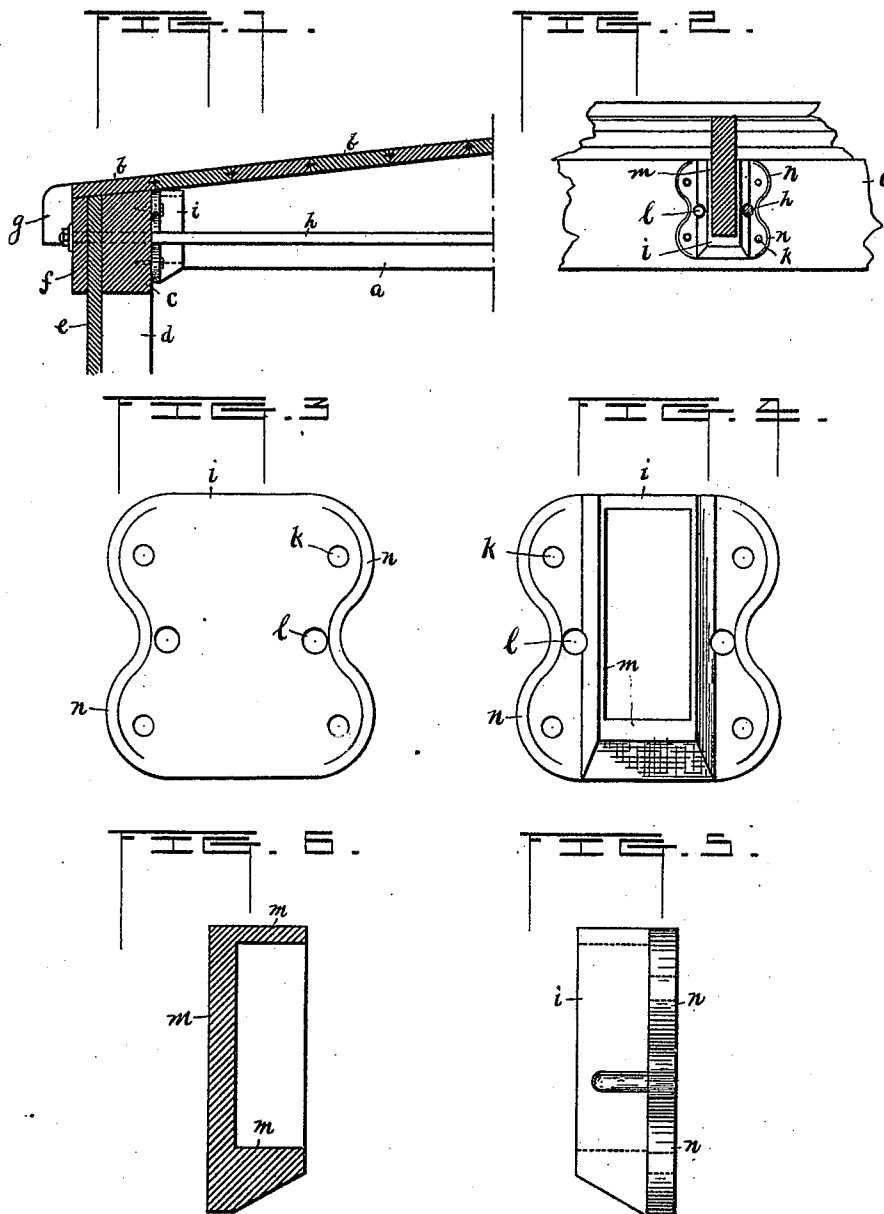


(No Model.)

W. E. COFFIN.
CARLING SOCKET FOR CAR FRAMES.

No. 470,744.

Patented Mar. 15, 1892.



WITNESSES

Arch. M. Catlin.
A. H. K. Lann.

INVENTOR

Walter E. Coffin
by
Reus. R. Catlin
att'y.

UNITED STATES PATENT OFFICE.

WALTER E. COFFIN, OF MARSHALL, TEXAS.

CARLING-SOCKET FOR CAR-FRAMES.

SPECIFICATION forming part of Letters Patent No. 470,744, dated March 15, 1892.

Application filed July 31, 1891. Serial No. 401,284. (No model.)

To all whom it may concern:

Be it known that I, WALTER E. COFFIN, a resident of Marshall, in the county of Harrison and State of Texas, have invented certain new and useful Improvements in Carling-Sockets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

The invention relates to carlings for the roofs of cars, such as used for transporting live or dead freight.

Heretofore the side plates of cars have been weakened by mortises, and the carlings have also been weakened by the forming of tenons or tenons and lips on their ends. These tenons and lips have been liable to wear in the mortises and also to break, split, warp, or turn. Further, a carling of the usual kind cannot be removed or replaced without spreading the car-frame and disturbing the roof.

The invention has for its object to provide means for strengthening the car and securing the carlings in place in such manner as to avoid the use of tenons and mortises and to provide for the removal or insertion of carlings when desired.

In the accompanying drawings, Figure 1 is a partial section of a car-roof. Fig. 2 is a partial elevation, a fragment of the roof and a single carling and a tie-rod shown in section. Figs. 3, 4, and 5 are respectively rear, front, and side elevations; and Fig. 6 is a vertical section of a holder adapted to receive the end of a carling.

Reference-letter *b* denotes the roof-boards.

a denotes a carling; *c*, a plate; *d*, a post; *e*, the car-siding; *f*, a face-plate, and *g* molding.

h indicates a tie-rod extending from side to side of the car and through the plates, as represented.

i indicates a holder for the carling end. It is made of metal and provided with holes *k* for bolts or screws, whereby it can be securely fastened to the plates *c*.

l denotes holes for the tie-rods. These holes are located near and partly in the side walls of the pockets, whereby all tendency of the carlings under the great and various

strains to which they may be subjected to be pulled out of the pockets is effectually obviated.

The carling-holder has a pocket, preferably of rectangular shape and inclosed by the walls *m*, as represented. The holes for the various bolts are formed in flanges, which latter are extended outwardly sufficient at *n* to provide that the holes shall not all be in one straight line. The holes for the tie-rods may be formed partially in the walls *m*. Four fastening-bolts for each holder and two tie-rods may be used; but these numbers may be varied. As indicated, the tie-rods pass through the carling-holder, the main side plate, the siding, and the face-plate on each side of the car, and are secured by nuts on their ends. Before they are put in position each end of the carlings is inserted in the pocket of a holder, which holders are then fastened to the plates, as stated.

To remove a carling or to replace one, it is only necessary to release the rods and the fastenings of the holders, whereupon the operation can be effected without disturbing the roof or spreading the car-frame.

Each end of the carling is preferably of the full size or nearly of the full size of the adjacent part thereof and closely fits the pocket, whereby its full strength is preserved and liability to split, break, wear, or twist is avoided. Should, however, a carling be wider than usual it can be fitted by reducing its end somewhat, as indicated at *o* in Fig. 1.

The constant and various strains to which car-roofs and frames are subjected in addition to their liability to many extraordinary injuries, renders it especially desirable that they be made as strong as practicable and that the construction be favorable to repairs, and these desirable objects are attained by the present improvement, which, however, is not confined to the exact form, size, and proportions indicated, as these may be varied, provided substantially the same mechanical principles and construction are employed.

I am aware that the use of holders with pockets adapted to receive the ends of braces or beams is not new, and I do not broadly claim such devices.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, it is declared that what is claimed is—

- 5 1. In a car, the upper side plates, in combination with a carling and with carling sockets or holders secured to the said plates, the upper side of each holder being in the same
10 plane as the upper face of its plate on which the roof-boards rest and each provided with a pocket to receive the end of a carling, and a tie-bolt passing through openings in the
15 holder and through the plate and provided with a nut on its outer end, substantially as set forth.

2. A holder for the end of a carling having a pocket and provided with flanges having holes for fastening screws or bolts and having separate holes for the tie-rods located close to and in contact with the walls of the pocket, 20 whereby the rods are held near the carlings, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WALTER E. COFFIN.

Witnesses:

F. A. HOPE,
S. P. JONES.