May 12, 1931. W. MERCK 1,805,369

DEVICE FOR OPENING VIALS

Filed March 8 1928

Fig. 1.

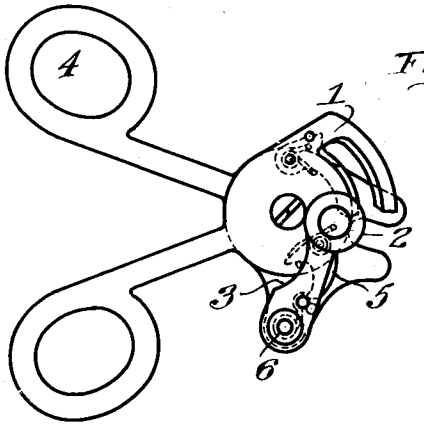


Fig. 2.

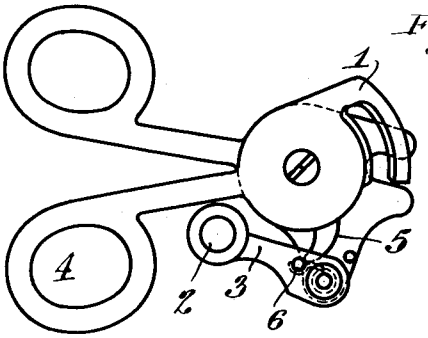
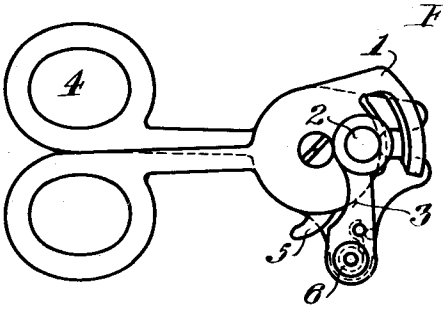


Fig. 3.



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UNITED STATES PATENT OFFICE

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DEVICE FOR OPENING VIALS

Application filed March 8, 1928, Serial No. 260,219, and in Germany March 18, 1927.

This invention relates to an improved device for cutting and breaking off the necks of vials exactly at the predetermined place, the object being to provide an improved device of this character which is simple in construction, which may be readily operated and which is efficient in cutting through the neck of an ampule, vial or the like, without splintering the same.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings

Figure 1 is a plan of a vial opening device constructed in accordance with this invention and with the parts thereof in one position.

Figure 2 is a similar view of the same showing the parts in another position.

Figure 3 is a similar view of the same showing the parts in another position.

The vial opener is so formed that it consists of a scissors-like part with glass cutter 1 and a circular striker 2 mounted on an arm 3, whereby the glass cutter takes up the position of the scissor blades and is best shaped circular, corresponding to the shape of the top of the vial. On the commencement of the operation of the opener the striker 2, on closing the hand grips 4 of the scissors, is pressed backwards by a disengaging lever 5, and when the cutting operation of the glass cutter is almost completed, is moved forwards, by slipping of the disengaging lever by means of a spring-actuated wire 6, against the cut top of the vial.

It is already known to open vials by means of glass cutters. In this connection the glass cutter has either the shape of a pencil sharpener and the vial was inserted in the opening of this device and rotated about its own axis; or the vial opener was shaped like scissors wherein the glass cutter took the place of the scissor blades.

In these devices there is the danger that on opening the vial splintering of the glass takes place with all its attendant dangers. According to the present invention this is avoided by combining a striking action with the cutting action, whereby of course a sharper division of the top of the vial takes place.

Claim:

A device for opening vials comprising a scissor-like mechanism, a semi-circular shaped glass-cutter taking up the position of one of the scissor-blades, a plate with an U-shaped incision taking up the position of the other blade; a small axle mounted on this plate, an arm with a small round plate of medium-hard material on the one end as striker, connected to the axle on the other end; an actuating spring wire around the axle, a disengaging pin mounted on the arm in the direction towards the plate with the incision, a spring wire actuated nose connected pivotally to the glass-cutter, of sufficient length to press the disengaging pin and thereby the arm and the small plate on it away from the glass-cutter when closing the grips of the scissors and to slip from the disengaging pin when the grips of the scissors are closed, whereby the striker is rapidly moved forward in the direction toward the glass-cutter.

In testimony whereof I have hereunto signed my name.

WILHELM MERCK.