No. 747,679. PATENTED DEC. 22, 1903.

C. F. BLISS.

WRENCH.

APPLICATION FILED JULY 7, 1903.

NO MODEL.

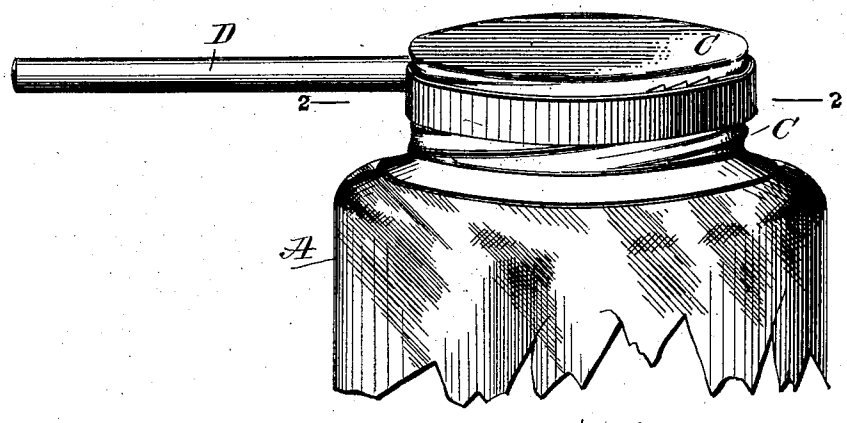


Fig. 1

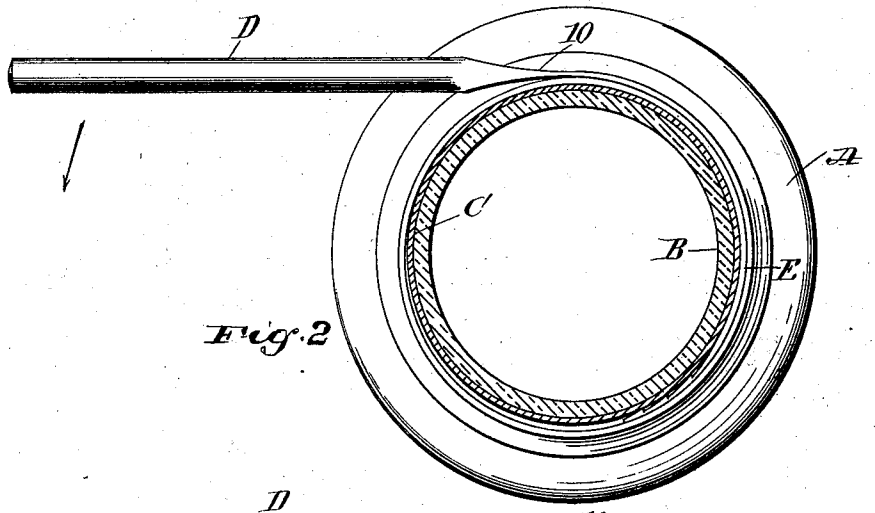


Fig. 2

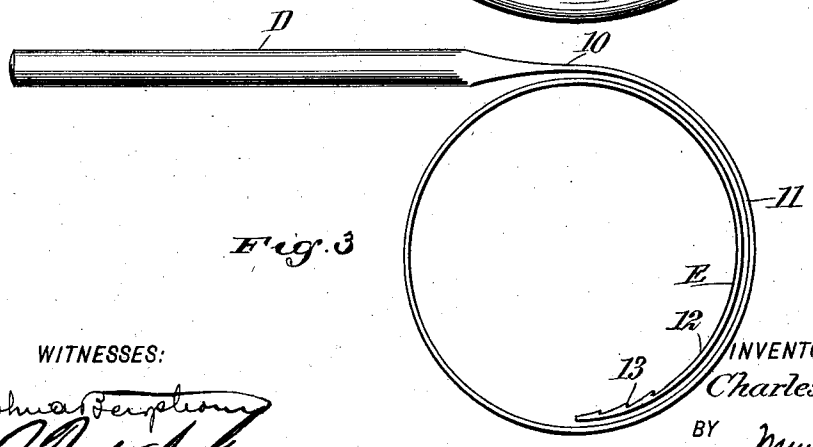


Fig. 3

WITNESSES:

John A. Tompkins

INVENTOR

Charles F. Bliss

BY

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 747,679. Patented December 22, 1903.

UNITED STATES PATENT OFFICE.

CHARLES FREDRICK BLISS, OF CARBONDALE, COLORADO.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 747,679, dated December 22, 1903.

Application filed July 7, 1903. Serial No. 164,511. (No model.)

To all whom it may concern:

Be it known that I, CHARLES FREDRICK BLISS, a citizen of the United States, and a resident of Carbondale, in the county of Garfield and State of Colorado, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

My invention relates especially to wrenches adapted to remove screw-caps and like covers from jars, cans, or similar receptacles and to securely screw such caps or covers upon the receptacles to which they belong.

The purpose of the invention is to construct a wrench, preferably of one piece of material, comprising a handle and a spring-clamping body-section fitted with teeth or an interior roughened surface adapted for gripping engagement with the cap or other article to be screwed upon or unscrewed from a receptacle of any description, so that the body or clamping section of the wrench will embrace the article to be operated upon with a firm grip and with a uniform pressure within the circle of its action and so that when the body-section is properly adjusted upon the article to be operated upon and pressure is applied to the handle-section in a suitable direction the cover may be turned one way or the other with little effort and without danger of mutilating the article.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the upper portion of a jar and a cap screwed thereon, together with a perspective view of the improved wrench applied. Fig. 2 is a horizontal section taken practically on the line 2 2 of Fig. 1, and Fig. 3 is a plan view of the improved wrench.

A represents the upper portion of the body of a jar, B the neck thereof having a thread formed thereon, and C represents a cap adapted to be screwed upon the neck and having more or less bearing on the upper portion of the body of the jar when desired.

The wrench is made of spring material, preferably steel, and consists of a handle-section D and a clamping body-section E. The handle-section D is preferably a bar-section, and at the outer end of the handle-section D the material is drawn or otherwise formed in the shape of a tape 10, and this tape 10 is circularly bent upon itself to form an outer coil 11 and a partial inner coil 12, said inner coil 12 at its front end being provided with teeth 13 at its inner face. The said teeth are made to incline in direction of the handle-section of the wrench, as is shown in the drawings.

In operation the coil-spring section E of the wrench is slipped over the cap or other article C to be operated upon. When the cap C is to be removed, the handle-section D occupies the position shown in Figs. 1 and 2, and upon drawing the handle-section D in direction of the arrow shown in Fig. 2 the teeth 13 on the inner partial coil of the ring or clamping body-section E will bite sufficiently on the outer side face or circumference of the cap C to force the outer coil 11 and the partial inner coil 12 to contract when the handle is drawn, as indicated above, thereby causing the spring-clamping body-section E to have a constant, firm, and uniform yet gripping engagement with the circumference of the cap. The more forcibly the handle D is operated the more forcibly will the clamping body-section E cling to the cap, thus enabling the cap to be screwed as tight as may be desired and unscrewed, no matter how tight it may be fixed upon the receptacle, with but comparatively little effort on the part of the operator and without crushing or unduly mutilating the cap. When the cap is to be screwed upon a receptacle, the wrench is reversed in position, and the handle is then carried in a direction opposite to that indicated by the arrow in Fig. 2, enabling a person to very conveniently and yet firmly screw a cap on a receptacle and, furthermore, enabling the work to be expeditiously done.

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

1. A wrench, comprising a handle and a body-section extending from an end of the handle, consisting of one coil within another, as and for the purpose set forth.

2. A wrench, comprising a handle and a

spring-tape body-section extending from an end of the handle and consisting of an outer and an inner coil, the inner coil having a roughened surface, for the purpose described.

3. A wrench, consisting of a handle and a tape projection from the handle, of a spring material, which material is bent upon itself to form an outer and an inner coil, the inner coil being provided with teeth upon its inner surface adjacent to its free end, as described.

4. A wrench constructed of spring material, comprising a handle and a tape-section carried from the handle and bent upon itself, forming an outer and an inner coil, the inner face of the inner coil at its free end being roughened, the said coils being located at an angle to the longitudinal center of the handle, for the purpose described.

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

CHARLES FREDRICK BLISS.

Witnesses:
E. D. TANDY,
ERNEST LEHOW.