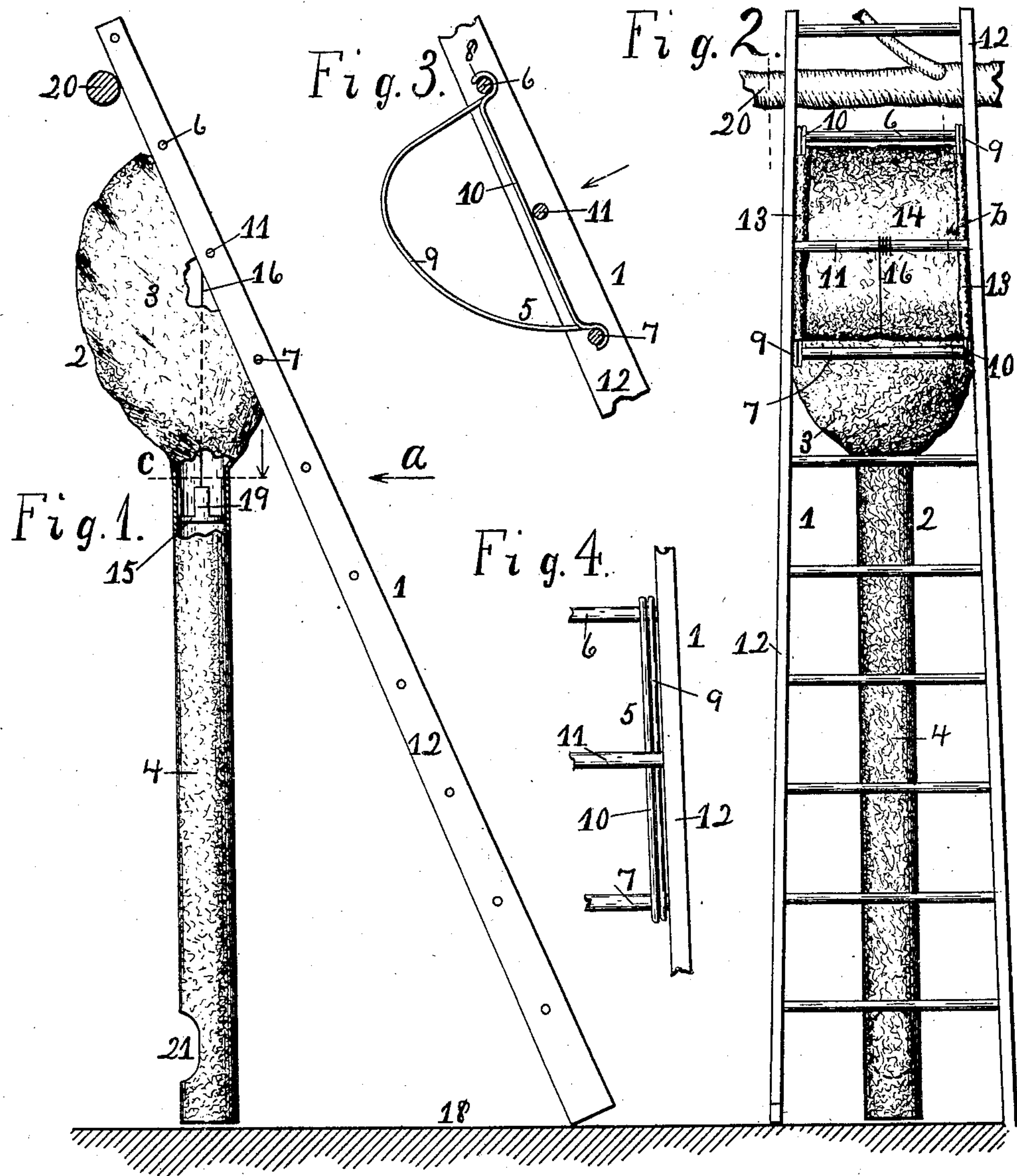


No. 865,437.

PATENTED SEPT. 10, 1907.

M. J. SHEAHAN.
 DEVICE FOR GATHERING FRUIT.
 APPLICATION FILED APR. 5, 1907.



Attest:
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UNITED STATES PATENT OFFICE.

MAURICE JAMES SHEAHAN, OF ROCHESTER, NEW YORK.

DEVICE FOR GATHERING FRUIT.

No. 865,437.

Specification of Letters Patent.

Patented Sept. 10, 1907.

Application filed April 5, 1907. Serial No. 366,562.

To all whom it may concern:

Be it known that I, MAURICE JAMES SHEAHAN, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Devices for Gathering Fruit, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention is an improved device for use and to aid in gathering fruit from the tree, and it belongs to the class of inventions designed and constructed for the purpose of conducting the picked fruit to the ground through conveyers instead of carrying it down in baskets or otherwise, in the usual manner.

With a suitable construction for such purpose in mind one main object of my invention is to produce a cheap and convenient device to be attached to the rungs of a ladder for lowering the fruit, internal movable parts being provided by means of which the body of gathered fruit may be controlled in its descent and moved easily and at intervals, without damage or injury, until it reaches the ground.

Other objects and advantages of the invention will be brought out and made to appear in the following description, and the novel features pointed out in the appended claims, reference being had to the accompanying drawing which, with the reference characters marked thereon, form a part of this specification.

Figure 1 is a side elevation of the device, attached to a ladder as in use, parts being broken away. Fig. 2 is a front view indicated by arrow *a* in Fig. 1. Fig. 3 is a side elevation of parts near the upper end of the ladder, showing one of the metallic expanders for the pouch, the longitudinal section being as on the dotted line *b* in Fig. 2. Fig. 4 is a front elevation of parts indicated by arrow in Fig. 3. Fig. 5, drawn to a larger scale, is a plan of the diaphragm detached, parts being in cross section as on the dotted line *c* in Fig. 1.

Referring to the parts shown, 1 is a ladder, of common kind and make, and 2 my improved device for aiding in gathering the fruit, in place on the ladder, as in use. The device, 2, consists of a large open fibrous sack or pouch 3 with a pendent hollow conductor or conveyer 4 for the fruit, of smaller diameter, extending from the lower part of the pouch 3 to the ground 18, as clearly shown in Figs. 1 and 2. The pouch is directly held and supported in place by a pair of metallic suspenders 5, bent at their ends to partly surround and catch onto alternate rungs 6 7 of the ladder near its upper end. These suspenders are preferably made of round iron rods each being bent double, at 8, Fig. 3, forming a long and a short branch or tine. The long branch of each is bent downward and backward to form a curved expander or spreader 9 for the body of the pouch, and the short branch is formed to constitute a straight connector or tie 10 extending downward back

of the intermediate rung 11 of the ladder. The two parts 9 and 10 of each suspender are in parallel planes, as appears in Fig. 4, the ends of both encircling and holding onto the respective rungs 6 and 7, as stated.

The suspenders 5 are made right and left, and in putting them to place on the rungs of the ladder the bowed portions or spreaders 9 are placed against the respective sides or rails 12 of the ladder the ties 10 being within, as appears in Fig. 4. The side edges 13, Fig. 2, of the mouth 14 of the pouch 3 are curled around the respective ties 10 and firmly secured to place by stitching or other common means, thus enabling the suspenders 5 to hold the pouch and the pendent conveyer 4, the spreaders 9 serving to keep the pouch distended, as shown, to readily receive the fruit as it is picked from the tree.

With this device I employ a circular movable diaphragm 15, Figs. 1 and 5, within the conveyer 4 to receive and control the descent of the fruit to the ground. This diaphragm is controlled by a suspending cord 16, Figs. 1 and 2, secured at the center of the diaphragm and carried over the rung 11 to which it is temporarily secured by winding or by other simple means. The diaphragm consists of a simple circular disk 17, Fig. 5, with the controlling cord 16 secured at the center, and it is provided with simple means, as upwardly-projecting circumferential strips 19 to keep it in proper relative position within the conveyer with the disk 17 always in a plane at right angles with the axis of the conveyer.

In using this device the ladder is commonly leaned against a limb 20 of the tree, the wire suspenders 5 being hooked onto rungs of the ladder most convenient in any given case. The diaphragm being raised to a position just beneath the pouch 3, as appears in Fig. 1, the operator, standing on the ladder, drops the fruit as it is picked into the open pouch. When the pouch is filled with the fruit the cord 16 is released from the rung 11 and the diaphragm permitted to descend sufficiently to allow the fruit to fall into the conveyer leaving the pouch empty. By again securing the cord to hold the diaphragm in its new position the pouch may be refilled by the operator, and again emptied by allowing the diaphragm to descend as before, these alternated operations being repeated until the diaphragm reaches the ground. I commonly form the conveyer 4 with an outlet opening 21 for the fruit near its lower end and just above the ground, as appears in Fig. 1 and by dotted lines in Fig. 2, the diaphragm in its last movement downward being stopped at a point between the opening and the ground. This allows all of the collected fruit to escape leaving the conveyer and the pouch empty and ready to be again filled the diaphragm being first pulled upward to its original position near the pouch, as appears in Fig. 1. By these means the gath-

ered fruit may be wholly discharged from the pouch and the conveyer without the operator having to descend from the ladder.

In constructing these devices I usually make additional lengths or sections of the conductor or conveyer 4 each with a discharge opening near one end like that shown at 21. These sections are telescoped one upon another as the height of the tree from which the fruit is to be gathered requires, each section serving to cover 10 the discharge opening in the one above it so that only the opening at the bottom of the lowest section in each given case remains open for the outflow of the fruit.

What I claim as my invention and desire to secure by Letters Patent is:—

- 15 1. A device for gathering fruit, consisting of a pouch, a conveyer pending from the pouch, a diaphragm within the conveyer adapted to move from the pouch to the ground and means for controlling the diaphragm.
- 20 2. A device for gathering fruit, comprising a pouch, a conveyer communicating between the pouch and the ground, a movable diaphragm in the conveyer, and means for controlling the descent of the diaphragm and for keeping it in planes at right angles with the axis of the conveyer.
- 25 3. A device for gathering fruit, consisting of an expanded part for receiving the fruit, a hollow reduced part pending from said expanded part to convey the fruit, and

a diaphragm in said reduced part adapted to traverse the length thereof, with means for suspending the diaphragm in said reduced part. 30

4. A device for gathering fruit, consisting, in combination with a ladder, of a fibrous receiver for the fruit, metallic expanders for the receiver held by the ladder, a conveyer for the fruit below the receiver, and means for controlling the fruit in the conveyer. 35

5. A device for gathering fruit, consisting, in combination with a ladder, of a yielding receiver with opening for the fruit, metallic expanders for the receiver, a conveyer for the fruit pending from the receiver and means for controlling the fruit in the conveyer, the expanders being 40 right and left and secured to rungs of the ladder at either side.

6. A device for gathering fruit, consisting, in combination with a ladder, of an open pouch for the fruit, metallic holders for the pouch, a conveyer for the fruit pending 45 from the pouch and means for controlling the descent of the fruit therein, each of said holders consisting of a straight member to which an edge of the pouch is secured, and a bowed member for expanding the pouch, said members being joined to rungs of the ladder. 50

In witness whereof, I have hereunto set my hand this 3d day of April, 1907, in the presence of two subscribing witnesses.

MAURICE JAMES SHEAHAN.

Witnesses:

E. B. WHITMORE,

A. M. WHITMORE.