

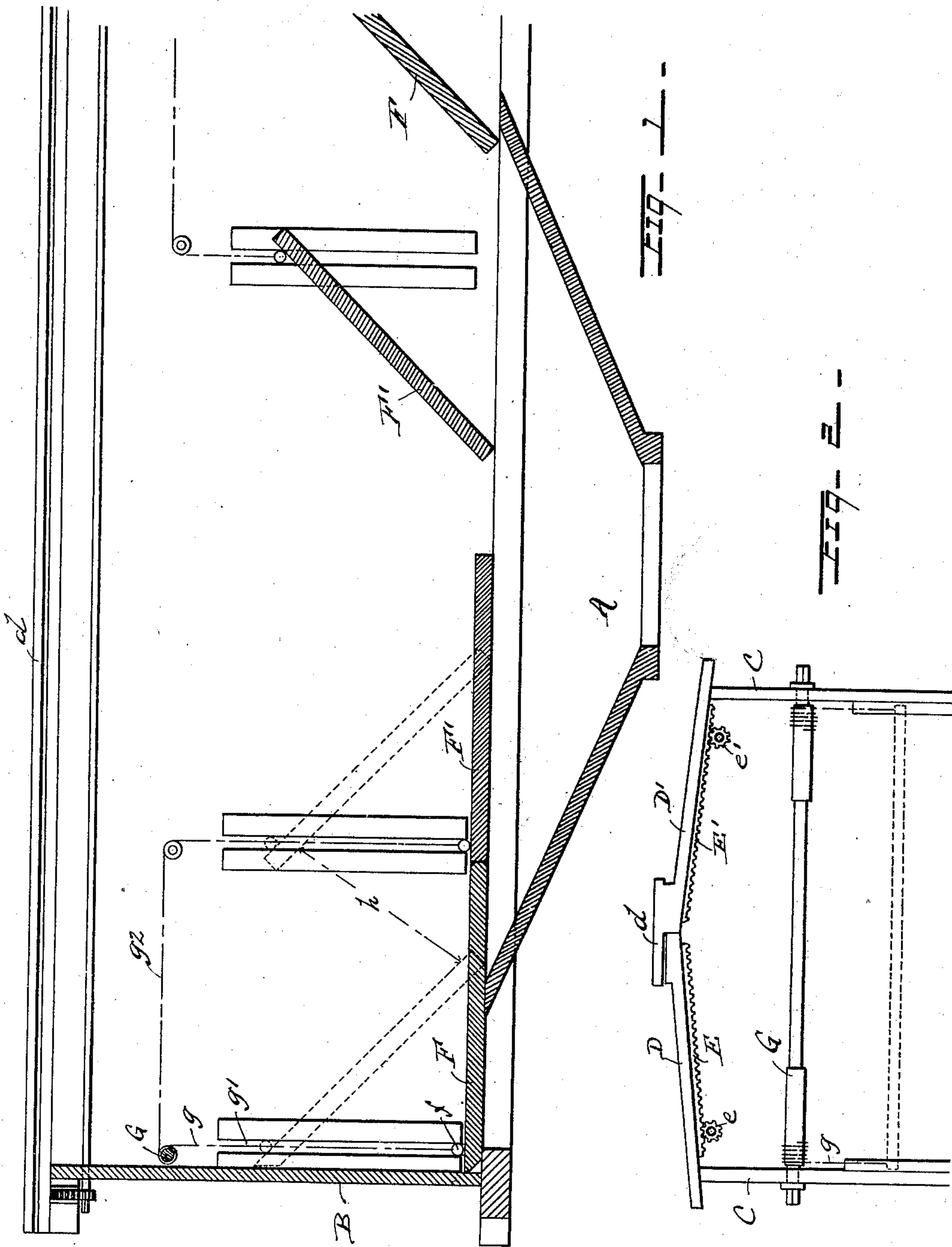
No. 654,306.

Patented July 24, 1900.

F. O. COKENOUR.  
COMBINATION FREIGHT CAR.

(Application filed Apr. 21, 1900.)

(No Model.)



Witnesses  
David Ryan  
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# UNITED STATES PATENT OFFICE.

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## COMBINATION FREIGHT-CAR.

SPECIFICATION forming part of Letters Patent No. 654,306, dated July 24, 1900.

Application filed April 21, 1900. Serial No. 13,751. (No model.)

*To all whom it may concern:*

Be it known that I, FRANKLIN O. COKENOUR, a citizen of the United States of America, and a resident of Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Combination Freight-Cars, of which the following is a specification.

My invention relates to an improved combination or convertible car adapted for use either as an ordinary box-car for cattle or general merchandise or for grain or coal and the like, which are commonly delivered through a hopper-bottom.

The invention is fully described in connection with the accompanying drawings, and the novel features are specifically pointed out in the claims.

Figure 1 is a longitudinal sectional view of a portion of a car embodying my improvements. Fig. 2 is a partial open end view of the same.

The drawings represent in the main an ordinary box-car body having a central bottom-hopper A and ends and sides B and C, as usual. The roof is made in two movable longitudinal sections D D', meeting midway of the width of the car when in normal closed position, but adapted to be moved sidewise, so as to open the top of the car for loading when desired. These sections are adapted to be moved by suitable mechanism, as racks E E', underneath the overhanging ends thereof, which are engaged by crank-pinions e e', suitably mounted on the car-body, and the junction-line between them is covered by the running-board d, which is fixed to one of the sections D' and overhangs the other section, as indicated in Fig. 2.

The floor of the car is formed, as shown, in four sections, each of the full width of the car and jointly extending the full length of the same. Each end section F when in lowered position to form the flat floor of the car extends a sufficient distance toward the center of the car to considerably overlap the flared top of the hopper, and it is connected at its farther end to a lifting mechanism consist-

ing, as shown, of a transverse winding-shaft G, connected by chains g to arms f on the floor-sections, which arms preferably slide in opposite vertical guideways g', provided on the sides of the car, so that by turning said winding-shaft the floor-section F is raised to inclined position, as indicated, with its free lower end overlapping the hopper, so as to discharge the contents of the car, such as grain or coal, onto the corresponding inclined walls of the hopper. In like manner the adjacent floor-section F', extending toward the center of the car, has its farther end similarly connected to the winding-shaft by chains g<sup>2</sup> and is likewise raised to inclined position, as indicated, thus providing a central discharge into the hopper and at the same time increasing the area of the outer discharge-opening, as indicated at h, thus providing for the rapid, free, and complete emptying of the car through the open hopper-bottom. The sections F F' are thus arranged in pairs, the two sections of which are jointly operated by the same windlass mechanism, though the section F' may be arranged to be raised somewhat before the outer section F begins to raise, so as to make the operation of raising them more easy.

The bottom of the hopper may be closed in any preferred manner and the construction of the car may evidently be considerably varied without material change in the application of my improvements thereto.

What I claim is—

1. In a combined general freight and hopper delivery car, a floor consisting of four adjustable sections arranged in pairs, and means for raising the two sections of each pair at the ends nearest the adjacent end of the car, to form separate floor-openings and inclines thereto for discharging into the hopper substantially as set forth.

2. In a combined general freight and hopper delivery car, a floor consisting of four adjustable sections arranged in pairs, and means for simultaneously raising the two sections of each pair at the ends nearest the adjacent end of the car, to form separate floor-openings and

inclines thereto for discharging into the hopper substantially as set forth.

3. A car having a roof formed in two longitudinal sections parted midway of the width of the car, a running-board fixed to one of said sections and arranged to overlap the other when said sections are in normal position, and means for moving said sections laterally to

open or close the same, substantially as set forth.

Signed by me at Reading, Pennsylvania, this 13th day of April, 1900.

FRANK. O. COKENOUR.

Witnesses:

ADAM L. OTTERBEIN,  
J. ALFRED MOLL.