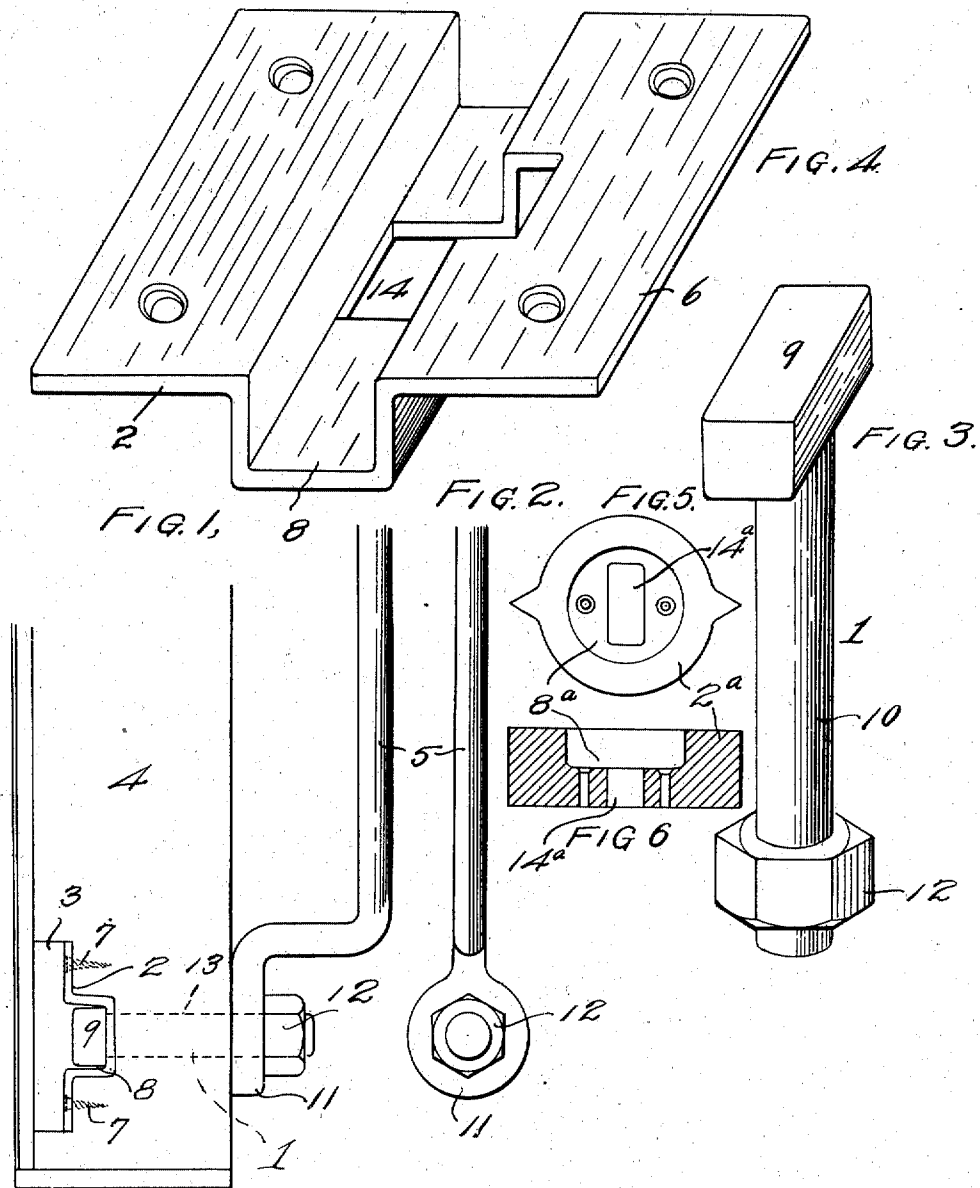


W. H. STIVER.
HAND RAIL FASTENING.
APPLICATION FILED OCT. 17, 1910.

984,114.

Patented Feb. 14, 1911.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM H. STIVER, OF ALTOONA, PENNSYLVANIA.

HAND-RAIL FASTENING.

984,114.

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To all whom it may concern:

Be it known that I, WILLIAM H. STIVER, citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Hand-Rail Fastenings, of which the following is a specification.

This invention relates to fastening means for hand rails or hand grips such as are used on and about cars, and has in view a simple and practical bolt fastening for that purpose which not only provides means for securely holding the hand grip in place, but also admits of the convenient and ready removal and replacing of parts in the event of damage or breakage.

With these and other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts herein-after more fully described, illustrated and claimed.

Preferred embodiments of the invention are shown in the accompanying drawings, in which—

Figure 1 is an elevational view illustrating a hand grip secured to a post or equivalent support by means of the improved fastening device. Fig. 2 is a detail front view of a portion of the hand grip shown in Fig. 1. Fig. 3 is a detail in perspective of the securing bolt. Fig. 4 is a detail in perspective of the preferred form of keeper plate for the securing bolt. Fig. 5 is a plan view of a modified form of keeper bolt. Fig. 6 is a cross-sectional view of the modification shown in Fig. 5.

Like references designate corresponding parts in the several figures of the drawings.

The improved fastening device, claimed herein, essentially comprises securing bolt 1 and a keeper plate 2. The keeper plate 2 is seated in a plate recess 3 provided therefor in a post or equivalent support 4 upon which is mounted and carried the hand grip 5, the latter being such a grip or hand rail as is found upon the side posts of street cars, or upon freight cars, and in other places where grips or hand rails of this character are useful. The said keeper plate 2 is housed within the recess 3 and in its preferable form

is provided with side attaching flanges 6 which receive the screws or other fastening means 7 for holding the plate in place, and in addition to said flanges 6 the said plate 2 has formed therein a socket depression 8 adapted to accommodate therein the T-head 9 at one end of the shank 10 of the bolt, the other threaded end of which bolt extends through the ear 11 at the end of the hand grip and receives thereon a clamping nut 12. The bolt 1 is detachably arranged in a bolt hole 13 formed in the post or support 4, and the keeper plate 2 is provided with rectangular clearing slot 14 disposed transversely of the socket depression 8 and providing means whereby the bolt head 9 may be engaged and disengaged within the socket depression 8. When turned crosswise of the slot 14 the head 9 is held locked within the socket 8 of the keeper plate.

The modification of the keeper plate shown in Figs. 5 and 6 involves a plate body 2^a formed with a socket depression 8^a and comprises in the bottom thereof a clearing slot 14^a, all of which parts perform the functions already indicated.

The distinct advantage of this bolt fastening device is the convenience it offers in replacing the bolt that secures the hand grips, this being performed without disturbing the inside finish of the car or vehicle to which it is attached. This convenient form of bolt attachment is also applicable to any place where it is desired to replace bolts from the outside. This facilitates in a very practical way the removal of bolts without the necessity of tearing away any of the structure around the bolt, such for example as that near the draft gear or any place where the bolt is first put in place and the same covered with parts of the structure, as shown in Fig. 1 of the drawings.

I claim:

1. In a fastening device of the character referred to the combination with a supporting element and a hand grip having an ear, of a keeper plate fitted to said supporting element and having a socket depression and an angular clearing slot in the bottom of said depression, and a securing bolt having a T-head cooperating with said slot and with said socket depression.

2. In a fastening device of the class de-

scribed the combination with a supporting element and a hand grip having an ear, of a keeper plate rigidly secured to the supporting element and provided with side attaching flanges, a socket depression, and a rectangular clearing slot pressing the bottom of said depression, and a securing bolt having a T-head cooperating with said slot and with said socket depression, said bolt engaging the ear of the handle. 10

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

WILLIAM H. STIVER.

Witnesses:

N. E. GEE,

Ross S. STIVER.