K. F. NYSTROM

BOLT MOUNTING AND SHOE FOR CAR DOOR POSTS

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Inventor
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To all whom it may concern:

Be it known that I, KARL F. NYSTROM, a subject of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bolt Mountings and Shoes for Car-Door Posts, of which the following is a specification.

This invention relates to a combined post-shoe and locking bolt mounting for the movable door posts in auxiliary freight car doors, and has for its object to provide a device of this kind which will afford a simple, cheap, durable protecting shoe for the end of the post, as well as a housing for the locking bolt to serve as a means of assembly of the locking bolt with the post and to permit the locking bolt to be held in assembly with its housing, by the presence of the post in the shoe; the general construction and design of the parts being such that they may be produced by the relatively cheap process of casting and with a minimum of expense for finishing.

In carrying out the invention a cast metal shoe having a plurality of sides, preferably four, for positioning the end of the post within it, and with the face or foot by which it rests against the floor or other portion of the freight car structure to which the post is to be secured, is also provided with a socket in which a bolt can slide longitudinally into and out of a keeper in the car body; said socket being provided in its outer wall with a slot that receives a stop pin projecting transversely from the bolt, and having its rear side, except at the bottom where the bolt is closely confined by a hole in the bottom plate of the shoe, originally open and depending upon a face of the inserted post as a closure therefor; the bolt being provided, on its rear side with a spacing lug or projection that bears against the face of the post to keep the bolt in normal relation to the socket in which it slides; and the design being such that the bolt can be assembled with its socket by first entering its locking end in the hole of the base plate then swinging the bolt laterally into its socket with its stop pin in position to enter the slot in the front wall of the socket.

In the accompanying drawing,

Figures 1 and 2 are two elevational views at right angles to each other of the combined shoe and bolt socket, with the bolt in the socket,

Figures 3 and 4 are, respectively, a bottom plan and a top plan view of the same, and

Figure 5 is a perspective view of the locking bolt.

1 represents a cast metal shoe or housing designed to receive the end of a post 2 in order to adapt the post for use as a movable door post of an auxiliary freight car door. Shoe 1 embodies in its construction a front wall 3, a rear wall 4, and side walls 5 and 6. Formed integrally with the front wall 3 is a socket 7 in which is mounted for longitudinal sliding movement, a locking bolt 8. The outer wall of the socket 7 is formed with a slot 9 that receives a stop pin 10 formed integrally with or otherwise carried by the bolt 8. The rear side 75 of the socket 7 is open to the interior of the shoe 1 in order that the bolt 8 may be introduced in its socket 7 from the inside of the shoe, the presence of the post 2, which is introduced into the shoe, after the bolt 8 is in place, being relied upon to confine the bolt against displacement. To keep the bolt 8 in vertical position, it carries a rearwardly extending lug 11 which contacts with the face and is opposed to the line across the open end of the socket. Shoe 1 is closed at the bottom by a stop 12 formed with a bearing foot 13 through which it rests upon the sill or other part of the outer part of the car. The socket 7 has a bottom opening 14 through which the bolt 8 may extend, in entering a keeper with which said portion of the car is provided. As shown by dotted lines in Figure 1 and surface shading in Figure 4, the bottom or stop 12 of the shoe 1 merges through means of beveled or curved surface 15, with the socket 7 in order to facilitate entry of the bolt into its socket at an angular position that will permit the stop pin 10 to enter the slot 9 before the bolt assumes vertical position. Extending laterally from the upper portion of the slot 9 is a recess 16 that receives the stop pin 10 when the bolt is withdrawn and this recess is formed at the bottom with a seat 17 in which the stop pin may drop behind the horn 18 that confines the stop pin against accidental displacement. The horn 18 has its salient not only rounded about the axis normal to the 110
outer face of the socket 7, but beveled or inclined from the outer face inwardly and downwardly so as to prevent lodgment of the stop pin 10 upon the horn in case of accidental rebounding of the bolt as a result of shock, jolt or other interference when in service. The upper end of the slot 9 is defined by an inclined wall 9, which automatically directs the stop pin 10 laterally to a position over the notched seat 17 by the mere act of throwing the bolt upward, so that when released the pin 10 will drop into said seat and be confined there against return to locking position by means of the horn 18.

1 claim:

1. A combined post shoe and bolt socket for door posts comprising a housing adapted to receive the end of a post and a bolt socket integral therewith, adapted to receive a bolt for locking the shoe with its contained post, in position relatively to a structure in which the post is used; said socket having its inner side open to the post to admit the bolt laterally thereto and said housing supporting the post with the face thereof in position to close the rear side of the socket.

2. The combination of a shoe adapted to receive and confine the end of a post or stud, a bolt socket integral therewith, having its side adjacent the shoe open to the interior thereof but adapted to be closed by the face of a post when in place in the shoe, and a bolt in said socket having a spacing lug presented toward the open side of the socket and adapted to contact with the post to limit the tipping of the bolt in the socket.

3. The combination of a shoe constructed to receive and confine the end of a post or stud, a bolt socket integral therewith and having its side toward the shoe open to the shoe but adapted to be closed by the face of a post in the shoe, and having a stop pin slot in its outer wall, and a bolt adapted to be introduced laterally into the socket, from the shoe, before the post is in place, and having a stop pin adapted to said slot; the slot being located to receive the stop pin with the lateral movement of the bolt into its socket.

4. The combination of a shoe adapted to receive and confine the end of a post or stud, a bolt socket integral with said shoe, open upon its inner side toward the interior of the shoe but having an aperture through which the end of the bolt works, and a bolt adapted to enter said socket from the shoe, by first introducing the end of the bolt into the lower portion of the socket and then swinging the bolt laterally into position.

5. The combination of a shoe adapted to receive and confine a post or stud, having a bottom which provides a step for the post and a foot which supports said bottom in elevated position, a socket integral with said shoe, open on its inner side to the interior of the shoe, and a locking bolt adapted to enter the socket of the shoe, by an endwise movement which introduces the end of the bolt into the lower portion of the socket, followed by the lateral movement which completes the introduction of the bolt.

6. The combination of a shoe adapted to receive and confine a post or stud, having a bottom which provides a step for the post and a foot which supports said bottom in elevated position, a socket integral with said shoe, open on its inner side to the interior of the shoe, and a locking bolt adapted to enter the socket of the shoe, by an endwise movement which introduces the end of the bolt into the lower portion of the socket, followed by the lateral movement which completes the introduction of the bolt; the stepping bottom of the shoe being merged with the bottom of the socket through means of a beveled surface.

7. The combination of a bolt and a shoe adapted to receive and confine the end of a post or stud, and a bolt socket carried by said shoe, formed with a slot in its outer wall to receive a stop pin by which the bolt is to be controlled, and having a recess opening laterally from said slot which recess provides a seat for said stop pin; the upper wall of the slot comprising a deflecting surface which directs the upwardly moving stop pin laterally to a position from which it gravitates into said seat when released.

Signed at Chicago, Illinois, this 4th day of November, 1924.

KARL F. NYSTROM.