

W. J. TAYLOR.

WHEELBARROW.

APPLICATION FILED SEPT. 24, 1907. RENEWED FEB. 29, 1912.

1,026,937.

Patented May 21, 1912.

2 SHEETS-SHEET 1.

Fig. 1.

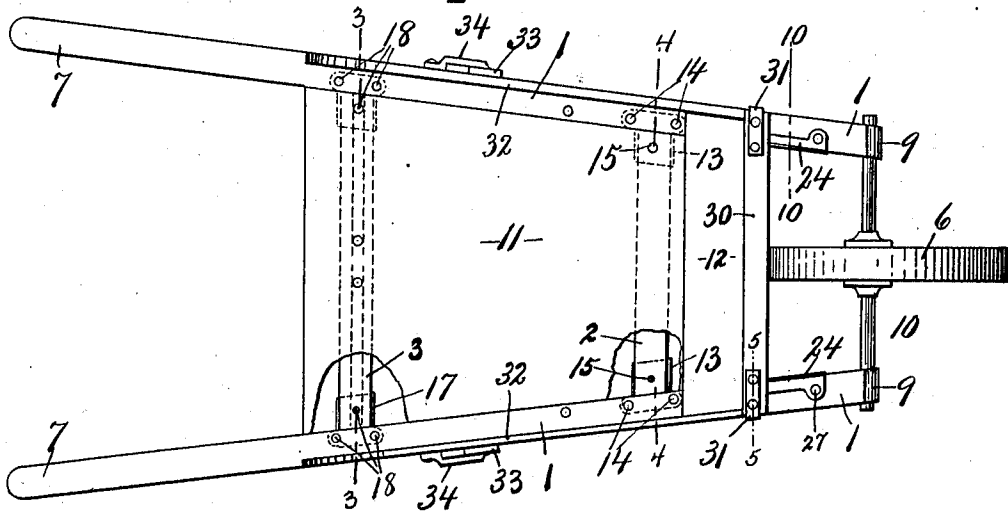
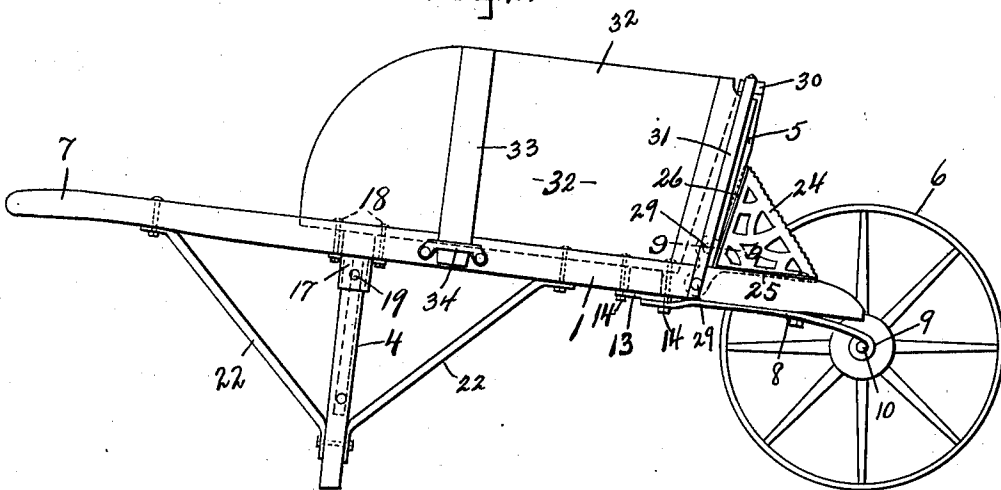


Fig. 2.



Witnesses.
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2 SHEETS-SHEET 2.

Fig. 3.

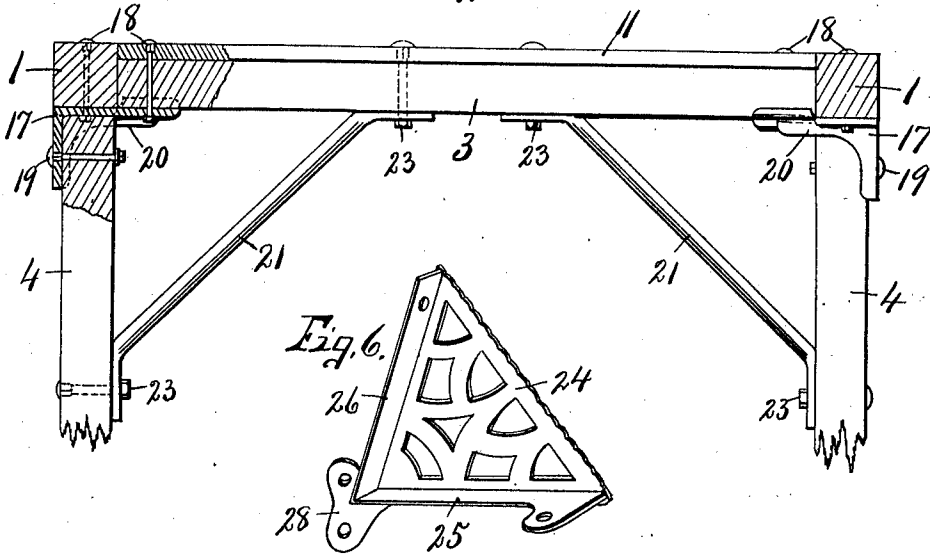


Fig. 4.

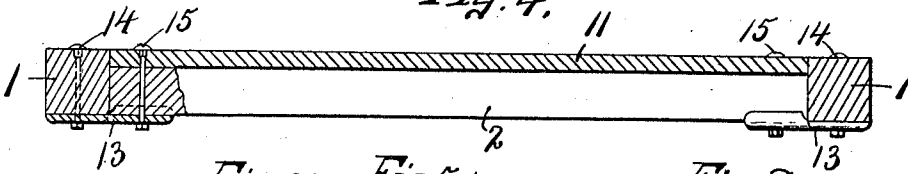
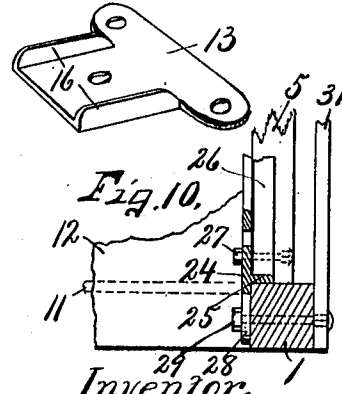
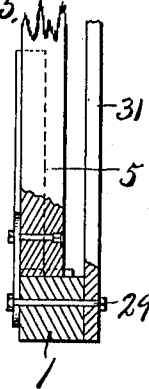
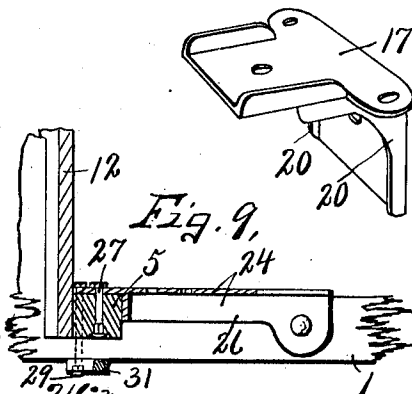


Fig. 7.

Fig. 5.

Fig. 8.



Witnesses.

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UNITED STATES PATENT OFFICE.

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WHEELBARROW.

1,026,937.

Specification of Letters Patent.

Patented May 21, 1912.

Application filed September 24, 1907, Serial No. 394,331. Renewed February 29, 1912. Serial No. 680,593.

To all whom it may concern:

Be it known that I, WILLIAM J. TAYLOR, of Canastota, in the county of Madison, in the State of New York, have invented new and useful Improvements in Wheelbarrows, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to certain improvements in wheel barrows and refers more particularly to the means for joining the different parts of the frame as, for example, the legs, cross bars, and upright end board standards to the handle bars. In the manufacture of this class of wheel barrows the frame is generally made of wood and the several parts are usually joined together by mortising the legs, cross bars, and end board standards into the handle bars which not only materially weakens the handle bars by cutting away those portions which are subjected to the most severe strains but the openings formed therein permits accumulation and retention of moisture which soon rots out the tenons and adjacent portions of the sockets in which they are inserted thereby shortening the life of the wheel barrow or, at least, making repairs frequently necessary.

My main object is to avoid mortising or otherwise cutting away the wood parts of the frame at their junctions one with the other thereby maintaining the full strength of these parts throughout and especially at their junctions one with the other where the strains are greatest and at the same time avoiding in a measure the accumulation and retention of moisture at such joints. In other words I have sought to simplify and reduce the cost of manufacture and at the same time to increase the strength and durability of the wheel barrow without adding to its weight by introducing special constructions of metal tie pieces or bonds at the joints of the various parts of the frame so that the strains are concentrated more upon the metal tie pieces than upon the wood.

Other objects and uses will be brought out in the following description.

In the drawings—Figures 1 and 2 are re-

spectively top plan and side elevation of a wheel barrow embodying the various features of my invention. Figs. 3, 4 and 5 are enlarged transverse sectional views taken respectively on lines 3—3, 4—4 and 5—5, Fig. 1. Figs. 6, 7 and 8 are perspective views respectively of one of the brackets for the front end board standards, the tie piece or bracket for uniting one of the legs to the adjacent handle bars, and cross bar, and one of the tie pieces for uniting one of the handle bars to the front cross bars. Figs. 9 and 10 are detached sectional views taken respectively on lines 9—9, Fig. 2 and 10—10, Fig. 1.

As shown in the drawings, this wheel barrow comprises essentially a pair of handle bars —1—, front and rear cross bars —2— and —3—, opposite legs or standards —4— and front end standards —5— all of which are united in a manner hereinafter described to constitute a main supporting frame upon the front end of which is mounted a wheel —6—.

The handle bars —1— are made of wood and converge forwardly in the usual manner, their rear ends being provided with suitable handles —7— while their front ends are equipped with underlying springs —8— terminating in suitable eyes —9— for receiving the shaft or axle —10— of the wheel —6—. The cross bars —2— and —3— are also made of wood and arranged one in advance of the other between and in substantially the same plane as the handle bars —1—, said cross bars being parallel and having their opposite ends terminating against the inner faces of the handle bars for supporting a suitable bottom or platform —11—. The end faces of these cross bars are beveled to conform to the forwardly converging angle of the handle bars —1— against which they terminate or abut thereby avoiding the necessity for mortising or otherwise cutting into the cross bars or side bars at their junction one with the other except for the small bolt holes for receiving the bolts of the metal tie pieces presently described. The upper faces of these cross bars are disposed in a plane below the upper faces of the handle bars, a distance substan-

tially equal to the thickness of the bottom or platform —11— which is mounted upon and secured to said cross bars between said handle bars and its upper face is substantially coincident with the upper faces of the handle bars.

The front cross bar —2— is located a short distance in rear of the upright standards —5— for the end board —12— and its opposite ends are united to the handle bars by comparatively thin metal tie pieces —13— which are fastened to the under side of the handle bars by bolts —14— and extend laterally under and against the adjacent end of the cross bar —2— to which they are secured by suitable fastening means as bolts —15—, the portions of said tie pieces which extend under the cross bars being provided with parallel flanges —16— for engaging opposite sides of the cross bar and thereby relieving in a measure the strain upon the bolts —15— and at the same time bracing the cross bar against movement relatively to the handle bar to which it is attached. These flanges —16— also serve to reinforce or stiffen the tie piece and permit the use of comparatively thin metal, said tie piece being continuous across the joint or abutting faces of the cross bar —2— and handle bar and thereby it affords a rigid tie between the parts without mortising or otherwise materially weakening the wood. As previously described the opposite ends of the cross bar —3— terminates and abuts against the inner faces of the said bars —1— and are rigidly united thereto by metallic tie pieces —17— which extend across the under side of the handle bars and some distance inwardly toward each other under the adjacent ends of the cross bar —3— and are secured to the cross bar and handle bar by suitable fastening means as bolts —18—. The outer edges of these tie pieces —17— are provided with pendent portions extending downwardly some distance along the outer faces of the legs —4— to which they are secured by suitable fastening means as bolts —19—, said tie piece being formed with opposite inwardly projecting flanges —20— between which the legs are held against lateral movement relatively to the handle bars, said flanges also serving to relieve the strain upon the bolts —19—.

The legs —4— terminate at their upper ends against the under side of the horizontal portions of the tie pieces —17— and are held in place by braces —21— and —22—, the braces —21— being secured to the inner sides of the legs and to the under side of the cross bar —3— some distance from the tie pieces —17— by suitable clamping bolts —23— as best seen in Figs. 2 and 3. The front end standards to which the end board —12— is secured terminate at their lower ends against the upper side of the handle bars

—1— just in front of the tie pieces —13— and are rigidly held in place by metallic tie pieces or braces —24— having marginal flanges —25— and —26— disposed at an angle to each other corresponding to the angle between the upright standards —5— and handle bars —1— and which are secured to said handle bars and upright standards by suitable clamping bolts —27—, said tie pieces —24— being also provided with additional ears —28— which engage the inner faces of the handle bars and upright standards and are secured thereto by clamping bolts —29—. These ears —28— extend across the meeting faces of the handle bars with the uprights —5— and thereby establish a firm bond between such parts to hold them in fixed relation to each other while the flanges —25— and —26— serve to further hold the end board or uprights —5— in fixed relation to the side boards. These upright standards —5— are connected at the top by a horizontal bar or cap —30— which extends laterally some distance beyond the outer faces of the standards and to these ends are secured upright metal straps —31— having their lower ends secured to the handle bars by the bolts —29— and their intermediate portions spaced apart from the outer faces of the uprights —5— a sufficient distance to receive the front ends of the side boards —32—, such latter being provided with vertical cleats —33— having their lower ends removably inserted in metal retaining pieces —34— as best seen in Figs. 1 and 2, said metal pieces —34— being secured to the outer faces of the handle bars —1—.

It is evident from the foregoing description that the cross pieces —2— and —3—, legs —4—, and standards —5— terminate against the handle bars —1— and are secured thereto by metal ties without mortising or otherwise weakening the handle bars.

What I claim is:

1. In a wheel barrow, the combination of opposite forwardly converging handle bars and a cross bar having its ends terminating and abutting against the inner faces of the handle bars, metal tie pieces secured to the under sides of the handle bars and adjacent ends of the cross bar and provided with upwardly projecting flanges engaging opposite sides of said cross bar.

2. In a wheel barrow, the combination of opposite forwardly converging handle bars, metallic tie pieces secured to the under side of the handle bars, opposite legs terminating at their upper ends at the under side of said tie pieces, said tie pieces having pendent portions embracing the adjacent ends of the legs and secured thereto.

3. In a wheel barrow, the combination of opposite forwardly converging handle bars, a cross bar having its opposite ends termi-

nating and abutting against the opposite
faces of the handle bars, metallic tie pieces
secured to the under sides of the handle bars
and adjacent ends of the cross bar, opposite
5 legs having their upper ends terminating
and abutting against the under side of said
tie pieces, the latter being provided with
pendent portions embracing the outer faces

and sides of the adjacent ends of the legs
and secured thereto.

In witness whereof I have hereunto set
my hand this 16th day of September 1907.

WILLIAM J. TAYLOR.

Witnesses:

WM. H. PATTEN,

H. E. CHASE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."