

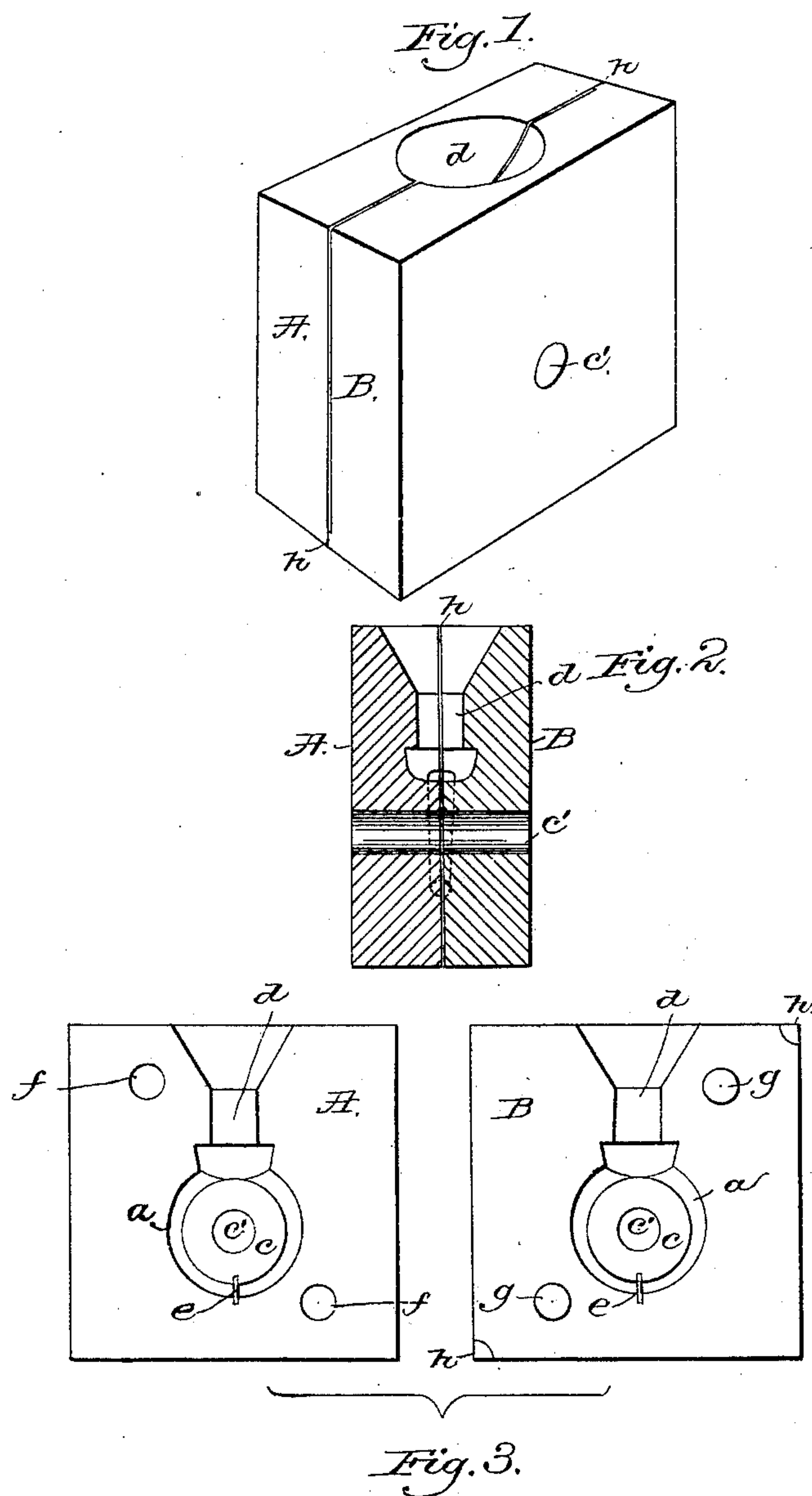
(No Model.)

W. WHITELAND.

MOLD.

No. 360,639.

Patented Apr. 5, 1887.



witnesses,
John F. C. Printz,
Fred L. Emery.

Inventor,
William Whiteland,
by Leroy & Gregory atty.

UNITED STATES PATENT OFFICE.

WILLIAM WHITELAND, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO CHARLES HENRY WHITELAND, OF SAME PLACE.

MOLD.

SPECIFICATION forming part of Letters Patent No. 360,639, dated April 5, 1887.

Application filed January 25, 1887. Serial No. 225,410. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WHITELAND, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Molds, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to provide a novel mold, whereby rings and similar articles may be cast.

In accordance with my invention a steel pattern-shaped in accordance with the ring or other article to be produced is forced into plates of metal softer than the steel, one-half into each half of two plates, and a run-hole is cut to intersect the recess of the mold so formed. The mold-space is divided by a plate, which forms a wall to thus leave a gap in the ring, so that as the metal cools neither the central hub of the mold nor the ring will be injured. The faces of the mold are so shaped as to leave a vent-space between them for the passage of gases formed and eliminated in casting, and the hub is provided with a hole, or made hollow for a similar purpose and to aid in keeping it cool.

Figure 1 in perspective represents a mold embodying my invention; Fig. 2, a vertical cross-section of Fig. 1, and Fig. 3 shows the two halves of the mold opened out.

The mold is composed, essentially, of two metal plates, A B, preferably wrought-iron or low-grade soft steel. These plates, at their inner sides, are substantially counterparts, each having formed in it a space, as *a*, which in shape corresponds with one-half of the article to be cast.

Herein I have shown two mold-plates shaped to produce a seal-ring. A hub, *c*, is left at the center of the mold-space, a run-passage, *d*, leading into the mold-space to receive the molten metal. The metal cast to form the ring, if the latter were cast endless, would in contracting either crack or injure the hub *c*, or destroy the ring. To obviate this I have provided the mold-space with a thin plate, *e*, to constitute a wall against which the metal flows, thus leaving a space in the ring, so that

as the metal of the ring cools and contracts all danger of injury to the hub or to the ring is obviated. The open space in the ring left by the plate *e* is soldered or brazed together after the ring is taken from the mold. The holes *f f* of the plate A receive in them the registering-pins *g g*, fast to plate B, and both plates are provided with suitable transverse vent-holes, *e'*.

To provide ample free vent-passage between the two halves of the mold, I have herein shown the plate B as provided near two of its corners with slight projections or raised portions, as at *h*, so that the inner faces of the mold cannot come close together. One projection *h* might be sufficient; but I prefer two.

The gases generated in the process of casting, which do not escape laterally from outside the ring through the vent-passage formed by these projections, escape through the vent-holes *e'*, the said vent-passage opening also into these holes.

I do not desire to limit my invention to the production of only rings, for I may by making a mold-recess of suitable shape make other analogous articles.

I am aware that it is old to provide a mold with a series of independent channels extending entirely around the mold-recess; but I desire to limit my invention to a two-part mold, one of the plates of which is provided with a projection or projections to separate the adjacent faces of the mold, thereby leaving a free open space for the ventilation of the mold, this being a more economical construction than has heretofore been used.

I claim—

1. The finger-ring mold composed of two metal plates, A B, having separating and cooling passages parallel with and perpendicular to their faces, a central hub, a surrounding molding-recess, and a separating-plate, *e*, substantially as described.

2. A mold composed of two metal plates, A B, having a mold-recess surrounding a hub, one of the said plates being provided with a projection or projections to separate the adjacent faces of the plates when the mold is assembled, their separation leaving a free or open

space for ventilating the mold, substantially as described.

3. A mold composed of two metal plates, A
B, having lugs *h h* and recessed at *a* to form
5 hubs *c*, the hubs having openings *c'*, all substantially as described.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses.

WILLIAM WHITELAND.

Witnesses:

BERNICE J. NOYES,
F. CUTTER.