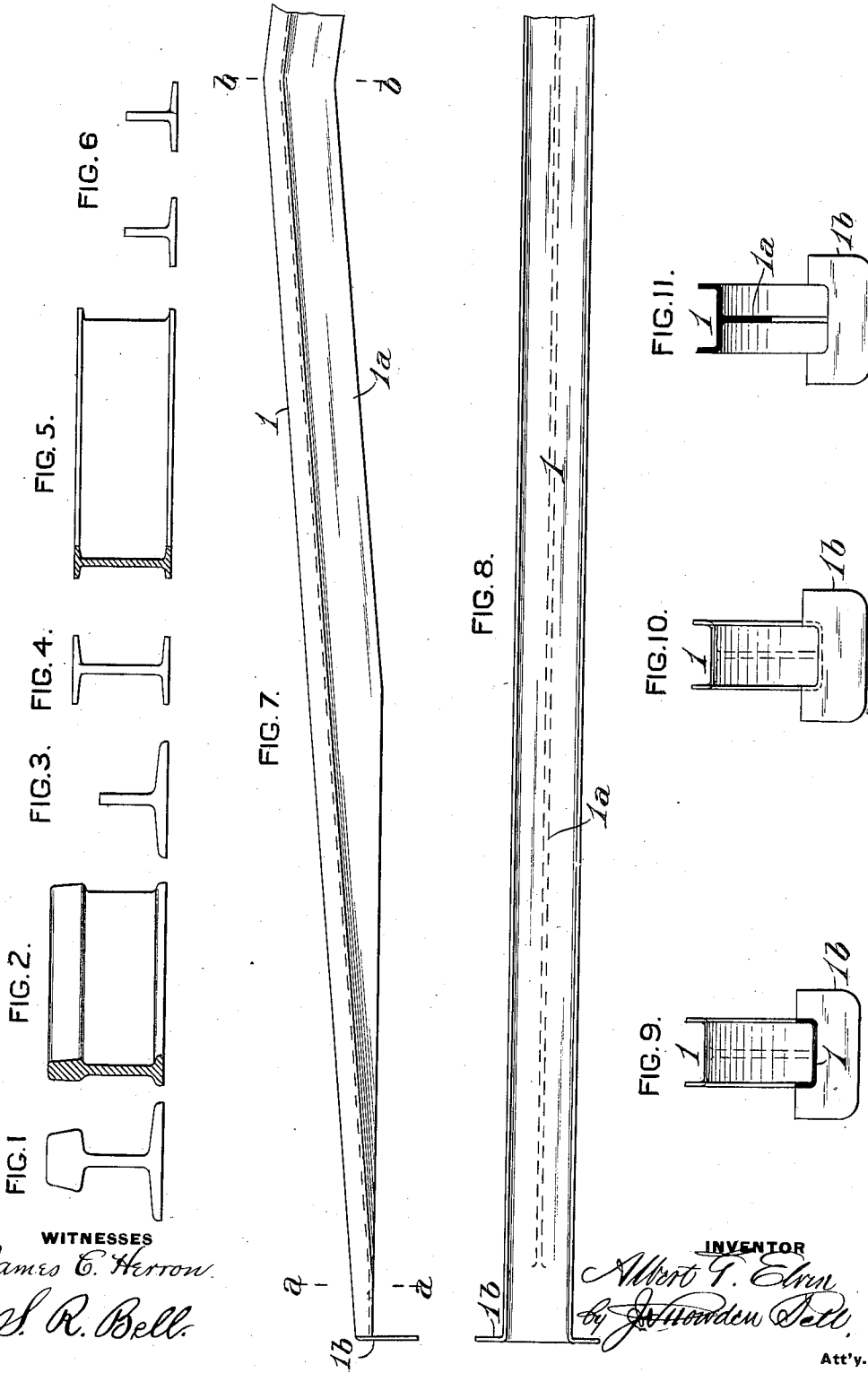


A. G. ELVIN.
ROOF CARLINE.

APPLICATION FILED JULY 27, 1909.

934,801.

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UNITED STATES PATENT OFFICE.

ALBERT G. ELVIN, OF EAST ORANGE, NEW JERSEY.

ROOF-CARLINE.

934,801.

Specification of Letters Patent. Patented Sept. 21, 1909.

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To all whom it may concern:

Be it known that I, ALBERT G. ELVIN, of East Orange, in the county of Essex and State of New Jersey, have invented a certain
5 new and useful Improvement in Roof-Carlines, of which improvement the following is a specification.

The object of my invention is to provide a metallic roof carline which shall embody the
10 features of strength, lightness, and special adaptability for use in the framing of railroad cars.

The improvement claimed is hereafter fully set forth.

15 In the accompanying drawings: Figure 1 is an end view of a structural shape, (a T rail) adapted for use in the manufacture of a roof carline embodying my invention; Fig. 2, a side view, in elevation, of a portion of
20 the same; Fig. 3, an end view of a T section shape produced by transversely severing the web of the shape shown in Fig. 1; Fig. 4, an end view of another structural shape (in this case an I beam) adapted for use in the
25 manufacture of a roof carline embodying my invention; Fig. 5, a side view, in elevation, of a portion of the same; Fig. 6, end views of two T section shapes produced by transversely severing the web of the shape shown
30 in Fig. 4; Fig. 7, a side view, in elevation, of slightly more than one half of the length of a roof carline produced from a T section shape of Figs. 3 and 6, and embodying my
35 invention; Fig. 8, a plan or top view of the same; Fig. 9, a transverse section, on the line *a a* of Fig. 7; Fig. 10, an end view, in elevation; and, Fig. 11, a transverse section on the line *b b* of Fig. 7.

In the manufacture of a roof carline embodying my invention, I take a rolled shape which presents, in transverse section, a web and end lateral enlargements or flanges, as, for example, a T rail, Figs. 1 and 2, or an I beam, Figs. 4 and 5, and, after having
45 heated the rolled shape to a proper temperature, sever the web transversely at or about the middle of its depth, thereby producing two portions of T section, as shown in Figs. 4 and 6. In the case of a T rail, while both
50 the resulting portions may be correctly said to be of T section, that which contains the

head of the rail will, of course, have a narrower and heavier base than the other, while, in the case of an I beam, the portions will
55 both be of strictly T section, and of substantially similar sectional form and area. The T section shape thus produced is then passed between suitably grooved rolls, which may be done either in the same or a subsequent heat, as may be found most desirable, and
60 rolled into a roof carline, which, when finished, is of the form shown in Figs. 7 to 11 inclusive.

The body, 1, of the carline, is of channel section, its side flanges being turned upwardly, and is bent downwardly from its
65 middle toward each of its ends, in accordance with the pitch or inclination of the roof in which it is to be used. An integral central strengthening rib, 1^a, projects downwardly from the lower side of the body, 1,
70 said rib being of maximum depth at, and for some distance on each side of, the middle thereof, and thence gradually decreasing in depth toward the ends of the body, near
75 which it terminates. The ends of the body are widened out and turned downwardly into transversely extending end flanges, 1^b, which are provided for attachment to the ordinary side plates of a car frame. The
80 space between the side flanges of the body may be utilized for the reception of a wood filler.

The advantages of my invention in the economical utilization of worn or discarded
85 rolled shapes of the character specified, for the production of a roof carline which is strong, light, and suited for application in roofs of the ordinary forms, will be apparent to those familiar with railroad car construction.

I claim as my invention and desire to secure by Letters Patent:

1. As a new article of manufacture, a metal roof carline having a body of channel
95 section, and an integral central strengthening rib projecting downwardly from the body.

2. As a new article of manufacture, a metal roof carline having a body of channel
100 section, and an integral central strengthening rib projecting downwardly from the body

and decreasing in depth from the middle portion of the body toward each of the ends thereof.

3. As a new article of manufacture, a
5 metal roof carline having a body of channel section, an integral central strengthening rib projecting downwardly from the body, and

transversely extending end flanges turned downwardly on the body.

ALBERT G. ELVIN.

Witnesses:

W. E. CADMUS,
C. L. WINCY.