

No. 775,794.

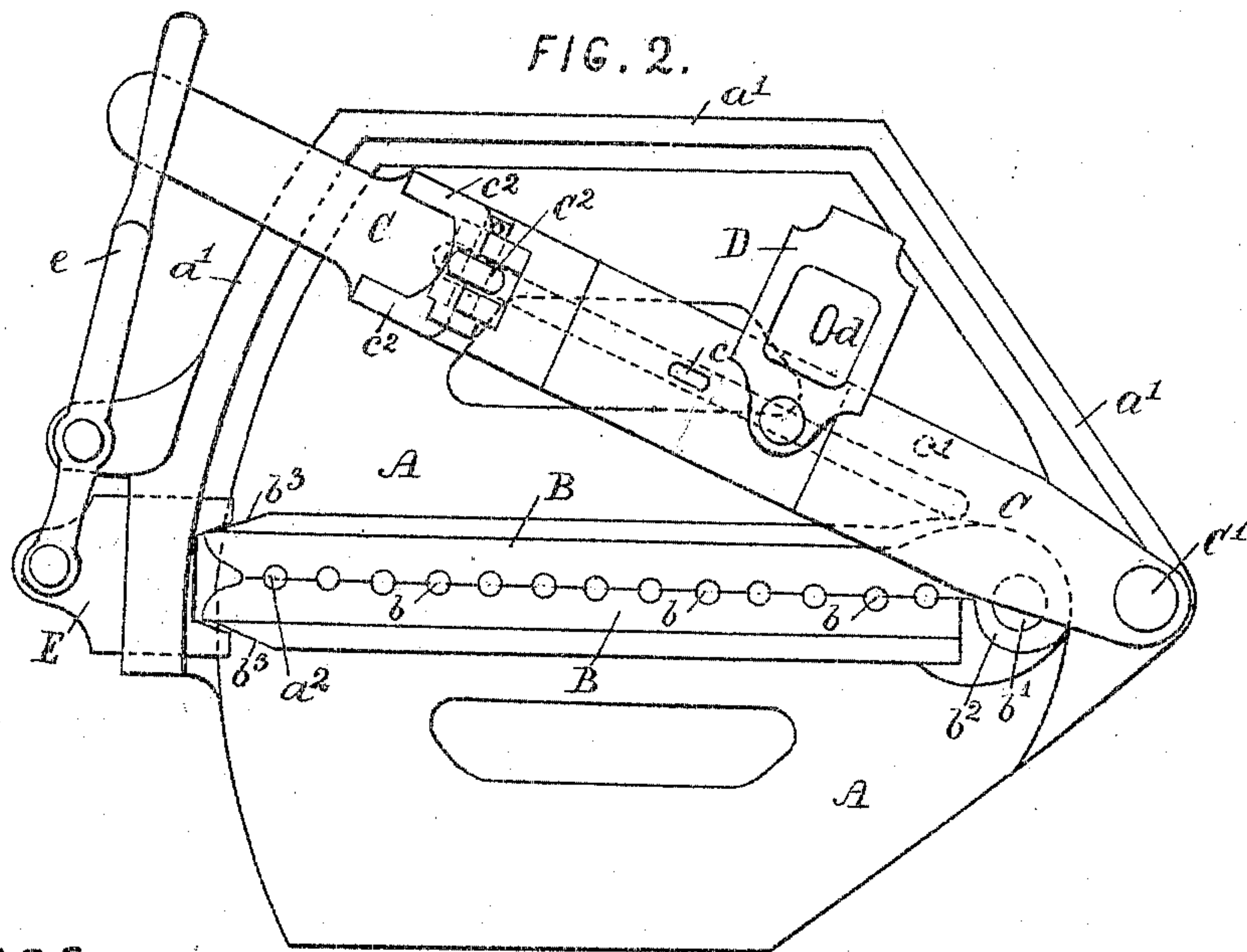
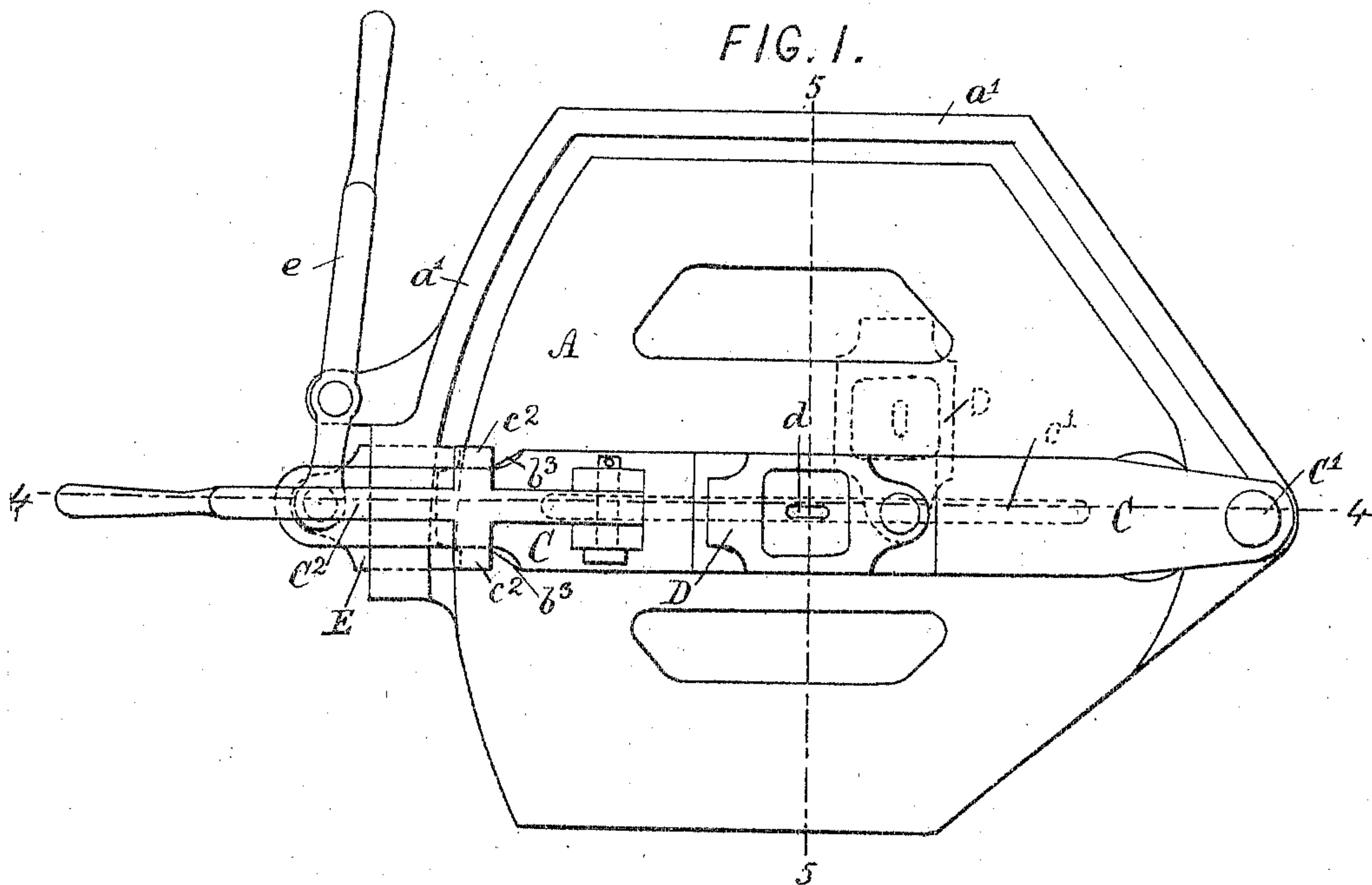
PATENTED NOV. 22, 1904.

J. BONE & M. REID.
MOLD FOR RIVETS, BOLTS, OR LIKE ARTICLES.

APPLICATION FILED NOV. 17, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:
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E. W. Collins

INVENTORS
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2 SHEETS—SHEET 2.

FIG. 3.

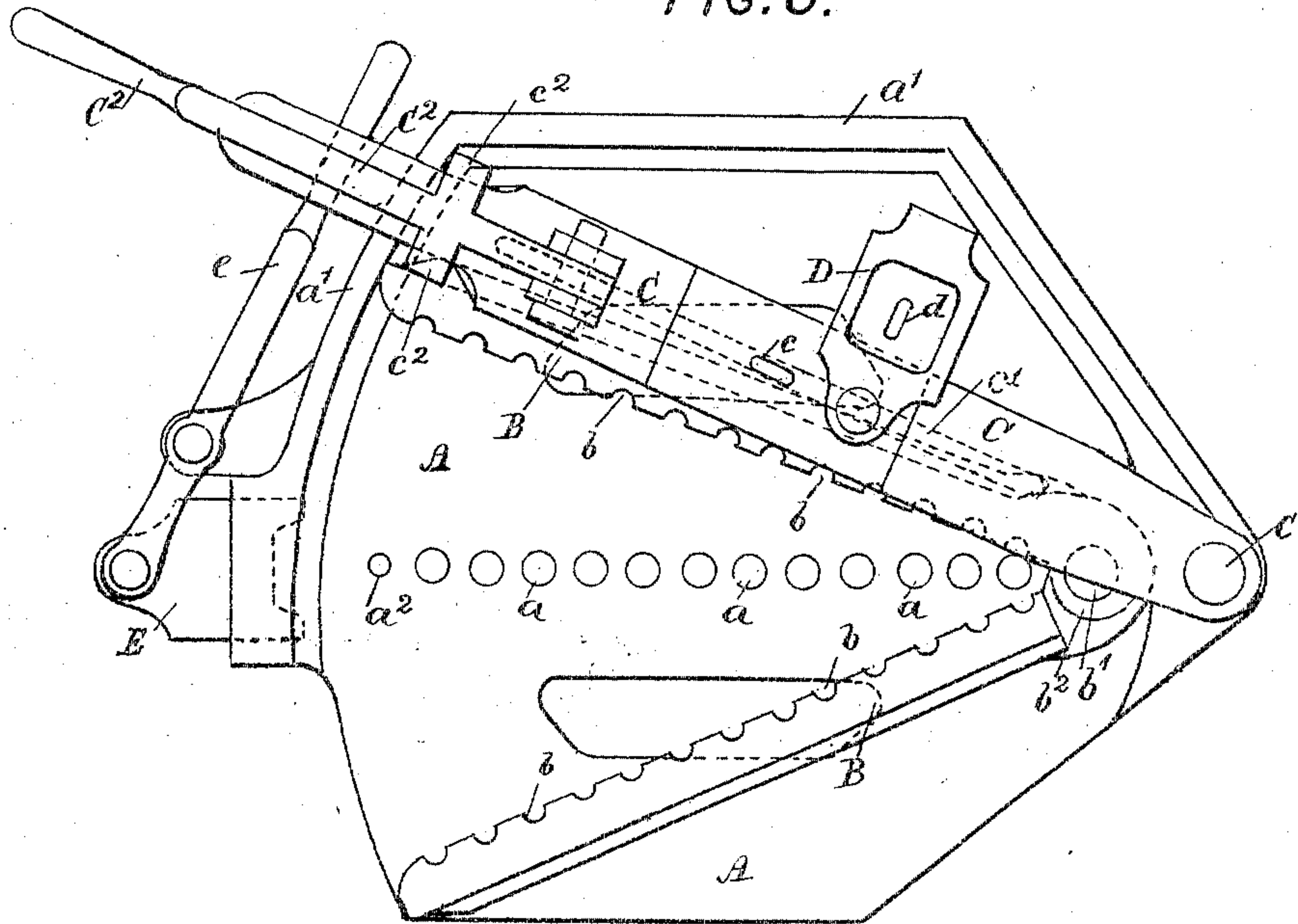


FIG. 4.

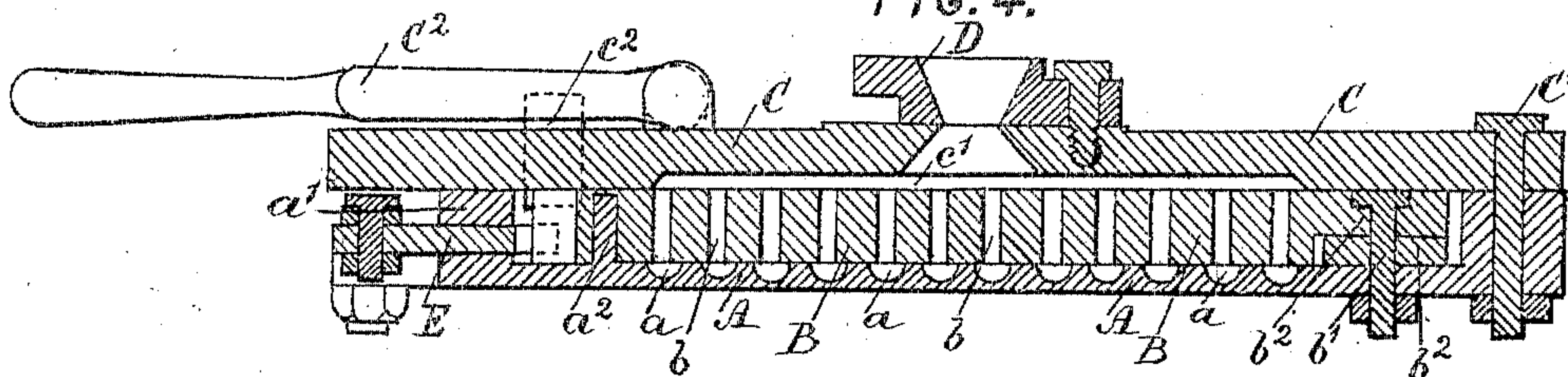
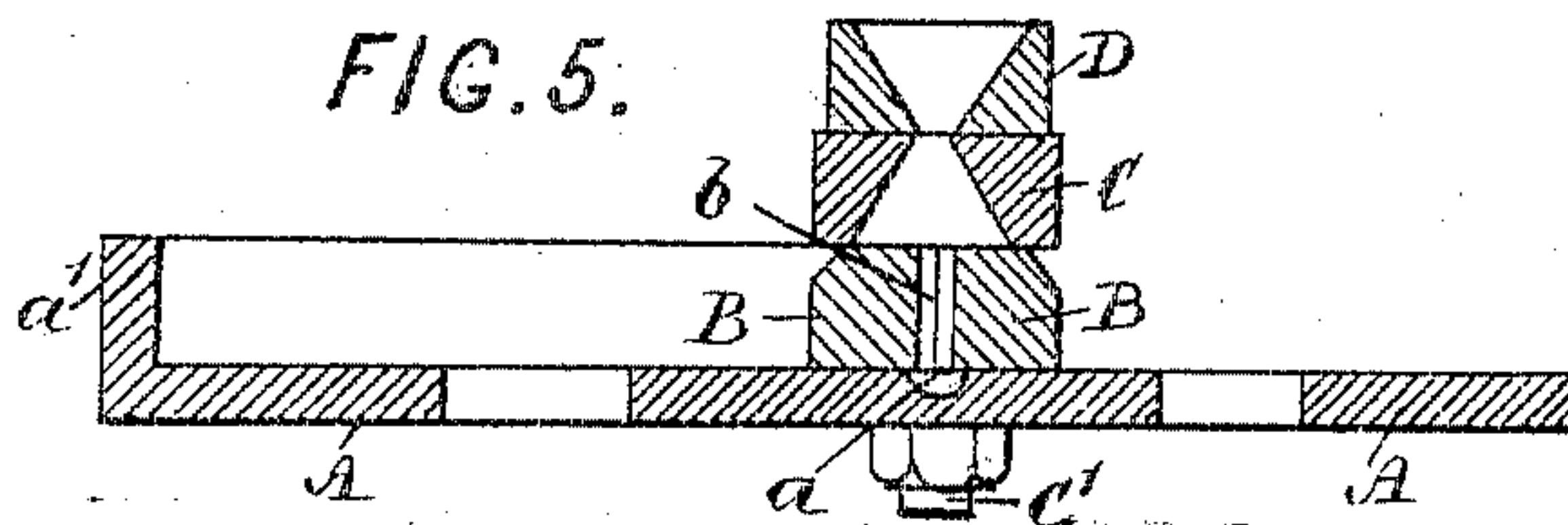


FIG. 5.



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UNITED STATES PATENT OFFICE.

JAMES BONE AND MORRIS REID, OF GLASGOW, SCOTLAND.

MOLD FOR RIVETS, BOLTS, OR LIKE ARTICLES.

SPECIFICATION forming part of Letters Patent No. 775,794, dated November 22, 1904.

Application filed November 17, 1903. Serial No. 181,512. (No model.)

To all whom it may concern:

Be it known that we, JAMES BONE, merchant, and MORRIS REID, engineer, subjects of the King of Great Britain and Ireland, and residents of Glasgow, Scotland, have invented certain new and useful Improvements in Molds for Rivets, Bolts, or Like Articles, of which the following is a specification and for which a patent has been applied for in Great Britain, No. 2,124, dated the 29th day of January, 1903.

Our invention has reference to improvements in molds for rivets, bolts, and like articles by casting same in suitable metal in a chill or mold-box made in several parts, constructed and fitted in the manner to be described.

In order that others skilled in the art to which our invention relates may understand the nature of same, we have hereunto appended two sheets of illustrative drawings, in which—

Figures 1, 2, and 3 are plan views illustrating a chill or mold-box for casting a number of rivets at one operation, constructed in accordance with our improvements and showing the working parts in different positions. Fig. 4 is a sectional elevation on the line 4 4; and Fig. 5, a cross sectional elevation on the lines 5 5, both in Fig. 1.

According to our improvements for casting rivets, bolts, and such like articles the chill shown in the drawings as formed for casting rivets is formed of three main plates A, B, and C. One of these plates, B, to be used as the center one, is in this case divided into two parts and formed with a series of perforations or holes b of the diameter of the rivet, the thickness of the plate being equal to the desired length.

Cavities a of the shape of the rivet-head are formed in another plate, A, at distances apart to coincide with the holes b in the center plate B, and this plate A is placed below the center plate B, which is hinged to it by the bolt b' , passing through the eyes b^2 , and when the two parts of the plate B are closed together on same they are secured by clamping. A stud a^2 is fitted to act as a stop and guide.

By the method of effecting the clamping

illustrated by the drawings the clamp E passes through a slot in the flange a' of the plate A and is formed at its inner end as a jaw to engage with the beveled free ends b^3 of the two parts of the plate B and hold them secure against movement, the clamp being actuated by the hand-lever e .

The third or upper plate C is pivoted on the bolt C' and carries the gate D for pouring in the metal, fitted to swivel on it, and there may be any desired number of these to suit the number and arrangement of holes in the center plate B, which may in some cases be divided into more than two parts to provide for more than one row of molds.

As illustrated by the drawings, the pouring-gate D is a block pivoted on the plate C, which has a small opening c , coinciding with the hole d in the bottom of the pouring-gate D.

A duct c' is formed in the plate C from the gate to the various holes b in the center plate B to convey the metal thereto.

The upper plate C is pivoted on the bolt C' and is made to slide upon the plate B and on the flange a' of the lower plate A by means of the hand-lever C^2 , so as to separate the metal in the duct c' from that which has been run into the molds while it is still hot. When in position for pouring the metal, the upper plate C is held in position by clamping. The hand-lever C^2 is pivoted on the plate C and is formed with prongs or projecting bent arms c^2 , which engage with the ends of the center plate B and hold the plate C in line with same. The hand-lever C^2 is shown in Figs. 1 and 3 in its lowered position and in Fig. 2 in its raised position to allow the plate C to slide on the center plate B.

In casting rivets or like articles with the mold-box, as described, the three plates A, B, and C are placed in line and clamped together, as shown in Figs. 1 and 4, and the metal run in by the gate D, which is immediately oscillated to the position shown in dotted lines in Fig. 1 to break the metal away from the plate C. The upper plate C is also immediately made to slide upon the center one B by oscillating it to the position shown in Fig. 2 to break the metal of the casting away from that of the duct c' . The two parts of the center plate B are then oscillated apart or turned

back on their pivot, as shown in Fig. 3, to allow the rivets to be dropped or removed out of the molds.

The mold-box or chill may be portable or be secured on any suitable standards or foundation.

We claim as our invention—

1. Chills, or mold-boxes for casting bolts, rivets and the like, comprising a plain plate A having recesses in its upper surface, a two-part plate pivoted thereto and openings through said two-part plate of less diameter than said recesses and adapted to be placed in line with said recesses, a cover-plate also pivoted and having a duct for the flow of metal to the openings in the two-part plate, substantially as described.

2. Chills or mold-boxes for casting bolts, rivets and the like, comprising a plate A having recesses, a two-part plate pivoted thereto and openings through said two-part plate of less diameter than said recesses and adapted to be placed in line with said recesses, a cover-plate also pivoted and having a duct for the flow of metal to the openings in the two-part plate, the free ends of the two-part plate being beveled and a clamp E in the plate A adapted to engage said free ends, substantially as described.

3. Chills, or mold-boxes for casting bolts or the like, comprising a plate A having recesses, a two-part plate pivoted thereto and openings through said two-part plate of less diameter than said recesses adapted to be placed in line with said recesses, a cover-plate also pivoted and having a duct for the flow of metal to the openings in the two-part plate, and a pair of bent arms on the cover-plate adapted to engage the two-part plate, substantially as described.

4. Chills, or mold-boxes, comprising a plate A having recesses, a two-part plate pivoted thereto and openings through said two-part plate adapted to be placed in line with said recesses, a cover-plate also pivoted and having a duct for the flow of metal to the openings in the two-part plate, a pair of bent arms to lock the cover-plate to the two-part plate, and a clamp E to lock the plate A to the two-part plate, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAS. BONE.
MORRIS REID.

Witnesses:

R. C. THOMSON,
WM. RUTHERFORD.