No. 821,361. PATENTED MAY 22, 1906.

H. F. HITNER.

DEVICE FOR CAPPING OFF GLASS CYLINDERS.

APPLICATION FILED MAR. 6, 1905.

Fig. 1.

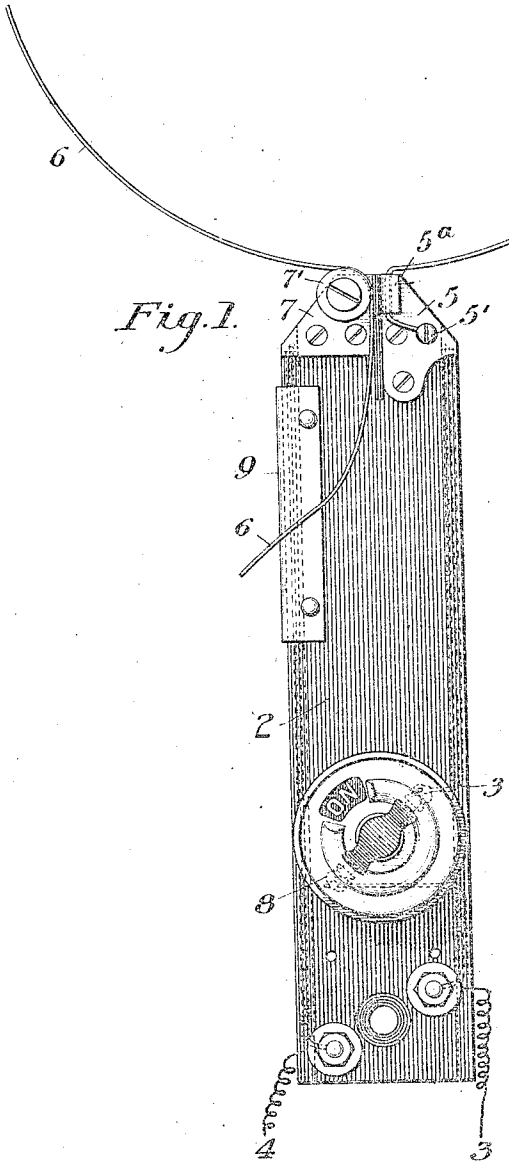
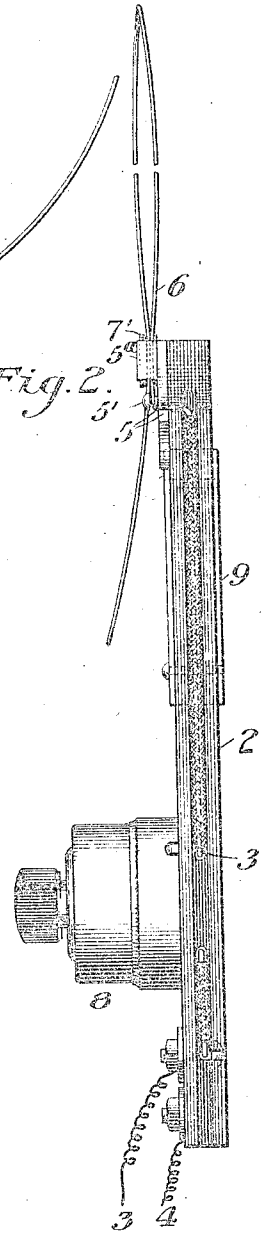


Fig. 2.



WITNESSES

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DEVICE FOR CAPPING OFF GLASS CYLINDERS.

No. 821,361. Specification of Letters Patent. Patented May 22, 1906.

Application filed March 6, 1905. Serial No. 248,528.

To all whom it may concern:

Be it known that I, HARRY F. HITNER, of Wilkinsburg, Allegheny county, Pennsylvania, have invented a new and useful Device for Capping Off Glass Cylinders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a plan view, and Fig. 2 an edge view, of a device embodying my invention, the heating-wire in both views being partially broken away.

The purpose of my invention is to provide a simple and effective hand-tool by which glass cylinders can be severed or capped off accurately and quickly and with greatly-diminished liability of wasting the cylinder itself. Heretofore in some cases cylinders have been capped off by means of an electrically-heated wire; but it has been the general practice to hold the wire in a stationary position and to move the glass which is to be operated upon into contact with it. Such arrangement has been awkward and has resulted in considerable waste.

In the drawings, 2 represents the handle of the tool, which is made of suitable insulating material, such as insulating fiber, and is provided with leading-in wires 3 4, which are also preferably insulated and fitted in grooves along the edges of the handle. One of these leading-in wires is connected with a binding-post 5, provided with a screw 5′ or other device for detachably holding one end of the heating-wire 6, and the other leading-in wire is connected to a post or projection 7, which is preferably provided with a conducting-roller 7′, though the roller is not indispensable. 5ª is a lug for guiding the wire from the post 5.

The heating-wire 6 is made of metal of high electrical resistance, such as platinum or a suitable alloy, and is of sufficient length to encircle the glass cylinders which are to be capped off. The leading-in wires, which extend from the handle, are flexible, so as to allow free movement of the device, and one of the leading-in wires on the handle is provided at an intermediate point with a switch 8, by which the circuit can be interrupted or established, as desired, by the operator. 9 is a wearing-plate.

In the use of the device the operator brings the tool to the end of the cylinder which is to be capped off and grasping the heating-wire 6 with one hand, while the tool is held in the other hand, he loops the wire around the glass cylinder and passes it around the conducting-roller 7′. This roller is located in close proximity to the binding-post 5, so that the intermediate gap at which the cylinder is not in contact with the wire is very small.

The free end of the wire after being passed around the roller is held by the finger or thumb of the hand by which the tool is grasped. The switch is then turned so as to close the circuit, and the current passing through the wire rapidly heats it, and heat is communicated to the glass cylinder, which can then be capped off on the heated line. The heating of the wire causes it to expand; but the slack produced by the expansion may be readily taken up, and the wire thus kept taut and in close contact with the glass, by pulling on its free end beyond the roller. In order to heat the small space of the cylinder between the conducting-roller and the binding-post, the operator may shift the handle up or down or may strike it lightly with the iron rod or tool which he uses in capping off. This brings the wire into contact with the complete circumference of the cylinder.

The tool above described permits only the portion of the wire that is in contact with the glass to be heated, as the portion of the wire beyond the conducting-post 7′ or roller 7′ is not in circuit, and therefore remains cold. There will thus be less tendency for the wire to overheat and burn in spots than if it were so arranged as to be heated at portions not in contact with the chilling surface of the glass. Other advantages of the device in respect of its quickness of action and its accuracy will be manifest to those having occasion to use it.

The form and proportion of the parts may be modified in many ways, since

What I claim is—

1. A glass-severing tool having suitable conductors and terminals, and a heating-wire connected at one end to one of the terminals and free at the other end and adapted to be placed around the article to be severed

and to have its free end put in contact with the second terminal.

2. A glass-severing tool, having suitable conductors with terminals arranged in close proximity to each other, and a heating-wire connecting the terminals and adapted to encircle the article to be severed, said wire being fixed to one terminal and adapted to be drawn loosely against the other.

3. A glass-severing tool having suitable conductors and terminals, and a heating-wire connected at one end to one of the terminals and free at the other end and adapted to be placed around the article to be severed and to have its free end put in contact with the second terminal, said terminals being in close proximity to each other.

4. A glass-severing tool, having suitable conductors with terminals arranged in close proximity to each other, and a heating-wire connecting the terminals and adapted to encircle the article to be severed, one of said terminals being constituted by a roller.

In testimony whereof I have hereunto set my hand.

HARRY F. WITTER.

Witnesses:
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JOHN MILLER.