C. NUTTING & C. NUTTING, Jr.

METAL WHEELBARROW.

No. 187,549. Patented Feb. 20, 1877.

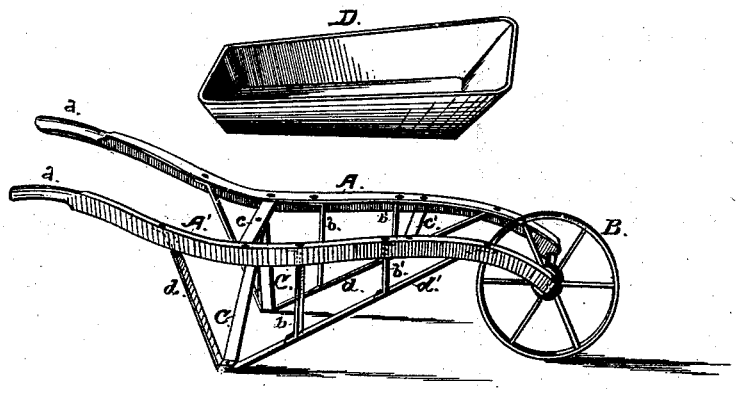

Fig. 1.

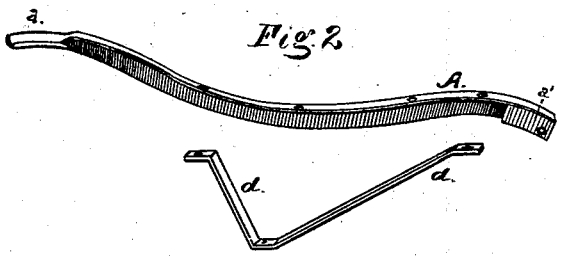

Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

CALVIN NUTTING AND CALVIN NUTTING, JR., OF SAN FRANCISCO, CAL.

IMPROVEMENT IN METAL WHEELBARROWS.

Specification forming part of Letters Patent No. **187,549**, dated February 20, 1877; application filed January 3, 1877.

To all whom it may concern:

Be it known that we, CALVIN NUTTING and CALVIN NUTTING, Jr., of the city and county of San Francisco, in the State of California, have invented an Improvement in the Construction of Metallic Wheelbarrows and Trucks, of which the following is a specification:

The object we have in view is the production of a wheelbarrow for carrying heavy materials—such as ores—which will be light and durable in use and cheap in construction; and it consists, first, in the peculiar side pieces, made of angle-iron, with handles at one end and journal-boxes for the wheel-axle at the other; and, further, in the combination, construction, and arrangement of the several parts, all as more fully hereinafter explained.

To enable others skilled in the art to manufacture our wheelbarrow, we proceed to describe the same, having reference to the accompanying drawings, making a part hereof, in which—

Figure 1 is a perspective view of the frame and tray, with the tray detached; and Fig. 2, a separate view of one of the side pieces and braces.

Like letters denote corresponding parts in each figure.

A A′ are the side pieces of the barrow-frame, constructed of angle-iron, each having at one end a round curved handle, *a*, and at the other end a journal-box, *a′*, to receive the axle of the wheel B. These side pieces are bent into the shape shown in the drawing, with the handle ends curved upwardly, to bring the handles the proper height above the frame, and the opposite ends curved downwardly, to receive between them the wheel and support the barrow the desired distance from the ground. Metallic cross-pieces *c c′* connect the angle-iron side pieces A A′, and are secured, by bolts or rivets, to the horizontal flanges of the same. A brace, C, is secured centrally to the under side of the cross-piece *c*, and projects downwardly to the sides to form the supports or legs; and this brace is connected at its ends to the side braces *d d′*. These side braces *d d′* run lengthwise of the frame, one under each side piece, and are secured to the horizontal flanges of such side pieces, and to the ends of the brace C, and form, with the said brace C, the legs or supports for the wheelbarrow. Between the brace C and the forward ends of the side braces *d d′* are placed two or more metallic supports, *b b′*, which are secured to the said side braces, and to the side pieces A A′. These supports brace the frame of the wheelbarrow, and, being placed directly under the tray, assist to strengthen the frame at the point of the greatest strain.

F is the tray, of any convenient form, which is secured to the side and cross pieces by rivets or bolts, which may be the same that secure the braces and supports, or separate from them.

It will be observed that the pieces of the frame of the wheelbarrow and the tray are formed separately, and afterward secured in position wholly by screw-bolts or rivets, or by bolts and rivets together, as may be found convenient and desirable.

By the use of angle-iron in the construction of frames and bodies of wheelbarrows less weight of iron is required, and the material can be worked and handled in the process of manufacture in a better manner, and with less danger of weakening the frame in bending and punching the iron, than in the case of the employment of iron of other shapes.

Much trouble has been experienced in the manufacture of iron wheelbarrows, and the frames have been more or less defective, and unable to resist the weight and strain of heavy loads, more especially in mining work. These defects and objections have, however, been removed and obviated by the employment of our invention in the construction of wheelbarrows, and a cheaper as well as a stronger and more durable article is therefore the result.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a metallic wheelbarrow, the separate side pieces A A′, curved substantially as shown, made from angle-iron, and having at one end the handles *a*, and at the other the

journal-boxes a' for the wheel-axle, constructed and arranged substantially as and for the purposes set forth.

2. In a metallic wheelbarrow, the combination of the separate angle-iron side pieces A A′, cross-pieces c c', brace C, side braces d d', and supports b b', constructed and arranged substantially as described and shown.

In testimony that we claim the foregoing we have hereunto set our hands this 22d day of December, 1876.

CALVIN NUTTING.
CALVIN NUTTING, JR.

Witnesses:
WILLIAM HARNEY,
EDWARD E. OSBORN.