

(No Model.)

W. H. HALL.
DOUBLE DECK BARROW.

No. 397,358.

Patented Feb. 5, 1889.

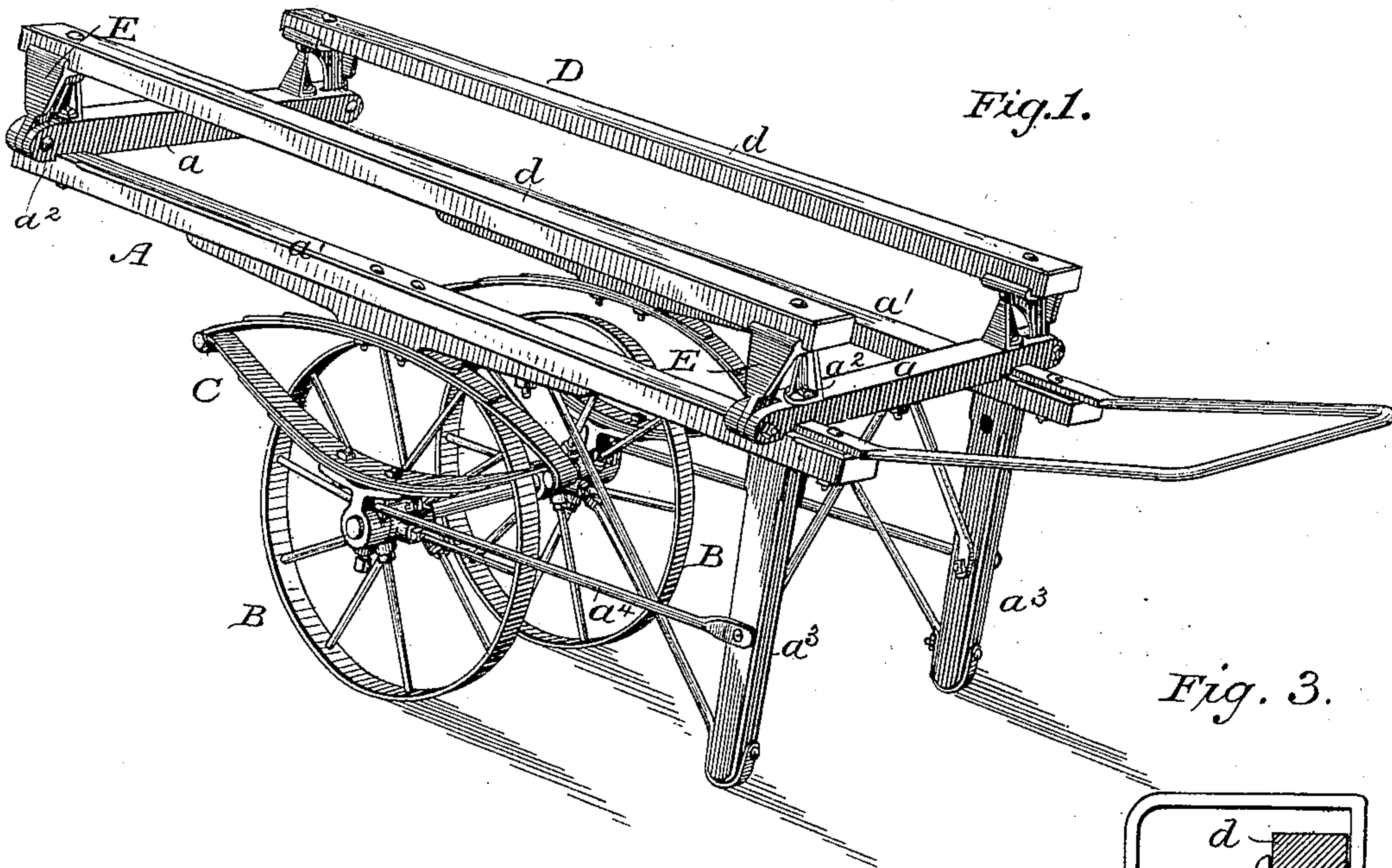


Fig. 2.

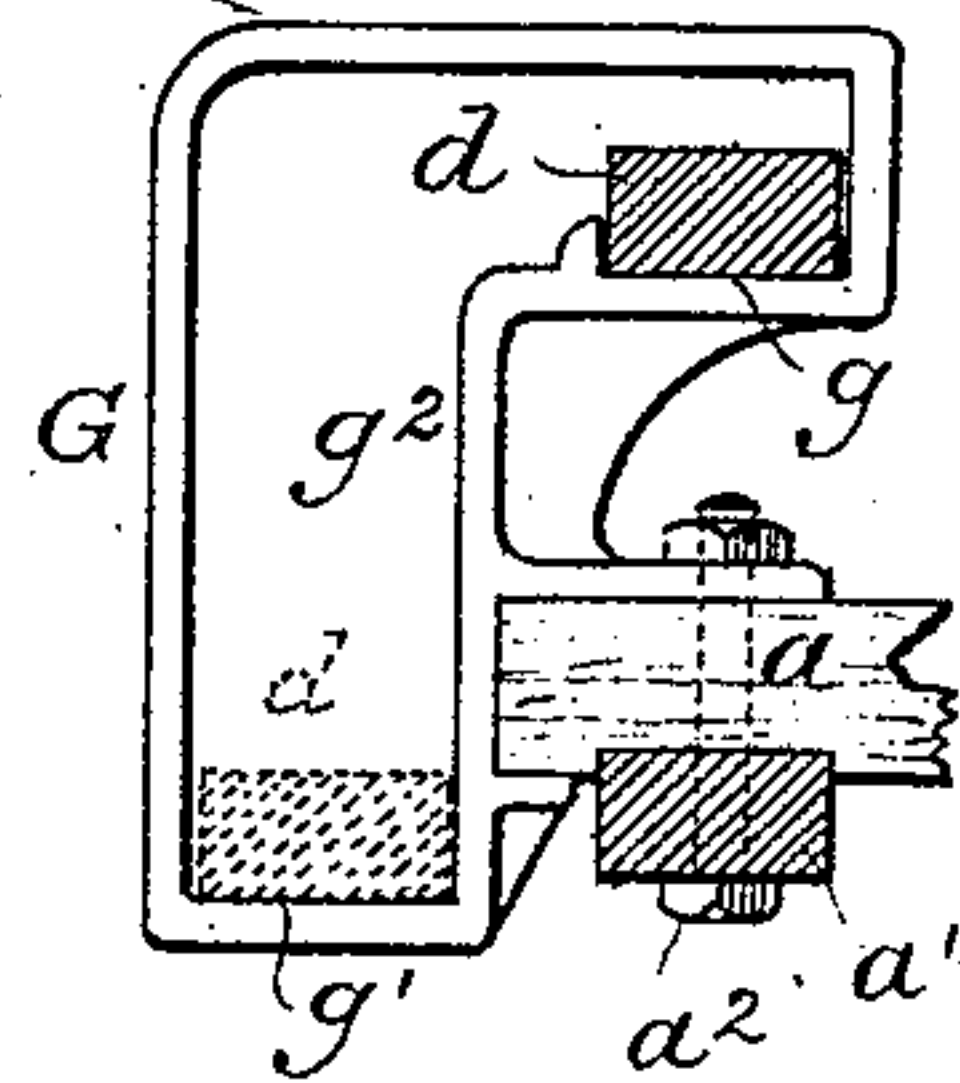
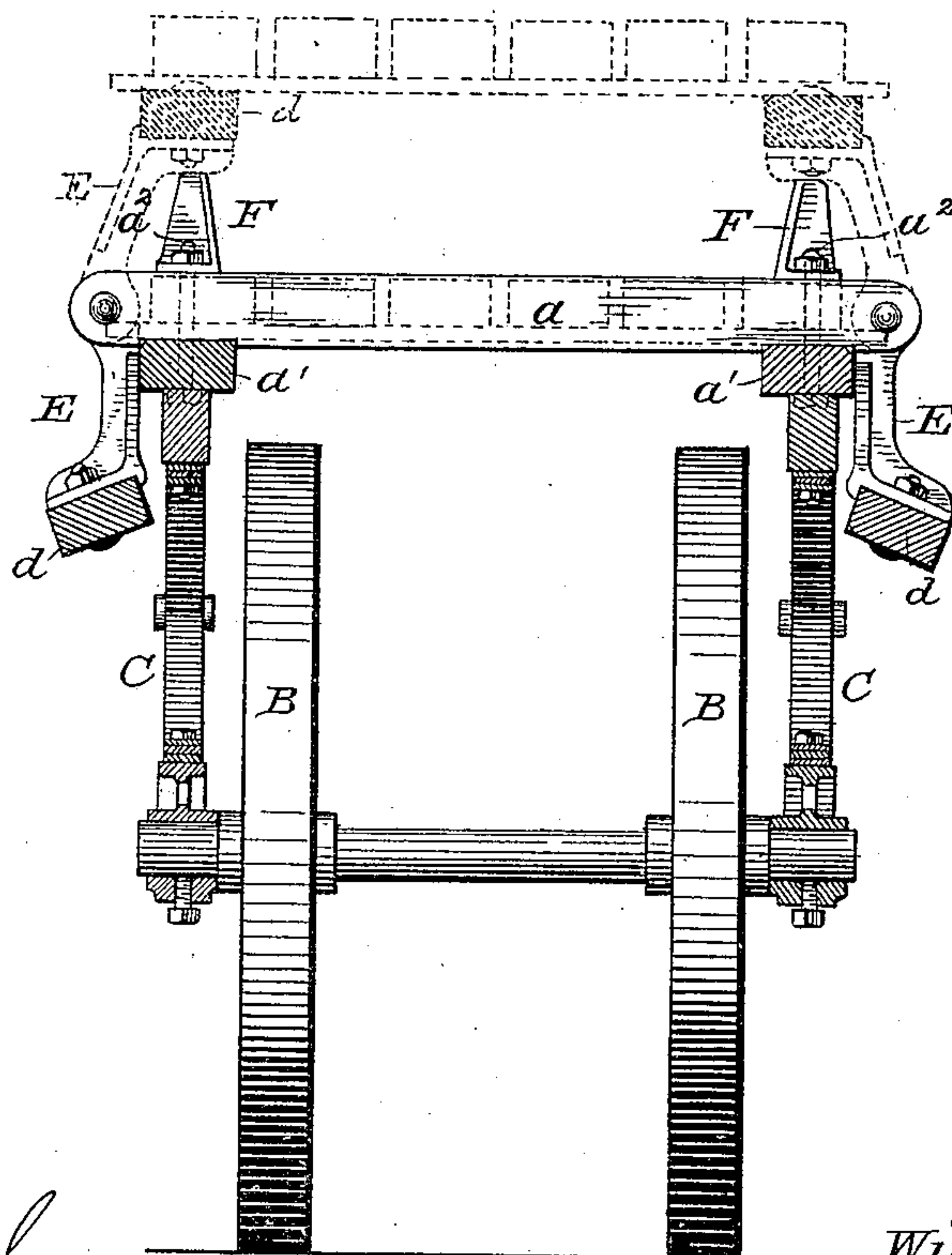
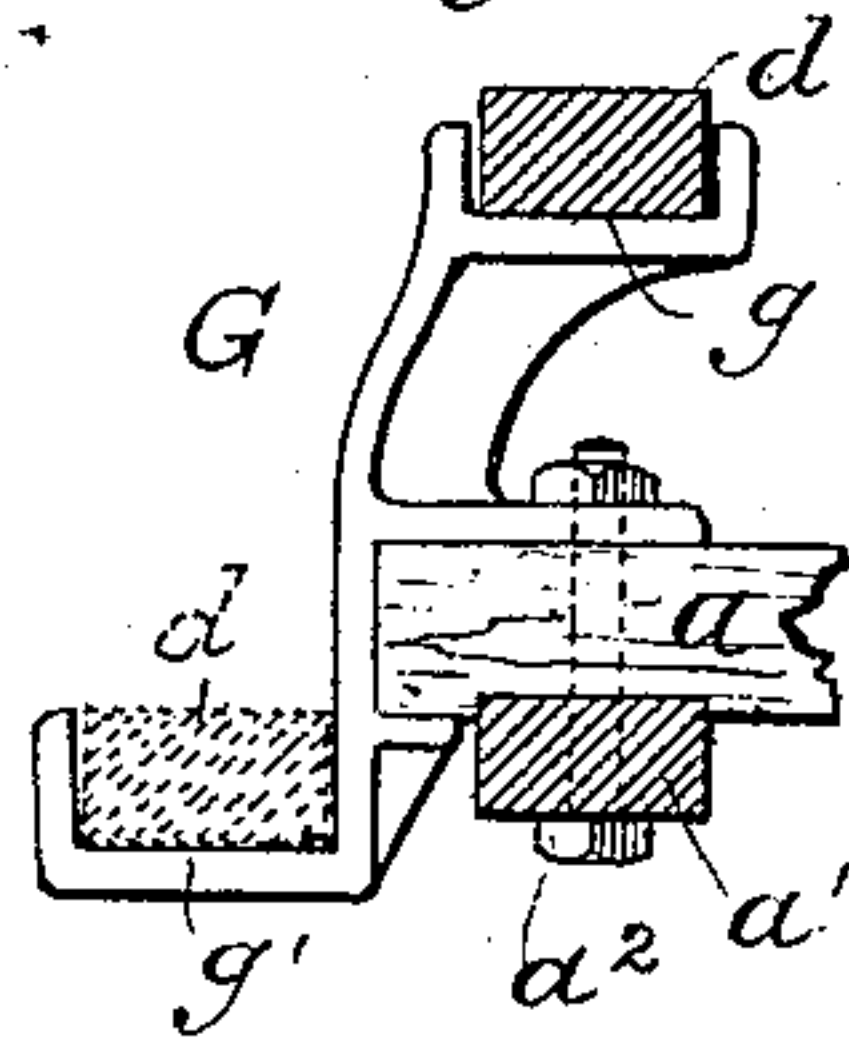


Fig. 4.



Witnesses

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DOUBLE-DECK BARROW.

SPECIFICATION forming part of Letters Patent No. 397,358, dated February 5, 1889.

Application filed September 15, 1888. Serial No. 285,544. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HALL, a citizen of the United States of America, residing at Tiffin, in the county of Seneca and State of Ohio, have invented certain new and useful Improvements in Double-Deck Barrows, of which the following is a specification.

My invention relates to barrows wherein, as a means for carrying certain articles—such as bricks—in separated tiers or layers, the barrow is double-decked.

A prominent object of my invention is to provide a construction whereby a double-deck barrow can be readily converted into a single-deck barrow and the component parts of the upper deck so disposed of as to place them conveniently out of the way and permit the vehicle to be freely and readily used as an ordinary single-deck barrow.

Further objects are to permit the upper deck to be conveniently removed and placed out of the way, so as to permit the ready loading or unloading of the lower deck, and to permit the upper deck to be easily restored to and firmly held in position over the lower deck in order to allow the upper deck to be loaded; also, to provide certain details of construction, all serving to promote the general efficiency of a double-deck barrow.

To the attainment of the foregoing and other useful ends my invention consists in matters hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 represents in perspective a barrow embodying the principles of my invention. Fig. 2 is a transverse vertical section of the same with the parts of the upper deck swung to the sides of the barrow. In this view the upper deck in position over the lower deck and loaded is illustrated in dotted lines. Figs. 3 and 4 are details representing certain forms of supports which can be employed for the bars of an upper deck, as hereinafter set forth.

In said drawings the lower deck of the barrow is formed by the open rectangular body-frame A, proportioned in length and width with reference to its service in a hand-barrow. This lower deck or body-frame adapted to afford a lower deck can be, and herein is, spring-supported from the wheels B through the intervention of suitable springs,

C, secured to seats or bearings upon the axle-boxes, although, if desired, the lower deck or body-frame could obviously be in rigid connection with boxes or bearings for the axle or journals of one or more properly arranged supporting-wheels. The upper deck, D, is divided longitudinally into a couple of independent sections, and in one of its simplest forms can comprise a pair of parallel bars, *d*, which are hinged or pivotally supported from the lower deck in such way that they can be either brought into position over the lower deck to conjointly constitute a suitably-elevated upper deck, as in Fig. 1, or respectively swung to opposite sides of the barrow and allowed to hang out of the way, substantially as illustrated in full lines in Fig. 2.

By the foregoing arrangement the two swinging divisions or independent sections of the upper deck can be readily and conveniently swung out of the way, so as to provide a clear space not only above the lower deck, but above the entire length of the barrow, whereby the lower deck can be conveniently loaded, and, if desired, the vehicle used simply as a single-deck barrow. After loading the lower deck the two divisions of the upper deck can be raised into position to provide a suitably-elevated upper deck, which latter can in turn be loaded with such matters as are to be carried by the barrow.

Where the lower deck comprises simply the side bars of the body-frame and the upper deck is formed by the combination of a couple of hinged bars, the barrow, while adapted for various services, will be particularly useful as a light and convenient vehicle for carrying separated layers of brick, which, when freshly molded, are laid upon pallets and the pallets placed upon the bars of the upper and lower decks, as indicated in dotted lines, Fig. 2.

With regard to certain details herein, serving to provide further features of improvement in this direction, the side bars, *d*, of the upper deck are hinged to the lower deck by means of arms or hinge-pieces E, which are rigidly secured to the bars *d*, but pivotally attached to the lower deck. As a simple means for supporting the sections or bars *d* of the upper deck when said bars are in position to form a completed deck, the lower deck or body-frame is provided with stops or stands

F, whereon the side bars of the upper deck may be removably seated when the latter are brought into position over the lower deck, as in Fig. 1. In this connection, however, it is understood that these stands F serve as legs for the bars or divisions of the upper deck at such times as such divisions are in position to provide a completed deck, and hence that the same result could be attained by attaching such stops or legs to the bars *d* in place of securing them upon the lower deck.

While various locking or latching devices could be employed for temporarily locking the divisions of the upper deck upon their respectively allotted legs or stands F, the necessity for such locking devices can be avoided by so proportioning the height of the legs or stands F relatively to the length of the swinging arms E that in seating the bars *d* upon said legs or stops the arms E will to some extent be swung over toward the longitudinal middle line of the deck. In this way, while the weight of the loaded upper deck is sustained by the legs or stops F and the bars held down upon such stands by the weight, the bars *d* will be held against lateral movement by the arms E, which at such times serve as inclined braces. It will also be seen that when the bars *d* rest upon the legs or stops F the pivotal supports for the arms E will, with relation to the points at which said bars are supported, be pivotally attached to the lower deck at points farther toward the sides of the barrow, and that in order to throw either bar to one side it must be first raised to some extent from its seat. In this way, while the load effectively holds the bars *d* down upon their allotted seats, the weight of the bars alone will serve to retain them in position over the lower deck, even when the upper deck is not loaded.

No particular limitation is herein placed upon the construction of the arms or hinge-pieces E, it being merely observed that the castings illustrated form simple devices, which can be shaped so as to permit the bars *d*, attached thereto, to lie flat when resting upon the stands or legs E or other supports provided for such purpose.

The end cross-bars, *a*, of the lower deck or body-frame may provide supports both for the stands or legs F, and the pivots for the swinging arms E in which case said cross-bars can be extended beyond the side bars, *a'*, of the lower frame, so that while the legs or stands F can be conveniently tied down by bolts *a*², herein employed to bolt the bars of such lower frame or deck together, the arms E can be pivoted either in or upon the ends of the cross-bars *a*. The bars *a'* can be secured upon the springs in any suitable manner, and the springs can be secured to seats or bearings *c* upon the axle-boxes, in which case the axle-boxes can be braced in any desirable way—for example, by rods *c'*, arranged to connect the axle-boxes with the barrow-legs *a*³.

The lower deck-frame can, if desired, be

boarded over, and likewise each half of the upper deck may consist of a frame-section boarded over or not, as preferred, it being understood that the omission of such boarding merely lightens the barrow, and at the same time permits it to answer every purpose for carrying bricks and other like matter.

Preparatory to loading the lower deck of the barrow the division of the upper deck can be swung to one and the other side of the barrow. After the lower deck has been loaded the said divisions can be righted, so as to provide a completed upper deck, which in turn can be supplied with a proper load. To unload the barrow, the foregoing order of operation can be reversed. When it is desired to use the barrow simply as a single-deck barrow, the divisions of the upper deck can be thrown to one side of the barrow, as in Fig. 2, where they will hang out of the way, and hence with but slight manipulation the structure can be converted from a double-deck barrow into a single-deck barrow, capable of each and all of the uses of an ordinary truck or wheel-barrow.

While I prefer to provide the barrow with an upper deck that is divided longitudinally into independent swinging sections, such as hereinbefore set forth, it will be obvious that for the broader purpose of this invention the bars *d* or other equivalent sections of the divided upper deck could be moved laterally to their length, so as to bring them into a lowered position alongside the barrow in other ways than by swinging such bars about the pivots for their allotted arms E. By way of illustrating a further mode of shifting the bars *d* from a position over the lower deck to a position alongside the barrow I have shown both in Figs. 3 and 4 a stand or bracket, G, secured to one of the cross-bars *a* of the body-frame and provided with a couple of seats, whereof the upper seat, *g*, is adapted to receive and support the bar in position over the lower deck, while the lower seat is adapted to receive and support the bar alongside the barrow, it being understood that two of such stands or brackets can be employed for each of the two bars *d*. In this way each bar can be lifted from its allotted upper seat, *g*, and moved bodily in a direction lateral to its length and to an extent to place it in its allotted lower seat, *g'*.

In Fig. 3 the stand or bracket is provided with a slot, *g*², which forms a guideway along which the bar can be moved during its transferment from one seat to the other, while in Fig. 4 such slot or guideway is omitted. It is understood, therefore, that, while I claim the divided upper deck having its sections arranged to be swung out of the way, I further desire to cover a longitudinally-divided upper deck whereof its sections are removably held over the lower deck, whereby they can be removed from such position in any convenient manner and placed alongside the barrow out of the way.

What I claim as my invention is—

1. In a double-deck barrow, the upper deck divided longitudinally into independent sections removably supported over the lower deck, for the purpose set forth.

2. In a double-deck barrow, the upper deck divided longitudinally into independent swinging sections arranged to swing, respectively, to opposite sides of the barrow, whereby said sections may be brought into position to conjointly form a completed upper deck or swung out of the way, so as to leave an unobstructed space over the lower deck.

3. The combination, substantially as here-
inbefore set forth, with the body-frame adapted to afford a lower deck, of the longitudinally-arranged independent bars *d*, connected with the body-frame by laterally-swinging arms, and stands by which said bars can be supported in position over the lower deck to provide a completed upper deck.

4. The combination, substantially as here-
inbefore set forth, with the body-frame adapted to afford a lower deck, of the longitudinally-arranged independent bars *d*, connected with the body-frame by laterally-

swinging arms, and stands or legs adapted for supporting said bars in position over the lower deck to provide a completed upper deck, said swinging arms being pivoted at points that are farther toward the sides of the barrow than the points whereat the stands are positioned, for the purpose described.

5. The combination, substantially as here-
inbefore set forth, with the lower body-frame adapted to afford a lower deck, of the stands *F*, arranged at the front and rear ends of said body-frame, and the independent lateral bars *d*, removably supported upon said stands, for the purpose described.

6. The combination, substantially as here-
inbefore set forth, with the wheel-supported frame *A*, of the upper deck divided longitudinally into independent sections, and the swinging arms *E*, secured to said sections of the upper deck and pivotally attached to the end cross-bars of the wheel-supported frame.

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Witnesses:

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