N. ROLLAND & J. F. VAN HOORDE.

Wheel-Barrows.

No. 167,198. Patented Aug. 31, 1875.

Fig. 1.

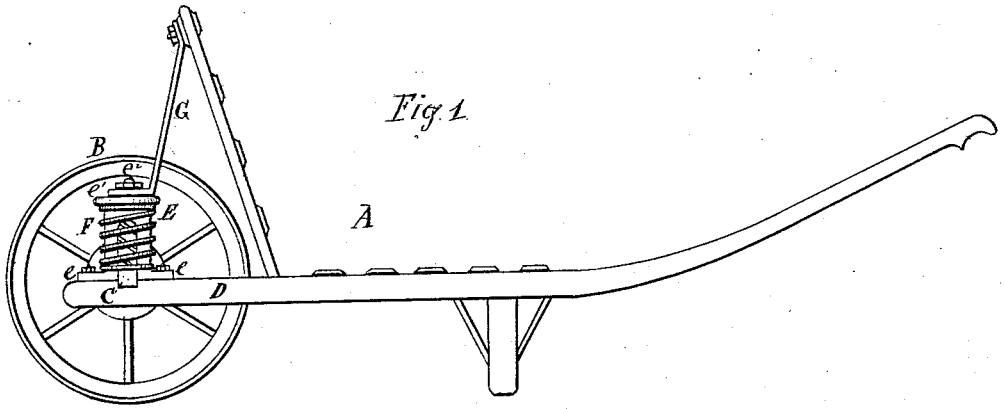


Fig. 2.

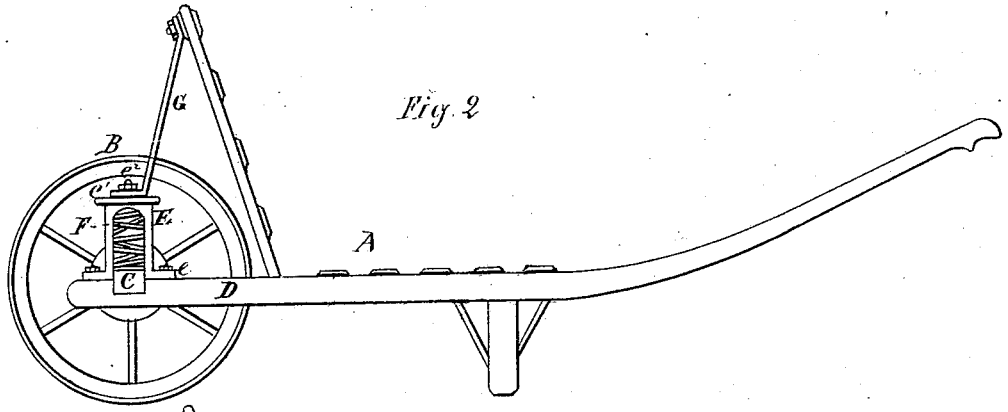


Fig. 3.

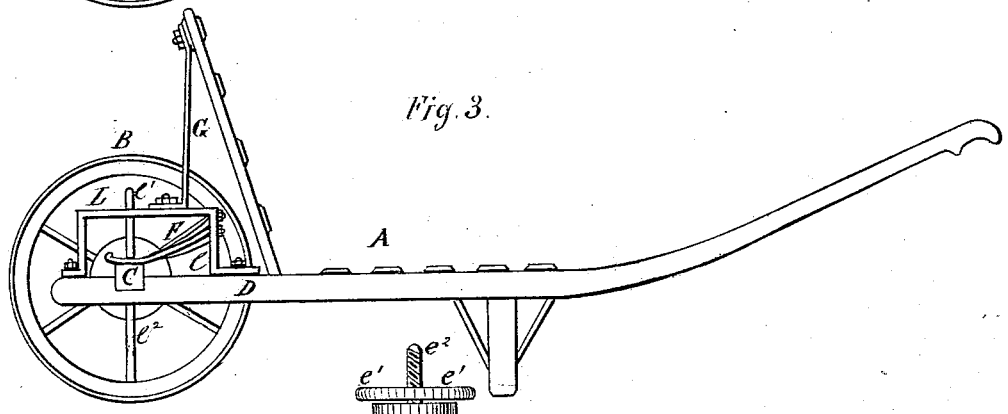
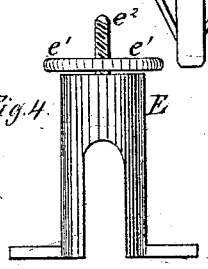


Fig. 4.



WITNESSES
Henri Guillaume
W. A. Dangerfield

INVENTOR
Nestor Rolland
Jean Francois Van Hoorde
per Henry Orth
Atty

UNITED STATES PATENT OFFICE

NESTOR ROLLAND AND JEAN FRANÇOIS VAN HOORDE, OF HENSIES, BELGIUM.

IMPROVEMENT IN WHEELBARROWS.

Specification forming part of Letters Patent No. **167,198**, dated August 31, 1875; application filed January 21, 1875.

To all whom it may concern:

Be it known that we, NESTOR ROLLAND and JEAN FRANÇOIS VAN HOORDE, both of the city of Hensies, in the Province of Hainaut and Kingdom of Belgium, have invented new and useful Improvements in Wheelbarrows, of which the following is a specification:

Our invention consists in applying a spiral or other spring to the thills of a wheelbarrow on each side of the axle of the wheel, in such a manner that the axle shall press or rest against said springs. The wheel, being mounted loosely on the axle, revolves around it, so that when the barrow and load are wheeled along, the weight thereof is borne by the springs, thereby facilitating the propelling, and obviating the jarring and consequent fatigue incident to wheeling barrows having their axles in rigid bearings, and at the same time a saving in wear is effected.

But that our invention may be fully understood, we will describe the same in detail by aid of the accompanying drawings.

Figure 1 is a side elevation of a wheelbarrow embodying our invention. Figs. 2 and 3 are similar views of slight modifications of the same, and Fig. 4 is a vertical elevation of the spring guide or barrel.

A is the wheelbarrow, and B is the wheel, which in this case does not revolve with the axle C, but, on the contrary, revolves around such axle, being mounted loosely thereon, while the axle is stationary.

The axle C has its extremities flattened or square. These extremities rest in a notch or recess formed in the upper part of the thills D, Fig. 1, or the extremities may have their bearings in loose bearing-blocks, as shown by Figs. 2 and 3.

E is the barrel or spring-guide, around the outside of which the spring is slipped. The lower end of the spring F rests upon two horizontal ears or projections, *e*, formed on each side of the barrel or guide E, and by means of which it is secured to the thills D, as shown by Figs. 1, 2, and 4. The barrel or spring-guide E is provided with a vertical central notch or slot, in which the squared or flattened extremities of the axle C, abutting against or resting on the spring F, move up and down as the wheelbarrow is depressed by the jars caused by the inequalities of the surface over which it is wheeled. The spring F is held in position on the barrel E by means of a cap or plate, e^1, held in place by a screw-rod, e^2, affixed to the top of the barrel or guide E, and a nut. To this barrel E, by means of the screw-nut e^2, one end of the braces G is secured, the other end of said braces G being secured to and brace the back of the wheelbarrow, as shown by Figs. 1 and 2.

The spring guide or barrel E may be made hollow, and the spring F inclosed therein, as shown by Fig. 2. In this case the movable cap or plate e^1 may be dispensed with, while at the same time the barrel E may be made of any ornamental configuration. Instead of a spiral spring a carriage-spring, or one-half of a carriage-spring, F, may be used, as shown by Fig. 3. When one-half of a carriage-spring is used, we affix one end of it to one of the vertical standards *l* of a rectangular frame, L, the other or free end resting on the squared end of the axle, or on the bearing-block of the axle.

To insure the vertical motion of the spring and axle, a guide-rod, l^1, is affixed to the top of the bearing-block, traversing and projecting above the horizontal arm of the rectangular frame L, another guide-rod, l^2, being affixed below the bearing-block of the axle, traversing and projecting below the thill; or two guide-rods may be affixed on the upper portion of the thill, and the horizontal arm of the rectangular frame L, between which the axle C is free to move up and down.

It is evident that by these means a simple and effective device is provided, by means of which the great fatigue arising from the constant jarring of the body when wheeling a loaded barrow over almost any surface is avoided, as well as a great saving effected in the wear of the barrow, while the cost of construction of our improved barrow is not much above the cost of an ordinary barrow, owing to the fact that they may be made of much lighter material.

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

1. The combination, in a wheelbarrow having its wheel loosely mounted on the axle, as set forth, of the axle C with the spring-guide or barrel E and spring F, affixed outside or inclosed within the barrel E, substantially as set forth.

2. The combination of the barrow A, braces G, and spring barrel or guide E, substantially as specified.

3. In a wheelbarrow having its wheel loosely mounted on the axle, the axle C, in combination with a spring, F, the frame L, guide-rods l^1 l^2, and the braces G, substantially as and for the purposes shown and described.

In testimony that we claim the foregoing, we have hereunto set our hands this 7th day of October, 1874.

J. F. VAN HOORDE.
NESTOR ROLLAND.

Witnesses:
J. COULMIER,
C. DELESSART.