

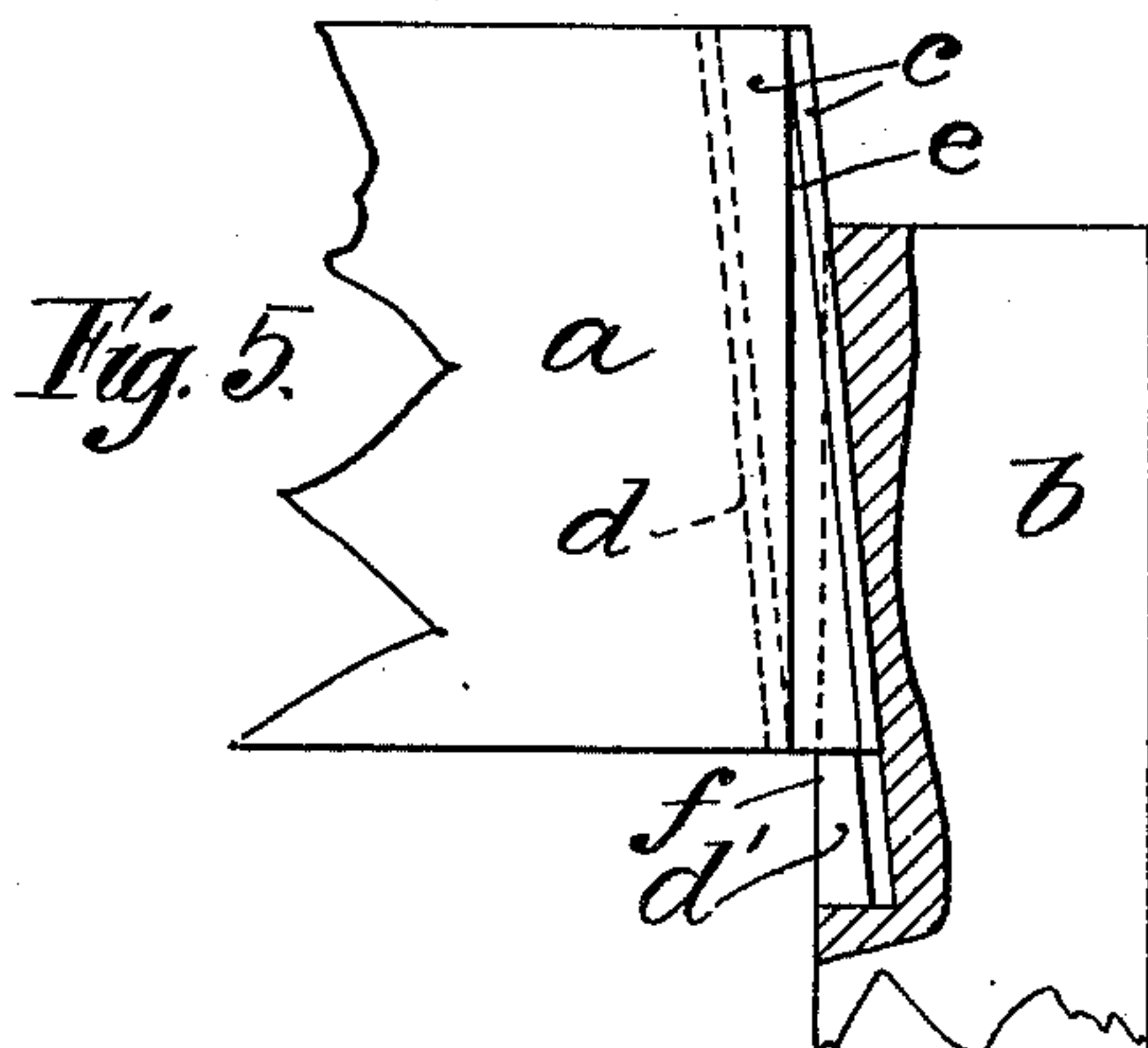
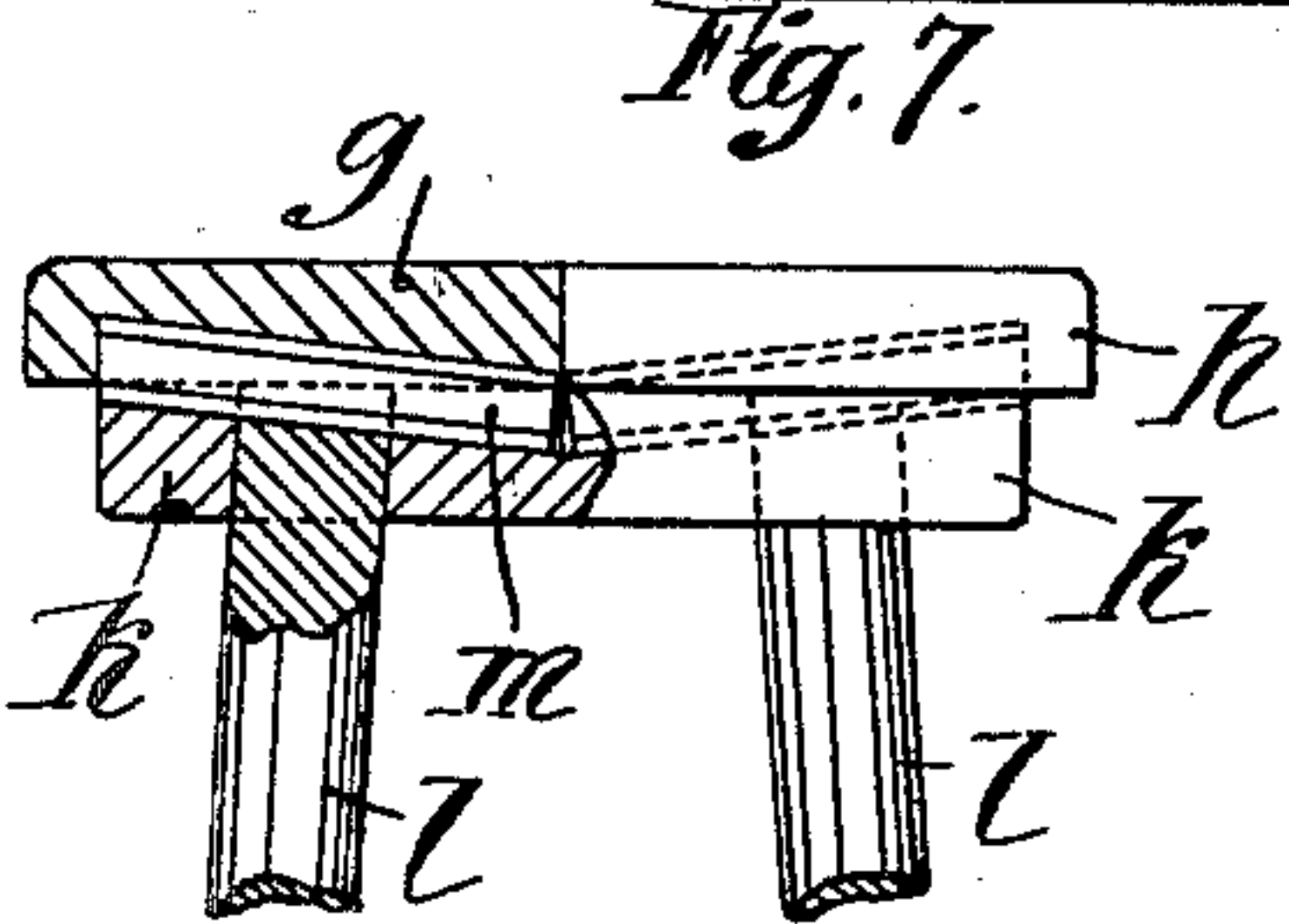
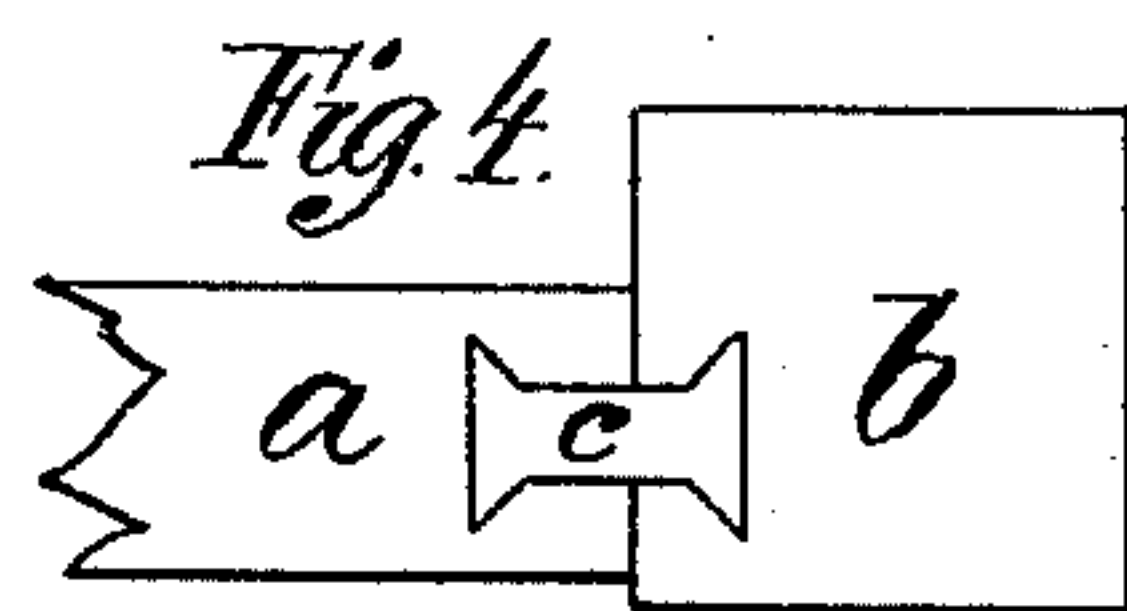
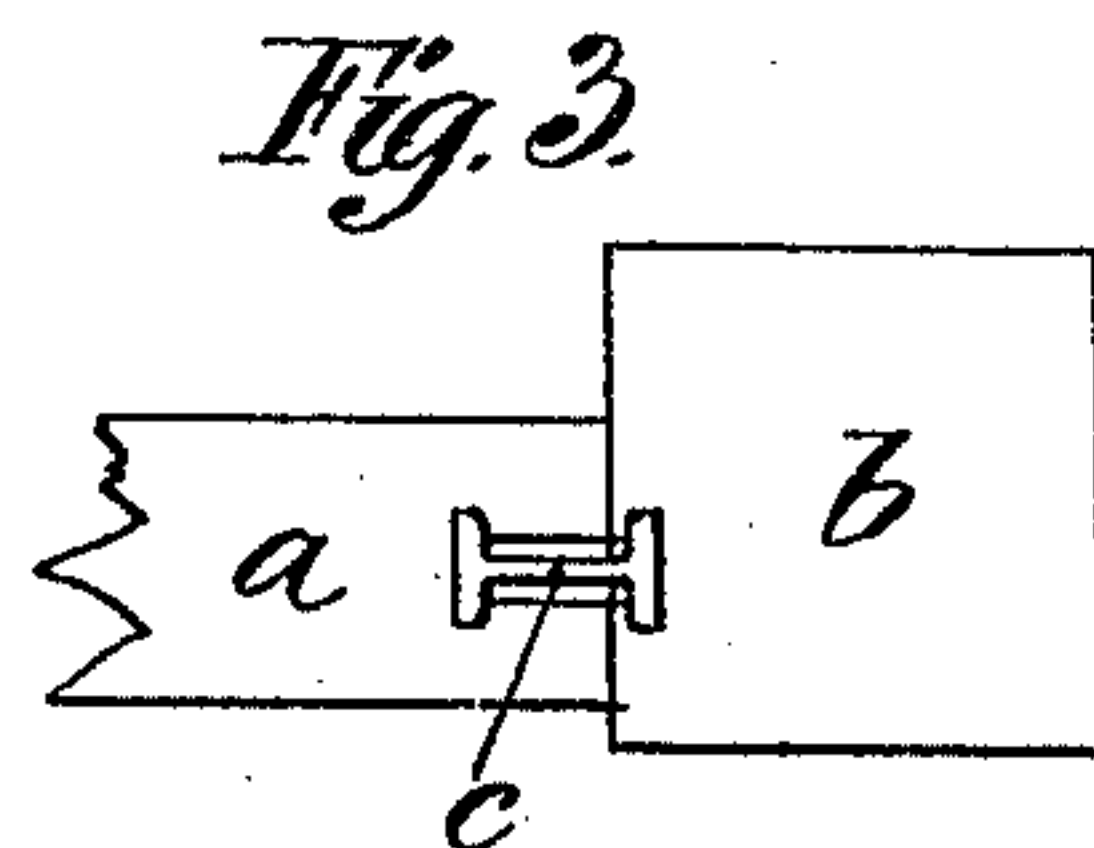
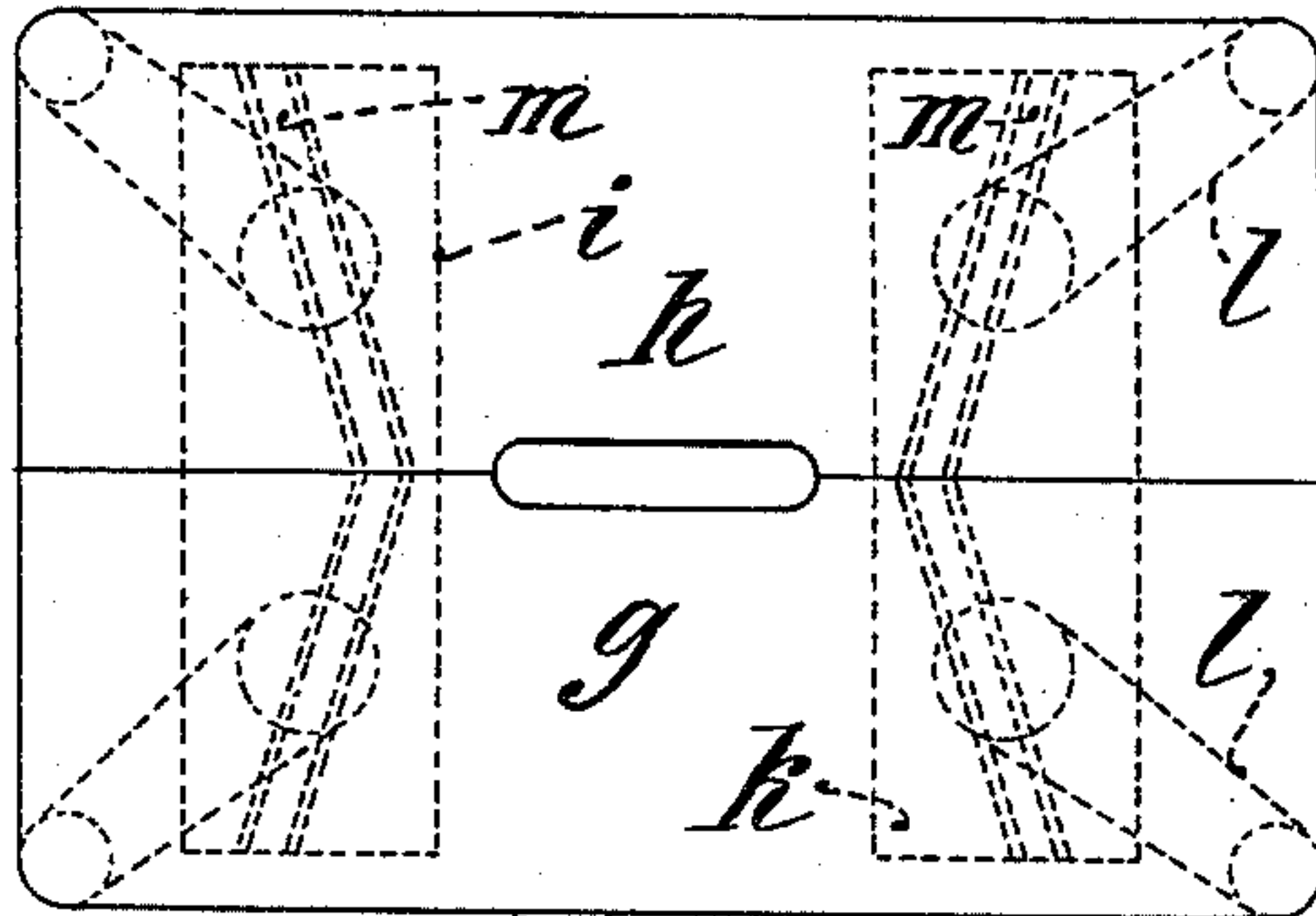
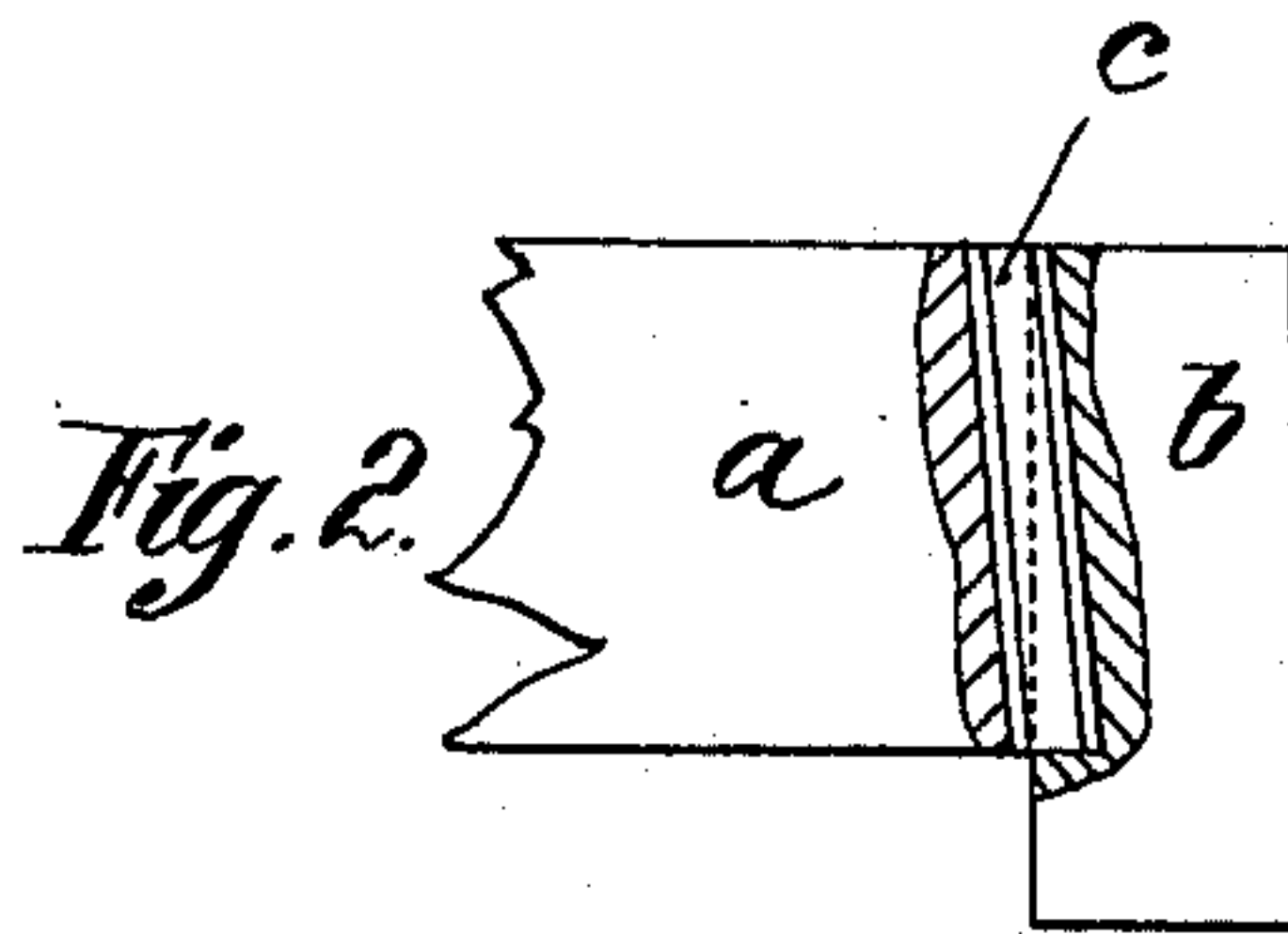
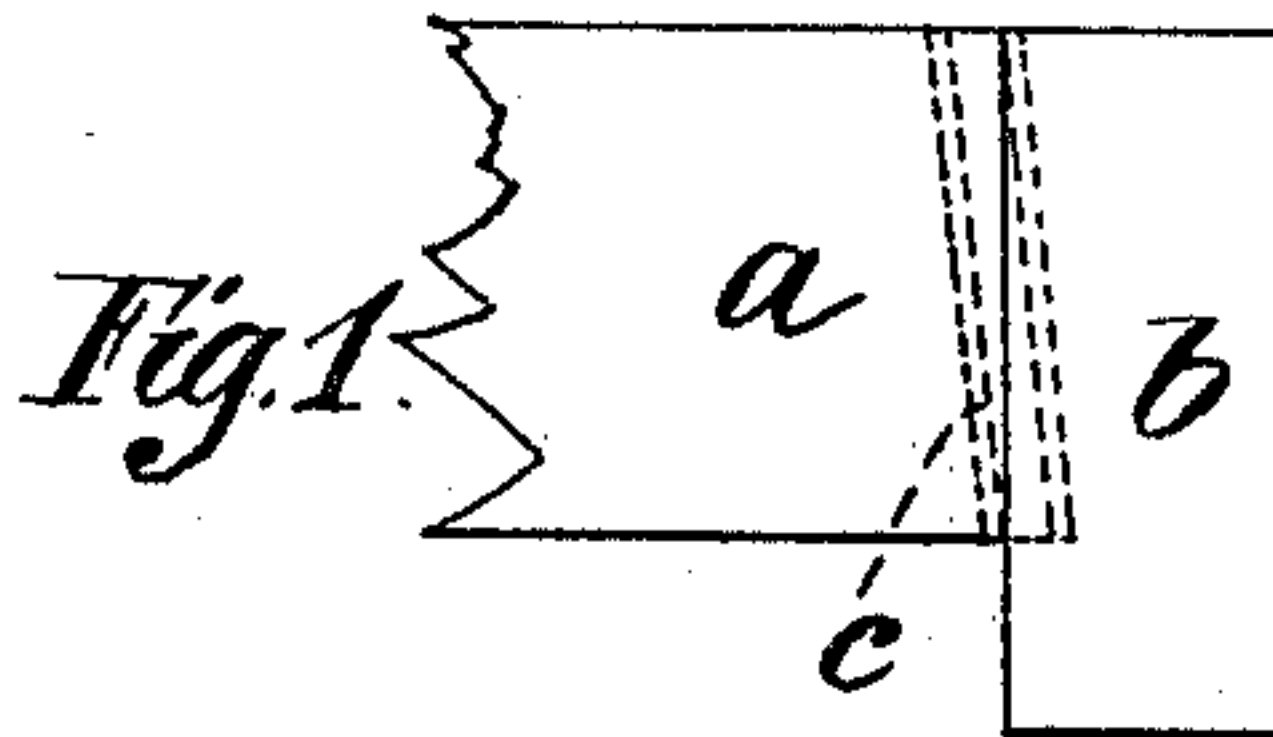
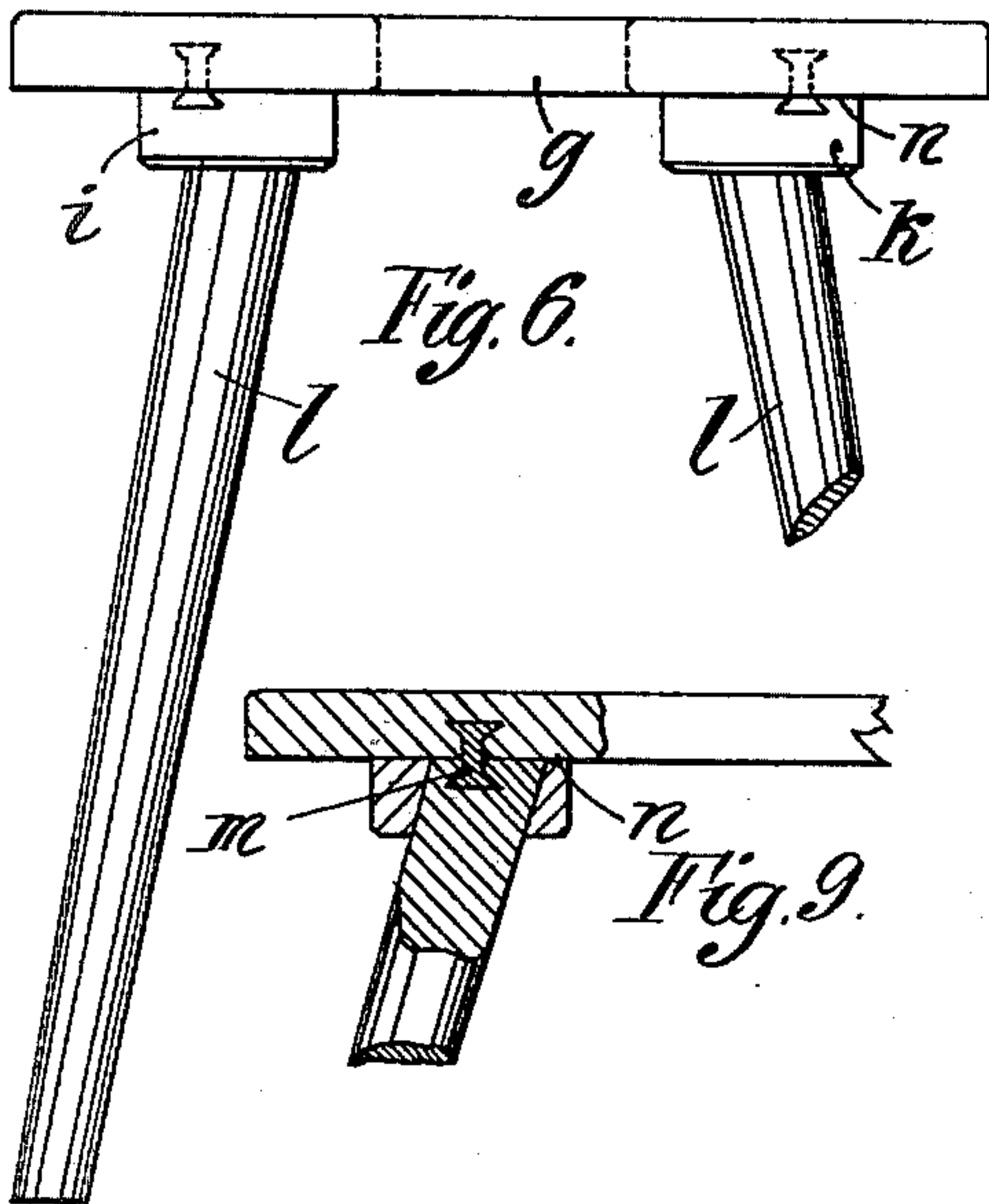
No. 713,679.

Patented Nov. 18, 1902.

E. PFEIL, GEBOREN BREUST & W. H. SCHNEIDER.  
WEDGE JOINT.

(Application filed Mar. 20, 1902.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

EMILIE PFEIL, GEBOREN BREUST, OF BERLIN, AND WILHELM HEINRICH SCHNEIDER, OF WILMERSDORF, GERMANY.

## WEDGE-JOINT.

SPECIFICATION forming part of Letters Patent No. 713,679, dated November 18, 1902.

Application filed March 20, 1902. Serial No. 99,142. (No model.)

*To all whom it may concern:*

Be it known that we, EMILIE PFEIL, geboren BREUST, of 4, Strasse 4a, Berlin, and WILHELM HEINRICH SCHNEIDER, merchant, of 9 Meierottostrasse, Wilmersdorf, near Berlin, Germany, subjects of the Emperor of Germany, have invented a new and useful Wedge-Joint, of which the following is a specification.

Our invention comprises a new wedge or tenon joint which may be employed for wedging together pieces of wood, iron, stone, or the like which are to be joined to each other.

The principal feature of this invention consists of using as a tenon or wedge a connecting-piece, the cross-section of which has its middle portion diminished—as, for instance, a I-iron or double dovetailed prismatical piece, which tenon-piece has an oblique position to the joint-plane and enters both the pieces to be jointed within suitable grooves adapted to its cross-section.

The accompanying drawings illustrate the invention when employed for woodenware.

Figures 1 and 2 show in front elevation and in section, respectively, the connection of a table-frame to the leg; Fig. 3, gives a plan view thereof on a larger scale; Fig. 4 a modification in plan view on the same scale. Fig. 5 shows the connection partly loosened. Fig. 6 illustrates a stool with our improved tenon-joint; Fig. 7, the plan view thereof; Fig. 8, the side elevation, partly in section. Fig. 9 shows the connection between the seat, the panels, and the leg inserted therein.

In Figs. 1 to 5, *a* is the table-frame, and *b* the upper portion of the table-leg. The joint-piece is herein formed by an I-iron *c*, which enters both the pieces *a* and *b* within correspondingly-shaped grooves *d d'*, respectively, so as to have a position obliquely to the joint-plane between the said pieces *a* and *b*. The wedge-shaped side surfaces of the said grooves *d d'* are pressed firmly against each other and between the flanges of the said I-iron *c*. Thus a very firm connection of the two pieces is obtained by this wedging. In the modified form of construction illustrated in Fig. 4 a double dovetailed prismatic piece, made of hard wood, is substituted for the I-iron *c*. In the arrangement shown in Fig. 5 the joint is partly loosened, and the joint-surfaces

*e* and *f* have still a small distance from each other.

In the construction of a stool shown in Figs. 6 to 9 we use the usual seat consisting of two boards *g* and *h*, the cross-pieces *i* and *k* for uniting said seat-boards, and the four legs *l*, entering said cross-pieces with their upper ends, as all this is well known in the construction of such like stools. For firmly connecting the said parts with each other we use four connecting-irons *m*, the cross-section of which forms a double dovetail, (see Figs. 6 and 9,) and we arrange the grooves for receiving said irons in such a manner that the irons when placed therein are inclined besides to the joint-plane *n* also to the direction of the grain for preventing splintering of the edges of said grooves. Further, we arrange the grooves in the cross-pieces *i* and *k* in a flat V form, as shown in Fig. 7, and we use four single irons *m* for connecting the parts with each other. It will be clear that the oblique grooves in the cross-pieces *i* and *k* also penetrate the upper ends of the legs *l* within said cross-pieces, and by this means, Figs. 8 and 9, the said legs are firmly secured in position. It is obvious that in this construction of a stool each drying of the wood contrary to the construction heretofore used effects further tightening of the connection, as the end of the leg which is contracted by drying embraces the iron *m* faster and faster, and by reason of the V form of the oblique grooves the seat-boards are firmly pressed against each other, and the connection is more and more tightened when the seat-boards and the cross-pieces are contracted by drying.

Having now described our invention, we claim—

1. In a wedge or tenon joint the combination with two work-pieces to be joined of a prismatical connecting-piece, the cross-section of which has its middle portion diminished, and grooves corresponding in cross-section to said connecting-piece and so arranged that the said piece enters both the work-pieces so that its longitudinal axis is inclined to the joint-plane, substantially as and for the purpose specified.

2. In a wedge or tenon joint, the combination with two work-pieces to be jointed of an

I-iron entering both the work-pieces so that its longitudinal axis is inclined to the joint-plane, substantially as described.

3. In a wedge or tenon joint the combination with two work-pieces to be joined of an iron having its cross-section double dove-tailed and corresponding inclined grooves in both the work-pieces, having the longitudinal axis of said grooves inclined to the joint-plane, substantially as set forth.

4. In a wedge or tenon joint the combina-

tion with two work-pieces to be joined of a third work-piece entering one of said two work-pieces, an iron having a double dove-tailed cross-section and inclined grooves for said iron penetrating the three work-pieces, substantially as described.

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