March 5, 1929. J. W. COGGINS 1,704,427

GREEN PEA SHELLER

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Fig. 1.

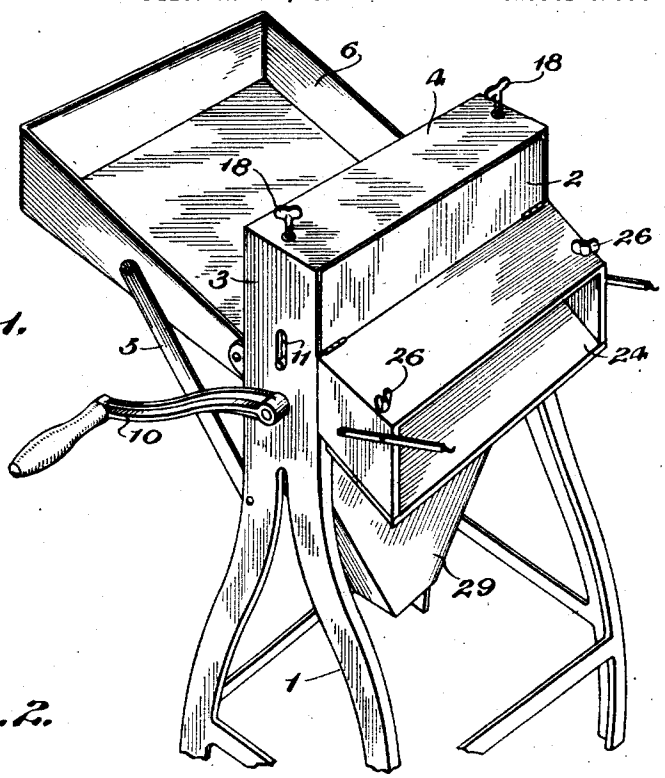
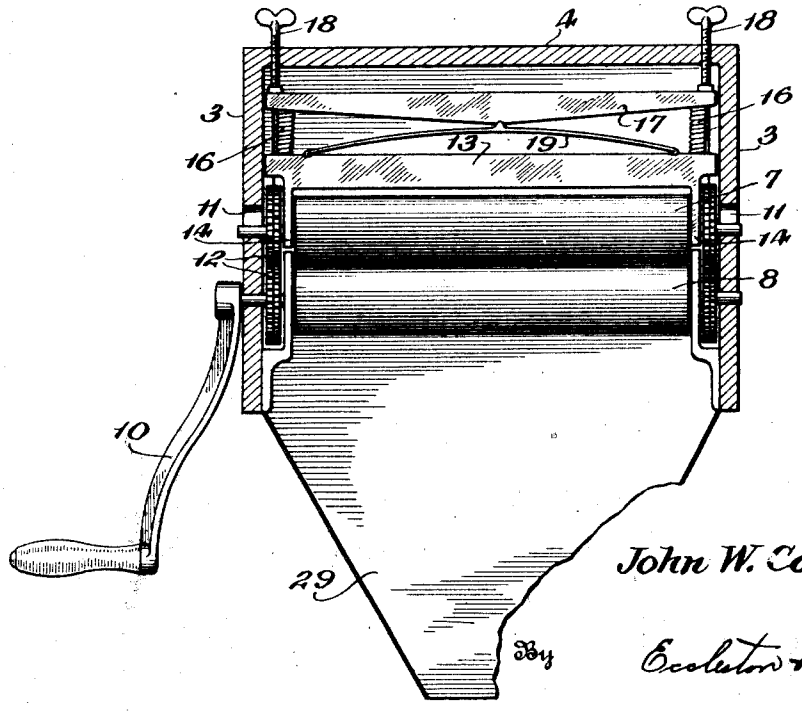


Fig. 2.



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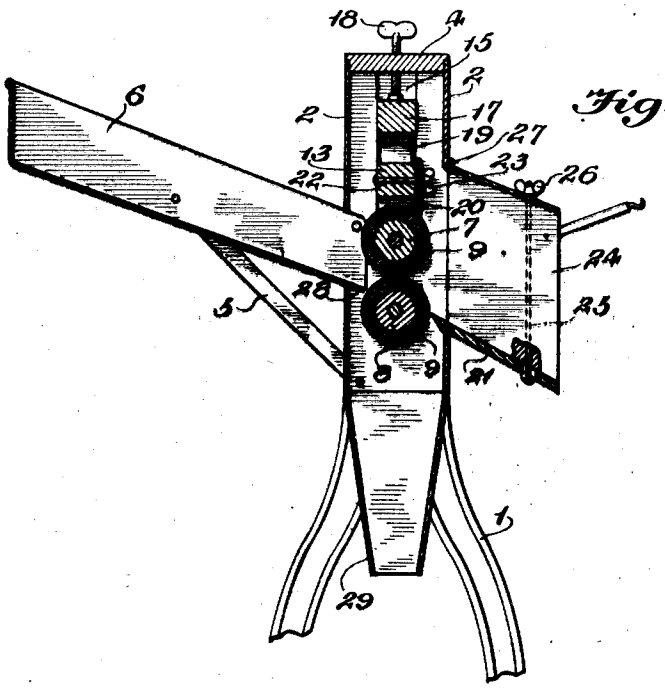


Fig. 3.

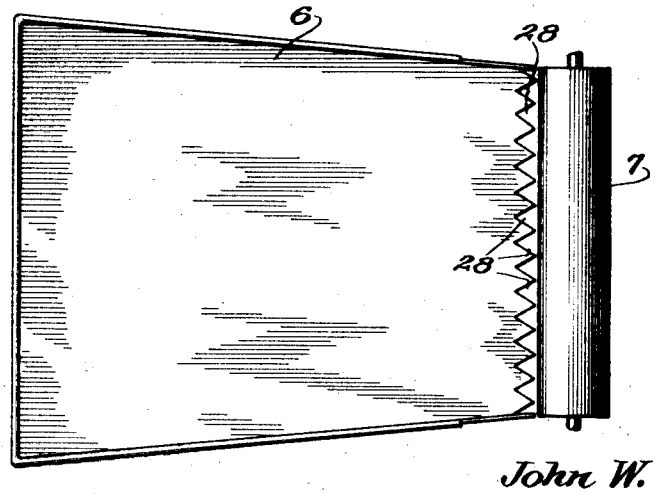


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN W. COGGINS, OF SOPHIA, NORTH CAROLINA.

GREEN-PEA SHELLER.

Application filed November 2, 1927. Serial No. 230,631.

This invention relates to apparatus for shelling green peas as distinguished from dried peas, and has for its object to provide an efficient and durable device of that character.

A further object of the invention resides in the construction of such a device with various adjustments to take up wear as well as to adapt the machine to varying working conditions.

Another object of the invention consists in the provision of a pea sheller which is extremely effective in segregating the peas from the hulls thereby eliminating the necessity of further operations to separate the peas and hulls after the machine has performed its functions.

Other objects and advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawings; in which

Figure 1 is a perspective view of the pea sheller.

Figure 2 is a vertical section through the upper portion of the apparatus.

Figure 3 is a vertical section taken on a plane at right angles to that of Figure 2; and

Figure 4 is a plan view of the hopper associated with the rollers.

Referring to the drawing in greater detail, the numeral 1 designates the main frame or stand on which the mechanism is mounted. This frame is provided with side and end walls 2 and 3 respectively, and top wall 4.

Mounted on the rear portion of the stand 1, as by means of brackets 5, is a hopper 6 into which the peas to be hulled are charged. The lower or inner end of the hopper or trough 6 projects into the interior of the frame of the apparatus and terminates adjacent a pair of vertically disposed rollers 7 and 8. These rollers may be formed of any desired material, and preferably are covered by layers of rubber or similar resilient material. The lower roller 8, which is provided with an operating handle or crank 10 has its bearings fixed in the frame 1, while the upper roller 7 is journaled in the vertical slots 11 formed in the end members 3 of the frame.

The rollers 7 and 8 are geared to rotate in opposite directions by means of the gear wheels 12, the teeth of which are of sufficient depth to permit of a limited vertical movement of the roller 7 within the slots 11. This roller, however, is normally pressed to the lower limit of its vertical movement by a mechanism which will now be described.

Extending longitudinally of the roller 7 is a strip of wood or similar material 13 provided with legs 14 which are apertured to receive the ends of the axle of this roller. The ends of the strip 13 are slidably mounted in the guideways 15 formed in the ends of the frame and the strip is spring-pressed downwardly by means of coil springs 16 which have their upper ends in engagement with a strip 17 also having its ends slidably mounted in the grooves 15. Strip 17 may be vertically adjusted by means of the screws 18 which are threaded through the top 4 of the frame of the apparatus and have their lower ends in engagement with the upper surface or edge of the strip. To provide a more even pressure on the roller 7 it is also found desirable to employ an elliptical spring 19 which has its central portion and ends bearing on the strips 17 and 13 respectively. It will thus be seen that by a simple manipulation of the screws 18 the pressure between the rubber coated rollers 7 and 8 may be not only increased or decreased as desired, but may also be adjusted so as to equalize the pressure throughout the length of the roller.

As already stated the present invention is intended primarily for use in the shelling of green peas and it is therefore desirable to employ some means to prevent shells, etc., from sticking to the rollers. To accomplish this purpose, I provide the scrapers 20 and 21 which are co-extensive with the rollers and are adjustably mounted so as to provide the desired clearance between the scrapers and rollers at all times. The scraper 20 is mounted on the wooden strip 13 and is slotted to receive the securing bolts 22. Obviously, this scraper may be adjusted with respect to the roller 7 by merely loosening the nut 23, sliding the scraper vertically to the desired position and then turning the nuts to locked position. By thus mounting the scraper 21 on the strip 13 it will be observed that in operation of the device the scraper will move up and down as a unit with the roller 7 thus preserving at all times the desired clearance between these elements.

Scraper 21 is adjustably mounted on the hull spout 24 by means of the bolts 25 and nuts 26, it being apparent that when the nuts

26 are loosened the scraper may be moved toward or from the roller 8 as desired. In this connection it should also be noted that the spout 24 is hinged, as indicated at 27, to the front wall of the frame or casing. This construction permits of the spout being swung upwardly thereby giving ready access to the interior mechanism including the rollers 7 and 8 as well as the adjustable scraper 20.

The charging hopper 6 previously mentioned has the forward edge of its bottom serrated as indicated at 28 so as to permit the peas as they are discharged from the hulls to descend into a discharge spout 29 from whence they may be directed to a collecting receptacle.

In the operation of the device, the peas as stripped from the vines are deposited in the hopper 6; the operator then by turning the crank 10 causes the rollers 7 and 8 to grip the pods as they descend along the bottom of the trough to the interior of the apparatus. As the pods are resiliently gripped by the rollers the peas are forced therefrom and descend through the serrations 28 to the chute or spout 29. The hulls, however, are carried through the rollers 7 and 8 and pass on to the chute 24 from which they may be deposited in any suitable receptacle. Should the size of the peas vary in different batches or should the rollers require adjustment for any other reason the same may be readily and quickly accomplished by means of the screws 18. Likewise the scrapers may be readily adjusted as desired.

From the foregoing description taken in connection with the accompanying drawings it will be seen that I have devised a comparatively simple and inexpensive construction of green pea sheller which is efficient and durable in operation; that it is provided with all adjustments necessary to successful operation thereof; and that, as designed, all parts are accessible for cleaning, repair and the like.

While the embodiment of the invention is shown herein as intended to be operated by hand power it will be apparent that the device is susceptible of mechanical operation if desired. Furthermore, it should be noted that the present construction may be varied as to minor details without departing from the spirit of the invention, and all such changes or alterations are intended to be included within the scope of the appended claim.

What I claim as new and desire to secure by Letters Patent is:

A green pea hulling machine including a hopper, a pair of cooperating, superposed rollers adjacent the lower end of the hopper, vertically slidable bearings for the upper roller, a spring-pressed strip for normally pressing the upper roller to the lower limit of its movement, and a scraper mounted on said strip.

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