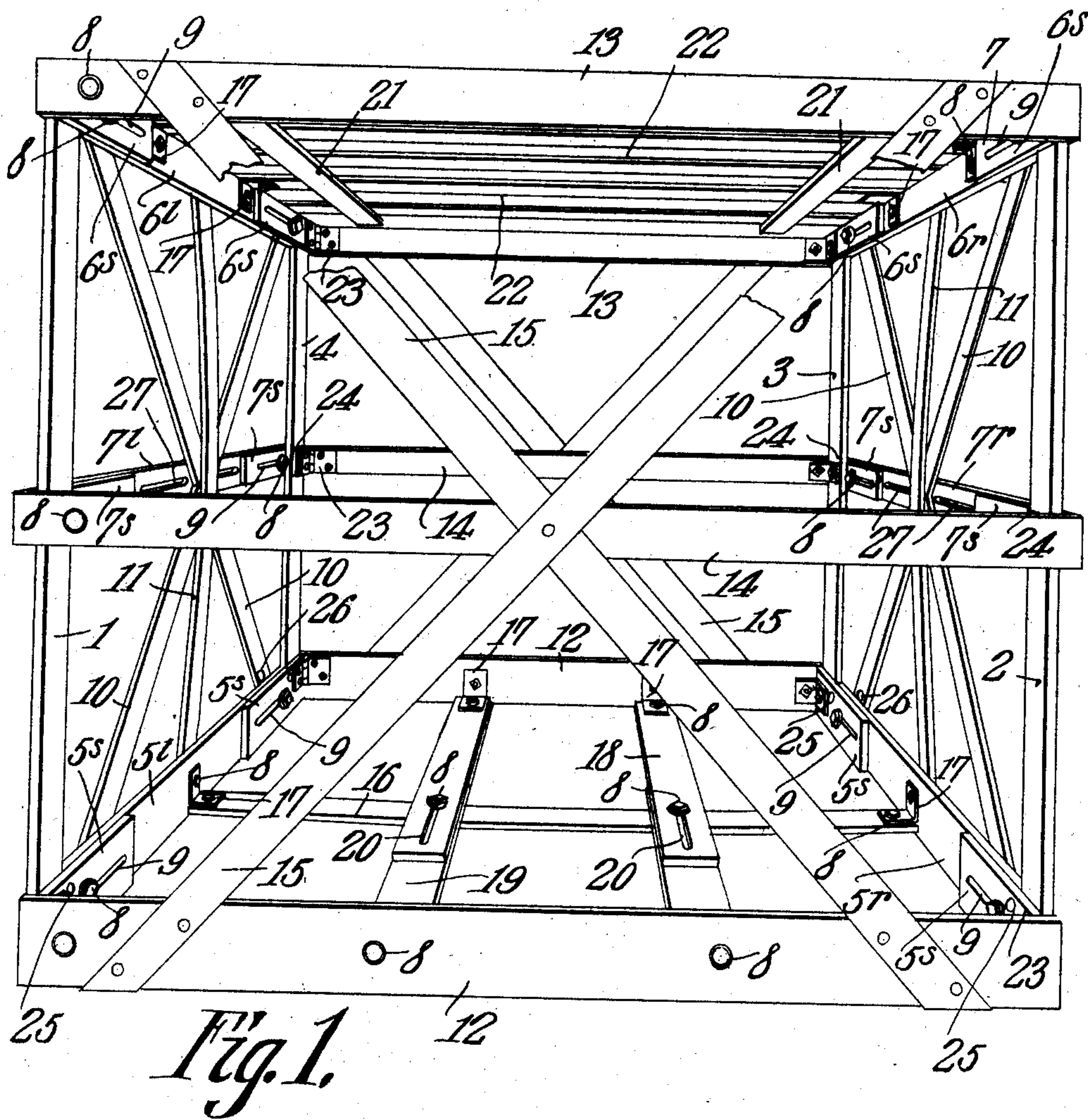


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APPLICATION FILED AUG. 3, 1908.

Patented Dec. 22, 1908.
2 SHEETS—SHEET 1.



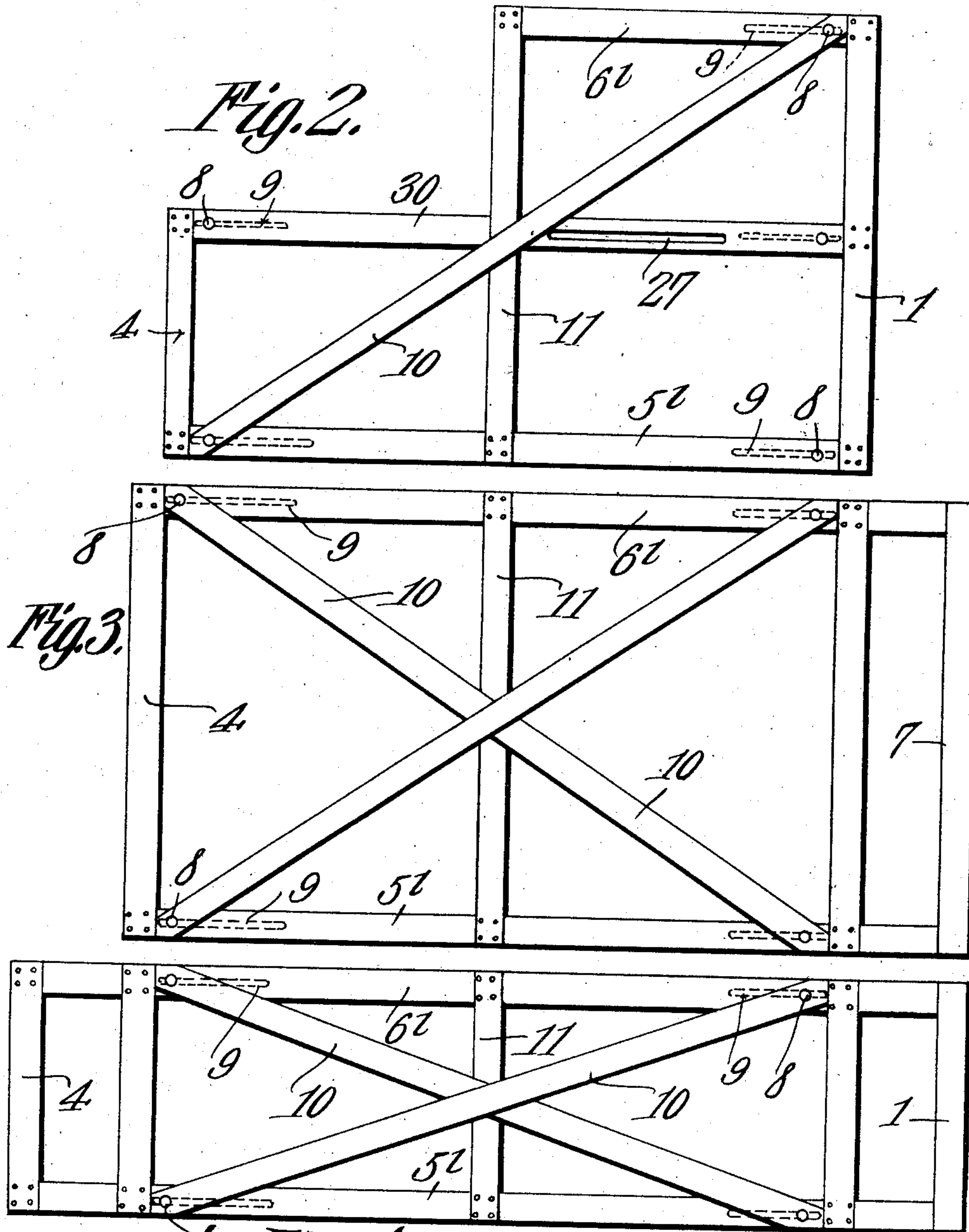
Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL D. HELLER, OF FINDLAY, OHIO.

CRATE.

No. 907,233.

Specification of Letters Patent.

Patented Dec. 22, 1908.

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To all whom it may concern:

Be it known that I, SAMUEL D. HELLER, a citizen of the United States, residing at Findlay, in the county of Hancock and State of Ohio, have invented a new and useful Crate, of which the following is a specification.

This invention relates to crates; and has for its object to provide a strong, adjustable, knockdown crate especially adapted for transporting light vehicles, such as buggies, surreys and the like.

The crate is constructed of light wood strips cross braced at the sides and ends, the horizontal strips extending from front to rear thereof are made in two or more longitudinally overlapping sections which are longitudinally slotted and connected by fastening bolts to permit the crate being lengthened or shortened to suit different lengths of vehicles. The heights of the crates vary as the heights of the vehicles, but vehicles of the same height, differing to some extent only in width or length, may use crates of a common size.

To this end the invention consists of the above and other novel objects and the construction, combination and arrangement of parts hereinafter described and claimed, and illustrated in the accompanying drawing in which:—

Figure 1 is a perspective view of one form of the crate, that for high buggies, set up in shipping condition; Fig. 2 is a side elevation of a crate for an L-buggy; Fig. 3 is a like view of a high surrey crate; and Fig. 4 a similar view of a low surrey crate.

Similar reference characters are used for the same parts in all the figures.

In Fig. 1 of the drawings representing a high buggy crate, the numerals 1, 2, 3, and 4 indicate four vertical strips constituting the corners of the crate. These posts constitute the ends of the two side panels of the crate, which panels are formed of bottom strips 5^r and 5^l top strips 6^r and 6^l and central strips 7^r and 7^l respectively. In other forms of the crate the strips 7^r and 7^l are omitted. These several strips are adjustably attached at their ends to the outer sides of short sections 5^s, 6^s and 7^s by means of bolts 8 extending through the strips and through longitudinal slots 9 in the short sections. Cross braces 10 extend diagonally across each side panel of the crate from the top to the bottom corners, and a vertical brace or post 11 is placed in

the center of each side panel and extends the full height of the crate, their ends being fastened outside the top and bottom strips and their centers inside the cross braces 10.

The front and rear panels of the crate comprise each a bottom strip 12, a top strip 13, and on high crates only, an intermediate strip 14 extending the full width of the crate, and cross braces 15 overlapping each other and the intermediate strip 14 in the center of the front and rear panels respectively.

The bottom panel of the crate comprises a central cross strip 16 fastened to the bottom side strips 5^r and 5^l with angle brackets 17 and bolts 8, and two strips 18 and 19 at right angles to said strip 16 formed each of two sections longitudinally slotted, as at 20, and connected to the cross strip 16 by bolts 8 passing through said slots. The ends of the bottom compound strips 18 and 19 are fastened to the bottom end strips 12 with right angle brackets 17. By means of the slotted connections at the sides and bottom, the length of the crate may be changed to suit the length of the vehicle to be transported.

The top panel of the crate is constructed of a strip 21 near each side of the crate running from front to rear thereof but not connected at either end. Across these strips are fastened a number of parallel strips 22 overlapping the upper strips 6^r and 6^l of the sides of the crate. Two of these top strips 22 are fastened at each end to the side strips 6^r and 6^l by angle brackets 17 and bolts 8. These connections are made within the short sections 6^s so that the length of the crate may be changed without reference to the top.

The side, front and end panels of the crate are conveniently and strongly joined in the manner now to be described. At two diagonal corners of the crate 1 and 3, the front and rear ends are rigidly fastened to the adjacent sides by right angled brackets 17 bolted to the strips 12 and 13 and, when present, the strip 14, and to the uprights 1 and 3. The other diagonal corners 2 and 4 are provided with hinge connections 23 between the front and rear panels and the side panels respectively of the crate. The hinges 23 are fastened each by one leaf directly to the bottom and top strips 12 and 13 and in high crates to the middle strip 14 of the front and rear panels, the other leaves of the several hinges being secured to the corner strips 2 and 4. When the middle strips are used the leaves of the middle hinges are con-

nected to filling blocks 24 on the inner sides of the corner strips 2 and 4.

Through each short section 5^s and the lower ends of the vertical corner strips 1, 2, 3 and 4 are horizontal holes 25 for the spindles or ends of the axles to pass through when a vehicle is placed in the crate. The crate is constructed in several types but all on the same principle, as for instance, high crates, low crates, and crates of different widths depending on the tread of the wheels, each type of crate being capable of carrying vehicles of at least three widths. This is accomplished by making the crate of such width that the collars on the inner ends of the spindles of a vehicle just fit between the short bottom sections 5^s of the sides of the crate. Shorter treads are compensated for by placing on each spindle a perforated block or blocks of the proper thickness. For longer or shorter vehicles the nuts holding the bolts 8 which pass through the several longitudinal slots, are loosened to permit elongating or shortening the crate until the spindle holes 25 are separated the proper distance to fit the axles and are then tightened on the bolts. In certain types of vehicles as the high buggy, the spindles of one axle are higher than those of the other axle, therefore, to accommodate such vehicles holes 26 are made through complementary side braces 10 as shown.

In high crates, horizontal slots 27 are made in each middle side strip 6^r for the passage of bolts or other means to secure the wheels of the vehicle in the same crate with the vehicle.

A vehicle may be removed from a crate by unscrewing the angle plate connections between diagonally opposite corners and similar connections joining one side panel of the crate, and remove the loosened side and end panels. The vehicle can then be withdrawn sidewise to disconnect the spindle from the standing side panel of the crate. After removing the wheels from the sides of the crate, the connections joining the other side and end to the top and bottom are removed so that the hinged side and end panels may be folded together inwardly and, with the top and bottom panels, are stacked and tied, or otherwise fastened together for return to the shipper in a small and compact condition and occupying much less space in the car

and at a reduced freight rate. The parts are fastened together by carriage bolts, preferably, but other varieties of bolts may be used.

In the crate for an L-shaped buggy illustrated in Fig. 2, but one cross brace 10 is employed on each side. The top strip 30 of the low front end of the crate forms the middle strip of the rear high end of the same through which portion the wheel securing slots 27 are made.

Fig. 3 represents the high surrey crate; the side strips 7^r and 7^l are not used with this type of crate unless ordered by the purchaser.

In Fig. 4 is shown the low surrey crate which resembles the low buggy crate except as to length. The slotted horizontal middle strips are not used with this type of crate.

What is claimed is:—

1. A crate comprising front and rear panels, side panels, each side panel including a middle portion and end portions slidably mounted thereon, a hinge connection between the front panel and a slidable end portion of one side panel, a hinge connection between the rear panel and a slidable end portion of the other side panel, and detachable means for rigidly connecting the said side panel with the front panel and the other side panel with the rear panel.

2. A crate comprising side panels, each side panel consisting of a middle portion and end portions slidably mounted on the middle portion, each of said end portions including a corner post, front and rear panels, hinge connections between the front panel and one of the corner posts of one side panel, hinge connections between the rear panel and one corner post of the other side panel, means for rigidly connecting said last mentioned side panel to the front panel, and means for rigidly connecting the other side panel to the rear panel, and an extensible bottom panel detachably but rigidly connected to the front, rear and side panels.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

SAMUEL D. HELLER.

Witnesses:

P. S. LATSHAW,
A. H. MAYER.