

S. J. PINK.
BRICK PRESS.

APPLICATION FILED DEC. 23, 1907.

938,699.

Patented Nov. 2, 1909.

3 SHEETS—SHEET 1.

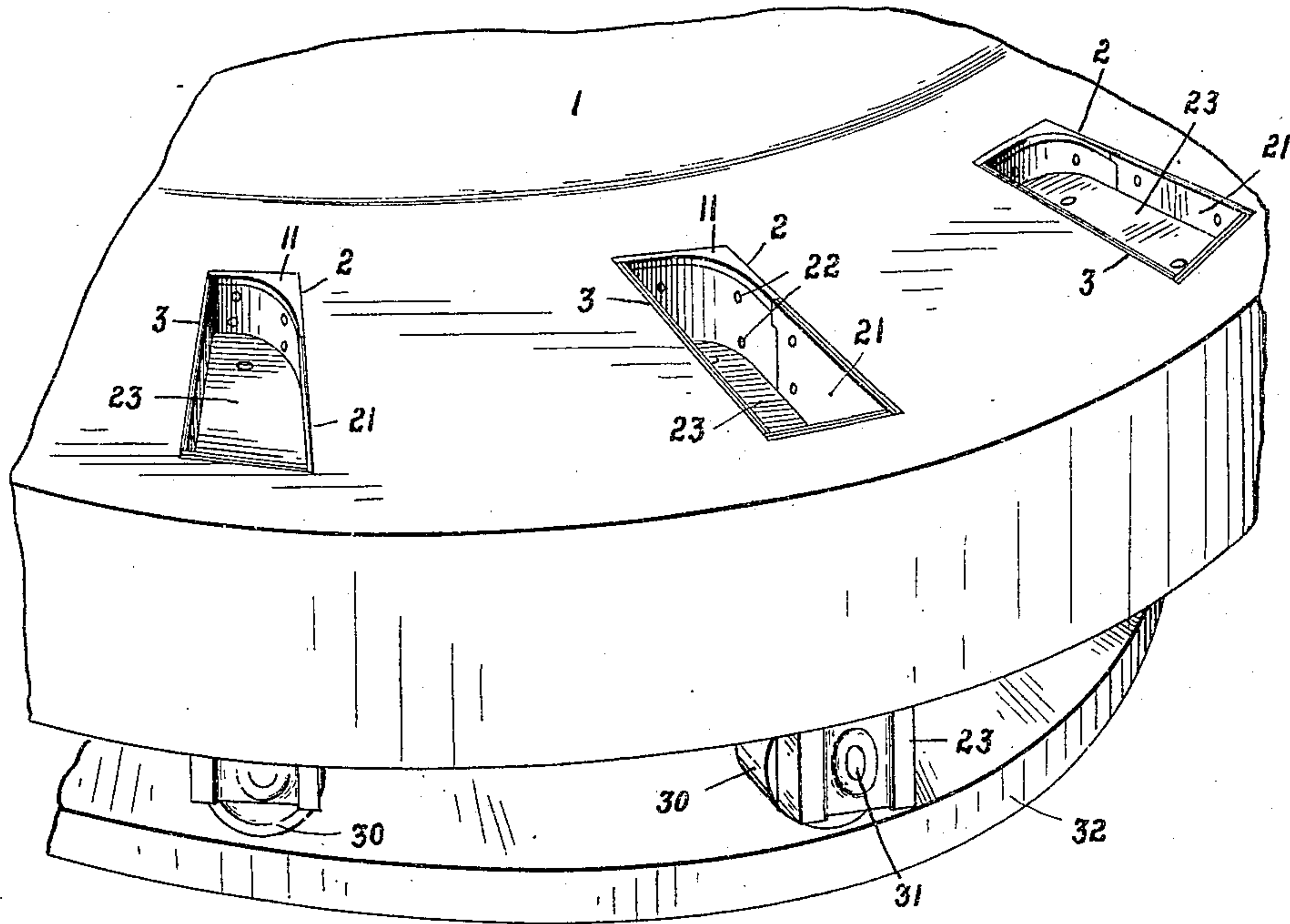


Fig. 1.

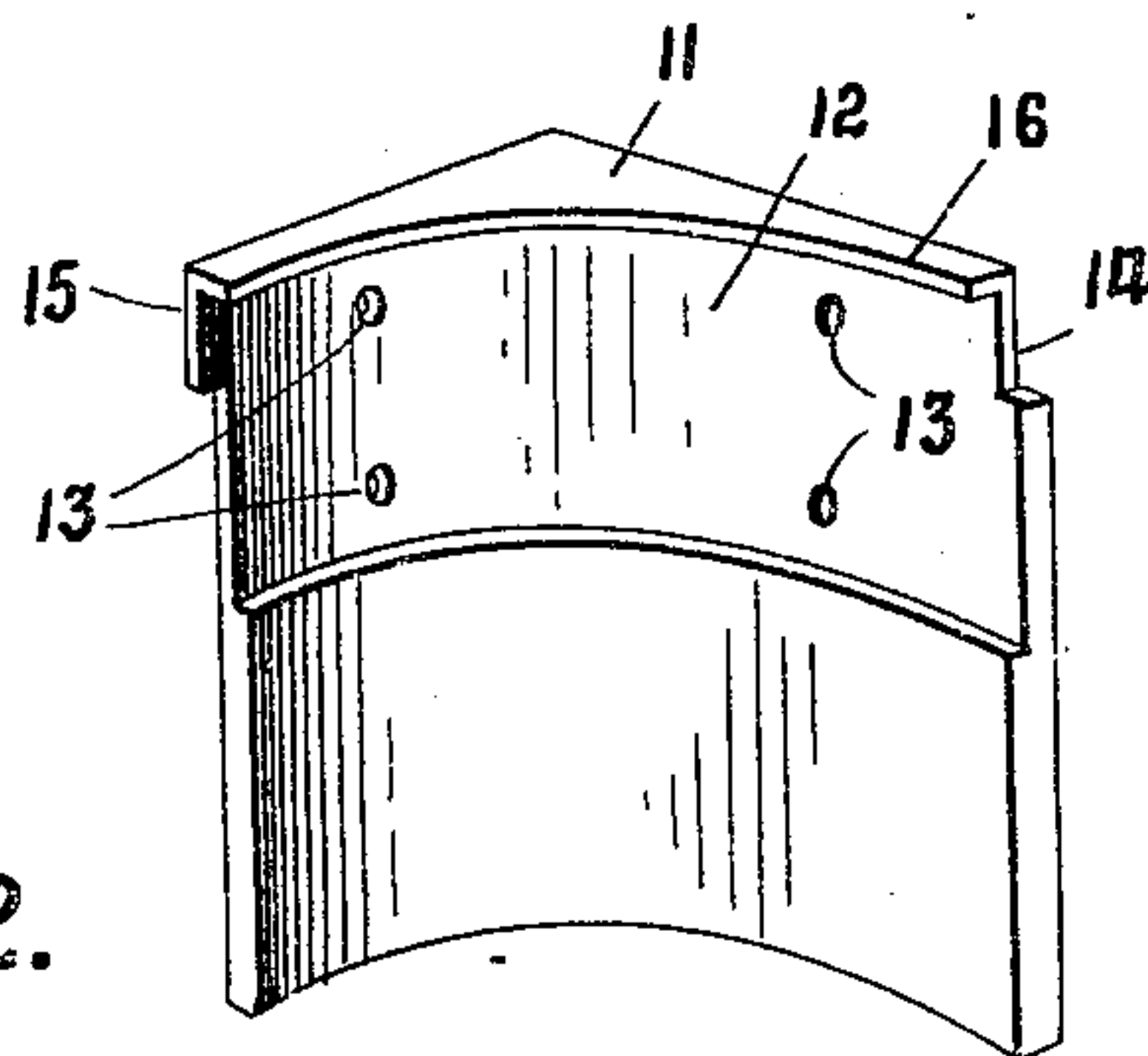


Fig. 2.

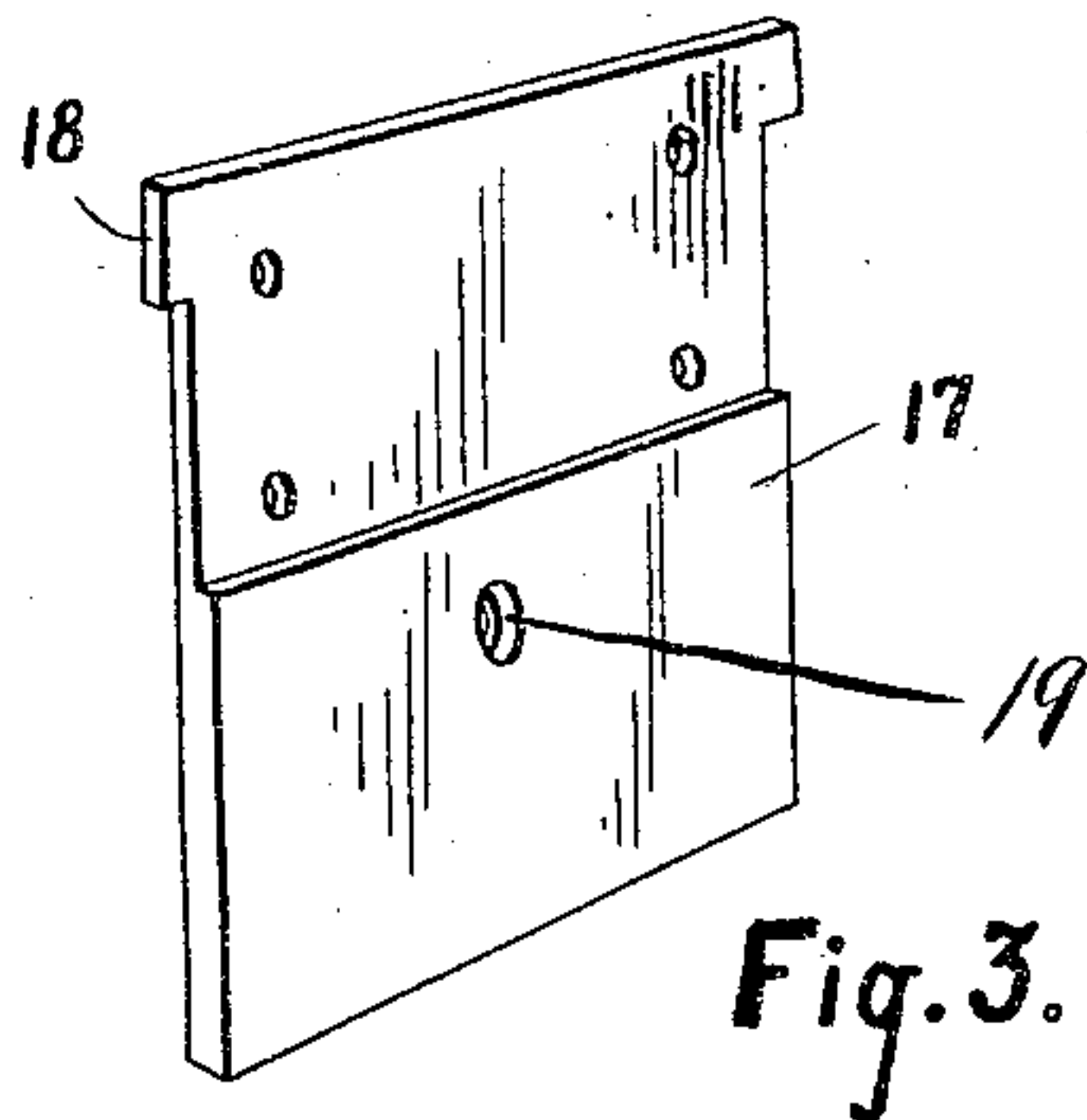


Fig. 3.

Witnesses.

Lloyd Blackmore
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3 SHEETS—SHEET 2.

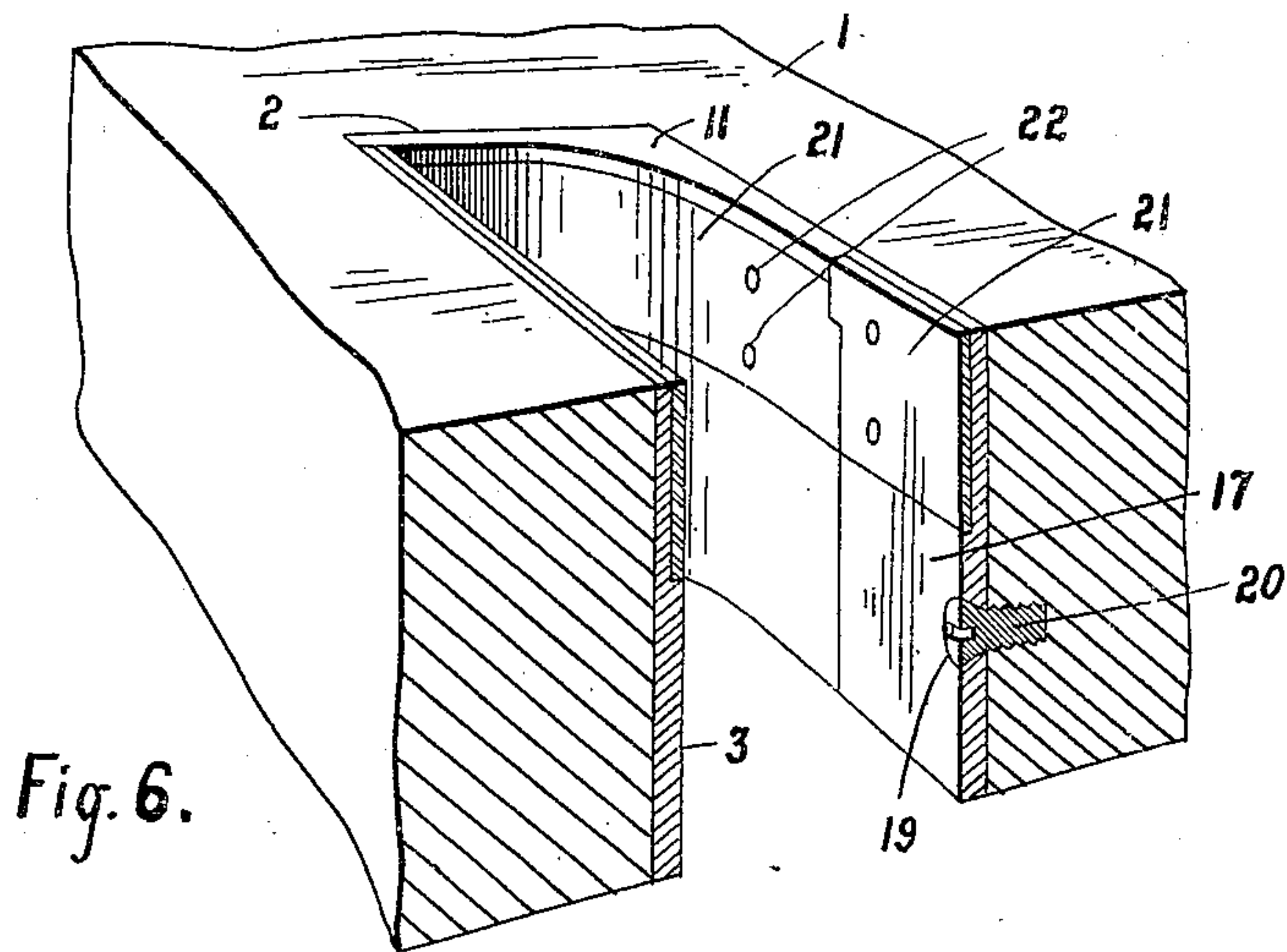


Fig. 6.

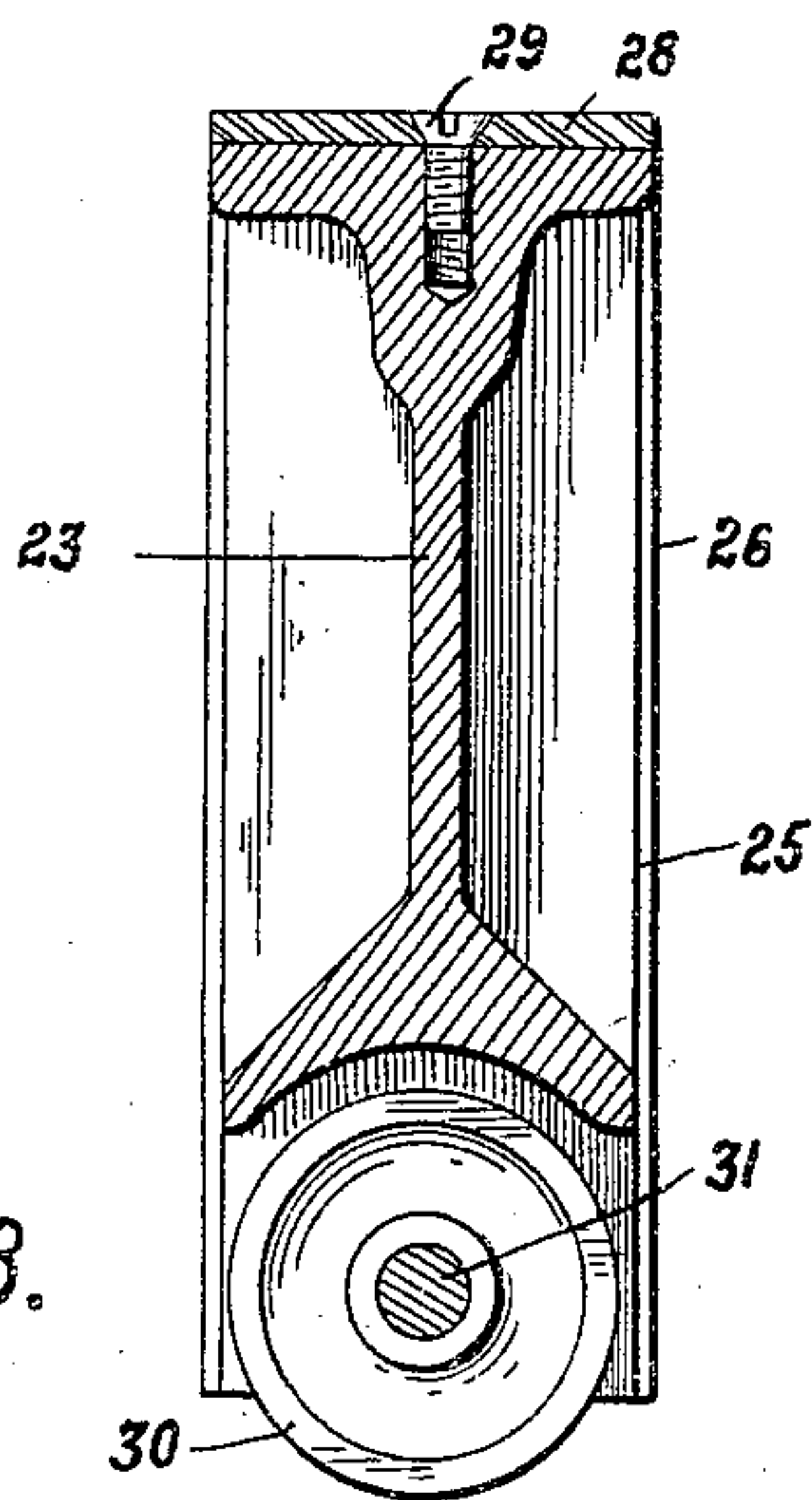


Fig. 8.

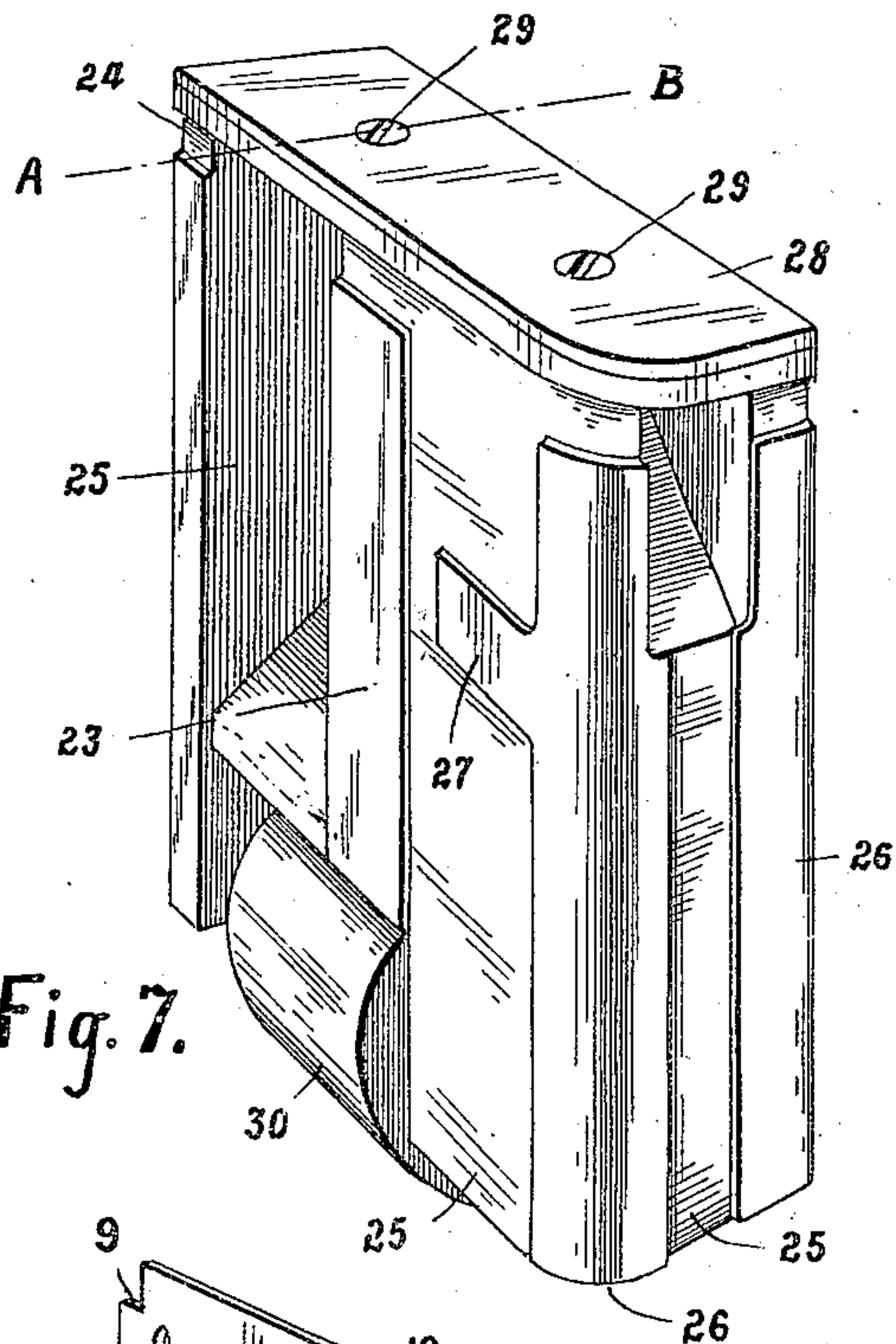


Fig. 7.

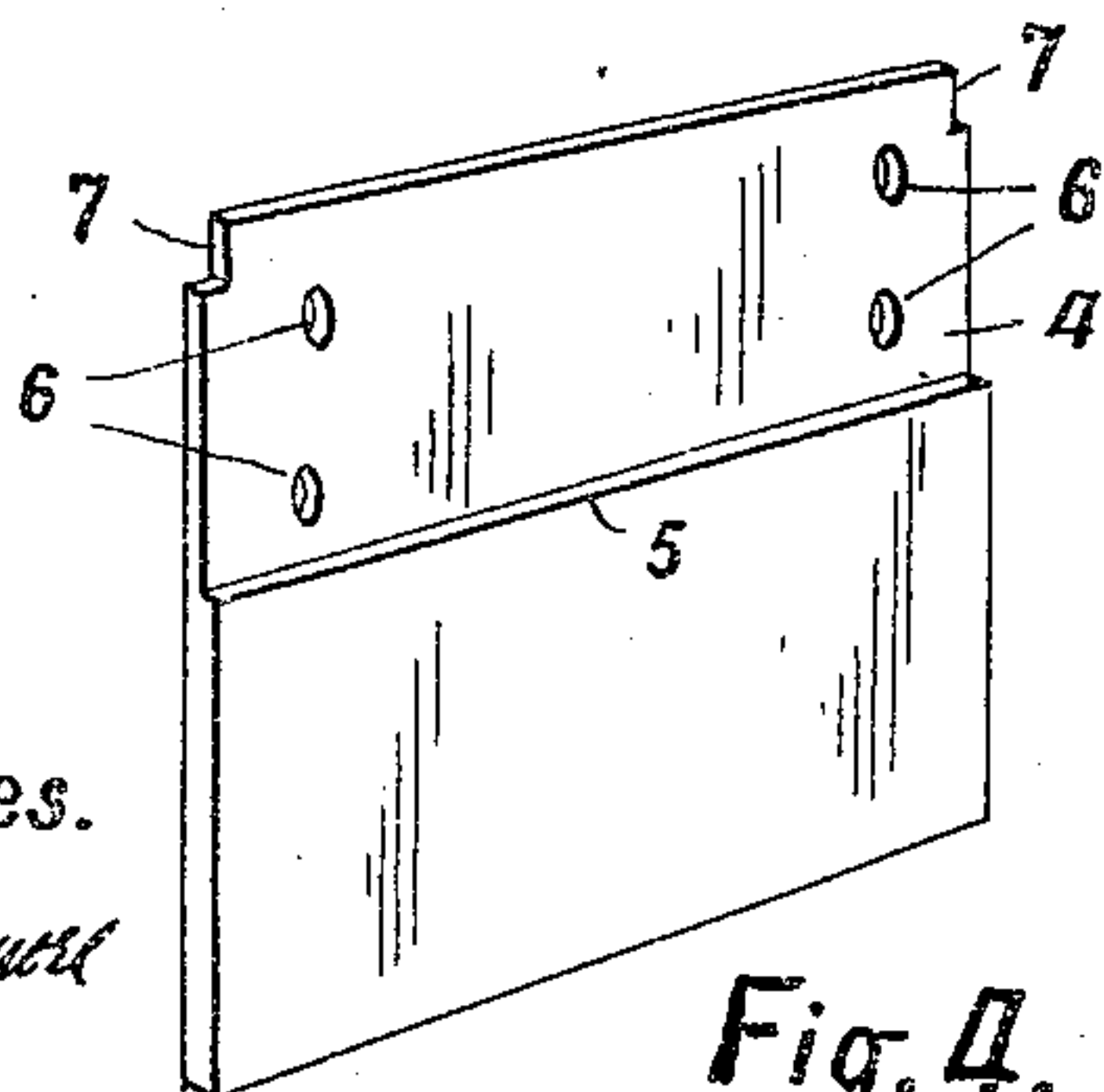


Fig. 4.

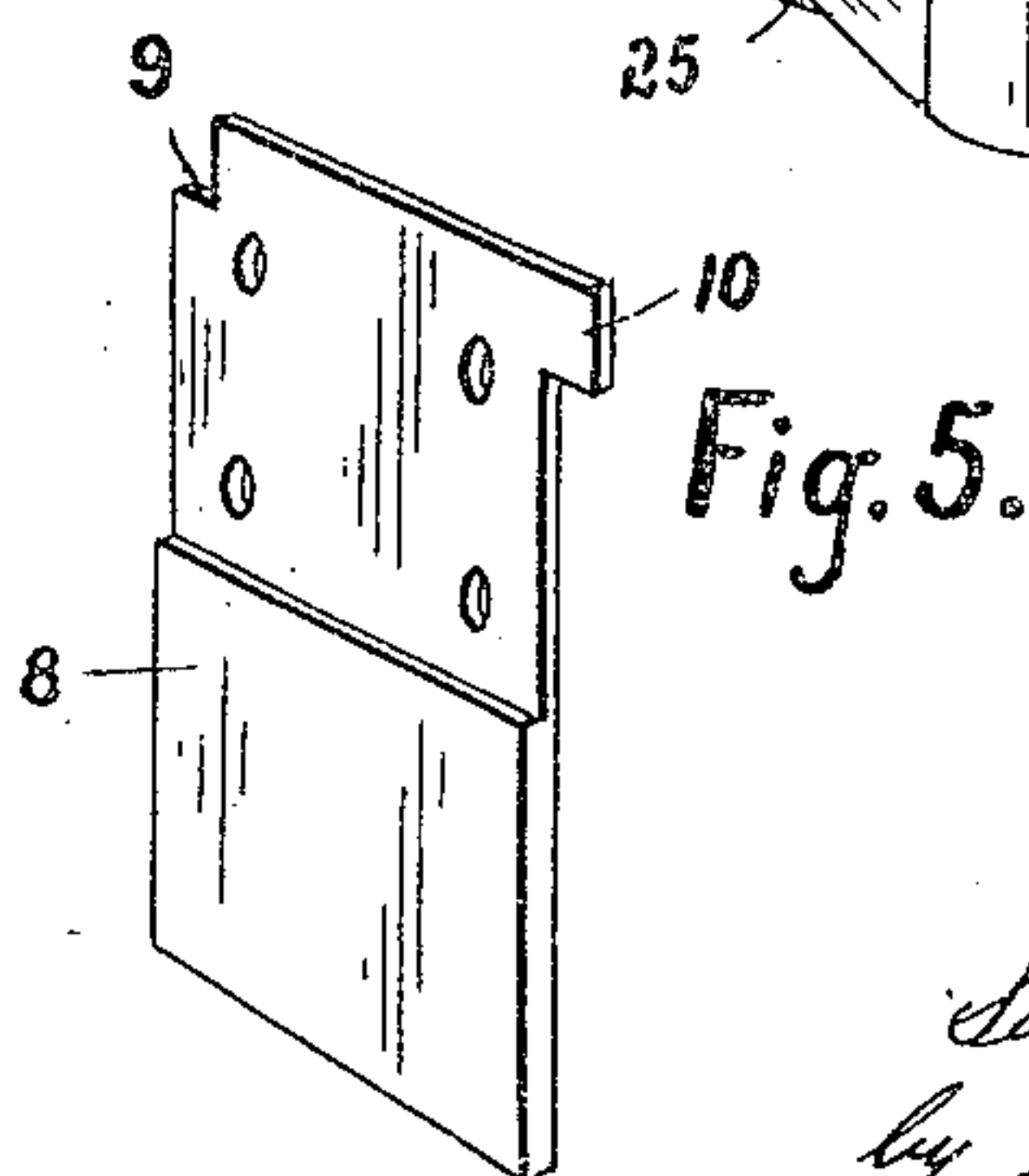


Fig. 5.

Witnesses.

Hayden Blackwell
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3 SHEETS—SHEET 3.

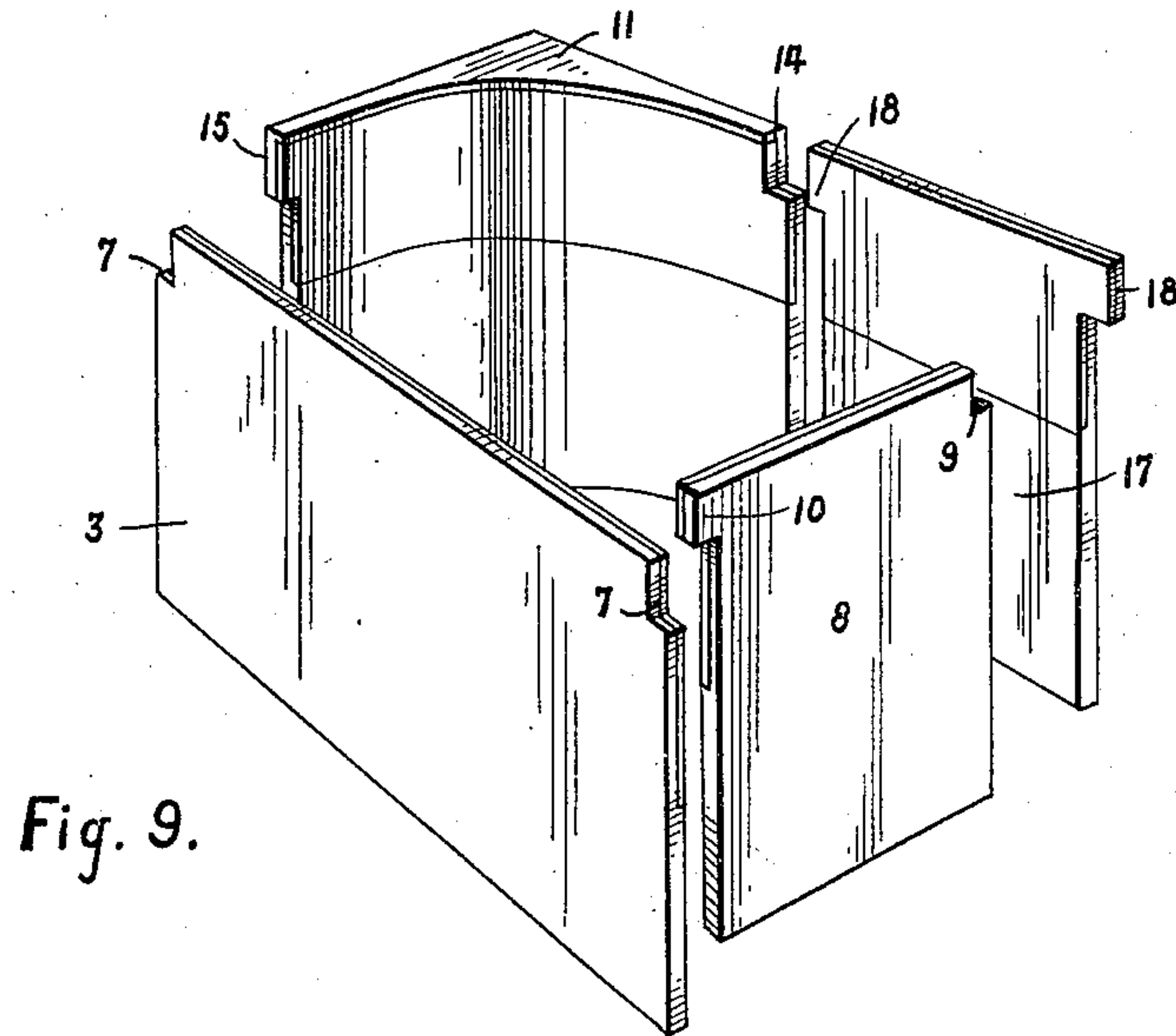


Fig. 9.

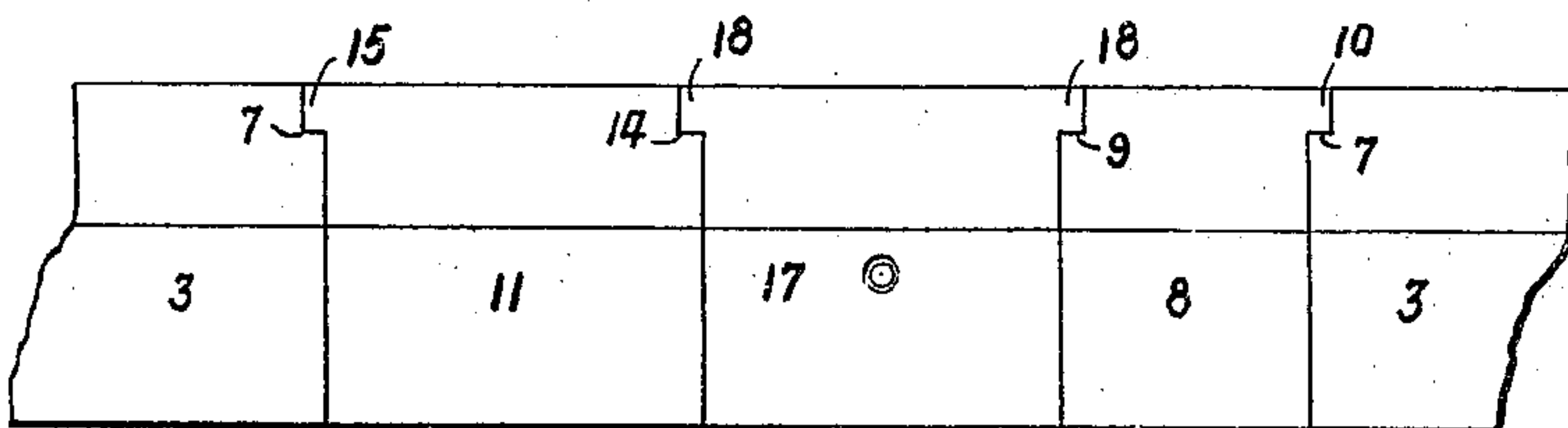


Fig. 10.

Lloyd Blackmore
J. J. McCarthy

Samuel J. Park
by C. J. Fetherstonhaugh atty.

UNITED STATES PATENT OFFICE.

SAMUEL J. PINK, OF OTTAWA, ONTARIO, CANADA, ASSIGNOR OF ONE-HALF TO MODERN MACHINE COMPANY, OF OTTAWA, CANADA, AND ONE-HALF TO JOSEPH A. BULLMAN, OF OTTAWA EAST, CANADA.

BRICK-PRESS.

938,699.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed December 23, 1907. Serial No. 407,819.

To all whom it may concern:

Be it known that I, SAMUEL J. PINK, a subject of the King of Great Britain, residing at the city of Ottawa, in the county of Carleton, in the Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Brick-Presses, of which the following is a specification.

The invention relates to improvements in brick presses and particularly the compression parts, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel arrangement and construction of parts whereby bricks of various shapes may be formed in the same mold chambers by the introduction of particular fillers and a suitable plunger cooperating therewith.

The objects of the invention are to obviate the loss and trouble incident to the removal and replacement of the part containing the mold chambers for each variety of bricks and generally to increase the efficiency of a particular type of press.

In the drawings, Figure 1 is an enlarged perspective view of a portion of the rotary table of a brick press showing the mold chambers with the liners forming mold pieces introduced therein and the plunger rising within said mold chambers. Fig. 2 is an enlarged perspective detail of a liner piece having a thickened portion to its wall to vary the shape of the mold surface from the outline of the mold chamber. Fig. 3 is an enlarged perspective detail of a liner piece having the screw hole therethrough and adapted to hold the several other liner pieces in place. Fig. 4 is a perspective detail of a straight liner piece. Fig. 5 is an enlarged perspective detail of another shaped liner piece. Fig. 6 is an enlarged sectional perspective view of a portion of the rotating table showing the arrangement of the liners forming the mold surface in the mold chamber. Fig. 7 is an enlarged perspective view of the plunger. Fig. 8 is a cross sectional view of the plunger through the line A—B in Fig. 7. Fig. 9 is a perspective view of four face plates in relative locking position one with the other. Fig. 10 is a plan view

of four face plates in projection to show the manner of interlocking, and the fastening in the center plate.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 is the rotating table having the openings 2 therethrough at intervals forming mold chambers and of rectangular shape in outline. 3 is a metal plate conforming to the shape of one of the side walls of said mold chambers 2 and having the recessed upper end 4, forming the ledge 5, the rivet holes 6 and the notches 7 at the upper corners thereof. 8 is a metal plate conforming to the shape of one of the end walls of said mold chamber having a notch 9 at one upper corner and an ear 10 at the other upper corner registering with one of the notches 7, and a corresponding recess at the upper end to the recess 4 and suitable rivet holes.

11 is a metal piece having the back thereof conform in shape to a portion of the side wall and an end wall of the mold chamber 2 and the face thereof curved, or of any suitable shape, here shown as of the shape to conform to, what is called a "bull-nosed brick," said metal piece 11 forming a fillet in the corner of said mold chambers 2. The metal piece 11 is formed with the recess 12 thereacross corresponding to the aforesaid recesses and forming a ledge in alinement with the ledge 5, and has the rivet holes 13 and the notch 14 at one of the upper corners and the ear 15 at the other upper corner, the latter registering with one of the notches 7 of the plate 3.

16 is a bead left just above the recess 12 on the metal piece 11 extending from end to end of said piece.

17 is a metal plate completing with the aforesaid metal plates and metal piece 11, the lining or mold walls of the mold chamber 2, said metal plate 17 having a corresponding recess and rivet holes, ears 18, registering with the notches of the metal piece 11 and the plate 8 respectively, and the screw hole 19, having a suitable bevel thereinto for countersinking the screw head.

The pieces thus formed are arranged in each of the mold chambers 2, so that ears on one piece engage notches on the other, pre-

senting flush joints the whole being secured in place by the screw 20 extending through the plate 17 into the body of the table 1.

21 are plates of a harder and more durable metal in thickness precisely identical with the depth of the recesses at the upper ends of said lining pieces, and secured in said recesses to said lining pieces by the rivets 22 and forming hardened metal facings to said lining pieces for mold surfaces.

The particular outline shape shown in the accompanying drawings and described herein, as for bull-nosed bricks, is only one of many that may be used, and the invention is not limited to the use of the particular shape described and shown, but may be used in any shape whatsoever differing from the actual rectangular shape of the mold chamber or openings in the rotary table.

The use of the term "mold chamber" in this specification must not be confused in any way as to intimate the mold itself, as the designation herein is intended to convey the meaning of a chamber for the reception of the mold parts proper and not that for the reception of the plastic material to be molded previous to the introduction of the mold proper. The chief characteristic of this portion of the invention is the thickness of the lining or mold piece in any one or more places, so as to present a mold surface of different shape in outline from the outline of the opening constituting the mold chamber.

23 is the plunger recessed from its under side at 24 and having the vertical recesses 25 separating the vertical bearing surfaces 26, two of said bearing surfaces 26 having the lateral extensions 27, said bearing surfaces 26 being smoothly polished and arranged in cross sectional outline in similar size and shape to the inner outline size and shape of the lining pieces or mold pieces proper in the mold chambers 2.

28 is a plate of the same shape as the outline of said mold pieces and secured to the top of said plunger by the screws 29 suitably countersunk in its surface.

30 is a roller journaled in the shaft 31 secured in the walls of the recess 25, said roller traveling on the cam track 32 and causing said plunger to reciprocate in said mold chamber during the rotation of said table.

In the operation of this invention, the particular shapes of the lining or mold pieces are inserted in the mold chamber for the variety of bricks to be manufactured, as for instance in the present description the shape is for the bull-nosed variety. These pieces are inserted and fastened as shown and described and a table rotated as usual in such types of machine, with the result that the various plungers in the mold chambers are reciprocated therewithin, the charge of sand and lime entering the mold chamber in

which the plunger is at its lowest point of travel on its track and in following this chamber around it may be explained that the plunger rises in progression the plate 28 contacting with the clay and compressing it against a compression plate over the table, not shown in the present drawings or mentioned previously in the present specification. As the table continues to rotate the roller 30 traveling on the cam track 32 sends the plunger still farther up, until the brick is fully formed, said brick taking the shape for its variety from the side walls formed by the lining or mold pieces. The brick having been thus formed, passes from under the compression plate and is then ejected from the mold chamber, the roller and plunger of the said mold chamber for this purpose continuing its upward motion being guided by the cam track as before. After ejection the brick is removed from the table by hand, the plunger being then forced mechanically downward or sinking by gravity in its lowest vertical position.

What I claim as my invention is:—

1. In a brick press, a table containing a mold chamber, liners for the side walls of said chamber having interlocking meeting edges one with the other, a plurality of renewable hardened face plates secured in a flush position on said liners, and a single screw fastening one of said liners rigid in said chamber.

2. In a brick press, a table containing a mold chamber, mold liners having their rear sides conforming to the shape of the walls of said chamber and their front faces shaped to a particular style of brick said liners having the meeting edges thereof tongued and notched, a plurality of renewable hardened face plates secured in a flush position on said liners, and a screw inserted through one of said liners into a wall of said chamber and holding said liners securely in position.

3. In a brick press, a table containing a mold chamber, a plurality of metal liners having ears on one side edge thereof interlocking with corresponding notches on the adjoining side edge of the next liner and having rear surfaces corresponding to and abutting the mold chamber walls and forming a mold surface of different shape and outline to the aforesaid chamber, a plurality of renewable hardened face plates conforming in outline to the front faces of said liners and secured to said liners in a flush position, and a screw inserted through one of said liners into the side wall of the chamber in said table and securely holding said liners in position.

4. In a brick press, a table containing a mold chamber, a side liner having recessed upper corners, a plurality of end liners having ears extending from the upper corners on one side thereof and interlocking with

the recesses in said side liner and a recess on the remaining upper corners thereof, and a second side liner having ears extending from the upper corners thereof interlocking with the recesses in said end liners and a plurality of renewable hardened face plates secured in a flush position on said liners.

5. In a device of the class described, a mold chamber, a liner piece having a rear face corresponding to the conformation of the walls of the chamber in which it is contained and a front face of irregular shape in relation to the walls of the chamber and vertical surfaces having an ear and a notch at the upper corner thereof respectively and a recess extending across the surface within the vertical length thereof, plates extending

around the walls of the chamber from the aforesaid piece and having corresponding ears and notches and flush joint surfaces and recesses thereacross at the upper ends thereof, a screw joining one of said plates securely to the wall of said chamber and holding by means of said plate the aforesaid piece and plates to the walls and plates filling in said recesses and securely riveted to said lining pieces, substantially as described.

Signed at Ottawa, this 18 day of December, 1907.

SAMUEL J. PINK.

Witnesses:

W. T. CUFFIQUIN,
JAMES C. HARTNEY.