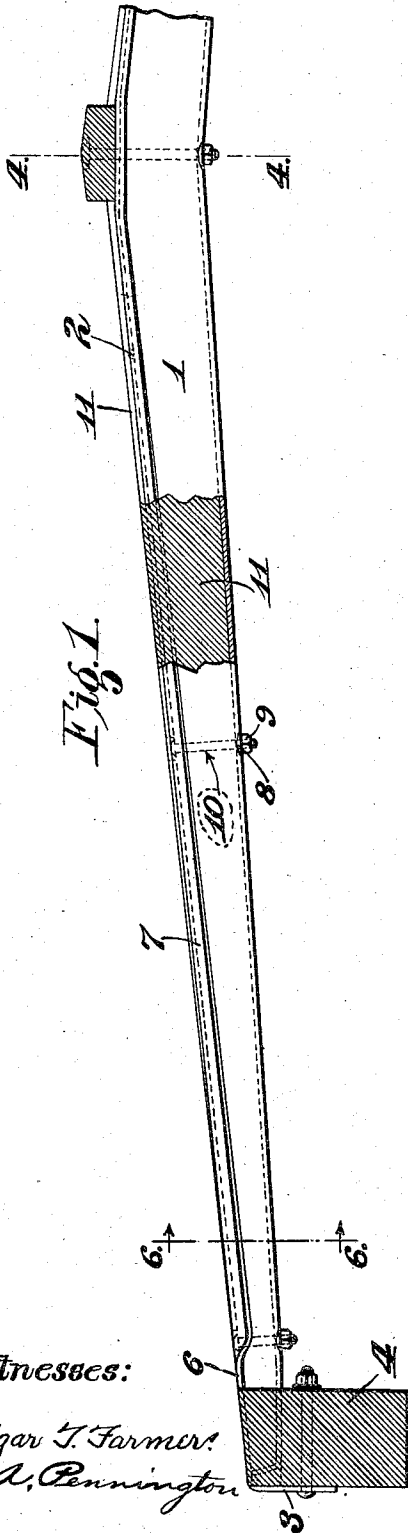


942,258.

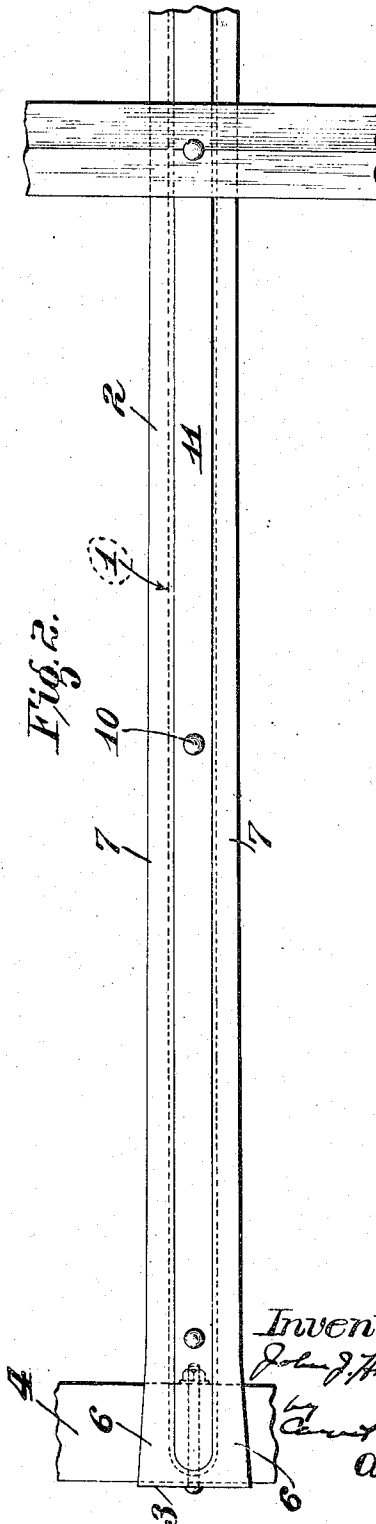
Patented Dec. 7, 1909.

2 SHEETS—SHEET 1.



Witnesses:

Edgar T. Farmer,
L. A. Pennington



Inventor:-

John J. Hoffman

by

Attys.

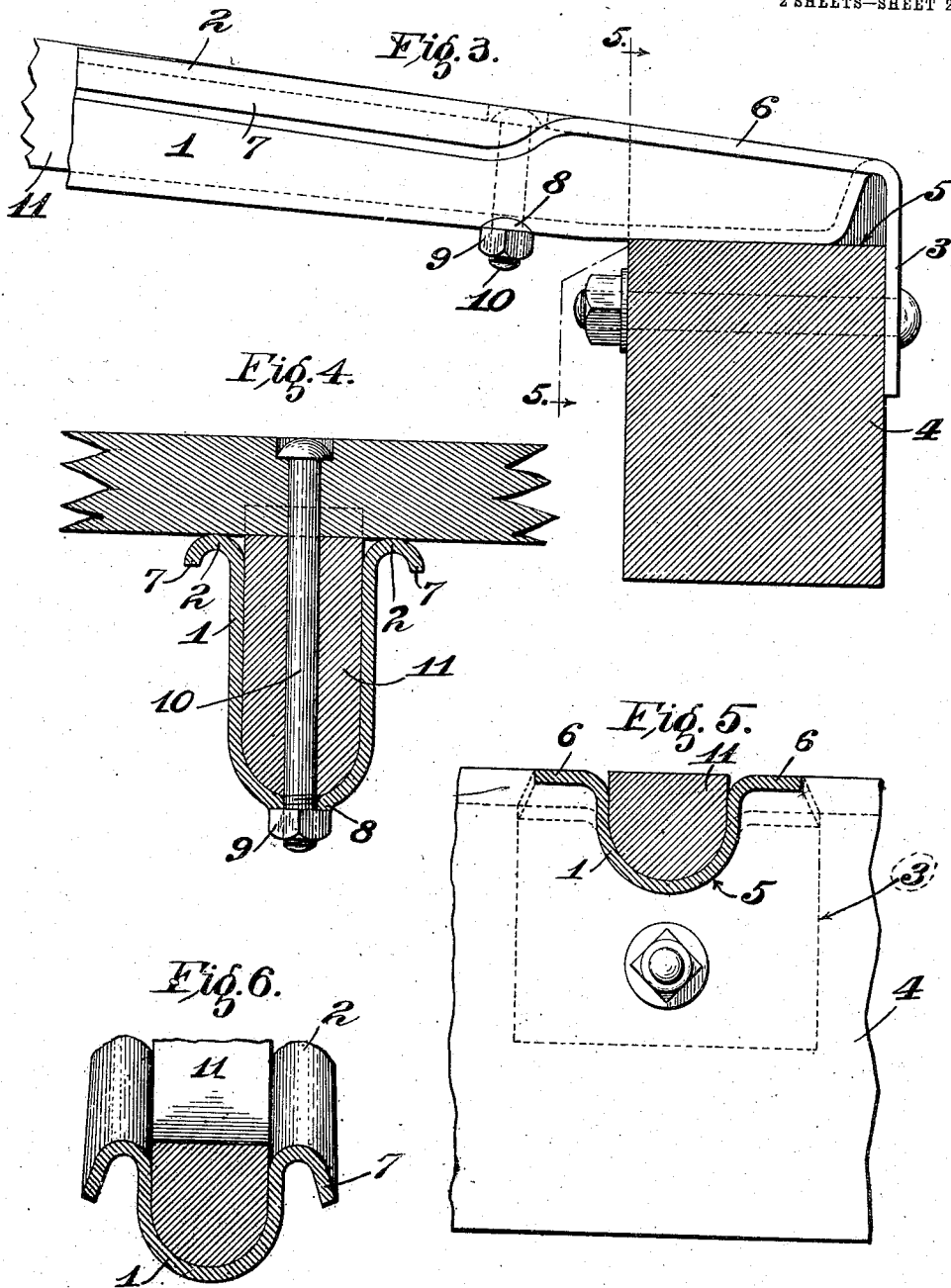
J. J. HOFFMAN.
CARLINE.

APPLICATION FILED MAY 26, 1908.

942,258.

Patented Dec. 7, 1909.

2 SHEETS—SHEET 2.



Witnesses:

Edgar T. Farmer:

G. A. Pennington

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UNITED STATES PATENT OFFICE.

JOHN J. HOFFMAN, OF ST. LOUIS, MISSOURI, ASSIGNOR TO PETER H. MURPHY, OF ST. LOUIS, MISSOURI.

CARLINE.

942,258.

Specification of Letters Patent.

Patented Dec. 7, 1909.

Application filed May 25, 1908. Serial No. 434,765.

To all whom it may concern:

Be it known that I, JOHN J. HOFFMAN, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented a new and useful Improvement in Carlines, of which the following is a specification.

My invention relates to carlines and has for its principal object to provide a metal carline that will develop the strength of the metal to the best advantage and will be free from some of the disadvantages of other metal carlines.

It consists in the construction and arrangements of parts hereinafter described and claimed.

In the accompanying drawing, which forms part of this specification, and wherein like symbols refer to like parts wherever they occur, Figure 1 is a side view of a portion of a carline embodying my invention, a portion thereof being shown in section, and a side plate and a ridge pole of a car being shown in section in operative relation to said carline; Fig. 2 is a plan view of the construction illustrated in Fig. 1; Fig. 3 is an enlarged detail view of the end portion of the carline applied to a side plate which is shown in section; Fig. 4 is a vertical cross section of a carline and the ridge pole applied thereto; Fig. 5 is a vertical cross section of the carline at the inner surface of the side plate; and, Fig. 6 is a vertical cross section of the carline on the line 6—6 of Fig. 1.

The metal portion of my carline is preferably made of a single elongated sheet or plate of steel. The body portion 1 of this sheet is bent to form a groove which extends longitudinally nearly the full length thereof, the marginal portions 2 of the sheet forming flanges at the top of said groove. The end portions 3 of the sheet are bent or turned downwardly just beyond the ends of said groove so as to adapt such downturned ends to rest against the outer faces of the respective side plates 4 of the car. By this arrangement, the ends of the groove in the carline will extend almost to the outer margins of the respective side plates. In order to accommodate the channeled or grooved portions of the carline, each side plate has a groove or socket 5 formed in the top thereof. The end portions 6 of the marginal flanges of the carline are flat, being designed to rest

flatwise upon the upper surfaces of the respective side plates.

The portions 7 of the marginal flanges between the side plates are curved or curled downwardly as well as outwardly. The longitudinal groove of the carline is of maximum depth midway of its length and decreases gradually toward its ends where it is comparatively shallow. Midway of the carline where the groove is of greatest depth, the flanges or marginal portions of the carline turn down to only a slight extent. The extent to which the flange is turned down increases gradually from the middle of the carline where the groove is of greatest depth to or close to the side plates of the car. That is to say, the extent of the downturning of the marginal flanges of the carline varies in inverse proportion to the depth of the groove in the carline.

In order to secure the maximum efficiency of the metal, abrupt bends are avoided. For this purpose, the bottom of the groove or channel is a continuous curve and the marginal portions or flanges are joined to the body portion by continuous curves.

In the bottom of the groove or channel are a series of bolt holes and the metal around each hole is swaged or pressed downwardly to form bosses 8 which are adapted to cooperate with nuts 9 or heads of bolts 10. By thus forming the bosses, the stress of the bolts is resisted by a considerable thickness of metal in excess of the normal thickness of the sheet. In the longitudinal groove is fitted a wooden member or filler 11 adapted to cooperate with and strengthen the metal carline. This wooden member is substantially flush with the uppermost surface of the carline and constitutes the means to which the superstructure is fastened. The fastening bolts extend downwardly through this filler.

What I claim is:

1. A carline consisting of a plate of metal which is grooved longitudinally from points adjacent to the ends, said groove being of maximum depth midway of its length and decreasing to a minimum at the ends thereof and the metal at the top of the sides of the groove being curled outwardly and, except at the end portions, downwardly, the extent of such downturning being inversely as the depth of the groove.

2. A carline consisting of a plate of metal whose ends are turned downwardly and which is grooved longitudinally from points adjacent to the downturned ends, said
5 groove being of maximum depth midway of its length and decreasing to a minimum at the ends thereof, and the metal at the top of the sides of the groove being curled outwardly and, except adjacent to the ends of
10 the groove, downwardly, the extent of such downturning being inversely as the depth of the groove.

3. A carline consisting of a plate of metal whose ends are turned downwardly and
15 which has a longitudinal groove terminating short of the downturned ends, said groove being of maximum depth midway of its length and decreasing to a minimum at the ends thereof, and the metal at the top
20 of the sides of the grooves being curled outwardly and, except at the end portions, downwardly, the extent of such downturning being inversely as the depth of the groove.

25 4. A carline consisting of a plate of metal whose ends are turned downwardly and

which is grooved longitudinally from points adjacent to the downturned ends, said groove being of maximum depth midway of its length and decreasing to a minimum
30 at the ends thereof and the metal at the top of the sides of the groove adjacent to the ends being turned outwardly to constitute bearing surfaces and the intermediate top portions being curled outwardly and down-
35 wardly, the extent of such downturning being inversely as the depth of the groove.

5. A sheet metal channeled carline having marginal flanges curled downwardly and outwardly at an inclination, substantially as
40 described.

6. A sheet metal carline having a longitudinal groove with a rounded bottom and having marginal flanges curled outwardly and downwardly at an inclination, substan-
45 tially as described.

Signed at St. Louis, Missouri, May 23, 1908.

JOHN J. HOFFMAN.

Witnesses:

J. B. MEGOWN,

G. A. PENNINGTON.