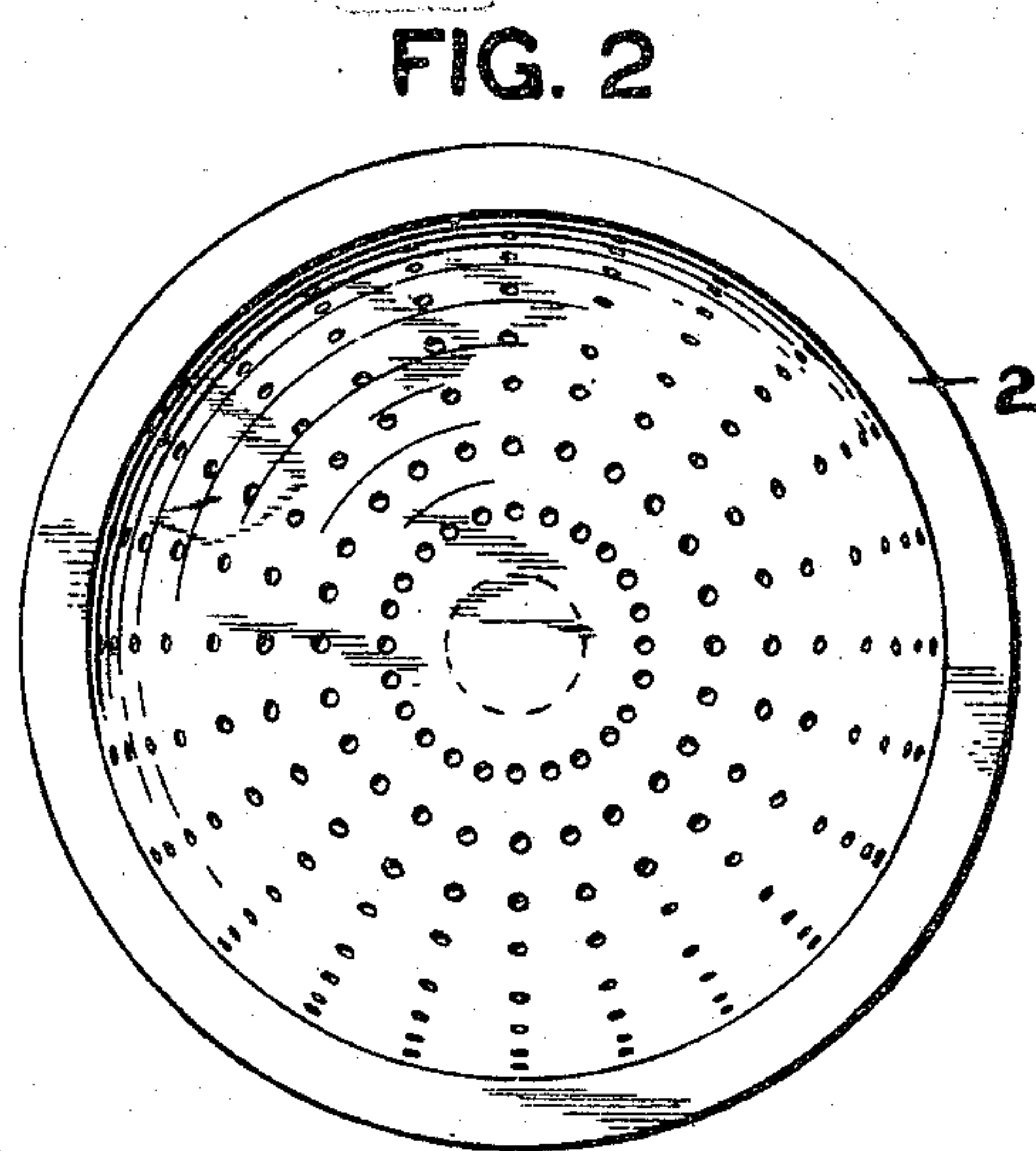
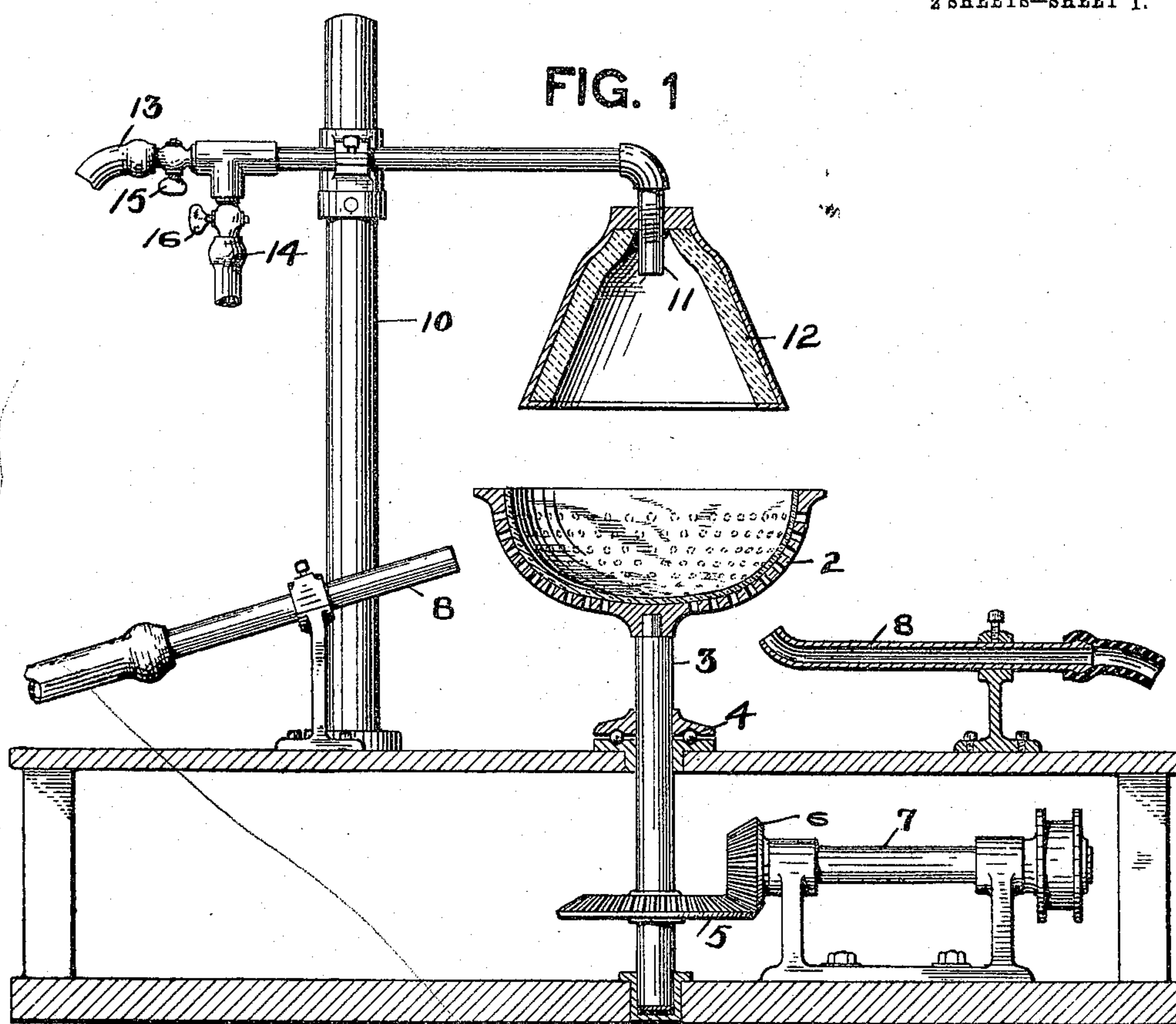


A. THOMPSON.

APPARATUS FOR FIRE FINISHING GLASSWARE.

APPLICATION FILED NOV. 3, 1906.

2 SHEETS—SHEET 1.



WITNESSES.
W. Arthur Keller.
C. E. Eggers.

INVENTOR.

A. Thompson
 by *James F. Baskin*
 his attorney

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2 SHEETS—SHEET 2.

FIG. 3

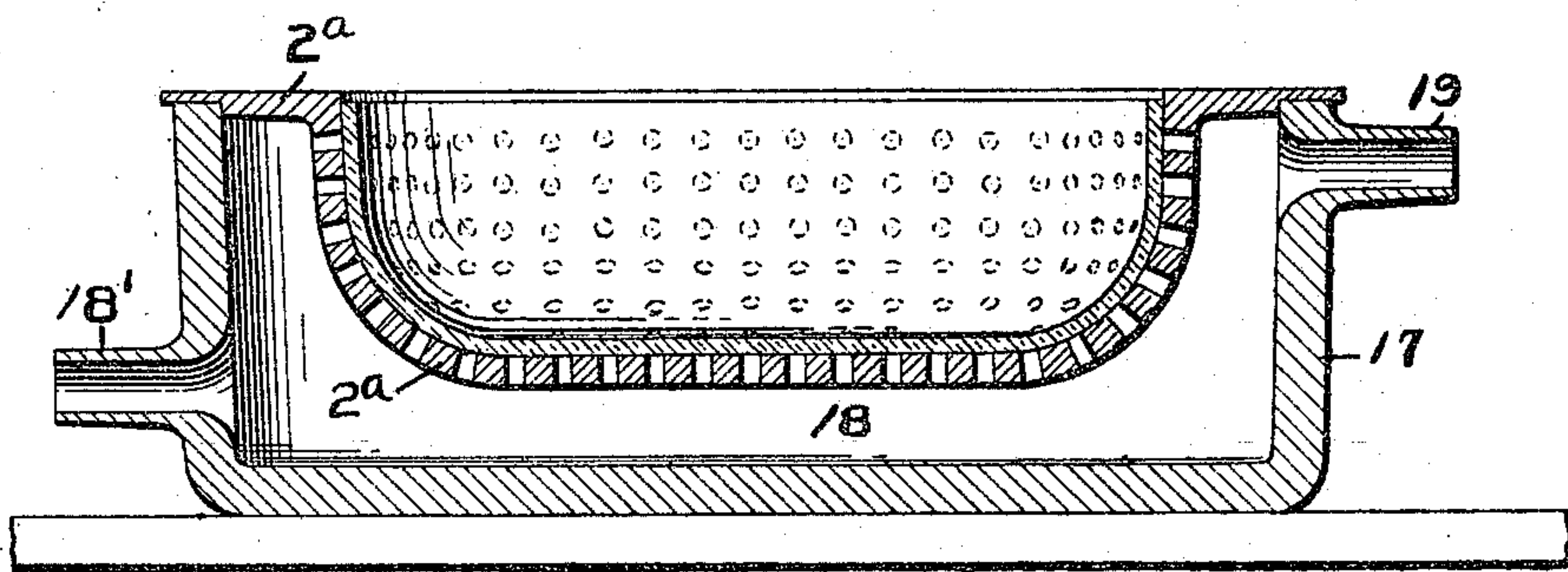
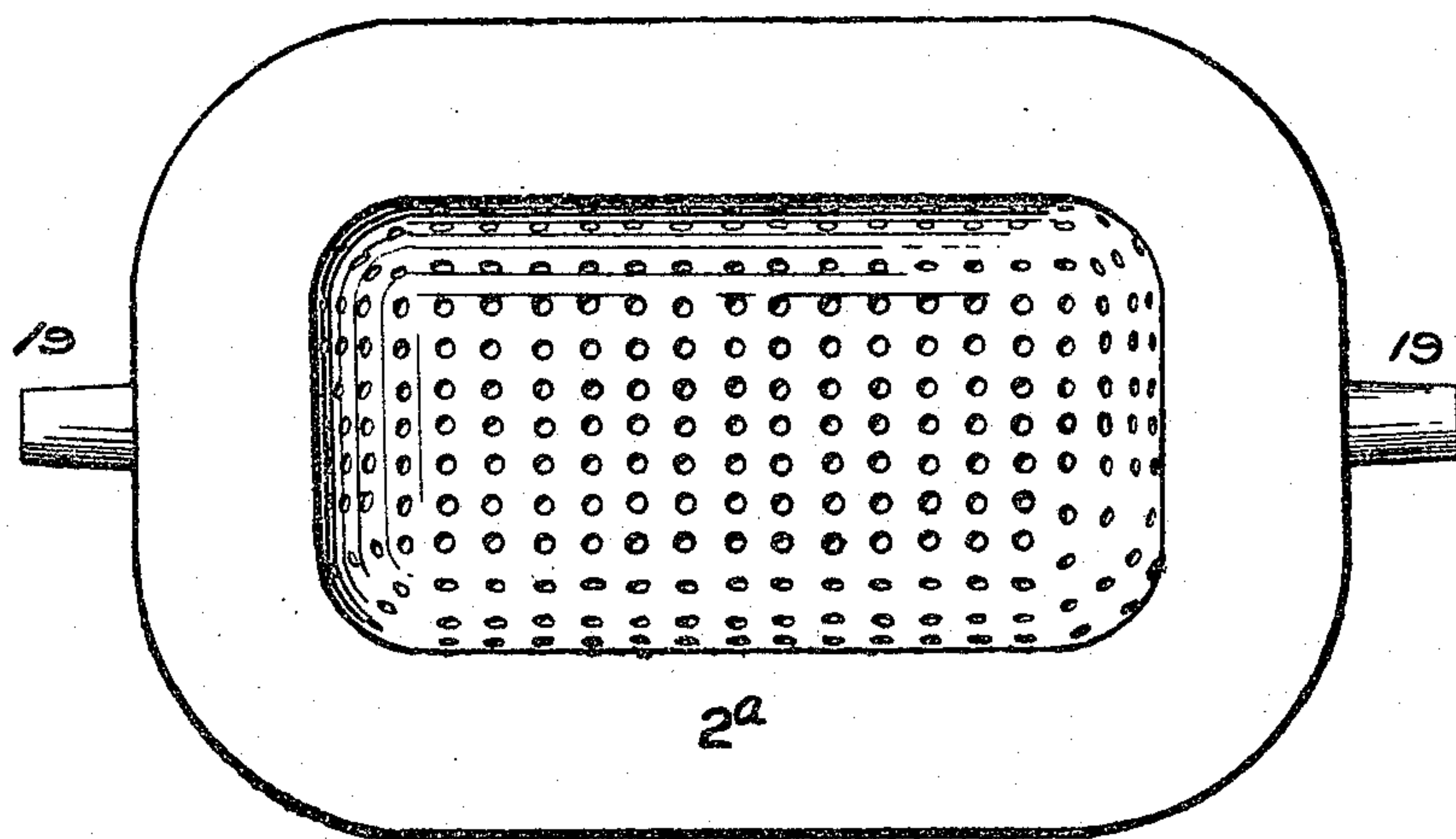


FIG. 4



WITNESSES.
W. Arthur Keller.
C. E. Eggers.

INVENTOR.
A. Thompson
by James H. Botsch
his Attorney

APPARATUS FOR FIRE-FINISHING GLASSWARE.

No. 858,484.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed November 3, 1906. Serial No. 341,831.

To all whom it may concern:

Be it known that I, ADDISON THOMPSON, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in
 5 Apparatus for Fire-Finishing Glassware, 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 an elevation partially in section, illustrating apparatus which I prefer to employ in the practice of my invention; Fig. 2 is a plan view of the former; Fig. 3 is a vertical sectional view of a modified form of apparatus; and Fig. 4 is a plan view of the same.

Like symbols of reference indicate like parts wherever they occur.

In the manufacture of glass-ware it is customary to fire-finish the surface of glass after it has been formed in the mold by subjecting this surface to heat of sufficient intensity to melt or glaze the surface before the heat has had time to soften the body of the article. One application of this fire-finishing method has been to the interior of the glass article, the exterior being supported by a former of the shape and pattern of the article being treated. The great objection to the use of such a former
 25 however, has been that the hot glass would adhere to the former and the former would cause more or less blurring or distortion of the surface or pattern of the glass article.

The object of my invention is to provide means by which this sticking of the glass to the former, or blurring or distortion of the glass pattern may be prevented, and it consists in providing a former, which may have either a plain or a patterned interior surface, with perforations, and in causing a blast of air or other cooling medium to strike against the outside of the former during the fire-
 35 finishing of the interior of the glass article by heat from a suitable source.

I will now describe my invention so that others skilled in the art may employ the same.

In the drawing 2 represents a perforated former which
 40 is preferably formed of iron, having its interior surface either plain or with a pattern to correspond with the pattern on the exterior of the glass article to be fire-finished. This former 2 is mounted on the spindle 3 which is supported by the ball-bearings 4 and is provided with
 45 the miter gear 5 which meshes with the miter gear 6 on the power shaft 7. Arranged on suitable supports and directed toward the exterior surface of the former 2 are one or more air nozzles 8 pivotally supported and of such shape as to cause blasts of air to be projected against
 50 the exterior surface of the former 2 to cool the same and to prevent the glass article within the former from sticking to the former during the fire-finishing operation, and

to prevent any distortion or blurring of the pattern which has previously been pressed on the exterior surface of the glass article. Above the former 2, adjust- 55 ably mounted on a standard 10, is the furnace 12 which surrounds and incloses the burner 11, the mouth of the furnace 12 being directed toward the interior surface of the former 2. The burner 11 is provided with suitable gas and air pipes 13, 14, having suitable stop-cocks 15, 16. 60

The operation of this device is as follows: The glass article having been pressed in the mold, and having either a plain or a patterned exterior surface, is brought to the former 2 and placed therein by the carrying-over-boy. The furnace 12 is then swung over the mouth of 65 the former 2, the former 2 is caused to rotate, and fire-finishing heat is directed against the interior surface of the glass article, at the same time jets of air are caused to pass from the nozzles 8 against the exterior surface of the perforated former 2, which prevents the glass from stick- 70 ing to the former.

In Figs. 3 and 4 I have shown a modification of my device, the former 2^a illustrated in these figures being of such shape as not to permit its effective rotation in front of the nozzles 8 as shown in Fig. 1. In this modi- 75 fication, the perforated former 2^a is adapted to be supported in an outer casing 17, there being an air space 18 between the casing 17 and the former 2^a, and the casing 17 having nozzles 18' and 19 one of which may be connected with a tube leading from the source of supply of 80 air. By this arrangement the air which passes into the chamber 18 cools the perforated former 2^a and prevents the former and the glass article from sticking to each other. The modification shown in Figs. 3 and 4 may be employed in connection with all articles of irregular 85 shape or articles having projections, such as handles or spouts.

I am aware that the use of jets of air is very old for the purpose of cooling glass articles during their manufacture; and I do not desire to claim the same broadly, but, 90 having thus described my invention,

What I claim and desire to secure by Letters Patent is:

1. In an apparatus for fire-finishing glass-ware, the combination of a perforated former, a device for subject- 95 ing the exterior of the former to the cooling action of air, and a device for projecting fire-finishing heat into the interior of the article supported by the former.

2. In apparatus for fire-finishing glass-ware, the combination of a rotatable perforated former, nozzles for projecting air against the exterior of the former and a fur- 100 nace for projecting fire-finishing heat against the interior of the glass article supported by the former.

In testimony whereof, I have hereunto set my hand.

ADDISON THOMPSON.

Witnesses:

JAMES K. BAKEWELL,
 C. E. EGGERS.