C. H. W. RUHE.

Machine for Flaring and Crimping Lamp-Chimneys, &c.

No. 209,425. Patented Oct. 29, 1878.

Fig: 1.

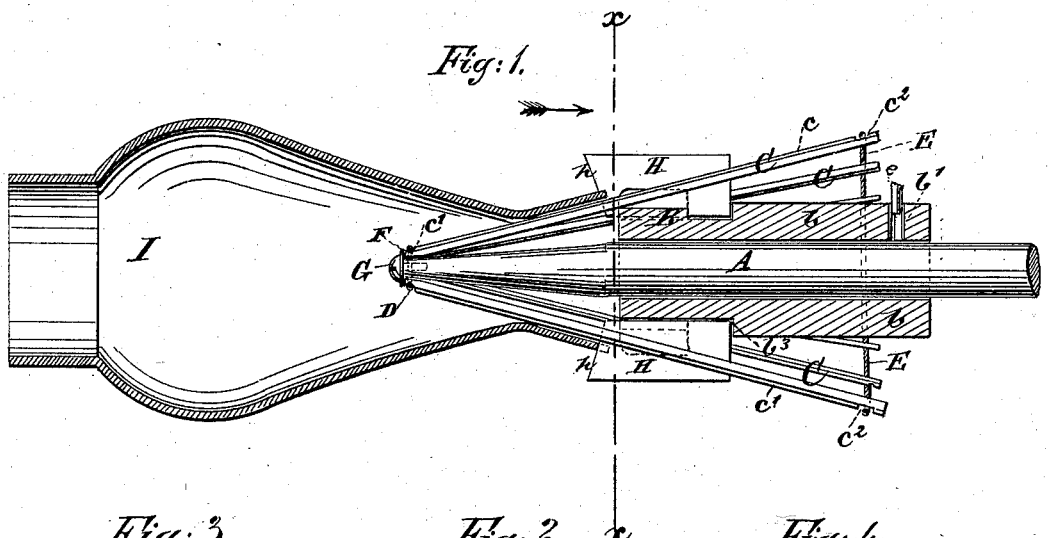


Fig: 3.

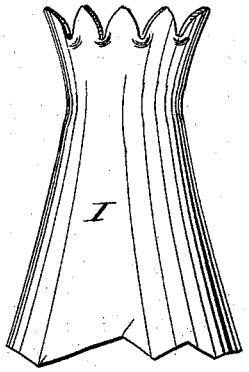


Fig: 2.

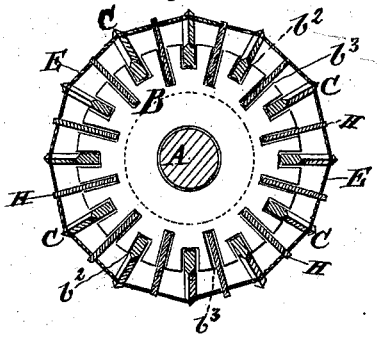


Fig: 4.

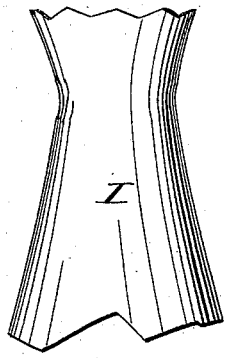


Fig: 5.

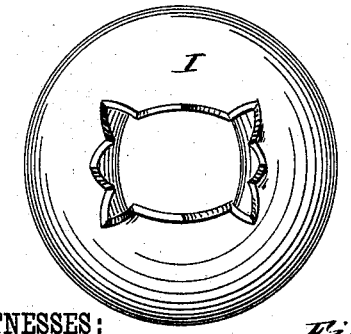
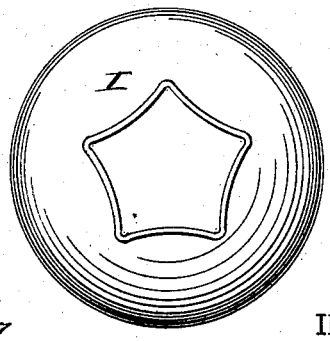


Fig: 6.

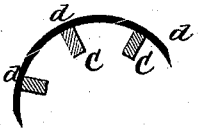


WITNESSES:

A. W. Almqvist

Chas. Nida.

Fig. 7



INVENTOR:

C. H. W. Ruhe

BY Munn & Co

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UNITED STATES PATENT OFFICE.

CHARLES H. W. RUHE, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR FLARING AND CRIMPING LAMP-CHIMNEYS, &c.

Specification forming part of Letters Patent No. **209,425**, dated October 29, 1878; application filed August 24, 1878.

To all whom it may concern:

Be it known that I, C. H. WILLIAM RUHE, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Edge-Ornamenter for Glassware, of which the following is a specification:

The object of my invention is to provide a simple and effective adjustable tool for widening the necks of glassware after the same has been formed by blowing in a mold, or by hand, and for otherwise ornamenting the edge with grooves or corrugations, notches or scallops, &c.

The invention consists in the combination of a slotted collar, sliding upon a stationary shaft, with a series of surrounding bars, pivoted at the forward end of the said shaft and resting in the said slots, and expansible by the said sliding collar; and in the combination, with the stationary shaft, the surrounding pivoted expansible bars, and the slotted sliding collar, of radial knives secured in the said collar alternately with the said bars, as will be hereinafter described.

In the accompanying drawings, Figure 1 represents a longitudinal section of my improved ornamenting tool in position to ornament the top of a glass lamp-chimney. Fig. 2 is a cross-section of the same, taken on the line *x x* of Fig. 1, and seen in the direction of the arrow. Figs. 3 and 4 are side views, and Figs. 5 and 6 end views, of lamp-chimneys, showing four of the various forms of ornamentation which may be produced by the said tool. Fig. 7 shows a modification of the bars for expanding circular forms without grooves or corrugations.

Similar letters of reference indicate corresponding parts.

A is a shaft, secured stationary in horizontal position when in use. B is a collar, formed upon a sleeve, *b*, arranged to slide upon the shaft A by means of a lever (not shown) that is connected to the arms *e e* at the outer end of sleeve. Through the circumference of the collar B are cut radial slots b^2, equidistant from each other and parallel with the axis of the shaft A. Between the slots b^2 are similarly arranged, but narrower and deeper, slots b^3.

C is a series of bars, (straight or curved, according to requirement,) arranged to rest one in each of the slots b^2, and thus to surround the shaft and collar. The bars are provided with an edge, *c*, on their upper or outer side, and a notch, c^1, across their forward end, at which end they are rounded off lengthwise underneath, and are pivoted around the forward end of the shaft A by a surrounding wire, D, resting in all the notches c^1 simultaneously, and between which wire D and the shaft they are thus clamped and held in position, while allowing their rear ends to be more or less distant from the shaft A to vary the angle at the apex of the cone which they form around the said shaft by sliding the collar B forward or backward on the latter. The bars C are contracted around the shaft A at the backward movement of the sliding collar by a spiral or other spring, E, acting by contraction, said spring resting in notches c^2 on the outer side of the bars C at their rear end, and thus surrounding the cone of bars at its base. The shaft A is tapered to a small diameter at its forward end, in order to correspondingly lessen the diameter of the cone of bars near the apex of the latter and adapt it for use even in glassware of very small openings. The bars C are kept from sliding off the forward end of the shaft A by means of a washer, F, which is pressed against their forward ends by the head of the screw G, whose shank is threaded into the end of the shaft A.

H are steel plates, with inclined forward cutting-edges *h*, and are secured by wedges or otherwise in the slots b^3 of the collar B between the slots b^2 in which the bars C rest. The glass chimney I (or other glassware) is held while yet nearly fusibly hot by the clamping-tongs at large or base end over the pivoted ends of the bars C, and then the sleeve *b* is moved upon the shaft A to expand the bars *c* to expand the chimney, and cut the scallops, which may be done to any desired extent. By adjusting the cone to a diameter much in excess of the opening in the top of the chimney I, and removing occasional or alternate bars C, deep grooves and varied forms, such as shown in Figs. 5 and 6, are produced, while at the same time the end opening is expanded to flare or gradually widen outward; and by expanding the arms *c* the more or less scal-

lops are formed, as in Fig. 3, or shallow notches, as in Fig. 4, thus varying the ornaments indefinitely by the adjustment of but one tool. To produce circular expansion without grooves, the bars C are provided with curved plates *d*, thinned at their edges and overlapping each other, as seen in Fig. 7, to allow of expansion and contraction without presenting any indenting-edge for contact with the glass.

The chimney is to be held rigidly during the expansion and contraction of the arms C; and the surface of the said bars may be ornamented with figures, which will be impressed in the glass.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the slotted collar B, fitted to slide upon the stationary shaft A, with the surrounding bars C, pivoted at the forward end of the shaft A, and resting in the slots b^2 of the collar B, substantially as and for the purpose set forth.

2. The combination, with the stationary shaft A, the surrounding pivoted expansible bars C, and the slotted sliding collar B, of the radial knives *h* H, secured in the collar B alternately with the bars C, substantially as and for the purpose set forth.

CHARLES HENRY WILLIAM RUHE.

Witnesses:
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GEORGE SWEITZER.