No. 676,469. Patented June 18, 1901.

H. McLOUGHLIN.

VEHICLE BODY.

(Application filed Oct. 27, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

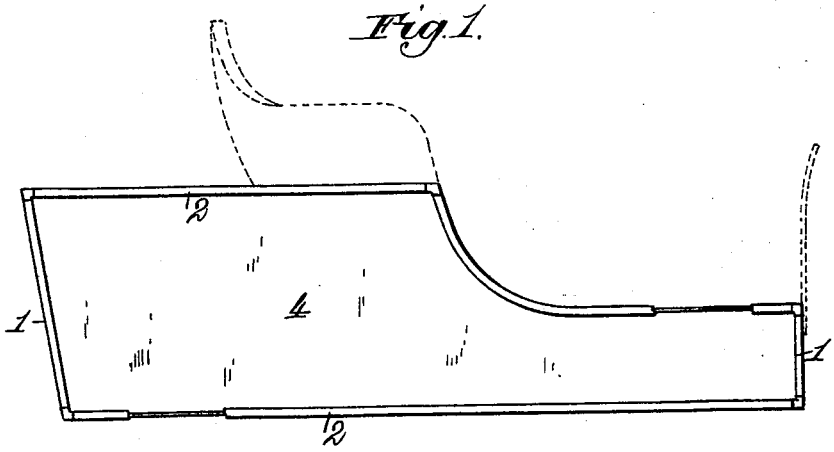


Fig. 4.

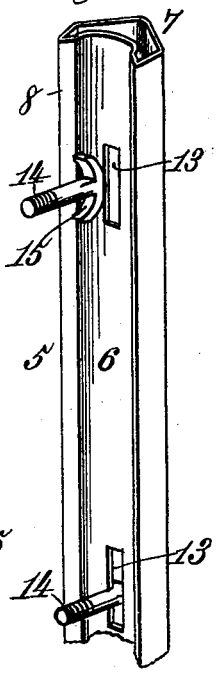


Fig. 2.

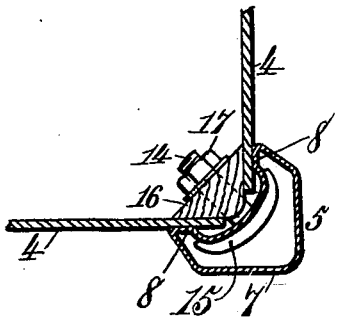
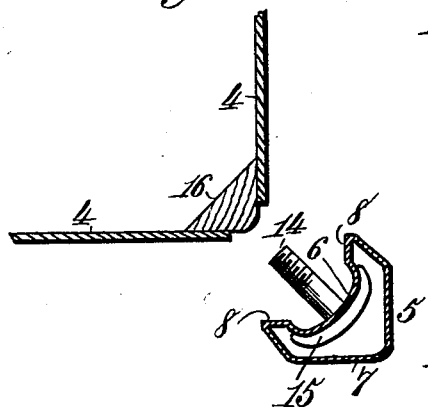


Fig. 3.



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Atty.

No. 676,469. Patented June 18, 1901.

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(No Model.) 2 Sheets—Sheet 2.

Fig. 5.

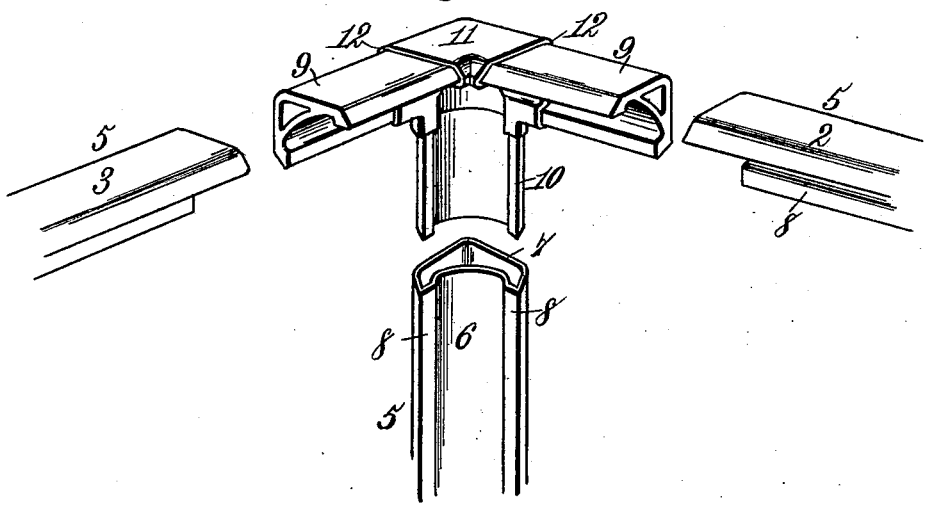
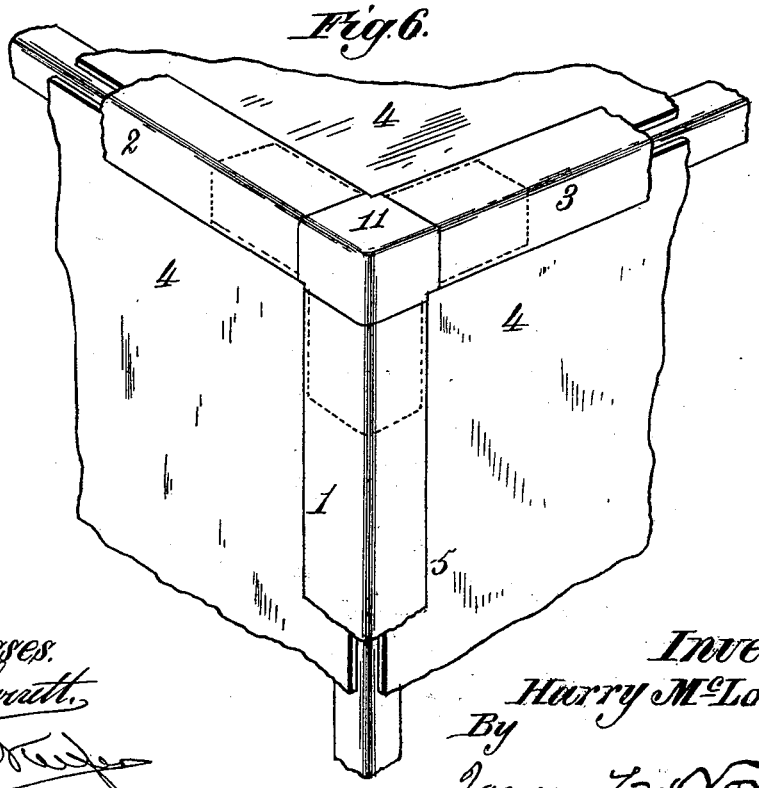


Fig. 6.



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UNITED STATES PATENT OFFICE.

HARRY McLOUGHLIN, OF STAPLETON, NEW YORK, ASSIGNOR TO BARTON E. KINGMAN, OF YONKERS, NEW YORK.

VEHICLE-BODY.

SPECIFICATION forming part of Letters Patent No. 676,469, dated June 18, 1901.

Application filed October 27, 1900. Serial No. 34,644. (No model.)

To all whom it may concern:

Be it known that I, HARRY McLOUGHLIN, a citizen of the United States, residing at Stapleton, Long Island, in the county of Richmond and State of New York, have invented new and useful Improvements in Vehicle-Bodies, of which the following is a specification.

This invention relates to vehicle-bodies, and is in the nature of an improvement upon the vehicle-body for which I obtained United States Letters Patent No. 651,261, dated the 5th day of June, 1900.

The present invention has for its objects to make the frame of the vehicle-body lighter without sacrificing any of its strength, to reduce the cost of the manufacture thereof, to produce a neat and symmetrical finish of the meeting parts or joints of the frame, and to provide improved means for securing the parts together.

To these ends my invention consists in the features and in the construction, combination, and arrangement of parts hereinafter described, and particularly pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a view in side elevation of a buggy-body constructed in accordance with my invention, a part of the frame being broken away to show the edge of the panel. Fig. 2 is a transverse sectional view taken through one edge of the vehicle-frame. Fig. 3 is a similar view of the parts detached. Fig. 4 is a detail view of a portion of the frame. Fig. 5 is a perspective view of one corner of the frame, the parts being shown detached or separated; and Fig. 6 is a similar view showing the parts assembled together in position.

I have illustrated in the drawings by way of example a buggy-body; but it will be understood that the invention may be adopted in the manufacture of all classes of or types of broughams, cabs, or wheeled vehicles, or carriages in general.

Referring to the drawings, the skeleton frame of the vehicle is shown as consisting of vertical sections or bars 1, longitudinal sections or bars 2, and cross bars or sections 3, the whole inclosing and supporting in place panels 4, the meeting ends of said bars or sections being rigidly secured together in the manner and by the means hereinafter described. Each of the bars or sections of the frame consists of a seamless tube 5, of steel or other metal, compressed into the shape in cross-section most clearly shown in Figs, 2, 3, and 4, whereby its inner wall is bent into a concavo-convex shape, as indicated at 6, and its outer wall is bent into substantially a beveled or right-angular shape, as indicated at 7, or into any other shape rendered necessary by the configuration it is desired to impart to the finished molding, those portions of the tube lying between the inner and outer walls forming beads 8, which serve as bearings or seats for the panels 4. The bars or compressed angular tubes 5 are united at their meeting ends or corners by approximately T-shaped coupling-brackets (best shown in Fig. 5) and each comprising two horizontal tenons 9 and a vertical or pendent tenon 10, corresponding in shape in cross-section to the bars or tubes 5 and of a size to neatly fit within the latter. Said coupling-brackets may either be of solid metal or may be made hollow for the sake of lightness, as shown, the two horizontal tenons 9 being arranged at right angles to one another in the same horizontal plane and the pendent or vertical tenon 10 being arranged at a right angle to the horizontal plane of the tenons 9. The corner portion of each coupling-bracket is formed with a raised or enlarged portion 11, forming transverse shoulders 12, said raised or enlarged portion corresponding to the thickness of the walls of the compressed tubes or bars 5, and when the said bars or tubes are slipped over the tenons 9 and 10 their ends will abut the shoulders 12, making a close joint with the latter, and the outer faces of the raised or enlarged portions 11 will lie flush with the outer faces of the bars 5, thereby forming a smooth and finished joint, which when the parts have been enameled will be invisible. Moreover, by constructing the coupling-brackets in the manner described I avoid the necessity of mitering the meeting ends of the bars or tubes, as in my former patented frame,

before referred to, which is a great saving in time and labor in manufacturing and assembling the parts, as experience has proved.

After the different parts of the frame have been rigidly secured together in the manner above described the panels may be readily secured in place in the following manner: In the inner concavo-convex wall 6 of each of the bars or tubes is formed a plurality of elongated longitudinal slots 13. The numeral 14 indicates T-shaped bolts, the elongated heads 15 of which are shaped to conform to the convex shape of the inner face of the wall 6 and are of such size that when presented properly to the slots 13, so as to register therewith, they may be freely passed through said slots. The panels 4 are fitted in place in the frame with their edge portions resting against the inner flat faces of the beads 8 of the bars or tubes 5. The bolts may then be passed between the ends or meeting edges of the plates or panels 3 and their heads inserted in and through the slots 13, after which the bolts are turned so as to cause their heads to lie transversely to or crosswise of said slots. Filling-pieces 15 are next fitted in the interior angle formed by the meeting edges of the panels, said filling-pieces each comprising a strip of wood triangular in cross-section and provided with suitable perforations to receive the bolts. The threaded ends of the bolts pass through the perforations in the filling-pieces and have fitted over their inner ends washers and nuts 16, by means of which the bars or tubes 5, comprising the frame, and the filling-pieces 16 are firmly drawn together, thereby tightly clamping the edges of the panels between the same.

In the arrangement above described the frame is disposed exteriorly of the panels instead of inside, as in my former patented vehicle-body, thereby giving greater strength to the body and affording a firmer and more secure support for the panels, and by such an arrangement, in connection with the wooden filling-pieces, I am enabled to materially reduce the weight of the frame without sacrificing any part of its strength or rigidity. Furthermore, by constructing the bolts in the manner described the parts may be assembled and taken apart with ease and despatch, and when the parts have been assembled together and the bolts have been tightened up the latter are effectually prevented from turning by their heads, which are formed to correspond to the cross-sectional shape of the wall 6, which they straddle or are caused to closely embrace, whereby when the bolts are drawn into position by the nuts the heads are incapable of turning on the wall 6 and the bolts thus prevented from turning. After the panels and the frame of the vehicle-body have been enameled as usual the frame and panels present the appearance of being made in one single integral piece.

I have described my improved frame as being intended for carriages, buggies, and similar wheeled conveyances, but I wish it to be understood that I contemplate employing the frame in the construction of railway-cars and vehicles or carriers of every description. I also wish it to be understood that by the term "plane surfaces" employed for designating those parts of the tubes against which the panels bear I mean to include either flat or rectilinear plane surfaces or curved plane surfaces, as the circumstances in each individual case may render desirable.

Having described my invention, what I claim is—

1. In a vehicle-body, the combination with a frame comprising seamless metal tubes of angular shape in cross-section and having plane inner surfaces disposed at angles to each other, of panels arranged within said frame and bearing at their edges against said plane surfaces, filling-strips corresponding in shape to and seated against the inner faces of the adjacent edge portions of the panels, and fastening devices for securing the filling-strips to the angular tubes and clamping the panels between said strips and tubes, substantially as described.

2. In a vehicle-body, the combination with a frame comprising seamless metal tubes compressed into angular shape in cross-section and having plane inner surfaces disposed at right angles to each other, of panels arranged within said frame and bearing at their edges against said plane surfaces, wooden filling-strips triangular in cross-section and seated against the inner faces of the adjacent edge portions of the panels, bolts detachably connected with the angular tubes and extending through the filling-pieces, and nuts arranged over the inner ends of said bolts and operating to draw the angular tubes and filling-pieces together and clamp the panels between the same, substantially as described.

3. In a vehicle-body, the combination with a frame comprising seamless metal tubes compressed into angular shape in cross-section and having plane inner surfaces disposed at right angles to each other, said tubes being provided on their inner faces with elongated slots, of panels arranged within said frame and bearing at their edges against said plane surfaces, wooden filling-strips triangular in cross-section and seated against the inner faces of the adjacent edge portions of the panels, T-shaped bolts adapted to be inserted through the slots in the angular tubes and turned crosswise thereof, said bolts extending through the wooden filling-pieces, and nuts screwed over the inner ends of said bolts and operating to draw the angular tubes and filling-pieces together to clamp the panels between the same, substantially as described.

4. In a vehicle-body, the combination with a frame comprising seamless metal tubes compressed into angular shape in cross-section and having plane inner surfaces disposed at right angles to each other, the inner wall of said tubes being concavo-convex in cross-sec-

tion and provided with longitudinal elongated slots, of panels arranged within said frame and bearing against said plane surfaces, filling-strips triangular in cross-section and seated against the inner faces of the adjacent edge portions of the panels, bolts passing through the wooden filling-pieces and through the said slots and provided with T-shaped heads arranged crosswise of the slots and straddling the inner faces of said concavo-convex walls, and nuts arranged over the inner ends of said bolts, substantially as described.

5. In a vehicle-body, the combination with a frame comprising seamless metal tubes compressed into angular shape in cross-section, of coupling-brackets comprising two horizontal tenons arranged at right angles to one another in the same horizontal plane and a vertical tenon arranged at a right angle to the plane of the horizontal tenons, said coupling at its corner being provided with an enlarged or raised portion corresponding to the thickness of the walls of the angular tubes the tenons being fitted in the ends of the tubes, substantially in the manner shown and described and for the purpose specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HARRY McLOUGHLIN.

Witnesses:
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GEO. W. REA.