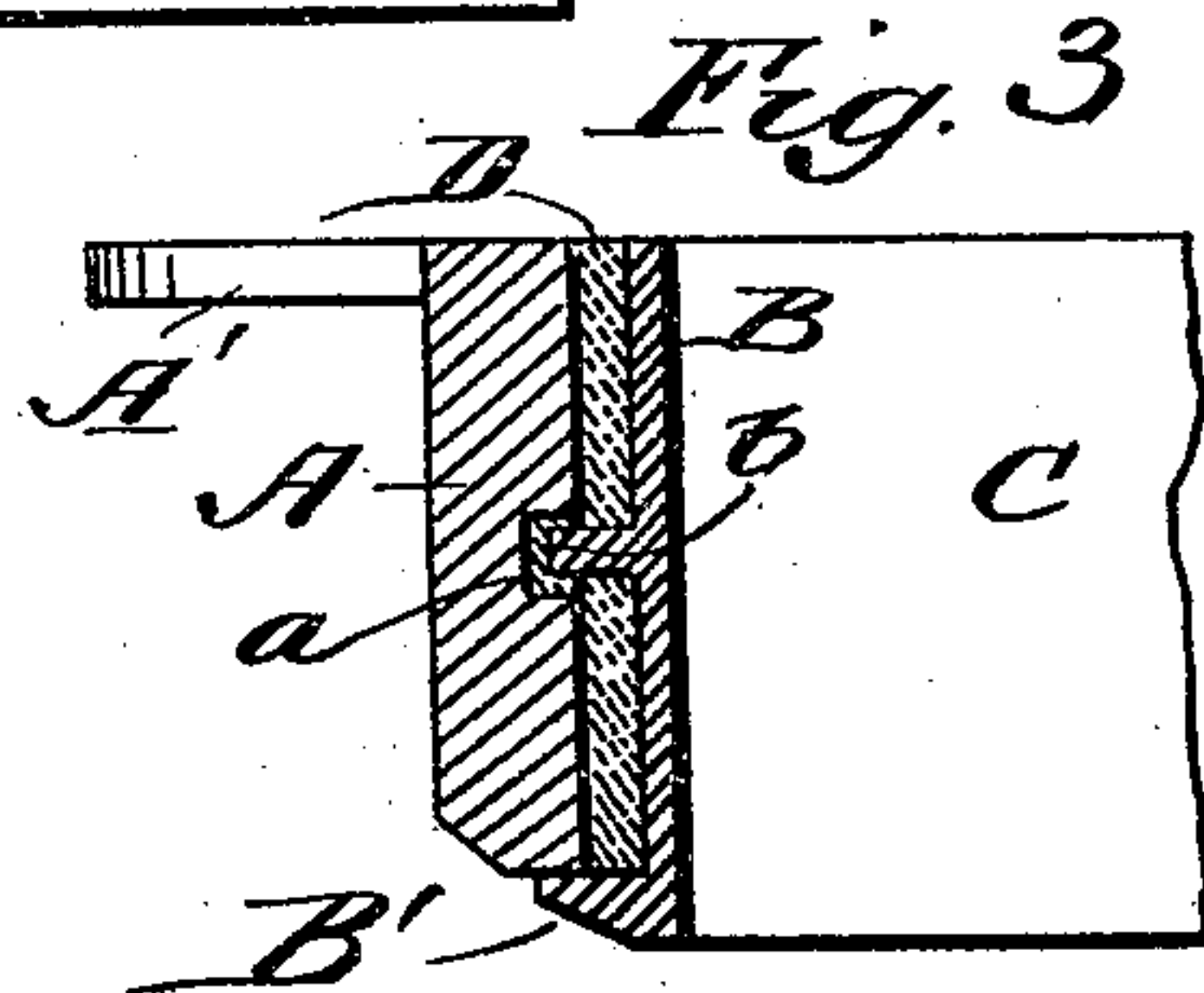
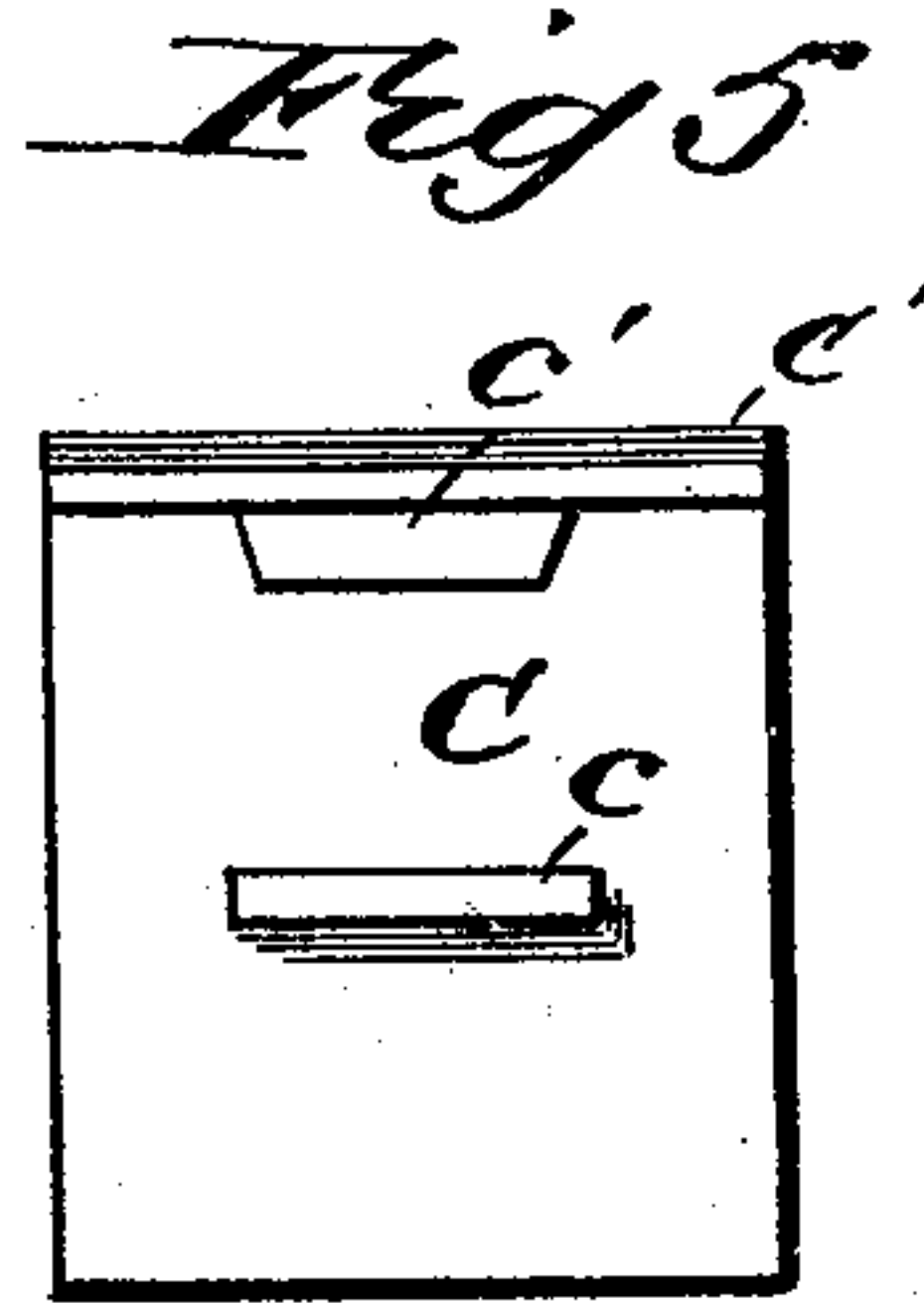
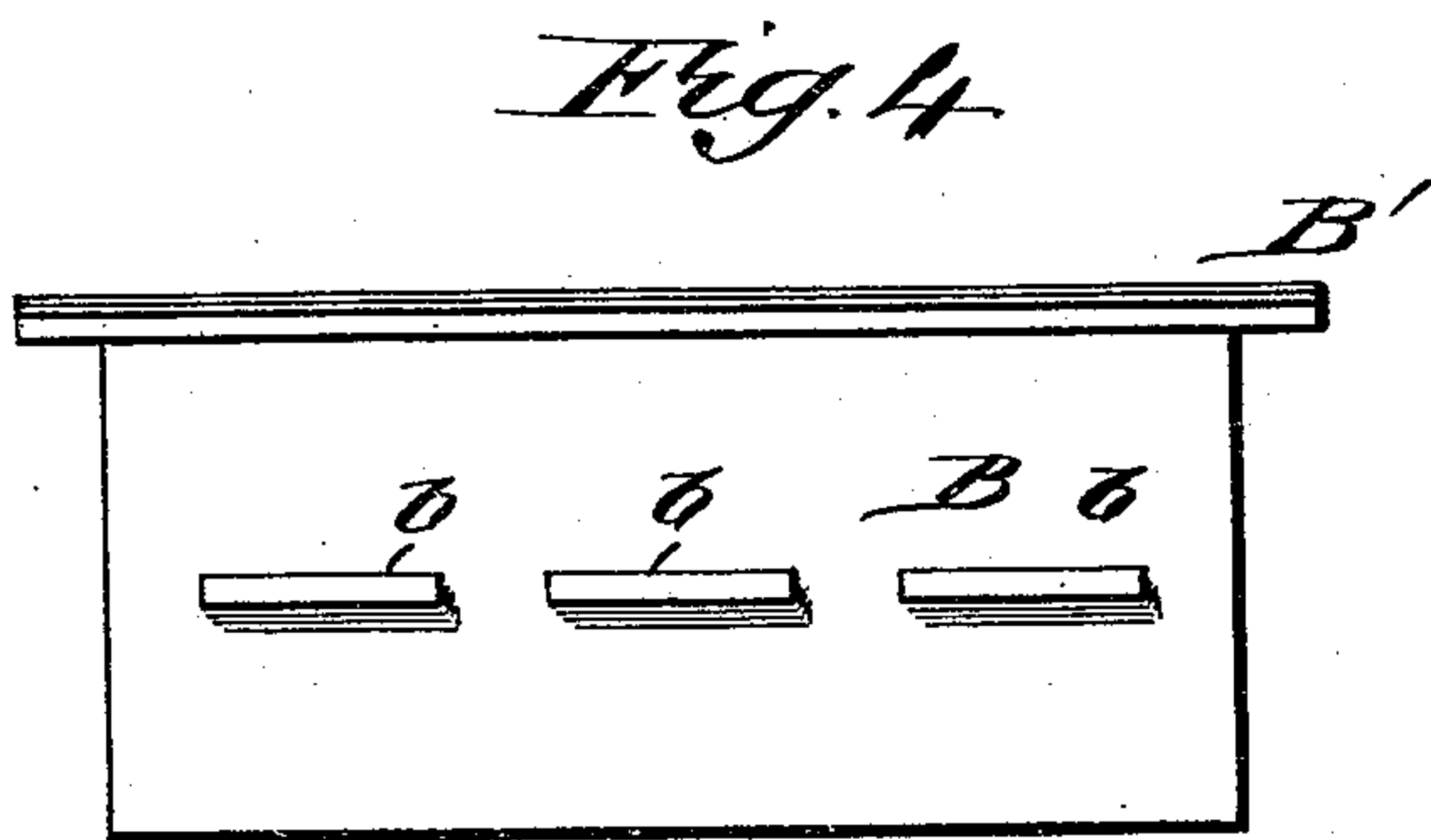
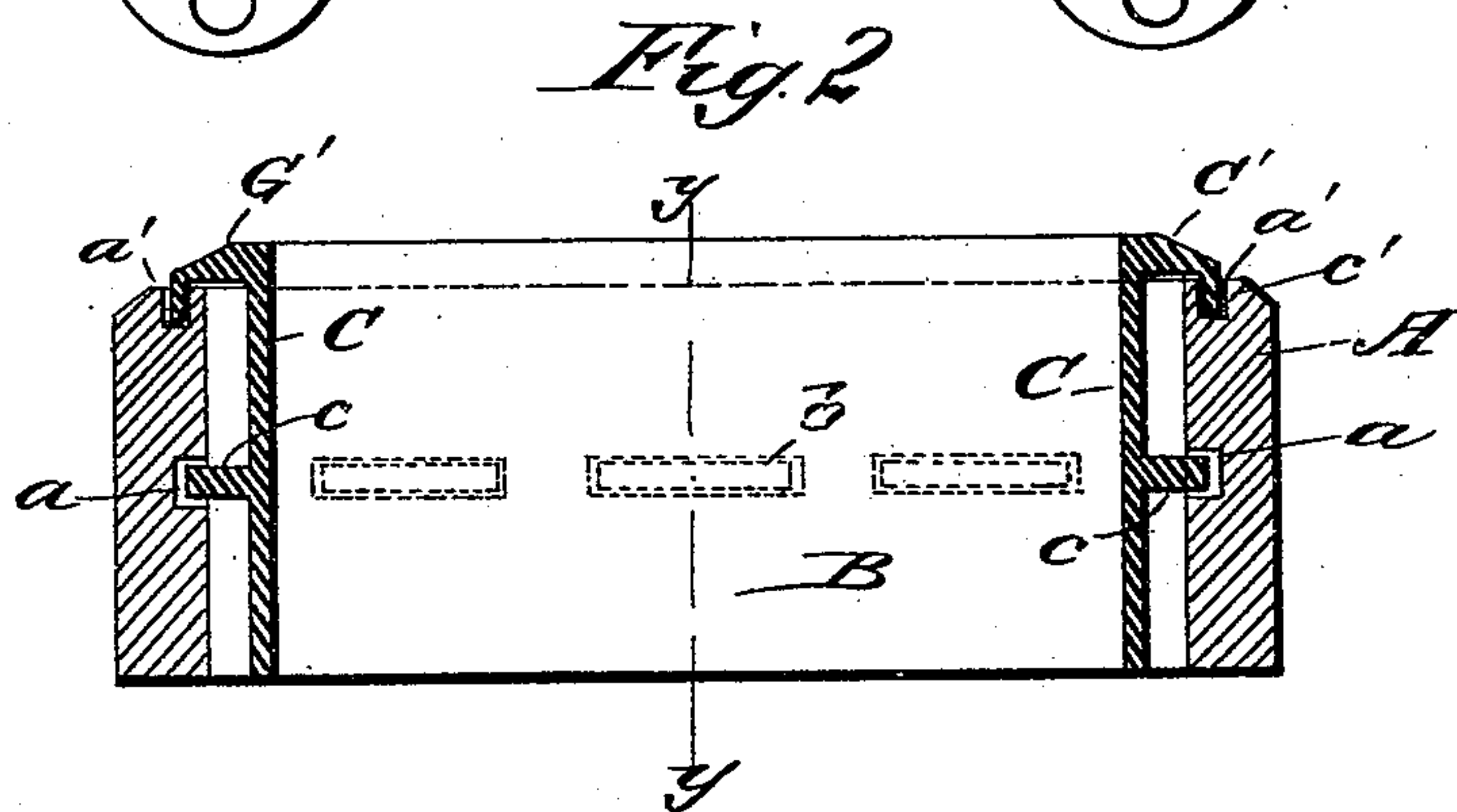
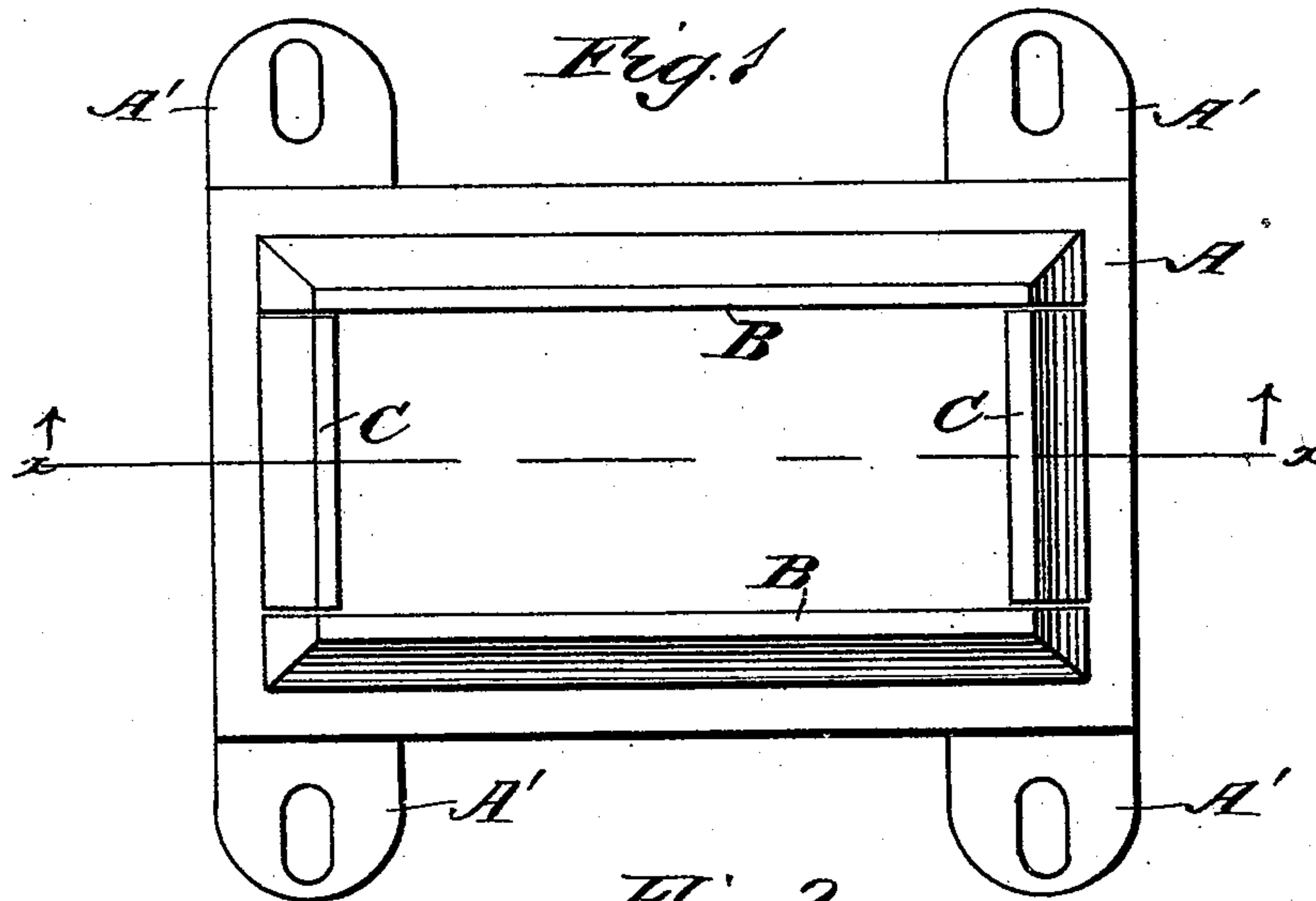


(No Model.)

C. E. SIMPSON.  
BRICK MOLD.

No. 459,313.

Patented Sept. 8, 1891.



WITNESSES:

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INVENTOR:

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ATTORNEYS

# UNITED STATES PATENT OFFICE.

CHARLES E. SIMPSON, OF PORTSMOUTH, OHIO.

## BRICK-MOLD.

SPECIFICATION forming part of Letters Patent No. 459,313, dated September 8, 1891.

Application filed February 14, 1891. Serial No. 381,428. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. SIMPSON, of Portsmouth, in the county of Scioto and State of Ohio, have invented a new and Improved Brick-Die, of which the following is a full, clear, and exact description.

My invention relates to improvements in that class of brick-dies which are used for pressing fire-brick, red brick, tiles, &c., into shape. The lining is an important feature of such dies, as the lining wears out much faster than the body of the die, and it is necessary that it be constructed in such a manner that it can be easily taken out, repaired, and replaced; and the objects of the invention are to provide a convenient die in which the lining may be easily and firmly placed and a lining specially adapted to its purpose.

To this end my invention consists in certain features of construction and combinations of parts, which will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the die. Fig. 2 is a vertical longitudinal section of the same on the line *xx* of Fig. 1. Fig. 3 is a broken cross-section on the line *yy* of Fig. 2. Fig. 4 is a detail side elevation of one of the side lining-plates, and Fig. 5 is a detail side elevation of one of the end lining-plates.

The body or frame A of the die is generally of a rectangular shape, is open on opposite sides, and is provided on each side at the corners with projecting flanges A', which are slotted, as shown at Fig. 1, and which enable the die to be secured in a machine. In the inner face of the walls of the frame are horizontal recesses *a* and in the outer edge of the end portions of the frame are recesses *a'*. The side lining-plates B are of about the same length as the inside of the frame, the said plates having centrally, on one side, projecting lugs *b*, which fit loosely in the recesses *a* of the frame, and the plates have on one edge a laterally-extending flange B', which is adapted to project over the outer edge of the frame, thus preventing the plates from being pushed inward and which also serves to stiffen the plates. The end plates C form the lining

for the ends of the die, said plates having on one side a lug *c* to enter the recesses *a* of the main frame, and the end plates having also at one edge a flange C', which overlaps the outer edge of the frame and which is provided on the inner side with a lip *c'*, adapted to enter the recesses *a'* of the frame and prevent the displacement of the plates.

When the plates B and C are to be inserted in the main frame A, they are ground to the proper size, the plates B are inserted on the sides, and the plates C at the ends, and the plates B and C are held in relation to the frame, so that there will be space all around between the lining-plates and the frame, as shown in Fig. 2, and the lining-plates and the frame may be held in a desired position in relation to each other by wedging them up with strips of iron, and when the plates are properly placed some soft metal—such as Babbitt, lead, or equivalent material—which may be melted, but which will quickly harden, is poured around them and also into the recesses *a'*. This material fills all the intervening space between the lining-plates and the frame, as shown at D in Fig. 3, and the molten material also runs into the recesses *a*, and after it hardens the lining-plates will be firmly held in place. If it is necessary to remove the lining-plates and replace them by new ones, they may be removed by heating the die, so as to melt the material between the plates and the main frame.

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

1. A brick-die comprising a main frame having recesses in the side walls, lining-plates having lugs thereon to fit the recesses in the walls and having flanges to overlap the edge of the die, and a filling of easily-melted material between the lining and the frame, substantially as described.

2. A brick-die comprising a main frame having recesses in the side walls and in the outer edge and a lining having lugs to enter the recesses and flanges to overlap the edge of the die, substantially as described.

3. A brick-die comprising a main frame having recesses in the side walls and in the outer edge at the ends a lining composed of separable side and end plates, said plates



having lugs to enter the recesses in the side walls of the frame and having flanges overlapping the outer edge of the frame, and the end plates having lips adapted to enter the  
5 recesses in the edge of the main frame, substantially as described.

4. A lining for brick-dies, consisting of plates having projecting lugs on their outer faces, flanges on one edge, and depending  
10 lips on the flanges of the end plates, substantially as described.

5. In a brick-die, the lining consisting of

side plates having projecting lugs on their outer sides and having flanges on one edge and end plates having laterally-extending  
15 lugs and having edge flanges with lips thereon, the lugs and lips being adapted to enter corresponding recesses in a die-frame, substantially as described.

CHARLES E. SIMPSON.

Witnesses:

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