(No Model.) 2 Sheets—Sheet 1.

D. S. TUTHILL.

WAGON FRAME.

No. 432,343. Patented July 15, 1890

Fig. 1.

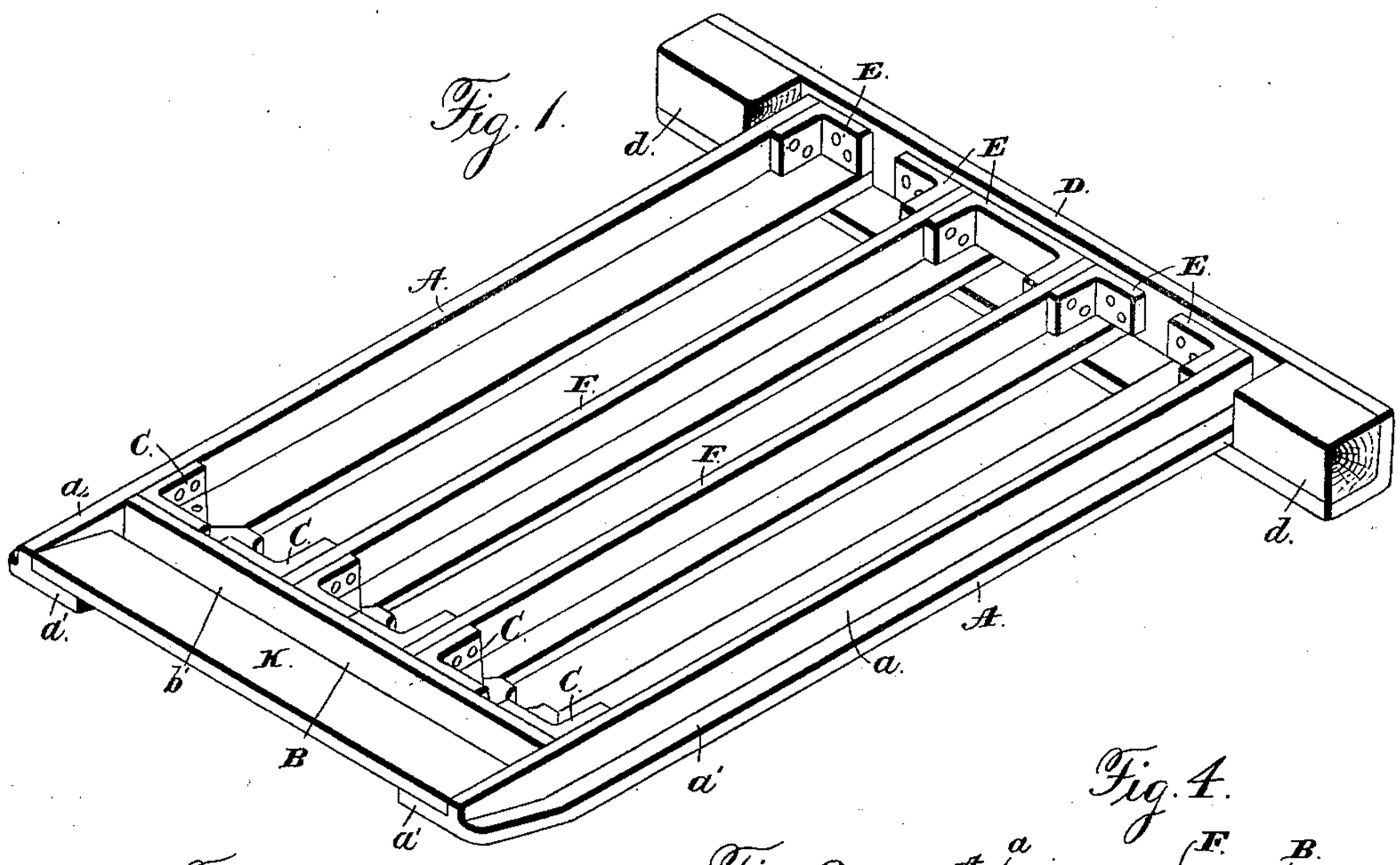


Fig. 3.

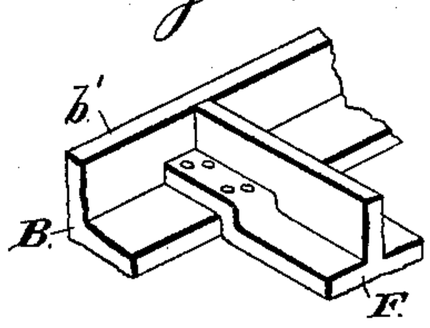
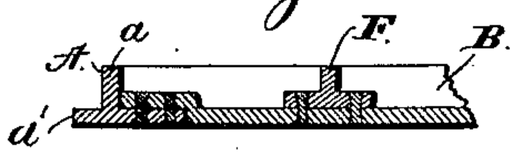


Fig. 2.

Fig. 4.



Witnesses:
Jas. E. Hutchinson.
Henry C. Hazard.

Inventor.
David S. Tuthill, by
Crindle & Russell, his Attys

(No Model.) 2 Sheets—Sheet 2.

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Fig. 5.

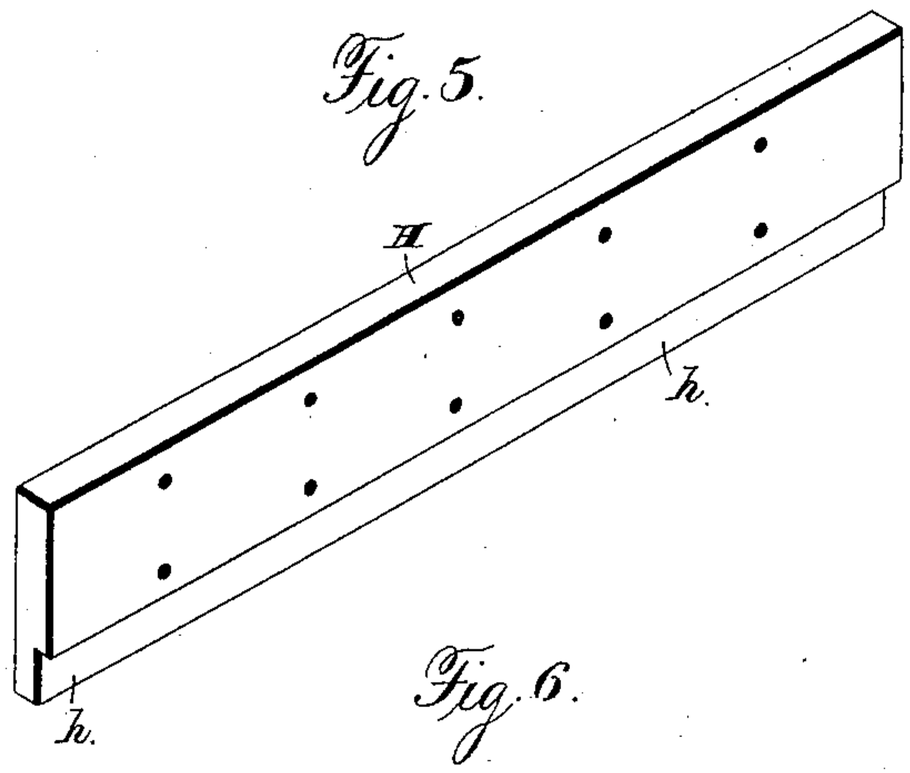


Fig. 6.

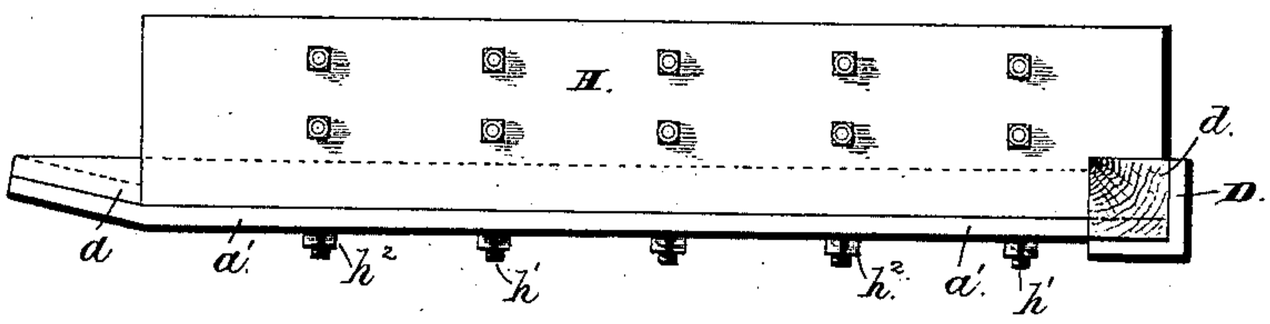


Fig. 7.

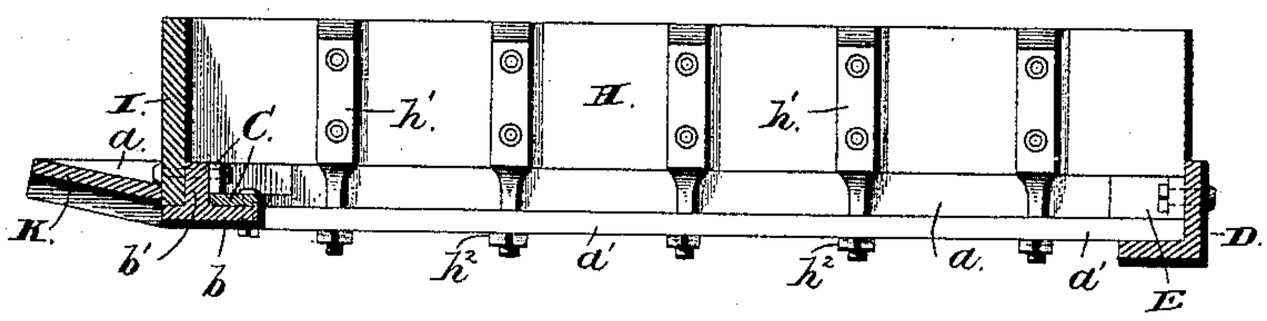
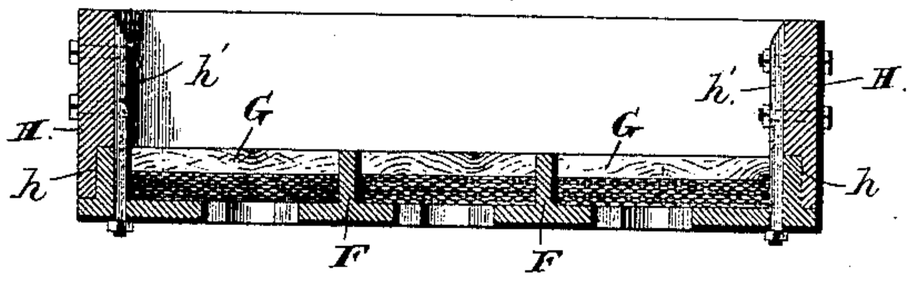


Fig. 8.



Witnesses:
Jas. E. Hutchinson.
Henry C. Hazard.

Inventor.
David S. Tuthill, by
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UNITED STATES PATENT OFFICE.

DANIEL S. TUTHILL, OF NEWBURG, NEW YORK, ASSIGNOR OF ONE-HALF TO HIRAM B. ODELL, OF SAME PLACE.

WAGON-FRAME.

SPECIFICATION forming part of Letters Patent No. 432,343, dated July 15, 1890.

Application filed April 7, 1890. Serial No. 346,959. (No model.)

To all whom it may concern:

Be it known that I, DANIEL S. TUTHILL, of Newburg, in the county of Orange, and in the State of New York, have invented certain new and useful Improvements in Wagon Frames or Beds; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view from the upper side of the bed of my wagon-body. Fig. 2 is a like view of the same from the lower side. Fig. 3 is a perspective view of the intersecting portions of one of the cross-bars and a central rail. Fig. 4 is a section of the same and a side rail at their points of union. Fig. 5 is a perspective view of a side-board separated from the bed. Figs. 6 and 7 are respectively outer and inner elevations of said side-board when in place; and Fig. 8 is a cross-section of the bed, the side-boards, and the bottom-boards.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to secure sufficient strength and rigidity in the beds or frames of wagon-bodies to enable them to withstand the strains to which they are subjected when used for transporting ice and other heavy articles; and to such end my invention consists in the construction of a frame or bed and of its connecting parts, and of their combination with each other, substantially as and for the purpose hereinafter specified.

In the carrying of my invention into practice I employ for the side bars A and A of my wagon-bed iron bars that in cross-section have the form of the letter T, and are known commercially as "T-iron." Said bars are inverted, so as to cause the vertical web *a* to be uppermost, are arranged in parallel lines, and near their front ends are connected together by means of a T-shaped cross-bar B. Each of said side bars has a comparatively narrow flange or head upon its outer side, while in case of said cross-bar its horizontal member *b* extends forward from its web *b'*, but about one-fourth of its width in rear of said web. The said horizontal member *b* is mitered into the like members *a'* and *a'* of said side bars, while said web *b'* extends to the webs *a* and *a* of the latter. Said parts are secured together by means of angle-plates C and C, which are placed within the inner angles formed by said intersecting webs, and are bolted or riveted to the same. At their rear ends the side bars A and A are connected together by means of an L-shaped bar D, which has its horizontal member placed beneath and its vertical member placed in rear of said ends, as shown in Figs. 1 and 5. Said parts are firmly united by means of bolts or rivets passed through their horizontal portions, and angle-plates E and E, that are placed within the inner angles formed by their intersecting vertical parts, where they are fastened by bolts or rivets, which pass horizontally through the same.

Between the side bars A and A are placed two or more rails F and F, which are formed from inverted T-iron, and have their rear ends secured to the cross-bar D by angle-plates E and E and bolts or rivets, substantially as in case of said side bars with said cross-bar. The front ends of said rails are mitered into the cross-bar B, and secured to the same by means of angle-plates C and C, as in the combining of said last-named cross-bar with said side bars. The frame thus constructed forms the bed of a wagon, and when in use has the spaces between the side bars A and A and rails F and F filled by means of boards G and G, that are loosely fitted to the spaces and rest upon and are supported by the horizontal portions or flanges of said parts. Upon the outer side of each of said side bars is fitted a side-board H, which is provided with a rabbet *h*, that fits over the web *a*, and causes the inner faces of said web and board to be substantially flush. Said boards are secured in place by means of straps *h' h'*, &c., several of which are secured vertically upon the inner face of each board, and have their lower threaded ends passed through corresponding openings in the horizontal portion *a'* of the bar, and upon said projecting ends are provided with nuts h^2 h^2.

Secured upon the front side of the web *b'* of the cross-bar B is a third board I, which extends between the side-boards H and H, and is held in place by means of bolts that

pass through said end-board and web, and, if desired, by means of straps, which pass around the intersecting ends of said side-boards H and I. The front ends of the side bars A and A extend beyond the cross-bar B, so as to furnish a support for a foot-board K, which rests upon and is secured to the horizontal members a' and a' upon the inner sides of said side bars. Said projecting portions are bent upward at such angle as to give to said foot-board the necessary inclination, and the web a of each side bar is cut away so as to restore its original horizontal line. The ends of the rear cross-bar D project beyond the side bars A and A for the purpose of receiving brace-irons for supporting the wagon-top, and in order that such irons may be more readily attached thereto and to cause said ends to present a better appearance, the angle of each is filled in with a block d of wood or other suitable material. The wagon-frame thus constructed possesses great strength and rigidity, and is capable of resisting the heaviest strains to which it would be subjected by any ordinary use, while in consequence of the forms of the metal portions of said frame its weight is not materially greater than the weight of wagon-frames of usual construction.

Having thus described my invention, what I claim is—

1. As an improvement in wagons, in combination with the longitudinally-arranged T-shaped bars connected together at their front and rear ends, respectively, boards that are disposed between said bars, substantially as and for the purpose specified.

2. As an improvement in wagon frames or beds, in combination, longitudinal T-shaped bars, a front T-shaped cross-bar whose horizontal member is connected to the horizontal members of said longitudinal bars, and a rear L-shaped cross-bar on whose horizontal member said longitudinal bars rest, substantially as and for the purpose shown.

3. As an improvement in wagon frames or beds, in combination, two side bars T-shaped in cross-section, a bar connecting them at their rear ends, and a front bar T-shaped in cross-section, whose horizontal member is attached to the horizontal member of said side bars, substantially as and for the purpose specified.

4. As an improvement in wagon frames or beds, in combination, two side bars, the bars between, all being T-shaped in cross-section, the L-shaped bar connecting them together at their rear ends, the latter resting on the horizontal member of said L-shaped bar and attached to the vertical member thereof, and the T-shaped bar connected to the front ends of said first-named bars, substantially as and for the purpose shown.

5. As an improvement in wagons, in combination with the longitudinally-arranged T-shaped bars connected together at their front and rear ends, respectively, boards that are disposed between the vertical members or webs of said T-bars, substantially as and for the purpose set forth.

6. In combination with the T-shaped inverted side bar, a side-board which is adapted to fit into the outer angle or rabbet and over the upper edge of the web of the same, and is secured in place thereon by means of straps that are fastened upon the inner face of the side-board and extend downward through the inner portion of the side bar, substantially as and for the purpose shown and described.

7. In combination with the cross-bar B and with the side-boards H and H, the end-board I, resting upon a flange on the bar B and connected to the latter and to said side-boards in the manner and for the purpose specified.

8. In combination with the upwardly-inclined front ends of the side bars A and A, the foot-board K, which rests upon and is secured to the inner horizontal portions of said bars, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of February, 1890.

DANIEL S. TUTHILL.

Witnesses:
E. L. WHITE,
HENRY C. HAZARD.