

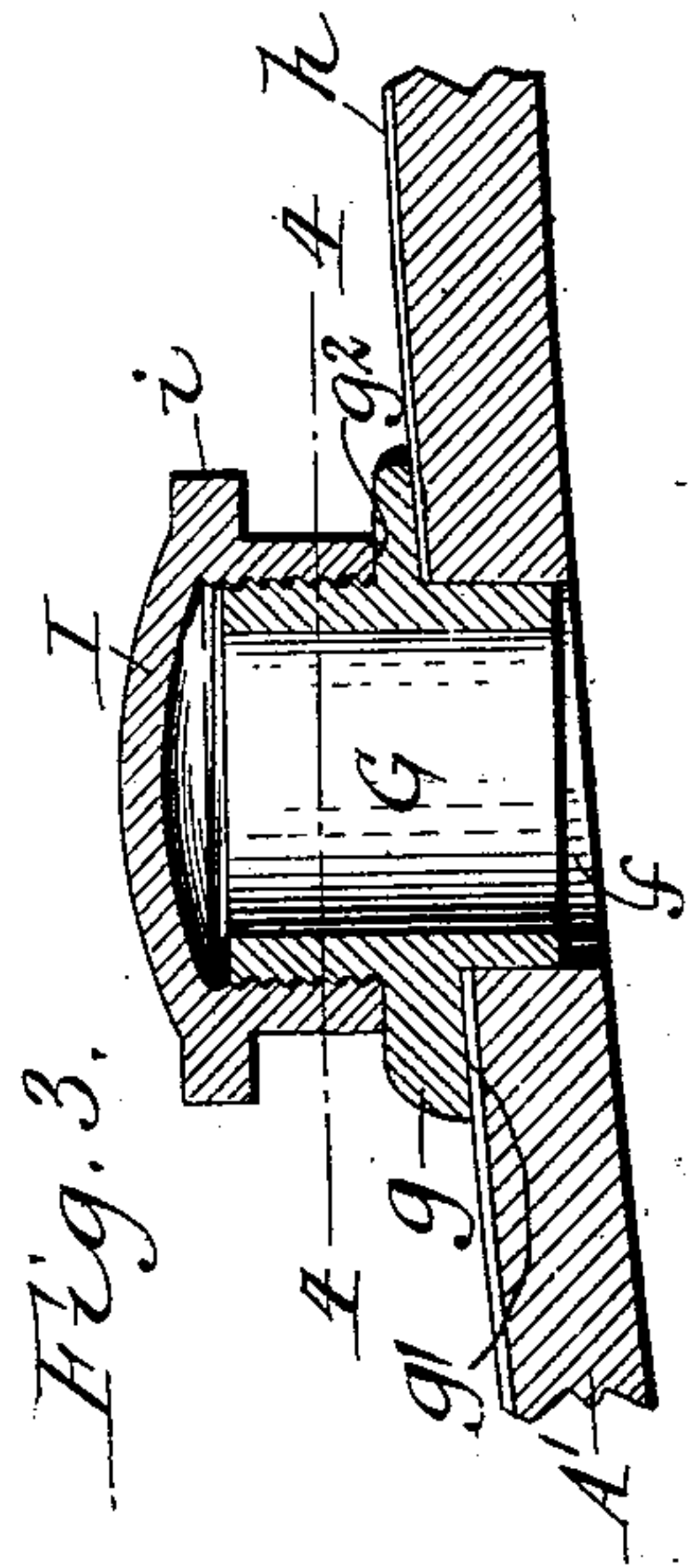
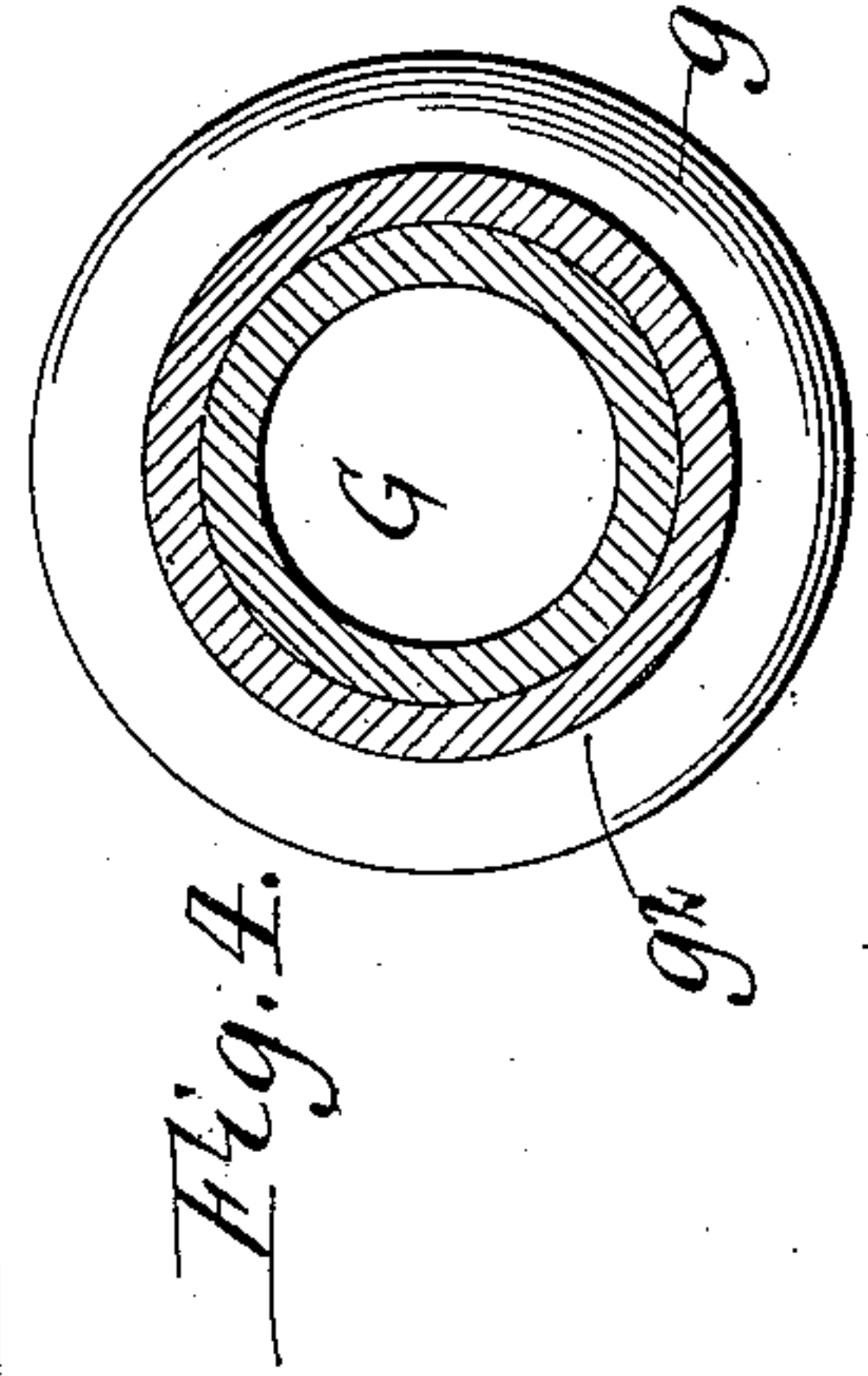
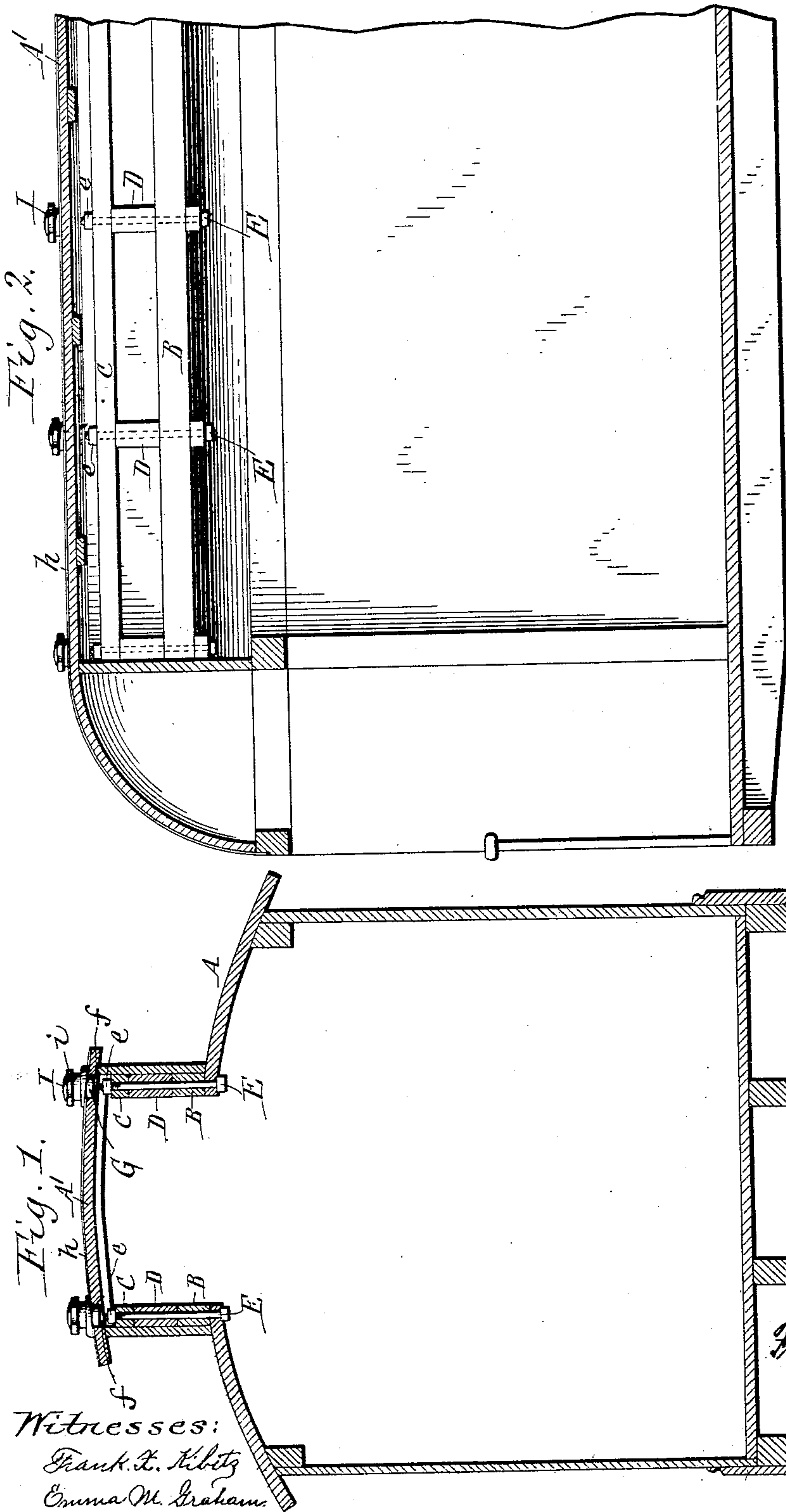
No. 703,069.

Patented June 24, 1902.

F. KUEMPEL.
RAILWAY CAR.

(Application filed Oct. 31, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERICK KUEMPEL, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF
TO IRVIN LINCOLN, OF BUFFALO, NEW YORK.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 703,069, dated June 24, 1902.

Application filed October 31, 1901. Serial No. 80,635. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK KUEMPEL, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Railway-Cars, of which the following is a specification.

This invention relates to the roof structure of railway-cars. The upper and lower deck-rails of such cars are usually tied together by vertical rods or bolts which pass through the deck posts or studs. The nuts of these bolts, which are arranged at the upper ends of the bolts, are liable to become loose from the straining of the car-timbers due to the vibrations of the car, rendering it necessary to tighten the nuts from time to time. In tightening these bolts it has heretofore been the common practice to cut holes in the roof and its tin covering opposite the tie-bolts to gain access to the nuts, the holes being covered by patches of tin after taking up the looseness of the bolts. This practice involves a considerable loss of time and material and gives the roof a patched and unsightly appearance.

The object of my invention is to provide the car-roof with simple and inexpensive means for facilitating access to the nuts of the tie-bolts and at the same time reliably closing the openings in the roof through which the nuts are reached, so as to exclude the weather.

In the accompanying drawings, Figure 1 is a transverse section of a passenger-car embodying my invention. Fig. 2 is a fragmentary longitudinal section thereof. Fig. 3 is an enlarged vertical section of one of the caps applied to the car-deck. Fig. 4 is a horizontal section in line 4 4, Fig. 3.

Like letters of reference refer to like parts in the several figures.

A indicates the main roof or lower deck of the car, and A' the upper deck.

B is the usual deck bottom rail, C the deck top rail, and D the posts or studs arranged between these rails.

E indicates the vertical tie-bolts, which pass through the deck top and bottom rails and the posts D, and e indicates the nuts applied to the upper ends of the bolts.

The upper deck A' is provided opposite the

upper ends of the tie-bolts E with openings *f* of sufficient size to admit a socket-wrench for tightening the nuts of the bolts. To each of these openings is applied a short upright tube or nipple G, open at both ends and provided with a base-flange *g*, which is secured to the upper side of the deck A' by any suitable means, preferably by soldering the same to the tin covering *h* of the deck. As most clearly shown in Fig. 3, the under side *g'* of this flange is preferably inclined or beveled from side to side, so as to rest flat upon the sloping upper deck, while its upper side or face *g''* is horizontal or in a plane at right angles to the axis of the tube G. This tube projects above the upper deck and is externally screw-threaded and, if desired, it may extend into the wrench-opening *f* of the deck, as shown.

I is a screw-cap removably applied to the projecting screw-threaded portion of the tube G for preventing the entrance of rain, snow, and dust through the same. The lower edge of this cap is straight and bears against the horizontal upper face of the tube-flange *g*, forming a tight joint. The screw-cap is provided with a flat-sided rim *i*, adapted to receive a wrench for tightening and releasing the cap. As shown in the drawings, the edges of the tube-flanges *g* are convex or rounded, so as to shed rain therefrom. By providing the car with such closures opposite the tie-bolts E the nuts of the bolts are readily accessible upon simply removing the screw-caps I, thus enabling any looseness of the bolts to be readily taken up. This construction not only saves material and the time required by the rude and laborious practice of reaching these bolts by repeatedly cutting holes in the roof and covering the same with patches, but also forms a neat finish, which rather improves than detracts from the appearance of the roof. After tightening the tie-bolts the caps I are replaced, thereby excluding water, dust, &c.

My improvement is also applicable to freight, street, and other cars and may also be applied to the car-roof opposite other bolt-like members, such as the rods or tubes which carry the brackets of the car-lamps.

I claim as my invention—

1. In a railway-car, the combination with the roof, of rods or bolts provided at their upper ends with screw-nuts arranged adjacent to the roof and accessible through wrench-openings located in the roof opposite the nuts, upright tubes or nipples secured to the roof in line with said openings, and removable caps applied to the upper ends of said nipples, substantially as set forth.
2. In a railway-car, the combination with the upper and lower decks, the deck top and bottom rails and the posts arranged between said rails, of tie-bolts passing through said top and bottom rails and having nuts at their upper ends which are accessible through wrench-openings located in the upper deck opposite the nuts, tubes or nipples applied to said openings and projecting above said deck and each provided with a base-flange which is secured to the surface of the deck, and removable caps applied to the projecting upper ends of said tubes, substantially as set forth.
3. In a railway-car, the combination with the upper and lower decks, the deck top and bottom rails and the posts arranged between said rails, of tie-bolts passing through said top and bottom rails and having nuts at their upper ends which are accessible through wrench-openings located in the upper deck opposite the nuts, externally-screw-threaded tubes or nipples applied to said openings and projecting above the upper deck and each provided with a base-flange having an inclined under side which rests upon the top of said deck and a straight upper face arranged at right angles to the axis of the tube, and screw-caps engaging with said screw-threaded tubes and each having a straight lower end which bears against the upper face of the corresponding tube-flange, substantially as set forth.

Witness my hand this 29th day of October, 1901.

FREDERICK KUEMPEL.

Witnesses:

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