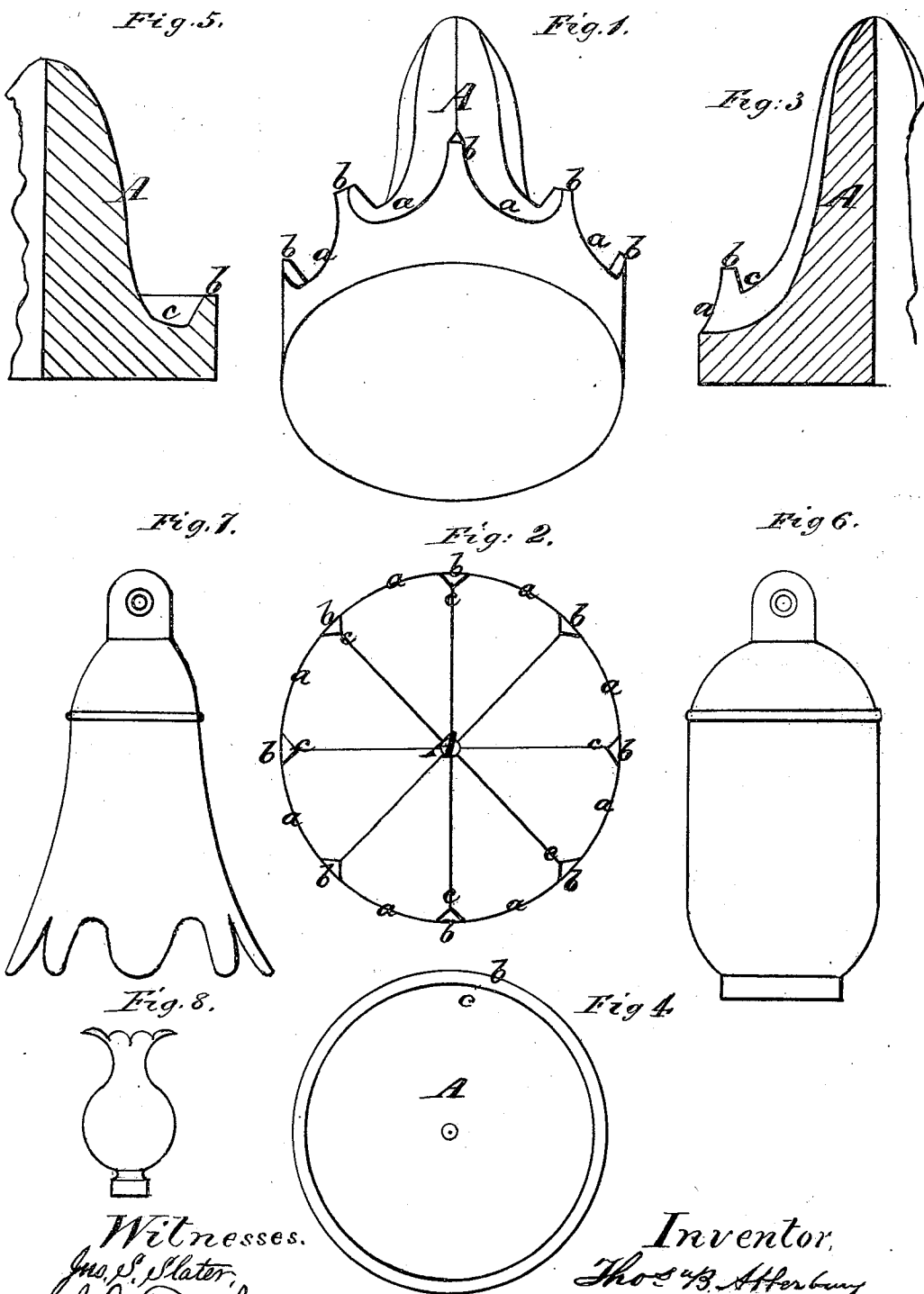


T. B. ATTERBURY.

TOOLS FOR FLARING AND CRIMPING LAMPS, CHIMNEYS, &c.

No. 170,431.

Patented Nov. 30, 1875.



Witnesses.
Jas. S. Slater,
J. C. Fernald

Inventor,
Thos. B. Atterbury
by
Mason Fenwick Lawrence
Attorneys.

UNITED STATES PATENT OFFICE.

THOMAS B. ATTERBURY, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO
DITHRIDGE & CO., OF SAME PLACE.

IMPROVEMENT IN TOOLS FOR FLARING AND CRIMPING LAMPS-CHIMNEYS, &c.

Specification forming part of Letters Patent No. **170,431**, dated November 30, 1875; application filed
November 12, 1875.

To all whom it may concern:

Be it known that I, THOMAS B. ATTERBURY, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Tools for Flaring and Crimping or Scalloping Smoke-Glasses, Lamp-Chimneys, Shades, and other tubular glassware; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of the fluted cone as improved by me. Fig. 2 is a top view of the same. Fig. 3 is a vertical half-section of the cone. Fig. 4 is a cone as improved, slightly different from the plan shown in Fig. 1. Fig. 5 is a vertical half-section of the cone shown in Fig. 4. Fig. 6 is a smoke-bell made by the ordinary process, as it appears previously to being placed upon the cone. Fig. 7 is the smoke-bell as it appears after it has been placed upon the cone and pressed thereon until it touches the base of the cone. Fig. 8 is a lamp globe and chimney opened and crimped at its top by my invention.

This invention relates to an improvement on the device heretofore used for producing the flaring form of, and crimps or scallops in, smoke-bells and other tubular glassware, such device being shown in Letters Patent No. 57,063, dated August 14, 1866, and granted to James S. and Thomas B. Atterbury.

The nature of the invention now made consists in a conical crimper or "former," provided with a stop at the base, and a little outside of the circumference of the cone, whereby the extent of the flare imparted to the glass article is accurately determined and controlled. It also consists in making scallops between the projections which form the stop, whereby the articles are flared, fluted along their length, and also made with scallops or crimps around their upper edges, and also the greatest accuracy obtained in the flare produced, and at the same time the division-lines at the crimping very nicely defined.

A is the cone, fluted from top to base, and therefrom to the circumference of its base the flutes are continued in form of scallops *a*. Between the respective scallops *a* short division projections *b b* are formed, which ex-

tend upward a proper distance from the base of the scallops. These projections form a stop, and on their inner side are made with a knife-edge, and of a less depth than on their outer side, and between these knife-edges and the circumference of the cone a narrow annular space, *c*, is formed.

Instead of forming scallops *a a* and separated projections *b b*, an annular projection, *b*, Fig. 4, may be provided, and instead of fluting the cone, it may be plain on its surface.

The plain cone with annular stop will answer for flaring glass articles which do not require to be fluted.

With the cone or crimper and former heretofore used, it has been difficult to prevent one side of the article being crimped from descending on the cone farther than the other side, and thus causing crooked ware to be produced; but by means of the stop, the moment the article arrives at the base of the cone its further descent on any side of the cone is prevented, and the most perfect work will be produced, as the stop enables the workman to finish the article in a true and accurate manner. The stop being divided into parts, and made with a knife-edge, enables the workman to get finely-defined crimping-lines, and to make very handsome work.

In operation with the cone a smoke-bell, made as in Fig. 6, has its end reheated, and, while hot, it is forced properly over the cone, and the result is the production of an article similar to that shown in Fig. 7, or an article having a flaring form, but not scalloped or fluted.

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

1. The former A, made with a stop, *b*, for shaping tubular glassware, substantially as described.

2. The former A, made with separated projections, which form a stop, *b*, for forming and shaping tubular glassware, constructed and adapted to operate substantially as described.

THOS. B. ATTERBURY.

Witnesses:

E. G. KROHAN,
CHARLES TAUER.