

(No Model.)

E. J. RAMBO.
TOOL FOR CRIMPING GLASSWARE.

No. 438,019.

Patented Oct. 7, 1890.

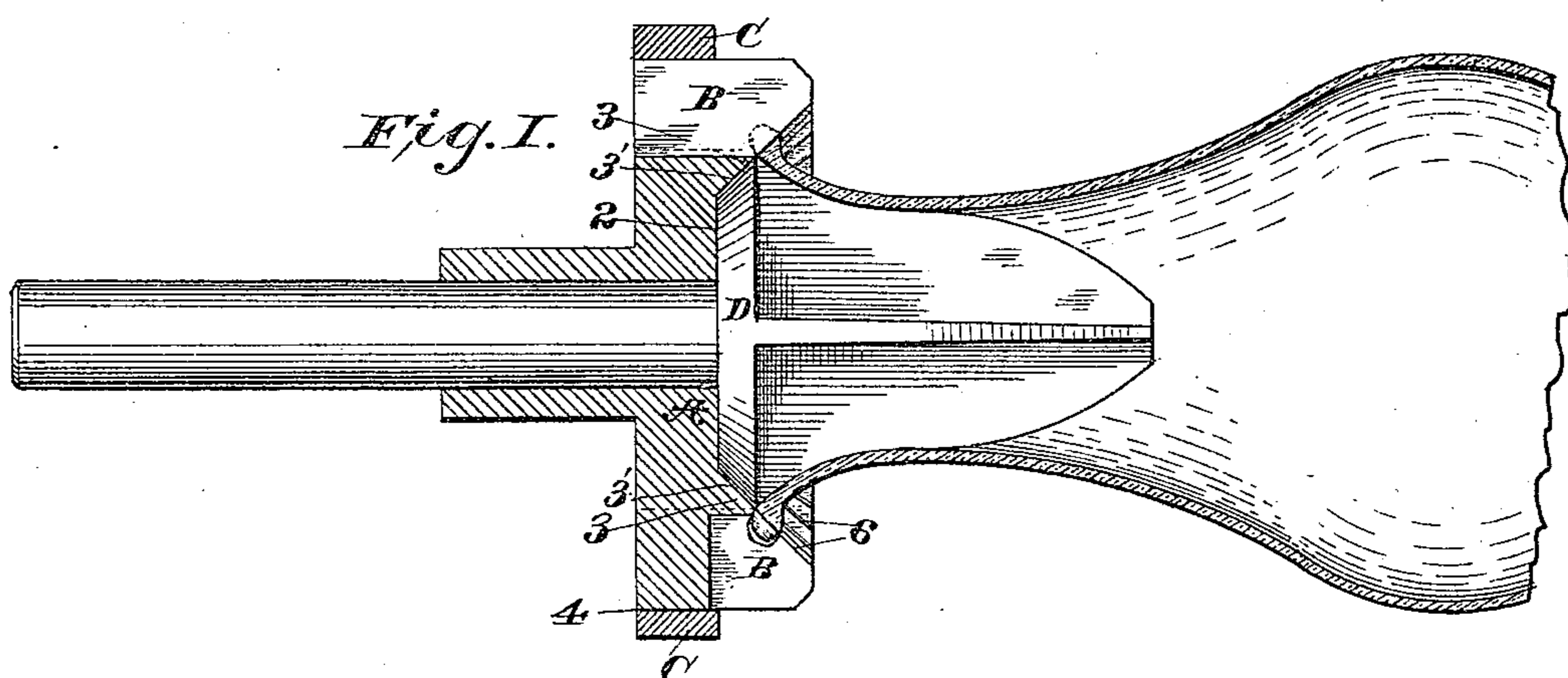


Fig. II.

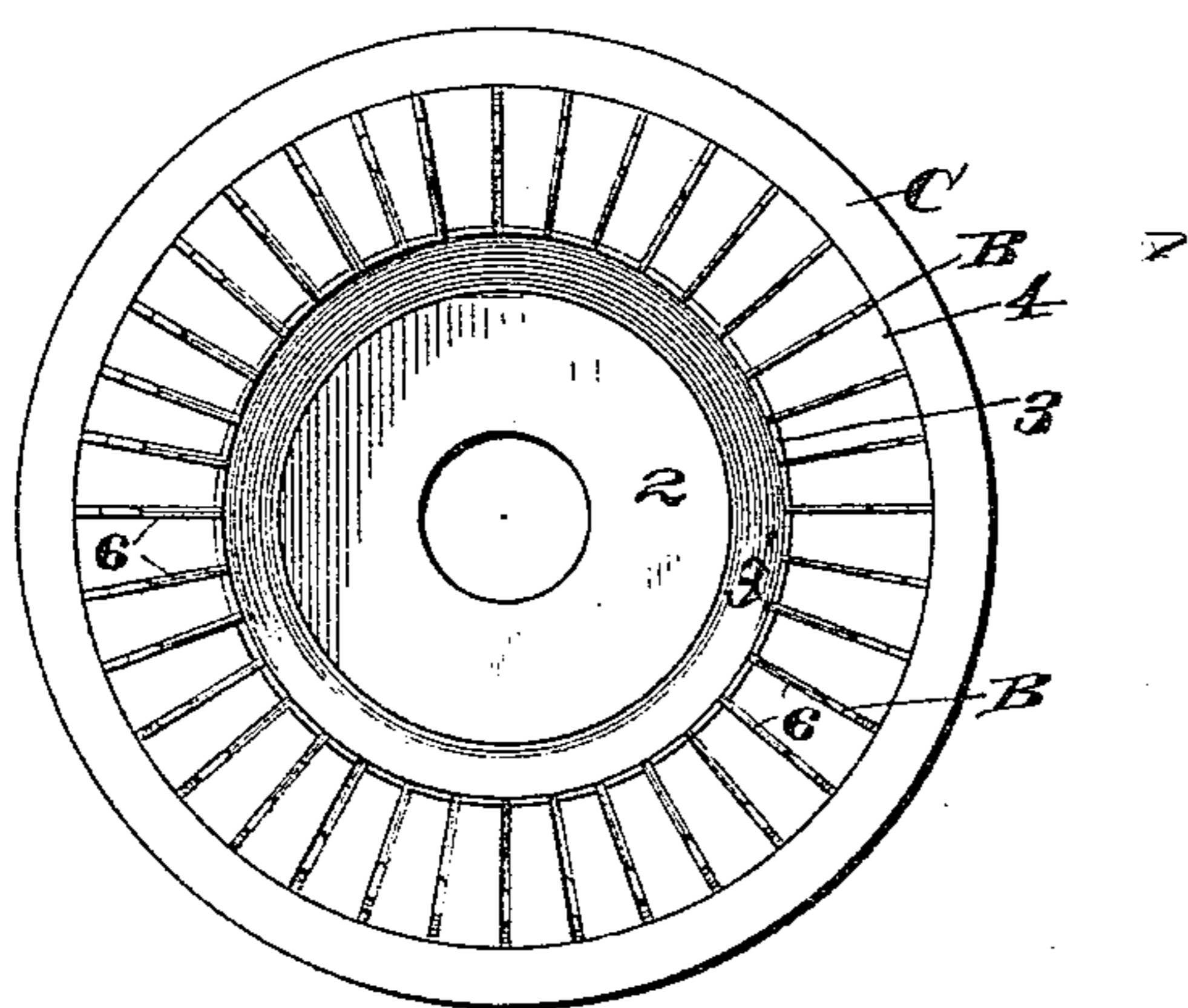


Fig. III.

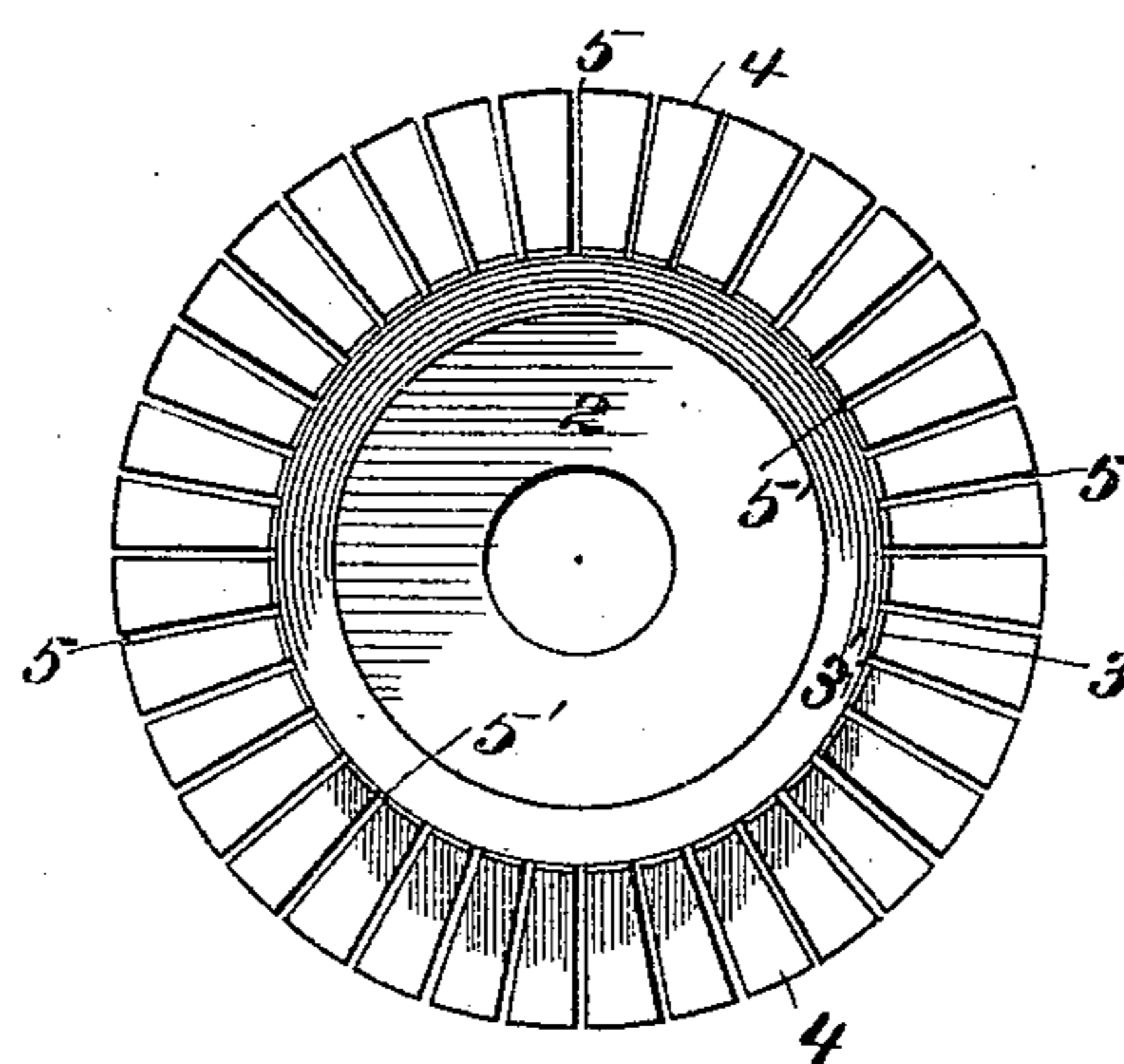


Fig. IV.



Witnesses:
E. J. Walker
E. J. Clark

Inventor.
Elmer J. Rambo
by *Chas. J. Hedrick*
his attorney.

UNITED STATES PATENT OFFICE.

ELMER J. RAMBO, OF FINDLAY, OHIO.

TOOL FOR CRIMPING GLASSWARE.

SPECIFICATION forming part of Letters Patent No. 438,019, dated October 7, 1890.

Application filed August 11, 1890. Serial No. 361,661. (No model.)

To all whom it may concern:

Be it known that I, ELMER J. RAMBO, a citizen of the United States, residing at Findlay, in the county of Hancock and State of Ohio, have invented certain new and useful Improvements in Tools for Crimping Glassware, of which the following specification is a full, clear, and exact description.

This invention relates more particularly to the tools for forming crimps in the tops of flared lamp-chimneys by means of radiating and inclined knife-edges, in connection with a guide or former over which the chimney is forced, and which may be utilized to flare the chimney-top in advance of crimping, but the improvements constituting the said invention are included for all the uses to which they may severally be adapted.

In accordance with the said invention the crimper proper or knife-edge part of the tool is composed of a disk with solid center and slotted periphery, a series of knives set in said slots, and a band or tire which surrounds the said slotted periphery and confines the knives in the slots. Further, the crimper is provided with an annular projection at the inner edges of the knives, which preferably extend a short distance into the outer surface of said annular projection, which is slotted for that purpose. The projection preferably has an inclined inner surface in line with the radiating and inclined knife-edges. The base of the guide or former is set within the circle of knives.

In the accompanying drawings, which form part of this specification, Figure I is a vertical central section of the tool complete, the view showing also a chimney in connection therewith. Fig. II is a plan of the crimper proper. Fig. III is a plan of the disk with annular projection and slotted periphery, and Fig. IV is a side view of one of the knives detached.

The disk A has a center 2, an annular projection 3, and a periphery 4, provided with radial slots 5. As shown, the slots 5 enter a short distance into the outer surface of the projection 3, as indicated by the nicks 5'. The knives B are of wrought or sheet metal, (steel or iron,) and can be made very sharp, and be sharpened as desired. They have their edges 6 inclined at the same angle as the interior

surface 3' of the projection 3. They are fixed in the disk A by being set in the slots 5, which are of the same width as the knives and confined by the band or tire C, which surrounds the periphery of the disk A. The base of the guide or former D fits within the space inclosed by the inclined surface 3' of the annular projection 3, and may be rotated or oscillated therein; or a stationary guide or former may be used. As shown, the former D is movable on the disk. The glass chimney to be crimped or to be flared and crimped while its end is sufficiently hot and plastic is forced over the guide or former till it meets the edges of the knives B, and then it is pressed forward until the edges have entered the proper distance into the glass. The chimney is then withdrawn. As shown, there are thirty-six knives for making the crimps, and consequently the tool will make as many comparatively fine crimps in the finished chimney. A greater or less number of knives may be used. The arrangement is especially desirable for making fine crimps, since it is easy to cut as many slots as may be desired in the disk and to supply them each with a knife. The knives being supported in the disk outside the largest circle of the guide or former, sufficient material is left (even when the knives are closely set) to hold them firmly. The same former or guide may be used with different crimpers. Should any knife be broken, it can easily be replaced.

I claim as my invention or discovery—

1. The crimper composed of the disk with an annular projection and a slotted periphery outside said projection, the knives set in the slots in said periphery, and the exterior band or tire, substantially as described.

2. The crimper composed of the disk with an annular projection and a slotted periphery outside said projection, and the knives fixed in the slots in said periphery, in combination with a guide or former within the circle of knives, substantially as described.

3. The crimper composed of the disk with slotted periphery and an annular projection having an inclined inner surface, and the knives set in the slots in said disk with the upper edges inclined in continuation of said inclined surface, substantially as described.

4. In combination with a guide or former,

a crimper-disk having a slotted periphery beyond the largest circle of said guide or former, and a number of separate knives set in said periphery, and thereby supported at points
5 beyond the said guide or former, substantially as described.

5. A crimper comprising a disk with slotted periphery, and a number of separate knives having their lower ends set in said slots the

full depth of said knives, substantially as described.

In testimony whereof I have signed this specification in the presence of two witnesses.

ELMER J. RAMBO.

Witnesses:

JASON BLACKFORD,
FRANK P. BLACKFORD.