T. H. TUTWILER.

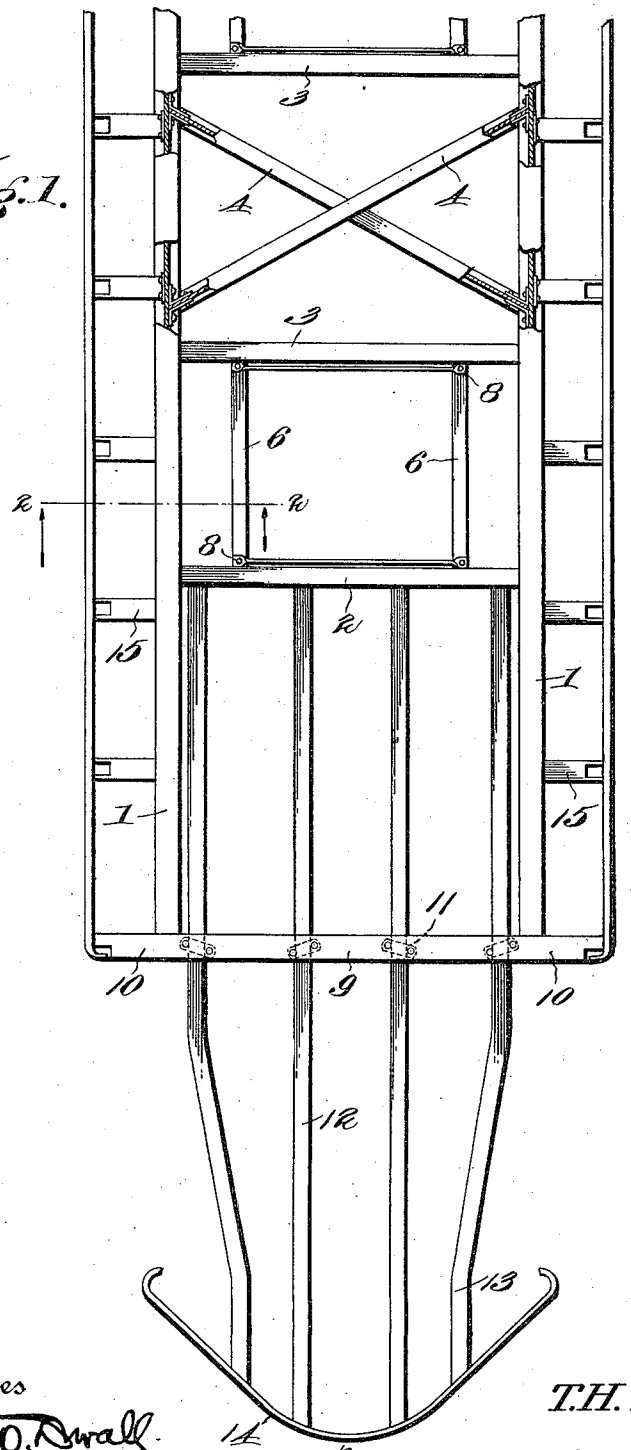
PASSENGER CAR.

APPLICATION FILED SEPT. 21, 1911.

1,015,100. Patented Jan. 16, 1912.

3 SHEETS—SHEET 1.

Fig. 1.



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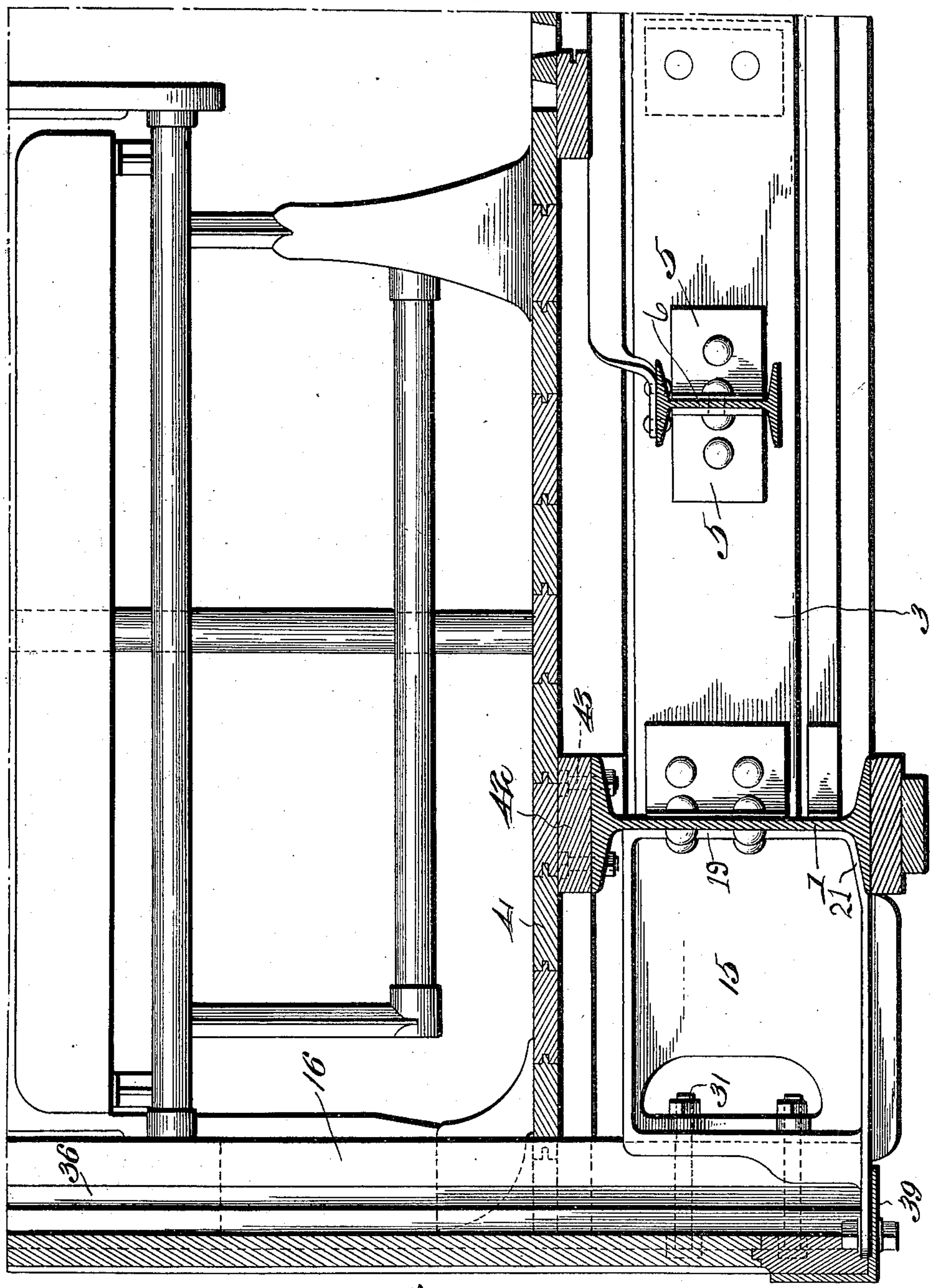
3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. 3.

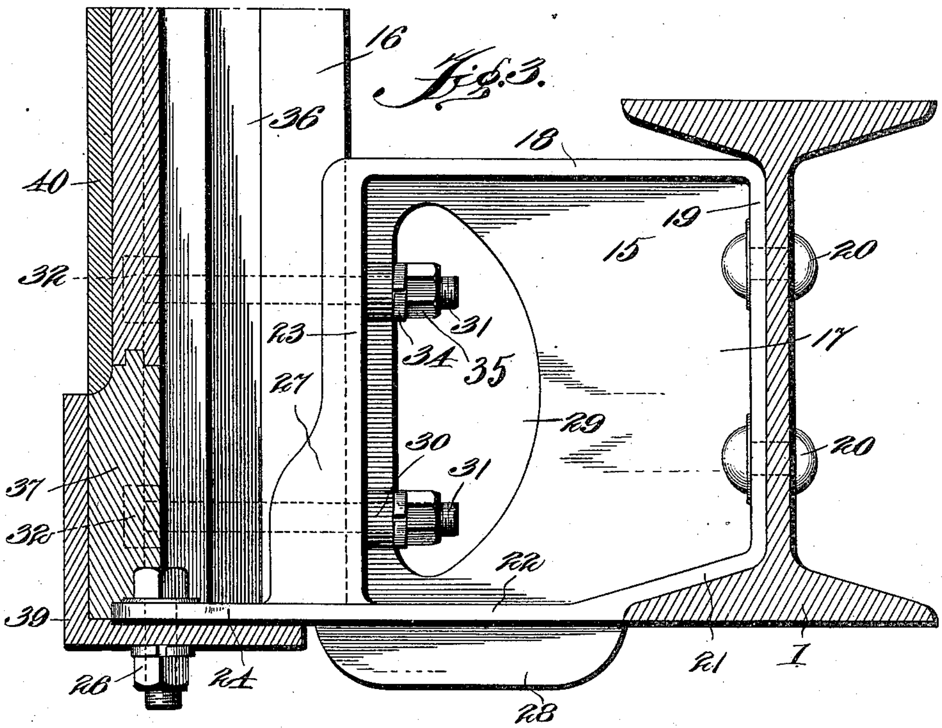


Fig. 4.

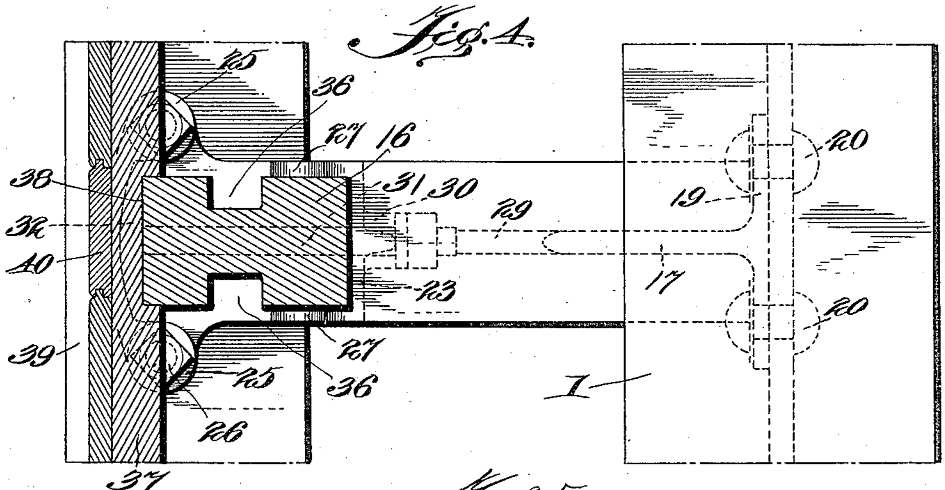
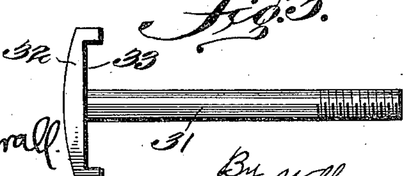


Fig. 5.



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UNITED STATES PATENT OFFICE.

THOMAS H. TUTWILER, OF MEMPHIS, TENNESSEE.

PASSENGER-CAR.

1,015,100. Specification of Letters Patent. Patented Jan. 16, 1912.

Application filed September 21, 1911. Serial No. 650,633.

To all whom it may concern:

Be it known that I, THOMAS H. TUTWILER, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Passenger-Cars, of which the following is a specification.

This invention relates to improvements in passenger cars and especially electric railway cars.

The main object of the invention is to so construct the under-frame that the side posts of the car body may be rigidly supported from the longitudinal sills.

Another object of the invention is to provide a seat for the base of the side posts, which will allow proper ventilation to prevent decaying of the bottom portions thereof.

A further object of the invention is to provide greater depth for the sliding of the window sashes by permitting them to be lowered to the bottom of the side posts.

With the above and other objects in view, the invention consists in certain combinations and arrangements of the parts hereinafter described, and the novel features thereof will be distinctly pointed out in the appended claims.

In order to clearly understand the invention, same will be fully described in connection with the accompanying drawings, which illustrate a preferred embodiment thereof, and in which drawings, like characters of reference indicate corresponding parts.

Figure 1 is a plan view of a portion of the under-frame of a car constructed in accordance with my invention, certain parts being broken away; Fig. 2 is a partial cross sectional view, on an enlarged scale of a car, taken on line 2—2 of Fig. 1; Fig. 3 is a sectional view, on an enlarged scale, of the lower left-hand corner of Fig. 2; Fig. 4 is a plan view of Fig. 3; and, Fig. 5 is a detail view of the T headed bolt.

The under-frame comprises a pair of standard spaced longitudinally extending sills 1, preferably I beams, which are suitably connected together intermediate their ends by a plurality of transverse beams 2 and 3 and diagonal crossing braces 4 in the space between the two center transverse beams 3. The transverse beams 2 and 3 and diagonal braces 4 are less in height than the sills. Extending longitudinally between the central transverse beams 3 and the other transverse beams 2 and connected thereto by angle plates 5 are short beams 6 of less height than the transverse beams 2 and 3. A transverse beam 9 connects the ends of the sills and extends laterally an equal distance on each side of the car beyond the sills, as at 10, extending entirely across the car. Fixed to the transverse beams 2 and the undersides of the end beams 9 as at 11 and extending longitudinally at the forward and rear ends of the car are a plurality of beams 12, the outside ones of which have inwardly bent ends 13. The outer ends of the beams 12 carry a buffer 14.

Rigidly secured to the outer sides of the sills 1 are a plurality of equally spaced brackets 15 for supporting the side posts 16 of the car body. The brackets 15 consist of a central rib 17 surrounded by a flange 18, the inner end portion 19 of which is provided with holes for receiving rivets 20 or other means for connecting the brackets to the sills. The lower inner portions of the brackets are made of a suitable shape as at 21 to fit the lower flanges of the I beams comprising the sills. The outer ends of the lower side 22 of the flange 18 projects beyond the outer flange 23, as at 24, to form a seat for the base of the side posts 16, and has lateral ears 25 provided with apertures for receiving bolts 26. Made integral with the outer end flange 23 and the projecting seat 24 are spaced vertical side pieces 27 forming a pocket for the inner side portion of the side posts. The projecting seat 23 is strengthened by means of a rib 28 extending longitudinally of the lower side 22 of the flange 18. The central rib 17 of the brackets 15 is cut away as at 29 and bosses 30 are provided on the inner side of the outer end flange 23.

The lower ends of the side posts 16 are securely fixed to the brackets 15 by means of T headed bolts 31, which pass through the side posts and through apertures in the outer end flange 23 and bosses 30. The heads 32 of the bolts 31 are recessed as at 33 for receiving the outer faces of the side posts. Spring washers 34 are preferably interposed between the bosses 30 and nuts 35 to prevent the nuts from working loose.

The side posts 16 are provided with vertical longitudinally alining grooves 36 extending to the bottoms thereof for receiving the sashes of the car windows (not shown).

Longitudinally extending boards 37, recessed as at 38 for receiving the outer faces of the side posts, are fixed thereto in any suitable manner. An angle bar 39 is fixed to the undersides of the projecting seats 24 by means of the above mentioned bolts 26 and to the ends of the extensions 10 of the end beams 9 and engage the outer sides of the lower ends of the boards 37. Vertically arranged weather-boards 40 are secured to the outer sides of the boards 37.

The flooring 41 of the car is supported by the transverse beams 2, 3 and 9 and rests on fillers 42 connected to the sills 1 at 43.

By constructing the under-frame of a car as shown and described, it is apparent that the side posts of the car body are rigidly supported from the sills of standard spaced gage, that the decaying of the bottoms of the side posts from dampness is reduced to a minimum and the side posts may be grooved entirely to their bases and thereby provide a greater downward sliding movement for the window sashes.

Having fully described my invention what I claim is:—

1. In a car, the combination with the sills of brackets connected to the outer sides thereof, the outer end of each bracket being provided with a seat for the base of a side post and vertical sides for embracing the inner portion thereof, boards arranged on the outer sides of the side posts, and an angle bar secured to the seats of the brackets and engaging said boards, substantially as described.

2. In a car, the combination with I beam sills of brackets connected to the outside thereof, each bracket consisting of a central rib surrounded by a flange, the outer end of the lower flange projecting outwardly to provide a seat for a side post, vertical sides integral with the seat and the outer end flange of the bracket for embracing the side post, and means for securing the side post between said vertical sides of the bracket, substantially as described.

3. In a car, the combination with I beam sills of brackets connected to the outside thereof, each bracket consisting of a central rib surrounded by a flange, the outer end of the lower flange projecting outwardly to provide a seat for a side post, vertical sides integral with the seat and the outer end flange of the bracket for embracing the inner portion of the side post, the central rib of the bracket being cut away near the outer end flange thereof, and T headed bolts passing through the side post and through the outer end flange of the bracket, substantially as described.

4. In a car, the combination with I beam sills of brackets connected to the outside thereof, each bracket consisting of a central rib surrounded by a flange, the outer end of the lower flange projecting outwardly to provide a seat for a side post, vertical sides integral with the seat and the outer end flange of the bracket for embracing the inner portion of the side post, the central rib of the bracket being cut away near the outer end flange thereof, T headed bolts passing through the side posts and through the outer end flange of the bracket, boards secured to the faces of the side posts, and an angle bar secured to the seats of the brackets and engaging said boards, substantially as described.

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

THOMAS H. TUTWILER.

Witnesses:
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