(No Model.)

D. J. C. ARNOLD.

SPRING BEARING FOR WHEELBARROWS.

No. 427,655. Patented May 13, 1890.

Fig. 1.

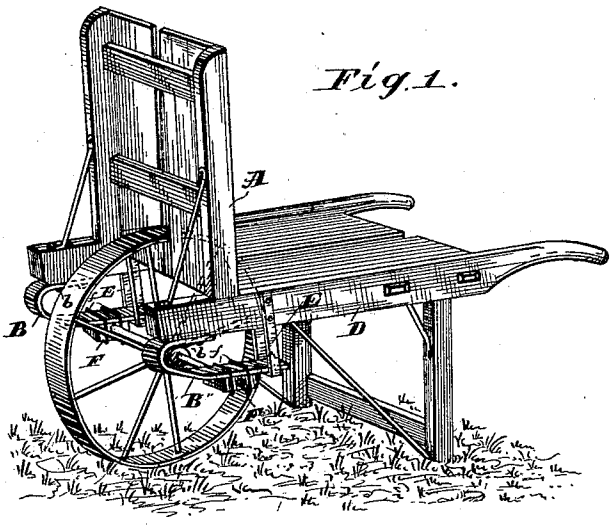
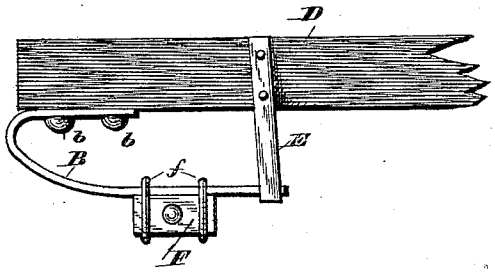


Fig. 2.



Witnesses
Franklin H. Moore.
Mayme Reid

Inventor
Daniel J. C. Arnold
by Wm. H. Monroe
Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DANIEL J. C. ARNOLD, OF NEW LONDON, OHIO.

SPRING-BEARING FOR WHEELBARROWS.

SPECIFICATION forming part of Letters Patent No. 427,655, dated May 13, 1890.

Application filed January 6, 1890. Serial No. 336,058. (No model.)

To all whom it may concern:

Be it known that I, DANIEL J. C. ARNOLD, a citizen of the United States, and a resident of New London, county of Huron, and State of Ohio, have invented certain new and useful Improvements in Spring-Bearings for Wheelbarrows; and I hereby declare the following to be a clear, full, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to spring-bearings for hand-barrows, and its objects are to relieve the shock occasioned to the hand when encountering an obstacle in the path of the barrow and to provide a simple, durable, and inexpensive spring-bearing adapted to heavy loads.

Heretofore the axle-bearings for brick-barrows have been mounted upon the free rear extremities of leaf-springs lying underneath the side rails and extending longitudinally with them and fastened to them at their forward ends by bolts or otherwise. A disadvantage arose from this usage in the shock occasioned the hand in wheeling the barrow when an obstacle was encountered, the spring merely transferring the shock without modifying it.

My invention consists in the employment of a spring having a semi-elliptical or rounded form at the forward end of the rail, the upper and shorter arm being fastened to the rail, while the longer arm extends rearward toward the handles. On this end the bearings are placed, having free vertical movement.

In the accompanying drawings the construction of the improved spring and its appearance are clearly shown.

Figure 1 is a perspective view of a barrow provided with the spring, and Fig. 2 a detail of one of the springs.

A is a barrow; B B, the springs secured with bolts, as *b b*, to the rails D. Guides E are employed to keep the movement of the springs vertical, and the axle-bearings F are secured, as usual, by bolts *f* to the free ends of the spring.

It will at once be seen that any shock sustained by the forward movement of the wheel will be arrested and reduced in force by the vibration of the spring B, from its peculiar position, and relieve the hand from its force.

I am aware that springs have been employed to prevent the transmission of the shock to the hand from the wheel, which, however, have been comparatively flat multiple springs pivoted instead of rigid at the forward end and with the rear extremity pressing against the rail, which gives but little range of movement or elasticity to the spring and no vertical movement to the free end.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hand-barrow, springs supporting the wheel-axle, rigidly secured to the hand-rails at their forward ends, but having their rearward extremities free to move vertically, and provided with bearings for the wheel-axle, substantially as and in the manner set forth.

2. In a hand-barrow, springs to support the wheel-axle and receive the shocks upon the wheel, consisting of single strips secured to the outer ends of the hand-rails and thence extending toward the rear, with rear ends free to move vertically in vertical guides, all substantially as described.

3. In a hand-barrow, springs secured to the outer ends of the bottom rails at their outer extremities, but having free vertical movement at their inner extremities, in combination with bearings for the wheel-axle, and vertical guides, substantially as described.

4. In a hand-barrow, spring-strips bent into loops with parallel sides, one longer than the other, the shorter arms being secured to the outer ends of the hand-rails, while the inner ends are free to move vertically toward the rail, as and in the manner specified.

5. In a hand-barrow, spring-strips bent into loops with parallel sides, one side longer than the other, the shorter sides being secured to the outer ends of the hand-rails, while the inner ends are free to move vertically toward the rail in guides, all substantially as and in the manner specified.

DANIEL J. C. ARNOLD.

Witnesses:
ROLLIN C. POWERS,
ROLLIN B. POWERS.