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ORCHARD LADDER.
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1,259,239.

Fig. 1.

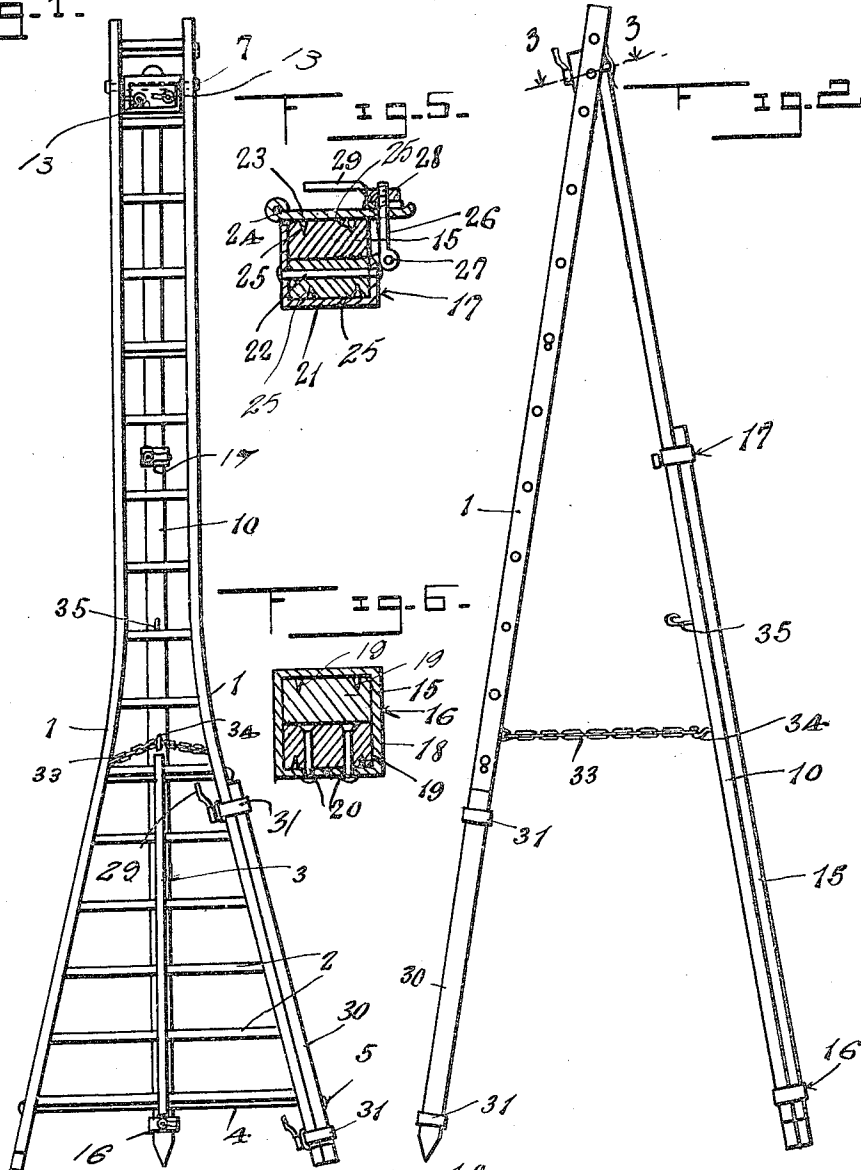


Fig. 5.

Fig. 6.

Fig. 2.

Fig. 3.

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ORCHARD-LADDER.

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To all whom it may concern:

Be it known that I, CONRADIN JECKLIN, a citizen of the United States, residing at Lowell, in the county of Dodge and State of Wisconsin, have invented certain new and useful Improvements in Orchard-Ladders; and I do hereby 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 to make and use the same.

This invention relates to improvements in a ladder and has for one of its objects the provision of a device of this character especially adapted for gathering fruit from trees without damaging the trees by breaking the branches thereof.

Another object of this invention is to provide a comparatively wide base or lower end and a converging upper end so that the device can be conveniently placed between the branches without injuring them and will be steady upon the ground owing to the width of the lower end.

A further object of this invention is the provision of a prop member pivotally connected to the upper end of the ladder for the purpose of supporting the ladder in an upright position, and obviating the necessity of resting the upper end of the ladder against the tree, said prop member being capable of adjustment in length so that the inclination of the ladder may be varied as desired.

A further object of this invention is the provision of a novel connection between the prop member and the ladder which will permit the prop member to swing in relation to the ladder so that the inclination of the ladder can be varied and which is also capable of permitting the prop member to be adjusted in relation to the ladder.

A further object of this invention is the provision of a member adjustably and detachably secured to one of the bars of the ladder adjacent its lower end for the purpose of supporting the ladder upon uneven ground.

A still further object of this invention is the provision of a ladder of the above stated character, which shall be simple, durable and efficient, and which may be manufactured and sold at a comparatively low cost.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in cer-

tain novel features of construction, combination and arrangement of parts, as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a front elevation of a ladder constructed in accordance with my invention,

Fig. 2 is a side elevation of the same,

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2, illustrating the pivotal connection between the prop member and the ladder,

Fig. 4 is a fragmentary elevation of said connection illustrating a spring clip,

Fig. 5 is a sectional view illustrating a clamp used in connection with my improved ladder, and

Fig. 6 is a sectional view of a sleeve used upon the adjustable prop member.

Referring in detail to the drawings, the numeral 1 indicates side bars which extend parallel with each other at the upper end of the device and diverge at their lower ends to form a ladder of a comparatively wide base and a comparatively narrow upper end which can be placed between the branches of a tree without injuring the same. The side bars are connected together by rungs 2 which increase in length according to the distance between the side bars 1. The rungs 2 which are of greater length than the remaining rungs are connected by a reinforcing member 3. The reinforcing member 3 is provided with spaced apart apertures to permit the rungs 2 that are of greater length than the remaining rungs to pass therebetween. The side bars 1 are connected by reinforcing rods 4 at certain intervals throughout their length and these rods are located in close proximity to some of the rungs 2, which will prevent the side bars 1 from moving in relation to each other and relieve the strain upon the rungs 2. The reinforcing rods 4 pass through the side bars 1 and have their ends enlarged to form heads 5 to prevent them from being withdrawn from said side bars.

A pivoted block 6 is pivoted between the side beams 1 adjacent their upper ends by a bolt 7 and is provided upon one face with a groove 8 having the walls thereof provided with teeth 9. A prop member 10 has

its upper end disposed within the channel 8 against the teeth 9 and secured therein by a substantially U-shaped clamp 11 which has the ends of its arm portions disposed through the pivoted block 6 and screw threaded to receive adjusting nuts 12 provided with handles 13. Secured to the web portion, of the substantially U-shaped clamp 11 in any desired manner is a leaf spring 14 which has its free ends disposed against the prop member 10 to tightly clamp the supporting member within the channel 8 of the pivoted block 6. It will therefore be seen that the prop member 10 is capable of being adjusted within the pivoted block 6 and that this pivoted block 6 will permit the prop member 10 to be moved with relation to the ladder for the purpose of supporting the ladder at various inclinations. The teeth 9 engaging the prop member 10 obviate any danger of the same slipping in the block 6. The prop member 10 also has adjustably secured thereto an extension 15 by means of a cuff 16 and the clamp 17. The cuff 16 consists of a substantially rectangular metallic member 18 which is provided with teeth 19. The member 18 is secured to the lower end of the prop member 10 by bolts 20 and receives the extension 15. The clamp 17 consists of a member 21, which is secured to the member 10 by means of a bolt 22 and which has hinged to one end a locking plate 23, as illustrated at 24. The locking plate 23 is provided with teeth 25, as is the member 21, which teeth are adapted to bite into the extension 15 and the locking plate 23 has its free end bifurcated to receive the locking bolt 26 which is pivoted to the member 21, as illustrated at 27, and extends through the bifurcated end of the locking plate 23 and receives an adjusting nut 28 which is provided with a suitable handle 29 for rotating the same to cause the locking plate 23 to tightly grip the extension 15 and prevent the same from moving in relation to the prop member 10. It will therefore be noted that by releasing the locking plate 23 from the extension 15, the same may be moved with relation to the prop member 10 so as to practically increase the length of the same when desired, thus providing means for varying the inclination of the ladder to a great extent, or providing

means whereby the ladder may be used upon uneven ground.

A member 30 is adjustably secured to either one of the side bars 1 of the ladder by clamps 31 similar in construction to the clamp 17, thus providing means whereby any one of the side bars may be lengthened for the purpose of supporting the ladder upon uneven ground.

A pair of chains 33 is secured to the side bars 1 adjacent the upper end of the reinforcing member 3 and the chains are adapted to be connected to a hook 34 carried by the prop member 10 to prevent said prop member 10 from spreading or moving away from the side bars 1 when the ladder is in use.

A suitable hook 35 is secured to the supporting member 10 and is adapted to engage or receive one of the rungs 2 when the ladder is in a collapsed position to prevent the prop member 10 from swinging in relation to the side bars 1, when the ladder is carried from one point to another, or when the ladder is in storage.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim is.

A ladder comprising side supporting bars, rungs connecting said bars, a block pivoted to said bars adjacent the upper ends and having a groove in one face thereof, teeth in said groove, a prop member having its upper ends disposed within said groove in engagement with the teeth, a substantially U-shaped clamp securing the prop member within the groove, and a spring clip carried by the web portion of the clamp and having its free ends disposed against the prop member.

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

CONRADIN JECKLIN.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."