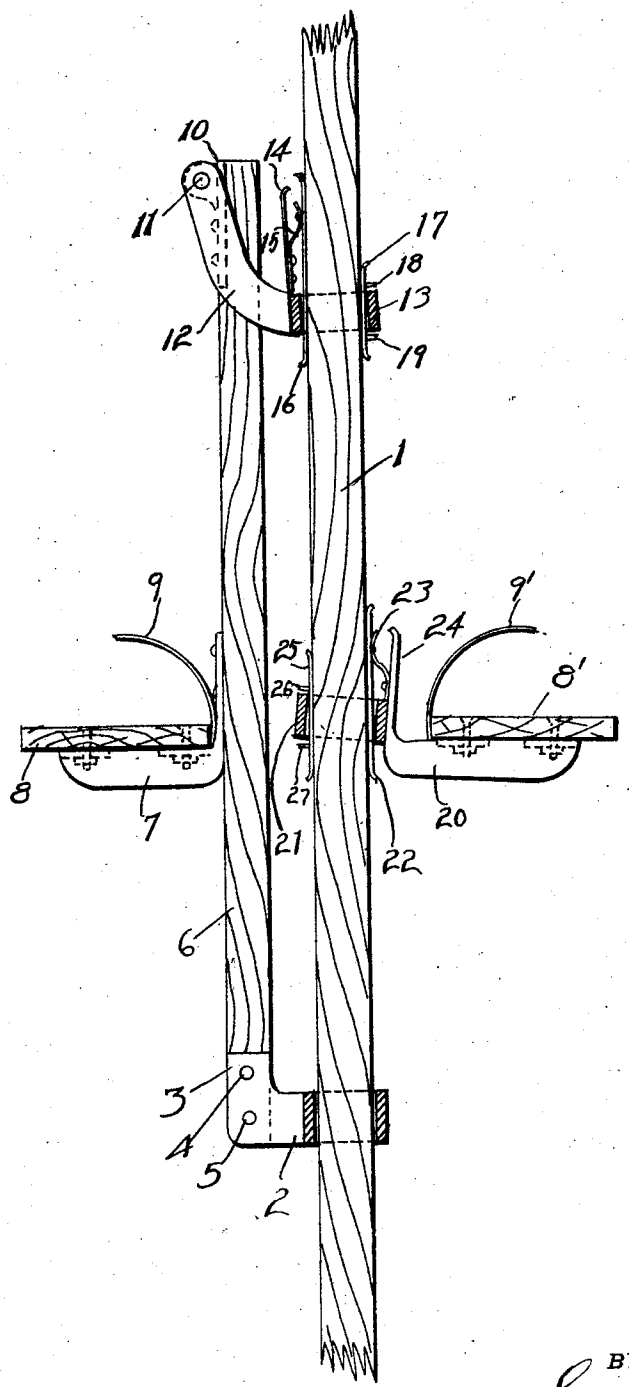
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ORCHARD LADDER

Filed Dec. 28, 1925



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UNITED STATES PATENT OFFICE.

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ORCHARD LADDER.

Application filed December 28, 1925. Serial No. 77,915.

This invention relates to an orchard ladder intended for the purpose of picking fruit, and the object is to enable the fruit picker to climb up into the tree on the ladder at any point, and to have a perfectly flat step to stand on, while at work.

An object of the invention is to provide means whereby the worker may take an ordinary lifting step with either foot provided the next step is taken with the other foot, and in a similar way he can step down the ladder just as easily by transferring the weight from one foot to the other alternately.

Another object is to provide a single wooden pole ladder which will allow one foot to pass the other alternately, but having the gripping yokes work one above another. Another object is to provide means to allow both feet to remain on a level when picking fruit.

An embodiment of the invention is shown in the accompanying drawing.

The figure is a side elevation of the complete apparatus, with the ladder pole cut away for purpose of illustration, and omitting the usual base upon which the lower end of the pole is mounted.

In the present instance the invention lies wholly in the mechanism for stepping up and stepping down the ladder pole, but no showing of the base used at the bottom of the ladder is made.

The numeral 1 indicates the pole which forms the ladder, and up which the workman climbs. This pole is ordinarily made of a piece of 2 x 4 or 2 x 3 lumber, as may be desired, and it is perfectly smooth on all sides.

Surrounding the pole is a yoke 2, which is provided with an upwardly extending lug 3 connected at 4 and 5 to a short bar 6, which carries the stirrup bracket 7 The stirrup bracket has a foot board 8 bolted thereto, which board is also provided with a hook 9 to pass over the toe to allow the workman to lift the step whenever necessary.

At the upper end of the bar 6, there is a hinge plate 10 which is pivotally connected at 11 to an arm 12 on the yoke 13, which surrounds the ladder pole 1. This yoke has an upwardly extending arm 14 connected thereto, which carries a light spring 15. and said light spring bears upon, and is secured to a wear plate 16 to prevent the yoke 13 from injuring the pole 1.

Inside the yoke on the opposite side of the pole there is a wear plate 17 which is loosely connected to the yoke by means of two lugs 18 and 19 which may be punched out of the wear plate.

On the opposite side of the pole or standard 1 there is a stirrup bracket 20 which is secured to a yoke 21 surrounding said pole 1. The yoke 21 bears on a wear plate which has a light spring 23 connected to the vertically extending member 24 of said stirrup 20. On the opposite side of the pole there is a wear plate 25 which is in turn loosely connected to the yoke 21 by means of two lugs 26 and 27 punched outwardly from the material of which said wear plate is made.

The springs 15 and 23 act to tilt the yokes and grip the pole so they would not slip down when there is no weight on them.

The wear plates are loosely carried in order to slide up and down as the workman raises or lowers his feet, but they prevent the yoke from cutting into the wood of which the pole is made. The stirrup 20 carries a foot board 8′ the same as the foot board on the opposite side of the ladder.

The operation of the apparatus is as follows:

The pole is put up to the tree wherever desired, the workman then steps upon the two foot boards 8 and 8′, and by lifting with his toe on the hooks 9 and 9′ alternately raises the yokes 13 and 21, thereby lifting himself up the pole step by step, and of course the yokes loosely fit the pole so that they cannot slip down the pole when once raised. However, if the workman desires to climb down the pole he will lift on the hooks 9 and 9′ alternately and by properly tilting the step by pushing inwardly he will cause the step to slide downwardly, but of course, this is also done alternately so he is continuously supported at the desired level.

It will be noted that this construction allows the user to bring one foot up past the other alternately, thus attaining a more natural climbing movement.

Those skilled in the art are aware that in most climbing ladders of this class the gripping means on one foot can only be moved towards, or away from, the gripping means on the other foot, and this is not a natural climbing movement.

Having thus described my invention, what I desire to secure by Letters Patent of the United States is as follows, but modifications

may be made in carrying out the invention as shown in the drawings and in the above particularly described form thereof, within the purview of the annexed claims.

1. A fruit picker's ladder comprising a light wooden pole, a pair of stirrups having gripping means adapted to grip said pole alternately as the user climbs thereon, one of said stirrups mounted directly on one of said gripping means and the other stirrup being mounted on the top of a short bar having gripping means engaging said pole above the other gripping means, and a guide on the lower end of said short bar surrounding said pole, whereby said stirrups may be moved one past the other, or both remain on the same level with each other.

2. A fruit picker's ladder, comprising a pole, a pair of stirrups having foot boards, a gripping yoke fixed on one of said stirrups, a short bar fixed to the other stirrup, an arm having a gripping yoke pivoted at the top of said short bar, and engaging said pole above the other gripping yoke and a lug on the lower end of said short bar having a guiding yoke engaging said pole below the stirrups.

3. A fruit picker's ladder comprising a pole, a pair of yokes adapted to grip the pole when said yokes are tilted, a stirrup with a foot board on one of said yokes, a spring on said stirrup acting to tilt said yoke, an arm on the other yoke pivoted to the top of a short bar which is parallel with said pole, an upwardly extending arm on said yoke, a spring on said arm acting to tilt said yoke, the other stirrup mounted on said bar intermediate of the ends thereof, and a guide yoke on the lower end of said bar adapted to slide freely on said pole.

In testimony whereof I have hereunto set my hand this 22 day of December A. D 1925.

FREDERICK J. P. KUHLMANN.