United States Patent [19]

Nagel

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[45] ***Feb. 5, 1974**

[54] **PECAN RETRIEVER**

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[*] Notice: The portion of the term of this patent subsequent to Aug. 17, 1988, has been disclaimed.

[22] Filed: **Nov. 12, 1970**

[21] Appl. No.: **88,637**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 860,926, Sept. 25, 1969, Pat. No. 3,600,029.

[52] **U.S. Cl.** ..... **294/19 A,** 56/328 R

[51] **Int. Cl.**..... **A01d 11/02**

[58] **Field of Search** ..... 294/19 A, 19 R, 49, 51, 54, 294/56, 59; 37/121, 130; 56/327 R, 328 R, 332, 400.01, 400.02, 400.14, 400.15

[56] **References Cited**

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Primary Examiner—Evon C. Blunk

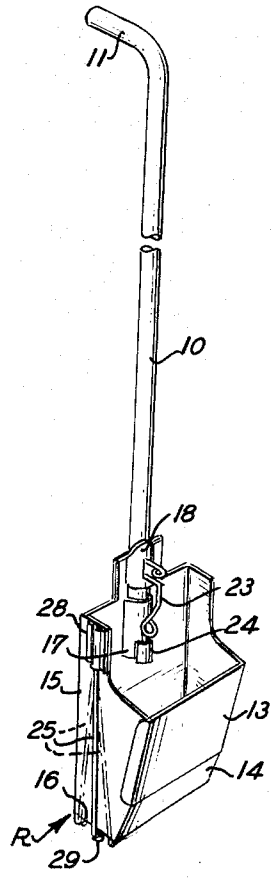
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[57] **ABSTRACT**

This specification discloses a device intended to be used in retrieving pecans from the ground with a pick up action. The device comprises an elongate rod having an open bottom receptacle secured to its lower end. This receptacle has parallel side walls. A spring of general U shape includes side legs and a straight back. The upper ends of the legs are anchored to the side walls on their outer faces and the back spans the open bottom between the lower edges of the sides. A roller is rotatably mounted on the back and is adapted to engage a pecan with a rolling action as the open end of the receptacle is forced thereover.

4 Claims, 4 Drawing Figures



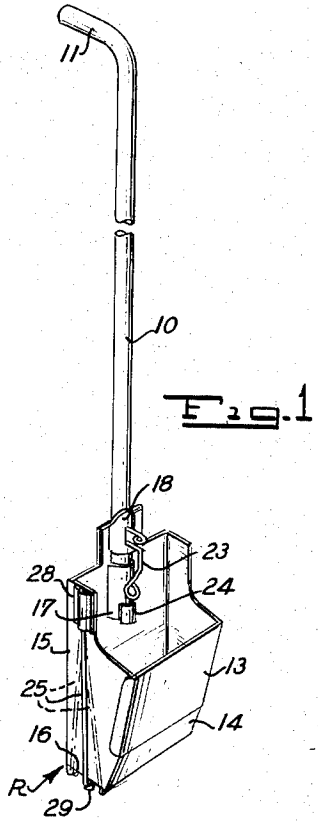


Fig. 1

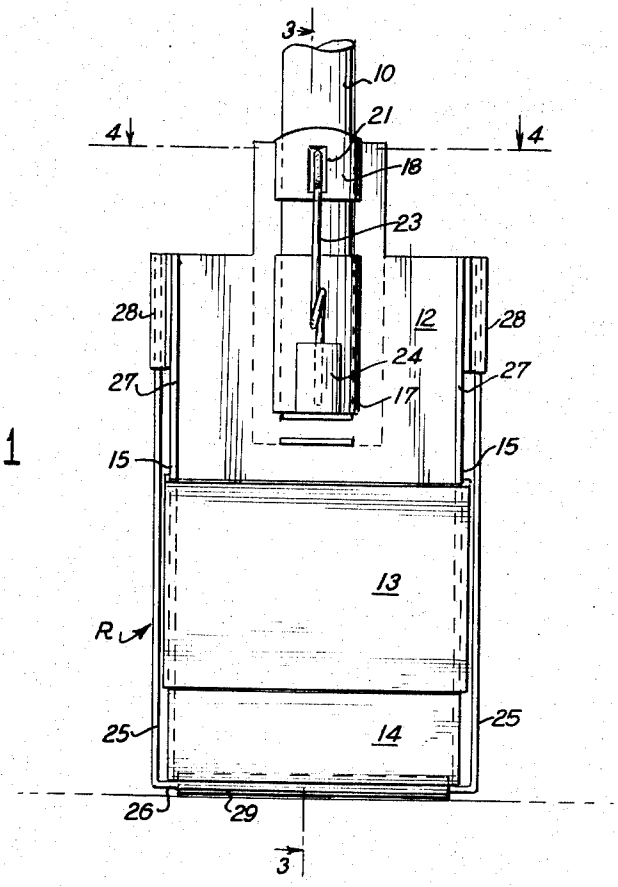


Fig. 2

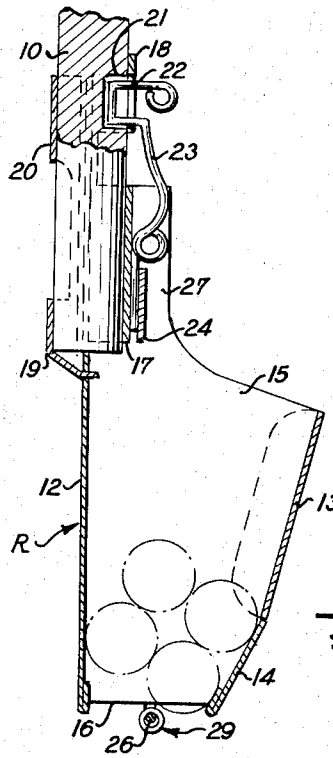


Fig. 3

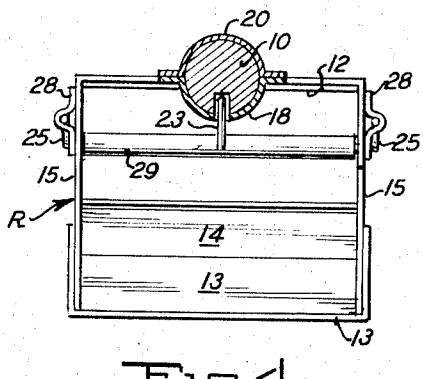


Fig. 4

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PECAN RETRIEVER

This application is a continuation-in-part of the copending application of Rudolph Nagel, Ser. No. 860,926, filed Sept. 25, 1969 and entitled PECAN RETRIEVER, now U.S. Pat. No. 3,600,029.

The present invention relates to pecan retrievers generally, and is concerned primarily with a device of this type which facilitates the picking up of pecans by minimizing the friction generated when an element of the retriever engages a pecan under pressure.

BACKGROUND OF THE INVENTION

Retrieving devices of the type with which the present invention is concerned are known. Such a device is disclosed in my copending application Ser. No. 860,926, filed Sept. 25, 1969 and entitled "Pecan Retriever" issued Aug. 17, 1971, as U.S. Pat. No. 3,600,029.

A device of this type includes, as characteristic and essential elements, a handle in the form of an elongate rod and an open bottom receptacle secured to the lower end of the handle. The receptacle includes side walls in parallel relation. A spring of generally U shape comprises straight legs joined by a straight back. The upper ends of the legs are anchored to the side walls of the receptacle on the outer faces thereof and adjacent to their upper edges. When so anchored the back spans the open bottom between the lower edges of the side walls.

In use the handle is grasped by a user and the receptacle positioned over a pecan lying on the ground. The open bottom is dimensioned so that the engagement of the back of the spring with a pecan causes the back to be deflected away from either the front or rear wall of the receptacle to permit and cause the pecan to enter the receptacle. This action is permitted by the spring properties of the legs.

It is evident that as the above described action takes place the back of the spring must ride over the pecan being retrieved. This generates friction to a high degree and impairs the riding action. It results in the necessity of high degree of pressure on the handle. This is undesirable.

OBJECT OF THE INVENTION

With the foregoing conditions in mind, the present invention has in view the following objects:

1. To provide, in a pecan retriever of the type noted, a spring including an open bottom spanning back and which spring has operatively associated therewith means for reducing friction created by engagement of the back with a pecan.

2. To provide, as a pecan retriever of the character aforesaid, a spring including a straight back together with means for facilitating riding of the back over a pecan.

3. To provide, in a device of the kind described, a U-shaped spring having a straight back with a roller rotatably mounted thereon.

Various other more detailed objects and advantages of the invention such as arise in connection with carrying out the above noted ideas in a practical embodiment will in part become apparent and in part be hereinafter stated as the description of the invention proceeds.

SUMMARY OF THE INVENTION

The foregoing objects are achieved by providing a pecan retriever comprising a handle, an open bottom receptacle secured to the lower end of the handle and including parallel side walls, a U shaped spring having legs and a straight back spanning the open bottom with the upper ends of the legs being anchored to the outer faces of the side walls, and a roller rotatably carried by the straight back.

For a full and more complete understanding of the invention reference may be had to the following description and accompanying drawing wherein:

FIG. 1 is a perspective of a pecan retriever incorporating the improvements of the present invention.

FIG. 2 is a front elevation; taken on an enlarged scale of the lower end of the retriever of FIG. 1.

FIG. 3 is a vertical section, with parts being shown in elevation, of the mechanism of FIG. 2, being taken about on the plane represented by the line 3—3 of FIG. 2; and

FIG. 4 is a horizontal section taken on the plane of line 4—4 of FIG. 2.

Referring now to the drawing wherein like reference characteristics denote corresponding parts, and first more particularly to FIG. 1 the pecan retriever of this invention is illustrated as including a handle **10** in the form of an elongate rod and a receptacle designated generally R. Handle **10** has an out turned hand grip **11** at its upper end while receptacle R is secured to its lower end.

Receptacle R comprises a rear wall **12**, a front wall made up of inclined sections **13** and **14**, and side walls **15** which are in substantially parallel relation. Side walls **15** terminate at their lower ends in straight bottom edges **16**. They, together with the lower edges of rear wall **12** and front wall section **14**, define an open bottom.

Formed integral with rear wall **12** is an inwardly extending lower semicylindrical socket half **17** and an upper socket half **18**. Complemental socket members **19** and **20** are secured to the outer face of rear wall **12** and cooperate with members **17** and **18** in defining a socket that receives the lower end of handle **10**. The latter is formed with a recess **21** (FIG. 3) which receives a detent **22** on the end of a spring **23**, the lower end of which is anchored to the exposed farce of socket member **17** by a bracket **24** secured thereto.

While it is not material to the present invention it is notable that spring **23** carrying detent **22** of recess **21** provides a detachable connecting of receptacle R on handle **10**. In the copending application above identified handle **10** is formed with another recess opposite to recess **21** which provides for mounting receptacle R on the handle in a reversed position relative thereto.

A spring of generally U shape comprises legs **25** and a back **26** that is substantially straight. Side walls **15** are formed with upper extensions **27**and the upper ends of legs **25** are secured to the outer faces of extensions **27** by brackets **28** as by welding or soldering. A metallic roller **29** is rotatably mounted on back **26**. This may be accomplished by positioning the roller **29** on back **26** before legs **25** are bent into the U formation of the spring.

Roller **29** spans the open bottom of receptacle R below edges **16**. In a central position it is slightly spaced from these edges and as it is deflected from this central

position as by engagement with a nut it approaches closer to edges **16.**

OPERATION

While the manner of using and mode of operation of the subject pecan retriever are believed to be obvious from the illustrations of the drawing and description of parts set forth above, they may be briefly outlined as follows:

A user grasps hand grip **11** to manipulate the retriever to position receptacle R over a pecan. In this vertical position roller **29** is in a central position and the spaces on the opposite sides thereof as determined by the lower edges of rear wall **12** and front wall section **14** are not of sufficient area for a pecan to pass therethrough. Downward pressure is now applied to the handle and, as the pecan is engaged, roller **29** is deflected to permit and cause the pecan to enter the interior of receptacle R.

This operation is made possible by the resilient and elastic legs **25** of the spring. After a pecan passes the roller **29** the the latter returns to its central position and is ready to pick up another nut.

It is evident that roller R rides over the pecan with a minimum of frictioned resistance to such movement.

While a preferred specific embodiment of the invention is hereinbefore set forth, it is to be clearly understood that the invention is not to be limited to the exact construction, mechanism, and devices illustrated and described, because various modifications of these details may be provided in putting the invention into practice.

What is claimed is:

1. In a pecan retriever including:

a. a handle having a recess adjacent to its lower end;

b. an outturned hand grip at the upper end of said handle;

c. a receptacle having an open bottom, a rear wall including a socket having a slot in alignment with said recess, and parallel side walls having bottom edges;

d. a U-shaped spring comprising legs and a back with the upper ends of the legs being anchored to said side walls on the outer faces thereof and the back spanning the open bottom between the bottom edges of the side walls, said spring together with a wall of the receptacle constituting yieldable pickup means; and

e. a spring latch mounted on said socket and including a detent which passes through said slot and into said recess to provide a detachable connection between said handle and socket;

the improvement consisting of:

a roller rotatably mounted on the back of said spring.

2. The pecan retriever of claim **1** in which the roller assumes a position centrally of said bottom edges when the spring is free of any deflecting stresses.

3. The pecan retriever of claim **2** in which the roller is spaced a slight distance from the bottom edges in said central position.

4. The pecan retriever of claim **1** in which the roller is of metal.

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