H. M. QUACKENBUSH.

NUT CRACKER.

APPLICATION FILED MAY 19, 1909.

930,796. Patented Aug. 10, 1909.

Fig. 1.

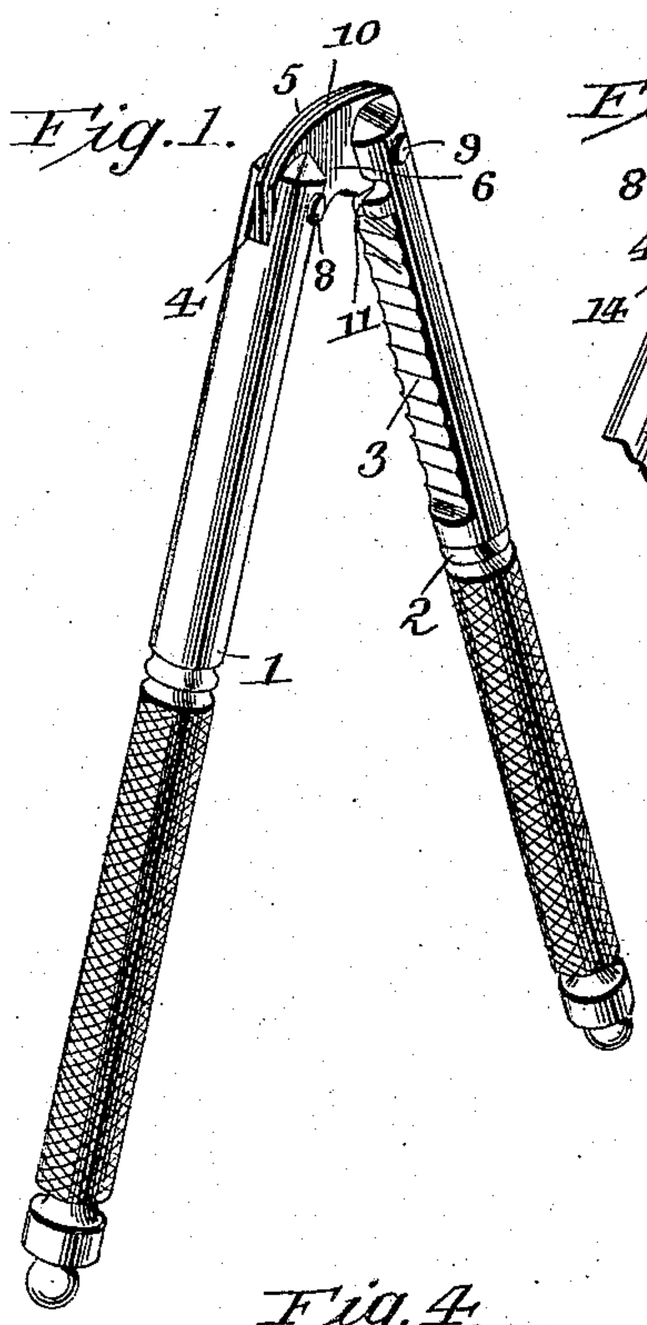


Fig. 2.

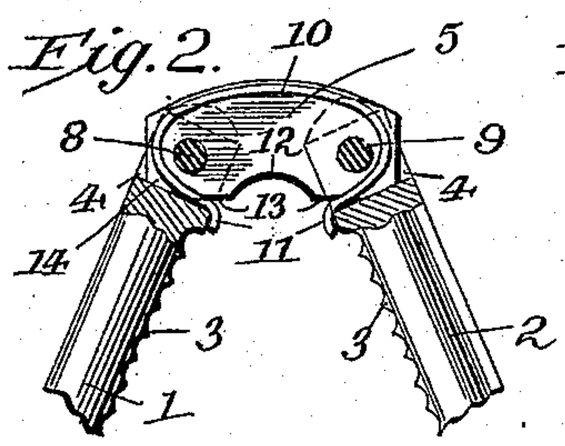


Fig. 3.

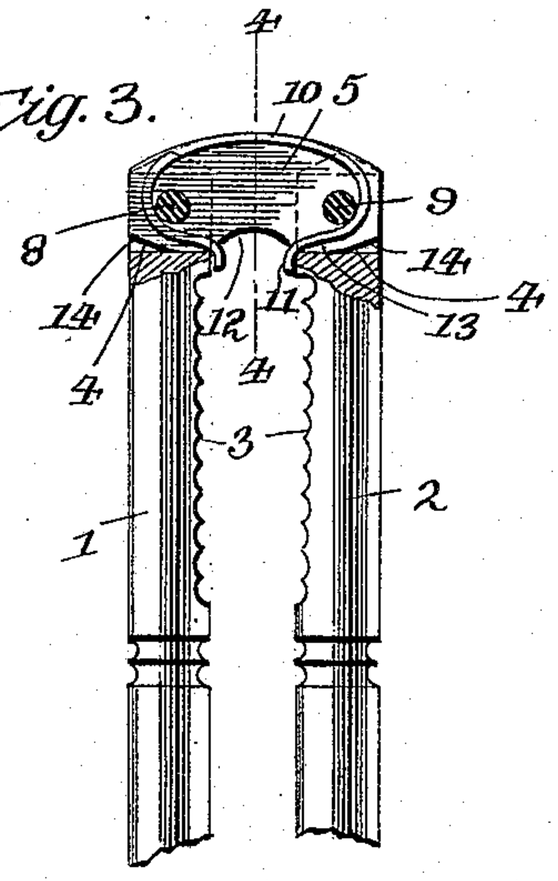


Fig. 4.

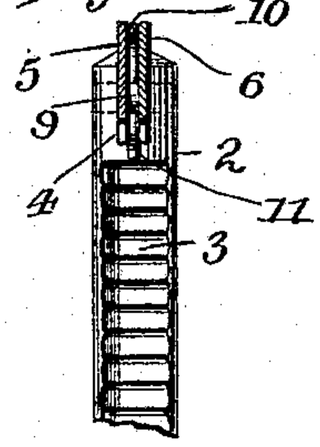


Fig. 5.

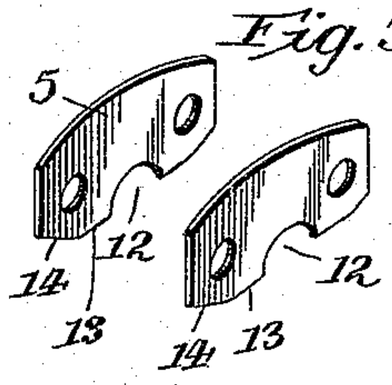


Fig. 6.

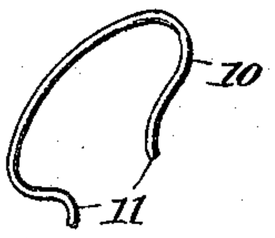


Fig. 7.

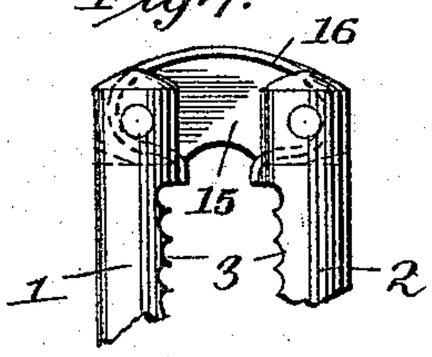
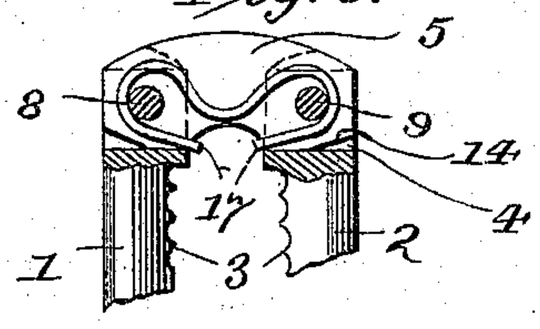


Fig. 8.



WITNESSES

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UNITED STATES PATENT OFFICE.

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NUT-CRACKER.

No. 930,796. Specification of Letters Patent. Patented Aug. 10, 1909.

Application filed May 19, 1909. Serial No. 497,068.

To all whom it may concern:

Be it known that I, HENRY M. QUACKENBUSH, a citizen of the United States, residing at Herkimer, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Nut-Crackers, of which the following is a specification.

My present invention pertains to nut-crackers, the construction and advantages of which will be hereinafter set forth, reference being had to the accompanying drawings, wherein:

Figure 1 is a perspective view of the cracker; Fig. 2 a sectional elevation of the upper portion thereof, the levers or jaws being thrown apart by the spring; Fig. 3 a similar view, the levers being shown as closed; Fig. 4 a vertical sectional view, taken on the line 4—4 of Fig. 3; Fig. 5 a perspective view of the links; Fig. 6 a perspective view of the spring; Fig. 7 a sectional elevation of the upper portion of the cracker, showing a modification, wherein but a single link is employed; and Fig. 8 a similar view, showing a still further modification.

The main object of the present invention is to produce a simple and efficient cracker, one which is strong and durable and yet neat in appearance.

A further object of the invention is to provide a construction whereby relatively light material may be used for the links, two of which are preferably employed, no special forming-up of the links being necessary.

Another object of the invention is to position the spring, which normally spreads the levers or handles apart, between the links so that the spring is housed, and at the same time serves as a spacer for the links, while closing or filling the space between the upper edges of the links.

With these and other objects in view, a detailed description of the invention will be given, reference being first had to the construction shown in Figs. 1 to 6 inclusive. In said figures, 1 and 2 denote the levers, provided as usual with hand portions adjacent to the lower ends and with teeth or roughened sections 3 at the upper portions, adapted to engage and crush the nut. The upper end of each lever is slotted, as at 4, the lower wall of the slot preferably being straight, as best shown in Figs. 2 and 3. A pair of flat, plate-like links 5 and 6 are mounted in the slots 4 and secured to the levers by pins or rivets 8 and 9, which pass through the upper end of the levers 1 and 2. The pins are so formed that they are free to turn in the links, or the links may turn upon the pins.

In order to hold the levers in their separated position, and also to space the links apart, I provide a spring 10, of the form shown in detail in Figs. 2, 3 and 6. The spring is bow-shaped in general form and the lower ends thereof are turned downwardly, as at 11, and are of such length as to engage the inner faces of the levers at a point just below the slots 4. As will be seen upon reference to Figs. 2 and 3, the ends of the spring pass below and outside of the pivot-pins 8 and 9, and when the arms or levers are drawn together, as in Fig. 3, the upper portion of the spring lies in a plane substantially coincident with the upper edges of the links. In this position of the levers the spring hugs the pivot-pins, passing from the position shown in Fig. 2 to that shown in Fig. 3.

The upper edge of each link will preferably be curved in outline and the lower edge thereof, at its center, is notched, as at 12. The lower edge of each link, to each side of the notch, is provided with bearing faces 13 and 14, which stand at a slight angle to each other, the face 13 being parallel with a line or plane passing through the openings formed in the link through which the pins 8 and 9 pass. The face 14 is inclined upwardly from the horizontal and contacts with the lower straight face of the slot 4 when the levers are spread apart, as shown in Fig. 2, thus preventing the levers from being spread too far under the action of the spring. When the levers are drawn inwardly to the position shown in Fig. 3, the faces 13 come in contact with the flat lower walls of the slots and prevent further inward movement of said levers.

The fact that the spring is provided with inturned ends which engage the inner faces

of the levers adjacent to the slots through which the spring passes, and the further fact that the spring when placed under tension passes under and engages the pivot-pins, prevents the spring from becoming displaced and the use of any particular retaining device for the spring, other than the parts required to connect the levers and links, is not necessary. Furthermore, there can be no tendency for the spring to jump out of place. Again, a relatively long spring, without any sharp bends or convolutions, may be employed.

It is conceivable, of course, that a single link with a spring of the form described may be employed, and such construction is shown in Fig. 7, wherein 15 denotes the link and 16 the spring, the parts being mounted in the upper end of the device in a manner similar to that above set forth. Under this construction, however, the spring is not hidden from view, as it is under the construction above described. Again, it is not essential to have downwardly-turned ends to the spring. A spring of the construction and formation shown in Fig. 8 may be employed in connection with a double-link construction, or the single link construction. In this the ends 17 of the spring are straight and the spring at its mid-length is bowed or depressed inwardly toward the ends. Under this construction the spring will not become displaced. The form first described is, however, the preferable one, as the device is simple and neat in appearance, while being strong and durable.

Having thus described my invention, what I claim is:

1. In a nut-cracker, the combination of a pair of levers; a pair of links pivotally connected to the upper ends of said levers; and a spring lying between said links and engaging the levers and serving normally to spread the levers apart whereby a relatively long spring free of sharp bends and torsional action may be employed.

2. In a nut-cracker, the combination of a pair of levers provided with slots in their upper ends; a pair of plate-like links mounted in the slots and pivotally connected to the levers; and a bow spring housed between the links and serving normally to spread the levers apart whereby a relatively long spring free of sharp bends may be employed.

3. In a nut-cracker, the combination of a pair of levers provided with slots in their upper ends; a pair of plate-like links pivotally mounted therein; and a spring interposed between the links and serving to space the same apart, the ends of the spring engaging the inner faces of the levers and serving normally to spread them apart.

4. In a nut-cracker, the combination of a pair of levers slotted at their upper ends; a pair of plate-like links extending into said slots; pivot-pins passing through the levers and the respective ends of the links; and a spring located between the links, passing outside of the pivot-pins and extending inwardly through the slots, said spring bearing upon the levers and serving normally to spread the same apart.

5. In a nut-cracker, the combination of a pair of levers provided with slots in their upper ends; a pair of plate-like links having their ends extending into said slots; pivot-pins passing through the respective levers and the links; and a bow-shaped spring placed between said links, passing outside of the pivot-pins, thence inwardly through the slots, and bearing at its ends against the inner portions of the levers, whereby the levers will be normally spread apart.

6. In a nut-cracker, the combination of a pair of levers provided with slots in their upper ends; a link extending into said slots; pivot-pins passing through the levers and the link; and a bow-shaped spring passing outside of the pivot-pins, thence inwardly through the slots, and having its ends bent downwardly and contacting with the inner faces of the levers.

7. In a nut-cracker, the combination of a pair of levers provided with slots in their upper ends; a pair of links extending into said slots; a pivot-pin passing through the upper end of each of the levers and the end of each link which extends into the slot in the lever; and a bow-shaped spring located between said links, the spring passing outside of the pivot-pins, thence inwardly through the slots, and having its ends bent downwardly to engage the inner faces of the respective levers.

8. In a nut-cracker, the combination of a pair of levers provided with slots in their upper ends, the lower wall of each slot being straight; a link extending into the slots and pivotally connected to each of said levers, the lower edge of the link adjacent to each end thereof being provided with two straight faces at an angle to each other, adapted at different times to contact with the straight face of the slot, whereby the movement of the levers toward and from each other will be limited; and a spring extending through the slot and bearing at its inner ends upon the inner faces of the respective levers, and serving to spread the same apart.

9. In a nut-cracker, the combination of a pair of levers provided with slots in their upper ends; a pair of plate-like links, the upper edge of each link being curved in outline and provided with a notch in its lower edge, and the lower face of each link, to each side of said notch, being provided with straight faces, arranged at an angle to each other; a pivot-pin passing through the upper

end of each lever and through the links; and a spring bow-shaped in outline, said spring being placed between the links, extending through the slots, beneath the pins, the ends of the spring being bent downwardly and contacting with the inner faces of the levers.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY M. QUACKENBUSH.

Witnesses:

GEORGIA V. BYROM,

FRANKLIN W. CRISTMAN.