R. E. FRAME & C. G. HARRINGTON.

CAR DOOR HANGER.

APPLICATION FILED OCT. 30, 1908.

941,069.

Patented Nov. 23, 1909.

2 SHEETS—SHEET 1.

Fig. 2.

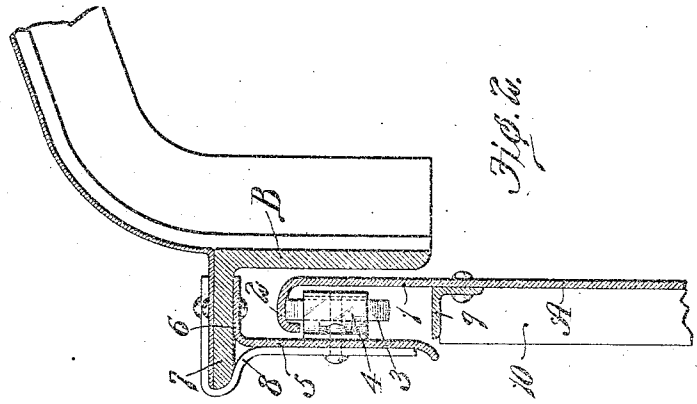
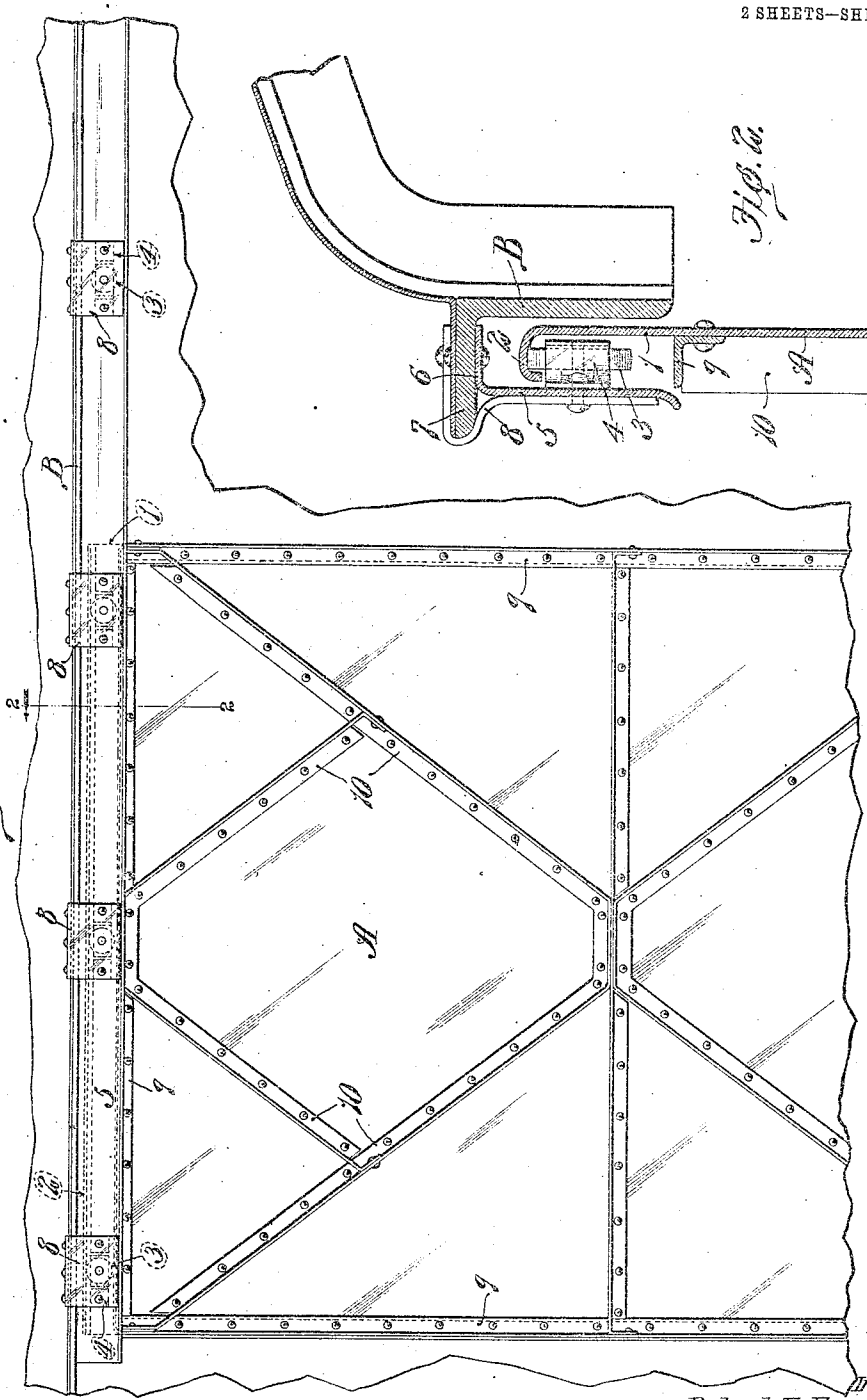


Fig. 1.



Witnesses:
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Inventors.
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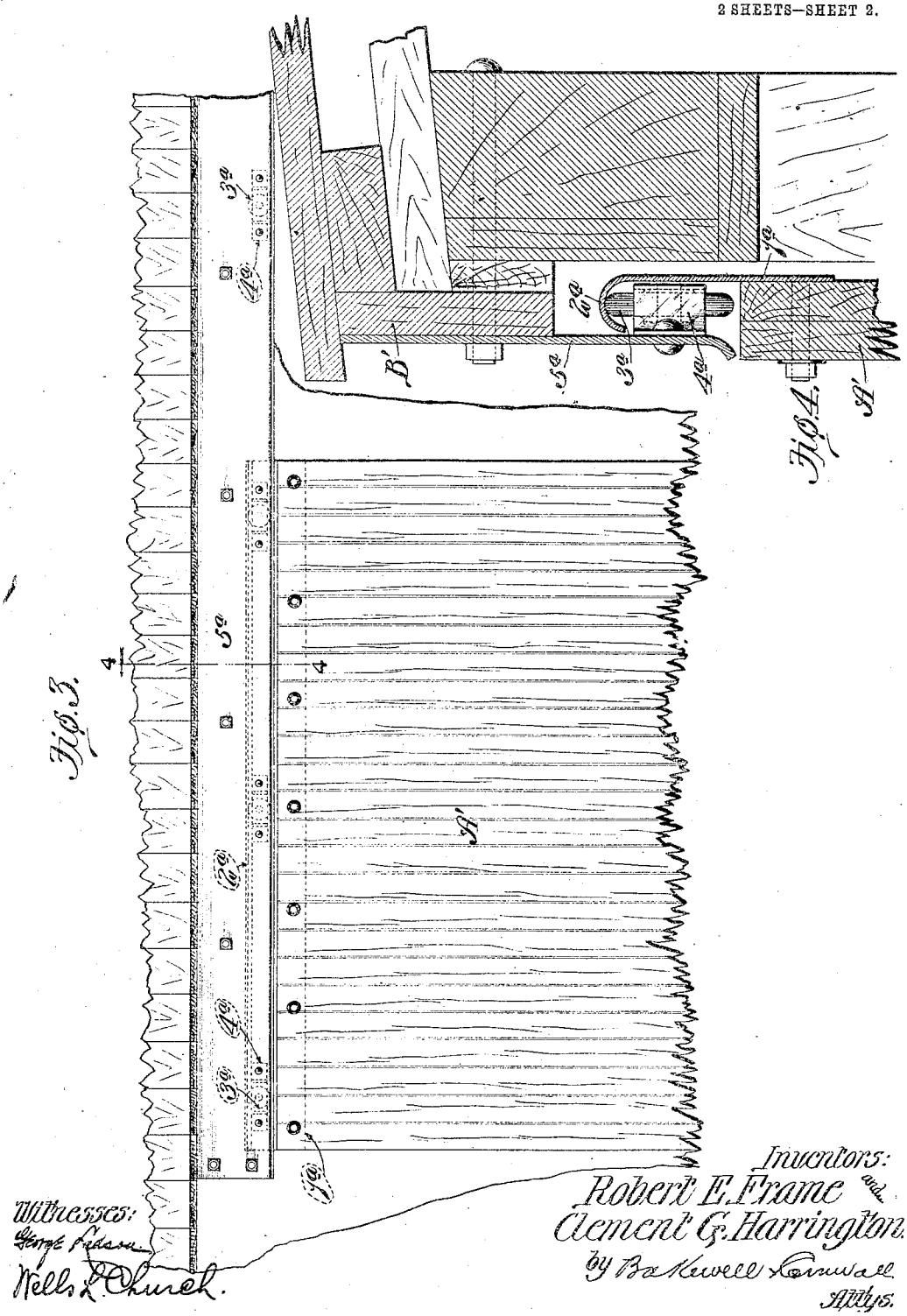

Fig. 4.

Fig. 3.

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UNITED STATES PATENT OFFICE.

ROBERT E. FRAME, OF ST. LOUIS, AND CLEMENT G. HARRINGTON, OF MAPLEWOOD, MISSOURI, ASSIGNORS TO AMERICAN CAR & FOUNDRY COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

CAR-DOOR HANGER.

941,069. Specification of Letters Patent. Patented Nov. 23, 1909.

Original application filed January 31, 1908, Serial No. 413,641. Divided and this application filed October 30, 1908. Serial No. 460,330.

To all whom it may concern:

Be it known that we, ROBERT E. FRAME and CLEMENT G. HARRINGTON, both citizens of the United States, residing at St. Louis, Missouri, and Maplewood, St. Louis county, Missouri, respectively, have invented a certain new and useful Improvement in Car-Door Hangers, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a portion of a metal car door provided with a door hanger constructed in accordance with our invention; Fig. 2 is an enlarged vertical sectional view taken on approximately the line 2—2 of Fig. 1; Fig. 3 is a side elevation of a portion of a wooden car door provided with our improved car door hanger; and Fig. 4 is an enlarged vertical sectional view taken approximately on the line 4—4 of Fig. 3.

This invention relates to car door hangers. The car door hangers which have heretofore been in general use consisted of devices connected to the upper edge portion of the door and provided with rollers that traveled on a stationary track arranged adjacent the upper edge of the opening in the wall of the car which the door covered.

The main object of our invention is to provide a car door hanger of simple construction that can be manufactured at a low cost and which will not be liable to get out of order. To this end we have designed a car door hanger that comprises rollers carried by stationary devices or brackets arranged adjacent the upper edge of the door opening in the wall of the car, and a member projecting from the upper edge portion of the sliding car door and resting on said rollers so as to support the door in position and permit it to be slid into its open and closed positions.

In our pending application Serial No. 413,641 for steel box car, filed January 31, 1908, of which this present application is a division, we have illustrated a metal car door provided with a hanger constructed in accordance with our invention, but we do not wish it to be understood that our improved hanger is limited to use with metal car doors as it can be used equally well with wooden car doors.

Referring to Figs. 1 and 2 of the drawings, which illustrate a metal car door provided with a door hanger that constitutes the preferred form of our invention, A designates a sliding door that covers an opening in a car wall, and 1 designates a member on said door and provided with a laterally projecting flange 2 that rests on rollers 3 journaled in stationary devices or brackets 4, located adjacent the upper edge of the door opening, the flange 2 being preferably bent downwardly, as shown in Fig. 2, so as to form a substantially inverted U-shaped or channel-shaped track member inside of which the rollers 3 are located. The flange 2 projects outwardly from the front face of the door, and the rollers 3 are located in front of the door.

In the construction herein shown, the devices or brackets 4 in which the rollers 3 are journaled are connected to the inner face of a hood 5 that extends transversely across the upper edge of the door opening so as to prevent the rain or snow from beating into the car over the upper edge of the door. The hood 5 is preferably constructed of sheet metal and is provided at its upper edge with a flange 6 that is fastened to the underside of a laterally projecting flange 7 on the upper side plate B of the car wall, the hood being reinforced and strengthened by a number of metal members 8 connected to the outer face of the hood and to the flange 7 of the side plate B.

The door shown in Figs. 1 and 2 which represents the preferred form of our invention, consists of a metal plate A provided with marginal reinforcing members 9 and also a number of convergent angular brace

members 10 arranged inside of the marginal edges of said plate, the flanged hanger member 1 on said door consisting of an extension or integral portion of the plate A. It will be obvious, however, that it is immaterial so far as our broad idea is concerned whether the track member is formed integral with the door or consists of a separate piece connected to the upper edge portion of the door. We have illustrated such a construction in Figs. 3 and 4, but instead of showing the track member connected to a metal door we have shown a flanged track member 1^a connected to the upper edge portion of the door A'. The car shown in Figs. 3 and 4 is also of wooden construction, and the hood member 5^a consists of a metal plate which is connected to the outer face of the wooden side plate B' of the car wall, the hood 5^a being provided on its inner face with brackets 4^a that carry rollers 3^a on which the flange 2^a of the track member rests. Preferably the hood in both the constructions shown in Figs. 2 and 4 has its lower edge flared outwardly so as to deflect or shed water from the door. The rollers are so disposed relatively to each other that the track member will always rest on at least two of the rollers and thus balance the door properly.

A door hanger of this construction is not liable to get out of order, and as it comprises few parts and is of very simple construction, it can be manufactured at a low cost.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In combination, a car wall, an upper side plate secured thereto and provided with a laterally projecting flange, brackets arranged under said flange, means on said flange for supporting said brackets, rollers journaled in said brackets, a sliding car door, and a member projecting outwardly from the upper edge of said door and traveling on said rollers.

2. In combination, a car wall, an upper side plate secured thereto and provided with a laterally projecting flange, brackets arranged underneath said flange, rollers journaled in said brackets, a sliding car door, a member projecting outwardly from the upper edge of said door and traveling on said rollers, and a housing member connected to said side plate for carrying said brackets and protecting said rollers.

3. In combination, a supporting wall provided with a door opening, a sheet metal housing member arranged adjacent the upper edge of said opening and having a vertical wall whose lower edge is curved outwardly, brackets connected to the inner face of said wall, rollers mounted on said brackets, and a sliding door provided at its upper edge with a laterally projecting flange that travels on said rollers.

4. In combination, a car wall having a door opening and provided with an upper side plate or reinforcing member which consists of a metallic member that has a horizontally disposed flange or portion which projects laterally from said car wall, a sheet metal housing member connected to the horizontal flange of said reinforcing member and provided with a vertical wall whose lower edge is flared outwardly, rollers carried by devices that are connected to the vertical wall of said housing member, and a sliding door provided at its upper edge with a laterally flanged portion that rests upon and travels on said rollers.

5. In combination, a car wall provided adjacent its upper edge with a reinforcing member that has a laterally projecting flange, a housing member depending from said flange, stationary devices arranged inside of said housing, rollers journaled on said devices, and a sheet metal door provided at its upper edge with an integral laterally projecting flange that rests upon and travels on said rollers.

6. The combination with a metal door and a supporting member integral therewith comprising an upwardly and laterally extended flange, of a housing into which said flange is adapted to extend, brackets secured to the inside of said housing, and rollers journaled in said brackets on which said support is adapted to travel.

7. In combination, a supporting wall having a laterally extending flanged member secured thereto, a housing member separate and distinct from said flanged member and connected thereto, rollers arranged inside of said housing member and spaced away from said wall, and a sheet metal door having an upwardly and a laterally extending flange at its upper edge adapted to travel on said rollers.

8. In combination, a car having a door opening therein, a sliding door for closing said opening, a flanged side plate extending across the upper edge of said door opening, a protecting hood secured to the flange of said side plate, rollers journaled in the inner face of said hood, brackets embracing said rollers and forming a bearing for the journals thereof, and a flanged extension on the upper edge of said door adapted to coöperate with said rollers to support the door.

9. In combination, a car having a door opening therein, a sliding door for closing said opening, a flanged side plate extending across the upper edge of said door opening, a protecting hood secured to the flange of said side plate, rollers arranged inside of said hood, brackets embracing said rollers

and forming a bearing for the journals thereof, reinforcing members on the outer face of said hood opposite each bracket and connected to said side plate and to said hood, and a flanged extension on the upper edge of said door adapted to coöperate with said rollers to support the door.

In testimony whereof, we hereunto affix our signatures in the presence of two witnesses, this 27th day of October, 1908.

ROBERT E. FRAME.
CLEMENT G. HARRINGTON.

Witnesses:
WELLS L. CHURCH,
GEORGE BAKEWELL.