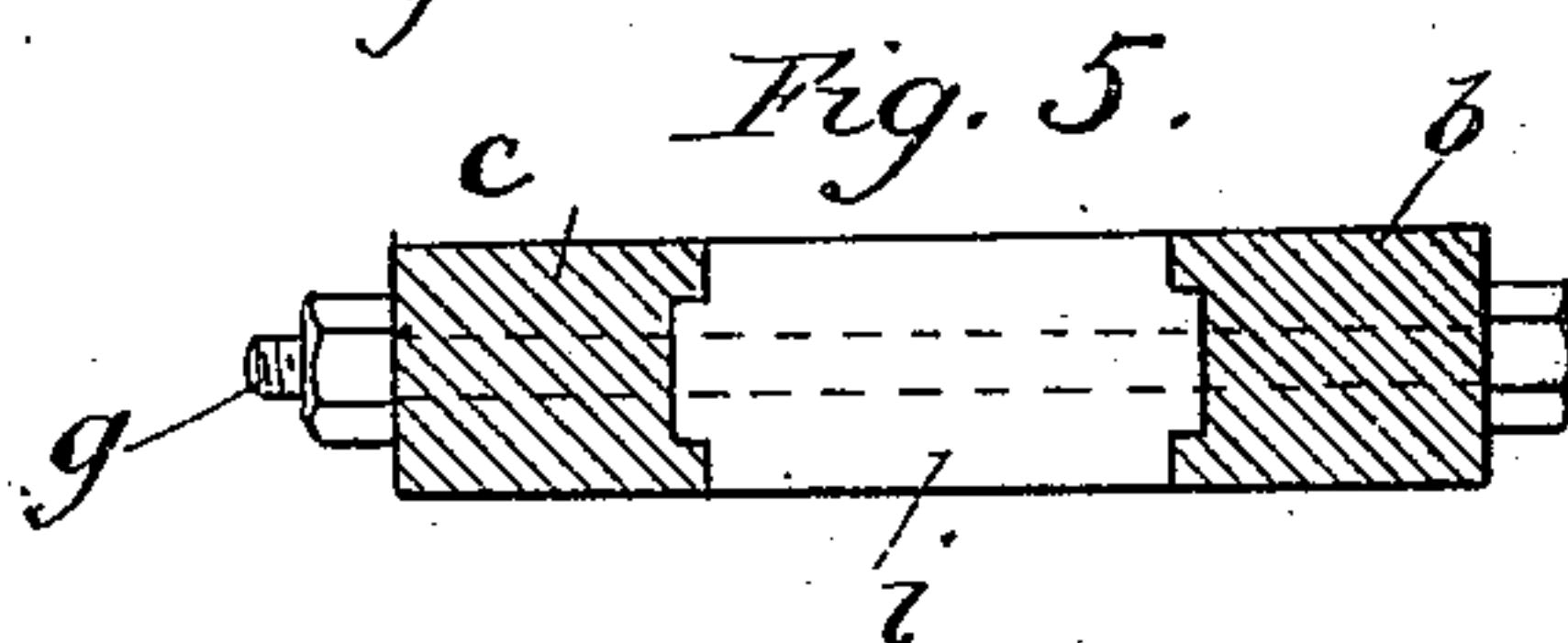
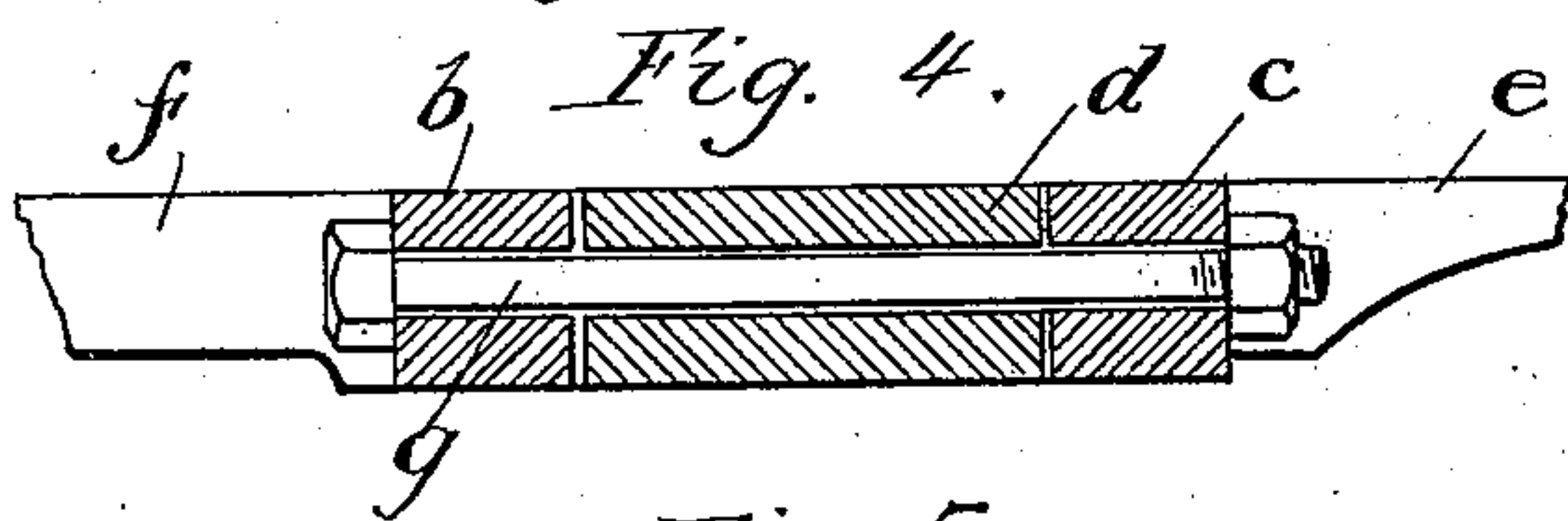
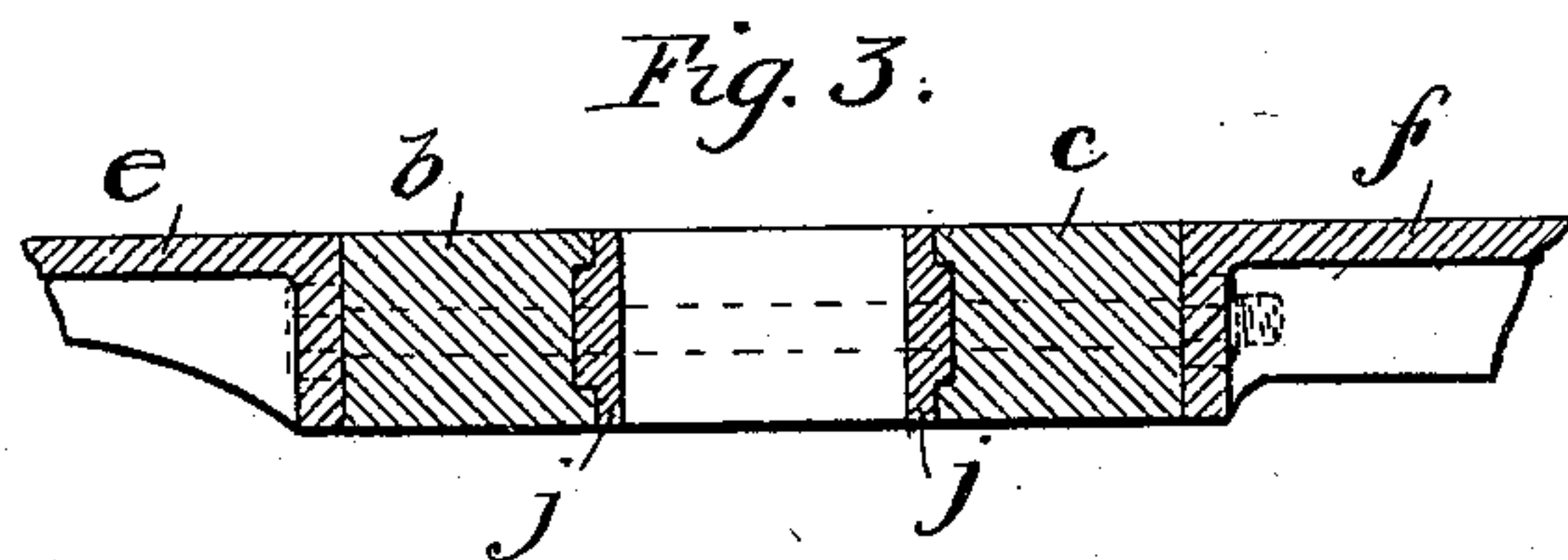
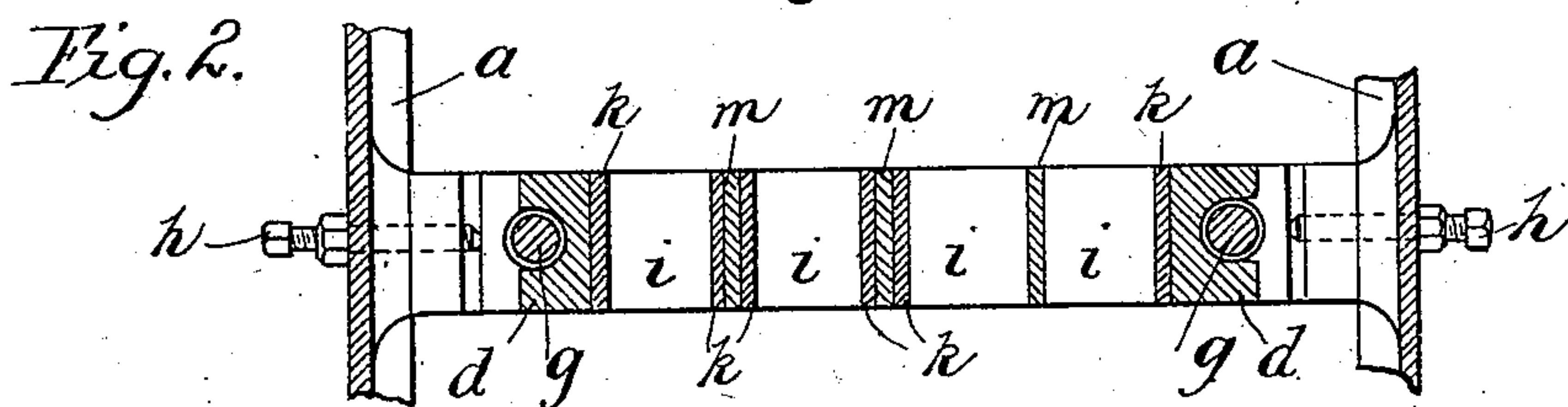
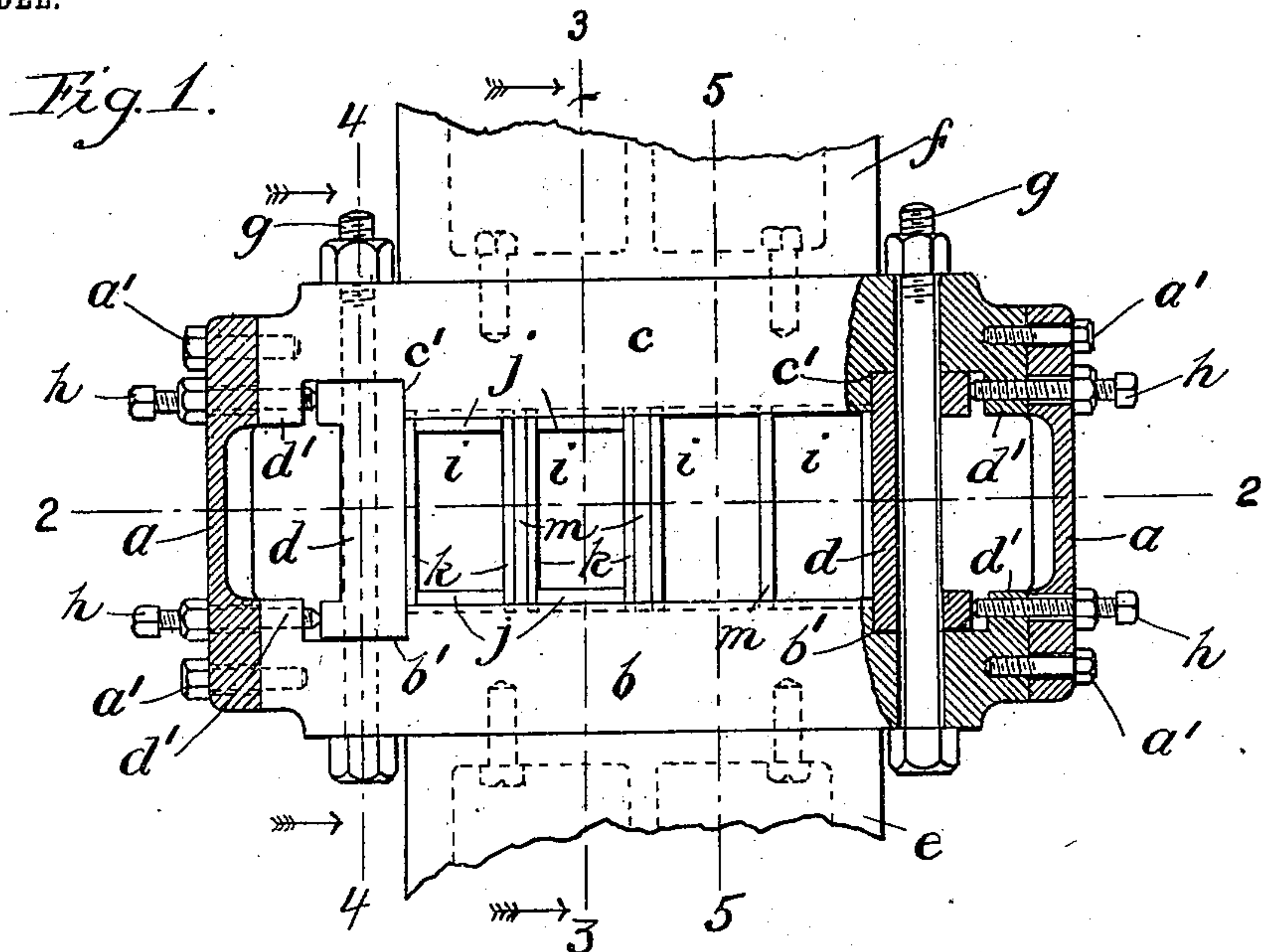


No. 725,619.

PATENTED APR. 14, 1903.

H. J. FLOOD.  
MOLD FOR BRICK MACHINES.  
APPLICATION FILED AUG. 28, 1902.

NO MODEL.



Witnesses  
*Eli Brande*  
*Charles L. Herrick*

Inventor  
*Harry J. Flood*  
By *Jesse & H. M. Cox*  
Attorneys



# UNITED STATES PATENT OFFICE.

HARRY J. FLOOD, OF CHICAGO, ILLINOIS.

## MOLD FOR BRICK-MACHINES.

SPECIFICATION forming part of Letters Patent No. 725,619, dated April 14, 1903.

Original application filed August 9, 1901, Serial No. 71,434. Divided and this application filed August 28, 1902. Serial No. 121,269. (No model.)

*To all whom it may concern.*

Be it known that I, HARRY J. FLOOD, a citizen of the United States, residing in the city of Chicago, county of Cook, State of Illinois, have invented a new and useful Improvement in Molds for Brick-Machines, of which the following is a specification.

My invention relates to molds for brick-machines and kindred machines for pressing material into form; and the objects of this invention are, first, to provide a mold the component parts whereof are rigidly held together by means of bolts extending in transverse directions; second, to provide means whereby the number and size of the molds may be readily altered; third, to provide self-adjusting means whereby the pressure of the end blocks on the end liners may be evenly distributed from top to bottom thereof, and, fourth, to provide means for separately adjusting the extremities of the end blocks for the purpose of truing the mold and to insure a substantially equal pressure upon the two end liners of any specified mold. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the parts adjacent to and composing the mold. Fig. 2 is a vertical section of the same, taken on the line 2 2, Fig. 1. Figs. 3, 4, and 5 are vertical sectional views taken, respectively, on the lines 3 3, 4 4, and 5 5, Fig. 1.

Similar letters refer to similar parts throughout the several views.

The component parts of the mold are supported on the main-frame pieces *a a*. The front cross-block *b* and back cross-block *c* are substantially symmetrical in form and are provided with the recesses *b' b'* and *c' c'*, respectively, for receiving the extremities of the end blocks *d d*. Said cross-blocks *b* and *c* are of massive proportions to afford great rigidity and strength and extend across the machine. At their ends said cross-blocks have the extensions *d'*, which form part of the recesses *b'* and *c'* and are adapted to receive the set-screws *h*, hereinafter mentioned. Said recesses do not closely fit said end blocks *d*, but permit an adjustment of the same in a transverse direction. The side frames *a a* are apertured to loosely receive the cap-screws

*a' a'*, so as to support said cross-blocks and at the same time permit the adjustment thereof.

The front apron *e* and back apron *f* are bolted to the front and back cross-blocks *b* and *c*, respectively. Said cross-blocks are drawn firmly to a bearing upon the said end blocks in a front and rear direction by means of heavy bolts *g g*, which fit loosely in said cross-blocks. By preference said bolts pass through the end blocks *d*, which are suitably recessed to loosely receive said bolts. In the transverse direction said end blocks are forced inwardly toward the center of the machine by means of the set-screws *h h*. The frame-pieces *a* are apertured to loosely receive said set-screws, and the heads of said screws lie upon the outside of said frame-pieces, thereby permitting the adjustment of the mold parts from the exterior of the machine. Said cross-blocks *b* and *c* are suitably drilled and tapped at the recesses *b'* and *c'* for receiving said set-screws, while the side frames are apertured in such a manner as to receive said set-screws loosely. The tightening of said set-screws forces said end blocks firmly onto the mold-lining plates, as will hereinafter appear.

The molds *i* are formed by the end liners *j* and side liners *k*, which consist, preferably, of steel plates having polished inner faces. The partition-plates *m* lie between the side liners *k* and extend from one to the other of the cross-blocks *b* and *c*. The extremities of the partition-plates *m* and side liners *k* and also the outward or rear sides of the end liners *j* are mortised to fit into the correspondingly-chambered cross-blocks *b* and *c*. It is evident that when the bolts *g* are screwed tight the side liners and partition-plates are prevented from moving in a front and rear direction. The motion of the side liners and partition-plates in a transverse direction is prevented by the end blocks *d*, held by the set-screws *h*, the end liners *j* serving as distance-pieces to spread said side liners and preserve the proper width of mold. The pressure of the side liners *k* against the end liners *j* holds the latter firmly in position. It follows, therefore, that the strain upon the mold-plates, due to the tendency of the clay or other



material to expand laterally under compression, is taken up in a transverse direction by the blocks *b* and *c*, which are of ample proportions and are at the same time simple in construction. Moreover, the pressure upon the ends of the molds is also taken up by said blocks *b* and *c*, which, being drawn together by the bolts *g*, are subjected to a transverse or breaking strain. Consequently the mold-table is not only self-contained, but consists of but four principal pieces—to wit, the end blocks *d d* and cross-blocks *b* and *c*. The set-screws *h* are located substantially midway of the height of the end blocks *d* and have but a slight bearing-surface thereon, and as a result there is an even distribution from top to bottom of the pressure of the side liners against the end liners. The advantage in this is that all parts of all the end liners are retained in position under substantially the same pressure even though there be slight inequalities in the dimensions of said liners.

In brick-machines the plungers should accurately fit the molds, and for this reason if in the present device the side liners *k* are displaced to any appreciable extent there is great danger of breakage. In the device here shown the two extremities of each end block *d* are separately adjustable by means of the respective set-screws *h*. This makes it possible to true up the mold-liners to a sufficient degree to insure the proper working of the machine.

In operation when it is desired to alter the size of the mold or renew worn parts the screws *h* and bolts *g* are loosened sufficiently to permit the end blocks and cross-blocks to be backed off, so that the mortised end and side liner may be removed. The size of the molds will be determined by the thickness of said lining-plates.

I desire to direct attention to the fact that none of the main parts of the mold-table need to be removed for the renewal of liners and also that the width and number of molds may be altered. For example, a four-mold

machine may be converted into a two-mold or three-mold by substituting end liners of suitable length, because the mortising of the blocks *b* and *c* is uniform across the table, and it is the end liners acting as distance-pieces that determine the lateral position of the side liners and partition-plates.

What I claim as new, and desire to secure by Letters Patent, is—

1. A mold composed of cross-blocks, bolts for drawing said blocks together in a front and rear direction; end blocks; and a set-screw at each extremity of said end blocks for separately adjusting the said extremities of said end blocks.

2. A mold composed of cross-blocks, bolts for drawing said blocks together in a front and rear direction; end blocks; and a set-screw screwing into each extremity of said cross-blocks for separately acting upon said end blocks; said set-screws being located approximately midway of the height of said end blocks for the purpose described.

3. In a sectional mold, the combination of end liners, side liners, end blocks, cross-blocks; bolts passing through said cross-blocks in a front and rear direction, extensions on said cross-blocks overlapping a portion of said end blocks, and a set-screw in each of said extensions for truing the molds.

4. In a sectional mold, the combination of cross-blocks, end blocks, mold-liners laterally inclosed within said blocks; main-frame pieces supporting said cross-blocks; and a screw for each extremity of said end blocks, said set-screws screwing into said cross-blocks in the direction of the length of said cross-blocks, and said set-screws passing loosely through said main-frame pieces whereby the heads of said set-screws are upon the outside of said main-frame pieces.

HARRY J. FLOOD.

Witnesses:

H. E. CRANKSHAW,  
GEO. W. EULETTE.