(No Model.)

A. COLE.

FRUIT PICKING LADDER.

No. 588,130. Patented Aug. 17, 1897.

Fig. 1.

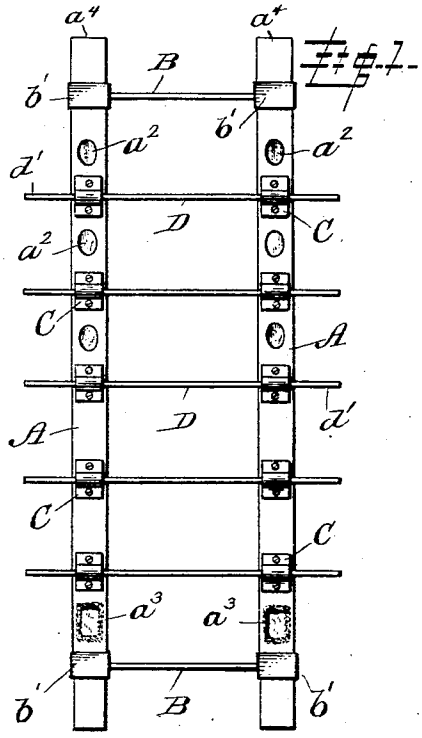


Fig. 2.

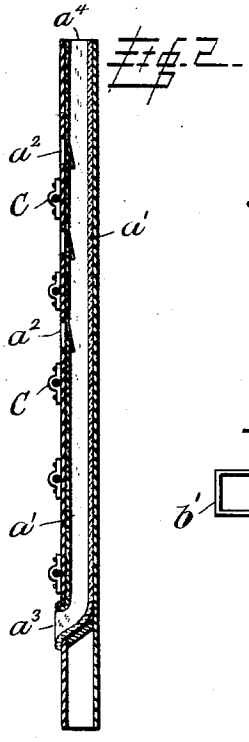


Fig. 3.

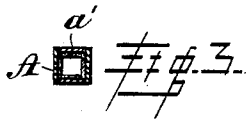


Fig. 4.

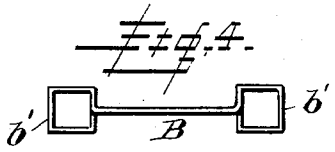
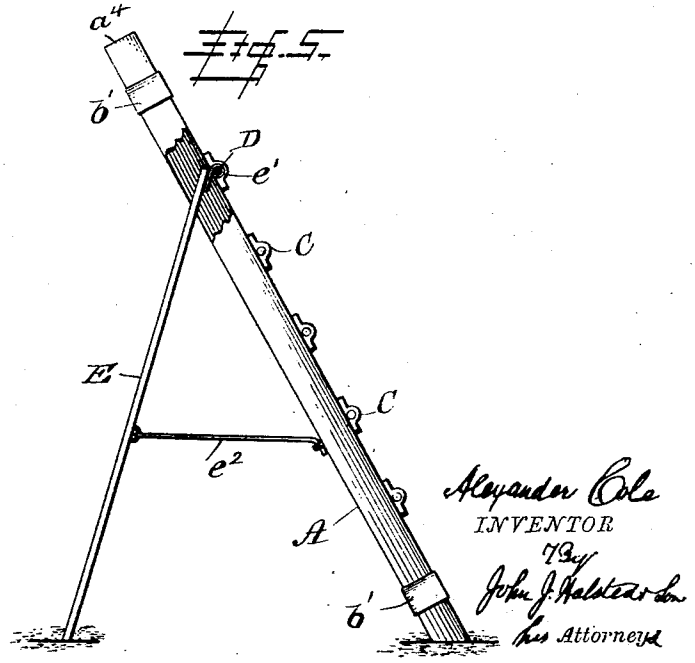


Fig. 5.



WITNESSES

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FRUIT-PICKING LADDER.

SPECIFICATION forming part of Letters Patent No. 588,130, dated August 17, 1897.

Application filed March 25, 1897. Serial No. 629,230. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER COLE, of Bridgeton, in the county of Cumberland and State of New Jersey, have invented certain new and useful Improvements in Fruit-Picking Ladders; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention comprises a fruit-picking ladder the sides or legs of which are tubes through which the fruit, as picked by hand from the trees, can descend without damage.

In the accompanying drawings, Figure 1 represents a front view of a ladder, showing my invention; Fig. 2, a longitudinal section of one of its legs and showing its interior lining and flaps; Fig. 3, a cross-section through one of the ladder-legs; Fig. 4, one of the removable leg-holders and its bands for holding the legs together; Fig. 5, a side view of the ladder with a back support applied to and centered on one of the removable rounds, a portion of the near leg of the ladder being broken away.

The legs A of the ladder are made tubular to serve as conductors for the fruit to convey it downward from the hand of the person picking it to any appropriate basket or receptacle placed at the foot of the ladder. These ladder-legs I prefer to make square and of boards of about three-fourths of an inch thick and of such breadth that when nailed together there will be a clear tubular interior space sufficient to pass the fruit down freely. Before such nailing together I line these boards on their inner sides with a fruit-protecting material a', such as canton or wool flannel or other appropriate and soft textile or suitable material, adapted to insure the fruit from being bruised in its passage, and short flaps of such or similar material may hang loosely over the inside of the openings a^2, mentioned below. These legs have openings, as many as desired, on their front sides to receive the fruit when picked and have also near their lower ends an outlet a^3 for the discharge of the fruit. The fruit may also be put into the top of the tubular legs, as at a^4.

The legs A are securely held together by iron fastening-bands B, serving as tube-holders, having at each end a square band b', adapted in size to be slipped over the ends of the legs and to fit thereon. These pieces B b' are quite distinct from the ladder-rounds presently to be described. By slipping the pieces B b' off the ends of the tubes the latter become released and set free.

Some of the cotton flannel or other lining a' is allowed to protrude through the openings a^3 near the bottom of the tubular legs, and thus protect the fruit as delivered to any basket or other receptacle. The fruit is thus protected from start to finish of its route of travel.

On the front or rear side of each of the legs are secured brackets or fasteners C of any appropriate kind to receive the rounds or rods D, which are to support the person or persons while picking the fruit. These rods or rounds are made long enough to pass entirely through the holes made for them in these holders or brackets and also to project about one foot or so at each end beyond the legs, and, as shown in Fig. 1, these projecting ends d' allow two persons conveniently to pick fruit at the same time even while standing on the same round or on near or adjacent rounds and also to reach out farther sidewise in picking than is possible with the usual short rounds of a common ladder.

The fruit as picked can be put into the conductor at any height at which the picker may be, the openings a^2 being located wherever desired.

The rounds or rods D, which are the steps of the ladder, are so applied to the front or rear of the tubes, as may be preferred, that they may be easily removed and replaced, and thus it will be understood that the entire structure can easily be taken all apart for transportation or shipment or to be put away in small space and in compact form after being used.

The rounds D can be stored away or packed inside the tubular legs, and thus be well protected. A convenient way of applying these rounds for use is, as previously stated, by in-

serting them in suitable holes made in the brackets C and so that while fitting snugly enough when in use yet they can easily be withdrawn from these brackets when desired.

The tube-holders B not only serve to hold the legs at the proper distance apart from each other, but their bands b' being square to fit these square tubes the latter cannot turn around within the bands, and thus they are kept positively in proper positions, so that the fruit is properly conveyed to and discharged into the basket. The holders thus answer a double purpose.

When desired, I have a back support (shown at E) attached removably to the back or under side of the ladder and serving the duty of the back support of an ordinary step-ladder. Instead of hinging such support to the ladder, as is customary in step-ladders, I connect it to the first or upper round of my ladder, this round passing through this support or through any eye secured thereon, as shown at e', thus enabling the support E to be closed up against the ladder or its rounds and between the ladder-legs, if desired. A connecting-rod e^2 should be attached to one or both legs of this support, and when in use such rod or rods should be hooked to a staple or staples on the conductor-legs. The removal of this upper round releases this support, so that it may be used or not, as desired. Thus even with this support provided the whole structure can yet be all readily taken apart for any purpose, or if the support be not applied the remainder of the structure can be used as an ordinary ladder for any purpose where a ladder is wanted.

I claim—

1. A ladder having tubular legs or sides, internally lined with a soft material and having openings in such legs to receive fruit as picked from a tree, and a lower opening in such legs for discharging the fruit, substantially as set forth.

2. In combination with the square, tubular, ladder-legs, the metal tube-holders having end bands around the legs adapted to be slipped on and off the ends of the legs, and rounds removably applied to the face of the legs, all substantially as set forth.

3. In combination with a fruit-picking ladder having tubular legs provided with openings therein for receiving and discharging the gathered fruit, removable rounds held in supports on the outside of such legs and of a length to project beyond such legs, thus enabling two persons though standing on the same round, to gather fruit at the same time.

4. In combination, the tubular legs, the removable tube-holders, the removable rounds, and a removable back support hung on one of the removable rounds, and whereby the whole structure may be readily taken apart and put together at will.

ALEXANDER COLE.

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