

(No Model.)

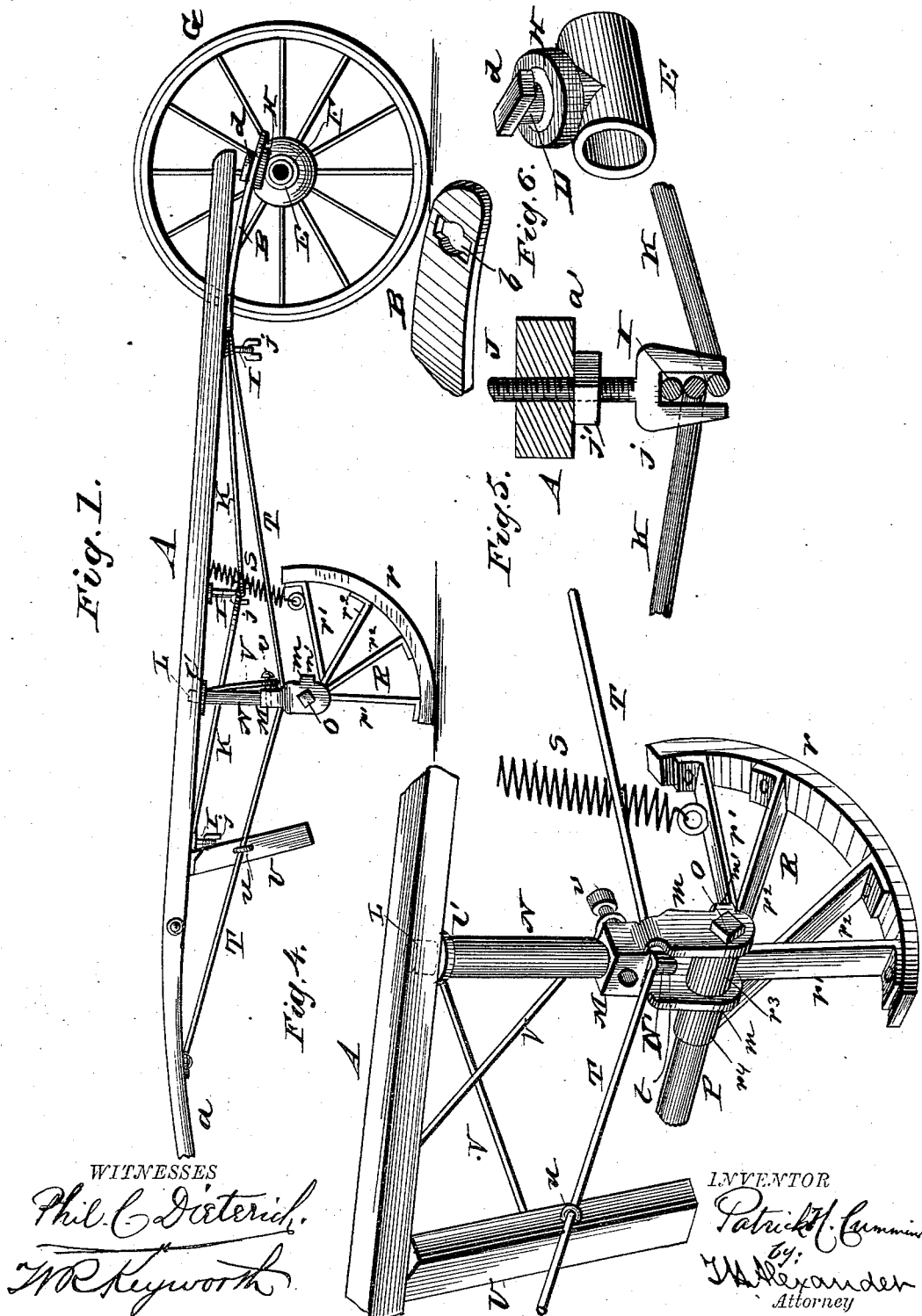
2 Sheets—Sheet 1.

P. H. CUMMINS.

WHEELBARROW.

No. 307,020.

Patented Oct. 21, 1884.



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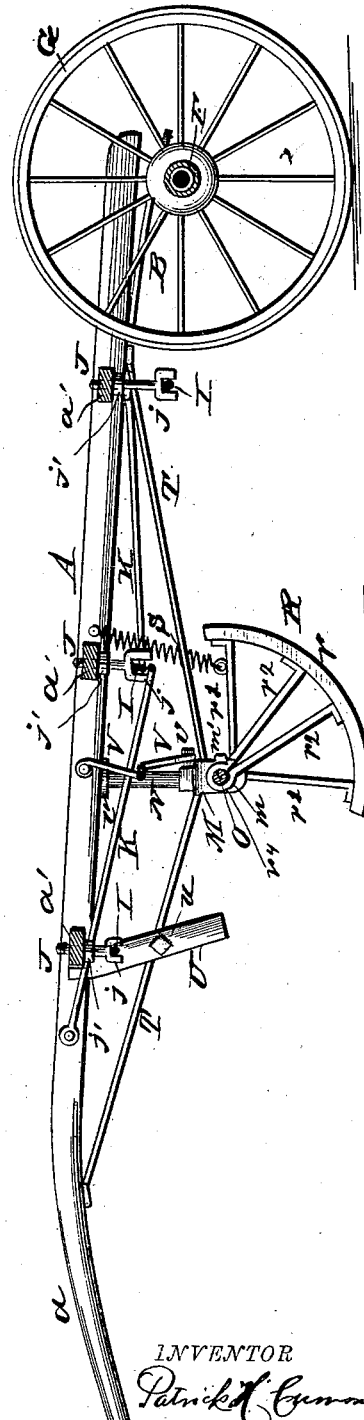
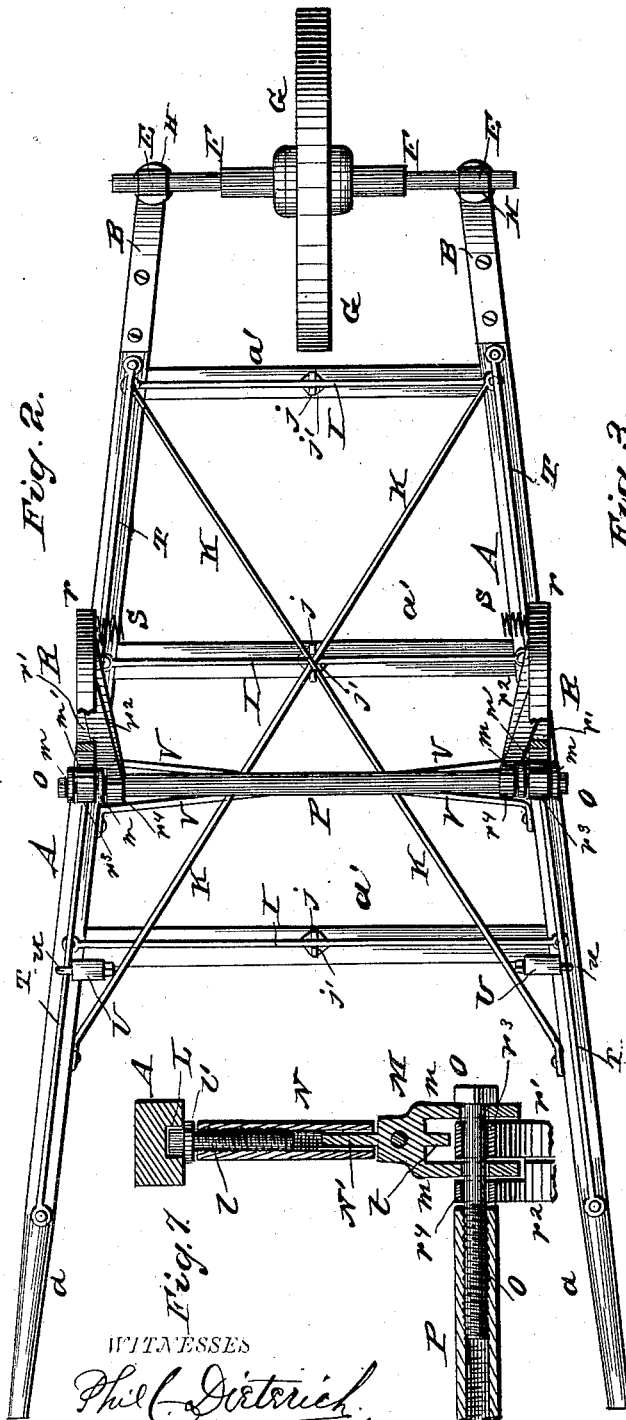
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WITNESSES

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PATRICK HENRY CUMMINS, OF AMSTERDAM, NEW YORK.

WHEELBARROW.

SPECIFICATION forming part of Letters Patent No. 307,020, dated October 21, 1884.

Application filed May 21, 1884. (No model.)

To all whom it may concern:

Be it known that I, PATRICK H. CUMMINS, of Amsterdam, in the county of Montgomery 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 thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to wheelbarrows, the object being to provide a barrow with truss-braces and tension devices to add strength and durability to the barrow-frame.

A further object of the invention is to substitute for the ordinary rigid legs of a wheelbarrow pivoted segments adapted to permit a forward movement of the barrow in passing obstructions, as will be fully described hereinafter.

A further object of the invention is to provide a yielding connection for the barrow-frame and the wheel-shaft.

The invention consists in the combination, with a barrow-frame, of transverse and longitudinal truss-braces and means for imparting a tension or strain to said braces to securely hold the parts of the frame together.

The invention further consists in the combination, with a wheelbarrow-frame, of pivoted segmental supports in rear of the wheel of the barrow.

My invention also includes certain features of construction and combinations of parts, as fully described hereinafter, and pointed out in the claims.

In the drawings, Figure 1 is a side view of a wheelbarrow-frame having my improvements applied thereto. Fig. 2 is a reverse plan view of the same, partly in section. Fig. 3 is a central longitudinal section, and Figs. 4, 5, 6, and 7 illustrate parts in detail.

The frame of the barrow consists of side bars, A A, having handle-extensions *a a* and cross-braces *a'*. The forward ends of the side bars, A A, are provided on their under sides with spring-plates B B, whose rear ends are secured to the bars A A, while their forward ends are bent slightly downward and formed with openings *b b*, to receive the heads *d* of lugs D, formed upon sleeve-bearings E, which

receive the shaft or axle F of the barrow-wheel G.

H H represent elastic washers interposed between the sleeves E and plates D. The barrow-wheel G may be of any preferred form, and secured upon its axle in any suitable manner.

It will be apparent from the description thus far that the spring-plates B B and the elastic washers H H afford a yielding connection between the wheel-axle and the barrow-frame, thus preventing undue jarring of the load upon the barrow when passing obstructions. The ends of the cross-bars *a' a'* are mortised into the bars A.

Below each of the cross-bars *a'* is secured a truss-brace, I, preferably of wire. The ends of these braces are secured to the under sides of the bars A. Each of said cross-bars *a'* is provided with a threaded bolt, J, extending from the under sides of the bar at the center through the latter, and formed with a recessed head, *j*, to engage the truss-braces I. Upon each of these bolts J is arranged a nut, *j'*. It is obvious that the tension of the truss-braces may be regulated by these nuts.

In addition to the function of drawing the side bars of the frame together and bracing them; the employment of these truss-rods adds to the strength of the barrow-frame by avoiding the tenoning of the ends of the cross-bars and the formation of through-openings in the side bars, which necessarily weaken those parts.

K K represent diagonal truss-rods, secured, preferably, to the under sides of the bars A A, as shown, and crossing each other at their centers, where they rest in the recess of the bolt-head of the central cross-bar, *a'*. These diagonally-arranged rods serve to brace the frame longitudinally, and may be tensioned by the nut of the bolt on the central cross-bar, as already described.

At about the center of each side bar, A, and on their under sides, I form a countersink, L, to receive the upper end of a threaded rod, *l*, formed with a collar or flange, *l'*. This rod receives a screw-threaded sleeve, N, into whose lower end projects a rod, N', made integral with a block, M, formed with parallel depending ears *m m*, braced together by a brace, *m'*.

The ears *m* of the blocks *M* are perforated to receive screw-threaded bolts *O O*, whose inner ends project into the interiorly-threaded ends of a hollow rod, *P*. These bolts *O* serve as axle-bearings for the segments *R R*. The latter may be of any form preferred; but I have shown them consisting of the segmental fellyes *r r* and spokes *r' r'* and *r² r²*. The spokes *r' r'* are formed of a single piece of metal bent upon itself to form the spokes, and looped to form the hub *r³*, which is supported upon the bolt *O* between the ears *m m*. The spokes *r² r²* and hub *r⁴* are similarly formed to those above referred to; but the hub *r⁴* is mounted upon the bolt *O*, on the inner side of the ears *m m*.

S S represent spiral springs whose upper ends are secured to the side bars of the frame, while their lower ends are secured to the front spokes of the segments to limit the movement of and retract the latter.

T T represent longitudinal truss-rods, secured one to the under side of each of the side bars, *A*, and looped around lugs *t t*, projecting from the block *M* between the ears *m m*, as shown. These truss-rods *T* are tensioned by turning the sleeve *N*.

U U represent stop-blocks secured upon the truss-rods *T* by staples or eyes *u*, and recessed at their upper ends to fit against the side bars, *A*, while their lower ends rest in the plane of the movement of the segments, so that the latter will abut against them to limit their movement. These segmental supports thus described will materially assist the barrow in passing obstructions. When the weight is thrown onto the said supports by the upward tilting of the front of the barrow, the latter may be given a forward movement to ride the wheel over the obstruction.

V V represent crossed diagonal brace-rods whose upper ends are secured to the side bars, *A*, while their lower ends are respectively secured upon screws or lugs *v v* of the blocks *M*.

It will be apparent that many slight alterations may be resorted to in the details of construction of my improvement; hence I do not limit myself to the exact construction herein shown and described, but reserve myself the right to make all such alterations and modifi-

cations as may properly fall within the scope of my invention.

Having described my invention, I claim as new the following:

1. The combination, with a wheelbarrow-frame, of truss-braces of the central cross-bar, *a'*, and a threaded bolt, *J*, having a recessed head engaging with said braces and provided with a nut, substantially as and for the purposes described.

2. The combination, with a wheelbarrow, of 60 transverse and longitudinal truss-braces and tension bolts and nuts, said bolts having recessed heads, substantially as described.

3. The combination, with the forward ends of the side bars of the barrow-frame, of spring-plates having openings, as described, sleeve-bearings for the wheel-shaft, and elastic washers, substantially as set forth.

4. The combination, with the frame of a wheelbarrow, of segmental supports arranged in rear of the barrow-wheel, substantially as described.

5. The combination, with the frame of a wheelbarrow, of pivoted segmental supports and retracting-springs, substantially as described.

6. The combination, with the frame of a wheelbarrow, of pivoted segmental supports provided with retracting-springs and stop devices, substantially as described.

7. The combination, with the side bars of the frame, formed with countersinks on their under sides, of bolts entering said countersinks, sleeves arranged on said bolts, blocks formed with arms to enter said sleeves, and with perforated ears, segmental supports mounted upon bolt-journals having bearings in said ears and connected by a hollow threaded rod, and longitudinal truss-rods, substantially in the manner and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

PATRICK HENRY CUMMINS.

Witnesses:

HENRY MCNIEL,
M. WEMPLE.