S. E. LIGHT

VEHICLE BODY.

APPLICATION FILED APR. 1, 1910.

969,293. Patented Sept. 6, 1910.

2 SHEETS—SHEET 1.

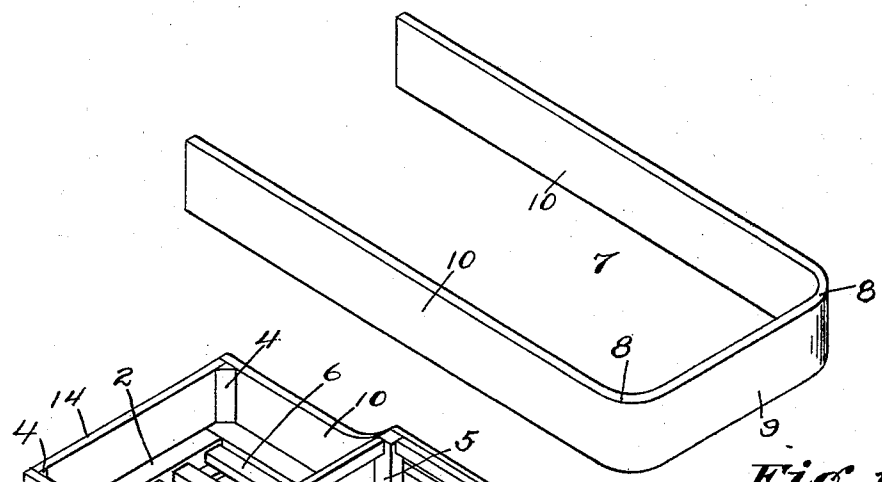

Fig. 1.

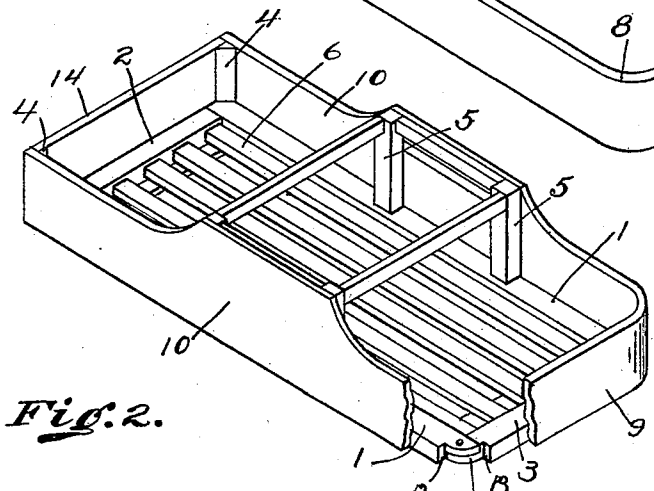

Fig. 2.

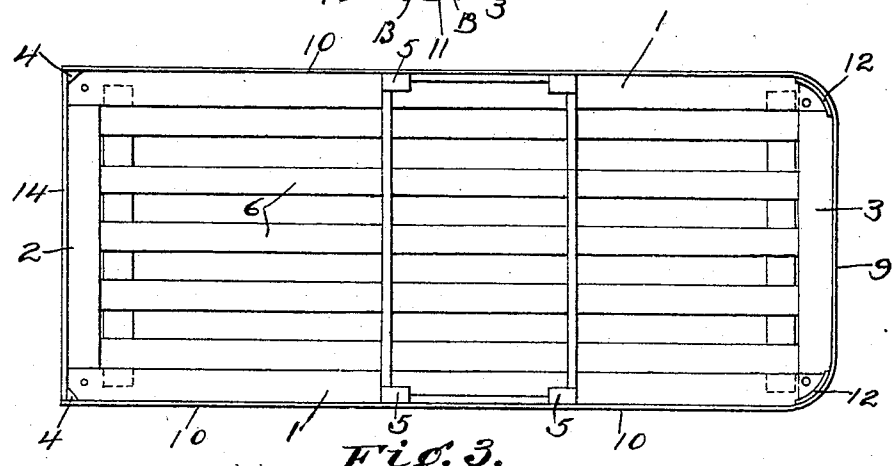

Fig. 3.

Witnesses
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2 SHEETS—SHEET 2.

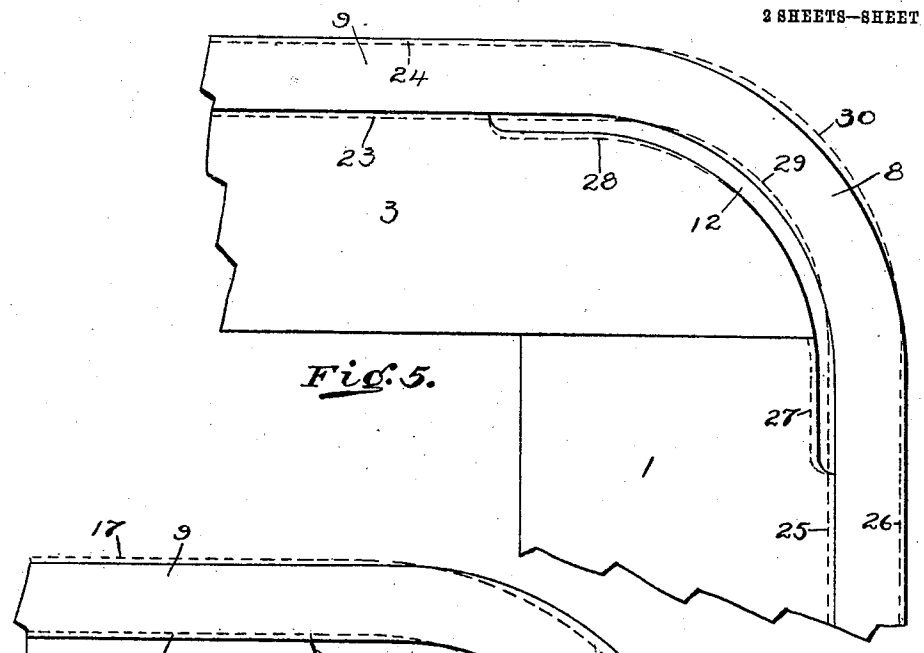

Fig. 5.

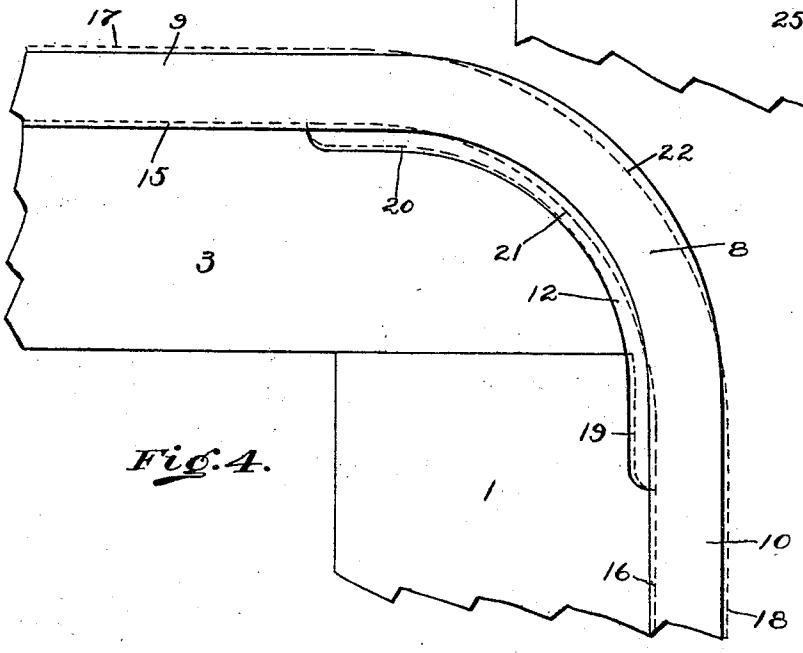

Fig. 4.

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UNITED STATES PATENT OFFICE.

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VEHICLE-BODY.

969,293. Specification of Letters Patent. **Patented Sept. 6, 1910.**

Application filed April 1, 1910. Serial No. 552,918.

To all whom it may concern:

Be it known that I, SAMUEL E. LIGHT, a citizen of the United States, and a resident of the city of Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Vehicle-Bodies, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

For years efforts have been made to furnish a box body for vehicles which upon exposure to the weather should not open up at the seams. Corner irons and braces of various kinds have been provided, and diligent efforts made to secure and brace the panel sides and ends so that the joints would not part when the vehicle is subjected to the strains and exposure to the elements while in use, but without entire success. It has been also sought to remedy the difficulty by forming the panels for the sides and ends in a single piece, and to bend such panel around the corners, and secure same to the sills in various ways. Even with panels curved or bent at the corners, the expansion and contraction of the frame, however, causes the same damage. The wood of the frames when subjected to moisture expands in width and not lengthwise so that a panel permanently secured to this frame at the end and sides must necessarily split or open up at the corners upon any substantial enlargement of the frame.

It is the object of my invention to overcome this difficulty particularly at the rear, where splits, checks or open seams are most noticeable, and the invention consists of that certain novel construction and arrangement to be hereinafter particularly pointed out and claimed, in which provision is made for the expansion or contraction of the frame.

In the drawings, Figure 1 is a perspective view of the panel for the sides and end of the body. Fig. 2 is a perspective view of the body frame and panels in place with one corner of the panel broken away at the rear. Fig. 3 is a plan view of the body. Fig. 4 is an enlarged plan view of one corner of the body, with dotted lines to show the effect of expansion of the frame. Fig. 5 is a similar view, with dotted lines to show the effect of contraction of the frame.

1, 1, are the side sills of the frame, 2 the front sill and 3 the rear sill. These sills are preferably joined together at the corners with an ordinary lap joint, although the method of joining the sill frame is not material. At the front corners of this frame, corner posts 4, 4, or corner irons are erected; at the middle portion the seat posts 5, 5, are preferably mortised into the side sills, and slats 6, 6, running lengthwise of the body are attached to bars running crosswise of the body. These bars are mortised into the side sills of the frame. In this way, a strong and substantial framework is provided for the finished vehicle body. It will be understood, however, that the framework can be put together in any desired way, without in any way affecting my invention.

7 is the panel for the sides and end formed in a single piece of a length to extend from one front corner to the other, and this panel is preferably steamed and then bent to form rounded corners 8, 8, a middle portion 9 for the rear panel, and parallel sides 10, 10.

The rear corners of the sill frame are also rounded off to correspond with the bends of the panel, and in addition to rounding off the corners, they are cut away as shown at 11 to leave a space 12, 12, at each rear corner. This portion is usually cut away after the frame is joined together, and the cut is commenced and terminates slightly beyond the line of the inner edge of the sills, so as to leave a shoulder 13, 13, parallel with and slightly within these lines. The panel 7 is then fitted around the sides of the side and rear sills and secured in place in any convenient way, by nails or screws and usually also by gluing. At the front the ends of the panel are secured to the corner posts, and 14 is the front panel, a separate piece secured directly across the front in the usual way.

When the panel for the sides and end of the body is formed in this way out of a single piece and secured as described to the side and rear sills, with openings 12, 12, between the frame and the panel at the curved corners, which openings provide for expansion and contraction of the sills, the panel is substantially indestructible, and will

never check or crack or open up at the corners.

In order to show the effect of expansion of the frame, I have illustrated in Fig. 4 one of the rear corners of the body in which the dotted line 15 indicates the outer edge of the rear sill 3 and the dotted line 16 the outer edge of the side sill 1 of the frame when expanded, and the dotted lines 17 and 18 indicate the position of the outer face of the panel at the end and sides respectively to conform to this enlargement of the frame. The dotted line 19 indicates the expansion of the cut away portion of the side sill 1, and the dotted line 20 the position of the cut away portion of the rear sill 3.

In view of the fact that the opening 12 is provided, the effect of pushing out the sides and end of the panel is merely to flatten out the curve of the bent portion 8, as indicated by the dotted lines 21 and 22.

It will be evident from an inspection of Fig. 4 that the expansion of the frame will not check or split the panel at the bent corner, as there is ample room to allow for the shortening of the curve. It will also be evident from this inspection that without the cut away portion 12, and with the frame cut to conform to the original curve, inasmuch as the original curved portion is longer than the flattened curve, the panel would have to break at the corner when subjected to the expansion indicated.

In Fig. 5 I have indicated in the same way the effect of contraction. The dotted lines 23, 24 show the position of the rear portion of the panel and the dotted lines 25, 26 the side portion. The dotted lines 27, 28 show the effect of the contraction on the cut portion of the frame, and the dotted lines 29, 30 the position of the panel at the curve under this contraction.

The effect of contraction of the frame is merely to increase the curvature of the panel at the corner.

Between the limits of expansion and contraction the curvature of the panel merely changes to follow the enlargement or diminished size of the frame without any liability to check or split at the corners.

It is not essential that the entire corner of the frame shall be cut away to provide for this expansion or contraction of the frame as long as sufficient material is removed to prevent undue pressure on the panel, but to extend the cut beyond the line of jointure of the ends of the frame, I find the preferable construction, for the reason that the panel at the rounded corners is in that event freed from any strain engendered by the expansion or contraction of either of the sills.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. A vehicle body, comprising a rectangular frame composed of front, rear and side sills, suitably secured together, with an upright panel to form the sides and end of the body, said panel formed in a single piece, with curved corners, and suitably secured to the sides and end of the frame, with the corners of the frame cut away to leave open spaces between the ends of the frame and the panel, to allow for the expansion and contraction of the parts.

2. A vehicle body, comprising a rectangular frame composed of front, rear and side sills, suitably secured together, with an upright panel to form the sides and end of the body, said panel formed in a single piece, with curved corners, and suitably secured to the sides and end of the frame, with the corners of the frame cut away to leave open spaces between the ends of the frame and the panel, to allow for the expansion and contraction of the parts, said cut portions extending around the corners of the frame slightly beyond the inner lines of the sill pieces.

SAMUEL E. LIGHT.

Attest:
H. H. LANG,
WM. SCOTT.