O. P. JACKSON.

Method and Apparatus for Flaring Glassware.

No. 214,150. Patented April 8, 1879.

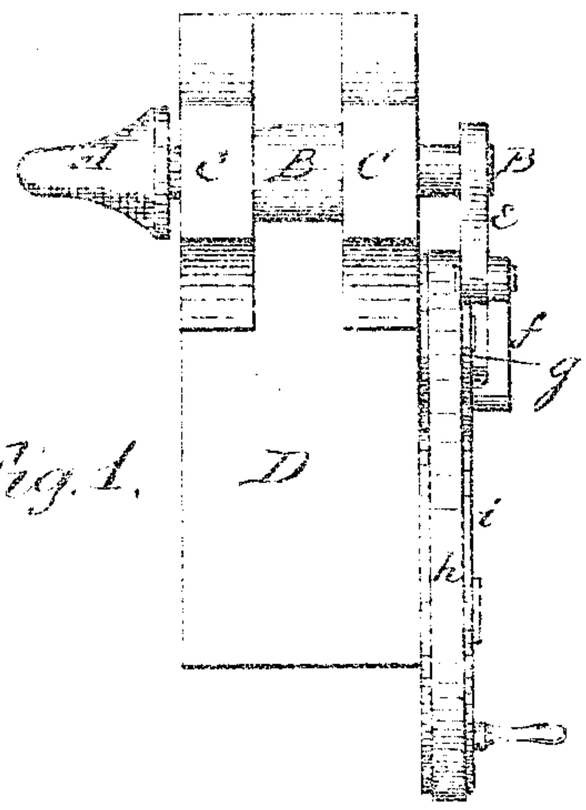


Fig. 1.

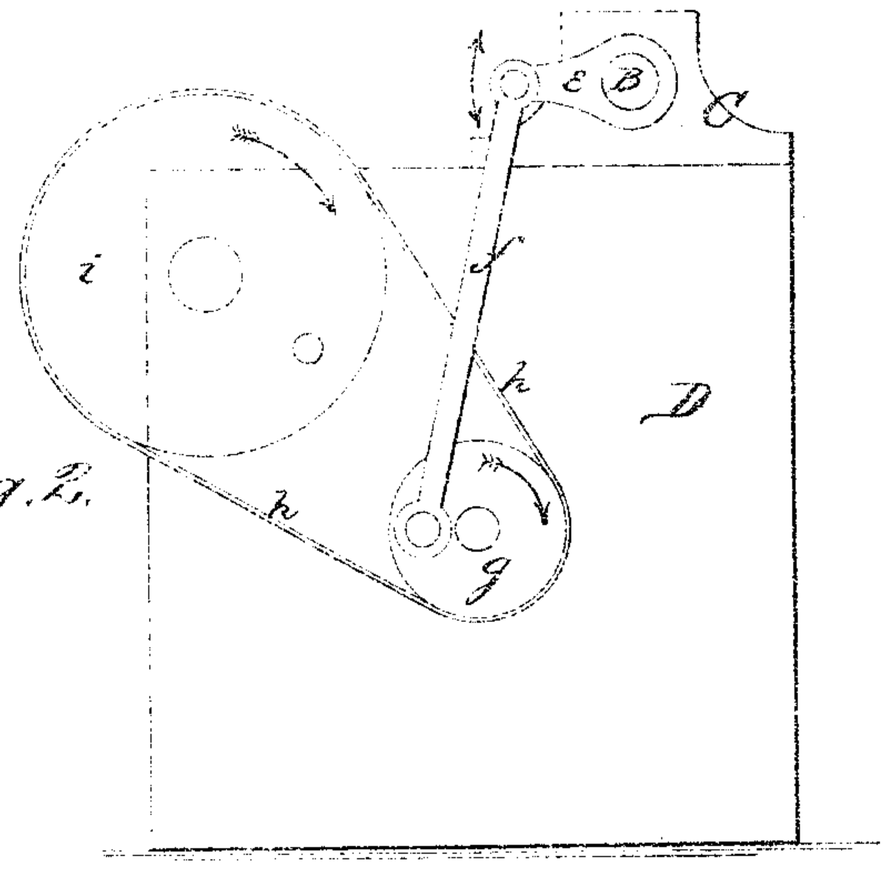
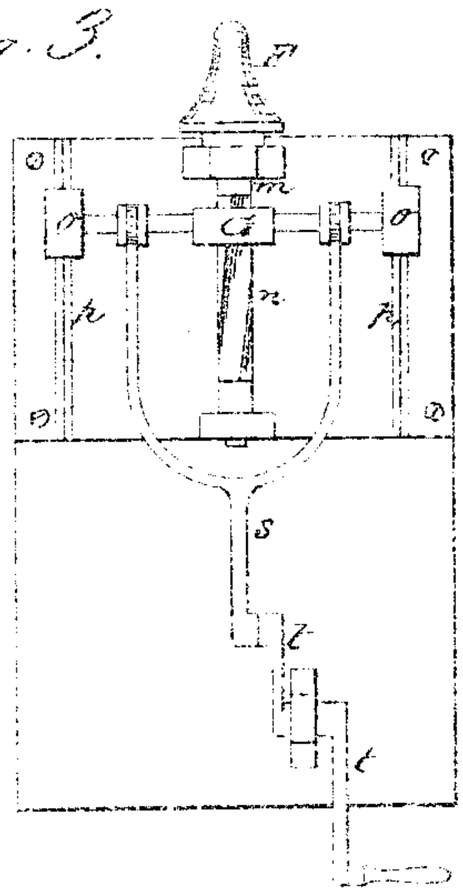


Fig. 2.

Fig. 3.



Witnesses
F. A. Belding.
L. Smith.

Oliver P. Jackson
Inventor
by Connolly Bronwell & Fyke
Attorneys.

UNITED STATES PATENT OFFICE.

OLIVER P. JACKSON, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN M. PATTERSON, OF SAME PLACE.

IMPROVEMENT IN METHODS AND APPARATUS FOR FLARING GLASSWARE.

Specification forming part of Letters Patent No. **214,150**, dated April 8, 1879; application filed March 4, 1879

To all whom it may concern:

Be it known that I, OLIVER P. JACKSON, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Method of and Apparatus for Flaring Glassware; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a plan view, and Fig. 2 a side elevation, of my apparatus. Fig. 3 is a plan of a modification.

This invention relates to a method of flaring glassware and apparatus therefor; and consists in oscillating a suitably-shaped expanding or flaring tool on a fixed axis while the article is forced against it; and in the construction and combination of devices for giving the required oscillation, substantially as hereinafter fully described and claimed.

Glassware is flared in various modes. The article is forced upon a stationary plug or former, which, entering the mouth of the article, expands it to the required degree. The objection is made to this mode that it causes the plastic glass to buckle and thicken beyond the tool, thereby destroying its previous outline to some extent. Another way is to force the article upon a revolving tool, or force a stationary tool in the article while the latter is made to revolve. The objection is made to this way that the constant revolution "drags" the glass and gives the article a threaded and uneven appearance, thus destroying its beauty and translucency.

My object is to avoid all these objections; and to that end my invention is as follows:

A designates the expanding-tool, being of the solid character and form shown, or of any shape found suitable to the grade of work to be done. This forms the end of a shaft, B, which is stepped in the bearings C on a suitable base, D. On the other end of shaft B is keyed a crank, *e*, and a pitman, *f*, connects it to a wrist-pin on wheel *g*, which is revolved by a belt, *h*, passing over a wheel, *i*, which can be revolved by hand or power.

Revolution of wheel *i* causes wheel *g* to revolve, carrying its wrist-pin around. This reciprocates the pitman *f*, and it, through the crank *e*, oscillates the shaft B and former A. Thus the former runs back and forth over the same surfaces, smoothing down the glass perfectly, and preventing the undue dragging of the glass and consequent threading.

It is obvious that, instead of the former, the article itself may be oscillated.

Various devices can be used for giving the oscillatory movement. Fig. 3 exhibits another in plan. F is the former on shaft *m*, having the square twisted portion *n*. G is a nut, bored out to fit the twist, and guided by the cross-head *o* sliding on the parallel shears *p*. Nut G is reciprocated by the pitman *s* and crank *t*, and, being prevented from revolving, forces the shaft *m* to oscillate slightly.

Other devices can be readily substituted for those shown to produce the oscillatory movement of the former, or of the article under manipulation, as mechanical knowledge will suggest various devices for the purpose.

I claim as my invention—

1. The herein-described mode of flaring glassware, consisting in forcing the article upon a suitably-shaped flaring-tool and oscillating the tool on a fixed axis, substantially as described.

2. A flaring-machine for glassware, comprising a suitably-shaped tool or former and means for giving the same an oscillatory motion, substantially as described.

3. The described flaring-machine, consisting of the following elements in combination: a flaring-tool, a shaft axially fixed to the same and adapted to receive oscillatory motion, and means, substantially as described, for giving it said motion.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of March, 1879.

OLIVER P. JACKSON.

Witnesses:
JOHN M. PATTERSON,
THOS. J. MCTIGHE.