May 28, 1935. J. H. MULLAN 2,002,906

CAN TOP REMOVER

Filed March 20, 1934

Fig. 1.

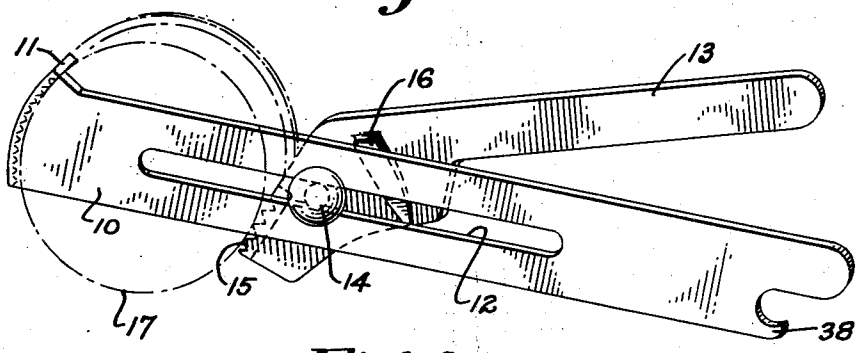


Fig. 2.

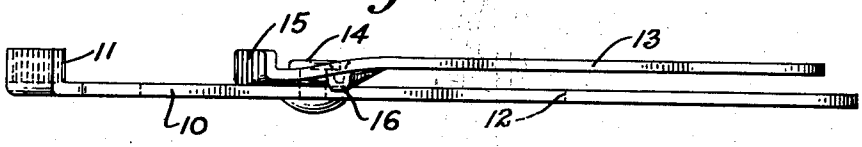


Fig. 3.

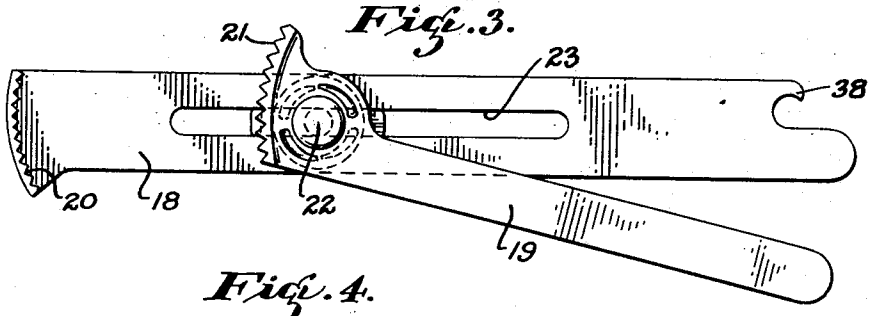


Fig. 4.

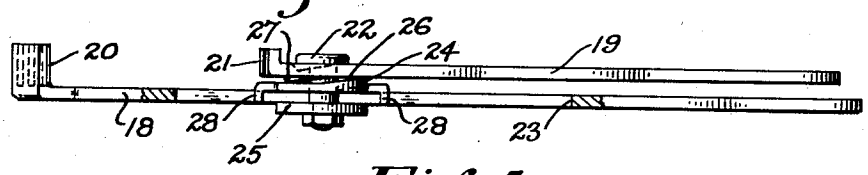


Fig. 5.

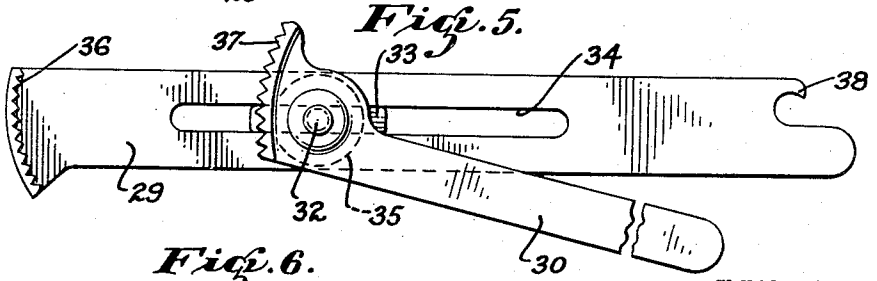
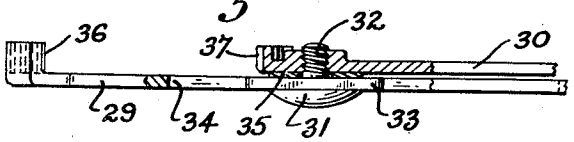


Fig. 6.



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UNITED STATES PATENT OFFICE

2,002,906

CAN TOP REMOVER

John H. Mullan, San Francisco, Calif.

Application March 20, 1934, Serial No. 716,479

5 Claims. (Cl. 81—3.1)

My present invention relates to a can top remover having adjustable cooperating jaws which engage and operate upon can tops of the screw threaded type, and more particularly to an improvement in a device of this character which will automatically adjust and secure the jaws in cooperating relation upon can tops of different diameters.

An object of my invention is to provide in a can top remover, of the type having a fixed jaw and a pivotally mounted adjustable jaw, means which will secure the adjustable jaw in proper spaced relation with the fixed jaw when the adjustable jaw is moved into an operative position against a can top.

Another object of my invention is to provide in a can top remover, having a fixed jaw member and a pivotally mounted jaw member, means which will secure the pivotally mounted jaw member in proper spaced relation with the fixed jaw member when the jaws upon said members are moved into operative engagement with a can top.

A further object of my invention is to provide a wrench like can top remover having opposed jaws which will automatically adjust themselves to can tops of different diameters when placed in engagement therewith.

With the above and other objects in view, my invention resides in the construction, combination and arrangement of parts substantially as will be hereinafter described and more particularly defined by the appended claims.

For a better understanding of my invention reference should be had to the accompanying drawing wherein there are shown, by way of illustration and not of limitation, preferred embodiments thereof.

In the drawing:

Figure 1 is a perspective view showing a simplified form of my invention,

Figure 2 is a view looking down upon the device illustrated in Figure 1,

Figure 3 is a bottom view of a modfied form of my invention,

Figure 4 is a view looking up at the embodiment illustrated in Figure 3,

Figure 5 is a further modification of my invention, and

Figure 6 is a view looking up at the embodiment illustrated in Figure 5 with parts broken away to disclose its construction.

In Figures 1 and 2 of the drawing, 10 is a handle member having a serrated can top engaging jaw 11. Extending longitudinally of the handle member 10 there is an elongated slot 12, into which a grip member 13 is pivotally mounted by means of a rivet or bolt 14. The grip member 13 is adapted to be pivoted toward and away from the handle member 10. At its inner end the grip member 13 has a serrated jaw 15 which is adapted to cooperate with the can top engaging jaw 11 when it is pivoted toward the handle member 10. Disposed adjacent the rivet or bolt 14 and carried by the grip member 13, there is a raised wedge forming or cam surface 16 which is adapted to engage the underside of the handle member 10. The raised wedge forming or cam surface 16 cooperates with the rivet 14, as will hereinafter appear, to secure the serrated jaws 11 and 15 in proper spaced and cooperating relation when the grip member 13 is pivoted toward the handle member 10. This raised wedge forming or cam surface 16 can be formed upon the grip member 13 by simply upsetting the surface thereof, as shown in Figure 2 of the drawing, or it may be a separate piece of metal secured thereupon.

In this embodiment of my invention, it will be seen that when the grip member 13 is pivoted outwardly, the rivet 14 will be free to move longitudinally along the slot 12 and in this way the jaws 11 and 15 can be moved into cooperating relation against the opposite sides of a can top of any size. Such a can top, designated by the numeral 17, is illustrated in the drawing by dot and dash lines. After the jaws 11 and 15 have been thus moved into engagement with the top 17 the operator can, by squeezing the handle member 10 and the grip member 13 together, cause the jaws 11 and 15 to grip the can top. This squeezing upon the grip member 13 will move the raised wedge forming or cam surface 16, carried thereby, into engagement with the underside of the handle member 10 and, because of its wedging action, it will tighten the head of the rivet 14 against the top of the handle member 10 and prevent a longitudinal movement of the rivet 14 along the slot 12. During the final movement of the grip member 13 the jaw 15 will be forced into clamping engagement with the can top 17, so that when a counterclockwise movement is imparted to the handle member 10 the can top will be turned off the can upon which it is mounted. A reverse movement of the handle member 10 can be employed to tighten the can top upon its associated can.

In Figures 3 and 4 of the drawing, which show a modified form of my invention, the numeral 18 designates a handle member to which there

is pivotally attached a grip member 19. The handle member 18 has a serrated can top engaging jaw 20 and the grip member 19 has a cooperating and serrated can top engaging jaw 21. The grip member 19 is pivotally secured to the handle member 18 by means of a pivot forming bolt 22 which extends through a longitudinally disposed slot 23 formed in the handle member 18. Cooperating with the bolt 22 and disposed respectively against the top and bottom of the handle member 18, there are washers 24 and 25 which engage the sides of the handle member 18 adjacent the slot 23. The washer 24 is provided with oppositely disposed cam surfaces 26 with which similar cam surfaces 27, carried by the grip member 19, cooperate when the grip member 19 is turned about the pivot forming bolt 22. In addition to the cam surfaces 26, the washer 24 also has oppositely disposed extensions 28 which project into the slot 23 to prevent a turning thereof.

When the can top remover is constructed in accordance with this embodiment of my invention, the cam surfaces 26 upon the washer 24 and the cam surfaces 27 upon the grip member 19 will move the washers 24 and 25 into clamping engagement with the handle member 18 and thus prevent a longitudinal movement of the pivot forming bolt 22 in the slot 23. When the washers 24 and 25 have been brought into clamping engagement with the handle member 18, a further movement of the grip member 19 will cause the serrated jaw 21, carried thereby, to move into clamping engagement with the can top (not shown) so that the top can be turned in either direction to tighten it upon or remove it from a can.

In Figures 5 and 6 of the drawing, which show a further embodiment of my invention, the numeral 29 designates a handle member having a grip member 30 thereupon. The grip member 30 is pivotally attached to the handle member 29 by means of a securing bolt 31 which has a screw threaded extension 32. The bolt 31 has an elongated boss 33 that is adapted to slide freely in a slot 34, formed in the handle member 29, and the threads upon the threaded extension 32 are of such a pitch that the grip member 30 will move against a spacing washer 35 and clamp the bolt 31 in the slot 34 when the grip member 30 is squeezed in the hand of an operator. The handle member 29 has a serrated can top engaging jaw 36 and the grip member 30 has a cooperating and serrated can top engaging jaw 37. When the can top remover is constructed in accordance with this embodiment of my invention, the head of the bolt 31 will be tightened against the handle member 29, adjacent the slot 34, and thus a longitudinal movement of the pivot forming screw threaded extension 32, in the slot 34, will be prevented. If the jaws 36 and 37 are placed in contact with a screw type can top, they can then be urged into tight clamping engagement therewith by squeezing the handle member 29 and the grip member 30 together. Under these conditions the grip member 30 will function as a nut upon the threaded extension 32 to tighten the head of the bolt 31 and the washer 35 against the sides of the handle member 29.

Top removers, constructed in accordance with the above disclosures, can be used to remove and/or tighten can tops of varying diameters, depending upon the length of the longitudinal slot provided in the handle forming member, and will be found particularly suitable for use in connection with screw caps, such as are commonly provided upon the so-called Mason jars. In addition to the can top removing features described above, the device may also be equipped, where desired, with a crown cap removing hook 38.

While I have, for the sake of clearness and in order to disclose my invention so that the same can be readily understood, described and illustrated specific devices and arrangements, I desire to have it understood that this invention is not limited to the specific means disclosed, but may be embodied in other ways that will suggest themselves to persons skilled in the art. It is believed that this invention is new and it is desired to claim it as such so that all changes as come within the scope of the appended claims are to be considered as part of this invention.

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

1. In a can top wrench, the combination of a jaw member having a handle with a longitudinal slot therein, a grip member having a cooperating jaw member, a securing means passing through the slot in the handle of said jaw member carried by and forming a longitudinally movable pivot for said grip member, and means disposed between said jaw member and said grip member operating between said members with a wedging action to tighten said securing means and prevent a longitudinal movement thereof in said slot when said grip member is moved toward said jaw member handle.

2. In a can top wrench, the combination of a jaw carrying member having a longitudinal slot therein, a grip member having a cooperating jaw member, means passing through the slot in said jaw carrying member and secured to said grip member forming a longitudinally movable pivot point for said grip member, and an inclined surface upon said grip member adapted to move between said jaw carrying member and said grip member with a wedging action and secure said means forming the pivot point against movement in said slot when said grip member is moved toward the jaw carrying member.

3. In a can top wrench, the combination of a jaw carrying member having an elongated slot therein, a grip member having a cooperating jaw member, means passing through the slot in said jaw carrying member carried by said grip member and forming a movable pivot for said grip member, and cooperating cam surfaces upon said grip member and said jaw carrying member adapted to tighten said means and secure the pivot against movement upon said jaw carrying member when said grip member is moved toward said jaw carrying member.

4. In a can top wrench, the combination of a jaw carrying member having a longitudinally extending slot therein, a grip member having a cooperating jaw member, means passing through the slot in said jaw carrying member and carried by said grip member forming a longitudinally movable pivot for said grip member, an enlarged head upon said means forming the longitudinally movable pivot, and a wedge surface upon said grip member adapted to engage said jaw carrying member and cooperate with said enlarged head to secure said pivot against

longitudinal movement in said slot when said grip member is rotated upon said pivot by a gripping thereof.

5. In a can top remover, the combination of a jaw carrying member having a longitudinally extending slot therein, a grip member having a cooperating jaw, a pivot member carried by said grip member and extending through the longitudinal slot in said jaw carrying member, said pivot member having an enlarged head overlying the sides of said slot, and means between said grip member and said jaw carrying member operating with a wedging action to draw said enlarged head against said jaw carrying member and prevent movement of said pivot member in said slot when said jaws are brought into engagement with a can top by a gripping force applied to said grip member.

JOHN H. MULLAN.