F. J. GILROY.

FREIGHT CAR CLOSURE.

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1,141,328.

Patented June 1, 1915.

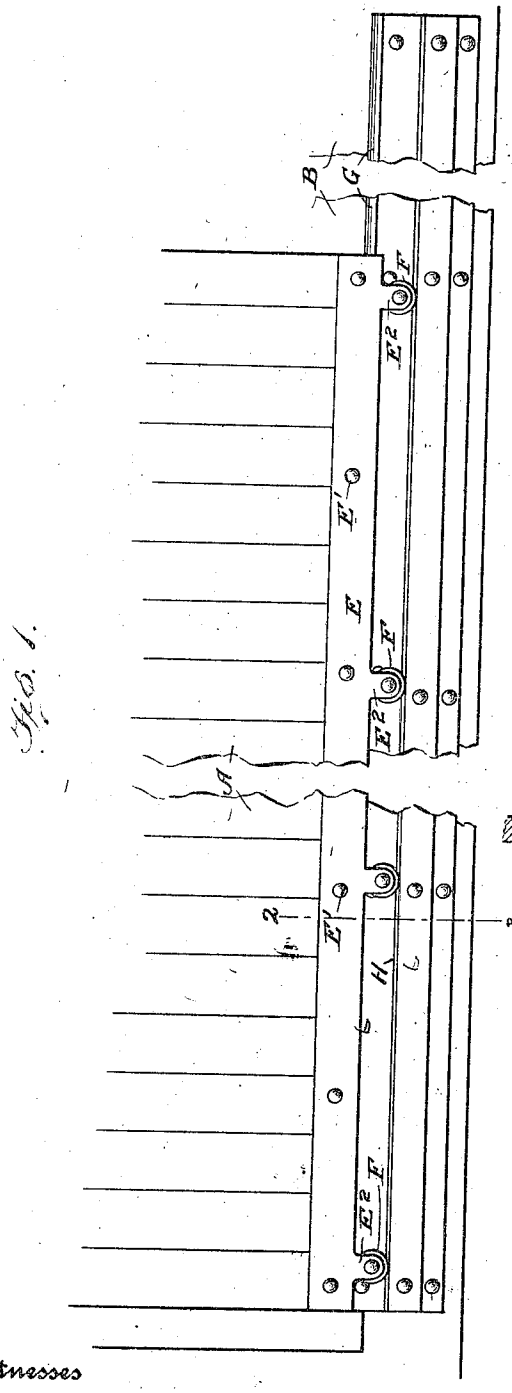


Fig. 1.

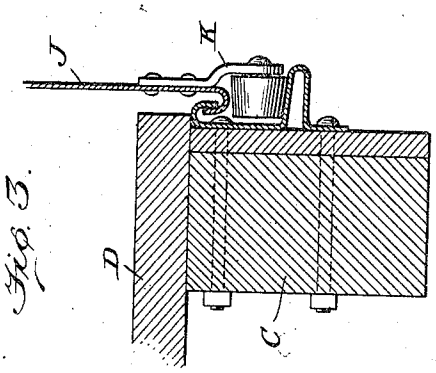


Fig. 3.

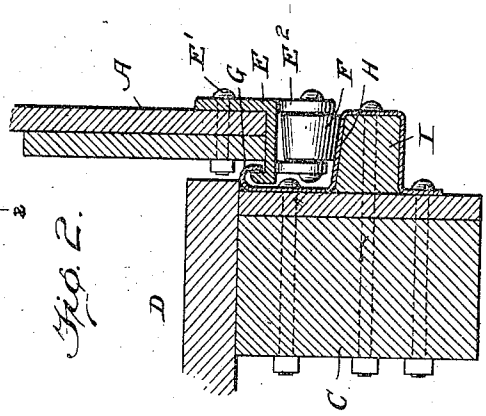


Fig. 2.

Witnesses

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FREIGHT-CAR CLOSURE.

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To all whom it may concern:

Be it known that I, FRANK J. GILROY, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Freight-Car Closures, of which the following is a specification, reference being had therein to the accompanying drawing.

In actual service, freight car doors must satisfy many conditions, and use or rejection depends upon the result of balancing all gains and losses, direct and indirect, near or remote, so far as is possible, to determine what course will produce the most money for the railway, and even "salvage", or the value of discarded or worn out doors is sometimes a controlling factor.

With these facts in view, the present invention seeks to provide a very inexpensive construction adapted for use on old or new wood doors or on doors of thin sheet steel, and it especially seeks to provide improved means for the support and lower side engagement of grain car doors where no inside boarding or "coopering" is to be employed, and, further, to eliminate the heavy and expensive castings of malleable iron often employed and yet have a structure which will not be injured by the impact of wagon wheels which are often backed against the car in preparing for unloading.

In the accompanying drawings, Figure 1 is an elevation of a portion of a wood door and adjacent portions of a car. Fig. 2 is a section on the line 2—2, Fig. 1. Fig. 3 is a view similar to Fig. 2, showing the use of a thin sheet metal door.

In Figs. 1 and 2, A represents a wood door, B the side wall of a car, C the car sill, and D the car floor.

Along the lower edge of the door extends a metal channel member E, which receives this side of the door and is secured thereto by bolts E'. From this member depend brackets E^2 to receive rollers F, which are preferably slightly conical.

A track member of sheet metal, bolted to the car, extends, below the door's edge, along the exterior of the car to a distance from the door opening not less than the width of the door. This member is formed from a primarily plane sheet metal strip having its upper marginal portion bent outwardly downward to form a hook G for receiving the narrow inner flange of the member E, and below the rollers it is bent sharply outward to form an inclined ledge H upon which the rollers may rest. It is then returned and bent sharply downward to rest against the car wall. The upper and lower walls of the hollow rib thus formed may be more or less widely separated and the intervening space may be filled with a strip I of suitable material, oak sometimes being used, to increase the resistance to the impact of the wheels of heavy vehicles used in unloading the car; and it is to be noted that this rib projects outward materially farther than the hook above, which is thus well protected.

The construction allows the lower edge of the door to be engaged from end to end at all times, whether the door be open or closed, and it permits the use of light rolled metal in place of the heavy and expensive malleable metal heretofore used in similar constructions. The closure at the bottom edge of the door is almost hermetic, the inclination of the upper surface of the rib causes water to run off quickly, and the readily accessible plane inclined surface make it easy to remove such snow and ice as might interfere with the opening of the door.

Fig. 3 illustrates a similar construction with a thin metal door J. Here the lower margin of the door is itself hooked instead of being provided with a channel iron. The rollers in this case are each supported by a single bracket K riveted to the outer face of the door. The track rib may project materially less than when a thick door is used, yet it protects the hook on the car in the same way. This form is readily added to any car and as its cost is not greater, it is preferred to the wood door form whenever a new door is needed.

What I claim is:

1. The combination with a car, of a horizontal metal member fixed to the exterior of the car slightly below the plane of its floor and provided with a continuous flange forming a downwardly open hook, a rigid upwardly closed rib parallel to the hook, below the same and projecting materially farther from the car wall, and a door provided at its lower margin with a flange engaging said hook.

2. The combination with a car, of a track member of sheet metal bent to form at its upper margin a continuous downwardly open hook and below the hook a parallel up-

wardly closed rib projecting materially farther than the hook from the car wall, and having its upper face downwardly and outwardly inclined and fixed to the car below the door opening, and a door carrying rollers to rest upon said rib and provided with a marginal hook to engage the hook first mentioned.

3. The combination with a car, of a metal strip bent to form along its upper margin a continuous downwardly open hook and between its margins a hollow track rib parallel to the hook and projecting farther from the car wall, devices fixing the strip to the exterior of the car below its door opening, a door having at its lower side a flange engaging said hook, and rollers mounted on the door and resting upon said rib.

4. The combination with a car, of a metal strip fixed to the exterior of the car below its door opening, bent to form a continuous hook along its upper margin and a hollow track rib between its margins, a door having at its lower side a flange engaging said hook, rollers carried by the door and resting upon said rib, and a strip of suitable material filling said rib, said rib having its upper surface outwardly and downwardly inclined and as a whole projecting beyond the vertical plane of said hook.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK J. GILROY.

Witnesses:
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