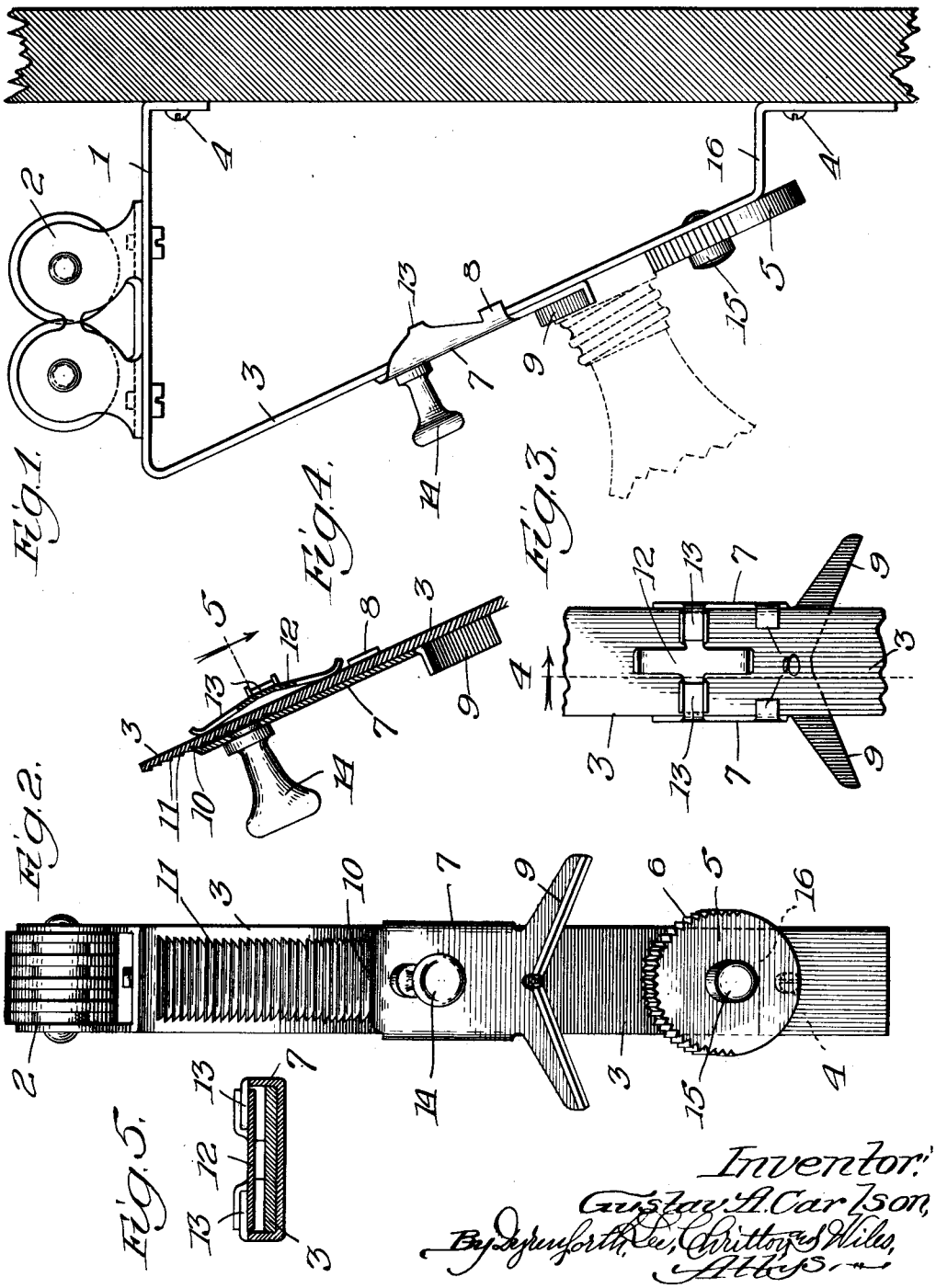
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CLOSURE REMOVING DEVICE

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CLOSURE-REMOVING DEVICE

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This invention relates to a closure-removing and knife sharpening device.

One of the primary objects of the invention is to provide simple and effective means for opening bottles or jars and sharpening knives, the means being supported upon a frame which permits ready attachment where needed. Another object is to provide simple means for securing the cap of a bottle or jar against rotation and enabling the cap to be removed by a slight turn or swing of the bottle. Other advantages will appear as the description proceeds.

The invention is described in the following specification and shown in the accompanying drawing, in which—

Fig. 1 is a side view, in elevation, showing the bracket device secured to a vertical post, the knife sharpening means being mounted upon the horizontal bracket and the bottle opening apparatus supported upon the depending leg; Fig. 2, a front view, in elevation; Fig. 3, a detail plan view showing the spring which is employed to secure the sliding or cap-retaining member in fixed position; Fig. 4, a sectional view, the section being taken as indicated at line 4 of Fig. 3; and Fig. 5, an enlarged sectional view, the section being taken as indicated at line 5 of Fig. 4.

In the illustration given, a bracket 1 is employed, upon the horizontal arm of which is secured a knife sharpener 2. Upon the guide-member or bracing leg 3, a closure opening device is supported. The bracket-frame may be secured to a post or wall by any suitable means, such as screws 4.

The closure opening device, in the illustration given, comprises a clamping member 5 eccentrically pivoted, by means of rivet 15, to the lower portion of the leg 3, the upper edge of the clamping member being provided with teeth or serrations 6. A cap-retaining member 7 is slidably secured to the leg 3 by means of inturned arms 8. The retaining member 7 is provided at its lower portion with furcated legs or jaws 9 which are adapted to engage the cap of a bottle and to secure it against the clamping-member 5. The upper portion of the retaining member 7 is equipped with an inwardly curved edge or tooth 10 which engages grooves 11 with which the leg or guide-member 3 is provided. On the rear side of leg 3, a leaf-like spring 12 engages a second pair of arms 13 which are connected to the upper portion of retaining member 7. The tension exerted by spring 12 upon arms 13 tends to hold the edge 10 within the grooves 11. To aid in adjusting the retaining member along the grooved section of leg 3, a knob or handle 14 is secured to the upper side of retaining member 7.

In the operation of the closure opening apparatus, the bottle cap is inserted in the space between the clamping member 5 and legs 9 of the retaining member 7. In order to hold the cap is contact with the teeth 6 of the clamping-member 5, the handle 14 is raised, thus permitting the retaining member 7 to be moved downwardly into contact with the cap. When the cap has been pressed against the clamping-member 5, handle 14 is released, causing the edge or tooth 10 to slide into one of the grooves 11 and to lock the retaining member 7 to the frame leg 3. As the bottle is rotated, the eccentric clamping-member 5 turns also and exerts increasing pressure upon the cap until it is firmly held against rotation. With the cap thus firmly clamped, the bottle may be raised or lowered to spring the cap off, or, if the cap be a screw cap, the bottle may be further rotated to unscrew the cap. Adjustment of the cap-retaining means may not be necessary when caps of substantially the same size are being removed. It will be seen that a very slight turning of the eccentric clamp 5 serves to secure the cap in a position in which it will not yield further.

The lower edge of the clamping-member 5, which is preferably supported a short distance from the post or wall by means of a horizontal leg 16, may be employed to remove caps from ginger ale bottles, and the like.

The inclination of leg 3 permits the bottle to be opened without loss of any of the contents thereof and increases the ease with which the caps may be removed.

The foregoing detailed description has been given for clearness of understanding

only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible, in view of the prior art.

What I regard as new, and desire to secure by Letters Patent, is:

1. A utensil of the character set forth, comprising a bracket having a guide-member, means for securing said bracket to a stationary support, an eccentric device connected with said guide-member, and a sliding body mounted on said guide-member and opposed to said eccentric device.

2. A utensil of the character set forth, comprising a bracket adapted to be attached to a wall and having an upwardly and outwardly inclined guide-member, means for securing said bracket to a stationary support, an eccentric device connected with the lower portion of said guide-member, and a slidable jaw adjustably mounted on said guide-member above said eccentric device.

3. A utensil of the character set forth, comprising a bracket having a guide-member provided with serrations, means for securing said brackets to a stationary support, a spring-equipped sliding jaw mounted on said guide-member and having a toothed portion adapted to engage said serrations, and a pivotally mounted eccentric carried by said guide-member and opposed to said jaw.

4. A device of the character set forth, comprising an upwardly and outwardly inclined guide-member having its front face provided with a series of serrations, means for securing said guide-member to a stationary support, a sliding jaw mounted on said guide-member equipped with a tooth adapted to engage said serrations, a spring carried by said jaw and slidably engaging the rear surface of said guide-member, and an eccentric disk pivotally mounted on said guide-member and opposed to said jaw.

5. A device of the character set forth, comprising a bracket having a long arm and a short arm and a guide-member connecting said arms, said guide-member having its front face provided with a series of serrations, means for securing said guide-member to a stationary support, a gripper jaw mounted on said guide-member and having a recessed operative end, a spring slidably engaging the back surface of said guide-member and connected with said jaw, and an eccentric disk pivotally mounted on said guide-member and opposed to the recessed end of said jaw.

6. A device of the character set forth, comprising a guide-member having its front surface equipped with a series of serrations, means for securing said guide-member to a stationary support, a sliding jaw disposed adjacent the front surface of said guide-member and having arms projecting rearwardly past the guide-member and having near one end a tooth adapted to engage said serrations, a leaf-spring carried by said arms and slidably engaging the rear surface of said guide-member, a handle attached to said jaw, and an eccentric device mounted on said guide-member and opposed to said jaw.

7. A device of the character set forth, comprising a bracket having a guide-member, a sliding gripper jaw mounted on said guide-member and an eccentric disk pivotally mounted on the lower portion of said guide-member and opposed to said gripper jaw, said disk having its lower portion projecting below the adjacent arm of said bracket, for the purpose set forth.

8. In a device of the character set forth, a frame provided with grooves, means for securing the frame to a stationary support, a clamping-member secured to said frame, an adjustable cap-retaining member slidably connected to said frame and provided with an edge adapted to engage said grooves, and means yieldably holding said edge in contact with said grooves.

9. In a device of the character set forth, a fixed bracket-member provided with an inclined leg-member, a clamping-member mounted upon said leg-member, and means adjustably connected to said leg-member for securing the cap of a bottle against said clamping-member.

10. A device of the character set forth, comprising a guide-member, a sliding gripper jaw mounted on said guide-member and an eccentric disk pivotally mounted on the lower portion of said guide-member and opposed to said gripper jaw, said disk having its lower portion projecting away from said guide-member.

11. A cap remover comprising a guide-member fixed to a stationary support, a clamping member carried upon said guide-member and a jaw member also carried upon said guide-member, said clamping member and said jaw member being adjustably related.

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