

W. E. WINE.
LADDER AND HANDHOLD FOR RAILWAY CARS.
APPLICATION FILED JUNE 27, 1912.

1,075,455.

Patented Oct. 14, 1913.

Fig. 2

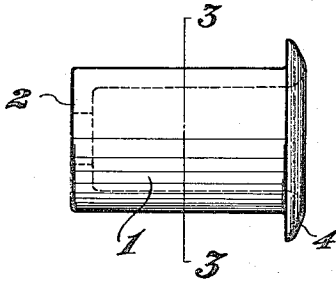


Fig. 1

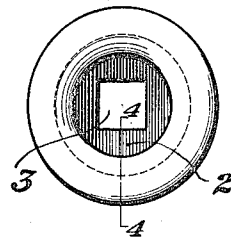


Fig. 4

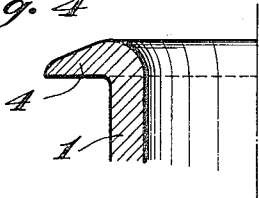


Fig. 5

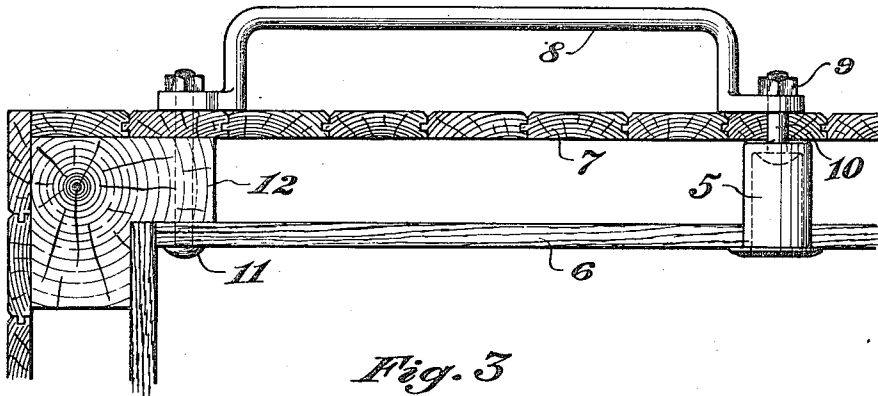
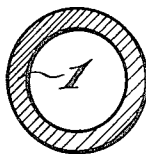


Fig. 3



Witnesses:

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UNITED STATES PATENT OFFICE.

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LADDER AND HANDHOLD FOR RAILWAY-CARS.

1,075,455.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM E. WINE, a citizen of the United States, residing at Wilmington, in the county of New Hanover and State of North Carolina, have invented certain new and useful Improvements in Ladders and Handholds for Railway-Cars, of which the following is a specification, reference being had to the accompanying drawing, forming a part hereof.

My invention relates to an improvement in means for attaching ladders and hand holds to railway cars and similar structures.

The object of my invention is to provide a means whereby a ladder or hand hold may be secured to both the inner and outer walls of a car without the necessity of placing a filler between them. At present in order to make a solid wall at a point where a ladder or hand hold is bolted to a car a filler is placed between the inner and outer walls, but in old or existing cars this method becomes very expensive as it is necessary to remove a portion of either the inner or outer wall to insert the filler.

Therefore my invention consists of a means adapted to receive a bolt and engage the inner and outer walls of a car in securing a ladder or hand hold thereto.

Referring now to the accompanying drawing which illustrates the preferred embodiment of my invention: Figure 1 shows a plan view of a washer so formed that it may engage both the inner and outer walls of a car in securing a ladder or hand hold; Fig. 2 is a side view of same; Fig. 3 is a section on line 3—3; Fig. 4 is a section on line 4—4; Fig. 5 shows a hand hold applied to a railway car which is shown partly in section, one end of the hand hold being fastened by a bolt passing through the corner post and the other end secured by a bolt in engagement with a washer which engages the inner and outer walls of the car.

Referring now to the parts by number, 1 is the hollow cylindrical body of a washer closed at its outer end by a disk 2 through which is a hole 3. At the inner end of the hollow cylindrical body is a circular flange 4 made tapering from a point near the body to its outer edge which is to prevent lading from catching thereon and causing damage to either the car or lading. The hole 3 is made square in order to keep the bolt from turning when applying the nut. In Fig. 5

this washer is designated by 5 and extends through the inner wall 6 to a point near the inside of the outer wall 7. The outer end of the washer 5 does not come in contact with the outer wall 7 until the hand hold 8 has been applied and the nut 9 of the bolt 10 drawn down tight thus causing the outer wall to spring in and the inner wall to spring out until the outer end of the washer is tight against the inside of the outer wall and the flange is tight against the inside of the inner wall.

It will thus be seen that when a ladder or hand hold is bolted to a car in the manner shown it will be firmly held by both the inner and outer walls. The opposite end of the hand hold is secured by a bolt 11 passing through the inner and outer walls and a portion of the corner post 12 of the car. While the method of applying hand holds as shown in Fig. 5 requires only one washer, the other end being bolted through the corner post, it is evident that in some cases it will be desirable to use a washer for both fastenings. Also in Fig. 5 the washer is shown in the application of a hand hold but it will be understood that it is equally applicable to any style of ladder or at any place where there is no filler and it is necessary to place a bolt through the inner and outer walls of a car or like structure. To apply one of these washers it is only necessary to bore a hole the size of the body of the washer through the inner wall, the washer can then be inserted and the hole through the disk at the outer end can be used as a templet for boring the hole through the outer wall for the bolt securing the hand hold or ladder.

Having thus described my invention, what I claim is:

1. The combination with an inner wall and an outer wall spaced apart and a device to be secured thereto, of fastening means comprising a washer adapted to engage the inner wall and the inner surface of the outer wall and means engaging said device and said washer.

2. The combination with an inner wall and an outer wall spaced apart and a device to be secured thereto, of fastening means comprising a washer adapted to engage one of said walls and the adjacent surface of the other wall and a bolt engaging said washer and said device.

3. The combination with an inner wall

and an outer wall spaced apart and a device to be secured to the exterior of the outer wall, of fastening means consisting of a socket washer having a hollow cylindrical body and a perforated disk at one end adapted to rest against the outer wall and having a flange at its other end adapted to rest against the inner wall and a bolt extending through the perforation in the disk with its head resting against the disk and a nut on the other end of the bolt.

W. E. WINE.

In the presence of—
MEARES HARRISS,
R. W. BARKER.
