

J. R. McPHERSON.  
STOCK-CAR

No. 178,793.

Patented June 13, 1876.

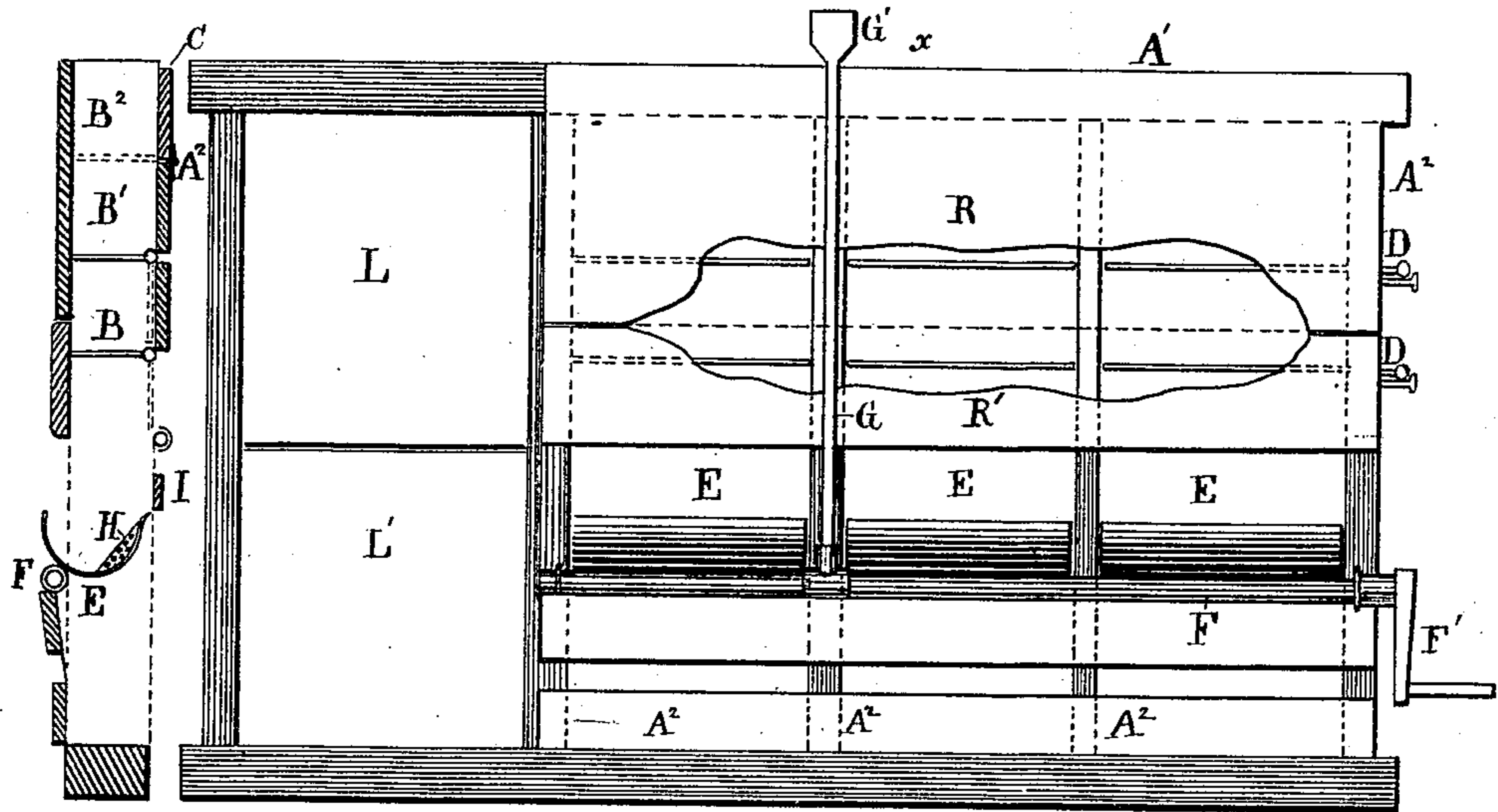


Fig. 3.

Fig. 1. x A

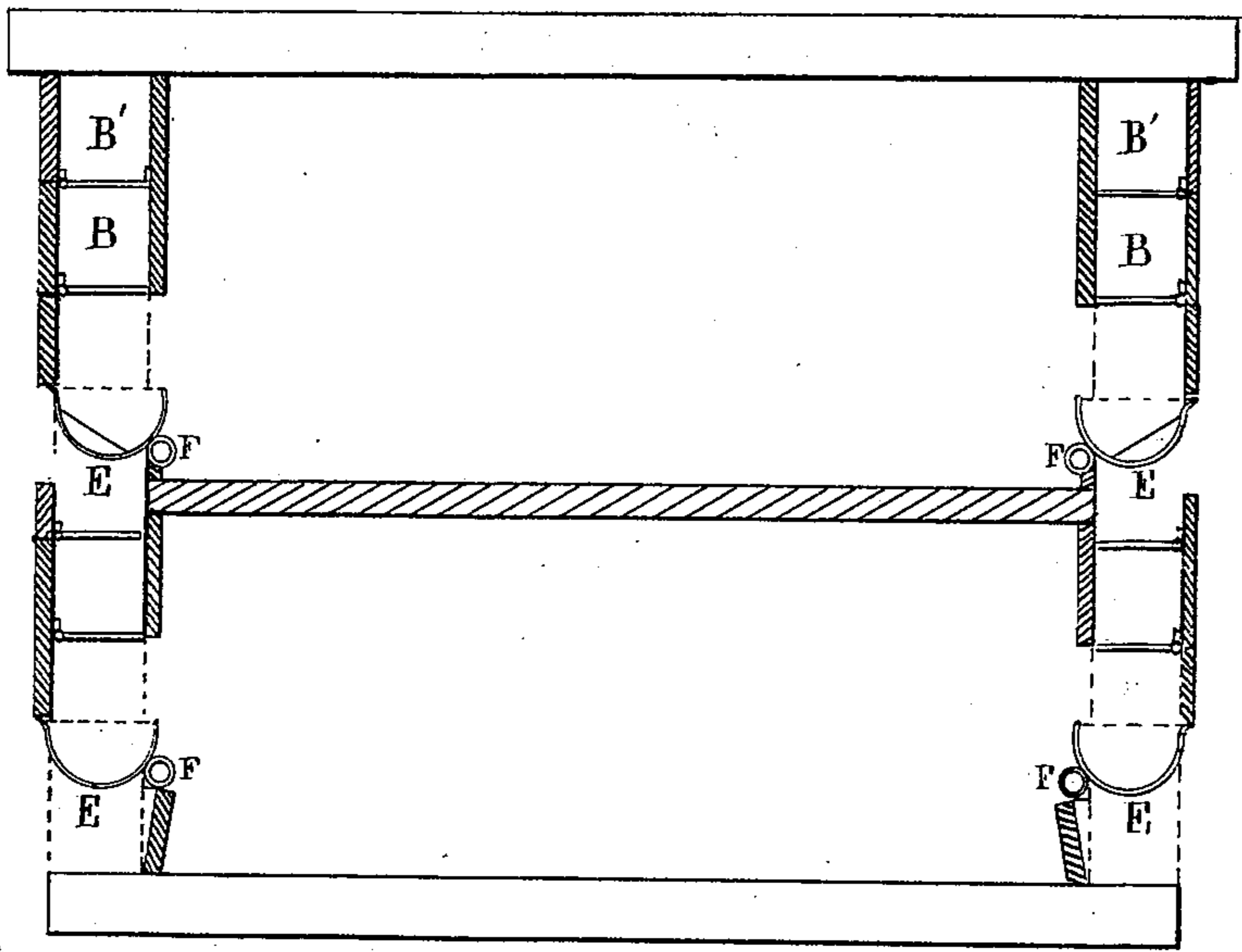


Fig. 2.

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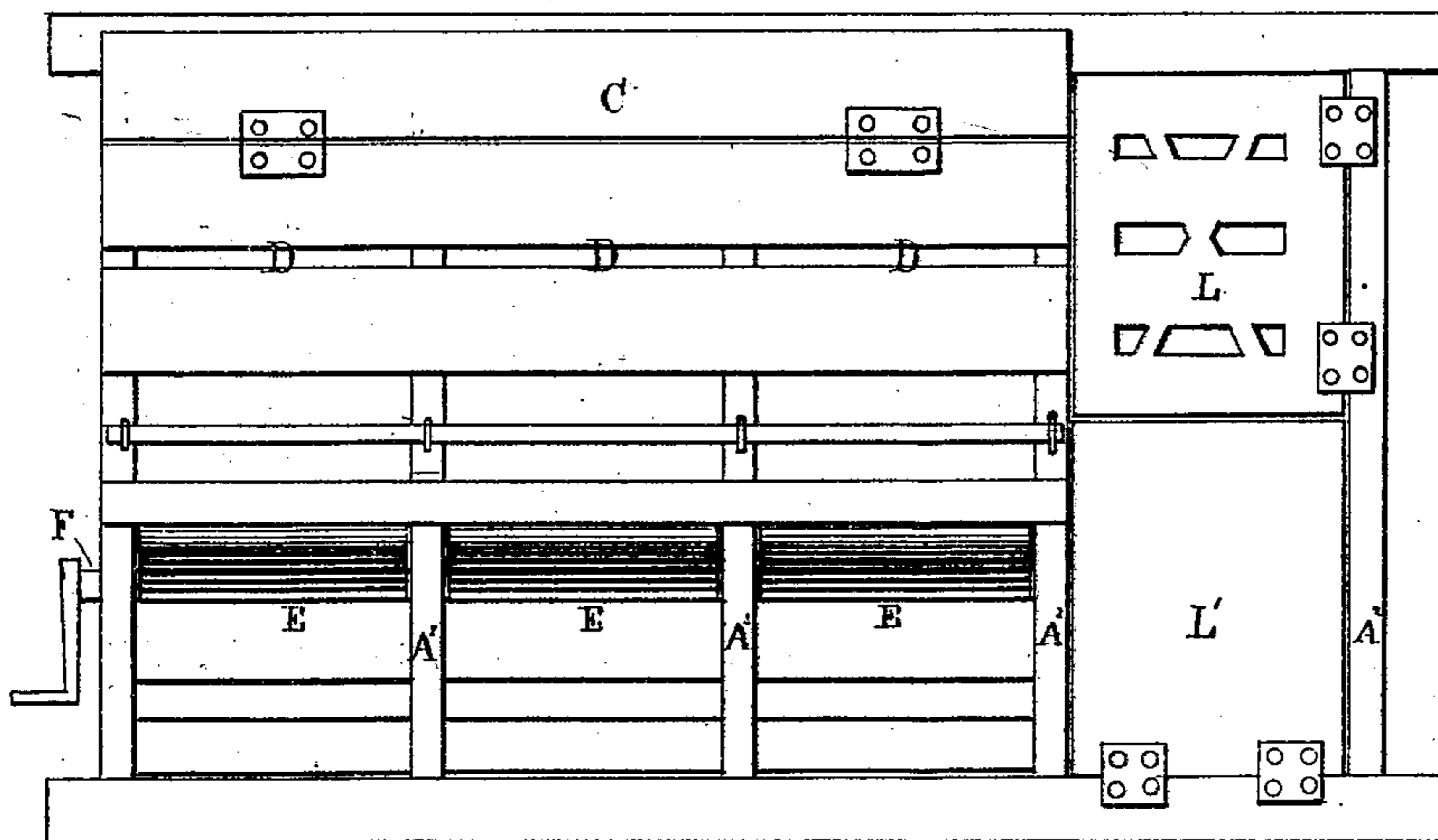


Fig. 4.

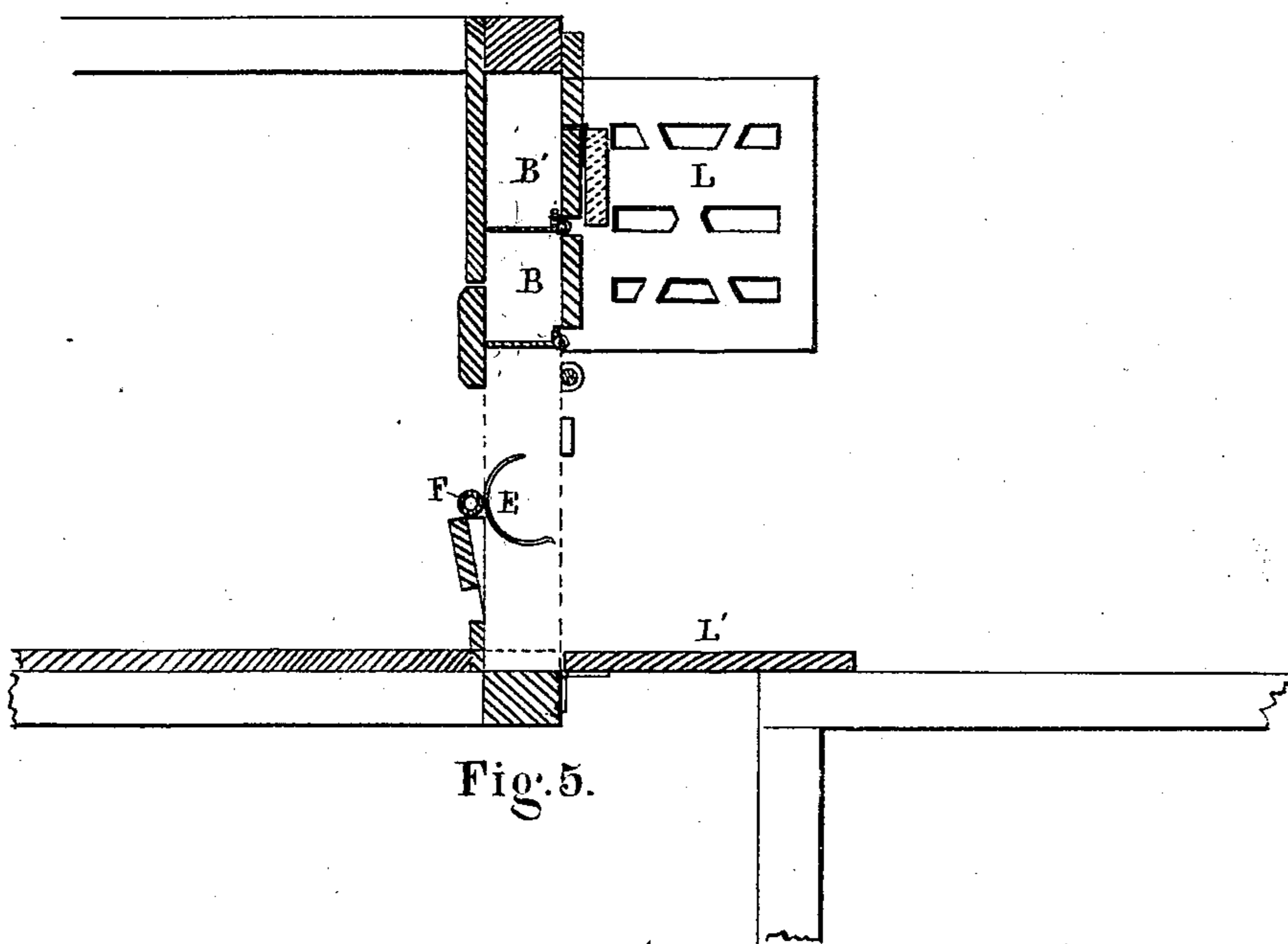


Fig. 5.

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN STOCK-CARS.

Specification forming part of Letters Patent No. **178,793**, dated June 13, 1876; application filed February 9, 1876.

*To all whom it may concern:*

Be it known that I, JOHN R. MCPHERSON, of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Stock-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification—

Figure 1 being an inside elevation of one side of the car, showing the doors for admitting the stock, a pipe for conducting the water to a distributing-pipe running along the inside thereof, the oscillating or tilting water-trough, and, at the point where the part is broken away, the feed-reservoirs within the framing. Fig. 2 is a cross section, showing the feed-reservoirs and water-troughs, as applied to a double-deck car. Fig. 3 is a cross-section on line *x x* of Fig. 1, showing the hinged bottoms of the feed-reservoir in position, as represented in full lines, and as dropped down to allow the contents to fall into the troughs, in dotted lines—the troughs being shown in position for retaining the food or drink. Fig. 4 is an elevation of the outside of the car, showing the arrangement of the doors and the means of ventilating the car; and Fig. 5 is a cross-section through the doors.

Corresponding letters denote like parts in the several figures.

This invention relates to cars which are designed more particularly for the transportation of live-stock upon railroads, but which, when not thus employed, are well adapted to the carriage of various other kinds of freight; and it consists in providing such cars with reservoirs for the reception and transportation of food, such receptacles being so arranged that their contents can readily be emptied into the troughs, to which water is supplied for watering the stock, or into other receptacles similarly located; and it further consists in certain combinations, as will be more fully described hereinafter.

The importance of so constructing cars in

which live stock is transported that such stock can be watered and fed without being removed from the same, is well known; and this invention has for its object the providing of means for that purpose which shall be available at any time during the journey. In constructing cars for the attachment of my improvements, I use a frame-work of the ordinary construction, it consisting of a sill, *A*, a plate, *A*<sup>1</sup>, and such vertical posts, *A*<sup>2</sup> *A*<sup>2</sup>, as may be required to give the desired permanency to the structure, the only change required being that when it is desired to enlarge the feed-reservoirs, the width of the posts *A*<sup>2</sup> be increased, so as to give more space between the sheathing upon their outer and inner sides. The food-reservoirs above referred to are formed by securing to the outer and inner surfaces of the posts *A*<sup>2</sup> *A*<sup>2</sup> boards or plates of metal, of the required thickness, which are made to extend from the top of the car downward as far as it may be desirable to have the reservoirs extend, and, by sectional-hinged partitions, which may be made of wood or metal, and so arranged as to divide the vertical spaces between the posts into two or more compartments, so that in filling them the hinged bottom of the lower one may be placed in the position shown at *B*, Fig. 3, when, by turning the other or others into a vertical position the food can be inserted through the swinging door *C*, at the upper portion of the car, which opens outwardly for that purpose. When the lower reservoir *B* has been filled, as above indicated, the swinging partition above it is dropped down to the position shown in full lines in Fig. 3, and the reservoir *B*<sup>1</sup> is filled, and so on through the series, however many there may be.

The swinging partitions between the reservoirs *B* *B*<sup>1</sup> *B*<sup>2</sup> are provided with shafts or pivots *D*, which extend outward beyond the end of the car, as shown in Fig. 1, in order that when the food is to be discharged into the watering or feeding trough, they may be turned into a vertical position, as shown in dotted lines in Fig. 3, by means of a lever or wrench applied to their outer ends, which will permit the food to fall into said trough, and, by leaving this partition in its open po-

sition, the food from the next in the series of reservoirs can be allowed to fall into the trough, and so on, at such intervals as may be found desirable, till all are emptied. Immediately below the reservoirs above described there is placed a trough, E, or, more properly speaking, a series of troughs, E E E, which, by preference, are made of metal, but which may be made of wood, they being of such length as to cause them to pass between the posts  $A^2 A^2$  of the frame of the car, so that when they are placed in the position shown in Figs. 3 and 4, they will receive and retain the food or water for the stock, but so that when it is desirable to empty them of the refuse of the food, or of any water that may remain in them, they may be turned into the position shown in Fig. 5.

In order that the troughs E E E may be supplied with water in the shortest possible space of time when the train has arrived at the proper watering-place, a pipe, F, is placed upon the inner surfaces of the posts  $A^2 A^2$ , or upon the inner surface of the car, which pipe is held in position by being secured in proper bearings, so that it may be partially rotated, and thus cause the troughs, which are attached to it, and are carried upon it, to be brought into a position to receive the water or food and retain the same, or so that it may be emptied therefrom by partially rotating said pipe by means of a handle,  $F^1$ , which is attached to the outer end thereof, or by any other suitable means. The pipe F and, through it, the troughs are supplied with water through a vertical pipe, G, which has upon its upper end a funnel,  $G^1$ , for securing the same while its lower end communicates with the horizontal pipe F, which in turn communicates with the different sections of the troughs through perforated diaphragms H, and through apertures in said pipe and in the trough.

It will be understood that there are a series of food-reservoirs and of troughs upon each side of the car, and that said reservoirs and troughs extend from the ends of the car to the doors, which, upon one side thereof, are near one end, and upon the opposite side are near the other; an arrangement which not only facilitates the loading of the stock, but enables each animal to get access to the food and water in the troughs without shifting its position with reference to the other animals.

To prevent the food from being wasted when the animals are feeding, a guard, I, is placed upon the posts  $A^2 A^2$  in such place that when the troughs are in the position shown in Fig. 3 it will be parallel with their upper edges, and thus prevent said food from being forced out of the troughs by the animals.

The interior sheathing of the food-reservoir is shown at R R', it being broken away for the purpose of showing the swinging partitions. In cars of this character it is desirable that every possible facility should be afforded for loading and unloading stock, and for that purpose I make the doors L L' in sections, the

upper one of which is hinged upon its sides and opens outwardly in a horizontal direction, while the lower one is hinged at its bottom, and swings vertically in order that it may serve as a platform upon or over which the animals pass in entering and leaving the car; and as these are upon each side of the car and near the opposite ends thereof, it follows that very little time will be lost in loading or unloading the same. The sheathing below the troughs is upon the outside of the car, and is put on in strips in order that proper ventilation may be had; and, to facilitate the same, apertures may be formed in the upper sections of the doors.

I have confined the description of the car thus far to a single deck, but the improvements are equally applicable to a double-deck car, or to one having two floors upon which animals are carried, such a construction being shown in Fig. 2 of the drawings.

In applying these improvements to cars now in use it is only necessary to change the sheathing, so as to form the food-receptacles, and add the swinging partitions and the troughs and pipes, a change which is easily effected, and at small cost. One of the advantages due to this method of constructing cars consists in the fact that persons shipping their own stock are provided with the means of transporting their food without extra cost, and others can fill the reservoirs before the starting of the train, and thus save both time and expense, as such food can usually be purchased cheaper at the points where cattle are shipped than it can in the larger towns on the road to the great markets.

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

1. A car for the transportation of live stock, having food-receptacles formed wholly within the vertical walls thereof, said receptacles being divided into compartments arranged one above the other, substantially as and for the purpose set forth.

2. The combination, in a car for the transportation of live stock, of a series of food-receptacles, which are located wholly within the vertical walls thereof, and are arranged one above the other, and a trough or troughs for the reception of food and water, substantially as and for the purpose set forth.

3. In a car for the transportation of live stock, the combination of two series of food-receptacles arranged one above the other, and located in the sides thereof, and troughs, into which the food from both of the series of receptacles can be deposited, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

JNO. R. MCPHERSON.

Witnesses:

C. M. CONNELL,  
E. A. BULLEY.