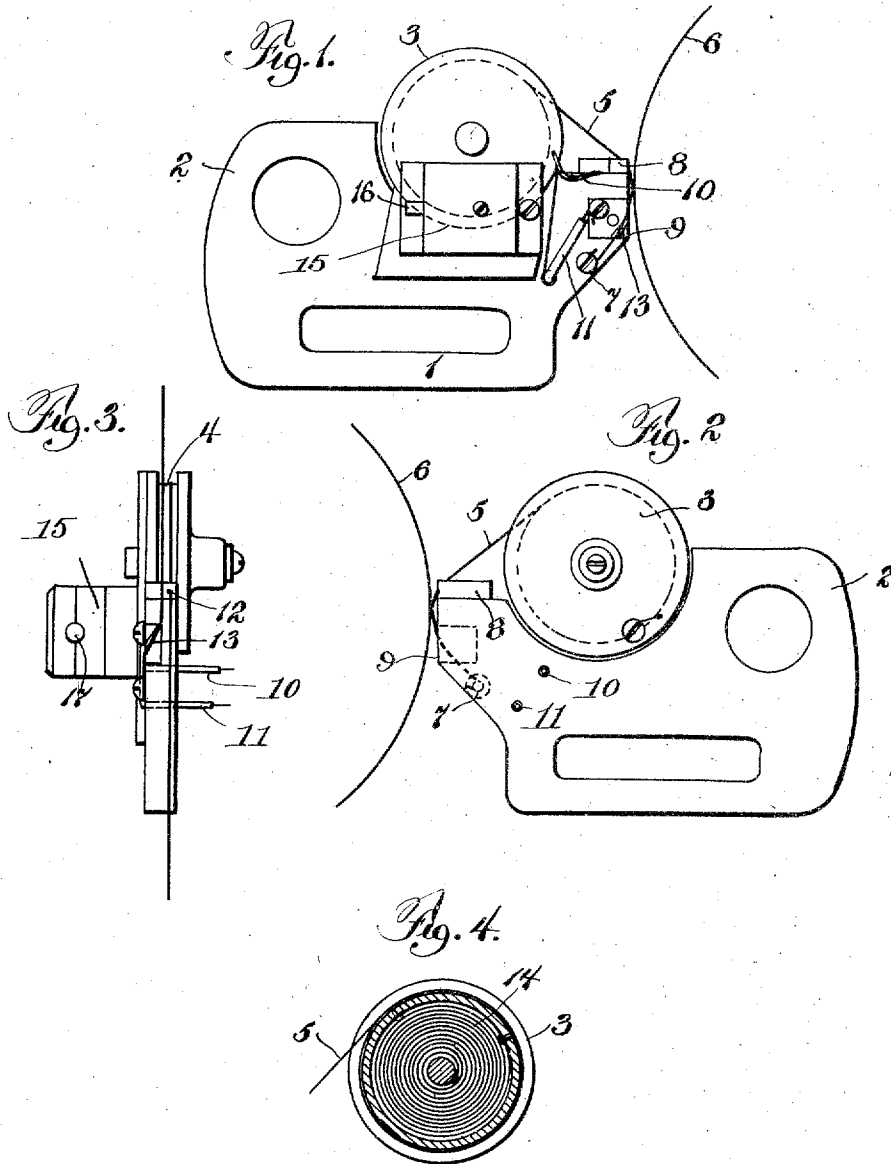


H. F. HITNER.
CAPPING OFF DEVICE.

APPLICATION FILED DEC. 19, 1908.

1,019,792.

Patented Mar. 12, 1912.



WITNESSES
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UNITED STATES PATENT OFFICE.

HARRY F. HITNER, OF MOUNT VERNON, OHIO, ASSIGNOR TO PITTSBURGH PLATE GLASS COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

CAPPING-OFF DEVICE.

1,019,792.

Specification of Letters Patent.

Patented Mar. 12, 1912.

Application filed December 19, 1908. Serial No. 468,275.

To all whom it may concern:

Be it known that I, HARRY F. HITNER, a citizen of the United States, residing at Mount Vernon, in the county of Knox and State of Ohio, have invented certain new and useful Improvements in Capping-Off Devices, of which the following is a specification.

The invention relates to capping-off devices for capping off glass cylinders by means of an electrically heated wire. It has for its principal objects; the provision of a device of the character specified wherein the wire is automatically maintained in engagement with the cylinder with a fixed and predetermined amount of pressure; the provision of wire supporting means whereby the slack incident to the lengthening of the wire when heated is yieldingly taken up; and the provision of an arrangement of the wire wherein the entire circumference of the cylinder is exposed to contact with the wire. One embodiment of the invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a side elevation of the device,

Figure 2 is a side elevation of the reverse side of the device,

Figure 3 is an end view, and

Figure 4 is a detail section through the reel showing the arrangement of the spring.

Referring to the drawings, 1 is the supporting frame work of the apparatus which framework is provided at its rear end with a handle portion 2 adapted to be grasped by the hand. Mounted rotatably upon the support 1 is the wheel or reel 3 provided with a groove 4 (Fig. 3) for receiving the wire 5. This wire 5 is of small diameter so that it may be readily heated by a current of electricity, and is secured at one end to the reel, while the other end is adapted to encircle the glass cylinder to be capped off. The loose end 6 of this wire after passing around the cylinder crosses the wire 5 as indicated in Figure 1, and is secured detachably to the screw 7. A pair of metal blocks 8 and 9 are secured to the front end of the support 1, and current is applied to such blocks by means of the wires 10 and 11 leading to a generator of some description. The block 8 is provided with a passage 12 (Fig. 3) through which the wire passes, and the block 9 is provided with a groove 13 (Figs. 1 and 3) through which the end 6 of

the wire is carried before it is wound about the holding screw 7. By reference to Fig. 3 it will be seen that the opening 12 and the groove 13 lie in different planes so that the ends of the wire pass each other without contacting. It will be apparent that by making the ends of the wire cross or pass each other contact is made between the wire and cylinder throughout the entire circumference of the cylinder, so that there is no portion of the circumference of the cylinder which is not heated when current is applied through the wire. The reel 3 is provided upon its interior with a coil spring 14 (Fig. 4) which coil spring is preferably so arranged as to maintain several coils of the wire 5 about it. In this manner tension is yieldingly applied to the wire 5 to hold it tight about the cylinder, and take up any slack due to the expansion of the wire after the end 6 thereof has been secured in position about the holding screw 7. The device is thus adapted to automatically maintain the wire in engagement with the cylinder with a fixed and predetermined amount of pressure, and is adapted to operate in connection with cylinders of varying diameters. The flow of current through the wire is conveniently controlled by means of a switch 15 mounted upon the side of the support 1, which switch is preferably of the type shown wherein the flow is controlled by means of a pair of push buttons 16 and 17, which construction is well known in the art and needs no further description. The various advantages incident to the construction will be apparent to those skilled in the art.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is the following:—

1. A capping off device for glass cylinders comprising a circle of wire having its ends crossed and in contact with the cylinder at the point of crossing but out of contact with each other at such point, a reel to which one end of the wire is attached, a spring tending to rotate the reel for holding the reel in tension when applied to a cylinder and means for sending a current of electricity through the wire.

2. A capping-off device for glass cylinders comprising a support, a wire secured thereto in position such that when in operative position the ends of the wire pass and

overlap each other while yet in contact with the cylinder at such point of passing but maintain out of contact with each other, and connections for sending a current of electricity through the wire.

3. A capping-off device for cylinders comprising a handle, a pair of metallic contact blocks carried by the handle and spaced apart thereon, a wire engaging one of the blocks and passing around the cylinder and engaging the other block, and electrical connections to the two blocks whereby a current of electricity may be passed through the wire, the ends of the said wire passing each other in substantial parallelism and in contact with the cylinder at the point of passing but out of contact with each other.

4. A capping-off device for cylinders comprising a handle, a pair of metallic contact blocks carried by the handle and spaced

apart thereon, a wire engaging one of the blocks and passing around the cylinder and engaging the other block, and electrical connections to the two blocks whereby a current of electricity may be passed through the wire, the ends of the said wire passing each other in substantial parallelism and in contact with the cylinder at the point of passing but out of contact with each other, and the blocks being mounted upon the handle in position to permit those portions of the wire intermediate the blocks to engage the cylinder.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

HARRY F. HITNER.

Witnesses:

BANNER M. ALLEN,
J. W. JONES.