No. 749,658. PATENTED JAN. 12, 1904.

F. H. BOLTE.

VEHICLE BODY.

APPLICATION FILED MAY 2, 1901.

NO MODEL.

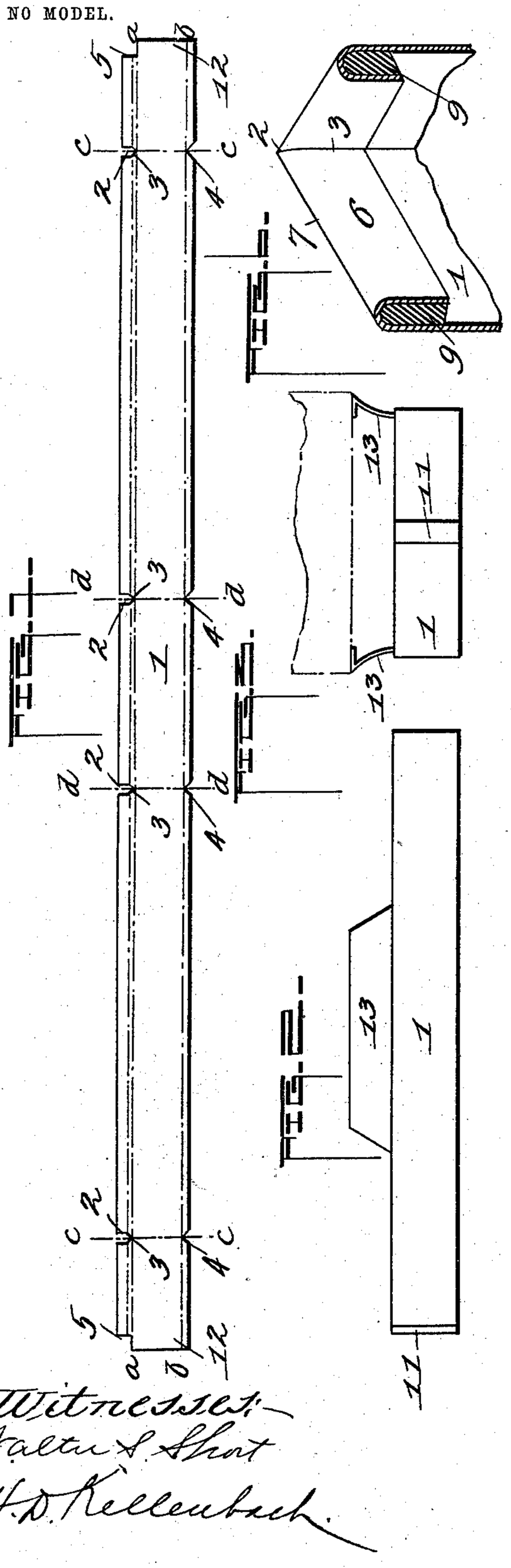

FIG. 1.

FIG. 2.

FIG. 3.

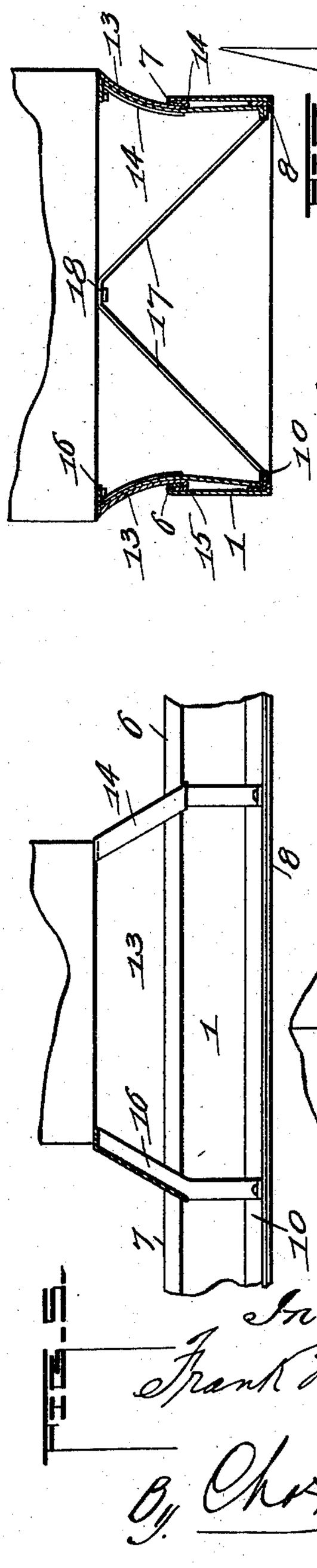

FIG. 4.

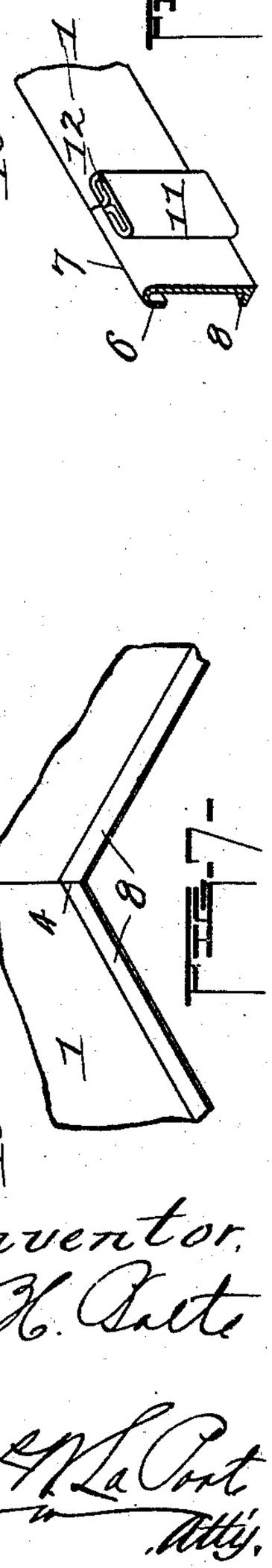

FIG. 5.

FIG. 6.

FIG. 7.

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No. 749,658. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

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VEHICLE-BODY.

SPECIFICATION forming part of Letters Patent No. 749,658, dated January 12, 1904.

Application filed May 2, 1901. Serial No. 58,442. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. BOLTE, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Vehicle-Bodies; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in vehicle-bodies, and has for its object to provide a vehicle-box made of one piece of metal whereby a strong, durable, and inexpensive article is produced, being well adapted for the purpose designed.

The invention further relates to the means of forming said body and to holding together the adjacent ends of the metal without the employment of nails, screws, rivets, or the like, which will produce at once a body which is smooth on its face and very attractive, that the same be highly finished by being enameled, &c.

It consists, further, in the means of bracing the sides and ends of said body and to suitable means for supporting a seat on the body, all of which will be hereinafter set forth.

In the accompanying drawings, Figure 1 illustrates in plan a strip of metal cut in a suitable manner preparatory to forming the body. Fig. 2 is a side elevation of the complete body. Fig. 3 is an end elevation of the same. Fig. 4 is an enlarged cross-section disclosing certain details of construction. Fig. 5 is an enlarged partial longitudinal section of the same. Fig. 6 is a detail perspective of the manner of bending and forming the upper corners of the body, and Fig. 7 is a detail perspective of the manner of bending and forming the lower corners. Fig. 8 is a detail perspective of the manner of securing the adjacent ends of the body.

Referring to the drawings, 1 refers to a strip of sheet metal of desired length and thickness which is to form the sides and ends of the vehicle body or box. Preparatory to bending and forming the strip into desired shapes to complete the body the strip is stamped or otherwise suitably cut on its edges at points throughout its length to enable me to form the corners of the box and to make suitable bends in the upper and lower edges of the sheet and to provide for interlocked adjacent ends. At suitable points on one edge of the sheet, preferably what is termed the "upper" edge, I provide the cut-out portions 2, rectangular in form and having meeting tapered sides 3, as shown, and on the opposite side of the sheet is provided the meeting tapered notches 4, which are placed directly opposite to the tapered sides 3 of the rectangular openings, and at the opposite ends of the sheet on its upper edge is shown cut-out portions 5. After this preliminary step in cutting the sheet the upper edge of the same is bent over on the line *a a* longitudinal of the sheet, forming the depending portion 6 in such a manner that the upper edge of the sheet will present a curved surface, as 7. Then the opposite side of the plate or sheet is bent over on the line *b b* longitudinal of the sheet to form the flange 8, and the next step in the formation of the body is to bend the strip in such a manner as to form the ends and sides of the body or box. This is accomplished by bending the strip on the lines *c c* and *d d*, which will be through the cut-out portions above described, and the peculiar cuts or stamped-out portions are such as to bring the matching faces of the rectangular sides 2 together, as also the tapered portions 3 and the tapered notches 4 upon the opposite sides of the sheet, thus making a smooth curved joint at the upper corners and the flanged inner portions at the lower inner corners, and to insure a complete joint at the upper corners, where the portions 6 are turned inwardly and extend downwardly, I pour suitable metal 9 between the matching faces of the sides, ends, and inturned depending portions, which will hold the same together and perfectly rigid. A skeleton frame is provided, to which the sides and ends are secured and in which the bottom may be placed to complete the box and upon which the seat-support may rest. This is a frame-piece of angle-iron (referred to as 10) bent into form, and the flanged portions 8 of the sides and ends are

secured to the angle-iron frame, on its lower face, by means of rivets or other suitable means. This forms a brace for the body on its lower edge, and by forming the inturned depending portion at the upper edge the same acts as a reinforcing strip or brace for the upper edge of the sides and ends.

I aim to lock the adjacent ends of the body by means of a lock-piece 11. This particular lock is not new; but the manner of cutting the sheet and attaching the same is, I believe, new with me. To provide a lock-joint such as I have shown without the use of rivets, screws, &c., it is necessary to cut the ends of the strips on their upper edges and corners as I have shown at 5, so that when the ends are brought together after the upper edge has been turned inwardly and down to present a curved upper edge it is necessary to leave free ends, as shown at 12, to be bent back upon its face, forming short flanges, so that the lock-plate 11 may be adjusted in such a manner as to have its flanges overlap the flanges formed by the ends of the sheet, as shown.

13 represents suitable seat-guards, also of metal and arranged to be supported from the body. The same have inwardly-curved end portions 14 and extended lower portions 15, which are bent to form flanges to engage and overlap the sides 6, as shown, which acts as a support for the guards, and 16 represents suitable metal straps carried between the sides of the guard and the bent portions 14 and have extended lower portions arranged to be secured to the angle-iron frame, as shown, the upper ends having extended portions bent on a horizontal line inwardly, as at 16, of which there are four, upon which a seat for the box may be bolted, and 17 is a supplemental brace supported transversely in the box by the angle frame, and the upper portion 18 is arranged to engage the lower face of the seat about central thereof and be bolted thereto.

From the above description it will be seen that a very durable and inexpensive vehicle body or box may be produced by forming the same of a single piece of sheet metal. The peculiar manner of stamping the sheet and bending the upper and lower edges insuring rigid sides and ends and the manner of bending the sheet insuring tight seams at the corners, and by affixing the same to an angle-bar frame the necessary additional parts, such as the seat-guard and seat, as well as the flooring for the box, may be readily and easily attached and supported, and my experience has been that the same built on the lines laid out in the description and as shown in the drawings the vehicle will stand any amount of strain and weight and will not rattle.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The herein-described vehicle-body, formed from a single piece of sheet metal, the sheet having cut-out portions in its opposite edges to form a curved upper edge and smooth curved joints at its corners, a lower flange portion, a rectangular skeleton frame supported by said flange and seat-supports attached to said frame, substantially as specified.

2. The herein-described vehicle-body, formed from a sheet of metal 1, provided with notches in its edges, and cut-out portions 5 at its opposite ends, the said sheet bent upon lines passing through the cut-out portions and provided with a convex upper edge and a flanged lower edge, a skeleton frame, seat-supports and seat-guards attached to the frame and upper curved edges of the body respectively, substantially as described.

3. The herein-described vehicle-body, having an upper flanged portion with a convex edge, suitable filling interposed at the corners of the body between the sides and aforementioned flanges, seat-supports attached to said body and seat-guards interlocked as shown to the flange of the body, substantially as described.

4. The combination in a vehicle-body made of one piece of sheet metal, having the upper convex edge 7, and depending portion 6, suitable metal filling at the corners interposed between the sides and ends and depending portion 6, the lower flange 8, rectangular frame 10, to which said flange 8, is secured, and suitable supports for a seat, said supports secured to the frame 10, all substantially as described.

5. A vehicle-body formed of the sheet 1, having the incisions 2, with tapered meeting sides on one edge, and incisions 4, on the opposite edge of said sheet, the corners of said body formed by bending the sheet on lines *c c* and *d d*, passing through the incisions 2, and 4, in combination with the skeleton frame 10, and the seat-guards 13, suitably attached to the body, and suitable seat-supporting means, in the manner described.

6. The herein-described vehicle-body, formed of the sheet-metal strip 1, having cut-out portions 5 at its opposite ends, and the cut-out portions 2 with tapered edges and cut-out portions 4 having converging edges, said strip bent on lines passing through the base of the cut-out portions 2, 4, and 5 and the opposite ends interlocked, means for supporting a seat and seat-guards, all substantially as described.

7. A vehicle-body formed in the following manner from a single piece of sheet metal: cutting out rectangular slots in the upper edge having meeting tapered sides, forming tapered slots on the opposite edge on lines *c c* and *d d* of said sheet, stamping or otherwise cutting the sheet at opposite corners as shown at 5, bending the sheet on lines *a a* and *b b*, to form the depending portion 6, and the flange 8, and joining the free ends of said strip by means of the lock-piece 11, attaching said body to the skeleton frame 10, and providing suitable seat-

guards and seat-supports in the manner specified.

8. In combination with a metal body as shown having the convex upper edge and depending portion 6, and angle bottom 8, of the seat-guards comprising the flared sheets 13, having inturned end portions and an extension of said plate to overlap the portion 6, of the sides with which it contacts and suitable straps engaged by the inturned ends of the guards and having extended ends attached to means within the body and the angle upper ends for the purpose herein described.

9. In combination with a vehicle-body, having a depending upper flange, of suitable metal filling interposed between said flange and body portions at the corners thereof for the purpose of strengthening such parts and insuring a complete joint at the corners, substantially as described.

10. A vehicle-body comprising a skeleton frame of sheet metal, a depending upper flange with matching curved corners, a rectangular frame supported by the lower portions of the sides and ends of said body, seat-supports, and seat-guards, the guards interlocked with the depending flange and the seat-supports interlocked with the guards, substantially as described.

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

FRANK H. BOLTE.

Witnesses:
CHAS. W. LA PORTE,
ROBERT N. MCCORMICK.