No. 662,066. Patented Nov. 20, 1900.

V. A. GATES.

WHEELBARROW.

(Application filed May 17, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1

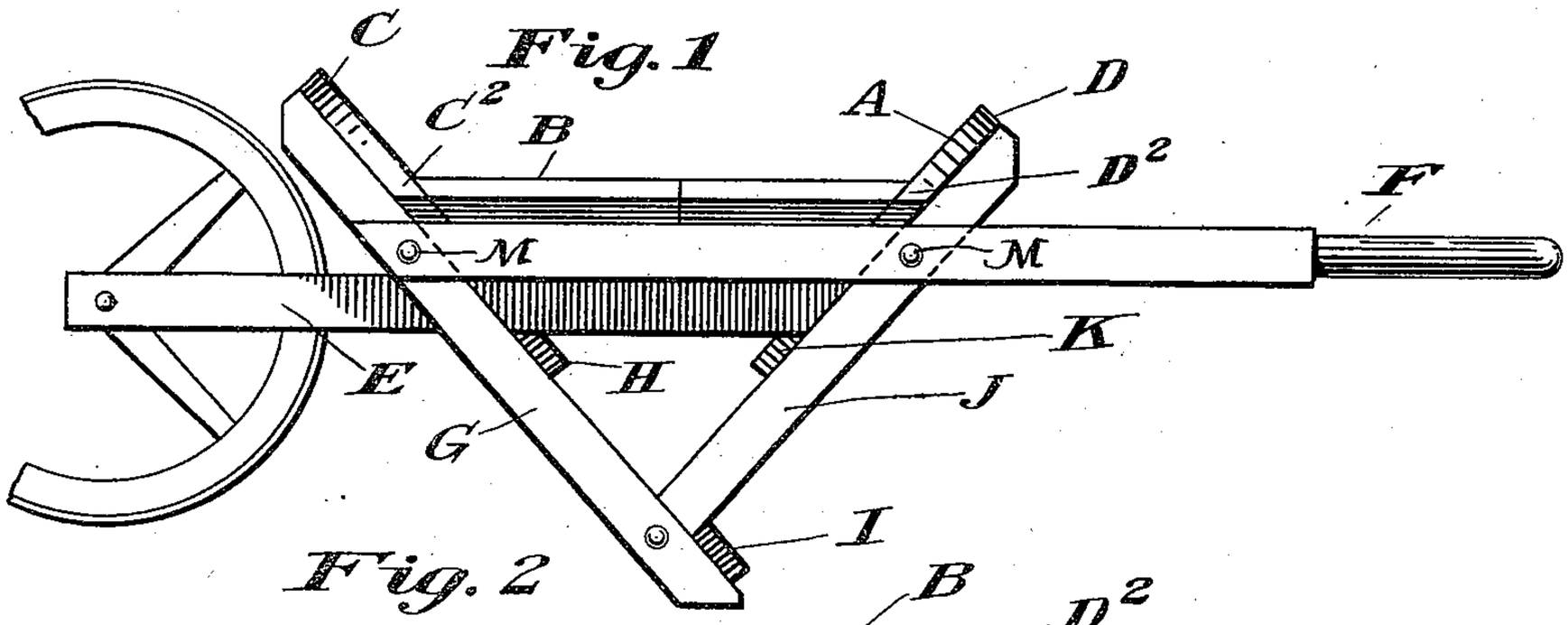

Fig. 2

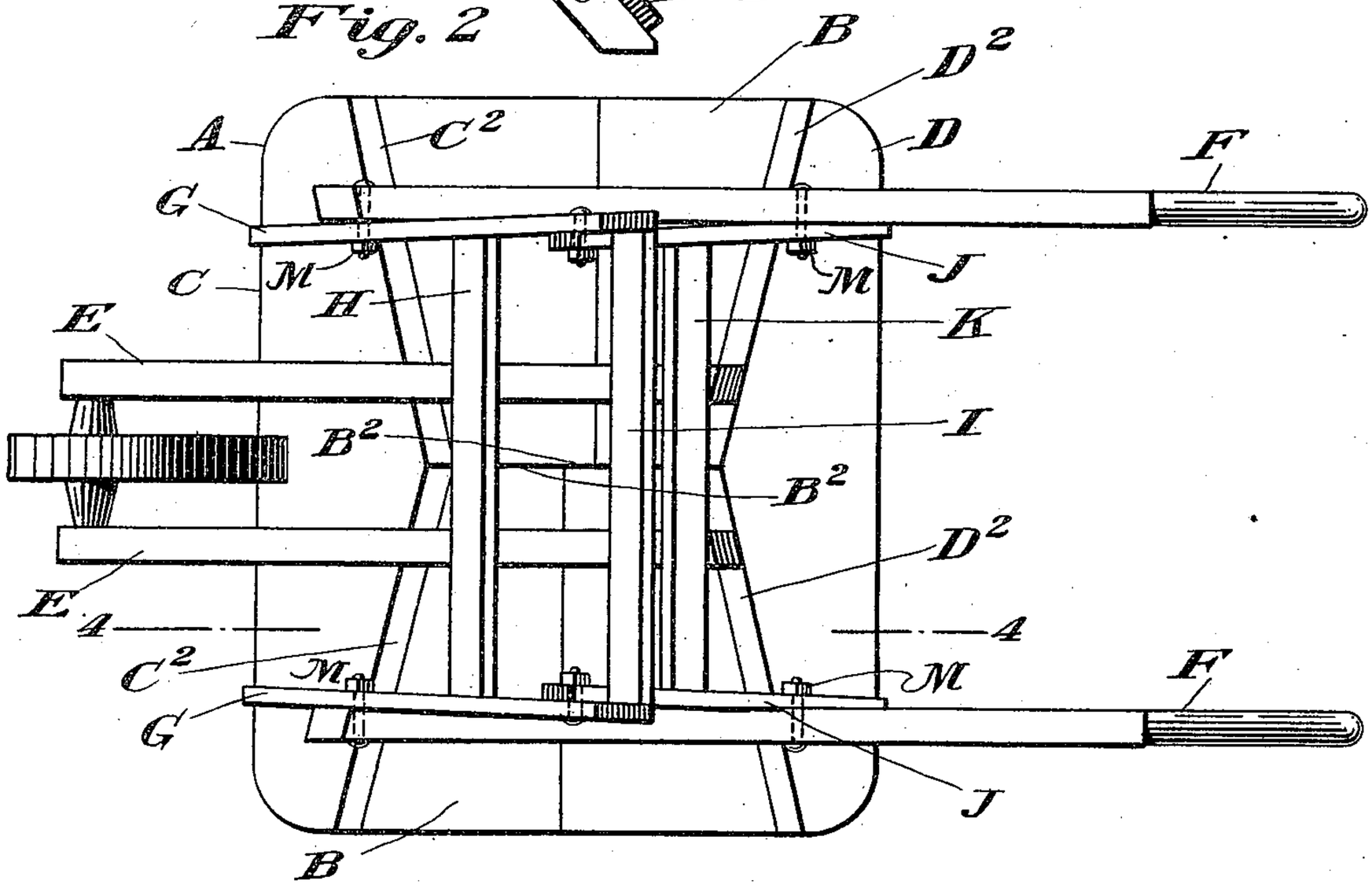

Fig. 4

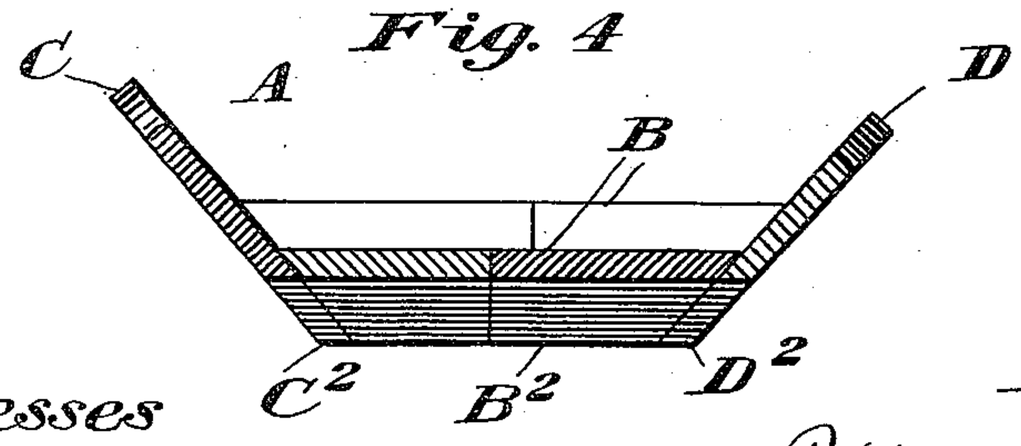

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Fig. 3

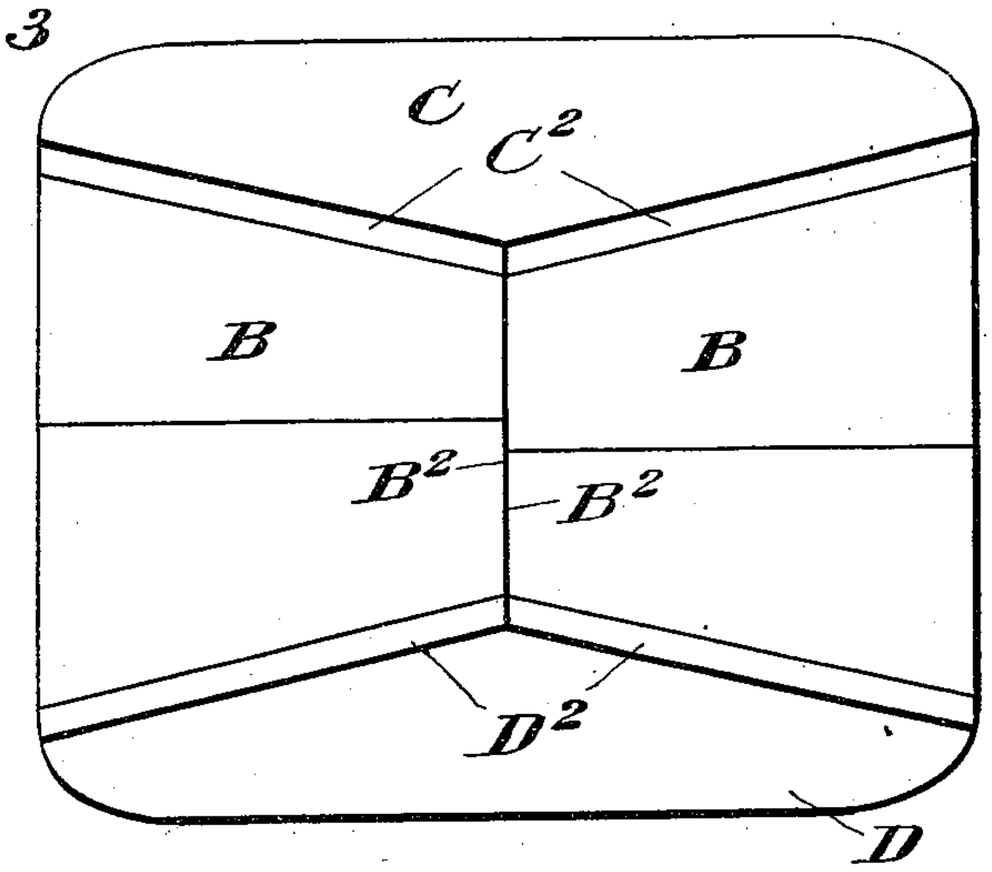


Fig. 7

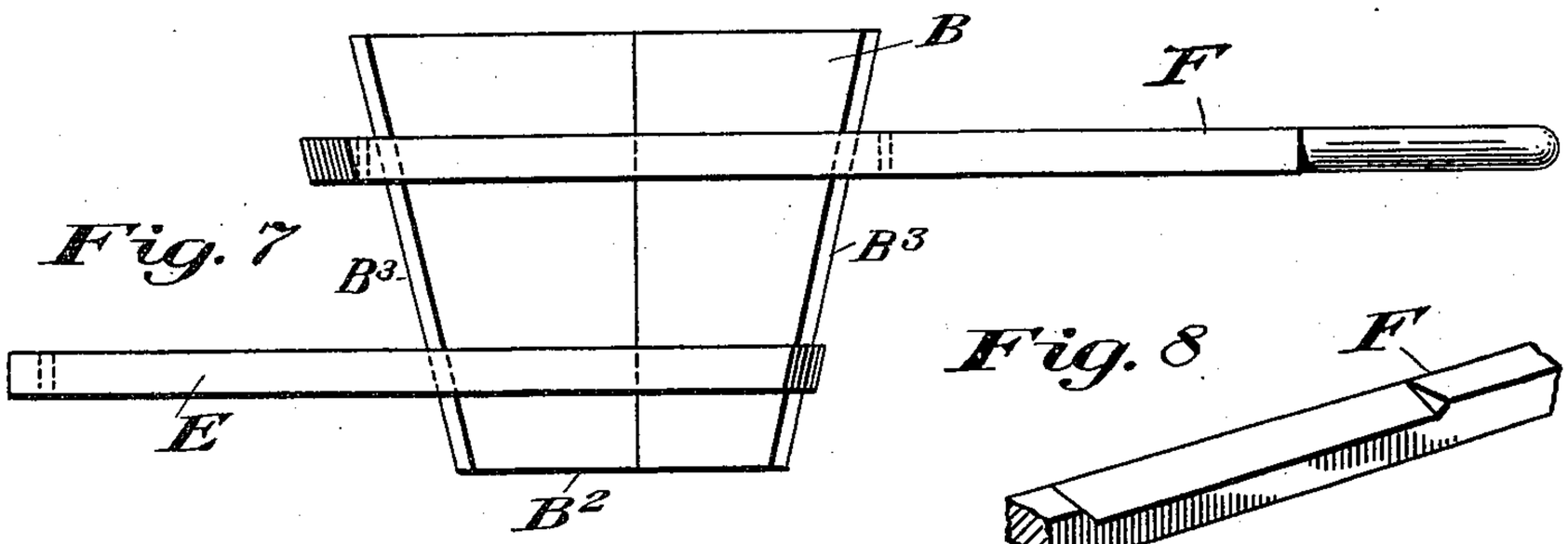


Fig. 8

Fig. 5

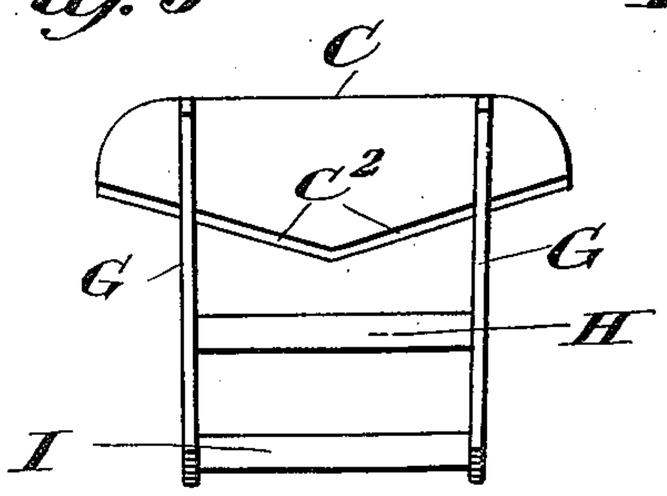


Fig. 6

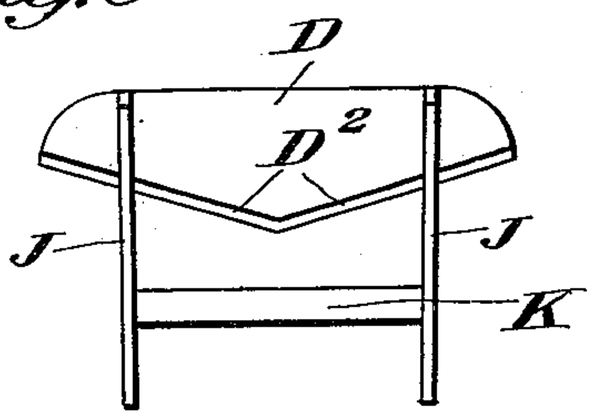
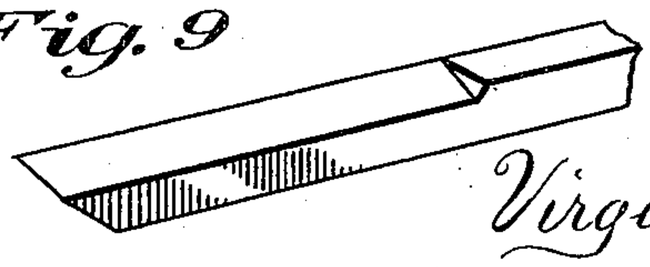


Fig. 9



Witnesses
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UNITED STATES PATENT OFFICE.

VIRGIL A. GATES, OF CHARLESTON, WEST VIRGINIA.

WHEELBARROW.

SPECIFICATION forming part of Letters Patent No. 662,066, dated November 20, 1900.

Application filed May 17, 1899. Serial No. 717,117. (No model.)

To all whom it may concern:

Be it known that I, VIRGIL A. GATES, a citizen of the United States, and a resident of the city of Charleston, in the county of Kanawha and State of West Virginia, have invented certain new and useful Improvements in Wheelbarrows, of which the following is a specification.

My invention consists of certain improvements, in certain advantageous directions, upon the wheelbarrow invented by me and described in and covered by Letters Patent No. 620,580, issued to me on the 7th day of March, A. D. 1899.

The several features of my invention and the various advantages resulting from their use conjointly or otherwise will be apparent from the following description and claims.

In the accompanying drawings, making a part of this specification, and in which similar letters of reference indicate corresponding parts, Figure 1 represents a side elevation of a wheelbarrow illustrating my invention. Fig. 2 is an inverted plan view of the same. Fig. 3 is a view of the under side of the tray. Fig. 4 is a vertical transverse section of the bed or tray, taken in the plane of the dotted line 4 4 of Fig. 2. Fig. 5 is an elevation of the front section of the wheelbarrow, that face of the section being shown which is inside when the wheelbarrow is put together. Fig. 6 is an elevation of the rear section of the wheelbarrow, that face of the section shown which faces toward the inside when the wheelbarrow is complete. Fig. 7 is a view of the under side of one of the bottom sections of the wheelbarrow. Fig. 8 is a perspective view of a portion of the handle-bar, showing the bevel thereon. Fig. 9 is a perspective view of the wheel-bar, showing the bevel thereon.

I will now proceed to describe my invention in detail.

A indicates the tray. This tray is constructed in a novel and advantageous manner, to wit: There are two inclined portions B B, inclining inward toward each other and meeting in the center, substantially as shown. The meeting edges of these portions are beveled, and these beveled edges B^2 B^2 make a close joint. Each side edge B^3 of these portions B inclines inward toward the transverse central line of the bottom. At the front there is a front piece C, which fits closely against the front edges of the portions B. At the back there is a back piece D, which fits closely against the back edges of the portions B. These front and back pieces are of substantially the same shape; but the front piece C is somewhat wider—*i. e.*, deeper—than the back piece D, so as to retain the load when the wheelbarrow is elevated as it will be in use. The bottom edges C^2 C^2 of the front piece incline downward toward each other and so do the bottom edges D^2 D^2 of the back piece. The bottom edges C^2 C^2 are beveled, so as to be flush and in the same plane with the plane of the adjacent portions of the bottom, and the bottom edges D^2 D^2 are beveled, so as to be flush with the adjacent portion of the bottom. These four parts B and B and C and D together constitute a substantial tray or bed. They are separable, as shown. The framework which supports this tray or bed is preferably as follows: One of the wheel bars or shafts E is fixed to the under side of one of the portions B of the bottom and near that edge which is at the center thereof, and the other wheel bar or shaft is fixed to the under side of the other portion B of the bottom and near that edge which is at the center thereof.

The handle-bars F are preferably separate from the wheel-bars E. One of these handle-bars F is connected to the bottom of one of the portions B and near the outer edge thereof. The other of these handle-bars F is connected to the bottom of the other portion B and near the outer edge of it. Thus each portion B has a handle-bar F and a wheel-bar E. The handle-bar being near one end of the portion and the wheel-bar being near the other end of it contribute to mutually brace the barrow when complete, as will be obvious when the entire construction has been specified. The handle-bars F and wheel-bars E also act as connections or cleats to hold together the several pieces or sections of which the portions B of the bed or tray are formed.

There are two legs or front supports G G, whose upper ends are secured to the front side of the front piece C. These supports are braced below by a brace H, secured at each end, respectively, to the legs G G. This

brace H supports the forward portions of the handle-bars F and constitutes a support for the wheel-bars E at their mid-length. There is also, preferably, present a lower brace I, connected to the legs G G at their lower ends. A brace, as I, at this point on the wheelbarrow-legs is not new and is well known in the art.

There are two rear supports J J in the nature of legs, and the upper portions of these are fixed to the rear side of the back piece D. The lower ends of these supports are respectively bolted to the lower ends of the legs G G.

A short distance below the lower edge of the back piece D is a brace K, whose opposite ends are fixed to the adjacent supports J J, as shown.

Inasmuch as the handle-bars and the wheel-bars are preferably rectangular, the handle-bar is beveled where it lies below and against the portion B, to which it is attached, and close thereto. The wheel-bar is beveled where it lies below and against the portion B. The other end of the wheel-bar, which projects beyond the rear edge of portion B, is preferably left plain. The object of these notches is to enable each bar for its entire width to rest upon the braces H and K and at the same time enable the top and surfaces of the bars to be horizontal to the better engage with the supports.

Before assembling the parts into a complete wheelbarrow we have here four groups of parts, which when put together form the wheelbarrow. There are two groups of parts, such as is illustrated by the group in Fig. 7, and there is the group of parts, such as is shown in Fig. 5 and the group of parts shown in Fig. 6. These several groups may be laid flat upon one another and be fastened together or crated. They make a compact bundle or package and occupy, comparatively speaking, a very small space. It will be observed that in each group the bars or legs, &c., and braces are in common planes and that the board of each group is flat and its flat planes are parallel to the bars, &c., and close thereto. Hence the construction of the parts results in a remarkably advantageous knockdown wheelbarrow. The assembling of these groups into a complete wheelbarrow is rapidly and quickly effected. The front group of Fig. 5 and the rear group of Fig. 6 are set up and the two portions, each consisting of a portion B and a wheel-bar and handle-bar, are combined with these groups in Figs. 1 and 2. Such a combining is the work of only a few moments. Then by bolts M each handle-bar is connected to its adjacent leg G and to its adjacent support J and the lower end of each support J to the lower portion of leg G.

A suitable wheel is provided for the barrow and is located in the well-known manner between the front end portions of the wheel-bars and rotates upon a suitable axle located there.

Some other advantages in the aforesaid construction are as follows: The inclination of the bevels to the adjacent planes of the parts is the same, thus simplifying the manufacture of the barrow. When any part wears out, it may be readily removed and a similar piece substituted for the old one. As the parts are common boards or straight bars or scantling, they are readily obtained and easily fitted for their place in the barrow, and in this connection the portions composed of boards may consist of two or more boards instead of one. Thus I have shown each of the portions B B (see Fig. 3) as composed of two boards.

The entire construction of the barrow renders it simple, cheap of manufacture, economical in transportation, serviceable in use, and easy to repair.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

1. In a wheelbarrow, the combination of a bed formed of separable front, back and side portions, front and rear supports connected respectively to the front and rear portions of the bed, handles connected to the side portions of the bed and connections between the handles and supports for holding the portions of the bed together, substantially as and for the purposes specified.

2. In a wheelbarrow, the combination of a bed or tray having two separable bottom portions, and the two handle-bars and the two wheel-bars, one handle-bar and one wheel-bar attached to each bottom portion of the bed, and separable supports for the bed and bars, forming a knockdown wheelbarrow, substantially as and for the purposes specified.

3. In a wheelbarrow, the combination of two separable bottom portions, and the two handle-bars, and the two wheel-bars, one handle-bar and one wheel-bar being attached to each bottom portion, and separable front support and rear support, forming a knockdown barrow, substantially as and for the purposes specified.

4. In a wheelbarrow, the two bottom portions, and the two handle-bars and the two wheel-bars, one handle-bar and one wheel-bar being attached to each bottom portion, a bed front piece, and bed back piece, vertical supports at front and back and connected to the bed front piece and bed back piece and cross-braces on the supports respectively below and near the front and back pieces for supporting the wheel-bars, substantially as and for the purposes specified.

5. In a wheelbarrow, the combination of the bed or tray formed of separable front, back and side portions, the front and rear supports connected respectively to the front and rear portions of the bed or tray, wheel-bars secured each to one of the side portions of the bed or tray, and cross-braces carried by the front and rear supports and arranged for engagement beneath the wheel-bars to support the same, substantially as and for the purposes specified.

6. In a wheelbarrow, the combination of a bed or tray formed of separable front, back and side portions, front and rear supports connected respectively to the front and rear portions of the bed or tray, handles each connected to one of the separable side portions of the bed or tray, wheel-bars, each also connected to one of the separable portions of the bed or tray, cross-braces carried by the respective front and rear supports and arranged for engagement beneath the wheel-bars for supporting the same, and detachable connections between the cross-braces and the handle-bars for holding the several parts of the bed or tray together, substantially as and for the purposes specified.

7. In a wheelbarrow, a bed consisting of two bottom portions, and a front bed-piece and a rear bed-piece, the two bottom portions inclining downward toward the center of the barrow and meeting there, and having their meeting edges beveled, and each having inclined front and rear edges, causing the bottom piece to be narrower at their meeting edge than at their outer edge, and the front bed-piece and the rear bed-piece each having in their lower edge two inclines meeting at the longitudinal center of the barrow, the planes of these front and back pieces being inclined downward and inward and the handle-bars and wheel-bars, each front piece having two upright legs, and the back piece two upright braces, the two legs inclining downward and inward, and the two braces inclining downward and inward and meeting below, and a cross-piece for the front bed-piece and a cross-piece for the back bed-piece, for supporting the wheel-bars, connected to the upright supports of each piece, one of the handle-bars and one of the wheel-bars connected to one of the bed-bottom portions and the other handle-bar and the other wheel-bar connected to the other bed-bottom portion, the whole forming a knockdown barrow, conveniently left in four general portions excluding the wheel, and capable of being rapidly and quickly connected together, in a wheelbarrow, substantially as and for the purposes specified.

8. In a wheelbarrow, a bed, in which there are two tapered bottom portions inclining downward and meeting at the center of the barrow, and a front bed-piece inclined downward and rearward toward the bottom portions and having its lower edge shaped to meet these portions, and a back bed-piece inclined downward and forward toward the bottom portions, and having its lower edge shaped to conform to the adjacent edges of these portions, and upright supports connected to the front bed-piece and inclined therewith, and other upright supports connected to the back bed-piece and inclined therewith, these lower portions of the supports of the front piece arranged to meet the lower portions of the supports of the back piece, and be connected thereto, substantially as and for the purposes specified.

VIRGIL A. GATES.

Attest:
E. STARBUCK SMITH,
K. SMITH.