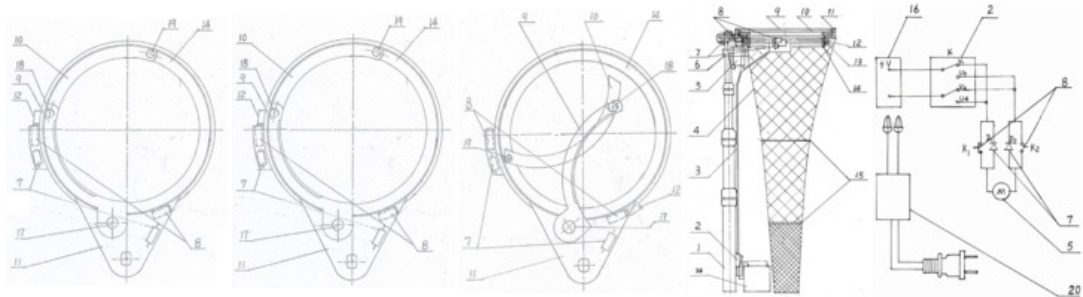


337 results for ( (fruit)/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (blade+)/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (ring)/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX AND (sleeve or net or mesh)/TI/AB/IW/CLMS/DESC/ODES/OBJ/ADB/ICLM/KEYW/TX ) AND (A01D-046)/IPC AND PD <= 2016-06-01 - Collection: FAMPAT

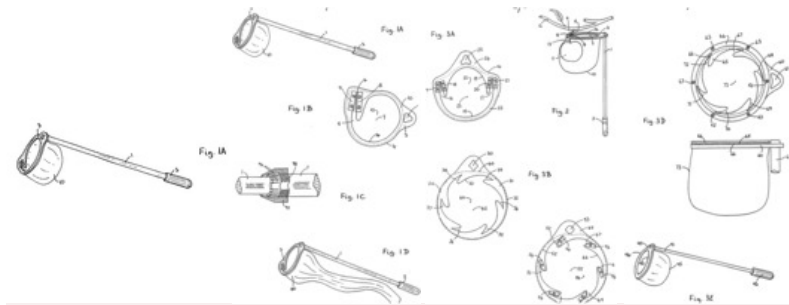
| #  | Title        | Publication number | 1st app. date | Applicant/Assignee | 1st publ. date | Publ. date |
|----|--------------|--------------------|---------------|--------------------|----------------|------------|
| 1. | Fruit picker | CN105359723        | 2015-12-08    | LIU JIANCHU        | 2016-03-02     | 2016-03-02 |

The invention relates to a **fruit picker** and a circuit control device used for the same. The **fruit picker** comprises a base **ring**, an inner **ring**, a first **blade** and a second **blade**. The **fruit picker** is characterized in that the inner **ring** is movably connected to the inner side of the base, the first **blade** and the second **blade** are movably connected through a rotating shaft, the meshing position of the first **blade** and the second **blade** is located in an area inside the inner **ring** or the vertical direction of the area inside the inner **ring**, the two **blades** are installed on the inner **ring** and the base **ring** respectively in a movable connecting mode, the **blades** are long enough to enable the inner **ring** to rotate freely so as to be opened and meshed fully, and when the two **blades** are opened, the two **blades**, the base **ring** and the inner **ring** form a hollow area used for sleeving **fruit** to be picked. The **fruit picker** is particularly suitable for picking operation of tall and large **fruit trees**, the picker is positioned and aligned with pedicels easily, in the picking process, the pedicels will not slip away, and it is ensured that the pedicels are shorn off completely; labor intensity is reduced remarkably, and the picking speed is increased.



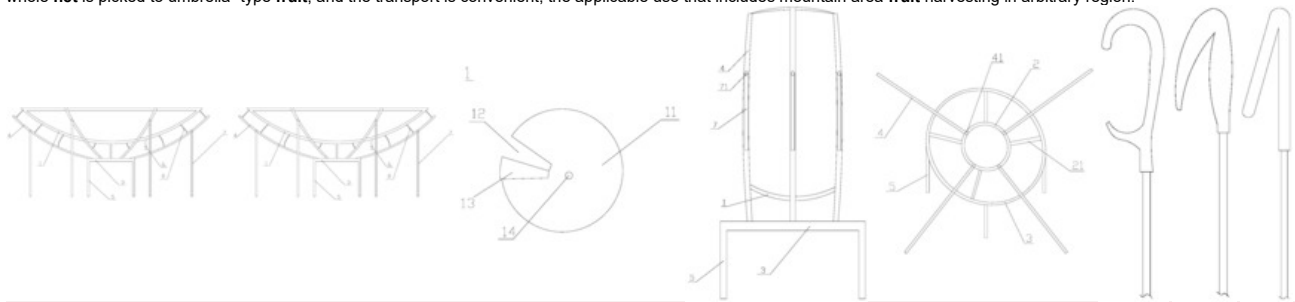
|    |                                     |           |            |                     |            |            |
|----|-------------------------------------|-----------|------------|---------------------|------------|------------|
| 2. | Improvements in or related to tools | GB9311359 | 1993-06-02 | BATTYE JOHN STEPHEN | 1993-07-21 | 1993-07-21 |
|----|-------------------------------------|-----------|------------|---------------------|------------|------------|

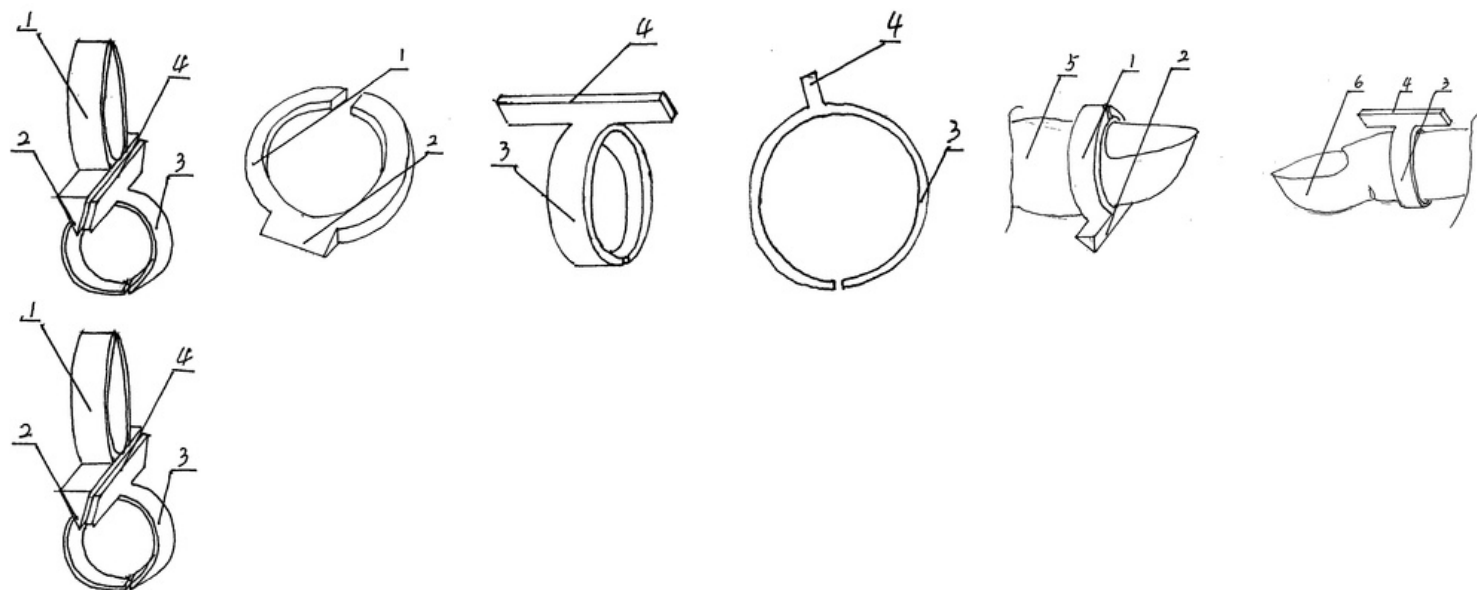
A tool comprising a stick 1 at one end of which is a hoop like frame 3 to which is attached a bag or tube 10, the hoop like frame being so shaped that it facilitates the picking of **fruit** which, when so picked, fall into the bag or tube to be recovered by the picker. The hoop like frame has on its inward facing edge a **blade** or **bladed** notches for cutting **fruit** from trees. <IMAGE>



|    |                                       |             |            |            |            |            |
|----|---------------------------------------|-------------|------------|------------|------------|------------|
| 3. | Net is picked to umbrella -type fruit | CN204762235 | 2015-06-15 | WU TIANYOU | 2015-11-18 | 2015-11-18 |
|----|---------------------------------------|-------------|------------|------------|------------|------------|

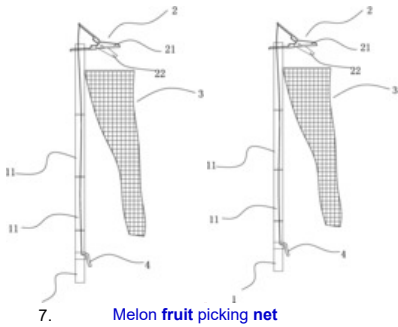
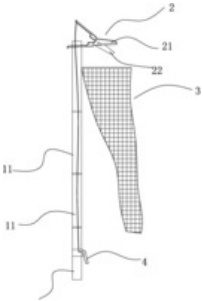
The utility model discloses a **net** is picked to umbrella -type **fruit**, it is netted and the supporting mechanism including collecting, it is the concave type structure to collect the **net**, a small opening is seted up to the inside of concave type structure, the small opening through a transfer passage with hold container intercommunication, one be used for the gap around the trunk radially offering of this collections **net**, the supporting mechanism is including supporting base and a plurality of support frame, wherein, support frame rotatable coupling on supporting the base, and the support frame with collect the outside of netting and pass through the flexible piece and be connected. The utility model discloses to collect the **net ring** and place under the **fruit** tree and surround the trunk, under the circumstances of the whole **fruit tree** of collection **net** coverability, the accessible is plucked the pole and is plucked **fruit** in the optional position, simultaneously, through the rotatable coupling structure of support frame, realizes folding up of whole **net** is picked to umbrella -type **fruit**, and the transport is convenient, the applicable use that includes mountain area **fruit** harvesting in arbitrary region.



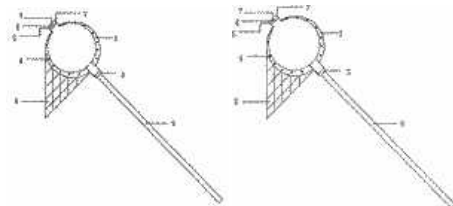
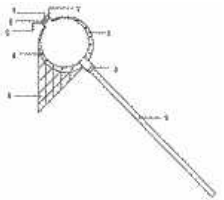


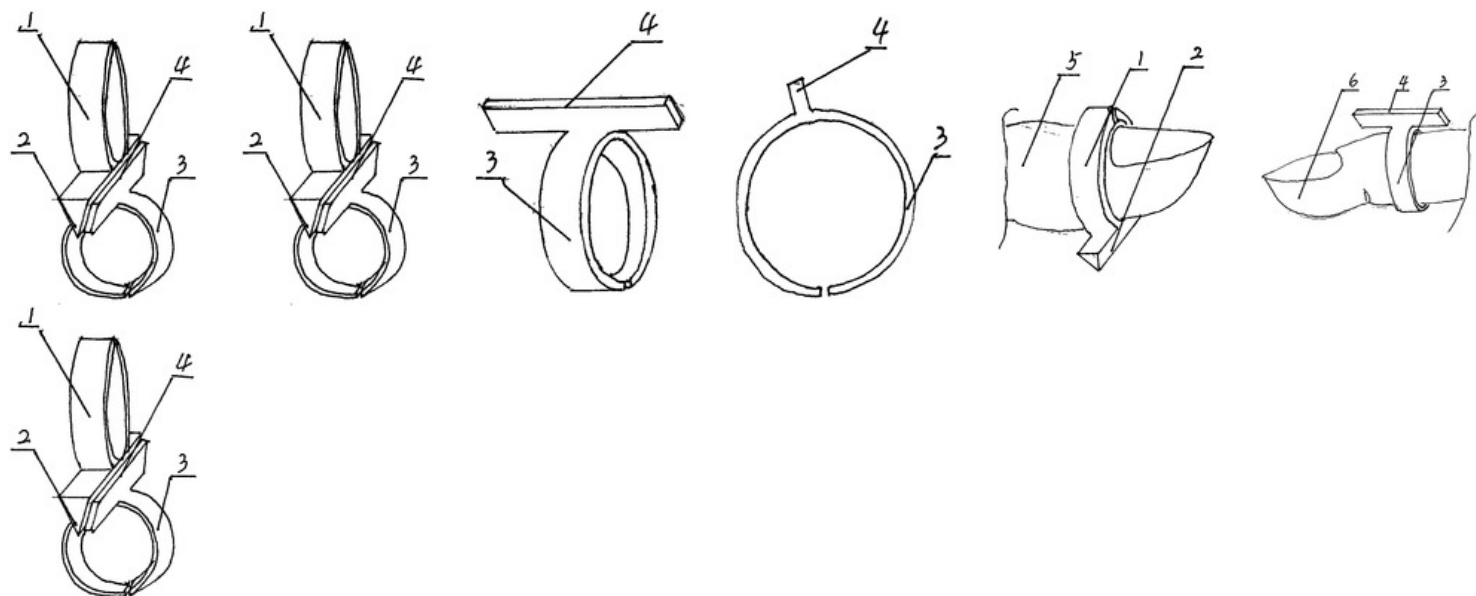
2015-09-30 2015-09-30

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |             |            |                                     |            |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------|------------|-------------------------------------|------------|------------|
| 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | High position fruit picker | CN204579179 | 2014-11-18 | GUANGDONG INDUSTRY & TRADE COLLEGE* | 2015-08-26 | 2015-08-26 |
| <p>The utility model discloses a high position <b>fruit</b> picker, including stock, <b>blade</b> group, the <b>fruit net</b>, the <b>blade</b> group includes shim and knife section, the top at the stock is fixed to the shim, it is articulated with the shim that the knife section passes through reset spring, the one end of knife section has worn to act as go-between, other one end of acting as go-between and the control handle that is located the stock lower extreme are connected, the <b>fruit net</b> is including steel <b>ring</b> and stratum reticulare, the fixed below that articulates on the stock and be located the <b>blade</b> group of steel <b>ring</b>, stratum reticulare length equal basically with stock length and link up from top to bottom, the upper end of stratum reticulare is fixed on the steel <b>ring</b>, the stratum reticulare top-down narrow gradually. The operation is sheared to the control handle control <b>blade</b> group that utilizes the stock lower part, and the <b>fruit</b> branch is sheared the back in addition, can be so that during the <b>fruit</b> to fall into the large bamboo or wicker basket along the <b>fruit net</b> always, and the <b>fruit net</b> that narrows gradually in addition makes the <b>fruit</b> to have offset the acting of gravity in the whereabouts for speed is lower when falling into the large bamboo or wicker basket, can not bump mashed <b>fruit</b>.</p> |                            |             |            |                                     |            |            |

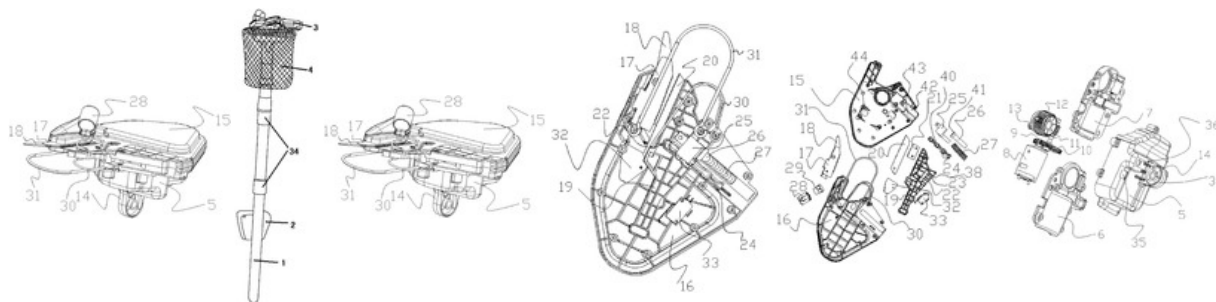


|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         |           |            |            |            |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------|------------|------------|------------|------------|
| 7.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Melon fruit picking net | CN2574364 | 2002-10-31 | YANG YUJUN | 2003-09-24 | 2003-09-24 |
| <p>The utility model discloses a melon <b>fruit</b> picking <b>net</b> which is composed of a circular <b>ring</b>, a <b>net</b> bag, and a handle, wherein, papillary projections for fixing the <b>net</b> bag, a <b>blade</b>, and a screw thread hole for installing the handle are arranged on the circular <b>ring</b>, and the circular <b>ring</b> is made of hardish plastics. The utility model has the advantages of simple structure, easy manufacture, low cost, and convenient application.</p> |                         |           |            |            |            |            |

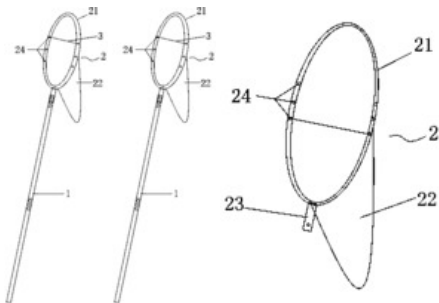




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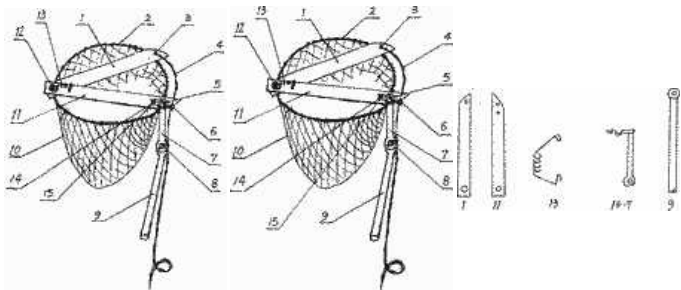
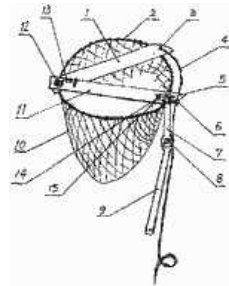


The utility model discloses a telescopic **fruit** picking device. The device comprises a telescopic arm, a **fruit** storing **net** bag and a **blade**, wherein the **fruit** storing **net** bag comprises a fixing **ring**, and a **net** bag body connected to the fixing **ring**; the telescopic arm comprises a plurality of cuboid tube sections which are sequentially sleeved with each other; the end parts of two adjacent cuboid tubes are fixedly connected through a bolt and a butterfly nut; a connector is formed in a fixing **net** frame and is fixedly connected with the upper end of the telescopic arm through a connecting part; three mounting openings for transversely inserting the **blade** are formed in the middle part of the fixing **ring net** frame; the **blade** can be inserted into the mounting openings and fixed through screws. The device is simple in structure, convenient to operate, easy to be manufactured, and small in manufacturing cost; when in use, the telescopic arm can be adjusted according to the **fruit**; the proper **fruit** storing **net** bag can be selected according to the **fruit** size in order to adapt to the picking of fruits/ clusters with different height and size; the mounting position of the **blade** can be selected to enable convenient picking and moving out of the fruits and clusters with different height and size, so that the **fruit** picking efficiency can be greatly increased.



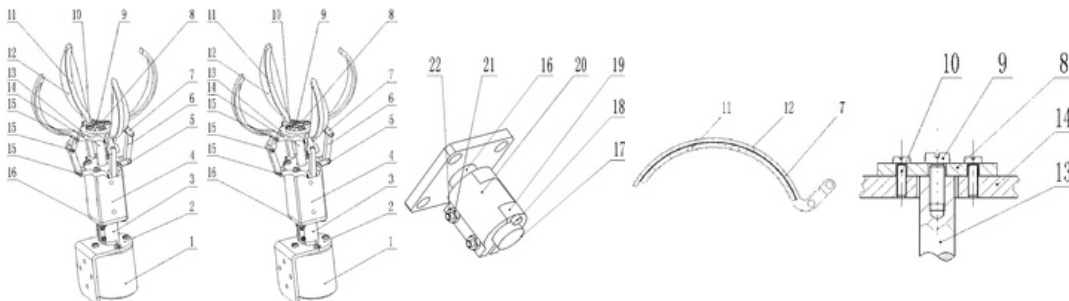
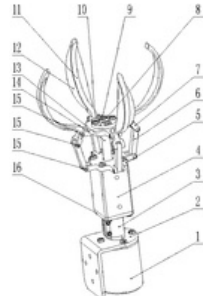
11.      Fruit picker for high fruit tree      CN2674830      2004-02-13      CHEN GUANZHEN      2005-02-02      2005-02-02

The utility model discloses a **fruit** picker for the high **fruit** tree, comprising a **fruit** picking knife, a **net** sling, a bracing cable, and a handle. The utility model is characterized in that the **fruit** picking knife is in a scissors shape, the **net** sling and the longer handle are connected at the lower surface of the **fruit** picking knife, the movable cutting **blade** of the **fruit** picking knife is pulled by the bracing cable, and the **fruit** at the high place can be picked and can fall into the **net** sling. The **fruit** picker is suitable for picking the fruits on various high branches, without using the ladder or other assistant tools.

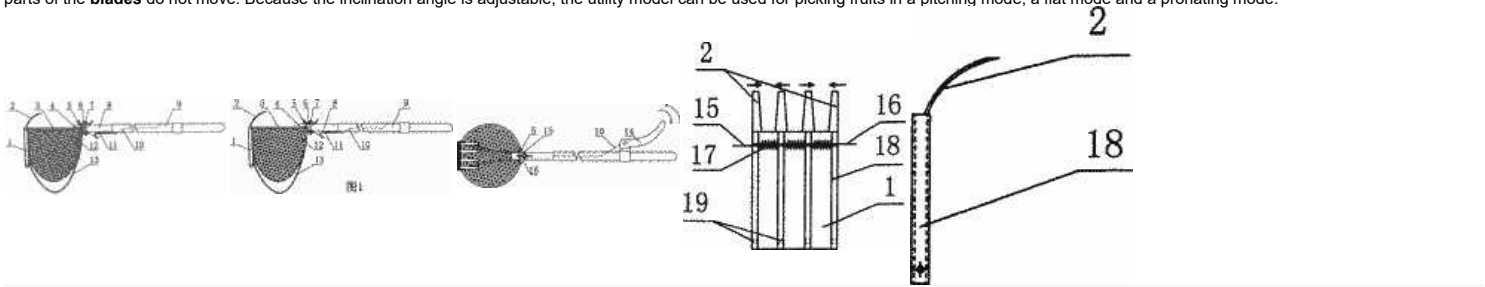


12.      End effector of ball-like fruit picking robot      CN102227973      2011-04-27      NANJING INSTITUTE OF  
TECHNOLOGY\*      2011-11-02      2011-11-02

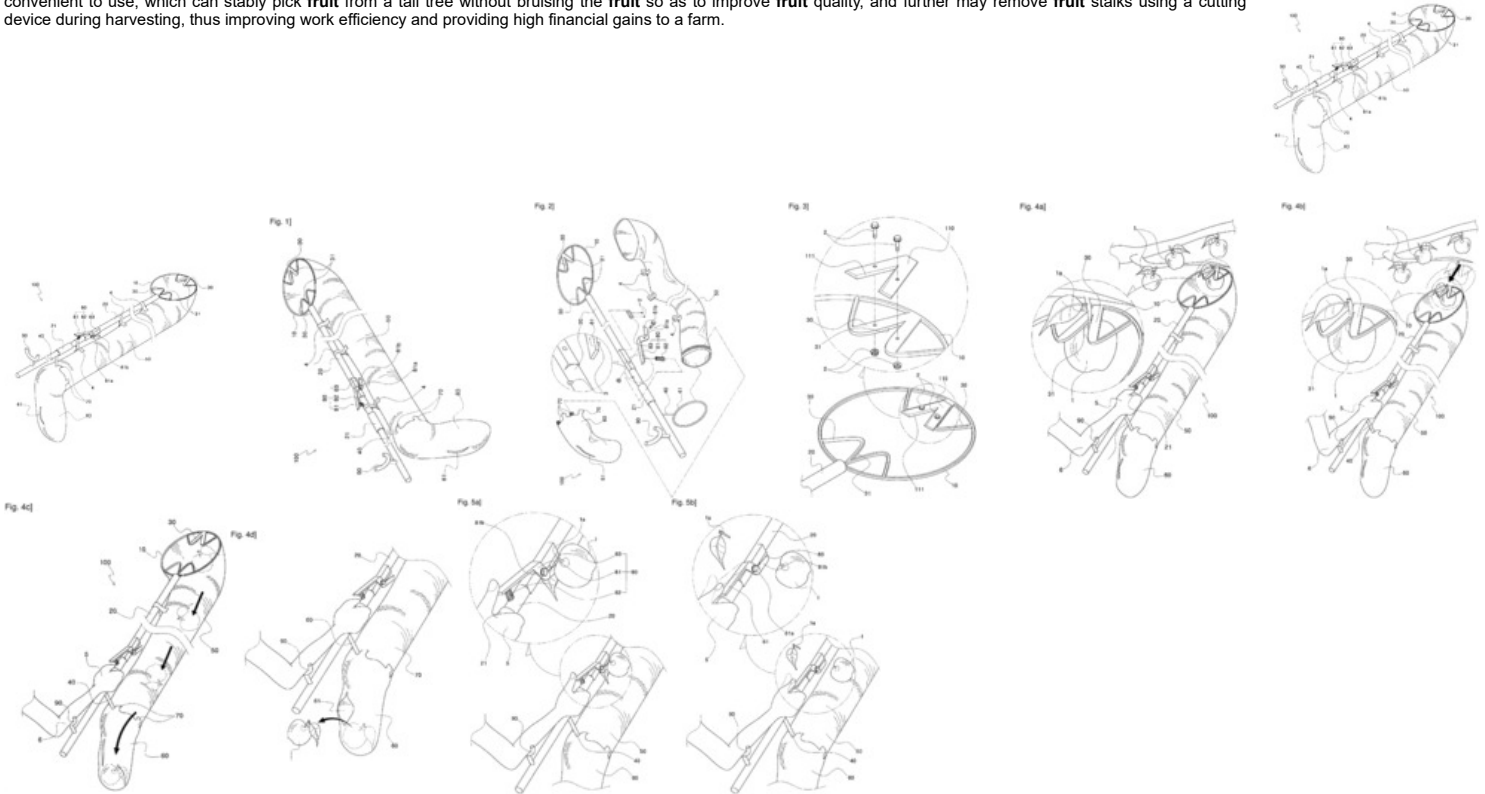
The invention discloses an end effector of a ball-like **fruit** picking robot. The end effector comprises a rotating machine assembly, a telescopic cylinder assembly and an arc-shaped finger cutting assembly. The end effector has the following advantages: a rotating machine is utilized to drive four arc-shaped **blades** to cut the **fruit** stem in any position between the four arc-shaped **blades** in a rotating manner via a coupling shaft assembly, thus omitting detection of the position of the **fruit** stem; a single-rod double-action cylinder drives four arc-shaped fingers to unfold and fold by way of extension and retraction of a piston rod; the space formed when the four arc-shaped fingers are folded is larger than the three-dimensional space of the fruits; the fingers are not contacted with the fruits during picking, thus ensuring that the fingers can rotate relative to the fruits, providing conditions for the arc-shaped **blades** to cut the **fruit** stems in a rotating manner and dispensing with complex pressure control for clamping the fruits; and the end effector has a reliable picking mode, low action control difficulty, low cost and strong universality.



The utility model relates to a **fruit** picking device which comprises a hand rod, **blades**, a pull cord for operating the **blades** and a **fruit** pocket, wherein the top end of the hand rod is provided with an adjusting mechanism for adjusting the inclination angle between the **fruit** pocket and the hand rod, the adjusting mechanism comprises a **net ring**, a lateral pin fixing both ends of the **net ring** together, an installation post, a fastening screws and nuts, the head of the installation post is axially provided with a hole with a hole groove to be matched with the lateral pin, and the hole groove of the installation post is tightly closed by the fastening screws and the nuts. The **blades** are arranged in a cutter frame box arranged in front of the **fruit** pocket. The heads of the **blades** face the **fruit** pocket. The number of the **blades** arranged in the cutter frame box is from two to four. A restoring spring is arranged at the middle of the **blades**. A zipper passes between the **blades** and the restoring spring and is divided into two strands, one strand clockwise surrounds the **net ring**, the other strand anti-clockwise surrounds the **net ring**, the two strands are converged into one strand to come down along the hand rod then, and the strand is controlled by clamping the **blades** by the hand rod. A positioning pin is arranged under each **blade**, thus, the **blades** can swing from left to right, and the lower parts of the **blades** do not move. Because the inclination angle is adjustable, the utility model can be used for picking fruits in a pitching mode, a flat mode and a pronating mode.



The present invention relates to a **fruit**-harvesting pole the use of which is convenient. More particularly, the present invention relates to a **fruit**-harvesting pole which is convenient to use, which can stably pick **fruit** from a tall tree without bruising the **fruit** so as to improve **fruit** quality, and further may remove **fruit** stalks using a cutting device during harvesting, thus improving work efficiency and providing high financial gains to a farm.



15.

Electric and hand-operated multidirectional fruit picking device

CN101120638

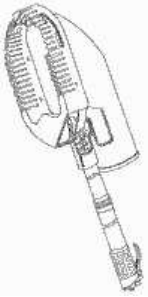
2007-08-06

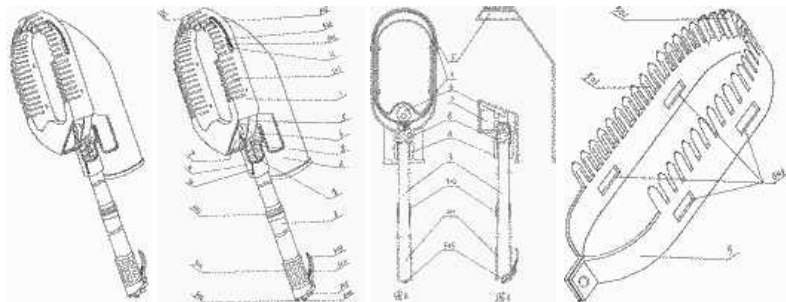
ZHOU RONGBO

2008-02-13

2008-02-13

The present invention relates to the plural door pockets electric and manual picking device. It is made by injection molding or a sheet metal stamping consisting of horizontal to set the **fruit** cavity mouth and down if the chamber guide member having a shower housing through a support **sleeve** mounted on the mouth of the multi-section telescopic sleeves, such as arc set the **fruit** cavity perimeter are two symmetrical waist upper and lower semi-circular mouth equal-length double-layered structure into an annular chamber that is parallel to,  $\cap$  - shaped comb teeth at its upper portion, lower portion protruding inwardly at a certain pitch and attached motors and cams miniature DC,  $\cap$  - shaped annulus mounted with two sides parallel equal length upper and lower semi-circular such as arc of the incisors symmetrical annular serrated knife, the spring applying an elastic force of the upper pair of annular serrated knife base in a support **sleeve**, and a power supply wire in a multi-section telescopic **sleeve** lumen serrated knife puller wires respectively connected with the bottom of wrench and the electric terminal, depending on the shape and light and heavy **fruit** bag guide taken of whether the **fruit** guide tubes or **fruit** **fruit** guide set **fruit** container and the chamber port is connected, through a gear swing cam rotates to drive the rotating cutter cutting wire or a spanner  $\cap$  - shaped tooth gaps so as to achieve a convenient and efficient no damage to the stem end enters the multi-directional utility picking **fruit**.





16.

Fruit picker

CN202635122

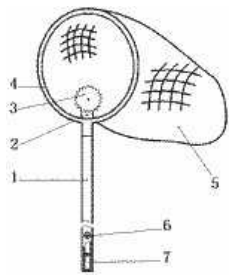
2012-07-20

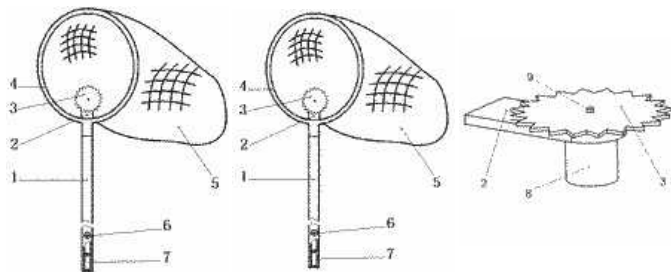
WANG GUOLIANG

2013-01-02

2013-01-02

The utility model discloses a **fruit** picker. The **fruit** picker comprises an arc **ring**, a **net** bag positioned on the arc **ring**, and a handle fixed on the outer side the arc **ring**; a **fruit** picking mechanism is arranged on the inner side the arc **ring**; the **fruit** picking mechanism comprises a fixed plate, a motor and a saw **blade**; the fixed plate is fixed on the inner side of the arc **ring**; the motor is fixed on the fixed plate; the saw **blade** is fixed on the rotating shaft of the motor; a battery for driving the motor and a switch for controlling the rotation of the motor are arranged on the handle; **blades** are arranged on the saw teeth at the edge of the saw **blade**. The **fruit** picker disclosed by the utility model solves the problem that the **fruit** in the tree is inconvenient to pick in the prior art, and provides a **fruit** picker facilitating picking the **fruit** in the tree.





17.

A multipurpose fruit harvester

KR200268826

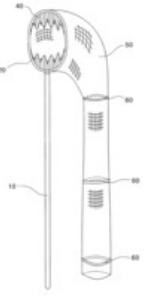
2001-12-05

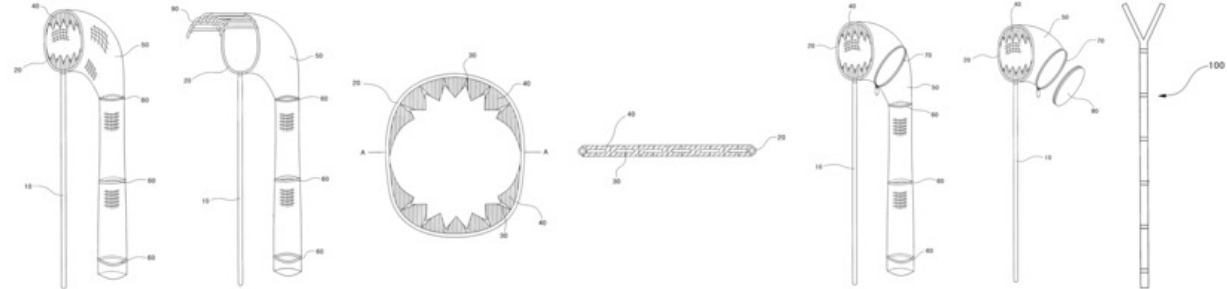
CHO HEUNG SIK

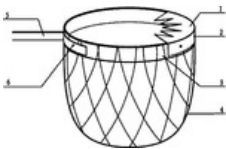
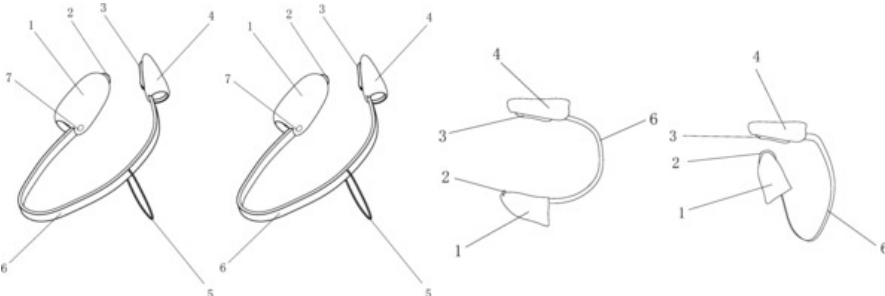
2002-03-18

2002-03-18

This idea about the **fruit** harvester as the thing, in detail, the **fruit** which is being opened to the dead tree to minimize the damage of the dead tree, simply, will be able to crop, also, at the time of the crop the **fruit** which falls with the ground safely, will be able to protect about the multipurpose **fruit** harvester is a thing. The goal of this idea at the time of the **fruit** crop which is opened to the old tree hour and can reduce a labor power greatly, does not ascend to the old tree, the **fruit** is being quick, safely also simply, will be able to crop provides the multipurpose **fruit** harvester is in. Achieves the goal of minute description the composition of this idea for the magnificence which has a prescribed length and, attachment to be fixed to the single step of minute description magnificence, to round belt vice-accomplishes the **ring** shape re-and minute description round belt vice-reconsideration outline Japan attachment the single step to be fixed opens and from the branch with the ground the low of guiding to prescribed location of the **net** and the minute description **net** is had the **fruit** which is cut in order rate of descent of the **fruit** which within the **net** in schedule interval, passes at the time of reduction height the cross section of the **net** elastic To expand/in order to be reduced, is composed of the elastic band which had a prescribed elastic force and is become accomplished the fact that with feature. Desirably, minute description cutting means minute description round belt vice-reconsideration to hand over, in order to confront each other to both sides, unevenness of knife **blade** absence and minute description knife **blade** absence of the saw **blade** form which attaches (unevenness) season in the part (convex) to protect looking away of the part (concave) the part is composed with the rubber absence which protects looking away of as minute description knife **blade** absence which is exposed to the outside is become accomplished the fact that with feature. Also desirably, the minute description cutting means to follow the minute description round belt vice-reconsideration upper side, have a prescribed length and the gab absence where Japan has become paragraph music the multiple dog is had the fact that with normal with feature. Desirably, to be had to prescribed location of the minute description **net**, bisected the minute description **net**, separates and/the low of combining combination nine and, by a minute description combination nine to the single step of the minute description **net** which separates to be combined, as for under screening the **net** screening absence more is had the single step of the minute description **net**, is become accomplished the fact that with feature.





|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                   |             |            |                                    |                                                                                       |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------|------------|------------------------------------|---------------------------------------------------------------------------------------|------------|
| 18.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Device capable of preventing fruit from bumping for picking fruit in upper branch | CN2107770   | 1991-10-28 | DINGBU*                            | 1992-06-24                                                                            | 1992-06-24 |
| <p>The utility model relates to a device capable of preventing fruits from bumping for picking fruits in upper branches, comprising a vertical rod, <b>fruit</b> scissors, a <b>fruit</b> conveying bag, and a support frame. The top end and the side surface of the vertical rod are provided with the <b>fruit</b> scissors, the support frame, and the <b>fruit</b> conveying bag; the <b>fruit</b> scissors are composed of a concave fixed <b>blade</b> and a T-shaped movable <b>blade</b> with two edges which are movably connected; the pull rope of the operating plate can pass through the two ends of the wing of the T-shaped movable <b>blade</b> with two edges; the lower parts of the <b>fruit</b> conveying bag, the external side of the <b>fruit</b> conveying bag, and the internal side of the <b>fruit</b> conveying bag are respectively provided with a speed reducing strip and an inflating anti-touch disk; the external <b>ring</b> of the inflating anti-touch disk is provided with an air inlet and an air-pressure regulating arm, and the internal <b>ring</b> of the inflating anti-touch disk is provided with an internal tooth valve. The device capable of preventing fruits from bumping for picking fruits in upper branches which has simple structure can pick the fruits with all kinds of sizes, and the picking and carrying work can be finished in one step.</p>                                                                                                 |                                                                                   |             |            |                                    |    |            |
| 19.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Fruit picker                                                                      | CN202503917 | 2011-12-13 | ZHEJIANG UNIVERSITY OF TECHNOLOGY* | 2012-10-31                                                                            | 2012-10-31 |
| <p>The utility model discloses a <b>fruit</b> picker which comprising a teeth-shaped <b>blade</b>, a <b>fruit</b> collecting bag and a handle <b>sleeve</b>. The <b>fruit</b> picker is characterized in that the teeth-shaped <b>blade</b> is provided with a plurality of triangular gaps, the upper end of the <b>fruit</b> collecting bag is provided with a steel <b>ring</b>, and the steel <b>ring</b> is fixedly connected with the teeth-shaped <b>blade</b> by a first nut; and the handle <b>sleeve</b> comprises a hollow steel pipe and an arc steel <b>ring</b>, the hollow steel pipe and the arc steel <b>ring</b> are fixed with each other in a welding way, a screw hole is arranged on the arc steel <b>ring</b>, and the arc <b>ring</b> penetrates through a nut hole through a second nut to be fixedly connected with the steel <b>ring</b>. According to the <b>fruit</b> picker, the high-branch fruitlets can be quickly and conveniently picked. The <b>fruit</b> picking danger coefficient can be reduced.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                   |             |            |                                    |    |            |
| 20.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Fruit picking device                                                              | CN202232191 | 2011-02-28 | CHENG YIQIANG                      | 2012-05-30                                                                            | 2012-05-30 |
| <p>The utility model relates to a <b>fruit</b> picking device, which is a special tool for picking fruits. The <b>fruit</b> picking device consists of an angle-adjustable <b>sleeve ring</b> with an embedded <b>blade</b>, a retractable picking device rod, a <b>fruit</b> collection <b>net</b>, a <b>sleeve net</b>, a locking handle, a fixed handle, a bottom bag-shaped <b>net</b> and a bottom bag-shaped <b>net</b> fastener which can be opened and closed. When a <b>fruit</b> on a tree is picked, an operator firstly sheaths the <b>fruit</b> to be picked in the <b>sleeve ring</b>, the base of the <b>fruit</b> is cut off in a pushing or pulling way by using the <b>blade</b> on the <b>sleeve ring</b>, and the <b>fruit</b> falls down into the <b>fruit</b> collection <b>net</b> and rolls into the bottom bag-shaped <b>net</b> along the <b>sleeve net</b>. The bottom bag-shaped <b>net</b> fastener is opened, the <b>fruit</b> is taken out and the picking process of one <b>fruit</b> or a string of fruits is completed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                   |             |            |                                    |      |            |
| 21.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Fruit-picking finger sleeve                                                       | CN204069785 | 2014-08-20 | FU AIHUA                           | 2015-01-07                                                                            | 2015-01-07 |
| <p>The utility model provides a <b>fruit</b>-picking finger <b>sleeve</b> and belongs to the technical field of agricultural tools. The problem that in the prior art, <b>fruit</b>-picking efficiency is low is solved. The <b>fruit</b>-picking finger <b>sleeve</b> comprises a thumb <b>sleeve</b> and an index finger <b>sleeve</b>, wherein the thumb <b>sleeve</b> is connected with the index finger <b>sleeve</b> through a connecting <b>ring</b>, and the connecting <b>ring</b> is in a C type, is matched with the inner side of the first web of the palm and has certain flexibility. A transverse <b>blade</b> is arranged at the finger tip part of the thumb <b>sleeve</b> and faces perpendicular to the pointing direction of the thumb. An abutting-against groove is formed in the longitudinal direction in the index finger <b>sleeve</b>, the <b>blade</b> is correspondingly embedded into the abutting-against groove in the picking process, and the width of the abutting-against groove is at least 0.8 cm. The <b>fruit</b>-picking finger <b>sleeve</b> can be used for cutting the stalks of fruits through the index finger and the thumb, the palm center and the other three fingers are used for supporting the falling fruits, and the other hand can be used for lifting a <b>fruit</b> basket and directly placing the fruits picked by one hand into the <b>fruit</b> basket; in this way, <b>fruit</b> picking efficiency is higher, and picking is more convenient.</p> |                                                                                   |             |            |                                    |  |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   |             |            |                                    |                                                                                       |            |

22.

Novel high-efficiency and convenient and fast fruit picking device

CN104718889

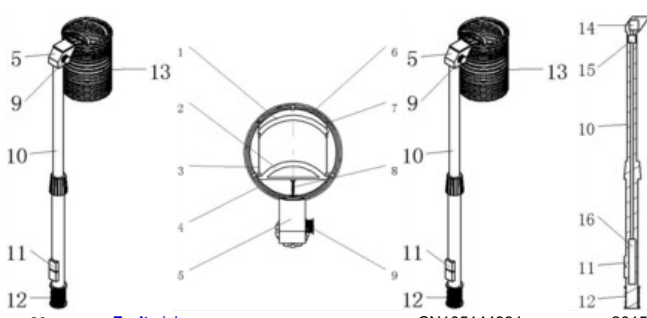
2014-12-20

QINGDAO UNIVERSITY OF SCIENCE & TECHNOLOGY\*

2015-06-24

2015-06-24

A novel high-efficiency and convenient and fast fruit picking device comprises a pruning knife, a baffle, sliding rods, an outer ring of a fixed ring, a motor fixing seat, an inner ring of the fixed ring, a guide rod, a spring, a coil, a telescopic rod, a switch, a handle, a fruit basket, a motor, a motor driver and a battery. The novel high-efficiency and convenient and fast fruit picking device is characterized in that the sliding rods are sleeved with the pruning knife and the baffle, the sliding rods, the guide rod and the inner ring of the fixed ring are fixed on the outer ring of the fixed ring, the front end of the motor fixing seat is connected with the outer ring of the fixed ring, the lower end of the motor fixing seat is connected with the telescopic rod, and the motor is arranged in the motor fixing seat; the coil is fixed at one side of the top end of the telescopic rod, and the motor controls the rotation of the coil; one end of the spring is fixed on the outer ring of the fixed ring, the other end of the spring is connected with the baffle and controls the reset of the baffle, the lower end of the telescopic rod is connected with the handle, the motor driver is arranged in the inner cavity of the upper segment of the telescopic rod, the battery is arranged in the inner cavity of the lower segment of the telescopic rod, the switch is installed on the outer wall of the lower segment of the telescopic rod, and the fruit basket is fixed on the inner ring of the fixed ring. The novel high-efficiency and convenient and fast fruit picking device has the advantages that the motor provides power for the picking device, manpower is not needed, the outer ring of the fixed ring is big enough, multiple picking requirements are met, the length of the telescopic rod is adjustable, and fruit on high tree branches can be picked.



23.

Fruit picker

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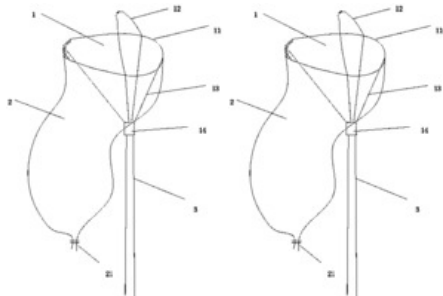
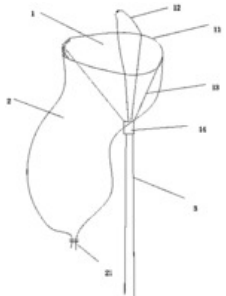
2015-08-07

WU RENPING

2015-12-16

2015-12-16

The invention relates to the technical field of fruit tree culturing and in particular relates to a fruit picker comprising a fruit picker body, a fruit bag and a sleeve rod. The fruit picker body is formed by a pushing-gather spring, a scraping-gathering ring and a supporting rack in a fixed connection way; the pushing-gather spring is in a duck tongue shape with a front end in a zigzag shape; the front end of the scraping-gather ring is provided with one to three zigzag-shaped and concave bend parts fixedly connected to the middle-back edge of the pushing-gather spring; the supporting rack is mounted on the lower surface of pushing-gather spring and formed by fixed connections of two to four metal rod racks; the fruit bag is movably connected under the pushing-gather spring and weaved by fine ropes; the mesh size is proper, so fruits cannot fall off; a fruit outlet is formed in the bottom of the fruit bag; the fruit outlet is ligated by an elastic rope or a fine rope; the sleeve rod is a telescopic multi-joint hollow rod; and the front end of the uppermost joint hollow rod is movably connected with a joint interface. The fruit picker has high fruit picking efficiency; and fruit picking operation can be conducted under the fruit trees, so a user does not have to climb the tree and safe fruit picking is achieved.



24.

Novel tool for picking fruits at high place

CN104996084

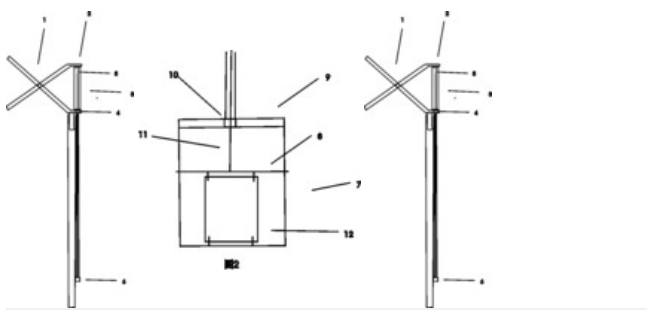
2015-01-23

ZHAO YANJIE

2015-10-28

2015-10-28

The invention discloses a novel tool for picking fruits at a high place. The novel tool comprises a scissors-shaped part. The scissors-shaped part is arranged on a long rod, and a net bag is arranged below the scissors-shaped part. Or, the net bag and a long net barrel are integrated. A spring is arranged between two handles of a rear grip of the scissors-shaped part. An outer sleeve of a bicycle brake wire is fixed on one handle, and a core wire of the bicycle brake wire is fixed on the other handle. If the core wire is pulled, two blades on front part of the scissors-shaped part can shear things. The bicycle brake wire is led to the root part of the long rod. A manual-control mechanism is set on the root part of the long rod. The outer sleeve of the bicycle brake wire is fixed at the outer ring of the manual-control mechanism. Under the action of spring, the manual-control part of the manual-control mechanism is returned. The core wire of the bicycle brake wire is fixed on the manual-control part. The knife edge of the scissors-shaped part is aligned to a fruit stalk, so that the fruit can be sheared off by operating the manual-control mechanism. Fruits drop on the ground, or drop into the net bag, or drop into the long net barrel which is integrated with the net bag. An appliance for receiving fruits is arranged at the lower end of the long net barrel.



The utility model discloses a combined cutter tool facilitating picking of **fruit**. The combined cutter tool comprises an arc **ring**, a **net** bag and a handle, wherein the **net** bag is positioned on the arc **ring**; the handle is fixed on the outer side of the arc **ring**; a swallow-tailed **blade** is arranged on the inner side of the arc **ring**; an opening of the swallow-tailed **blade** faces the center of the arc **ring**; a cutting edge is arranged on the inner side of the opening of the swallow-tailed **blade**; and the swallow-tailed **blade** is arranged at the front end of the handle on the inner side of the arc **ring**. The combined cutter tool facilitating picking of **fruit** on trees solves the problem that the **fruit** on the trees is inconvenient to pick in the prior art.

