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PATENTED JULY 24, 1906.

J. F. TORRENCE.

FIRE FINISHING ARTICLES OF GLASSWARE.

APPLICATION FILED FEB. 10, 1904.

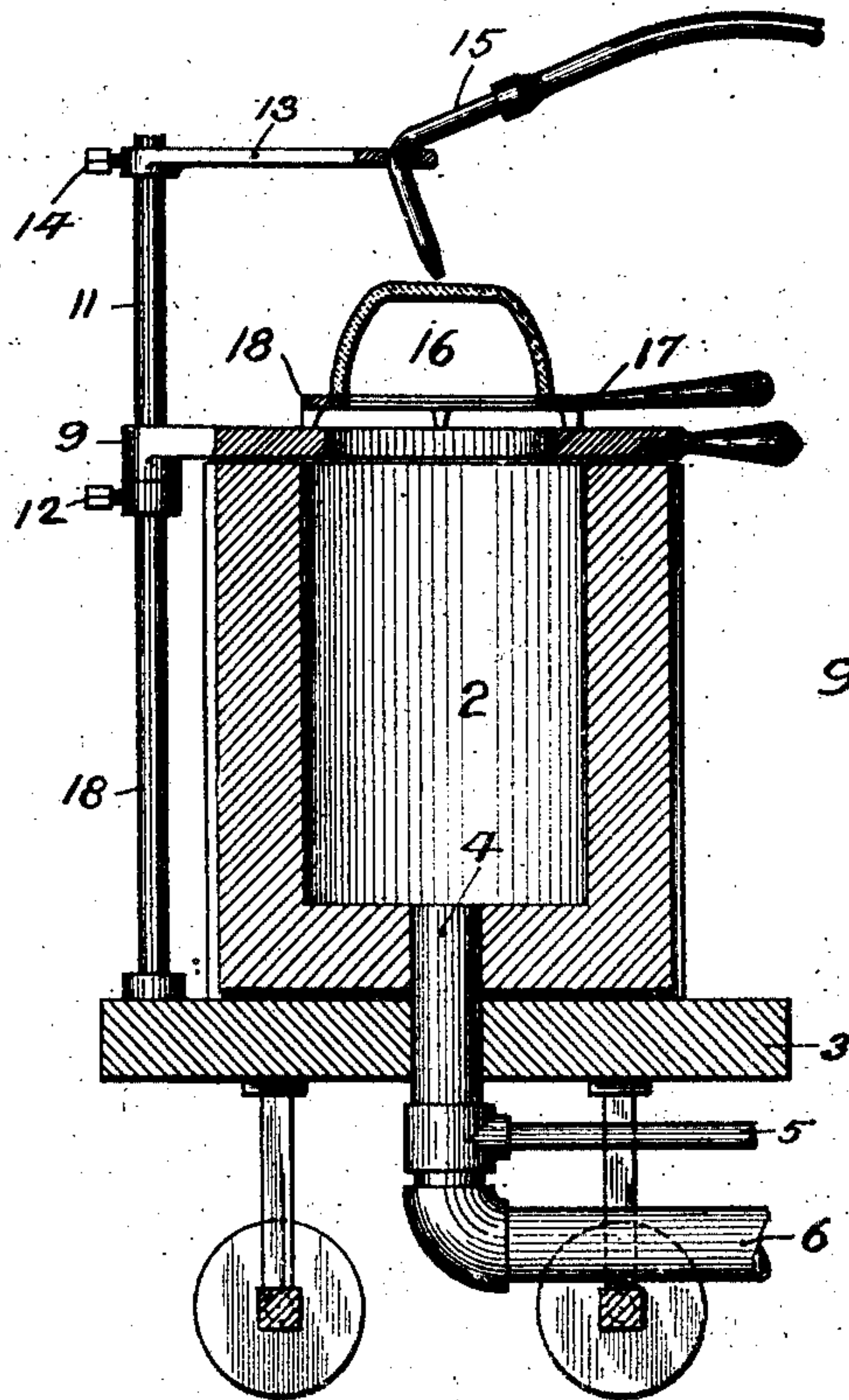


fig. 1.

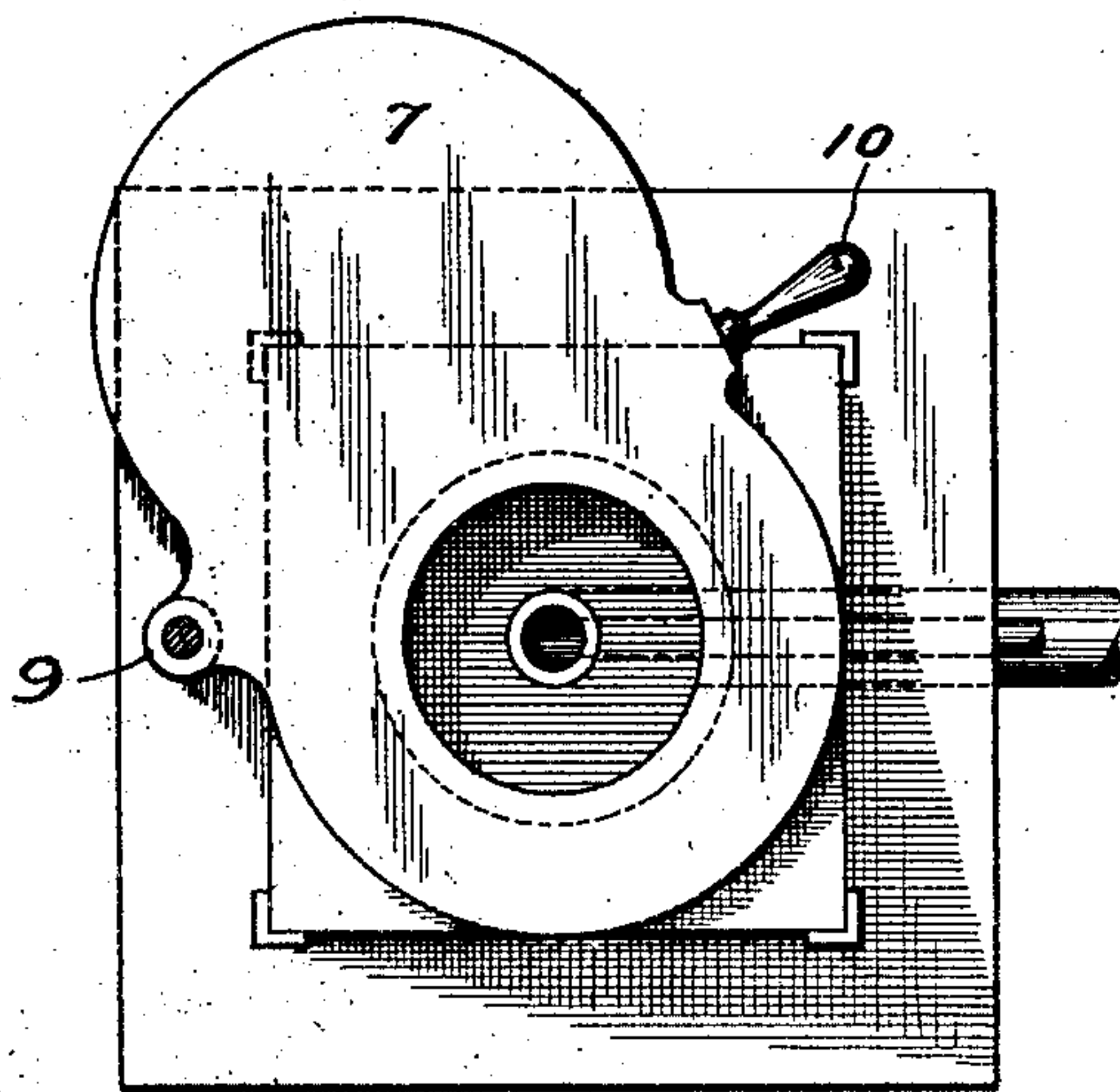


fig. 2.

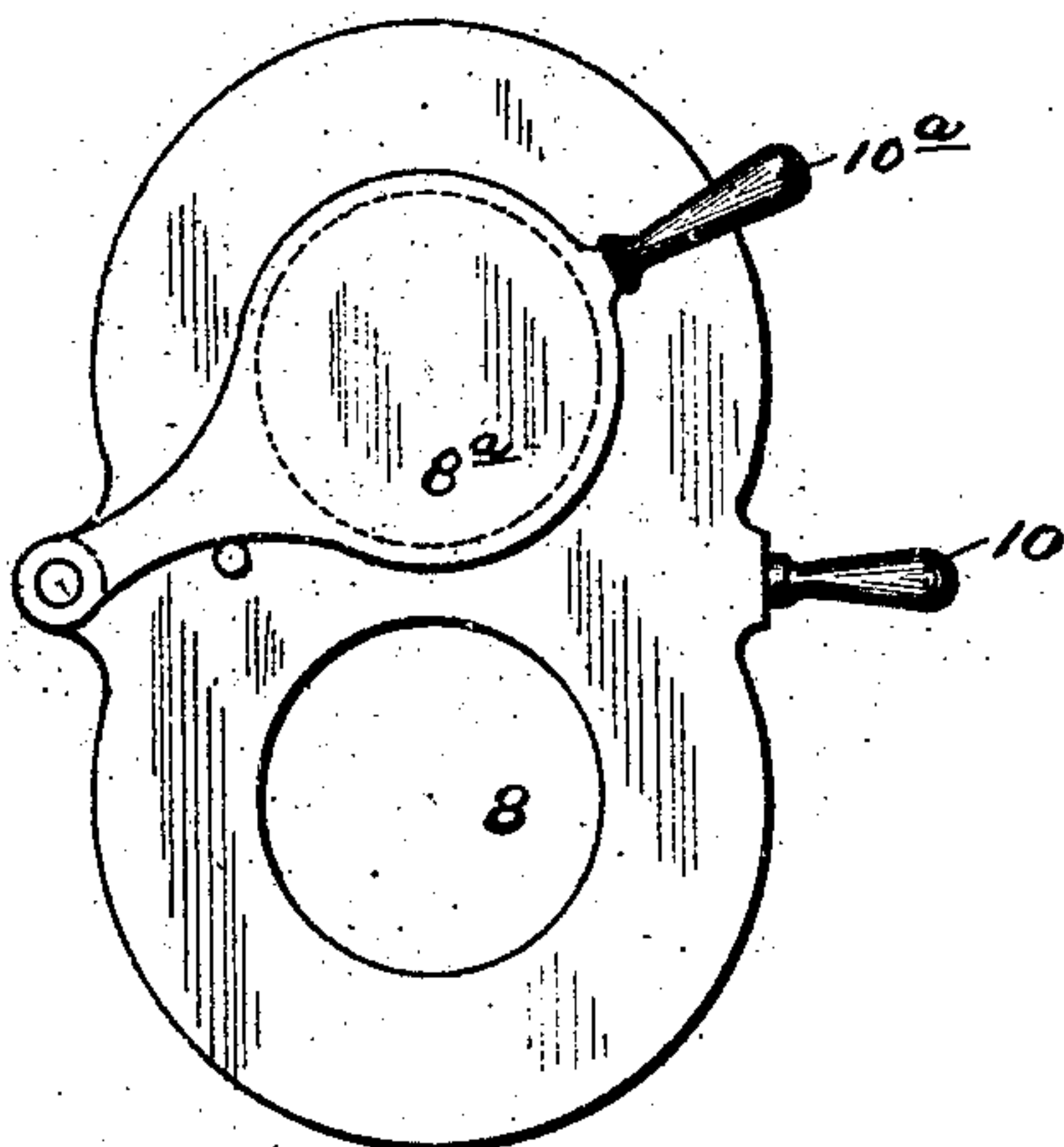


fig. 3.

Witnesses:

Walter Samaness
A. M. Steen,

Inventor:

James Frederick Torrence
by James R. Bates
his Attorney.

UNITED STATES PATENT OFFICE.

JAMES FREDERICK TORRENCE, OF ROCHESTER, PENNSYLVANIA.

FIRE-FINISHING ARTICLES OF GLASSWARE.

No. 826,701.

Specification of Letters Patent.

Patented July 24, 1906.

Application filed February 10, 1904. Serial No. 192,866.

To all whom it may concern:

Be it known that I, JAMES FREDERICK TORRENCE, of Rochester, in the county of Beaver and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Fire-Finishing Glass Articles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical sectional view of my improved apparatus. Fig. 2 is a plan view of the same. Fig. 3 is a plan of a modification of the cover.

Like figures of reference indicate like parts wherever they occur.

My invention relates to an improved device for fire finishing or glazing blown or pressed glass articles, and it is especially adapted to the fire-finishing of the inner surfaces of finger-bowls, tumblers, nappies, and similar hollow articles.

My invention consists of a heating-chamber and a support or holder for holding the article within the zone of heat; and it also consists in devices for preventing the distortion of the article by the action of the heat.

In the drawings, 2 represents a heating-chamber mounted on a suitable truck 3 to enable it to be readily moved from place to place. Opening into the bottom of the heating-chamber 2 is a burner 4, having a gas-pipe 5 and an air-pipe 6, the burner being of any suitable form which will produce a glazing heat within the chamber 2. On top of the chamber 2 is a supporting-lid 7, having an opening 8. This lid is provided with a handle 10, by means of which the imperforate portion of the lid may be brought over the top of the chamber 2 when the chamber is not in use, and the opening 8 may be brought over the top of the chamber when it is desired to fire-finish a finger-bowl or other glass article, the opening 8 being slightly greater in diameter than the article to be finished. Extending from the truck 3 is a standard 11, on which the cover 7 is adjustably mounted by means of an extension 9 of the cover and a collar and set-screw 12. Above the cover 7 is a slidable bracket-arm 13, which may be vertically adjusted on the rod 11 by the set-screw 14. At the end of the bracket 13 is an eye adapted to receive and support the nozzle of an air-pipe 15, by

means of which air may be blown down upon the outer surface of the inverted glass article while it is being subjected to the action of the glazing heat. The walls of the chamber 2 are preferably formed of fire-clay or other refractory material.

The operation of my improved apparatus is as follows: The chamber 2 having been suitably heated by the burner 4, the finger-bowl or other glass article 16 is brought to the top of the chamber in an inverted position on the carrier 17, which carrier is open at the center and is provided with supporting-feet 18 and is of a greater diameter than that of the opening 8. The carrier with the article thereon is placed over the opening 8 and the inner surface of the article subjected to the glazing heat. At the same time a jet of air may be allowed to pass from the pipe 15 against the outer surface of the article, the purpose being to keep the article sufficiently cool to prevent distortion of the same through the softening of the glass under the glazing heat. When the glazing has been accomplished, the article is removed and another put in its place. During any interval in the carrying of the articles to the apparatus the imperforate portion of the cover 7 may be brought over the top of the chamber 2, retaining the heat therein during such interval.

Although I have described a glory-hole or glazing-furnace having a single heating-chamber 2, the furnace may be provided with a series of heating-chambers, each, if desired, being provided with a cover and with a suitable rest for the article.

In Fig. 3 I have shown a modified form of cover, there being two openings 8 and 8^a, so that the opening 8, with the article to be fire-finished over the same, may be brought over the glazing-chamber by the handle 10, and after the article is finished the second opening 8^a may be brought over the glazing-chamber in a like manner for the reception of another article. In this modification I have shown a movable cover to the opening 8^a, provided with an operating-handle 10^a. In glazing small articles a smaller chamber 2 without a cover 7 may be employed.

The advantages of my improvement will be appreciated by those skilled in the art. It provides means for the glazing of the inner surfaces of glass articles, and it may also be used for the glazing of the outer surfaces by

providing holders of different shapes or construction for differently shaped or sized articles.

I claim—

- 5 1. In apparatus for fire-finishing glass articles, the combination of a burner, a support for holding the article to be fire-finished within the zone of glazing heat, and means for applying a cooling medium to the surface of
10 the article opposite to that which is being fire-finished to prevent distortion of the article by the heat.
2. In apparatus for fire-finishing glass articles, the combination of a heating-chamber

provided with an opening in the top, a burner, 15 and a movable cover pivoted eccentrically to the heating-chamber and having an opening therein and also an integral imperforate portion at one side of the opening to cover the opening in the heating-chamber when the 20 latter is not in use.

In testimony whereof I have hereunto set my hand.

JAMES FREDERICK TORRENCE.

Witnesses:

A. M. STEEN,
WALTER FAMARESS.