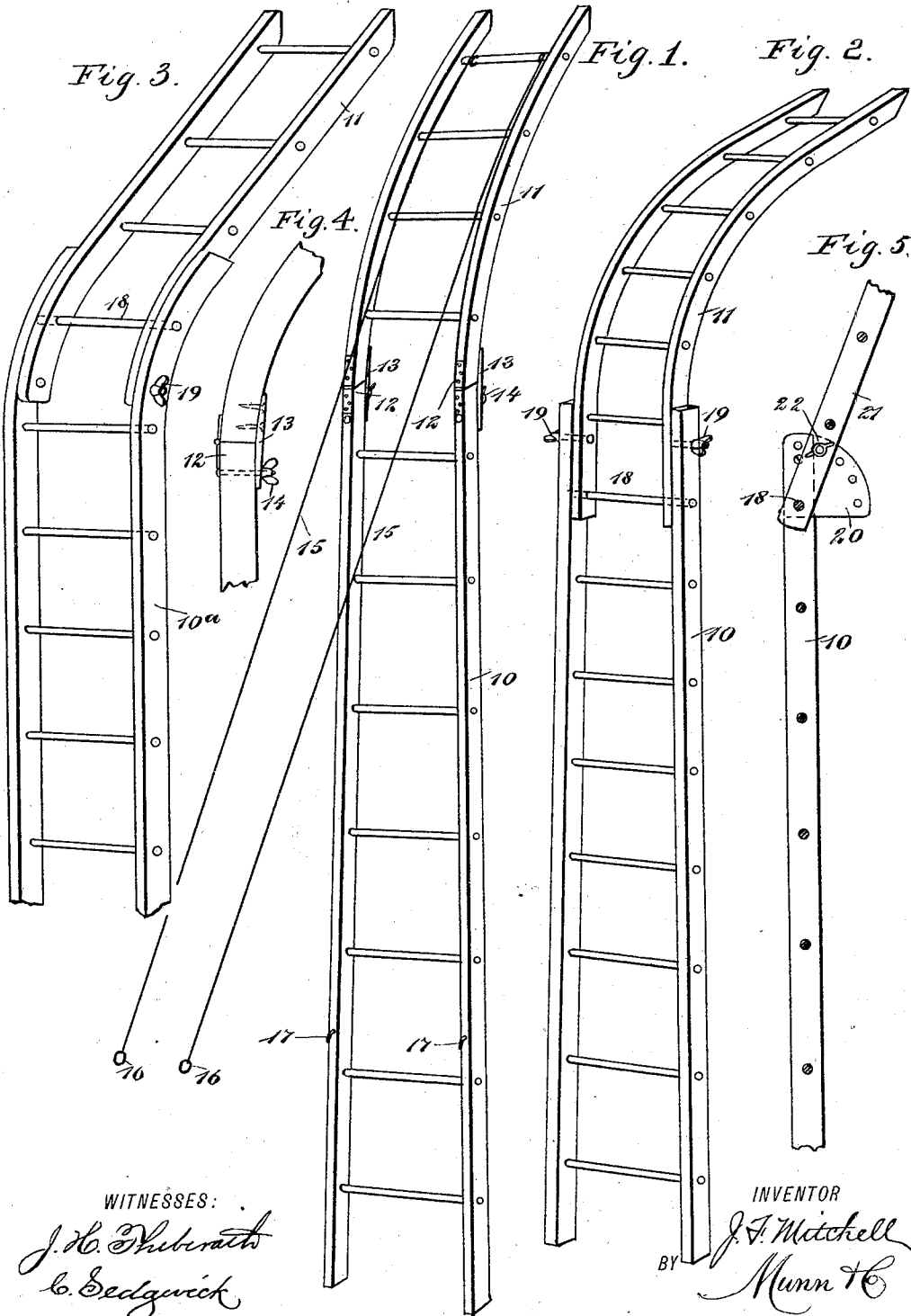


(No Model.)

J. F. MITCHELL.
LADDER.

No. 473,768.

Patented Apr. 26, 1892.



WITNESSES:

J. H. Shubert
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UNITED STATES PATENT OFFICE.

JAMES F. MITCHELL, OF TITUSVILLE, FLORIDA.

LADDER.

SPECIFICATION forming part of Letters Patent No. 473,768, dated April 26, 1892.

Application filed August 11, 1891. Serial No. 402,385. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. MITCHELL, of Titusville, in the county of Brevard and State of Florida, have invented a new and Improved Ladder, of which the following is a full, clear, and exact description.

The object of my invention is to provide a ladder which is particularly adapted for use in picking oranges and other fruit. One feature of the ladder is the top portion, which is curved and extended laterally in a plane at an angle of not less than forty-five degrees to the body or straight portion of the ladder.

The invention further consists in a construction and combination of parts herein-after described.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the ladder embodying my invention. Fig. 2 is a perspective view of a slightly-modified form of ladder. Fig. 3 is a broken perspective view of another modified form in which the upper and lower portions are both curved. Fig. 4 is a broken detail side elevation showing the manner in which the ladder-joint is strengthened; and Fig. 5 is a broken sectional view of another modified form of ladder in which the upper and lower sections are both straight.

The ladder 10 is substantially like the ordinary ladder, and hinged to its top is a curved section 11, the sections 10 and 11 being united by hinges 12, and on the side opposite the hinges are straps 13, which are secured to the upper section of the ladder and close over the lower section, and thumb-screws 14 project through the straps and into the lower section, and by tightening the thumb-screws the sections may be securely fastened together. If desired, however, the thumb-screws may be dispensed with, and the ladder will then be strong enough for ordinary purposes.

A pair of wires 15 are secured to the upper round of the top section 11, and these extend downward to a point adjacent to the ground, so that by pulling upon them the top section may be swung outward into a desired position, and these wires terminate at their lower ends in rings 16, which rings are adapted to

be hooked upon projecting hooks 17 on the ladder 10, and they will thus be held in a fixed position. I have shown a pair of these hooks; but it is obvious that any desired number may be used, and ropes or rods may be substituted for the wires 15.

In Fig. 2, instead of hinging the top section 11 to the lower section 10 in the manner described, the lower end of the top section is pivoted on the upper round 18 of the lower section, and the two sections are held in a fixed position in relation to each other by clamping thumb-screws 19, which project through the adjacent rails of the two sections.

In Fig. 3 I have shown another slight modification, in which the lower section 10^a is curved at the top and the upper and lower sections are secured together, as described above and illustrated in Fig. 2.

In Fig. 5 I have shown still another modification, in which both the upper and lower sections of the ladder are straight. In this case the lower section 10 is provided at the top with quadrants 20, which are secured to the side rails of the ladder, and which are perforated near their curved edges, and the top section 21 is pivoted on the upper round of the ladder 10, and is secured in a desired position by means of fastening-bolts 22, which extend through the lower portion of the rails of the section 21 and through the holes in the quadrants.

The top portion of the ladder will in most cases be extended laterally at a right angle to the body or straight portion; but in others the angle will be less, although in no instance much below forty-five degrees.

I have shown the wires 15 secured to one form of ladder only; but it is obvious that they may be secured to either form.

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

1. As an improved article of manufacture, a ladder for use in picking fruit, the same having a straight body and a top portion, which is curved and extends laterally in a plane at a large angle to the said body, as shown and described.

2. A ladder comprising a straight section, a curved section hinged to the top of the

straight section, and strengthening-straps secured to one section and adapted to overlap the joints of the ladder, substantially as described.

- 5 3. A ladder comprising a straight section having projecting hooks thereon, a curved section hinged to the top of the straight section, and adjusting-wires secured to the top

section and having rings to fit over the hooks on the straight section, substantially as described. 10

JAMES F. MITCHELL.

Witnesses:

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