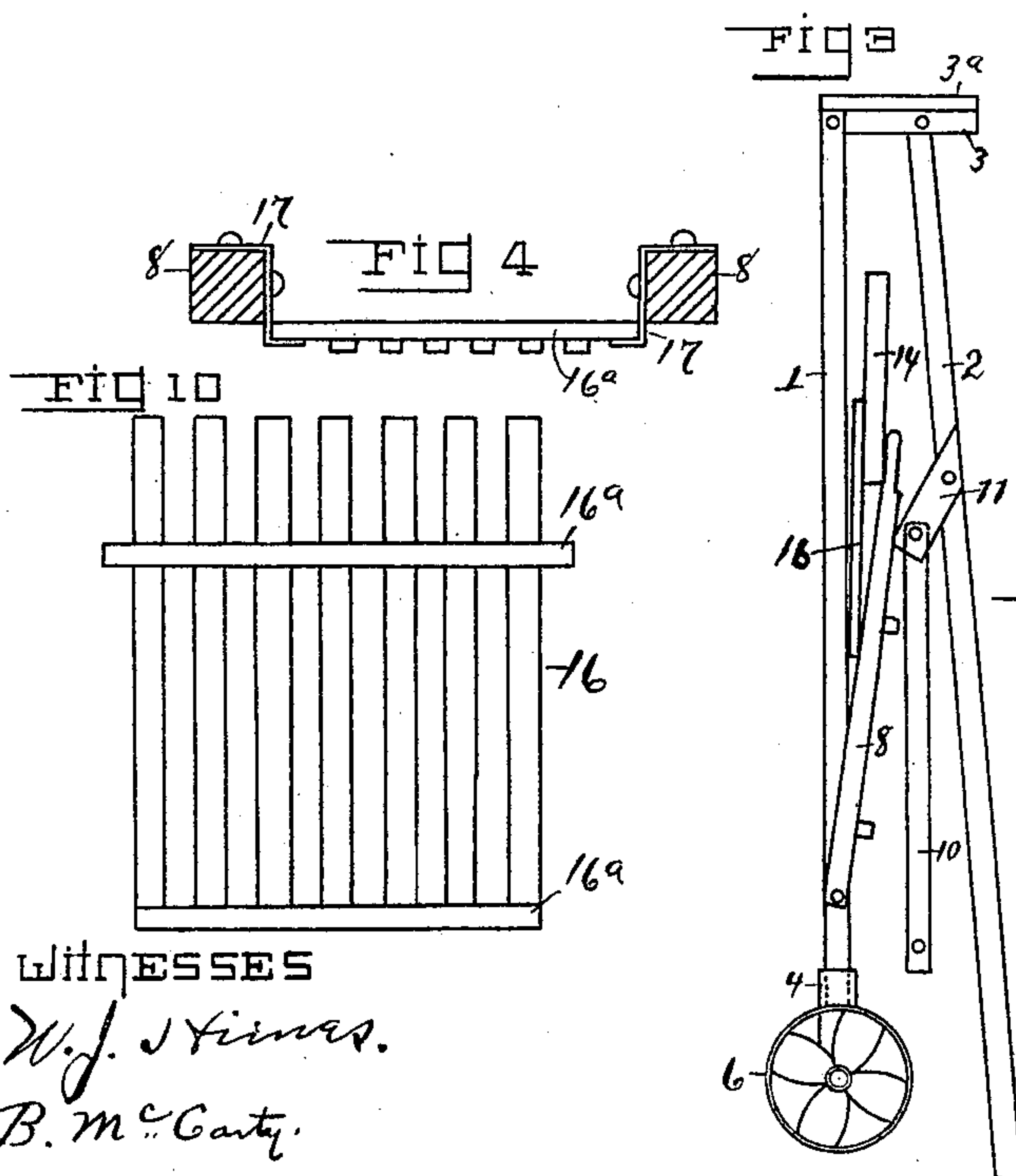
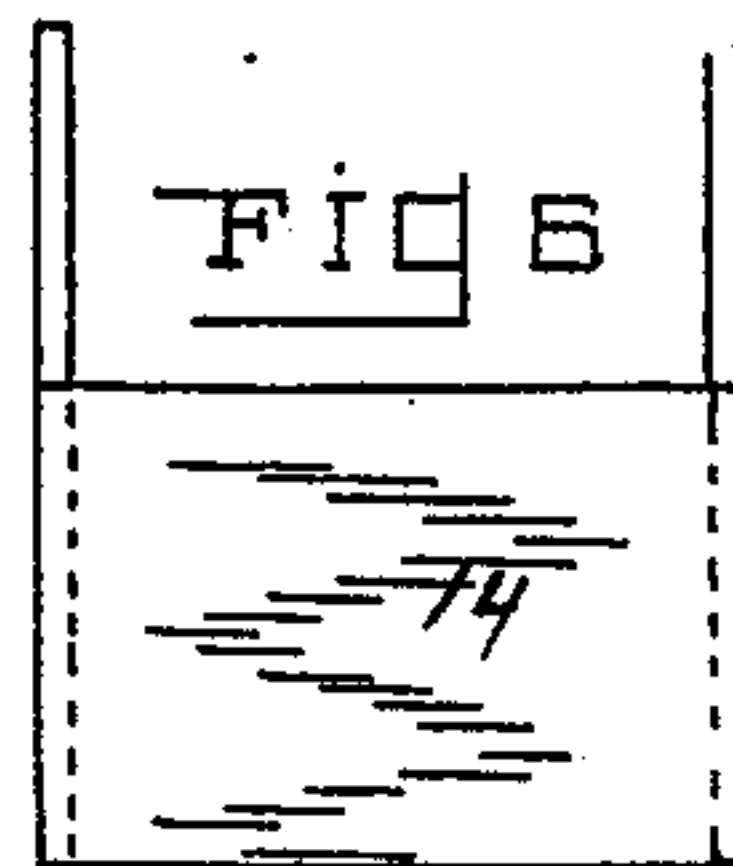
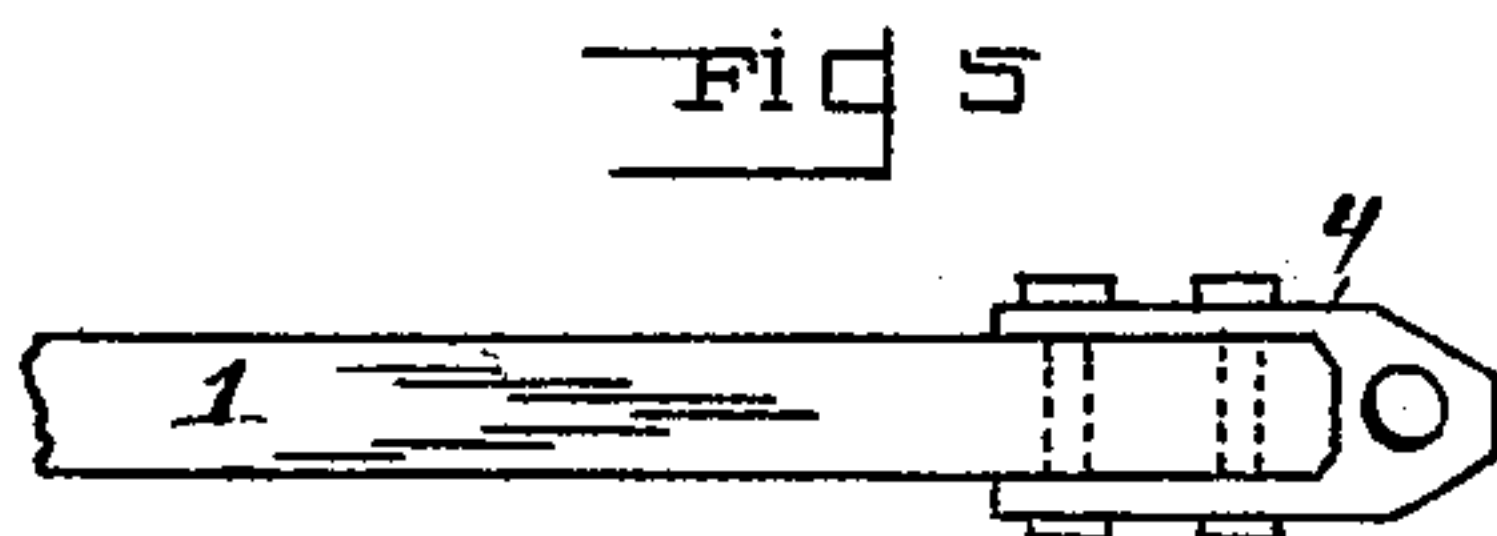
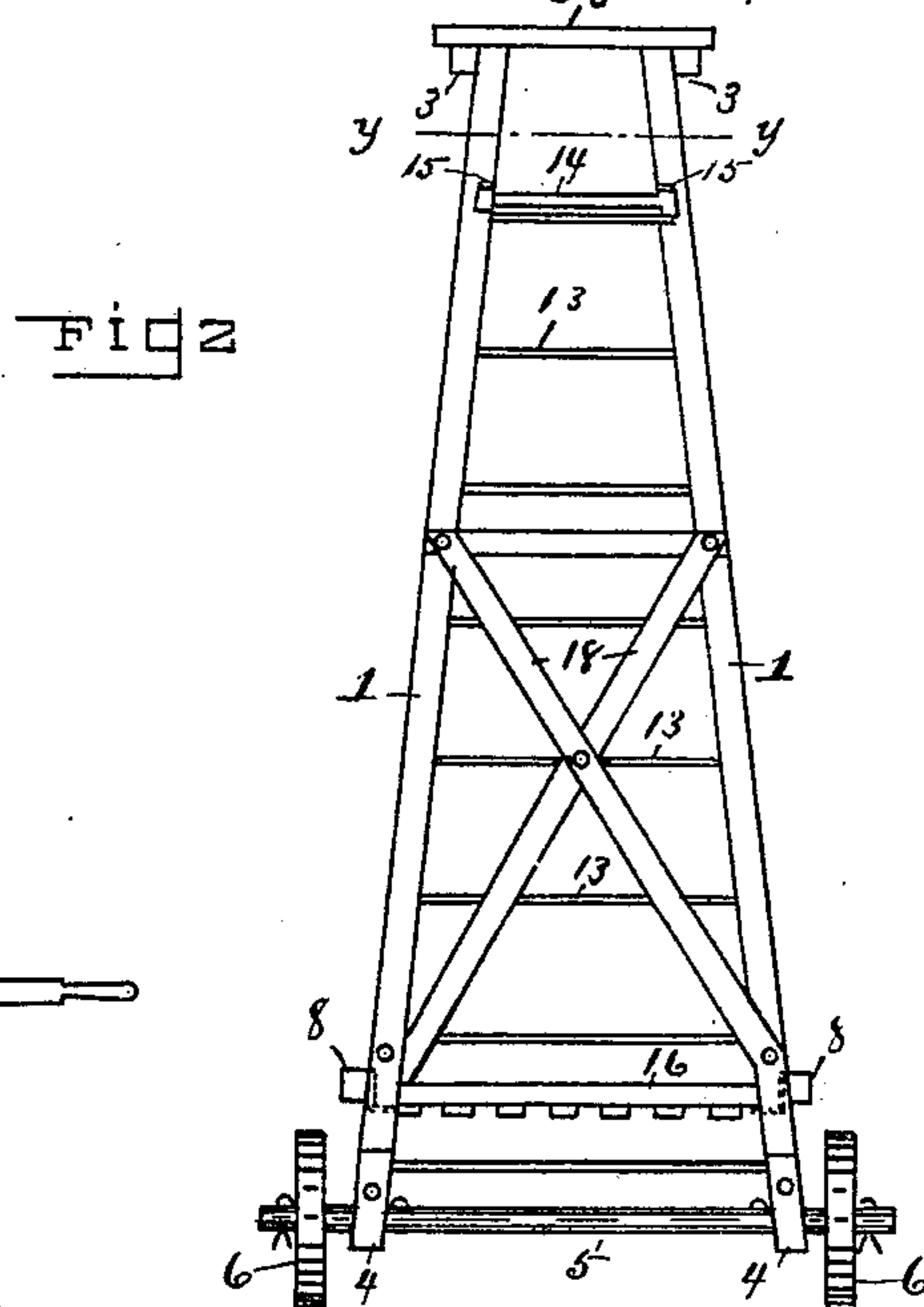
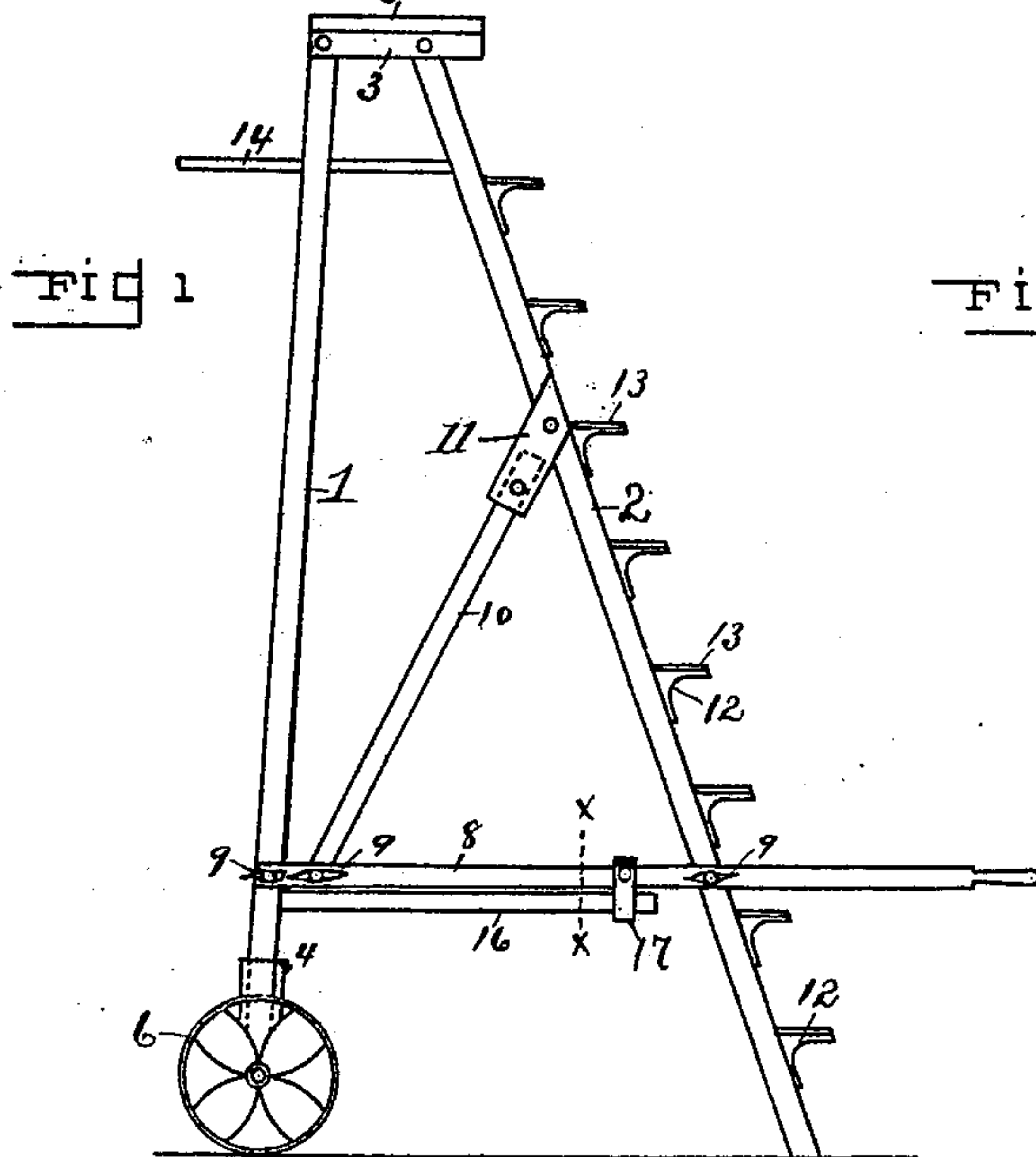


(No Model.)

H. BOWMAN.
ORCHARD LADDER.

No. 582,617

Patented May 18, 1897.



WITNESSES
W. J. Stevens.
B. M. Carty.

Harry Bowman,
INVENTOR.
By R. J. M. Carty,
his ATTORNEY.

UNITED STATES PATENT OFFICE.

HARVEY BOWMAN, OF FORGY, OHIO.

ORCHARD-LADDER.

SPECIFICATION forming part of Letters Patent No. 582,617, dated May 18, 1897.

Application filed July 13, 1896. Serial No. 598,914. (No model.)

To all whom it may concern:

Be it known that I, HARVEY BOWMAN, a citizen of the United States, residing at Forgy, in the county of Clark and State of Ohio, have
5 invented certain new and useful Improvements in Orchard-Ladders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains
10 to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to new and useful improvements in step-ladders; and it consists
15 of a portable ladder suitable for orchard use.

The object of the invention is to provide a ladder that may be easily moved about from tree to tree and by means of which the fruit
20 may be gathered from the trees.

A further object is to provide a ladder that will maintain a steady position.

To these ends the invention consists of parts and their arrangements, as hereinafter
25 more fully described in connection with the accompanying drawings, of which—

Figure 1 is a side elevation of my improved orchard-ladder. Fig. 2 is a front elevation. Fig. 3 is a side elevation of the ladder folded.
30 Fig. 4 is an enlarged section on the line $x x$ of Fig. 1. Fig. 5 is an enlarged view of the lower end of one of the vertical posts. Fig. 6 is an enlarged detached view of the upper shelf. Fig. 7 is an enlarged side view of one
35 of the step-brackets. Fig. 8 is a sectional view on the line $y y$ of Fig. 2. Fig. 9 is a view of the upper end of one of the inclined braces detached. Fig. 10 is a detached view of the lower shelf.

40 Similar reference-characters indicate corresponding parts in the several views.

1 designates uprights, of which there are two, and 2 designates a similar number of inclined posts, all of which have their upper
45 ends pivoted to horizontal bars 3, to the upper side of which is attached a board 3^a.

The foregoing parts are common to step-ladders.

4 designates boxes, of which there is one
50 secured to the lower end of each of the posts 1 and in which the axle 5 has a bearing. Ground-wheels 6 are mounted on this axle.

8 designates handle-bars which are bolted to the parts 1 and 2. The bolts are secured by thumb-nuts 9, that permit an easy detach-
55 ment of the parts.

10 designates inclined braces, of which there are two, one on each side. These braces are attached to each of the handle-bars 8 and extend diagonally across the ladder and are
60 attached by means of bolts and thumb-nuts to plates 11. These plates are similarly attached to the posts 2. Fig. 9 shows the manner of attaching the plates to said braces and posts.
65

12 designates a series of brackets which are rigidly secured to the posts 2 and upon which steps 13 are secured. These brackets are preferably constructed of malleable iron and are screwed onto the posts.
70

14 designates a shelf adapted to support a fruit-basket or other article, and which is supported by means of slots 15 in the inner sides of the posts 1 and 2 and may be slid in and out from the position shown in Fig. 1.
75

16 is a second shelf constructed of a series of cross-rails and supported on the handle-bars 8 by means of angle-plates 17. These plates 17 are secured to said bars, as shown in Fig. 4. The cross-pieces 16^a rest on the
80 inner projecting ends of these plates 17.

18 designates cross-braces secured to the posts 1.

As shown in Fig. 3, the ladder is closed, in which position it occupies but little space in
85 shipping.

In practice it is found desirable to construct the ladder about eight feet high with the steps about one foot apart, the wheels about thirty inches apart, with the front and rear
90 posts 1 and 2 about three feet ten inches apart.

Having fully described my invention, I claim—

1. In a portable step-ladder, the combination with posts 1 and 2, the latter being provided with steps; horizontal bars to which said posts have pivotal connections at their upper ends; of handle-bars detachably secured to the lower portion of said posts, and inclined braces detachably secured to said
100 handle-bars at points adjacent to the front ends thereof, plates pivoted to the sides of the posts 2, and to the upper ends of said inclined braces, and a shelf supported from said han-

dle-bars between the front and rear posts 1 and 2, as herein shown and described.

2. In a portable ladder, the combination with posts 1 and 2, the latter being provided with steps, horizontal bars at the upper ends of said posts, handle-bars 8 detachably secured to said posts, angle-plates secured to said handle-bars, and a shelf supported on said plates, as herein shown and described.

10 3. In a collapsible ladder adapted for fruit-gathering, the combination with posts 1 having wheels mounted on their lower ends, posts 2 provided with steps, and horizontal bars to which said posts have pivotal connections at

their upper ends, of handle-bars detachably 15 secured to said posts, inclined braces similarly secured to said handle-bars and to the posts 2, angle-plates secured to the handle-bars, and a shelf supported on said angle-plates between the posts 1 and 2, as herein 20 shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

HARVEY BOWMAN.

Witnesses:

R. J. MCCARTY,
J. A. WORTMAN.