H. A. LUTTGENS.

Wagon-Bodies.

No. 134,996. Patented Jan. 21, 1873.

Fig I

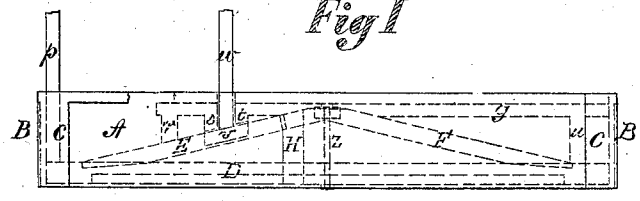


Fig II

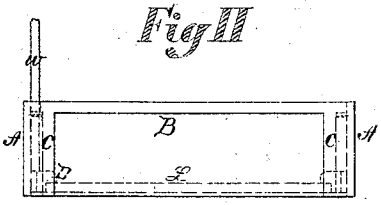


Fig III

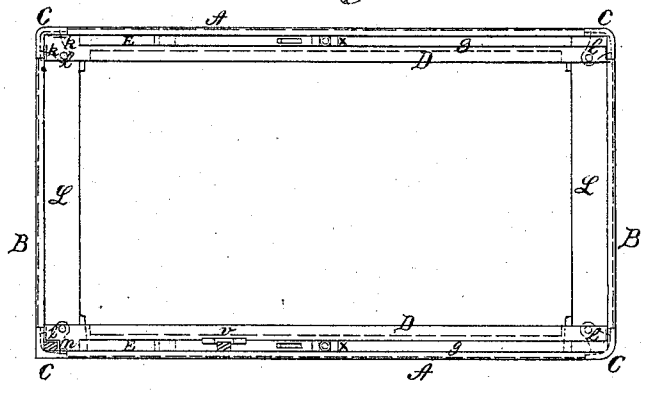


Fig IV

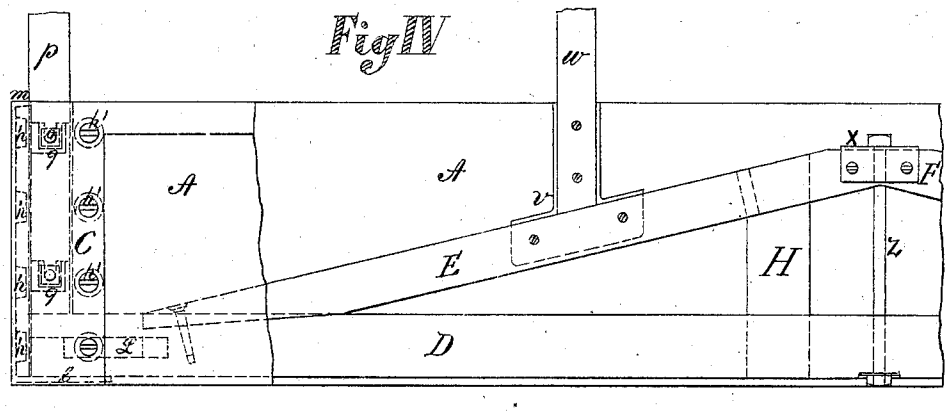


Fig V

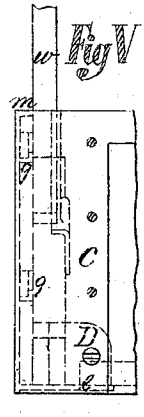
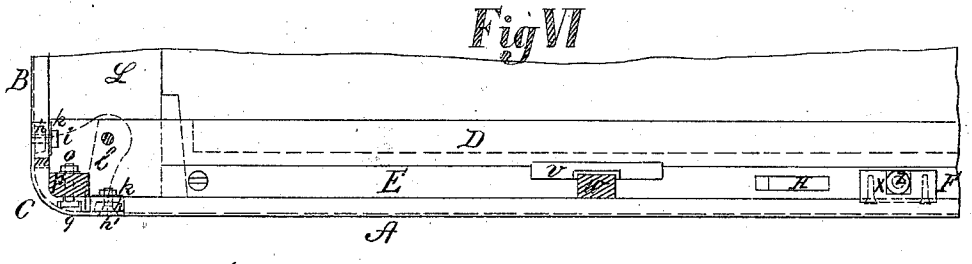


Fig VI



Witness John L. Stagg

Wm. Hudson Jr.

H. A. Luttgens

UNITED STATES PATENT OFFICE.

HENRY AUGUSTUS LUTTGENS, OF PATERSON, NEW JERSEY.

IMPROVEMENT IN WAGON-BODIES.

Specification forming part of Letters Patent No. **134,996**, dated January 21, 1873.

To all whom it may concern:

Be it known that I, HENRY AUGUSTUS LUTTGENS, of Paterson, in the county of Passaic, in the State of New Jersey, have invented a new and Improved Carriage-Body; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing forming part of this specification, in which—

Figures I and II represent a side and end elevation of the carriage-body; Fig. III, a top view of the same; Figs. IV and V, a part of the side and end elevation on an enlarged scale; and Fig. VI, a part of the top view of the same on an enlarged scale.

Similar letters of reference indicate corresponding parts in each of the several figures.

My invention consists, first, in the construction of carriage-bodies in a manner to insure permanence in the corner-fastenings by making the corners separately and of malleable iron or other metal, each corner-piece being provided with a flange, whereby it is secured to the bottom of the sill. The edges of the corner-pieces are constructed so as to secure the side and end panels of the body to their inner sides by bolts or rivets, a wrought-iron washer being placed inside of the panels, so that the ends of the panels, forming the sides and ends of the carriage-body, are firmly pressed and secured by bolts or rivets between the corner-piece and washer. Secondly, the improvement consists in the construction of the sill, which, instead of being made in one piece, is made in the shape of a truss, with a central bolt uniting the top of the truss with the lower sill, the sill and truss-bars being further connected by one or more vertical pieces or uprights, whereby the truss is firmly held in position, thus affording an efficient support for the load placed into the carriage-body, and at the same time preserving the side panels in position. The bottom of the bows, which support the top of the carriage, are supported by brackets, which are bolted to the inside of the truss-bars, and the bows placed at the corners are secured to the inside of the corner castings either by bolts, the heads of which enter recesses provided upon the inside of the corner castings, or a socket is formed, which is secured by the same bolts which connect the corner-pieces with the side and end panels of the carriage-body. If rave-pieces are required to support the seats they are secured to the truss and supported by the same, being cut out at those points where the brackets, if needed for supporting the central top bows, are secured to the truss-bars.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A A represent the side panels, and B B the front and rear panel of a carriage-body, which are securely bolted or riveted to corner-pieces C and fastened to the cross-bars L, to the sills D, to truss-bars E and F, and rave-pieces G. The corner-pieces C are so made as to form the square or rounded corner of the carriage-body, and are made to receive the side and end panels A A and B B, which are secured to the inside of the corner-pieces C by rivets or bolts. If secured by rivets the part of corner-piece C which receives the panels A and B is made with a smooth or plane surface; but when secured by bolts the projections *h* are cast or formed upon the inner side of corner-pieces C for the purpose of either receiving the countersunk heads of bolts *h'*, which are put in from the outside of the carriage-body, or to receive the end of bolts *i*, which enter the corner-piece C from the inside of the carriage-body, the projections *h* of the corner-piece being then provided with tapped holes for this purpose. The panels A A and B B are notched out at the ends to make room for the projections *h* when used, and plates or washers *k* are placed upon the inside of the panels A A and B B, so that the rivets or bolts, as the case may be, which secure the corner-pieces C and panels A and B, and which also pass through the plates *k*, firmly press or hold the panels A and B between two metal plates. The corner-piece C is provided with a flange, *l*, which is bolted to the bottom of sill D, and also with a small flange, *m*, at the top, which extends to the inside of the panels A, A, B, and B. A socket, *n*, for the reception of the bows *p* supporting the carriage-top, is formed by the two plates or washers *k*, belonging to each corner-piece C, being in that case made of a plate of metal sufficiently large to form, in combination with the inside face of the corner-piece C, the socket *n*.

A modification of this plan is represented in

Figs. IV, V, and VI, where the front and rear bows *p*, instead of being supported by socket *n*, are provided with bolts *o o* passing through them, the heads of which enter recesses *q q*. The recesses are open at the top, so that the head of bolt *o* may freely enter the same. The bolts *o o*, after being placed in position, are tightened so as to hold the bow *p* firmly in position.

The rave-pieces G, if needed for supporting the seats of the carriage, are placed above the truss-bars E F and secured to the latter. Supporting-pieces *r s t u* are placed between the truss-bars E F, sill D, and the rave-piece G. The rave-piece G is cut out to admit the bracket *v*, which supports the central bow *w*, the bracket *v* being firmly bolted to the inside of bow *w*, and also to the truss-bars E and F by bolts *z z*. One bracket, *v*, only is shown upon the drawing. The sill D is notched to receive the lower ends of the truss-bars E and F, the sill and truss-bars being secured together. The upright H, which is tenoned into the sill D and truss-bars E and F, secures the latter in their vertical position. The cap-piece *x*, which is bolted by its flange to the upper ends of the truss-bars E and F, receives the truss-bolt *z*, which also passes through sill D and supports the center of the same.

The operation is as follows: The side and end panels A, A, B, and B, instead of being fastened by means of wood-screws to the top bows *p* and *w* of the carriage-body so as to make the bows form a part of the carriage-body, these parts are so made that the bows *p* and *w* may be connected with the carriage-body or removed at will.

The corner-pieces C are made separate and the ends of panels A and B are secured by bolts or rivets to the inside face of the corner-pieces C, the panels A and B being compressed between two plates, so that the position of the panels A and B is not dependent upon wood-screws, as ordinarily, but firmly secured between the inside face of corner-piece C and plates or washers *k* by bolts or rivets. The corner-pieces C themselves may be molded into a shape forming a round or square corner, with or without panels, and are adjusted and secured by flange *l* to the sill D, a bolt connecting the flange and sill.

The strength of the panels and sills when secured together by wood-screws is often found insufficient, so that the panels change their position, and the wood-screws connecting them lose their hold, and the panels also are found to be pressed outward by the weight of the seats and load resting upon the rave-pieces; but in the construction represented the sills D, truss-bars E F, upright H, and truss-bolt *z* form in combination a rigid support for the weight, which is placed upon the rave-pieces G, entirely independent of the side panels A A, so that the panels A are not liable to be displaced or to change their position by the weight, which may be supported by the carriage-body.

The carriage-top is removable by means of the corner-bows *p* being removed from socket *n;* or as represented in the modification, Figs. IV, V, and VI, the bolts *o o* entering recesses *q q* are loosened, when also the bolts connecting the bracket *v* to truss-bars E and F are disconnected, so that the whole top may be readily taken off from the carriage-body, or replaced, if so desired.

A modification may be made in the construction of the side-truss. The truss-bolt *z* may be dispensed with, when each truss-bar, E and F, must be provided with an upright piece, H.

Whenever a stationary seat is used the rave-pieces are dispensed with, and vertical pieces, supporting the seat, are halved into and secured to the sill D and truss bars E and F.

The corner-pieces C may be modified in shape to be adapted to various designs of carriage-bodies; they may be made to include the corner of the back seat, if so desired, in which case the carriage-top, if used, is fastened to the top of the seat.

The side panels A, instead of being fastened to the sill D and truss-bars E and F by wood-screws entered from the outside, may be secured together by entering the wood-screws from the inside; or, instead of this mode of fastening, corner-strips may be introduced, which are fastened by screws to sill D and panel A and to the truss-bars E and F and panel A.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of corner-pieces C, panels A and B, sill D, truss-bars E F, and upright piece H, substantially in the manner and for the purpose as described.

H. A. LUTTGENS.

Witnesses:

JOHN L. STAGG,

WM. S. HUDSON, Jr.