

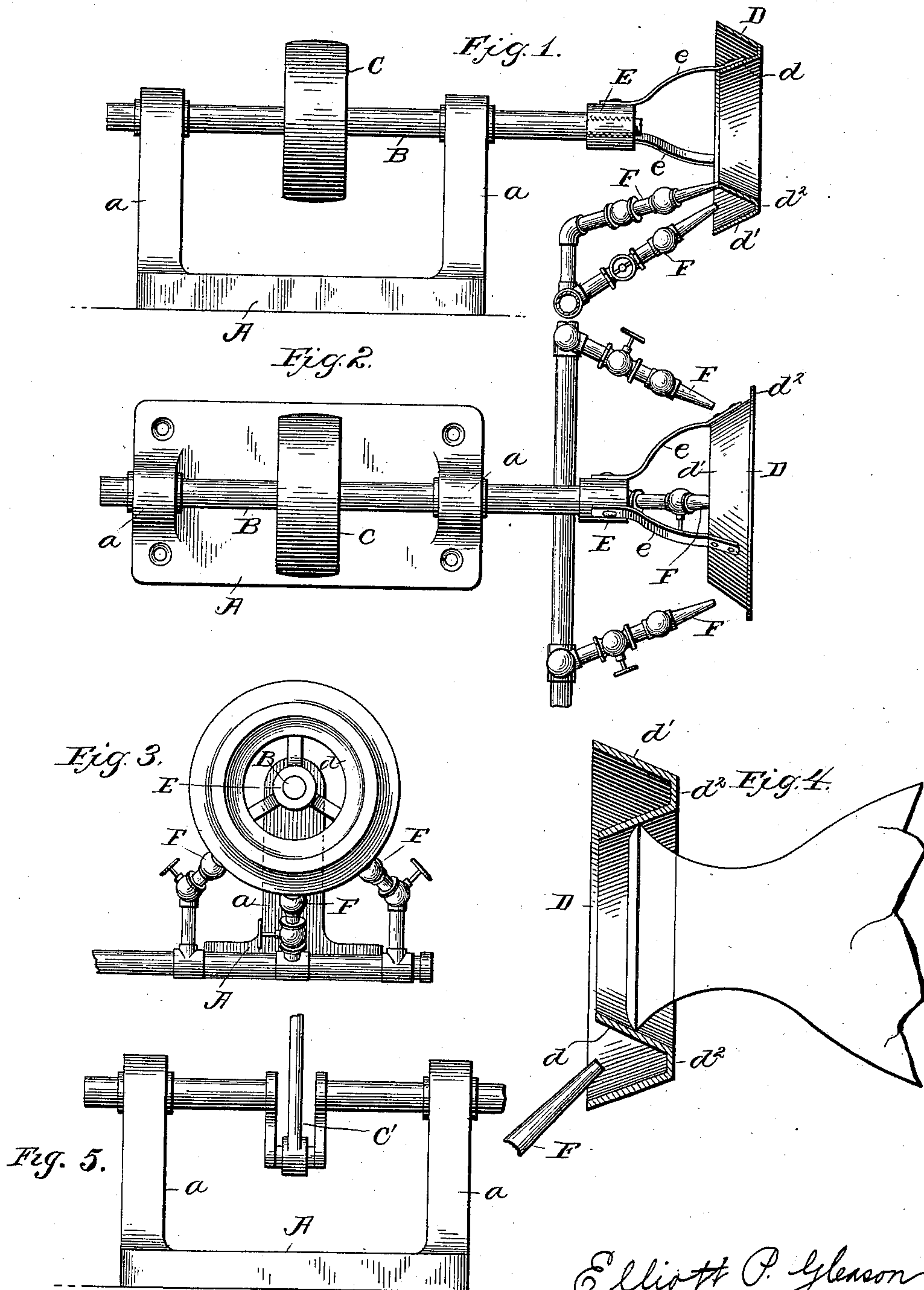
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Patented Jan. 10, 1899.

E. P. GLEASON.
APPARATUS FOR REMOVING BLOW OVERS.

(Application filed Dec. 17, 1897.)

(No Model.)



WITNESSES

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APPARATUS FOR REMOVING BLOW-OVERS.

SPECIFICATION forming part of Letters Patent No. 617,333, dated January 10, 1899.

Application filed December 17, 1897. Serial No. 662,348. (No model.)

To all whom it may concern:

Be it known that I, ELLIOTT P. GLEASON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Apparatus for Removing Blow-Overs; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in devices for removing blow-overs formed in the construction of glass lamp-chimneys, globes, and the like; and its object is to provide a most simple, cheap, and durable apparatus by which the high part of the blow-over may be most quickly and accurately heated, so that when immediately subjected to the chilling action of cold air or water it will crack off evenly all around.

To this end the invention consists in a Bunsen or other suitable burner as the heating means (in lieu of depending upon friction, hot air, electricity, or other sources of heat more or less expensive or otherwise unsatisfactory in use) and a heating-ring, against the outer surface of which ring the flame from said burner is directed and the inner surface of which is made to receive the blow-over, whereby the heat of said flame is most economically utilized and the high part of the blow-over is uniformly heated all around and will accurately crack off when subjected to cold air or water.

The invention also consists in certain peculiarities in the construction of the several parts and in certain novel combination of elements, substantially as hereinafter described, and particularly pointed out in the subjoined claims.

In the accompanying drawings, illustrating the invention, Figure 1 is a side elevation of a device embodying my improvements. Fig. 2 is a plan view of the same, showing a slightly-modified construction of heating-ring. Fig. 3 is an end view of the device. Fig. 4 is a detail view of the preferred form of heating means, showing a blow-over engaged there-

with; and Fig. 5 is a view of a form of device wherein reciprocatory instead of rotary motion is imparted to the heating-ring.

The same letters of reference designate the same parts in the several figures.

A designates an ordinary head having suitable uprights *a*, within which is journaled a spindle B. Attached to the end of said spindle is a chuck E, having arms *e*, which are secured to and support a ring D, which ring is subjected to the heating action of flames issuing from a suitable number of relatively stationary Bunsen or other suitable burners F. Said ring D is constructed with an inner ring or wall *d*, having an open mouth to receive the end of the article having a blow-over to be removed, and said wall is preferably made of a suitable copper composition or other metal capable of retaining heat for a maximum length of time and is preferably tapered inward, as shown in the drawings, to enable the high part of the blow-over to engage the same at some distance from the extreme outer end of the ring and at about the center of said wall, whereby the heat produced is best utilized.

In the operation of the device the spindle B is rotated by suitable power communicated to it by a belt (not shown) and the pulley C on said spindle, as shown in Fig. 1, or, if desired, it may be rocked by means of a suitable power device connected with the lever C', as indicated in Fig. 5, thus causing the ring D to be rotated or reciprocated in respect to the burners and successively bringing various parts of the wall *d* of said ring under the direct influence of the flames, whereby said ring is quickly heated and the necessary high temperature thereof maintained with the use of a less number of burners than otherwise would be required. To further economize in the use of heat, the ring referred to preferably comprises the inner inwardly-tapered wall or ring *d* above mentioned, against one surface of which the flame is directed and against the other surface of which and directly opposite said flame the high part of the blow-over is placed, a reversely-tapered outer ring or shield *d'* to muffle the heat, and the surface *d*², from which said rings project, said rings being arranged to provide a flame-chamber

between them and said portion d^2 closing the outer end of said flame-chamber and confining the heat and flame to within said chamber; but the outer ring and shield while advantageous may be omitted without departing from the spirit of the invention.

It is desirable so to construct the device as to permit the ring to be removed therefrom, whereby heating-rings of various sizes may be interchangeably secured to the device. To this end the chuck E is preferably threaded upon the end of the spindle, as indicated.

The operation is as follows: If it is desired to crack off the blow-over of a globe having a four-inch holder, a heating-ring measuring about four and one-eighth inches at the greatest diameter of its mouth is fitted to the spindle, the flame caused to burn, and the spindle is revolved or rocked. When the ring is hot, a globe having a four-inch flange and blow-over is held in such a manner within the heating-ring, that the high part of the blow-over comes in contact with the heating-ring, the globe being held stationary, whereby only that part of the glass which comes in direct contact with the ring is heated. After holding it there for about one-half a minute, more or less, according to the character of the glass, the globe is removed and a little water or cold air applied to the high part which has just been heated, when the flange will crack off evenly and the globe is ready for milling or sale, as the case may be.

I wish it understood that the construction above described is only the preferred embodiment of my invention and that changes other than those above specified, may be made in the details without departing from the spirit of the invention.

Having thus described the invention, what I believe to be new, and desire to secure by Letters Patent, and what I therefore claim, is—

1. The herein-described device for heating blow-overs to cause the same to crack off when chilled, embodying a burner and a ring interposed between said burner and the part to be cracked, said burner being arranged to direct flame against the outer surface of said ring and said ring being constructed to receive the blow-over to be removed, substantially as described and for the purpose set forth.

2. A heating device for blow-overs, comprising two rings, arranged one within the other to provide a flame-chamber between them, the inner of said rings being constructed to receive the blow-over and said flame-chamber being closed at its front end, combined with a burner arranged to direct flame against the outer surface of said inner ring.

3. In an apparatus for removing blow-overs, the combination of a ring to receive the blow-over, a means for heating said ring, and mechanism for moving said ring relatively to the heating means, substantially as described.

4. In an apparatus for removing blow-overs, the combination of a movable spindle, and a heating-ring removably attached to said spindle and constructed to receive the blow-over to be heated by said ring, substantially as shown and described.

5. A heating-ring for blow-overs, comprising an inner ring or wall to receive the blow-over, an outer ring or shield surrounding said inner ring or wall, a surface from which said rings project, and means for heating said inner ring or wall, substantially as shown and described.

6. A heating-ring for blow-overs, comprising an inner ring or wall to receive the blow-over, said ring or wall being tapered inwardly, an outer shield, surrounding said ring and arranged with respect thereto to provide a flame-chamber between them, a surface closing the forward end of said flame-chamber, and a burner arranged to direct flame against said inner ring or wall, substantially as shown and described.

7. In an apparatus for heating blow-overs, the combination with the spindle and means for moving the same in its bearings, of a chuck removably secured to said spindle and turned therewith, arms projecting from said chuck, a ring carried by said arms and constructed to engage the blow-over, and a stationary burner arranged to direct flame against said ring, substantially as shown and described.

8. The herein-described device for heating blow-overs, consisting of a journaled spindle, means for moving the same in its bearings, a chuck mounted on the end of said spindle and movable therewith, said chuck having projecting arms, a ring carried by said arms, said ring being formed with an open mouth to receive the blow-over, and comprising an inner ring or wall to receive the blow-over, an outer encircling shield arranged with respect to said wall to leave a flame-chamber between them, a surface closing the forward end of said flame-chamber, and a relatively stationary burner, projecting into said flame-chamber and arranged to direct flame against said inner wall, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

ELLIOTT P. GLEASON.

Witnesses:

E. F. GENNERT,
E. WHITNEY.