Sept. 6, 1932. E. R. SWANSON 1,875,832

RAILWAY CAR

Filed May 27, 1929

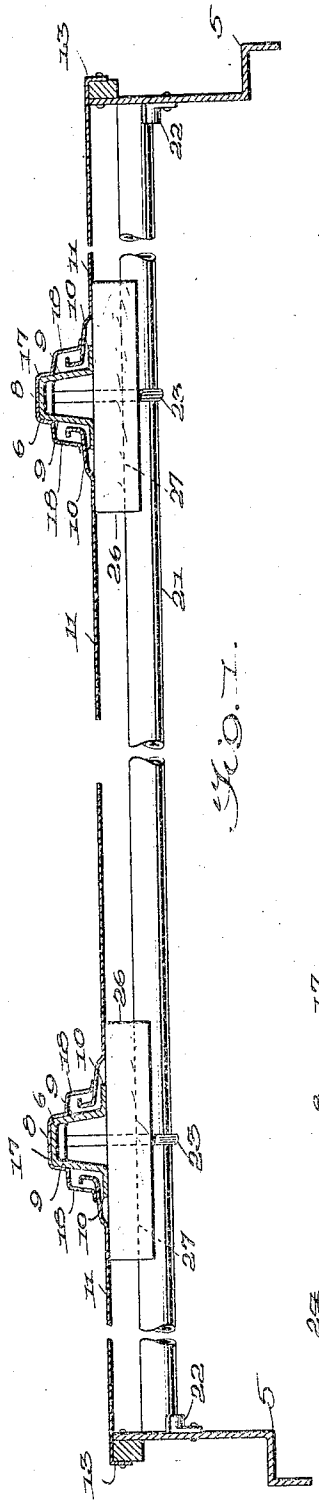


Fig. 1.

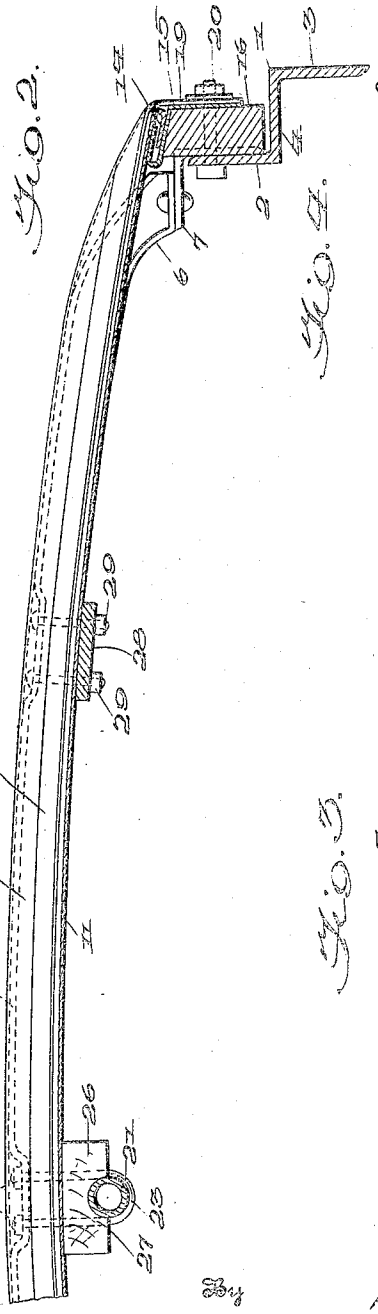


Fig. 2.

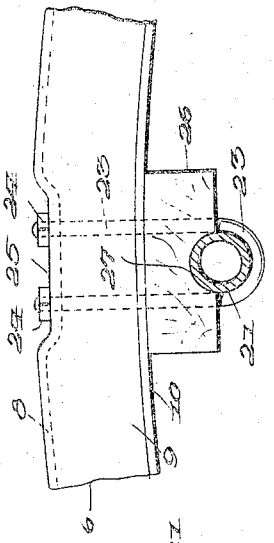


Fig. 4.

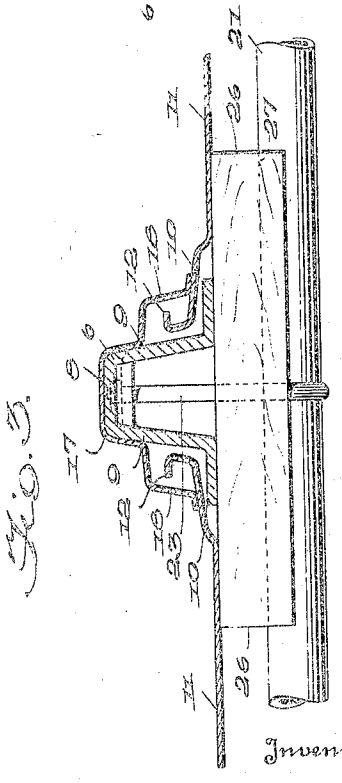


Fig. 5.

Inventor

Earl R. Swanson

By Ritter & Maehlin

his Attorneys

Patented Sept. 6, 1932

1,875,832

UNITED STATES PATENT OFFICE

EARL R. SWANSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO CHICAGO-CLEVELAND CAR ROOFING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE

RAILWAY CAR

Application filed May 27, 1929. Serial No. 366,405.

My invention relates to railway cars and more particularly to a load lifting device adapted to be associated with the roof structure. A principal object of the invention is to provide means extending longitudinally of the car and supported by the carlines affording means for receiving a rope, chain or other hoist device whereby automobiles and other articles may be raised above the car floor.

A primary feature of the invention consists in providing a car roof of the type involving carlines and roof sheets, with a beam member extending longitudinally of the car in spaced relation to the roof sheets, and in associating therewith filler blocks which project on opposite sides of the carlines for supporting the roof sheets, means passing through the filler blocks and carlines for supporting the beam member.

Another feature of the invention resides in constructing a car roof of the type involving carlines and roof sheets with a beam member extending longitudinally of the car in spaced relation to the roof sheets, and in associating therewith, filler members for supporting the roof sheets, U-shape members being employed for connecting the beam member and carlines, the ends of each of the U-shape members being secured to the carlines.

Other and more specific features of the invention residing in advantageous forms and combinations and relations of parts will hereinafter appear and be pointed out in the claims.

In the drawing illustrating a preferred embodiment of the invention.

Figure 1 is a fragmentary longitudinal sectional view of a car roof embodying the invention.

Figure 2 is a fragmentary transverse sectional view of the roof construction illustrated in Figure 1.

Figure 3 is an enlarged detailed view illustrating a portion of the roof construction shown in Figure 1 adjacent one of the carlines.

Figure 4 is an enlarged detailed view taken at right angles to Figure 3, the roof sheets and associated seam cap being omitted.

As the construction of the roof on opposite sides of its longitudinal center is identical, the transverse sectional view illustrated in Figure 2 depicts a little more than one-half of the roof structure.

Referring more particularly to the drawing 1 indicates one of the side plates of the roof structure which may advantageously be of Z-section having substantially vertical flanges 2 and 3 connected by a horizontal web 4. The end plates 5 of the roof which, as is well known, are rigidly connected to the side plates are also Z-shape and are arranged in a manner similar to that of the side plates.

Extending continuously from one side of the car to the other are metal carlines 6 which are connected at their opposite ends by brackets 7 to the adjoining side plates. Each of the carlines is preferably of inverted channel shape having a horizontal web 8 and downwardly projecting substantially vertical sides 9, each of which terminates in lateral base flanges 10. The roof sheets 11 which also extend continuously from one eaves edge of the roof to the other respectively span the spaces between the carlines. The lateral edges of each of the roof sheets, with the exception of the outer edges of the end roof sheets are flanged upwardly as at 12 and are spaced slightly from the adjacent sides of the carlines. The outer edges of the end roof sheets may be flanged downwardly as at 13 for connection to the side plates. The eaves edges of the sheets 11 are formed with inwardly projecting flanges 14 for cooperating with flashing strips 15 respectively mounted upon side fascias 16 which are carried by the side plates 1.

Embracing each of the carlines 8 is a seam cap 17 for connecting the adjoining edges of the roof sheets. The sides of each of the seam caps are fashioned with offsets 18 to form housings for the upturned flanges 12 of the roof sheets. The ends of the seam caps are preferably turned downwardly as at 19 and secured to the side members of the roof by bolts 20. Intermediate their ends the seam caps may be firmly secured to the carlines by any suitable means (not shown).

The load lifting device 21, illustrated in the

present embodiment of the invention as a tubular beam, extends continuously from one end of the roof to the other substantially midway between the ends of the carlines in spaced relation to the roof sheets. At its ends the beam is preferably rigidly connected to the end plates by brackets 22 which may be of any convenient shape. Intermediate its ends the beam is connected to each of the carlines by a U-shape member 23. The U-shaped members are arranged to extend beneath and embrace the beam member and the ends of each, which are threaded, project through apertures formed in the web 8 of the associated carline, being secured thereto by nuts 24.

The portions of the webs of the carlines to which the U-shaped beam-supporting members 23 are secured are depressed as at 25 so that the ends of the members will not project upwardly above the tops of the carlines.

Interposed between the beam member and each of the carlines are filler members or blocks 26 whose undersurfaces are recessed as at 27 to receive the beam member. The filler blocks are adapted to engage the undersides of the base flanges 10 of the carlines and each is formed with apertures for receiving the U-shaped members 23. It will be readily perceived that when the U-shaped members are drawn upwardly by the nuts 24 the beam member is rigidly supported thereby and maintained in spaced relation to the roof sheets by the filler block 26. In this manner sufficient clearance is provided between the beam and roof sheets so that a rope, chain or other hoisting device may pass therebetween and be supported by the beam.

Each of the filler members is so proportioned that it projects a relatively great distance on opposite sides of the associated carline into engagement with the undersides of adjacent portions of neighboring roof sheets. Thus in addition to serving as means for spacing the beam member from the roof sheets, the fillers serve as means for supporting portions of the sheets adjacent the ridge of the roof. By forming the filler blocks 26 so that the U-shaped members pass therethrough the necessity of employing separate means for securing them in place is eliminated.

The portions of the roof sheets intermediate the ridge and eaves of the roof, are as usual, supported by purlins 28 connected to the carlines by bolts 29.

From the foregoing it will be readily perceived that the car roof is provided with simple, rigid and efficient means affording a convenient device whereby heavy loads may be raised and if necessary supported above the floor of the car.

I claim:

1. In a roof for railway cars, the combination with a plurality of carlines, each of said carlines having a web and downwardly extending legs terminating in oppositely projecting flanges, of roof sheets respectively associated with and spanning the spaces between the carlines, a beam member extending longitudinally of the car, filler blocks respectively interposed between the beam member and carlines and projecting beyond the flanges of the latter for supporting the roof sheets, and U-shaped members depending from the carlines for supporting the beams in spaced relation to the roof sheets, said beam being disposed within the legs of each U-shaped member and resting upon the portion of the latter connecting the legs, said filler blocks being respectively clamped between the beam and the lateral flanges of the carlines by said U-shaped members.

2. In a roof for railway cars, the combination with a plurality of carlines respectively having webs and downwardly extending legs, of roof sheets respectively associated with and spanning the spaces between the carlines, a beam extending longitudinally of the car in spaced relation to the roof sheets, U-shaped members respectively connecting the beam and carlines, the free ends of the legs of each of said U-shaped members being secured to the web of the associated carline and said beam being disposed between the legs of said members and resting upon the portions of the latter respectively connecting the said legs, and means interposed between the beam and roof sheets for supporting the latter.

In testimony whereof I affix my signature.

EARL R. SWANSON.