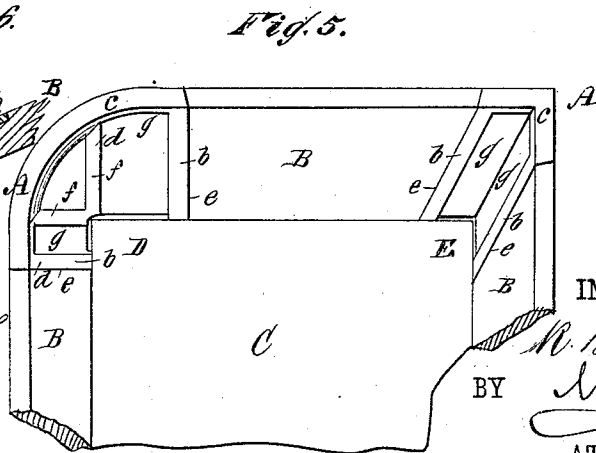
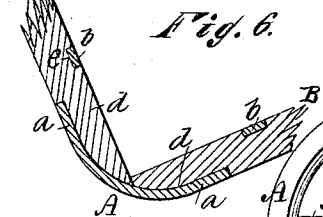
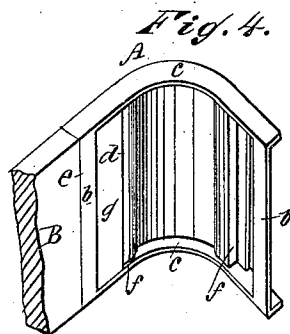
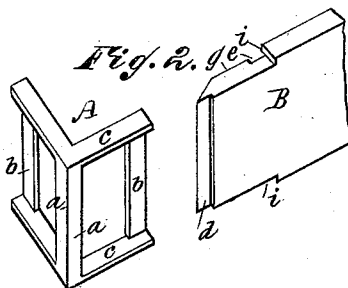
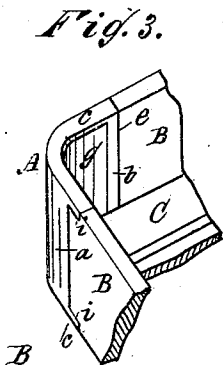
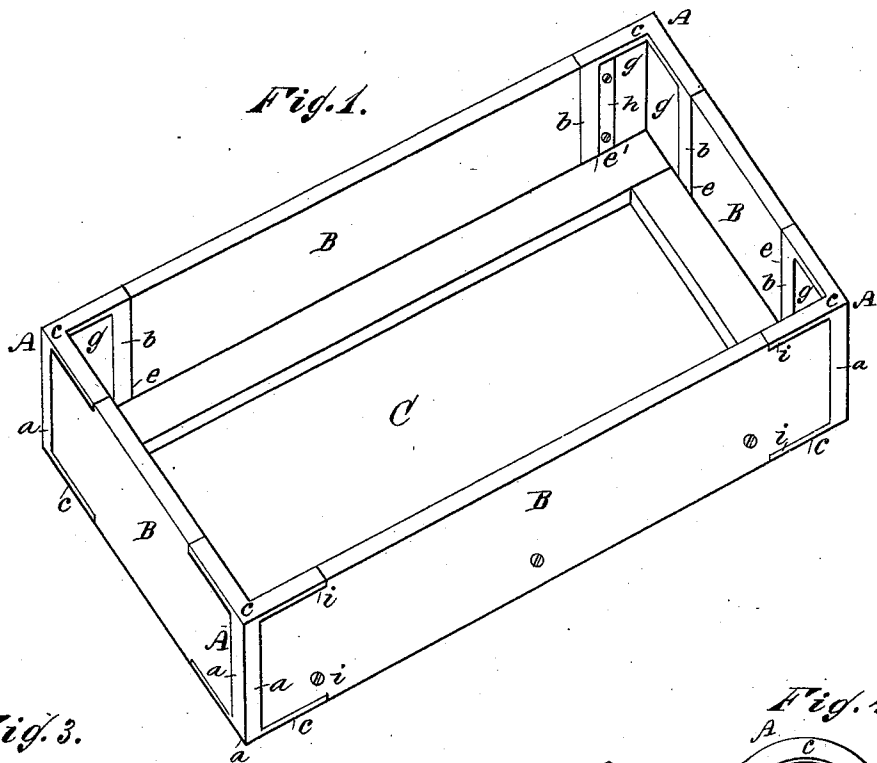


(No Model.)

R. B. PERKINS.  
CORNER PIECE FOR WAGON BODIES.

No. 251,278.

Patented Dec. 20, 1881.



WITNESSES:

*Theo. H. Hooten*  
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INVENTOR:

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# UNITED STATES PATENT OFFICE.

RICHARD B. PERKINS, OF HORNELLSVILLE, NEW YORK, ASSIGNOR OF TWO-THIRDS TO DE LANCY FREEBORN AND JOHN MILTON BROWN, BOTH OF SAME PLACE.

## CORNER-PIECE FOR WAGON-BODIES.

SPECIFICATION forming part of Letters Patent No. 251,278, dated December 20, 1881.

Application filed September 9, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD B. PERKINS, of Hornellsville, in the county of Steuben and State of New York, have invented a new and useful Improvement in Corner-Pieces for Wagon-Bodies, of which the following is a full, clear, and exact description.

The object of my invention is to provide means whereby the boards of wagon or carriage bodies, and wagon-seats, and other similar boxes and things may be securely joined at the ends to form square or rounded corners without dovetailing, and without the use of nails, screws, or similar fastenings, and in such manner that the corners will be shielded and protected from every direction, the rounded corners being rounded both upon the inside and outside of the box, or only upon the outside, as desired.

My invention consists, principally, of metal corner-pieces made with inside and outside locking-bars or supports, which fit in suitable cut-away places and grooves in the side and end boards of the box or seat, the said bars or supports being at right angles to the top and bottom plates for perpendicular corners or diagonal thereto for divergent corners where the side and end boards are inclined.

The invention also consists in the manner of uniting the boards and corner-pieces, and of the combination of the grooved and cut-away or rounded side and end boards with the corner-pieces, whereby square or rounded corners (inside and outside, or outside only) are formed, as hereinafter fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a square-cornered box having my improved corner-pieces. Fig. 2 is a perspective view of one of the corner-pieces removed. Fig. 3 is a detailed perspective view of a rounded box-corner formed with my improved corner-piece. Fig. 4 is a similar view, the corner being rounded both upon the inside and outside of the box. Fig. 5 is a perspective view of a wagon-seat, rep-

resenting square and rounded corners formed with my improved diagonal corner-pieces; and Fig. 6 is a detailed section, showing a box-cover square upon the inside, but rounding upon the outside, formed with my improved corner-piece.

In the drawings, A represents the corner-pieces, and B represents the side and end boards, of the box or seat. The corner-pieces are preferably cast of malleable iron, and are formed with the outside locking-bars or supports, *a*, for the ends of the boards, the inside locking-bars or supports, *b*, and the top and bottom plates, *c*, which are of a width about equal to the thickness of the boards, the outside bars or supports being formed upon the outer edges of the plates *c*, and the inside bars or supports are formed upon the inner edges of the said plates, as clearly shown in Fig. 2. The outside supports, *a*, are preferably joined or formed of a continuous plate of metal and made angular, as shown in Fig. 2, to form a square corner, or rounded, as shown clearly in Fig. 6, to form rounded corners. If the side and end boards, B B, are to stand perpendicular or at right angles to the bottom board, C, as shown in Fig. 1, the plates *c* and the outside and inside bars or supports, *a* and *b*, are to be formed at right angles to each other; but if the side and end boards are to be inclined the said bars or supports are to be made diagonal to the plates *c*, as shown in Fig. 5, to suit the desired inclination of the boards.

In making a square-cornered carriage body or box the ends of the boards are cut away upon the outside, as shown at *d*, and formed with the grooves *e* upon the inside, which cut-away places and grooves come against and form good joints with the outside and inside locking-bars or supports of the square corner-pieces.

In forming a box the corners of which are to be square upon the inside, but rounded upon the outside, the ends of the boards, instead of being cut away as shown at *d*, Fig. 2, are rounded off upon the outside to fit the inner walls of the rounded corner-pieces, as shown

in Fig. 6, the inside bars or supports, *b*, locking in the grooves *e*, as in case of the square-cornered box just described.

In forming a box the corners of which are to be rounded both upon the inside and upon the outside, the ends of the boards are to be formed the same as in the case of forming the square-cornered box, except that the distance between the cut-away place *d* on the outside and the groove *e* on the inside is much shorter, thus leaving the inner rounded wall of the corner-pieces exposed, not covered by the boards, as shown in Figs. 4 and 5. For this latter form of corner I prefer to cast the corner-pieces with the ribs *f f* upon the inside for the ends of the boards to abut against, as shown in Figs. 4 and 5. Instead of forming these ribs as shown in these figures, leaving a vacant space between them, which is advantageous only when light corner-pieces are desired, the portion of the corner-pieces between the ribs may be made solid, of a thickness of metal equal to the width of the top and bottom plates, thus making a continuous, smooth, and perfect corner when the boards are in place.

In setting the body up (one with four sides) it will be found, after locking the boards in three of the corner-pieces, that in completing the fourth corner the end of the last board will not pass between the supports *a* and *b* of the corner-piece. To overcome this difficulty I make the groove *e* in one of the boards about double the width of one of the outside locking-bars or supports, *a*, so as to permit the end of the board to pass the edge of the outside support in position so that the board may be shoved longitudinally into place, the whole being then keyed together by the strip *h*, secured in the wide groove *e*, between the inner edge of the inside support and the head or offset *g*, formed by making the groove in the board, as shown in Fig. 1. The edges of the boards are reduced, as plainly shown at *i* in Fig. 2, to receive the top and bottom plates, *c c*, of the corner-pieces, in order that good joints may be formed therewith upon the edges of the box or body, as shown in Fig. 1.

In forming corners rounded both upon the inside and outside, where the boards are set on an incline to the bottom board, *C*, as shown at corner *D* in Fig. 5, the corner-pieces are made with the upper curved plate, *a*, of greater length than the corresponding bottom plate, and the opposite locking-bars or supports and the opposite ribs, *f f*, are not parallel with each other, but are diagonal to each other, as shown. In this form of corner the ends of the boards are square across to fit against the ribs *f f*, as shown in said figure, which is an obvious advantage in construction; but if the corner is to be made square, as shown at corner *E* of Fig. 5, the locking-bars are made parallel with

each other, and the top and bottom plates, *c c*, are of equal size, but are set diagonal to the line of the length of the locking-bars, as above mentioned. In this case the ends of the boards are not square, but are made diagonal, as shown in said figure, and the grooves are made diagonally across the boards, to receive the inside locking-bars, as shown.

The offsets or locking-heads *g*, formed by making the grooves *e* across the boards, when the boards are clamped and locked in the corner-pieces, prevent the withdrawal of the boards, and thus the boards are securely confined at the corners without dovetailing and without nails, screws, or other fastenings, and the corners are incased in a shield of metal and protected from all directions against injury, and are thus made very strong and durable. Furthermore, the corner-pieces may be made highly ornamental, and the box or body is made at less cost of money and labor than by the ordinary way of forming the corners.

I do not confine myself to the use of my improved corner-pieces for making carriage boxes or bodies and carriage-seats, as they may be used in like manner for making any boxes or other things where strong and durable corners are desired.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A metal corner-piece made substantially as herein shown and described, consisting of the outside and inside locking or supporting bars, and of top and bottom plates, as and for the purposes set forth.

2. A metal corner-piece for rounded corners, formed of the curved top and bottom plates, *c c*, inside locking-bars or supports, *b b*, outside supports, *a a*, and the ribs *f f*, substantially as described.

3. The boards *B*, formed with the locking-heads *g*, in combination with the corner-pieces *A*, formed with the inside and outside locking-bars or supports, substantially as and for the purposes described.

4. The boards *B*, formed with the groove *e*, and the cut-away places *d*, in combination with the corner-pieces *A*, formed with the outside supports, *a a*, and the inside supports or locking-bars *b b*, and the top and bottom plates, *c c*, substantially as and for the purposes set forth.

5. The boards *B*, formed with the grooves *e*, and the wide groove *e'*, in combination with the corner-pieces *A*, and the removable key *h*, substantially as and for the purposes set forth.

RICHARD B. PERKINS.

Witnesses:

B. C. DE WITT,  
C. E. DRAKE.