

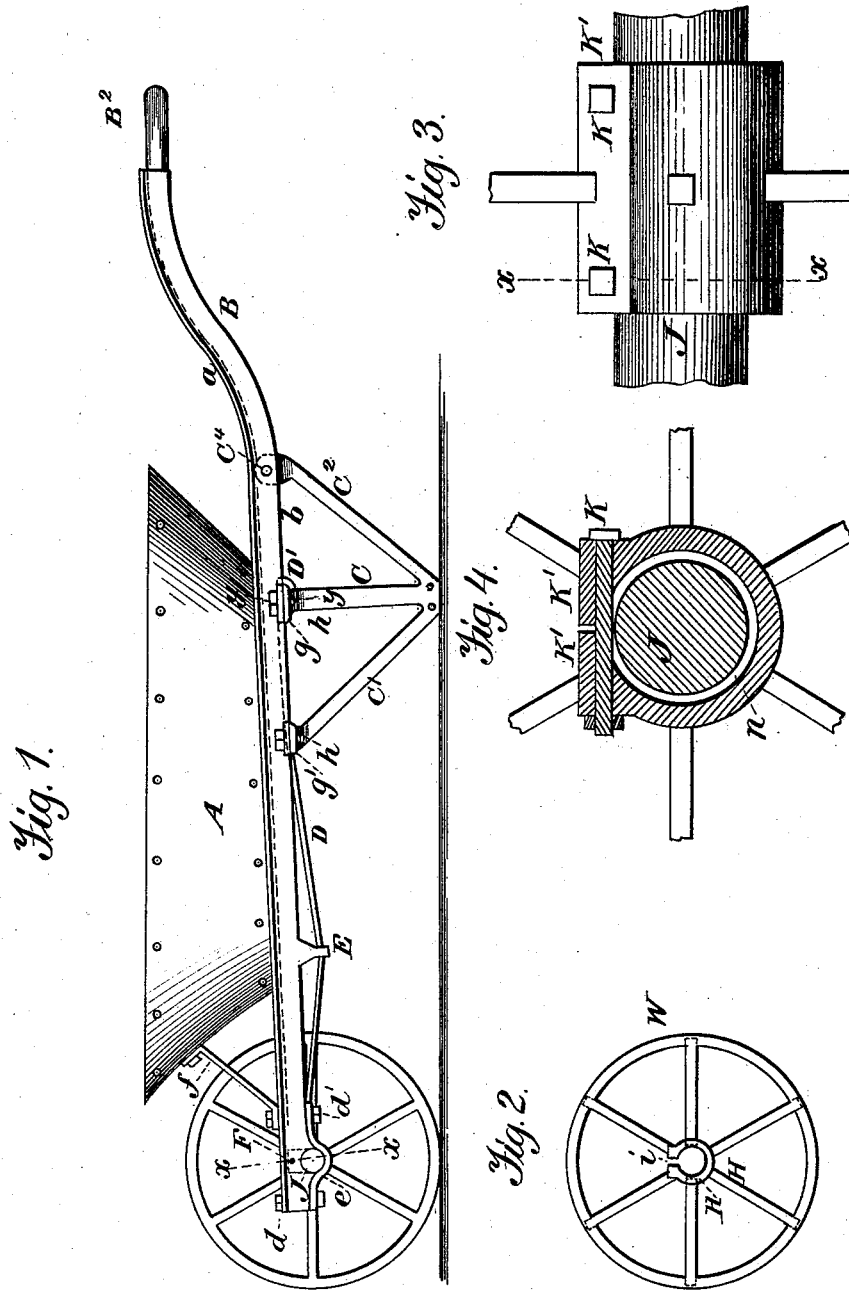
(No Model.)

2 Sheets—Sheet 1.

W. SLEICHER, Jr.
WHEELBARROW.

No. 384,093.

Patented June 5, 1888.



Witnesses.
A. Ruppert.
H. A. Daniels.

Inventor.
Wm. Sleicher Jr.
Per
Thomas R. Simpson.
att'y.

(No Model.)

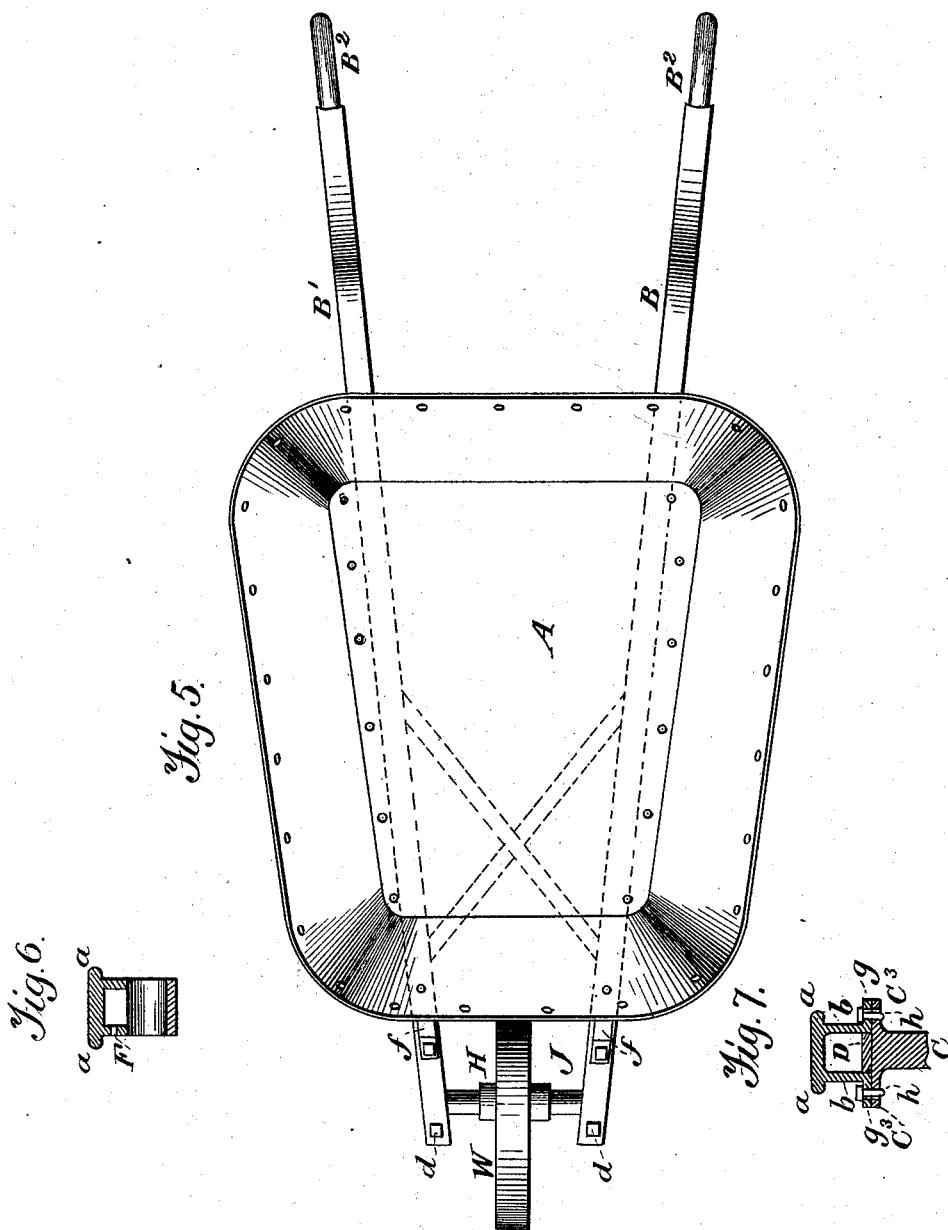
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UNITED STATES PATENT OFFICE.

WILLIAM SLEICHER, JR., OF TROY, NEW YORK.

WHEELBARROW.

SPECIFICATION forming part of Letters Patent No. 384,093, dated June 5, 1888.

Application filed December 31, 1887. Serial No. 259,522. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SLEICHER, Jr., a resident of the city of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Wheelbarrows; and I do hereby declare that the following is a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

My invention relates to improvements in wheelbarrows; and it consists of the novel construction and combination of parts, hereinafter described, and pointed out in the claims.

The general object of the invention is to make use of malleable cast-iron in the construction of the wheel and frame, to produce at small cost a light and durable wheelbarrow.

Figure 1 of the drawings is a side elevation of my improved wheelbarrow. Fig. 2 is a side elevation of the wheel detached. Fig. 3 is a front elevation of the wheel-hub secured upon its axle. Fig. 4 is a vertical section taken on broken line *xx* in Fig. 3. Fig. 5 is a plan view of the device shown in Fig. 1. Fig. 6 is a vertical section, taken on broken line *xx* in Fig. 1, of the frame and clip without the wheel and axle. Fig. 7 is a vertical section of a side stringer of the frame, a truss-spring, and a portion of an upright support taken on the broken line *yy* in Fig. 1. Figs. 3, 4, 6, and 7 are drawn upon an enlarged scale for convenience in illustration.

The pan *A*, which may be of any desired form, is supported by a frame composed, essentially, of the two stringers *B B'*, provided at one end with boxes for the bearings of the wheel-axle and at the other with handles *B²*. The stringers are made of cast-iron made malleable, and provided with vertical strengthening-flanges *b*, also beneath the forward part of the pan, with a downwardly-projecting strut, *E*. The axle-boxes are formed by casting the forward ends of the stringers solid, filling up the space between the flanges *b*, except for a small distance over the axle, which is left open,

as shown by dotted lines in Fig. 1 and by solid lines in Fig. 6, to form a chamber adapted to contain lubricants, the oil-hole *F* opening from said chamber exteriorly. The castings are provided with bolt-holes to receive the bolts *d*, by which clips *c* and braces *f* are secured to the stringers, to hold the axle and pan in place. The stringers are also provided with the lugs *g g'*, projecting laterally and oppositely from the flanges *b*, as shown in Figs. 1 and 7. These lugs are cast integral with the stringers and with bolt-holes adapted to receive the bolts *h*, by which the supports *C*, having corresponding perforated lugs, *C³*, are secured to the stringers. This method of attaching the supports avoids the necessity of weakening the stringers by perforating the flanges *b* to form bolt-holes therein. I have shown the brace *C'* attached in the same manner.

I have shown the brace *C²* secured to the stringer by a horizontal bolt, *C⁴*, passing through bolt-holes in flanges *b* and through the end of the brace, partly because there is less strain at this point so near the handles, and partly to illustrate the weakening effect upon the stringers produced by perforating the flanges *b*. It is obvious, however, that laterally-projecting lugs, like *g g'*, may be provided whenever it is desired to bolt any part to the stringers. I am thus able to form the stringers of very light and strong castings. As a further support, I provide a truss-spring, *D*, secured at its forward end by bolt *d*, passing through a bolt-hole formed therein, and at the rear by bending the end *D'* down against the support *C*, as shown in Fig. 1. The ends of the spring rest in the groove formed by the flanges *b*, while the part midway of the ends bears against the strut *E* and tends to support that part of the stringer. It is not essential that the part *D* should be a spring, as a wire or cable secured firmly at its ends would strengthen the stringers, acting in the nature of a truss; but I prefer a spring, for the reason that the resilient force of the spring, bearing against the strut *E*, would strengthen the stringers even if the ends of the spring were free to move longitudinally. The hub is cast in the form of a sleeve, *H'*, having the split or opening *i* on one side, and adapted to receive a detachable axle, *J*.

Any loosely-fitting rod of iron or steel having end bearings can be inserted in the hub-sleeve for an axle, and the sleeve contracted to firmly hold the axle therein. The sleeve is
5 contracted by means of bolts K passing through bolt-holes in the lugs K', formed on the edges of the lateral sleeve-opening.

The axle may have a slight groove, *n*, and the bolt-holes in lugs K' be so arranged that
10 one or both of the bolts will enter the groove and prevent any longitudinal movement of the axle in the hub. I am thus able to secure a tight fit of the axle within a cast hub without the expense of boring or otherwise fitting up
15 the interior of the hub.

The stringers are formed of separate integral castings, and may be held in a fixed position relative to each other by securing them to the pan or by diagonal braces. (Indicated
20 by dotted lines in Fig. 5.)

When desired, the split hub-sleeve, spokes, and tire may be made in separate parts, as indicated by the dotted lines in Fig. 2, and of different kinds of material.

25 What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a wheelbarrow, of two side stringers, each formed of a single malleable casting having longitudinal ribs and flanges, with laterally-projecting attaching
30 lugs, a lubricant-chamber at one end of the stringers open on one side to the wheel-axle, and a handle at the other end, supporting legs bolted upon the stringers, and a traction-wheel, all combined and organized substantially as
35 and for the purposes set forth.

2. The combination, with stringers having the strut E and flanges *b*, of a truss cable, wire, or spring, D, bent down at D' against said
40 strut, resting in a groove formed by said flanges, held by a bolt at its forward end, and bearing with its middle against said strut, as and for the purpose specified.

3. The wheelbarrow axle-boxes, combined with flanged stringers B to form a chamber
45 for lubricants, as shown and described.

In testimony whereof I have hereunto set my hand this 27th day of December, 1887.

WILLIAM SLEICHER, JR.

Witnesses:

GEO. A. MOSHER,

CHAS. L. ALDEN.