

No. 795,900.

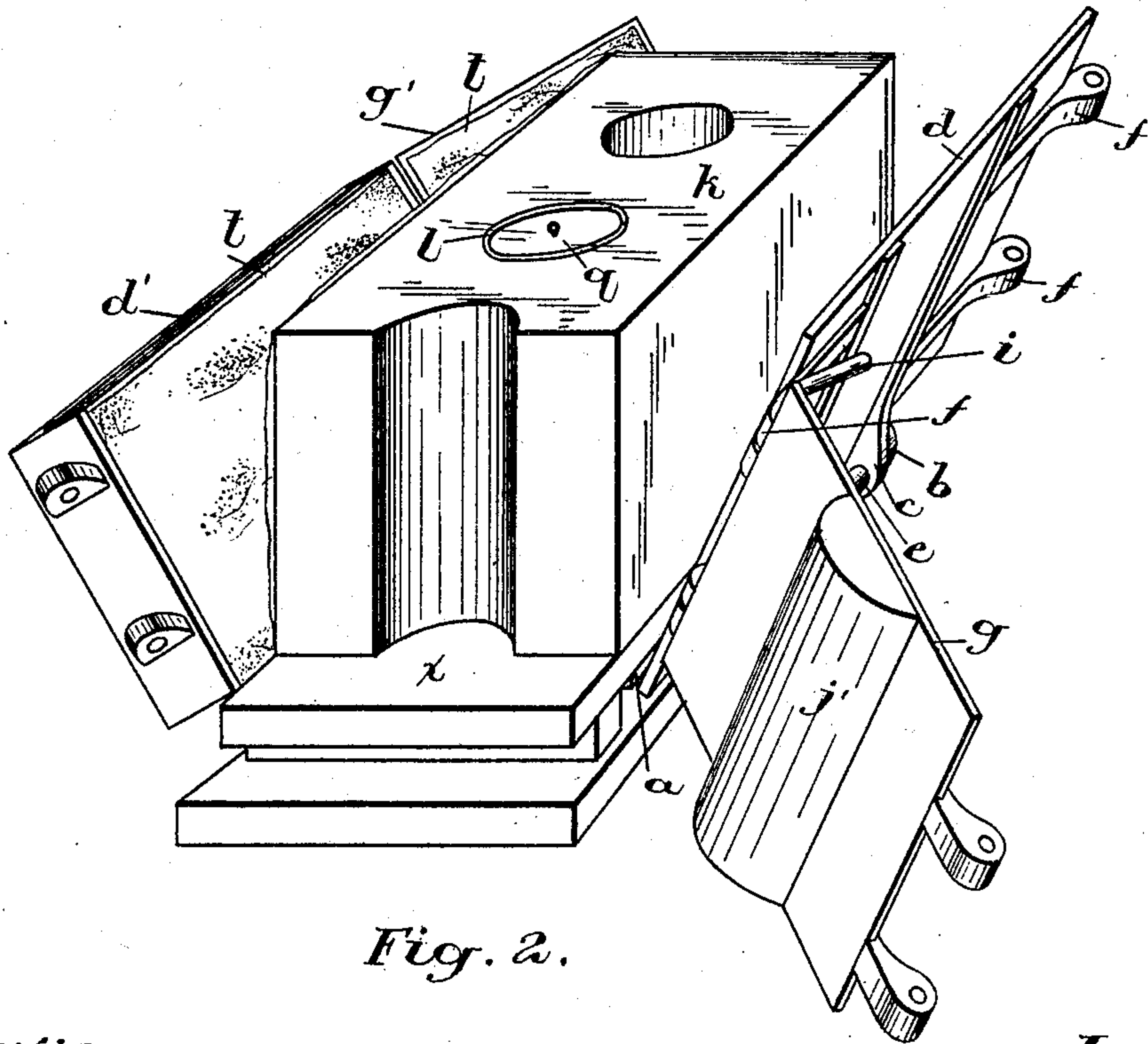
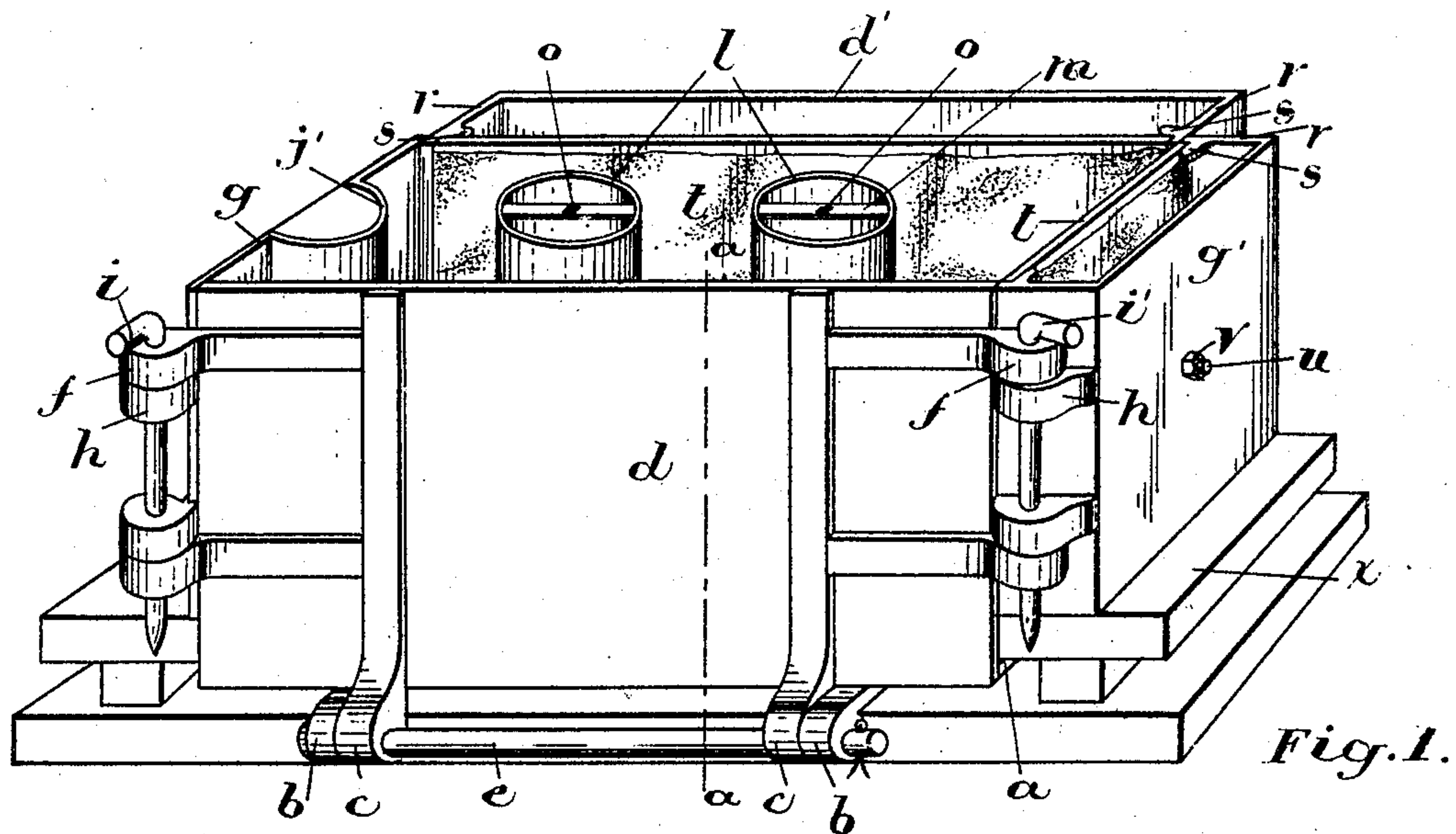
PATENTED AUG. 1, 1905.

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MOLD FOR THE MANUFACTURE OF ARTIFICIAL STONE.

APPLICATION FILED FEB. 27, 1905.

2 SHEETS—SHEET 1.



Witnesses.

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2 SHEETS—SHEET 2.

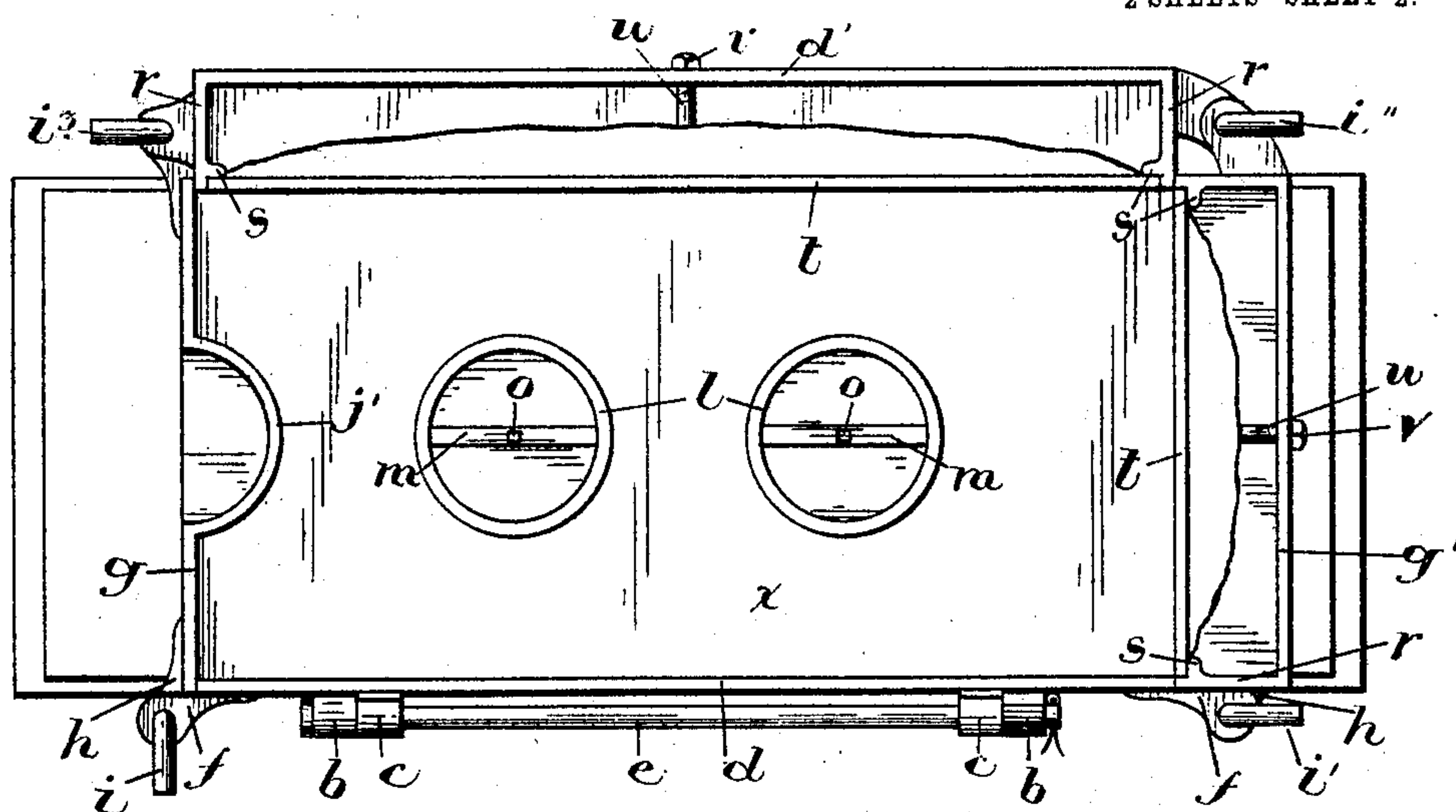


Fig. 1a.

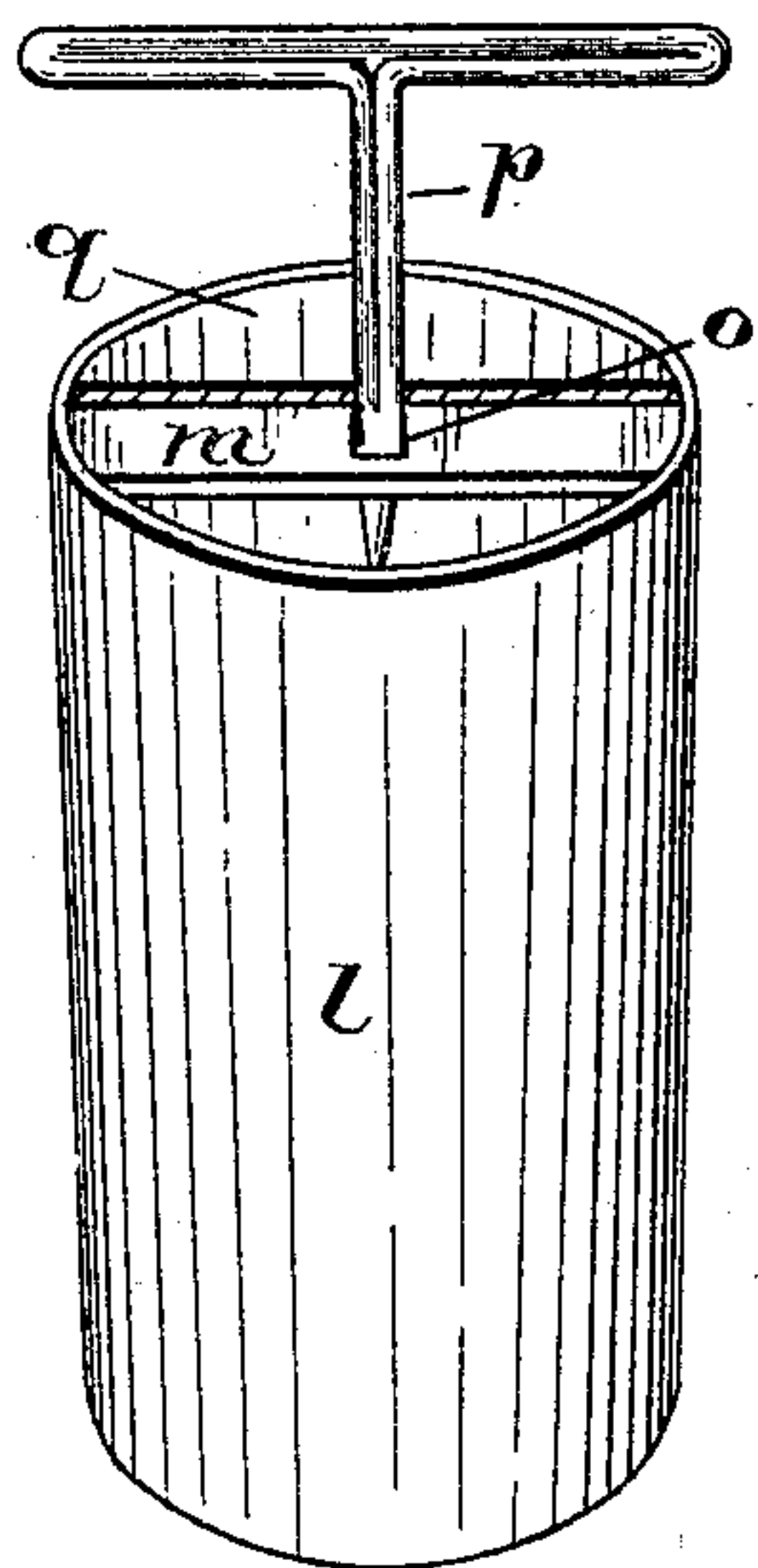


Fig. 4.

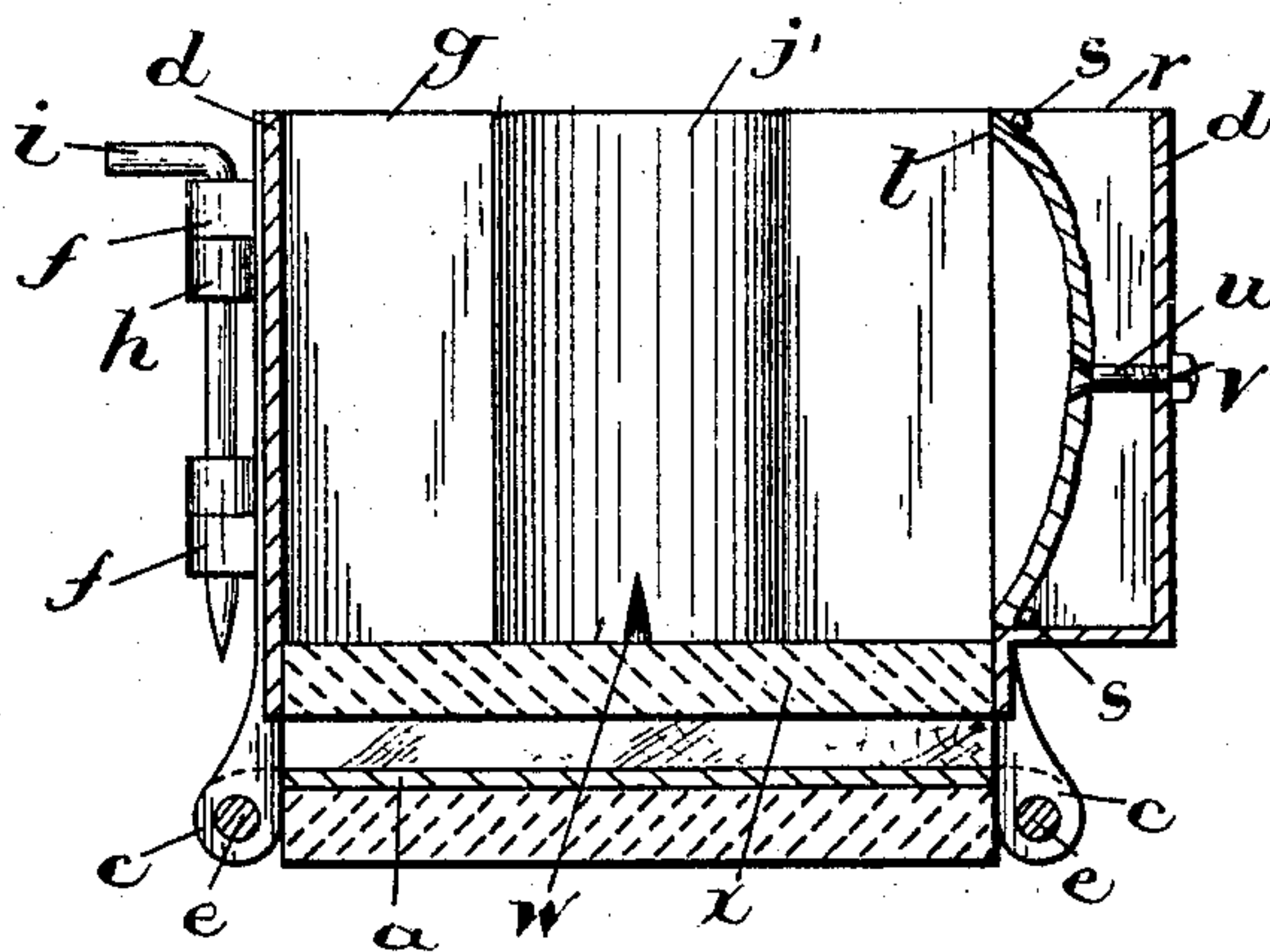


Fig. 3.

Witnesses.

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# UNITED STATES PATENT OFFICE.

GEORGE DOUGHTY, OF WATERFORD, CANADA.

## MOLD FOR THE MANUFACTURE OF ARTIFICIAL STONE.

No. 795,900.

Specification of Letters Patent.

Patented Aug. 1, 1905.

Application filed February 27, 1905. Serial No. 247,599.

*To all whom it may concern:*

Be it known that I, GEORGE DOUGHTY, of Waterford, in the county of Norfolk and Province of Ontario, Canada, have invented certain new and useful Improvements in Molds for the Manufacture of Artificial Stone; and I hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to certain new and useful improvements in molds for the manufacture of that class of building-blocks made from a mixture of cementing and refractory materials, such as sand and cement or sand and lime or other substances of similar character mixed together in a granular condition and tamped or packed into a homogeneous mass; and it relates more particularly to the peculiar construction of the mold-box and to the removable face-plates for forming the plain and ornamental faces of the block and to the cores for forming the internal apertures and end grooves or channels.

For a full understanding of the invention reference is to be had to the following description and to the accompanying drawings, in which—

Figure 1 is a perspective view of the mold, showing the parts in their closed condition. Fig. 1<sup>a</sup> is a plan view of the parts when in the position shown in Fig. 1. Fig. 2 is a perspective view showing the parts in their open position preparatory to the removal of the molded block. Fig. 3 is a sectional view on the lines *a a*, Fig. 1. Fig. 4 is a detail view of one of the cores for the mold.

Like letters of reference refer to like parts throughout the specification and drawings.

The mold consists of a bed-plate *a*, having at each side a set of hinge members *b* to register with the hinge members *c* of the mold sides *d* and *d'*, respectively, and passing through the hinge members *b* and *c* are hinge-bolts *e*, by which the mold sides are articulately connected to the bed-plate. Projecting from the ends of the mold sides *d* and *d'* are hinge members *f*, and projecting from the adjacent ends of the mold sides *g* and *g'* are hinge members *h*, registering with the hinge members *f*, and coupling the hinge members *f* and *h* are hinge-pins *i*, *i'*, *i''*, and *i'''*, which not only articulately connect the mold sides *g* and *g'* to the mold sides *d* and *d'*, but also fasten the four mold sides rigidly together when in the closed position. (Shown in Fig. 1.) When the block is molded, the hinge-pins *i* and *i'''* can be withdrawn to allow the side *g'*

to swing upon the hinge-pin *i''* into substantially the same plane as the side *d'* and the side *g* to swing upon the hinge-pin *i* into substantially the same plane as the side *d*, as shown in Fig. 2. The sides *d* and *d'* when opened rest against suitable supports, which maintain them in an inclined position, so that the pallet, with the molded block, can be removed without risk of the block being shattered. On the inner face of the mold side *g* is a core member *j'* to groove the end of the block *k* during the molding of the material, and contained within the mold are removable core members *l* of a cylindrical or frusto-conical shape.

The core members *l* are hollow, and within them are cross-bars *m*, having rectangular apertures or holes *o* to receive the turning-key *p*. The mixture from which the block is made is prevented from entering the core members by removable covers *q*, which close their upper ends.

The mold sides *d'* and *g'* have inturned flanges *r* with offsets *s* at right angles to their inner faces, and engaging the flanges *r* and offsets *s* are face-plates *t* of a plain or ornamental character to imprint on the block material a corresponding design, so that the block may be either of a plain or ornamental character, as required. The face-plates *t* are provided with fastening-bolts *u*, which project through the mold sides and are fitted with fastening-nuts *v* to lock the face-plates in position against the flanges and offsets.

In the use of the apparatus the mold sides *d* and *d'* are closed together into the position shown in Fig. 1 of the drawings, and the hinge-pins *i*, *i'*, *i''*, and *i'''* are inserted through the hinge members *f* and *h* to lock the sides of the mold together in their closed position. The removable core members *l* are then properly positioned within the mold by the centering or positioning pins *w*, which project upwardly from the top face of the pallets *x* and enter corresponding holes or apertures in the removable core members *l*, and the removable covers *q* are then placed upon the top of the core member *l*. When the mold sides have been closed together and fastened and the removable core members properly positioned, the material is placed in the mold and tamped into a solid mass of the required density and of the shape and design of the internal formation of the mold. The core members *l* form apertures through the middle of the block, and the core member *j'* forms



a groove or channel in its end. When the block is formed, the covers  $g$  are removed from the core members and the core members are rotated within their own space to relieve them of the adhesion of the material. When the material has been loosened from the core members  $l$ , they can by seizing the cross-bars be lifted out of the molded block. When the block is formed and the core members removed, two of the hinge-pins at diagonally opposite corners of the mold-box are removed and the mold sides  $g$  and  $g'$  are swung out into substantially the same plane as the mold sides  $d$  and  $d'$ , to which they are hinged, and the mold sides are then opened, as shown in Fig. 2 of the drawings, to relieve the molded block of contact with them. When the mold sides are opened into the position shown in Fig. 2, the pallet and molded block can be lifted out of the mold and carried away to the place where the block is to season and harden and a fresh pallet placed in position in the mold and the above operation repeated.

One or both end sides  $g$  and  $g'$  may be provided with semicircular core members or with ornamental face-plates, or one side may be provided with a core member and the other with an ornamental face-plate, and by arranging these end sides to swing outwardly from the molded block it is possible to perfectly form it and effect its removal without injury to it.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a mold for the manufacture of building-blocks the combination of a bed-plate, two mold sides hinged to the opposite ends of the bed-plate, and two other mold sides

hinged to the opposite ends of the first-mentioned mold sides, removable means for locking the mold sides together when in their closed position, removable core members of cylindrical shapes rotatably placed within the mold and a core member for one of the mold sides to form an end groove in the molded block.

2. In a mold for the manufacture of building-blocks, the combination of a bed-plate, two mold sides hinged to the opposite ends of the bed-plate, and two other mold sides hinged to the opposite ends of the first-mentioned mold sides, removable means for locking the mold sides together when in their closed position, removable core members of hollow cylindrical shapes having hand-bars within them and removable covers to close their upper ends, rotatably placed within the mold, and a core member for one of the mold sides to form an end groove in the molded block.

3. In a mold for the manufacture of building-blocks the combination of a bed-plate, two mold sides hinged to the opposite ends of the bed-plate, and two other mold sides hinged to the opposite ends of the first-mentioned mold sides, removable means for locking the mold sides together when in their closed position, one of the mold sides having inwardly-projecting flanges with offsets, a face-plate, and a fastening means to hold the face-plate against the flanges and offsets.

Waterford, February 13, 1905.

GEORGE DOUGHTY.

In presence of—

J. MATCHETT,

G. W. HOWELL.