H. C. DANNER.

DEVICE FOR OPENING WATCHCASES AND OTHER ARTICLES.

APPLICATION FILED MAR. 1, 1919.

**1,313,271.** Patented Aug. 19, 1919.

Fig. 1.

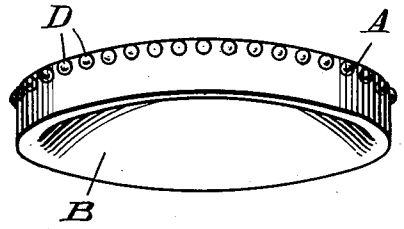



Fig. 2.

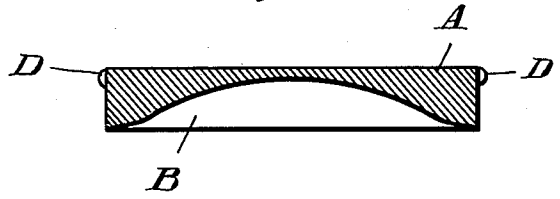
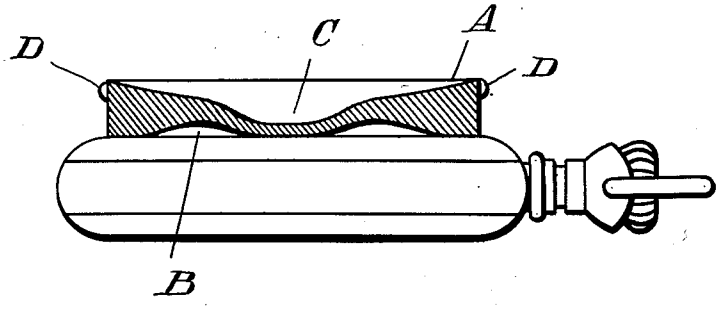



Fig. 3.




WITNESS:

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## DEVICE FOR OPENING WATCHCASES AND OTHER ARTICLES.

1,313,271. Specification of Letters Patent. Patented Aug. 19, 1919.

Application filed March 1, 1919. Serial No. 280,156.

*To all whom it may concern:*

Be it known that I, HUGH C. DANNER, a citizen of the United States, residing at Martinsburg, in the county of Berkeley and State of West Virginia, have invented certain new and useful Improvements in Devices for Opening Watchcases and other Articles, of which the following is a specification.

This invention relates to devices for unscrewing the covers of watch cases, the caps of jars and other removable screwed parts of articles, more especially such removable parts as are substantially of cylindrical form in general outline with a smooth substantially disk shape end or face. Hitherto devices for such purposes have been made of round concave form of an unyielding material having a very thin layer of rubber or other yielding facing to fit upon circular parts such as above described and to turn them by adhesion and frictional action. But these devices have been found unsatisfactory in practice, as from their nature they cannot be conveniently carried or handled, they are useless where the surface of the device to be removed is larger than the concaved part of the device and has a less degree of convexity, and the facing is so thin that there is no yield of practical value to it and it can operate by friction only. The chief objects of the present invention are to overcome these defects by making such a device entirely of yielding or flexible material, so that no matter what the size of the part to be turned it may be easily unscrewed by applying the device substantially coaxially therewith and applying force to turn the device, and so that the device may be easily carried in a vest pocket. Also to increase its effectiveness applicant forms the device so that it will get a suction grip, as well as frictional grip, for increasing its adhesion. A further object is to decrease the cost of manufacture.

In the accompanying drawings:

Figure 1 represents a perspective view of an article embodying my invention; showing the concave face;

Fig. 2, a vertical central sectional view through the same in normal condition;

Fig. 3, a similar view of the same as applied to a watch case for unscrewing the rear plate or cover of the same, the middle part of the device being depressed and deformed as by the finger of the user to create the vacuum in its under face and to get a frictional grip with the central part of the device as well as with the edge portion thereof.

A designates a disk or gripping pad of readily compressible elastic india rubber, normally flat on top and having in its under face a concavity B, which occupies the middle of said face, leaving only a rim for fitting on the outer part of the watch cover, that is, substantially concentrically with the axis of whatever part is to be turned. The pad being thus applied, the pad as a whole is forced against the article to be turned, the center of the pad is depressed as shown by Fig. 3, preferably by the action of the operator's forefinger, forcing the air in great part out of the space between pad and part to be turned and causing a partial vacuum therein so that the adhesion between the rubber and part to be turned will be increased and friction between these parts will be greater and more certainly and quickly effective. The pad or rubber disk A is then turned in the correct direction for unscrewing the part to which it is applied, the procedure being the same whether said part be a watch case plate, a jar cap, an automobile radiator cap or fuel tank cap or any other part to be unscrewed. A peripheral series of beads D formed on pad A act as a milled bead to insure a good grip on the device by the operator's hand, but this feature is not essential.

The device is absolutely integral and homogeneous, requiring no attachment to anything, no backing nor handle, may be easily formed on any article or made to conform to the general outlines thereof, and may be molded in large quantities at small expense and is so small and flexible that it may be easily carried, without the slightest inconvenience, in a vest pocket as readily as a rubber eraser. Its outline is preferably circular, as shown, in order to get a good grip in a continuous line concentric with the axial line of the article to which it is applied.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A gripping pad of flexible india rub-

ber, presenting a relatively thick peripheral body, inclosing a concave face and made thinner and more yielding toward the middle to permit the diaphragm so formed to yield under manual pressure.

2. A block of flexible elastic material adapted to be applied to a watch case or other disk-form article and presenting a relatively thick and relatively rigid peripheral part and having a concave face and made thinner and more yielding toward the middle to permit the expulsion of the air under pressure and the formation of a vacuum to cause the adhesion of the block to the watch-case.

3. A device for unscrewing watch-cases consisting wholly of an india rubber disk which has a concave face and is thinnest at its center.

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

HUGH C. DANNER.

Witnesses:
PAUL H. MARTIN,
E. A. HOBBS.