

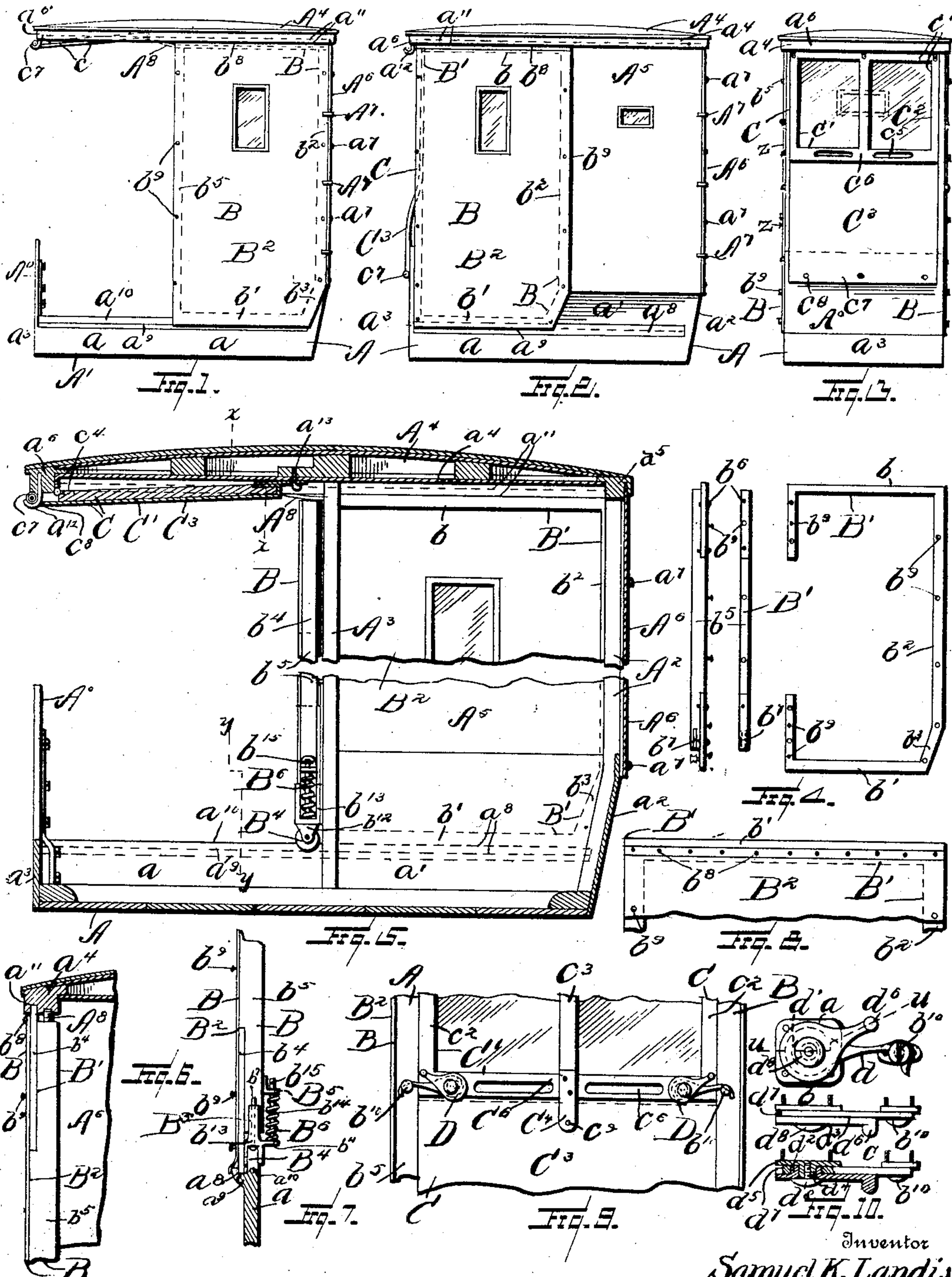
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S. K. LANDIS.
STORM CARRIAGE.

APPLICATION FILED JULY 25, 1902.

NO MODEL.



Inventor

Samuel K. Landis.

Witnesses

E. R. Rusby.

Stephen H. Parker.

By

Dan. H. Herr.

Attorney

UNITED STATES PATENT OFFICE.

SAMUEL K. LANDIS, OF MOUNT JOY, PENNSYLVANIA.

STORM-CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 777,959, dated December 20, 1904.

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To all whom it may concern:

Be it known that I, SAMUEL K. LANDIS, a citizen of the United States, residing at Mount Joy, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Storm-Carriages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in a carriage-body of that class in which its roof or top is upheld by rigid rear end corner and intermediate side posts, with the spaces between the posts opened or closed by drop-curtains, which may be buttoned in the usual way or otherwise secured in place, in which slidable sides and a drop-wing are adapted to conveniently close or open the forward portion of said body and in which means are provided to prevent said sides and wing from chattering or rattling in either closed or opened positions, making a storm-carriage for use in all kinds of weather.

The object of the invention is to provide a top-covered carriage-body with means to expeditiously close the forward portion of the same from within without unrolling and buttoning either side and front end curtains or with equal facility to open said portion again, also from within, without unbuttoning and rolling up said side and front end curtains, the former being quite a desideratum when out riding or driving in fair weather and on the sudden approach or appearance of falling weather and the latter again when said falling weather ceases.

The elements of the invention will severally and at large appear in the following description, and they will be separately or combinedly pointed out or set forth in the appended claims.

The purposes of the invention are attained by the mechanism, devices, and means illustrated in the accompanying drawings, with similar reference characters to designate like parts throughout the several views, in which—

Figure 1 is a full side elevation of a carriage-body embodying the elements of the invention with the forward portion thereof

opened. Figs. 2 and 3, respectively, are similar side and front end elevations showing said portion closed. Fig. 4 shows in detail and front end elevation the frame of a slidable side detached from Fig. 1; Fig. 5, an enlarged longitudinal central vertical section of Fig. 1 with the central portion horizontally broken away and the upper portion of the side closing-curtain between the body-posts removed; Fig. 6, a sectional elevation practically on the line *xx* in Fig. 5, showing the upper portion of the slidable side in position; Fig. 7, a similar elevation practically on the line *yy* in said figure, showing the lower portion of said side in position; Fig. 8, an outside view of the upper portion of the slidable side detached from Fig. 5; Fig. 9, an enlarged inside view of the portion of the forward end comprehended between the points *zz* in Fig. 3; and Fig. 10, three enlarged views of the wing and side securing-hook detached from Fig. 9, *a* being an elevation, *b* a top view, and *c* a horizontal section taken on the line *uu* of the view *a*.

In the drawings, A designates a carriage-body, such as is referred to in the opening paragraph hereto, in which the box portion A' is practically rectangular in horizontal plan, having vertical side walls *a*, preferably widened in the rearward or seat portions *a'* thereof, with a downwardly and forwardly sloping rear end or back wall *a''* and a vertical front end wall *a'''*, with any approved dasher A⁰ supported in position thereon, in which rear end corner-posts A² and intermediate side posts A³ support an approved top or roof A⁴, said roof having two side rails *a⁴*, a rear end rail *a⁵*, and a forward end rail *a⁶*, and which roof in this instance is rounded off in four directions toward the corners thereof, while the box portion may be made outwardly bulging or curving in the walls thereof, and the top or roof must be made to correspond in horizontal contour with that of said box portion, in which curtains A⁵ with their upper ends affixed to the outer surfaces of said roof side rails *a⁴* close the spaces between the posts A² A³ on each side of the body, and lying close against the outer surfaces of the posts they have their front and rear ends turned inwardly against the front and rear sides of said posts,

where they may be secured in place, as by being buttoned onto pin-buttons a^7 , driven into said latter sides, while a curtain A^6 , with its upper end securely affixed to the outer surface of said rear end roof-rail a^5 and buttoned onto the pin-buttons a^7 of the posts A^2 , closes the back or the space between said latter posts, and to the rearward surfaces of these posts are secured the shorter arms of L-shaped brackets A^7 , with their longer arms forwardly projecting to embrace the rearward end edges of the slidable sides, yet to be described, when said sides are in their rearward positions, holding said ends in close contact and preventing them from chattering or rattling, in which the outer surfaces of the portions a' of the walls a are provided to near their rearward ends with downwardly-recessed horizontal grooves a^8 , in which engage the lower edges of the slidable sides before mentioned in their rearward and forward motions, while the lower edges of the moldings forming said grooves extend forwardly in ornamental beads a^9 to near the forward ends of the walls a , leaving prescribed upwardly-projecting ridges or ribs a^{10} above said beads in the forward or narrow portions of said walls a , said ribs having their upper edges rounded, adapting them to be engaged by grooved rollers supported underneath the lower ends of the forward end posts of said slidable sides, and the outer surfaces of the side rails a^4 of the roof or top A^4 practically from end to end thereof are provided with upwardly-recessed grooves a^{11} , arranged directly opposite, but in a plane parallel to that of said lower grooves a^8 , to be engaged by the upper edges of said slidable sides, said grooves a^8 and a^{11} , together with said ribs a^{10} , constituting passage-ways to guide said slidable sides in their forward and backward motions, and to the under surfaces of said rails a^4 next to the inner sides of the grooves a^{11} are secured the heel ends of strap-springs A^8 , with their free ends to engage on the tops of the forward end posts of the slidable sides when in their rearward positions, holding them down and preventing their chattering or rattling, while in the under surface of the forward end roof-rail a^6 are secured J-shaped pin-hooks a^{12} to be engaged by a rod in the lower end of the drop-wing apron, yet to be described, and near to the center of the top, in the under surface thereof, is a similar hook a^{13} , but rearwardly open to be engaged by a strap upholding the drop-wing, to be hereinafter described, when said drop-wing is folded against the roof of the body.

Movable back and forth by reason of the passage of guideways above mentioned are slidable sides or side curtains B , practically rectangular in form, but so shaped in elevation and contour as to conform to the sides and back of the body, but having in this instance their lower rear end portions shown to be more forwardly sloping than is the back wall

of the box of said body, the grooves a^8 not extending through to said wall. These slidable sides or side curtains have skeleton frames B' , which consist in part of a rim made of approved strap metal having parallel top and bottom bars b b' to engage in said grooves a^{11} a^8 , with vertical rear end bars b^2 , having forwardly-sloping lower ends b^3 , conforming to the rearward end of the body-box, and forward end perpendicular strips b^4 , extending toward each other, but parallel to said rear end bars, said strips and bars being rigidly joined at the angles thereof, as by welding or forging, and the strips b^4 are seated in recesses formed in the outer surfaces of approved posts b^5 adjacent to the ends thereof and rigidly secured, as by rivets or screws b^6 , through orifices in said strips, the depths of said recesses being such as to bring the outer surfaces of the posts therebetween flush or even with the outer surfaces of the strips. The upper ends of the posts are below the top edges of the bars b to be engaged by the springs A^8 , as before mentioned, and their lower ends are above the bottom edges of the bars b' , making room for the placing of the grooved rollers and their supports before mentioned, while said lower ends in their forward and rearward sides are provided with grooves or slots b^7 to guide said supports. Against the outer surfaces of the bars b are placed the upper ends of approved curtains B^2 , overlaid by approved metal straps and rigidly secured, as by rivets b^8 , while the side edges are preferably secured by being buttoned onto pin-buttons b^9 , secured into the outer surfaces of said bars b^2 , said strips b^4 and the portions of the posts between said strips and said posts at prescribed points on their rearward sides are provided with headed pins b^{10} to be engaged by drop-wing hooks hereinafter described. Mounted on the lower ends of the posts are roller-supports or bracket-pieces B^3 , comprising base-plates b^{11} , with downwardly-projecting pairs of ears b^{12} , having pivoted or journaled between the ears of the pairs peripherally-grooved rollers B^4 , with their grooves engaging on said ribs a^{10} and with upwardly-projecting strips or bars b^{13} embracing the forward and rearward sides of the posts, said bars having inwardly-projecting ribs or ridges engaging in said slots b^7 , guiding said bars longitudinally in place, and said base-plates have inward side extensions, having on their top surfaces upwardly-projecting spindle-like columns b^{14} , with their upper ends passing through the horizontal plates of L-shaped brackets B^5 , said brackets having their vertical plates rigidly secured to the inner sides of said posts. Spiral springs B^6 are coiled about said columns, with their lower ends seated on said inward extensions and their upper ends against said horizontal plates and having longitudinal resiliency therebetween, while pins b^{15} through the column ends above said latter plates prevent

said ends from disengagement therewith, said springs B^6 by reason of said resiliency serving to press said rollers B^4 onto said ridges a^{10} and hold the tops and bottoms of the forward ends of said slidable sides in close contact with their respective guide or passage ways.

Adapted to close or open the forward end of the carriage-body A is a drop-wing C, comprising a rectangular frame C' , composed of upper and lower parallel bars $c\ c'$, with their extremities joined to those of parallel bars c^2 , while an intermediate bar c^3 , having its extremities centrally secured to said bars $c\ c'$, forms in said frame two equal openings, into which are placed panels C^2 , preferably of plate-glass, with their edges secured to said bars in any approved manner. This frame extending from side to side of the body, with the outer edges of its end bars c^2 abutting against the inner sides of the forward end posts of the slidable sides when they are fully forwardly drawn, has the upper edge of its bar c securely hinged to the inner side of the forward-end roof-rail a^6 by hinges c^4 , so as to hang downwardly therefrom or to be folded upwardly against the under surface of the roof, and the frame having the required depth or drop has in its lower bar c' longitudinal slots or openings c^5 , with a partition-wall c^6 therebetween, said slots giving passage to the lines when driving and said wall preventing said lines from slipping or falling therethrough when their free ends are joined and dropped from the driver's hands. To the inner surface of this lower bar c' , adjacent to the lower edge thereof, is securely affixed the upper end of an approved apron C^3 , adapted to hang down over the dasher when the frame is dropped or lowered and close the space therebetween, said apron having a width equal to that of the frame and a depth sufficient to extend above the hinged edge thereof when folded over its outer surface or up to and a prescribed distance above the hooks a^{12} , with a rod c^7 in its free end to engage on said hooks, while in the body of the apron adjacent to said rod are formed orifices c^8 , through which the hooks engage when the rod is passed into position thereon, and the rod by reason of said engagement supports the apron in the position of covering the frame portion of the wing when it is folded up against the roof of the body, the rod also serving as a weight to hold the apron down when in the hanging position over and against the dasher before mentioned. Centrally to the inner surface of the bar c' , adjacent to the lower edge thereof, is rigidly secured one end of a strap C^4 , with its free end projecting beyond said edge and provided with an orifice c^9 to be engaged by the roof-hook a^{13} , upholding the folded drop-wing in position against said roof.

Adjacent to the extremities of the bar c' and against the inner surface thereof are mounted drawing or tightening hooks D to

firmly hold together, as well as to secure rigidly in place, the slidable sides and drop-wing when the former are forwardly drawn and the latter lowered, as shown, preventing them from chattering or rattling, and in order that said hooks may best perform their functions they have the hook ends of their arms d under the bends thereof hollowed out or curvingly recessed, so as to assure firm grips on their respective wing-pins b^{10} on engaging therewith, and in their other or widened ends are formed orifices d' , through which said arms are journaled onto cylindrical lugs d^2 , projecting rearwardly from the flat sides of widened plates of lever-arms d^3 , which lever-arms by means of orifices eccentrically through said lugs are journaled onto cylindrical lugs d^4 , projecting forwardly from plates d^5 , rigidly secured to said frame-bar c' , said lever-arms being provided at the free ends with knobs or handles d^6 for turning them, and at prescribed points on their widened plates are rearwardly-projecting pins d^7 , which by engaging against the under edges of said hooks serve to disengage them from said wing-pins b^{10} when said lever-arms are sufficiently turned, while headed screws d^8 , tapped into said lugs d^4 and firmly screwed home thereon, serve to securely hold the several parts of said hooks together and in place.

The invention having thus been ascertained and described and the manner in which it is performed fully shown and set forth, what is considered new and desired to be secured by Letters Patent is—

1. A carriage-body having a base or box portion and a roof portion with two rear end corner-posts and two intermediate side posts upholding said roof portion, and having rear end and side spaces between said posts, with curtains adapted to close or open said spaces, and a dasher supported on the forward end wall of said box portion, with guide or passage ways comprising the roof-grooves, a^{11} , the rear end box-grooves, a^8 , and the forward end wall-ribs, a^{10} , arranged in the sides of the body as shown; slidable side curtains movable back and forth in said guideways and adapted to open and close the forward portions of said sides up to said dasher, with means provided to hold them steadily in place; and a drop-wing as described with its upper end hinged to the forward end roof-rail and adapted to close the forward end of the body when said slidable side curtains are fully forwardly drawn, with means provided to lock said wing and sides together, preventing their rattling, and to open said end again when the wing is folded up and supported against the roof, all substantially as described and for the purpose hereinbefore set forth.

2. In a carriage-body, as described, having the roof side-rail grooves, a^{11} , and the body-box grooves, a^8 , with the wall-ribs, a^{10} , constituting the slidable side-curtain guideways

arranged in the sides of said body; slidable side curtains movable back and forth in said guideways and having skeleton frames with parallel top and bottom horizontal bars respectively engaging in said grooves, with vertical rear end bars joining their rearward ends and their forward ends provided with downwardly and upwardly approaching branch bars, and vertical forward end posts with recesses in their outer surfaces adjacent to the extremities thereof, into said recesses said branch bars seated and rigidly secured, and curtain-cloths overlying said frames and having their upper ends rigidly secured to the outer surfaces of said top bars and their rear and front ends buttoned onto pin-buttons in the outer surfaces of said rear end bars, forward end branch bars and forward end posts, with the L-shaped brackets, A^7 , secured to the rear end corner-posts, the strap-springs, A^8 , secured to the under surfaces of the roof side rails, and the grooved rollers, B^4 , mounted on the lower ends of said forward end posts, all substantially as described and for the purpose hereinbefore set forth.

3. In a carriage having the slidable side-curtain passage-ways, the roof, the rear end corner and intermediate side posts supporting the roof, and the L-shaped brackets secured to said corner-posts, all as shown and described, the combinations with the slidable side curtains, as described, having their upper and lower ends movable back and forth in said passage-ways, with their rearward ends engaged by the forwardly-projecting arms of said brackets, and their forward end posts in position adjacent to the forward sides of said intermediate posts, of the strap-springs, A^8 , having their heel ends rigidly secured to the under surfaces of said roof side rails and their free ends engaging on the tops of the forward end posts of said slidable side curtains, substantially as described and for the purpose hereinbefore set forth.

4. The combination in a carriage-body of the character described, having the slidable side curtains movable back and forth in the side passage-ways as shown, with the forward end posts of their skeleton frames, of the grooved rollers, B^4 , engaging on the wall-ribs, a^{10} , and journaled between pairs of ears at the lower ends of bracket-pieces, B^3 , slidingly mounted on the lower ends of said posts, with the springs, B^6 , provided to press said bracket-pieces downward, substantially as described and for the purpose hereinbefore set forth.

5. In a carriage-body of the character de-

scribed, having the side passage-ways, the forward end roof-rail and the hooks, a^{12} , in the under surface of said rail, with the hook, a^{13} , practically at the center of the ceiling of said roof all as shown, the combination with the slidable side curtains movable back and forth in said passage-ways and fully forwardly drawn, of the drop-wing, C, composed of the rectangular frame, C' , having the horizontal bars, $c c'$, the perpendicular end bars, $c^2 c^2$, the central bar, c^3 , and the transparent panels, C^2 , secured by said bars, with the hinges, c^4 , secured to said bar, c , and said forward end roof-rail, with the openings, $c^5 c^5$, and the partition-wall, c^6 , in said bar, c' , and the apron, C^3 , with one end rigidly affixed to the inner surface of said latter bar adjacent to its lower edge, and the rod, c^7 , secured to the free end of the apron, with the orifices, c^8 , in its body adjacent to said rod, with means provided to securely lock said side curtains and wing together when the latter is dropped, and to secure the wing in folded position against said ceiling, substantially as described and for the purpose hereinbefore set forth.

6. In a carriage-body of the character described, the combination with the slidable side curtains, B, having the forward end posts, b^5 , and fully forwardly drawn in the side passage-ways, with the headed pins, b^{10} , in rigid positions on the rearward sides of said posts, and the drop-wing, C, with the frame, C' , having the top and bottom horizontal bars, $c c'$, and the parallel end bars, $c^2 c^2$, as described, said bar, c , hinged to the forward end roof-rail, said bars, $c^2 c^2$, having their outer edges abutting against the inner sides of said forward end posts, and said bar, c' , having the openings, $c^5 c^5$, with the partition-wall, c^6 , and the apron, C^3 , as described having its upper end rigidly affixed to the inner surface of said latter bar, of the tightening-hooks, D, as described, having the arms, d , with the recesses in the angles of their hook ends engaging on said pins, b^{10} , and their other ends pivotally secured to the inner surfaces of said bars, c' , adjacent to the extremities thereof, with means provided to throw said hook ends into and out of engagement with said pins, b^{10} , substantially as described and for the purpose hereinbefore set forth.

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

SAMUEL K. LANDIS.

Witnesses:

PAUL A. HERR,

DANIEL H. HERR.