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SCREW CAP WRENCH WITH FRICTION BASE

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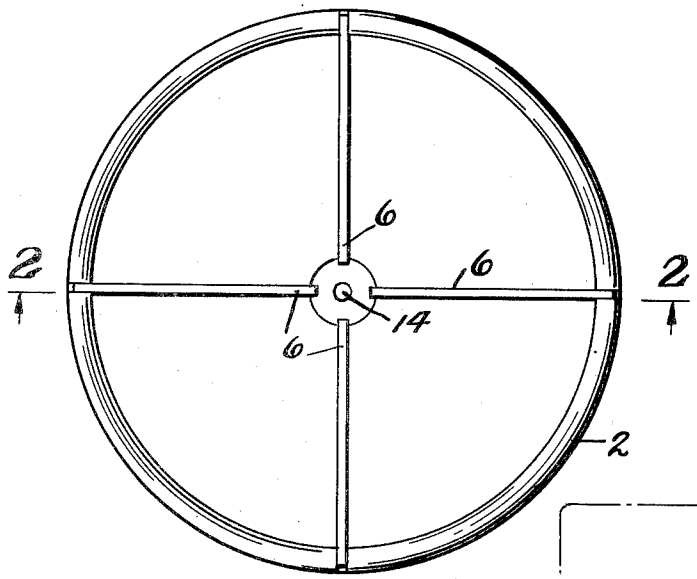


Fig. 1

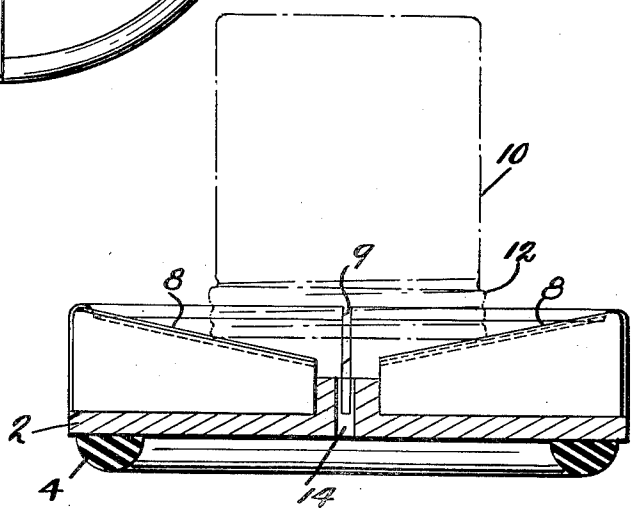


Fig. 2

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SCREW CAP WRENCH WITH FRICTION BASE

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2 Claims. (Cl. 81—3.3)

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My invention relates to an improved device for loosening screw caps on containers and has for one of its objects to provide such a device which is inexpensive and extremely simple in operation.

A further object of the invention is to provide a device for loosening screw caps which is devoid of moving parts, so that it is practically indestructible.

Still another object of my invention is to provide a device of the character indicated which is portable, so that it may be stored in a kitchen drawer or other suitable place when not in use.

A further object of the invention is to provide a device for loosening screw caps which is of such construction that both hands of the operator may be employed to apply torque to the container cap, which is of decided advantage over devices now on the market, wherein one hand is applied to the container and the other to the remover.

A still further object of my invention is to provide a device for loosening screw caps which is capable of use in connection with a wide range of cap sizes, my device being adapted for use on caps varying in diameter from a fraction of an inch up to three or four inches, for example, or even larger.

Another object of the invention is to provide a device for loosening screw caps which so engages the cap top that, in the act of loosening the cap, the sides of the cap tend to spread slightly and, if the bottom of the container be struck a sharp blow with the hand while holding the cap in contact with my device, this spreading action is accentuated. This is a decided advantage over prior devices wherein the cap sides are clamped, thus tending to squeeze the cap into tighter fitting contact with the container and hindering rather than promoting loosening of the cap.

In the accompanying drawings,

Fig. 1 is a top plan view of an embodiment of my invention; and

Fig. 2 is a section taken substantially on the line 2—2 of Fig. 1.

Referring to the drawings in detail, 2 designates the base or body of my improved device for loosening container screw caps. This base or body conveniently is circular in plan, its base may be flat, as shown, while its upper face is concaved.

The base or body member 2 may be constructed of any suitable material, as, for example, plastic, wood, or metal.

To prevent rotation of the device when in use, the underside or base of the body member 2 may be roughened or, as illustrated, an annulus 4 of friction material, such as sponge rubber, may be attached to this part of the body.

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The upper concaved face of the body member 2 is provided with a plurality of radially extending projections or knives 6. These knives may be integral with the body member, or they may be separate members attached to the body member. For example, if the body member were composed of sheet metal, these members may take the form of radially extending louvres, the sharp sheared edge of each louvre functioning as a knife.

In the drawing I have illustrated the knives as separate elements from the base member and frictionally retained in the concaved face of the body member in any suitable fashion. The edge 8 of each knife is parallel to the concaved face of the body member. It will be appreciated that each knife edge projects slightly above the face of the body member and is so bevelled, as seen at 9 in Fig. 2, that, when a container cap is held in contact with the knives and turned counter-clockwise to loosen the cap, the knives will cut into the face of the cap while leaving the sides free to bulge outwardly away from the container sides.

In Fig. 2, I have illustrated the manner in which my device is used. In this drawing, 10 designates a container and 12 the screw cap therefor. To loosen the cap 12, the device is simply placed upon a table or sideboard with its concaved face uppermost. The container 10 is then placed in position, as shown, upon the knives 6. The user then grasps the container in either or both hands and then, while pressing the cap upon the knives, twists the container. In this operation, the knives 6 will bite into the container cap, thus preventing rotation of the cap relatively to the knives, and at the same time, because of the downward pressure being exerted by the operator, there will be a tendency for the cap sides to bulge outwardly slightly, away from the container sides. Of course, by reason of the fact that the container may be grasped in both hands, a tremendous torque can be applied to the container, so that the cap can readily be started or loosened. In this operation of loosening the container cap, the friction ring 4 prevents turning of the device relatively to the table or other support, and the greater the downward pressure applied to the container, the more this resistance to turning of the device increases. Where a cap may be badly corroded and bonded

to the container so that difficulty is experienced in loosening it when following the procedure above outlined, I have found that this difficulty is readily overcome if the cap is placed in position on the knives and the bottom of the container struck a sharp blow with the heel of the hand and then rotated slightly and struck another sharp blow. This actually increases the diameter of the cap sufficiently to break the corrosive bond between the cap and container.

My device may be suspended from a nail or screw in a wall, if desired, and to this end I provide the device at its center with a hole 14, which enables the device to be suspended from such nail or screw with the friction ring 4 facing the wall. Operation is the same as above described, the contact of the friction surface 4 with the wall preventing turning of the device as pressure and torque are supplied to the container.

It will be seen that my device is simple in construction and operation and is entirely devoid of moving parts so as to be practically indestructible.

It will be seen furthermore that, by having the knives extend substantially from the center to the periphery of the device, the same is usable with caps varying over a wide range of sizes.

It will be appreciated still further that, by concaving the working face of the device, I facilitate use of the device in that the container will practically center itself, and slipping of the container from the device is avoided.

It is to be understood that changes may be made in the details of construction and arrangement of parts illustrated and described within the purview of my invention.

What I claim is:

1. A device for loosening container screw caps, said device comprising in combination a base member having a bottom end adapted to rest against a support surface and a top face having a plurality of radially-extending vanes rigidly mounted therein, said vanes having respective knife surfaces projecting slightly above said top face and arranged at slight inclinations to said

bottom face, the included angle formed by the knife surfaces of radially-opposed vanes being an obtuse angle, said knife edges being thus positioned to engage the top edge portion of the screw cap of a container inverted thereabove while leaving the sides of said screw cap unobstructed, the bottom end of said base member having resilient friction means secured thereto and adapted to frictionally and immovably engage said support surface when pressed thereagainst.

2. A device for loosening container screw caps, said device comprising a base member having a bottom end adapted for mounting on a support surface, and an opposed top face having a shallow concave surface, a plurality of radially-extending vanes rigidly mounted in said base member and each having an inclined upper knife edge projecting above and substantially alined with said top face, said vanes being arranged in radially-opposed pairs, the included angle formed by the knife surfaces of radially-opposed vanes being an obtuse angle, said inclined knife edges thus forming an open bed for receiving the screw cap of an inverted container, the bottom end of said base mounting resilient friction means to prevent turning of the device when loosely placed against said support surface and torque and pressure are applied to said inverted container.

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