

W. N. GRADICK.
NUTCRACKER.
APPLICATION FILED FEB. 20, 1912.

1,061,470.

Patented May 13, 1913.

Fig. 1.

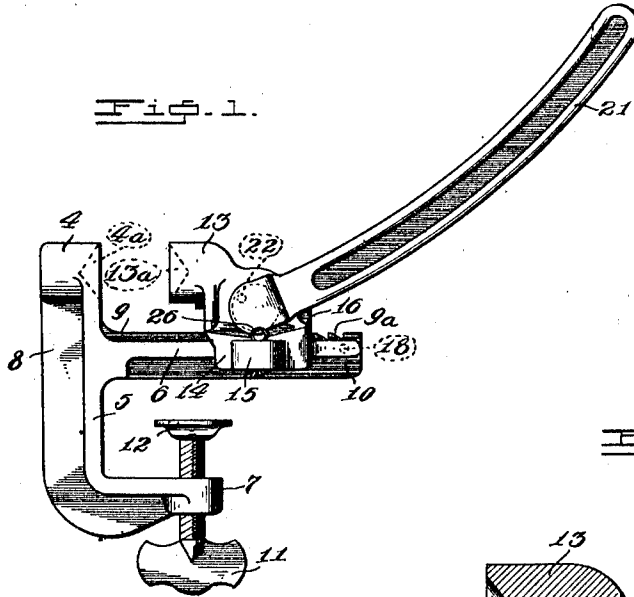


Fig. 2.

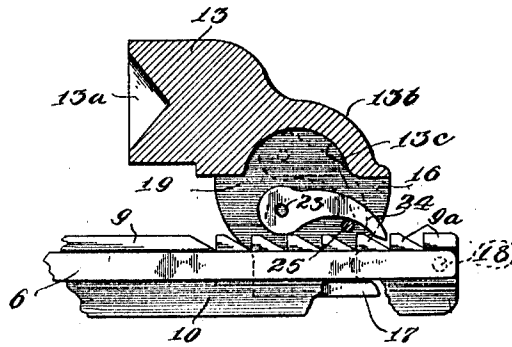
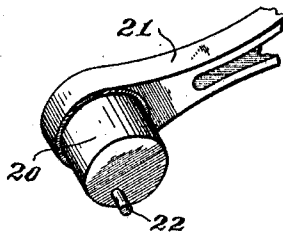


Fig. 3.



WITNESSES:

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WILEY N. GRADICK, OF TYLER, TEXAS, ASSIGNOR TO WOLDERT GROCERY COMPANY,
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NUTCRACKER.

1,061,470.

Specification of Letters Patent.

Patented May 13, 1913.

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To all whom it may concern:

Be it known that I, WILEY N. GRADICK, citizen of the United States, residing at Tyler, in the county of Smith and State of Texas, have invented certain new and useful Improvements in Nutcrackers, of which the following is a specification.

This invention relates to improvements in nut cracking devices, and especially to certain improvements in the nut-cracker described in Patent No. 1,037,963, Sept. 10, 1912, to Frank W. Moser of Chicago, Illinois.

The improvements which form the subject matter of this application consist in interposing between the rack-bar and the handle or lever, a pawl which is loosely arranged in the sliding jaw and is engaged and operated by the cam on the inner end of the lever.

In the nut-crackers constructed according to the disclosure of the above mentioned application, it was found that the teeth on the rack-bar would break off when subjected to the action of the pin on the lever cam, such fault being due in part to the shape of the teeth and in part to the friction and pressure of the pin without any lubrication between the parts, and the commercial necessity of making the device of cheap material and without machine work. My present improvements avoid these faults as will be appreciated by one skilled in the art.

In the accompanying drawing which forms a part of this application, I have illustrated my invention in a preferred form in the following views:—

Figure 1 is a side elevation of a complete nut-cracker embodying my improvements; Fig. 2 is a detail in section of the sliding jaw the pawl arranged therein, and a portion of the rack which is engaged by the pawl; Fig. 3 is a fragmentary detail of the operative end of the handle or lever.

Referring to the details of the drawing, 4 represents the fixed jaw of my improved nut-cracker, the same being cast integral with a vertical extension 5, a horizontal arm 6 at right angles to the extension 5, and a foot 7 on the lower end of the extension 5. The jaw 4 has a conical recess 4^a in its face and is supported, and the parts 5 and 7 are strengthened, by a central rib or flange 8, and the arm 6 is formed with vertical up-

per and lower ribs 9 and 10 respectively. A portion of the rib 9 is cut to form a series of teeth 9^a having vertical faces on their edges toward the fixed jaw and inclined faces on their opposite edges thus giving the teeth broad bases.

The foot 7 is tapped to receive the usual clamping screw 11, 12, by which the device may be secured to a table, shelf or the like.

13 represents the slidable jaw in which is a conical recess 13^a arranged to register with the corresponding recess 4^a in the jaw 4. The slidable jaw 13 is cast with a quasi-spherical extension 13^b in which is formed a recess 13^c bounded by parallel vertical walls 16 between which an opening 19 is provided. The side walls 16 of the sliding jaw are extended downwardly below the arm 6 as at 14 and their lower edges terminate in inwardly extending flanges 17 which engage the under side of the arm at opposite sides of the rib 10. In the side wall adjacent the handle a round opening is provided to receive the cam 20. A lateral extension 15 is also provided on one of the side walls 14 to receive a cotter-pin 26.

The handle or lever 21 is formed with a laterally extending cam 20 on its lower end, in which is set a steel pin 22. The cam is journaled in a round opening in the adjacent side wall 16, and projects into the recess 13^c and opening 19. The pin 22 loosely engages a hole 23 in a pawl 24 which is arranged in the opening 19, at one side of the cam. A pin 25 extends across the opening 19, with its ends fixed in the walls 16, and is so positioned that the nose of the pawl will engage it when the pawl is moved into position to disengage the rack teeth 9^a, as shown by dotted lines, Fig. 2, and will thus prevent the pawl from engaging the teeth as the sliding jaw is moved away from the fixed jaw.

A pin 18 is inserted near the outer end of the arm 6, after the sliding jaw is mounted on said arm and serves as a stop for the jaw in its outward sliding movement. When the handle 21 is in the position shown in Fig. 1, the pin 22 will have raised the pawl to its inoperative position as indicated by dotted lines, Fig. 2, and thereupon the jaw 13 may be freely moved toward and away from the fixed jaw, but as soon as it has been brought

into proper position relative to the latter, the forward movement of the upper end of the handle will rock the cam 20 in its bearing, depress the point of the pawl and bring it into engagement with the vertical face of one of the teeth 9^a, and the continuation of the cam movement will cause the sliding jaw to move forward and thus crack the nut placed between the jaws. The cotter pin 26 extends over the cam end of the handle and thus retains the cam in its bearing.

It will be apparent that in the forward movements of the sliding jaw, the pawl will slide freely over the teeth even though the handle should be in the position required to effect engagement between the pawl and teeth, as the pawl is loosely mounted on the pin 22.

I am aware that in the art of vise construction it is old to mount a lever eccentrically in a sliding jaw and pivot a pawl on such lever to engage ratchet teeth; I am also aware of the construction shown in U. S. Patent No. 1037966, upon which my invention is an improvement, and I do not claim the equivalent of such constructions, but

What I claim and desire to obtain by Letters Patent is:—

In a nut-cracker, a fixed jaw having a nut-receiving recess in its inner face, and having an angular extension and a rack-bar integral with said jaw, a clamping screw mounted in said angular extension, a jaw slidably mounted on said rack-bar and having a nut-receiving recess in its inner face, and provided with an open slot forming a slideway on said rack-bar, a lever having a solid cam projecting at right-angles from its lower end and journaled in said sliding jaw, a pin projecting from the face of said cam eccentric to the pivotal axis of the latter, a pawl loosely mounted on said pin and adapted to engage the rack-teeth upon the downward and rearward movement of the lever, and to be held disengaged therefrom when said lever is thrown forward and downward.

In testimony whereof I affix my signature in the presence of two witnesses.

WILEY N. GRADICK.

Witnesses:

ALEX. WOLDERT,
JANET CALDWELL.