F. KOCH.

PASSENGER CAR HOOD CONSTRUCTION.

APPLICATION FILED JULY 19, 1917.

1,249,121.

Patented Dec. 4, 1917.

3 SHEETS—SHEET 1.

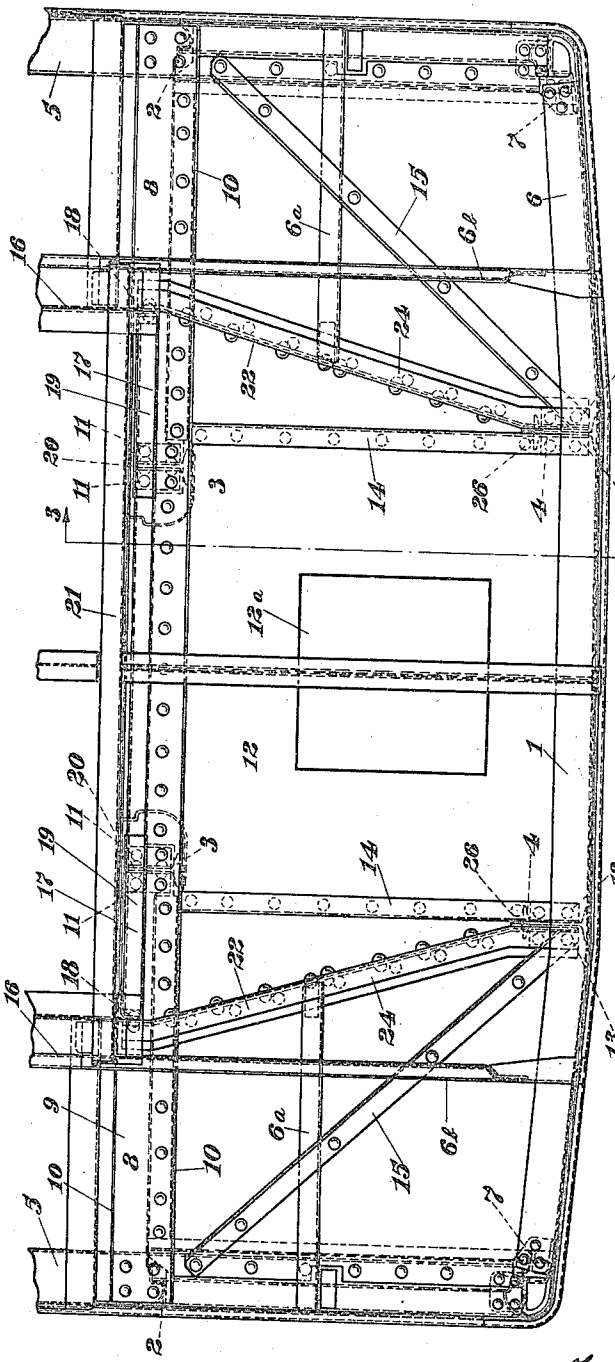


Fig. 1

Witnesses

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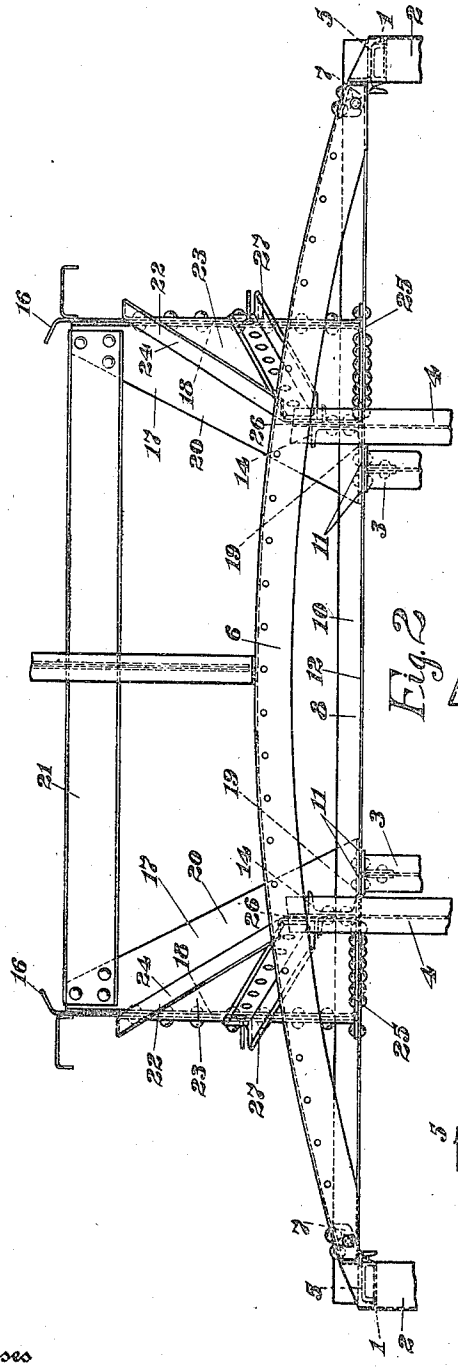


Fig. 2

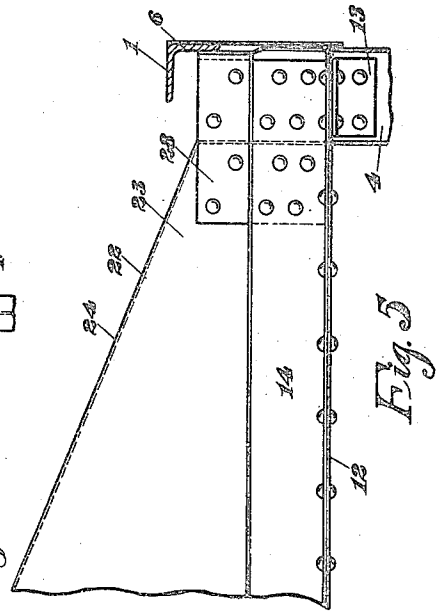


Fig. 3

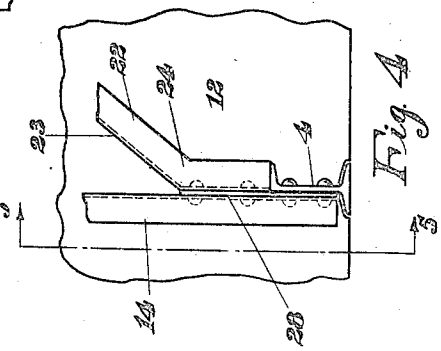


Fig. 4

Witnesses

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3 SHEETS—SHEET 3.

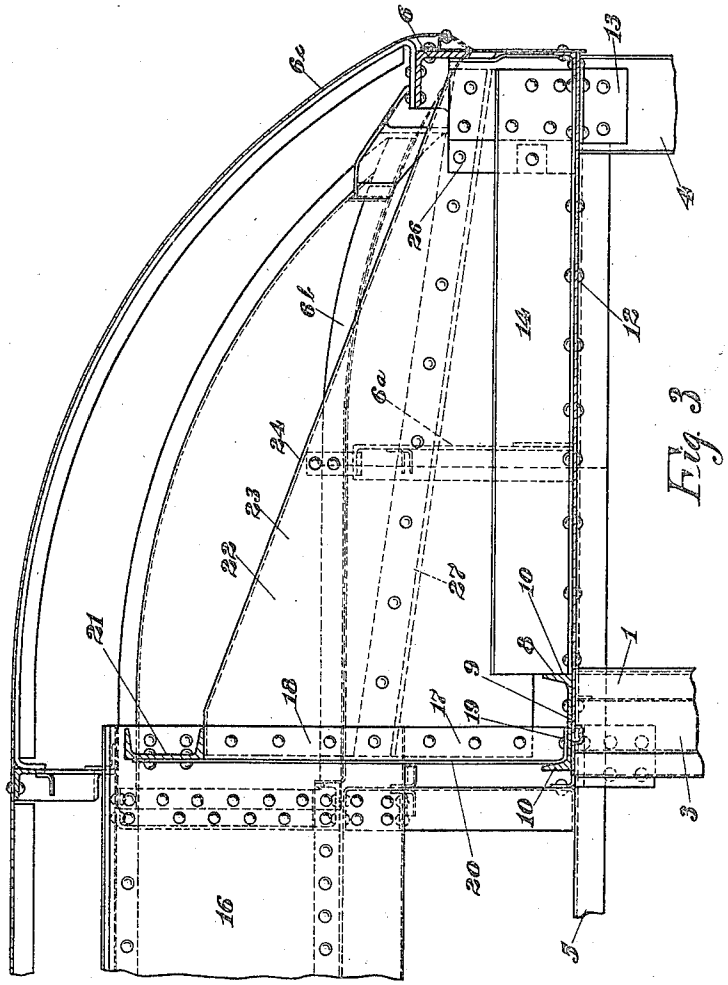


Fig 3

Witnesses

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UNITED STATES PATENT OFFICE.

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PASSENGER-CAR-HOOD CONSTRUCTION.

1,249,121. Specification of Letters Patent. Patented Dec. 4, 1917.

Application filed July 19, 1917. Serial No. 181,531.

To all whom it may concern:

Be it known that I, FELIX KOCH, a citizen of the United States, residing at Lincoln avenue, Bellevue, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Passenger-Car-Hood Constructions, of which the following is a specification.

This invention relates to railway passenger cars, and more especially to the construction of the hood thereof, and has for its object to provide a hood construction which is braced in such a manner as to adapt it to resist the strains and stresses to which a car of this type is subjected.

Another object of the invention is to provide a hood construction which is combined with the body of the car in such a manner that the stresses to which the hood may be subjected will be conveyed to and absorbed by the body of the car.

A further object of the invention is to provide a deck plate construction which will in effect be continuous from end to end of the car.

Referring now to the drawings in which like reference characters refer to like parts, Figure 1 is a plan view of the end portion of a car embodying the invention, the roof plates being removed to more clearly illustrate the invention; Fig. 2 is an end elevational view of the same; Fig. 3 is an enlarged longitudinal sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is a plan view of a modification of the invention, and Fig. 5 is a sectional view of the same taken on the line 5—5 of Fig. 4.

Referring now in detail to the drawings, 1 indicates the superstructure framing which preferably comprises side posts 2, body end posts 3, vestibule end posts 4, side plates 5, ramp carlines 6, hood carlines 6^a, hood purlins 6^b and roof sheets 6^c, all of which may be of any suitable form or construction. The side plates 5 preferably extend the full length of the car and at their ends are connected with the ramp carlines 6 through the medium of bracket members 7.

At each bulkhead or end of the car body, a transverse member 8 is provided which is preferably of channel form in cross section having its web 9 disposed horizontally and its flanges 10 disposed vertically upward. This member extends across the width of the car and at its ends is secured to the side plates 5, thus forming a strong tie or connection between the side plates of the end of the car body. Intermediate its ends, this member rests on the top portion of the body end or door posts 3, and is connected to such posts through the medium of bracket members 11.

12 indicates the vestibule ceiling plate which preferably comprises a single flat plate and extends transverse of the car from side plate to side plate and longitudinally of the car from the transverse member 8 to the end of the car. This plate is secured to the side plates 5 and to the web 9 of the transverse member 8 and is connected with the vestibule end posts 4 through the medium of bracket members 13. To stiffen the plate 12 and to further connect such plate with the vestibule end posts 4, longitudinal members 14 preferably of channel form are provided, which members are secured throughout their lengths to the plate 12 and at their outer ends to the posts 4. To further stiffen the plate 12 diagonal members 15 preferably of angle form are provided which at their ends near the sides of the car are secured to the side plates 5, and at their opposite ends are secured to the posts 4 and intermediate their ends are secured to the plate 12. This plate may if desired be provided with a manhole 12^a, to admit of access to the interior of the hood when necessary.

16 indicates the deck plates which extend from end to end of the body of the car and which may be of any preferred form or construction. At the ends of the deck plates, gusset members 17 are provided, each of which is provided with a vertically disposed flange 18 to which one of the deck plates 16 is secured and a horizontally disposed flange 19, which is secured to the web 9 of the transverse member 8, and a vertically disposed web 20, which extends in a direction transversely of the car, such web forming a diagonal brace for the deck plate. Between the end portions of the deck plates a member 21 is provided which extends in a direction transversely of the car and at its ends is secured to the webs 20 of the gusset members 17, thus connecting the end portions of the deck plates.

22 indicates the deck plate extensions or continuations, each of which is preferably of channel form having a vertically disposed web 23 of varying depth, and horizontally

disposed top and bottom flanges 24 and 25 respectively, the bottom flange 25 being in substantially the same horizontal plane throughout its length, and the top flange being sloped downwardly from the deepest end portion of the member to its shallowest end portion. This member extends from the deck plate diagonally inward toward the longitudinal center line of the car to the vestibule end post 4, the deepest or inner end portion of the member for a portion of its depth overlapping and being secured to the end portion of the deck plate 16, and for the remainder of its depth overlapping and being secured to the flange 18 of the gusset member 17, and the shallowest or outer end portion of the member overlapping and being secured to the upper end portion of the web of the vestibule end post 4, *i. e.*, to the web of that portion of the post 4 which extends above the vestibule ceiling plate 12. In the drawings a plate 26 has been shown interposed between the web of the post 4 and the deck plate extension, but it will be understood that this plate may be omitted and that the deck plate extension may be secured directly to the web of the post 4. To stiffen this deck plate extension a member 27 preferably of angle form may be secured to the web 23 of the deck plate extension, and may extend from the post 4 to the deck plate 16. It will be understood, however, that in some instances this member 27 may be omitted.

In Figs. 4 and 5 a modification of the invention has been illustrated, in which the deck plate extension 22 terminates short of the inner edge portions of the post 4 and is connected with such post through the medium of a plate 28 and the member 14, both of which preferably overlap and are secured to the web of the post 4. It will be understood, however, that if desired the plate 28 may be omitted and that the end portion of the deck plate extension may be secured directly to the web of the member 14.

It will be understood by those skilled in the art to which this invention appertains that many changes may be made in the construction without departing from the spirit and scope of the invention.

Claims:

1. In a car vestibule hood construction, the combination with the deck plate and vestibule end post, of a deck plate extension connecting said deck plate and vestibule end post.

2. In a car vestibule hood construction, the combination with the deck plate and vestibule end post, of a deck plate extension of varying cross section connecting said deck plate and vestibule end post.

3. In a car vestibule hood construction, the combination with the deck plate and vestibule end post, of a deck plate extension connecting said deck plate and end post, said extension having its deepest portion at the deck plate and its shallowest portion at the end post.

4. In a vestibule hood construction, body end posts, vestibule end posts and a transverse member connecting said body end posts, in combination with deck plates, and deck plate extensions connecting said deck plates and vestibule end posts, said deck plate extensions having a varying cross section.

5. In a vestibule hood construction, body end posts, vestibule end posts and a transverse member connecting said body end posts, in combination with deck plates, and deck plate extensions connecting said deck plates and vestibule end posts, said deck plate extensions comprising webs of varying depth having lateral flanges extending therefrom.

6. In a vestibule hood construction, body end posts, vestibule end posts and a transverse member connecting said body end posts, in combination with deck plates, and deck plate extensions connecting said deck plates and vestibule end posts, said deck plate extensions comprising webs of varying depth having lateral flanges extending therefrom, and a stiffening member secured to said web intermediate said lateral flanges.

7. In a vestibule hood construction, body end posts, vestibule end posts and a transverse member connecting said body end posts, in combination with deck plates, and deck plate extensions connecting said deck plates and vestibule end posts, said deck plate extensions comprising webs of varying depth having lateral flanges extending therefrom, the uppermost lateral flanges sloping downwardly from said deck plate to said vestibule end post.

8. In a vestibule hood construction, side posts, side plates, body end posts and vestibule end posts and a transverse member connecting said side plates and body end posts in combination with deck plates, a transverse member connecting said deck plates, and deck plate extensions connecting said deck plates and vestibule end posts.

9. In a vestibule hood construction, side posts, side plates, body end posts and vestibule end posts and a transverse member connecting said side plates and body end posts in combination with deck plates, a transverse member connecting said deck plates, and deck plate extensions connecting said deck plates and vestibule end posts, said deck plate extensions comprising webs of varying depth having lateral flanges extending therefrom.

10. In a vestibule hood construction, side posts, side plates, body end posts and vestibule end posts and a transverse member connecting said side plates and body end posts in combination with deck plates, a transverse member connecting said deck plates, and deck plafe extensions connecting

said deck plates and vestibule end posts, said deck plate extensions comprising webs of varying depth having lateral flanges extending therefrom.

11. In a vestibule hood construction, side posts, side plates, body end posts and vestibule end posts, and a transverse member connecting said side plates and end posts, in combination with a ceiling plate extending from side to side of the car and forming an extension of said transverse member to the end of the car, and deck plates and deck plate extensions connecting said deck plates and vestibule end posts.

12. In a vestibule hood construction, side posts, side plates, body end posts and vestibule end posts, and a transverse member secured to said side plates and end posts, in combination with a ceiling plate extending from side to side of the car and forming an extension of said transverse member to the end of the car, and deck plates and deck plate extensions connecting said deck plates and vestibule end posts, said deck plate extensions being of varying cross section.

In testimony whereof I affix my signature in the presence of two witnesses.

FELIX KOCH.

Witnesses:
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HERBERT M. BENDER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."