

(Model.)

M. WARD & W. H. BRUNT.

APPARATUS USED IN ETCHING GLASSWARE.

No. 270,165.

Patented Jan. 2, 1883.

Fig. 1.

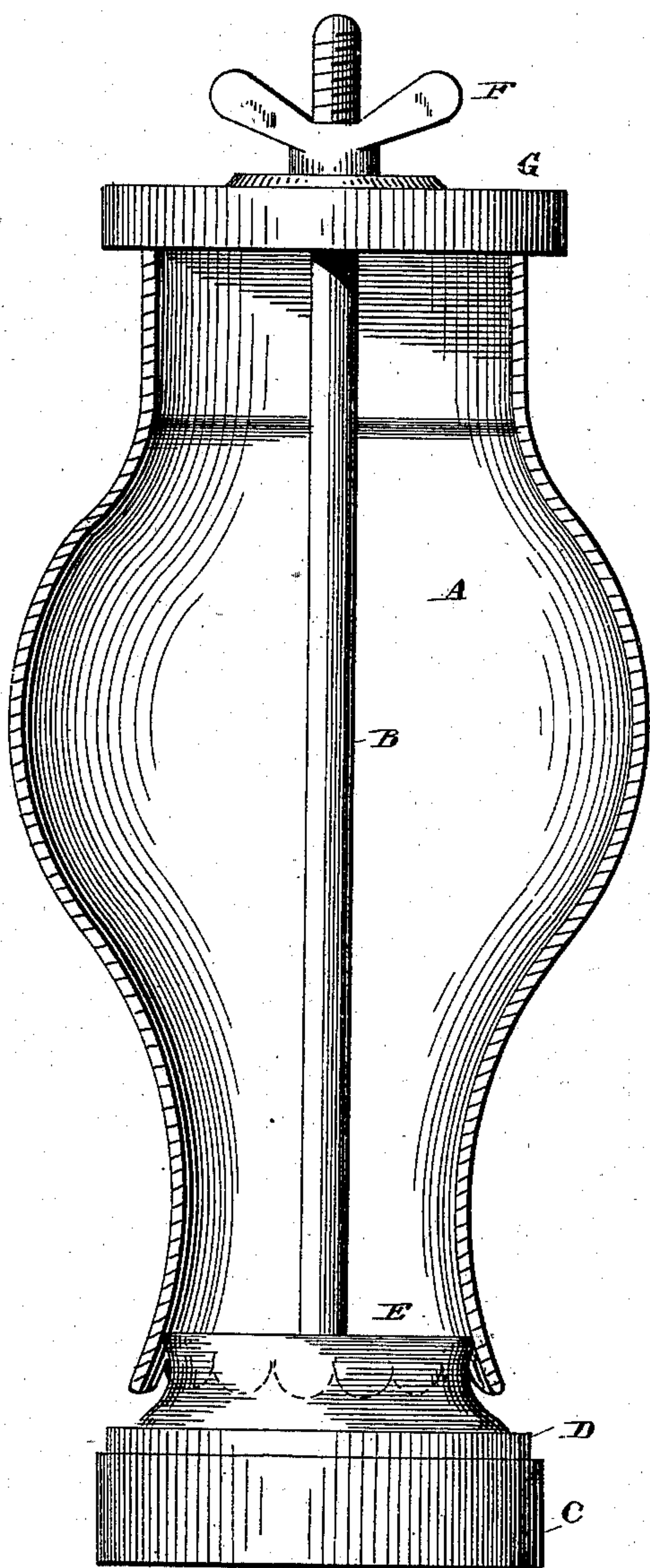
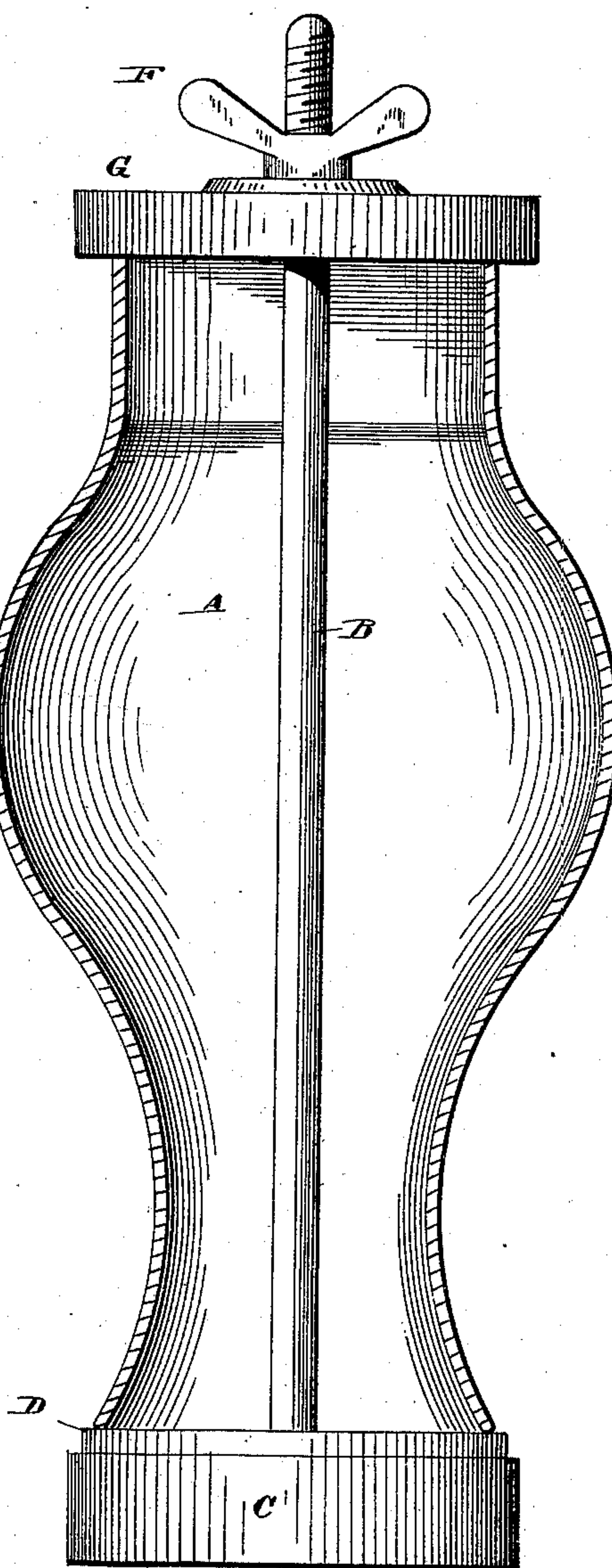


Fig. 2.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

MICHAEL WARD AND WILLIAM H. BRUNT, OF PITTSBURG, PENNSYLVANIA,  
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## APPARATUS USED IN ETCHING GLASSWARE.

SPECIFICATION forming part of Letters Patent No. 270,165, dated January 2, 1883.

Application filed October 24, 1882. (Model.)

*To all whom it may concern:*

Be it known that we, MICHAEL WARD and WILLIAM H. BRUNT, of Pittsburg, in the county of Allegheny, and in the State of Pennsylvania, have invented certain new and useful Improvements in Apparatus used in Etching Glassware; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to certain improvements in the method of constructing that class of lamp chimneys or globes in which the upper portion is made translucent, so as to partially obstruct the light and form a reflecting-surface, and the other portions are made transparent for the free transmission of the rays of light, and also for roughening the outside of tumblers or other articles to any desired extent. In this class of articles it is essential that the roughening, which causes the translucency, should be produced only on the outside of the article, for the reason that should it be on the inside it would afford a surface upon which the products of combustion or carbon from the flame of the lamp would be deposited and held, and from which such products could with difficulty be removed owing to such roughness.

The object of our invention is to provide an improved device which may be clamped to the edges of the chimney or globe, and which will prevent the etching-fluid from entering the article when inserted in the same to the proper extent, so as to confine the corrosive action entirely to the outside of the article.

The above-mentioned object we attain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a sectional view of a lamp-chimney having a corrugated or ornamented upper edge, showing our improved device applied thereto and the article ready to be dipped into the etching-fluid, and Fig. 2 represents a similar view of a plain lamp-chimney, showing our device applied.

The letter A indicates a lamp-chimney, which

may be provided with an ornamental top, as shown in Fig. 1, or with a plain edge, as indicated in Fig. 2 of the drawings.

The letter B indicates a rod of metal or other suitable material, provided at one end with a disk of lead or other suitable material, as indicated by the letter C, the upper face of which forms a seat for the annulus D, which may be of rubber or other suitable packing material.

The letter E indicates an additional annulus, which is employed when a chimney having an ornamental or corrugated edge is being operated upon, the said annulus extending into the chimney and packing against the sides, so as to exclude the etching-fluid when the article is dipped. When a plain chimney is to be treated the annulus E is omitted and the upper edge of the chimney is clamped directly against the annulus D. The upper end of the rod B is screw-threaded, and is provided with a nut, F, and a disk, G, the latter of which is adapted to set over the base of the chimney, and may be clamped thereon by means of the nut, so as to effectually exclude the etching-fluid when the article is dipped. In some instances, for particular purposes, the central rod may be dispensed with and two or more rods, which may extend upward on the outside of the article, substituted, and be secured to the disk by screw-nuts, as before mentioned.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

A device for closing the ends of lamp-chimneys and other hollow articles of glass or earthenware to be etched, the same consisting of a disk of suitable material carrying one or more annuli, and provided with clamping mechanism by which it can be secured to the article, substantially as specified.

In testimony whereof we affix our signatures, in presence of two witnesses, this 13th day of October, 1882.

MICHAEL WARD.  
W. H. BRUNT.

Witnesses:

W. N. JARRETT,  
MICHAEL JARRETT.