

No. 677,549.

R. F. LUDLOW.
MOLD FOR MAKING CASTINGS.

Patented July 2, 1901.

(No Model.)

(Application filed Jan. 20, 1900.)

Fig. 1.

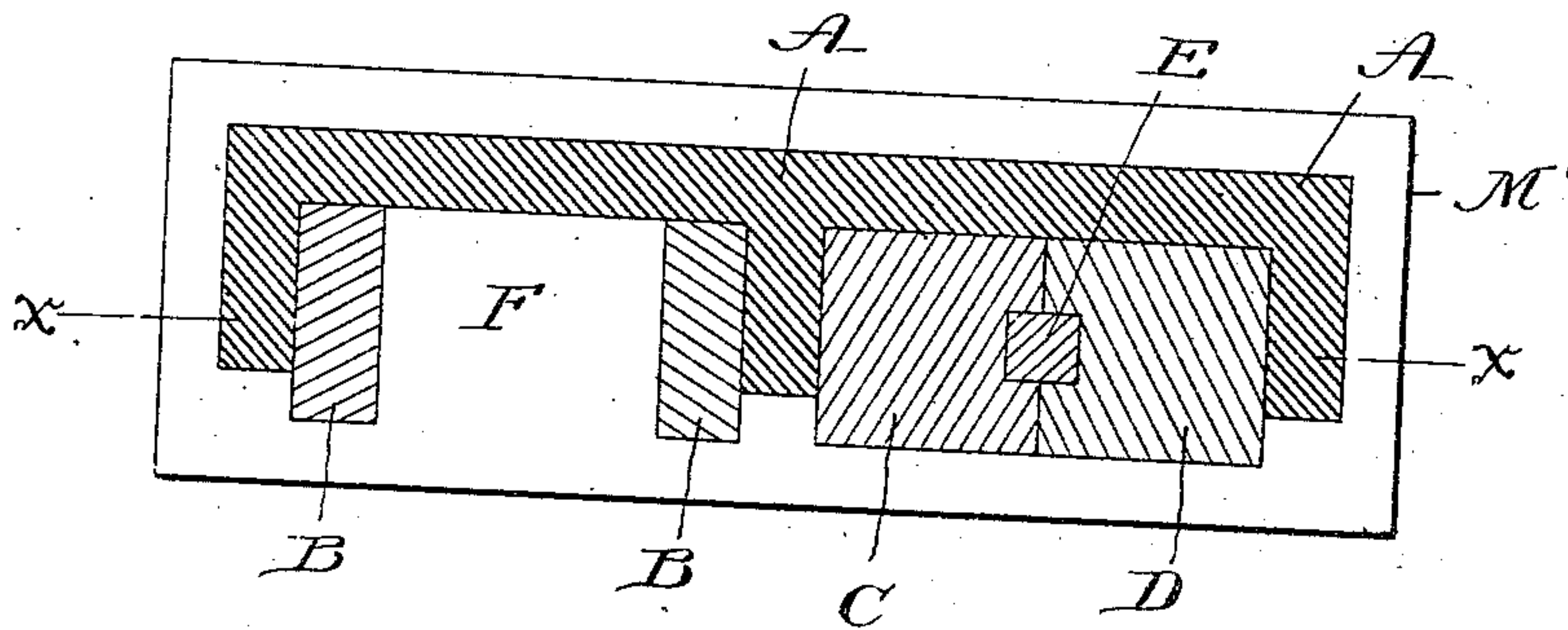


Fig. 2.

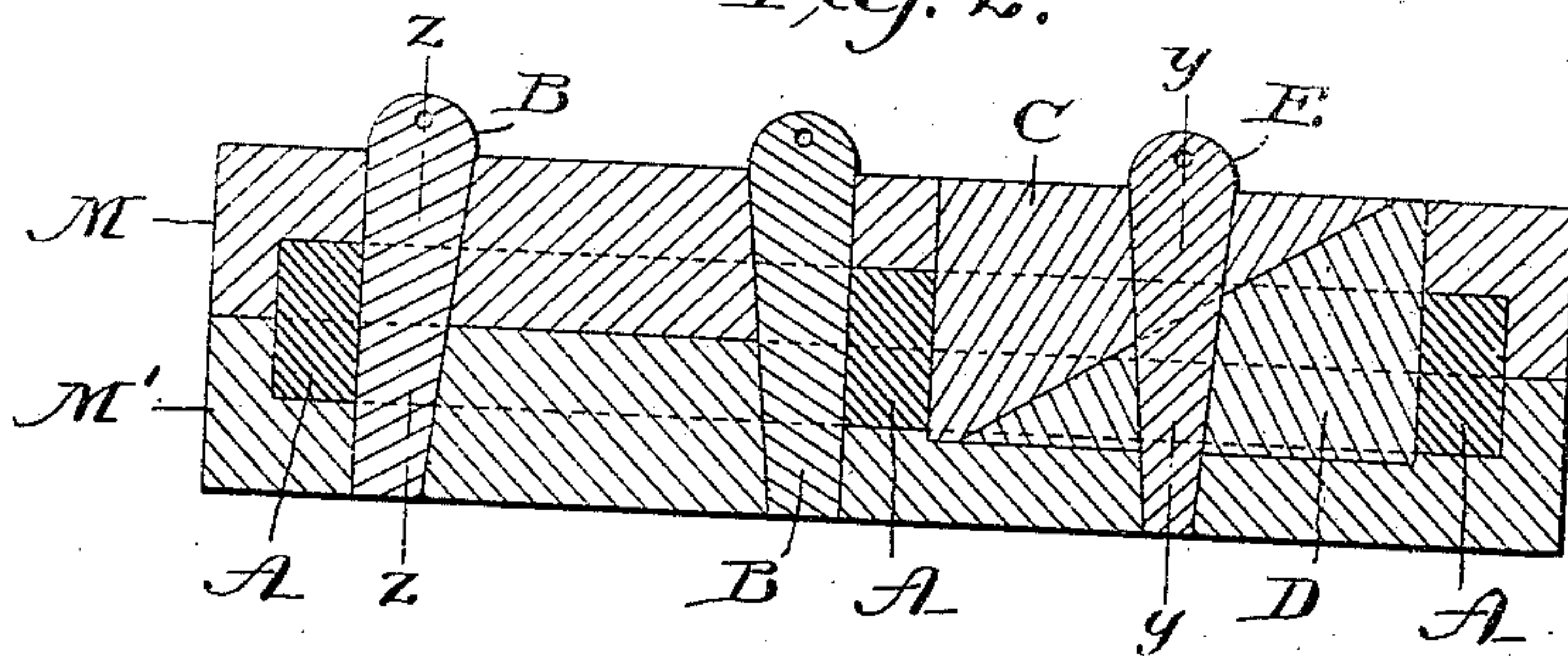


Fig. 3.

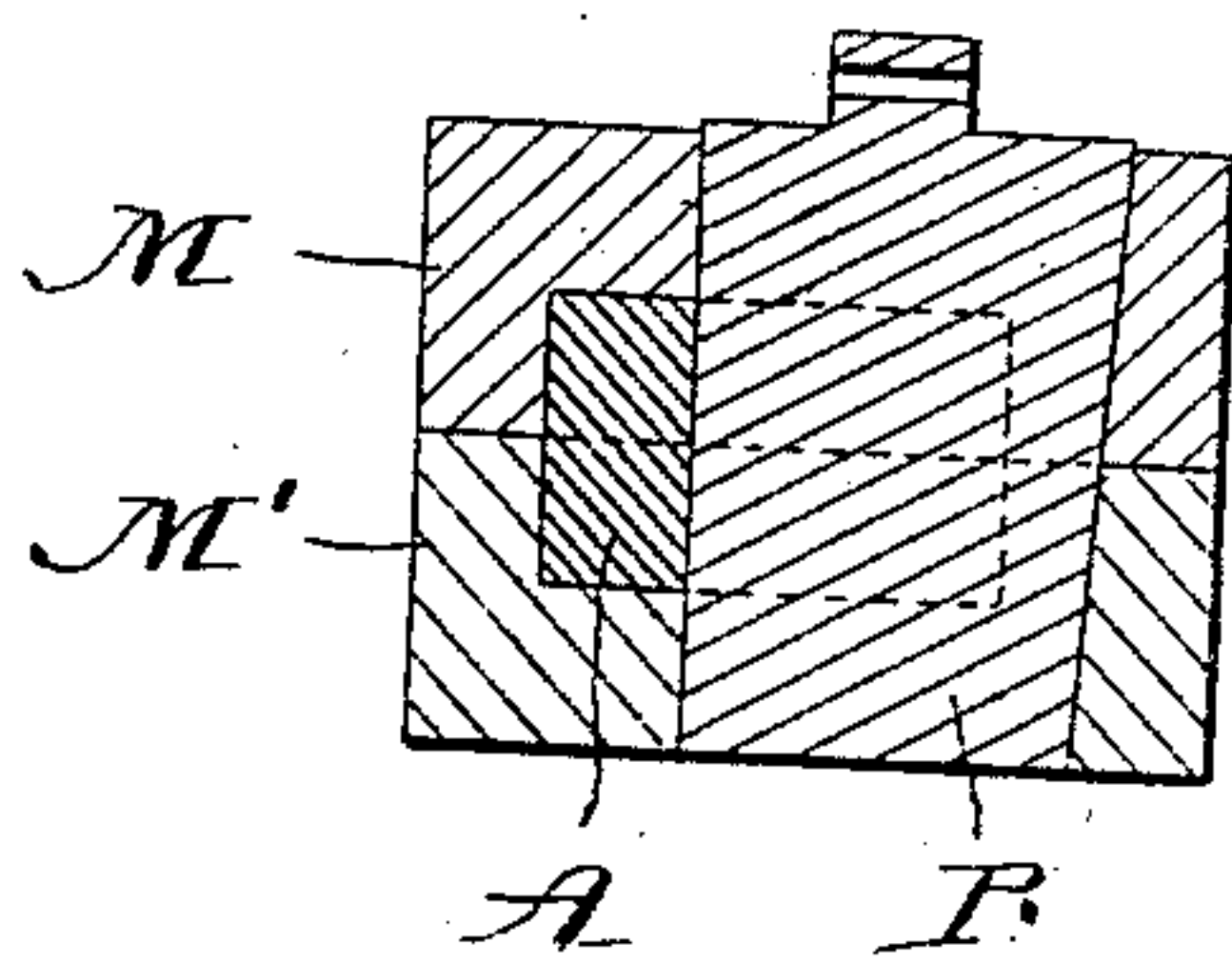
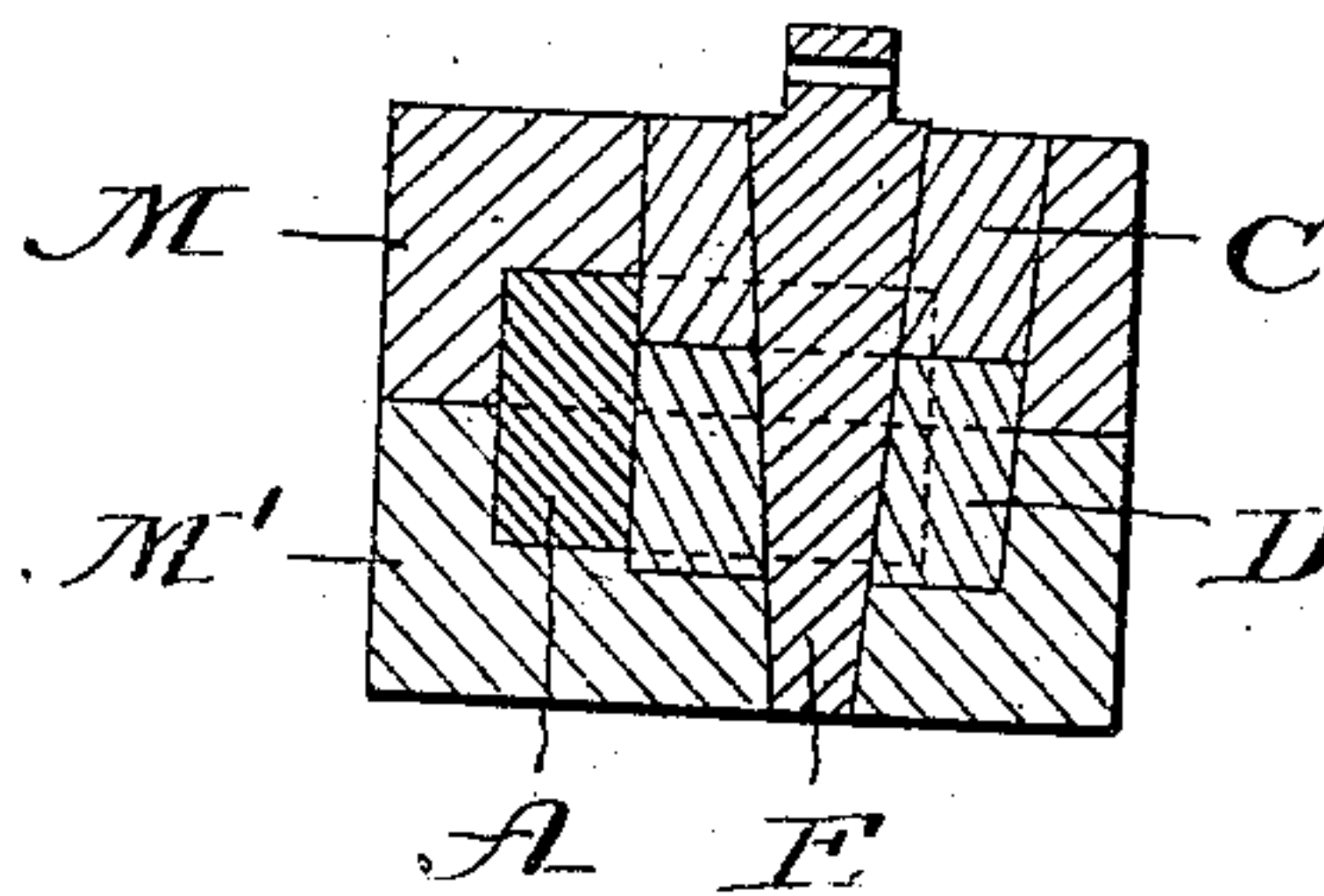


Fig. 4.



WITNESSES:

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MOLD FOR MAKING CASTINGS.

SPECIFICATION forming part of Letters Patent No. 677,549, dated July 2, 1901.

Application filed January 20, 1900. Serial No. 2,172. (No model.)

To all whom it may concern:

Be it known that I, RODNEY F. LUDLOW, a citizen of the United States, residing at Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Molds for Making Castings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to molds for forming metal castings, and has for its object to take up the strain due to shrinkage of the cast metal on cooling.

To that end it consists in constructing a mold in two or more parts whereby one or more of these parts may be moved from a set or working position after the molten metal has been poured in the formation of the casting.

The distinctive and characteristic features of novelty will be hereinafter described, and pointed out in the claims.

In the drawings illustrating my invention, Figure 1 is a horizontal section of my improved mold on a line with the face of the drag of the mold. Fig. 2 is a vertical section through both drag and cope on a line $x x$ of Fig. 1. Fig. 3 is a vertical section on the line $z z$ of Fig. 2, and Fig. 4 a vertical section on the line $y y$ of Fig. 2.

In the several views the vertical sections Figs. 2, 3, and 4 are designed to illustrate the relative arrangement of the cope, drag, removable and movable members, and contents or casting in the mold.

Describing now the construction of the device by reference to the drawings, M' is the drag or under half of the mold, and M the cope or upper half thereof.

C and D are movable members constituting a part of the mold and made with coinciding inclined faces adapting them to rest one upon the other, these inclined faces being at an angle of not less than forty-five (45°) degrees, and E is a wedge or key passing through a vertical opening in said movable members C and D and adapted to key and hold said parts together when in normal position. Said keys

being removable, they allow when removed the parts C and D to slide upon each other, when the contraction or shrinkage of the cooling casting bearing upon said movable parts C and D will naturally produce such result.

On the left-hand side of Figs. 1 and 2 and in section in Fig. 3 $B B$ are removable members of the mold, preferably wedge-shaped, adapted to fill openings in the mold-body and capable of withdrawal.

A indicates the casting.

The operation of the device and its utility will be apparent to one skilled in the art. The several parts being in normal position, as shown in the drawings, and the metal being poured to form the casting indicated at A , the part B is withdrawn wholly or partly at the proper time, thus providing an opening or chamber in the mold next to the offsets F in the mold against which the part B rested, thus giving space to equalize the contraction of the cooling casting. In like manner the keys E are withdrawn at like proper time, allowing the movable members C and D to slide on each other or one on the other, as may be, when the pressure of the cooling casting on said parts or one of them will be taken up by the then adaptability of said parts C and D to be so moved.

I desire it to be understood that I do not confine my construction to any particular design of mold, as this may be varied as occasion and particular construction of pattern or casting to be made may require.

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

1. In a mold for making castings, the combination with the drag and cope, of movable superposed members provided with inclined contacting portions and normally forming part of the mold and of its shaping-surface; substantially as described.

2. In a mold for making castings, the combination with the drag and cope, of movable members normally forming part of the shaping-surface of the mold and having reversely-inclined superposed portions, and a locking device to hold said movable members prima-

rily in set or operative positions; substantially as described.

3. In a mold for making castings the combination of the drag and cope, of removable
5 members having reversely-inclined contacting portions and arranged at one side of and projecting into the mold-cavity.

In testimony whereof I have hereunto affixed my signature this 12th day of January, A. D. 1900.

RODNEY F. LUDLOW.

Witnesses:

GEO. W. REED,
H. T. FENTON.