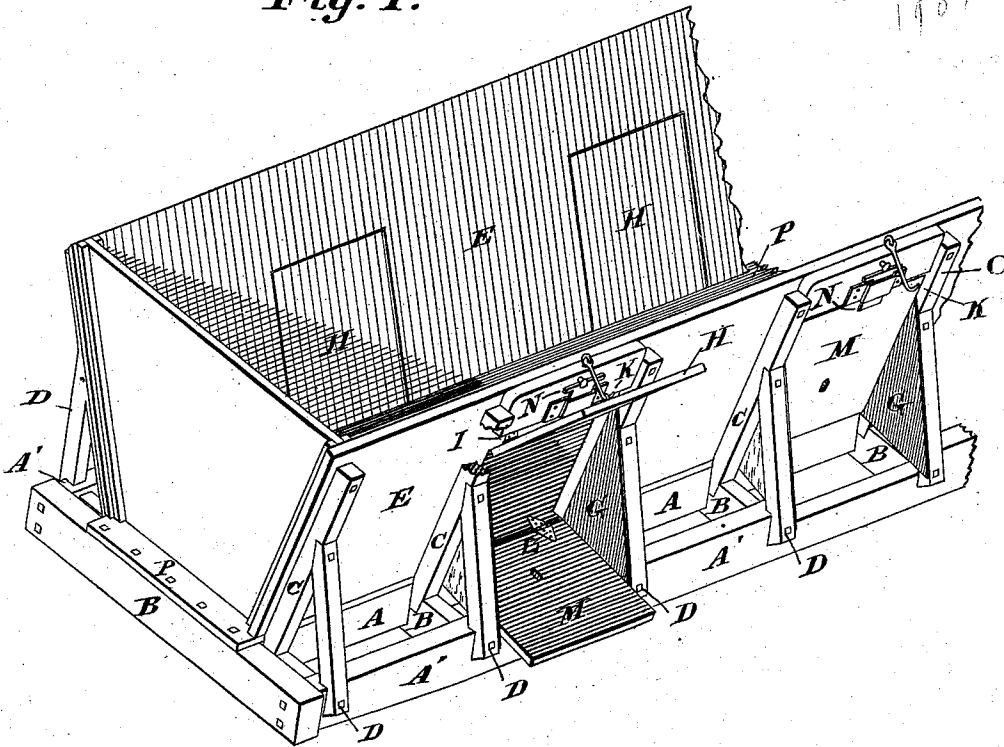


Fig. 2.

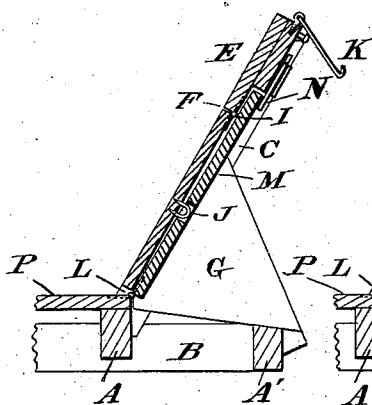
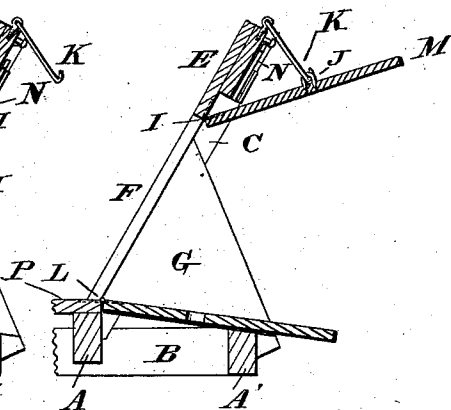


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

JOHN D. MADEIRA, OF CHILlicothe, OHIO.

COAL-CAR.

SPECIFICATION forming part of Letters Patent No. 292,336, dated January 22, 1884.

Application filed December 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. MADEIRA, of Chillicothe, in the county of Ross and State of Ohio, have invented a new and useful Improvement in Coal-Cars, of which the following is a specification.

My invention relates to an improvement in that class of railway-vehicles (employed to transport coal, gravel, broken rock, and other like materials) whose sides have one or more discharge-openings; and my invention relates to a provision, at each of such openings, of a pair of overlapping flaps or shutters, of which the inner shutter is hinged at the upper edge of the opening, and when closed becomes part of the car-side, and of which the outer and locking shutter is hinged at the lower edge of the opening, and when closed secures and supports the inner shutter, and when open serves as the floor of an extension-platform or discharge-chute, as hereinafter fully explained.

In the accompanying drawings, Figure 1 represents, by perspective view, a portion of a car-body embodying my invention, one opening being shown open. Figs. 2 and 3 are vertical sections through an opening in the closed and open conditions, respectively.

A A' B are portions of the bottom framing of a car-body; P, a portion of the car-floor; C, out-sloped standards framed to the cross-timbers B and to the inner longitudinal timbers, A. D are oblique struts framed to said standards and to the outer longitudinal timbers, A'. The body sides E rest against and are spiked or bolted to the sloping inner sides of the standards, so as to flare upward and outward in the manner shown. F are rectangular openings at equidistant intervals along the sides, said openings being preferably of width nearly equal to that between the consecutive standards, and extending from the floor-level upward. G are wing-pieces spiked to the sides of the opening. Each opening is provided with a pair of overlapping shutters, as follows: H is an inner shutter, adapted to fit, and when closed to occupy, the opening. Said shutter is so hinged, as shown at I, by its upper edge to the corresponding edge of the opening, as in the closed condition to constitute, practically, a portion of the car-side, (see Figs. 1 and 2,) but to be capable of

being held in the elevated position (shown in Figs. 1 and 3) by any suitable device, such as a staple and hook, J K. Hinged, as shown at L, to the lower edge of the opening, and of equal width to and somewhat greater height than the opening, is an outer shutter, M, which, when closed, shuts tightly over and supports the closed inner shutter, being held to the said closed position by any suitable device, such as a gravitating catch, N. The said outside shutter, in its open condition, serves as the floor of a discharge-chute, of which the wings G serve as the sides.

The described preferred construction may be modified in non-essential particulars without departing from the characteristic features of my invention. For example, my improvement may be applied to a car with vertical sides and with an out-sloped or any desired form of floor, and to openings placed at any height in the sides.

The inner shutter, instead of fitting the opening and closing flush with the inner face of the body-side, may be larger than the opening, and may close on the outer face of the body-side, the outer shutter in that case being hinged the thickness of the inner one farther out.

I claim as new and of my invention—

1. A car-body having one or more discharge-openings, each of which has hinged, respectively, to its upper and under edges, two overlapping shutters, of which the inner shutter is held by the outer one when closed, and of which the outer shutter becomes, when open, the floor of a discharge-chute, substantially as set forth.

2. In a railway-car for transporting coal and like materials, and having one or more discharge-openings, two overlapping shutters at each opening, of which the inner shutter is hinged by its upper edge to the top of the opening, so as to be capable of closing it, and of which the outer shutter is hinged to the bottom of the opening, and is combined with external side wings to form an extension-platform or discharge-chute, substantially as set forth.

In testimony of which invention I hereunto set my hand.

JOHN D. MADEIRA.

Attest:

GEORGE H. KNIGHT,
JOHN B. SMITH.