No. 766,193.

PATENTED AUG. 2, 1904.

C. J. NOLAN.

APPARATUS FOR FIRE POLISHING GLASS.

APPLICATION FILED APR. 25, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

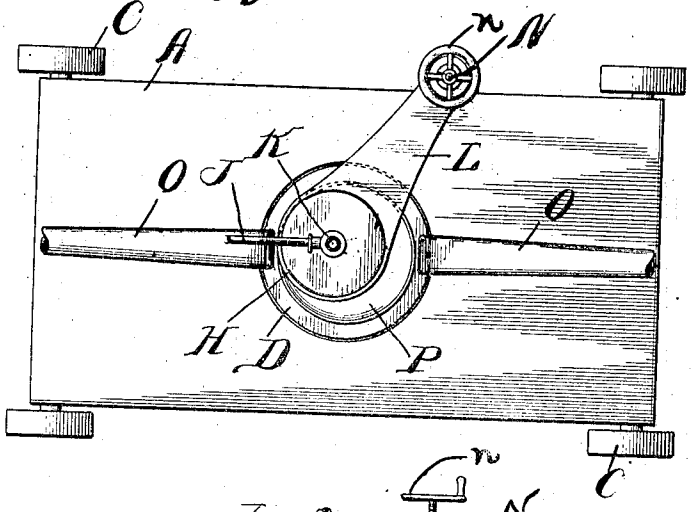
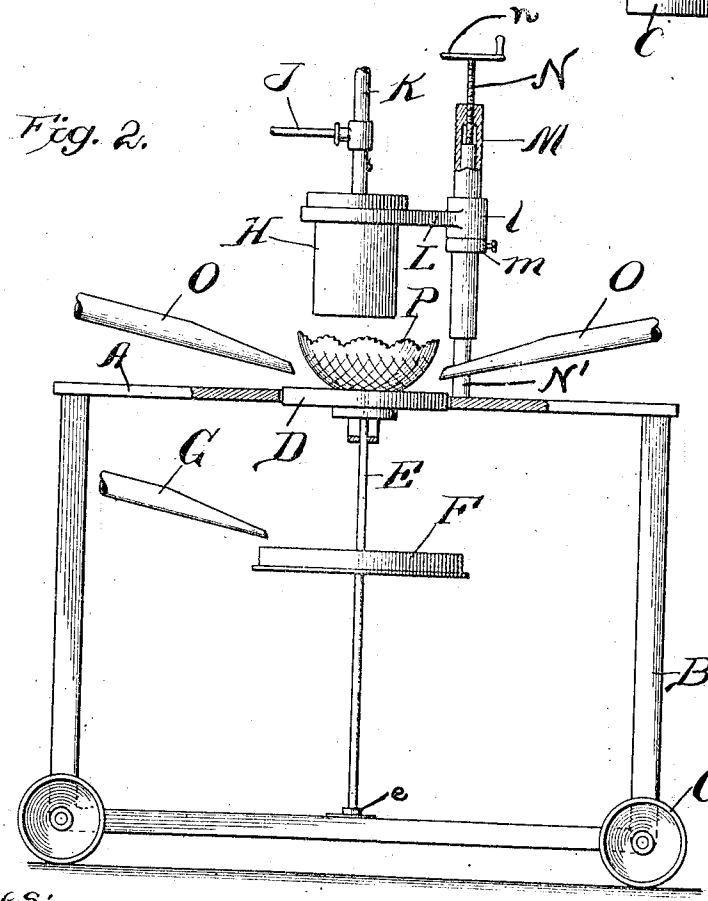


Fig. 2.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

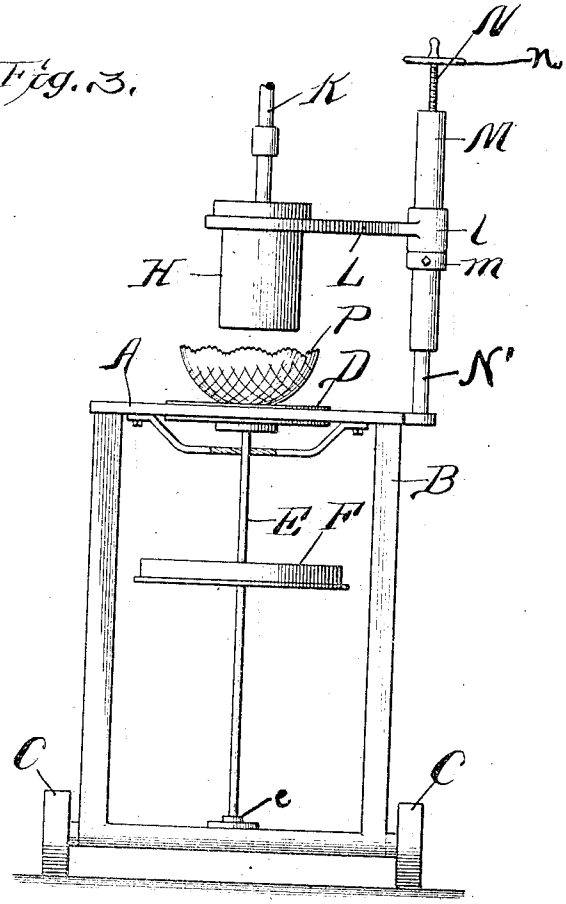
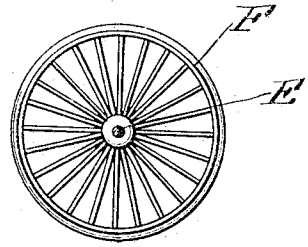


Fig. 4.



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No. 766,193. Patented August 2, 1904.

UNITED STATES PATENT OFFICE.

CORNELIUS J. NOLAN, OF TOLEDO, OHIO, ASSIGNOR TO THE LIBBEY GLASS COMPANY, OF TOLEDO, OHIO, A CORPORATION OF OHIO.

APPARATUS FOR FIRE-POLISHING GLASS.

SPECIFICATION forming part of Letters Patent No. 766,193, dated August 2, 1904.

Application filed April 25, 1904. Serial No. 204,873. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS J. NOLAN, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Apparatus for Fire-Polishing Glass, of which the following is a specification.

My invention relates to improvements in apparatus for fire-polishing glass articles.

The object of my invention is to provide an apparatus which is especially adapted for the practice of my improvement in this art as set forth in my copending application, which discloses a process whereby one surface of a glass article is kept cool to maintain the shape of the article while the opposite surface is being subjected to a polishing-flame. This and such other objects as may hereinafter appear are attained by my invention, which may be conveniently embodied in the form shown in the accompanying drawings, in which—

Figure 1 is a plan view of a convenient form of apparatus for practicing my improved process. Fig. 2 is a side elevation of the same apparatus. Fig. 3 is an end elevation of the same, and Fig. 4 is a plan view of the motor-wheel.

Like letters of reference indicate the same parts in the several figures of the drawings.

Referring by letter to the accompanying drawings, A indicates the top of a portable table or carriage, which is supported upon the legs B and the wheels or rollers C. Mounted within the table-top A is a rotatable plate D, which is carried upon a spindle E, the spindle E being journaled in the bottom of the frame of the apparatus at *e* and being provided with convenient means for its rotation, such means as illustrated in the drawings consisting of an air motor or wheel F, which is adapted to be operated by an air-blast from the nozzle G.

H is a gas-burner to which gas may be supplied through the pipe J and an air-blast through the pipe K, the gas-burner being carried upon the arm L, upon which is formed a sleeve *l*, which is angularly adjustable or rotatable upon a sleeve M and is supported in position by a collar *m*. The sleeve M is mounted upon a standard N′ and is provided with an adjusting-screw N, which has screw-threaded engagement with the sleeve M and which abuts against or rests upon the top of the standard N′. The screw-threaded shaft N is provided with a hand-wheel *n*, by means of which it may be rotated.

O O are nozzles through which blasts of cold air may be projected against the glass article or blank P, which is mounted upon the rotatable plate or disk D.

While I have shown my invention embodied in a light, inexpensive, and convenient form, it is obvious that the essence of my invention does not relate either to the size, proportion, or exact construction of the parts as shown, but that wide variations in these regards may be made as a matter of mechanical skill, shop expediency, or convenience without departing from the spirit of my invention, which contemplates such equivalent structures.

I claim—

1. The combination with a rotatable support, of means for rotating said support, means for projecting a cooling medium against one surface of an article carried by said support, and means for simultaneously projecting a polishing-flame against another surface of said article.

2. The combination with a support, of means for projecting a cooling medium against an article carried by said support, and means for simultaneously projecting a polishing-flame against said article.

3. The combination with a rotatable support, of means for rotating said support, means for projecting a plurality of cooling-jets against an article mounted upon said support, and means for simultaneously projecting a polishing-flame against said article.

4. The combination with a rotatable support, of means for rotating said support, means for keeping an article mounted upon said support sufficiently cool to prevent the distortion thereof, and means for simultaneously projecting a polishing-flame against said article, said means comprising a burner carried by an angularly-adjustable arm.

5. The combination with a rotatable sup-

port and means for applying a cooling medium to one surface of an article carried by said support, of means for projecting a polishing-flame against another surface of said article, said means comprising a standard, a sleeve mounted upon said standard, means for vertically adjusting said sleeve, an angularly-adjustable support carried by said sleeve, a burner carried by said support, and means for supplying fuel to said burner.

6. In a device of the class described, the combination of a carriage, a rotatable plate carried by said carriage, an air-motor arranged to rotate said plate, a plurality of nozzles, means to project a cooling medium against the exterior of an article carried on said plate, and means for projecting a polishing-flame against the inner face of said article, said means comprising an upright carried by said framework, a sleeve mounted upon said upright, means for vertically adjusting said sleeve, a horizontally-adjustable arm carried by said sleeve, a burner carried by said arm, and means for supplying fuel to said burner.

CORNELIUS J. NOLAN.

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FRED. E. WOLF.