(No Model.)

2 Sheets—Sheet 1.

H. HOULDSWORTH, Jr.

WHEELBARROW.

No. 529,912. Patented Nov. 27, 1894.

Fig. 1

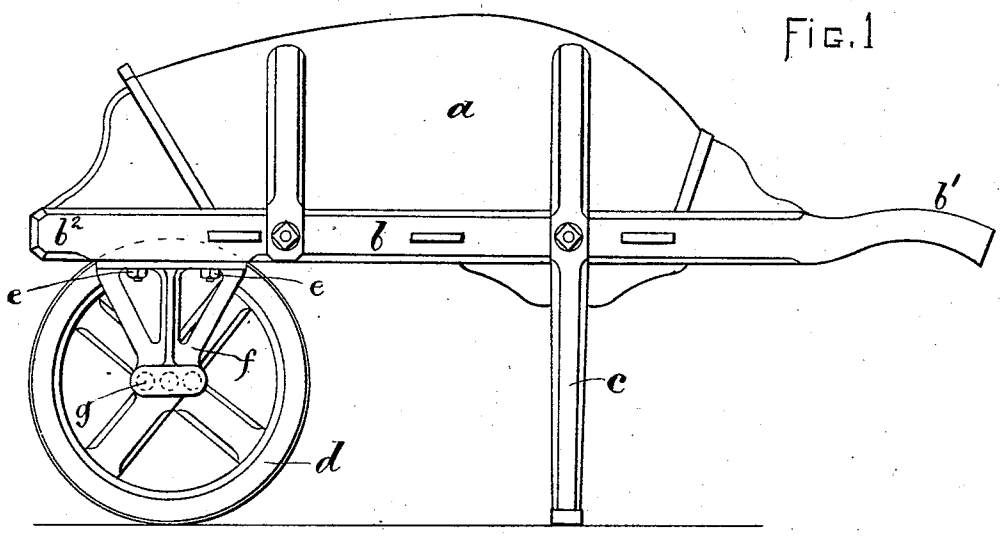


Fig. 2

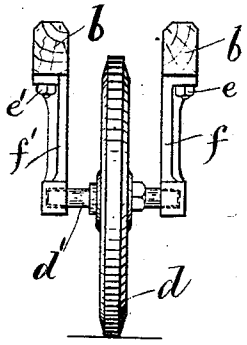


Fig. 3

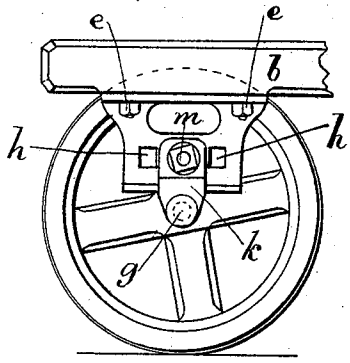
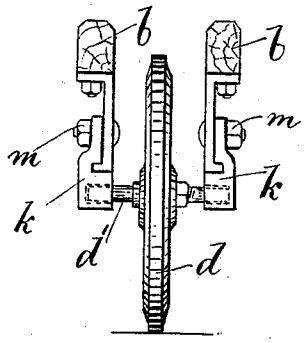


Fig. 4



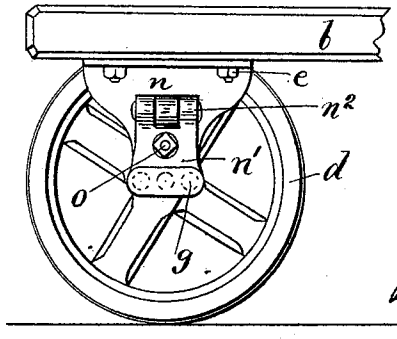


Fig. 5

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(No Model.) 2 Sheets—Sheet 2.

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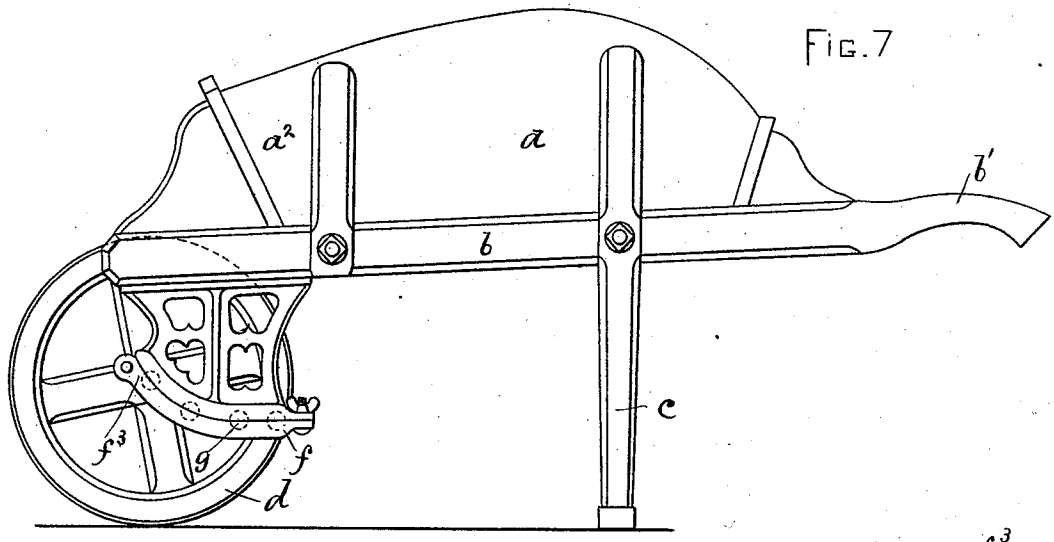
WHEELBARROW.

No. 529,912. Patented Nov. 27, 1894.

Fig. 7



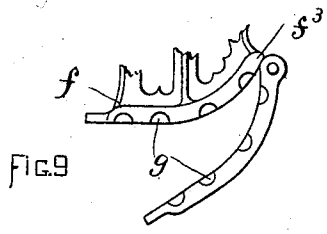


Fig. 9

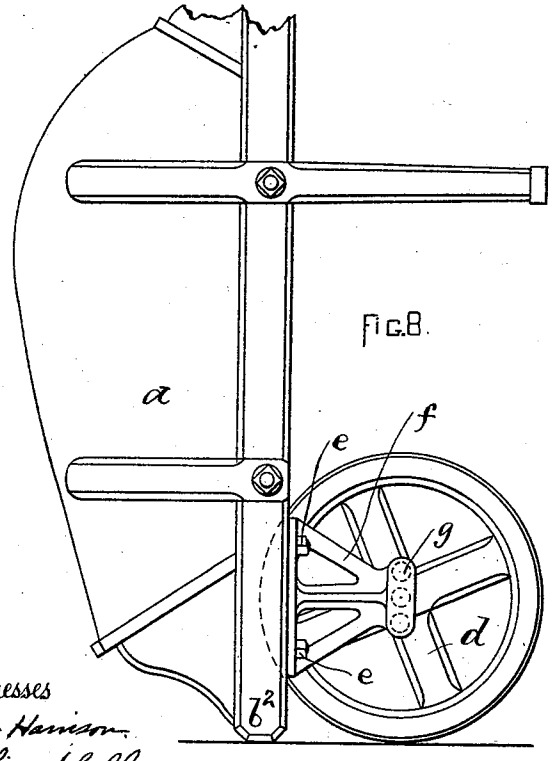
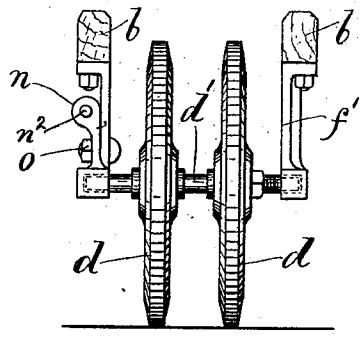


Fig. 8.

Fig. 6



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UNITED STATES PATENT OFFICE.

HENRY HOULDSWORTH, JR., OF KEIGHLEY, ENGLAND.

WHEELBARROW.

SPECIFICATION forming part of Letters Patent No. 529,912, dated November 27, 1894.

Application filed April 23, 1894. Serial No. 508,658. (No model.)

To all whom it may concern:

Be it known that I, HENRY HOULDSWORTH, Jr., a subject of the Queen of Great Britain, residing at Ingrow Lane, Keighley, in the county of York, England, have invented a new and useful Improvement in Wheelbarrows, of which the following description, together with the accompanying sheets of drawings, is a specification.

My invention relates to an improvement in wheelbarrows and has for its object the production of means that may be regulated so that the load on a wheelbarrow to which said means are applied may be thrown more or less upon the wheel as the user desires or may find to be to his convenience. To attain this object I make use of the means or parts illustrated in the accompanying sheets of drawings, in which—

Figure 1 is a side elevation of a common wheelbarrow with my improved parts applied. Fig. 2 is an end elevation of a sufficient portion of the wheelbarrow to show in this direction the application of my said improved parts. Fig. 3 is a side elevation of a portion of a wheelbarrow and shows a modification of my improved means. Fig. 4 is an end elevation of the parts shown by Fig. 3. Figs. 5 and 6 are similar views to Figs. 3 and 4 respectively and are illustrative of a different form of my improved means. Fig. 7 is a side elevation of a wheelbarrow with my improved means formed to meet certain ends hereinafter described. Fig. 8 is a side elevation of a wheelbarrow with the parts attached as shown by Fig. 1 but shows said wheelbarrow as standing on its end. Fig. 9 shows in detail certain parts illustrated by Fig. 7.

The body part *a*, the framework pieces *b* which terminate in the handles *b'*, supports *c* and wheel *d* are of well known formation or construction and although they are shown of a certain configuration or shape it will readily be understood that any other well known shapes or formations of these parts may be made use of, since the application of my improved device in no way interferes with such formation or shape.

On the framework pieces *b* I mount bearing pieces *f f'* for the reception of the wheel *d*, these bearing pieces *f f'* being arranged to be detachable (as by unscrewing the nuts *e e'* on their holding bolts, or otherwise as hereinafter described) in order to allow the said wheel *d* to be placed near to or at a greater distance from the handle *b'* by its axis *d'* being placed in one or other of the holes *g* which are shown in broken lines in all the drawings, so that as said wheel *d* is brought nearer being centrally under the load of the wheelbarrow more of the weight of said wheelbarrow is borne by said wheel, and the arms of the user are thereby relieved and his labor lightened, while if the wheel is moved farther from the center of gravity of the wheelbarrow then the weight thereof is thrown more upon the arms of the wheeler and its said wheel is thus relieved to facilitate its running or being pushed or forced upon inclined or rising ground.

The method of arrangement or construction of the bearing-pieces *f f'* so that they may be detachable in order to allow the axle *d'* of the wheel *d* to be placed in one or other of the holes *g* (which may be three or more in number as shown by Figs. 1, 5, 7 and 8) may be by being of the formation above described and shown by Figs. 1, 2, 7 and 8 or instead of several holes *g* being made in said bearing pieces *f f'*, the bolt holes *h* (see Fig. 3) may be made therein and the detachable piece *k* having one hole *g* attached thereto by the bolt *m* which on being detached leaves said piece *k* free to be moved and again fixed nearer to or farther from the handles *b'*; or again the bearings *f'* of the formation first before described may be mounted on one side of the wheelbarrow while bearings *n* having a hinged part *n'* are mounted on the other side of same. The part *n'* is hinged so that on its holding or retaining bolt *o* being removed, it is at liberty to be turned on its hinges n^2 to allow the detachment of the axis *d* as described.

In order to make the bearings *f f'* more fully meet the requirements of those wanting to use the wheelbarrow on considerably steep or rising ground, the outer end f^3 is curved to allow the wheel to be moved farther from the handles *b'* and also to bring the front end a^2 of the wheelbarrow nearer the ground or more in line with the axle, and when this formation of bearing is used I have the bottom part hinged to the upper part so that it may

be opened as shown by Fig. 9 to allow the adjustment of the wheel *d* as described.

The framework pieces *b* are preferably made to extend beyond the wheel when in the position shown by Figs. 1 and 8 so that their outer ends b^2 may hold the wheelbarrow when same is tilted into the position shown by said Fig. 8, the wheelbarrow being left in this position when not in use and yet exposed to the weather, that any rain falling thereon may be quickly drained away.

In order to enable the load of the wheelbarrow to be kept within the base of the wheel and so render it less liable to sway laterally I employ two wheels *d* on one axle as shown by Fig. 6.

This being the nature and object of my said invention, what I claim is—

1. A wheel-barrow having wheel-bearings with holes which receive the journals of the wheel and whose bottoms prevent endwise movement of the wheel, there being provisions for varying the location of the wheel with respect to the length of the barrow.

2. A wheel-barrow having bearings for the wheel, each with a row of separated holes in its inner side for the reception of the wheel-journals, the bottoms of the holes preventing endwise movement of the journals, and there being provisions for disengaging the journals from one set of holes and inserting them in another.

3. A wheel-barrow having wheel-bearings each with a row of separated holes in the inner side to receive the journals of the wheel, one or both of said bearings being removable laterally.

4. A wheel-barrow having wheel-bearings, each with a row of holes in the inner side to receive the journals of the wheel, one of said bearings being hinged to swing laterally; and suitable means for locking said hinged bearing.

5. A wheel-barrow having wheel-bearings curved upwardly toward the front, and each formed with a row of separated holes in the inner side of the curved portion, said holes adapted to receive the journals of the wheel, and there being provisions for disengagement of the journals from one set of holes and their insertion in another set of holes.

HY. HOULDSWORTH, JR.

Witnesses:
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HARRY ELLISON.