C. L. JOHNSON.

CAP REMOVING TOOL.

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1,342,848.

Patented June 8, 1920.

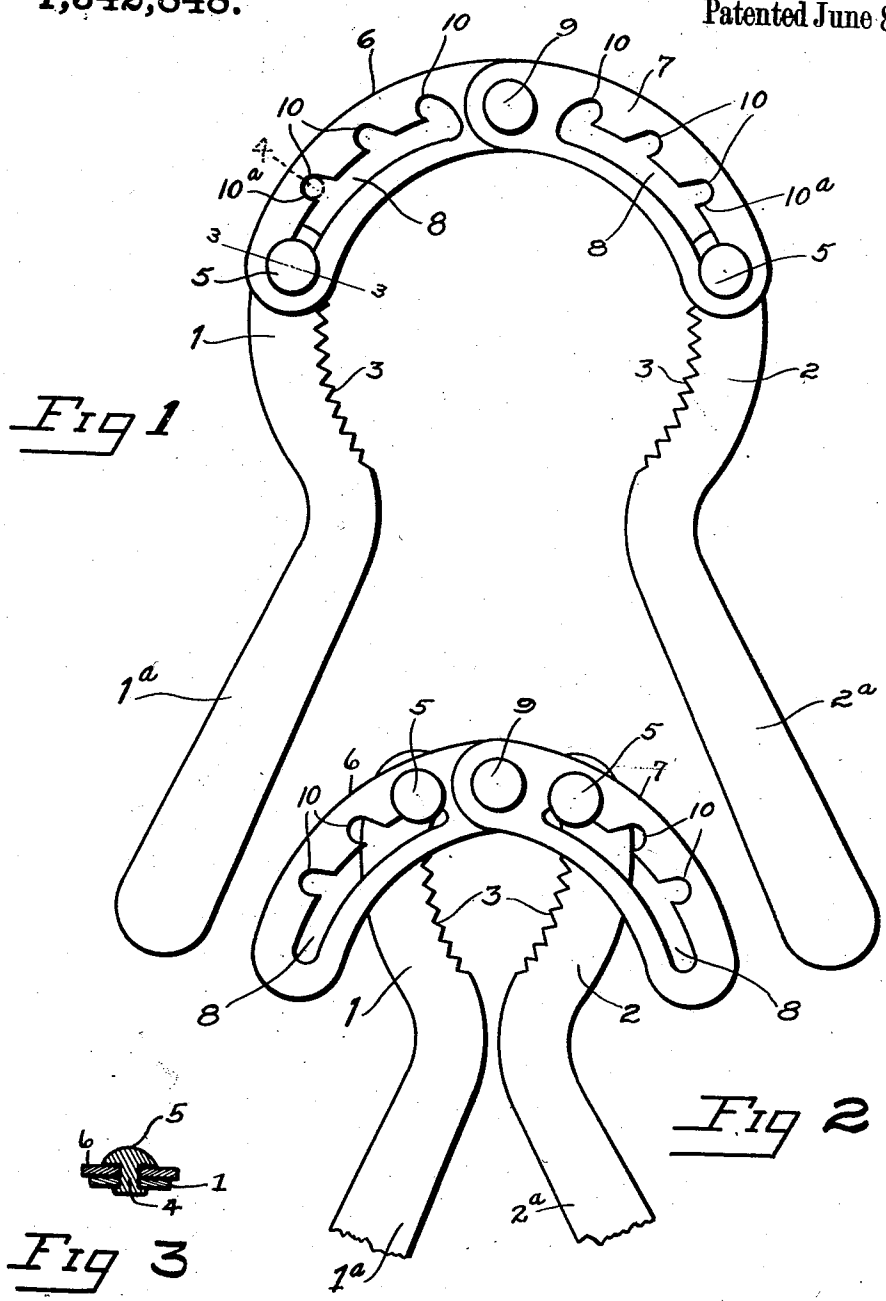


Fig 1

Fig 2

Fig 3

Witness

Inventor

By

Attorneys

UNITED STATES PATENT OFFICE.

CHARLES L. JOHNSON, OF SPRINGFIELD, OHIO.

CAP-REMOVING TOOL.

1,342,848. Specification of Letters Patent. Patented June 8, 1920.

Application filed November 4, 1919. Serial No. 335,662.

To all whom it may concern:

Be it known that I, CHARLES L. JOHNSON, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Cap-Removing Tools, of which the following is a specification.

My invention relates to tools for removing the threaded caps of cans, jars, bottles and the like.

The object of my invention is to provide a tool of this character which may be readily adjusted within a wide range to different sized caps.

A further object of the invention is to provide a tool which will be simple in construction and effective in operation.

In the accompanying drawings:—

Figure 1 is a top plan view of a tool embodying my improvements, showing the same in one position of adjustment.

Fig. 2 is a top plan view of a portion of the same showing a different position of adjustment.

Fig. 3 is a detail in section on the line 3—3 of Fig. 1.

Referring to the drawings, 1 and 2 represent a pair of lever gripping members each of which has a handle portion 1^a, 2^a, respectively, and a series of serrations 3 upon its inner edge which is curved to conform substantially to the contour of the cap. Each of the gripping members has near its end a stud 4, preferably secured in position by swaging the end thereof as shown in Fig. 3, each stud having a head 5. Mounted upon the respective studs are curved links 6 and 7, each link being provided with a curved slotted opening 8 to receive the stud; the heads 5 overlying the top surfaces of the links adjacent the slots. The inner ends of the links are pivotally connected together by a headed stud, 9 representing the head thereof; the other end of the stud being secured to the link 6 by swaging the end thereof in the manner described in connection with the studs 4.

The outer edge of each slotted opening is provided with a series of recesses 10, preferably three in a number, one of the recesses of each link being at the extreme inner end of the slot 8 while the other two recesses are arranged intermediate the ends. The recesses are inclined substantially in the direction in which the studs 4 tend to swing when the tool is applied to a cap and pressure is applied to the handles, so that so long as pressure is applied to the handles the studs will be held in the recesses, the walls of which act as fulcrums.

If a comparatively large cap is to be removed, the tool is adjusted to the position shown in Fig. 1, in which the studs 4 will be fulcrumed at the extreme outer ends of the slots 8. If a small cap is to be removed the tool is adjusted so that the studs will be fulcrumed in the extreme inner notches 10, while, for caps of intermediate size, the studs may be placed in either one of the intermediate notches 10. This provides for four adjustments, and if desired a wider range of adjustment may be secured by placing one of the studs 4 in any one of the notches of its corresponding link or in the extreme outer end of the slot thereof, and then placing the other stud in any one of the notches or in the extreme lower portion of its corresponding slot to give the required adjustment. In this manner a great variety of adjustments may be secured, and I am enabled to accomplish this by the employment of two connecting links pivoted together in the manner described, which allows for a comparatively long connection between the levers which will conform or adjust to the contour of the cap when pressure is applied to the levers.

Having thus described my invention, I claim:—

1. In a device of the character described, two lever gripping members, a pair of pivoted links, and a plurality of fulcrum points on each of said links for the respective gripping members.

2. In a device of the character described, two lever gripping members having curved serrated portions and handle portions, a pair of pivoted links, and a plurality of fulcrum points on each of said links for the respective lever members.

3. In a device of the character described, two lever gripping members, each having a handle portion and a curved serrated portion, a fixed headed stud on each of said curved serrated portions, a pair of links pivoted together and each provided with a slotted opening to receive the headed stud of its corresponding serrated member, and a plurality of fulcrum points for said studs in the edges of said slots.

4. In a device of the character described,

a pair of lever gripping members, each consisting of a curved serrated portion and a handle portion, a fixed headed stud upon each of said serrated portions, means for pivotally connecting said gripping members together having a slotted opening with fulcrum points at the respective ends thereof and also intermediate the ends thereof.

5. In a device of the character described, a pair of lever gripping members, each consisting of a curved serrated portion and a handle portion, a fixed headed stud upon each of said serrated portions, means for pivotally connecting said gripping members together comprising a slotted opening with a plurality of inclined recesses in the outer wall thereof to provide fulcrum points.

6. In a device of the character described, a pair of lever gripping members, each member comprising a curved serrated portion and a handle portion, a fixed headed stud upon each of said gripping members, a pair of links pivoted together, each link having a slotted opening to receive the headed stud of its corresponding gripping member, the outer wall of each slot having a plurality of recesses, the walls of which are inclined substantially in the direction of the swinging line of said stud when the pressure is applied to said handle.

In testimony whereof, I have hereunto set my hand this 31st day of October, 1919.

CHARLES L. JOHNSON.

Witness:
CHAS. I. WELCH.