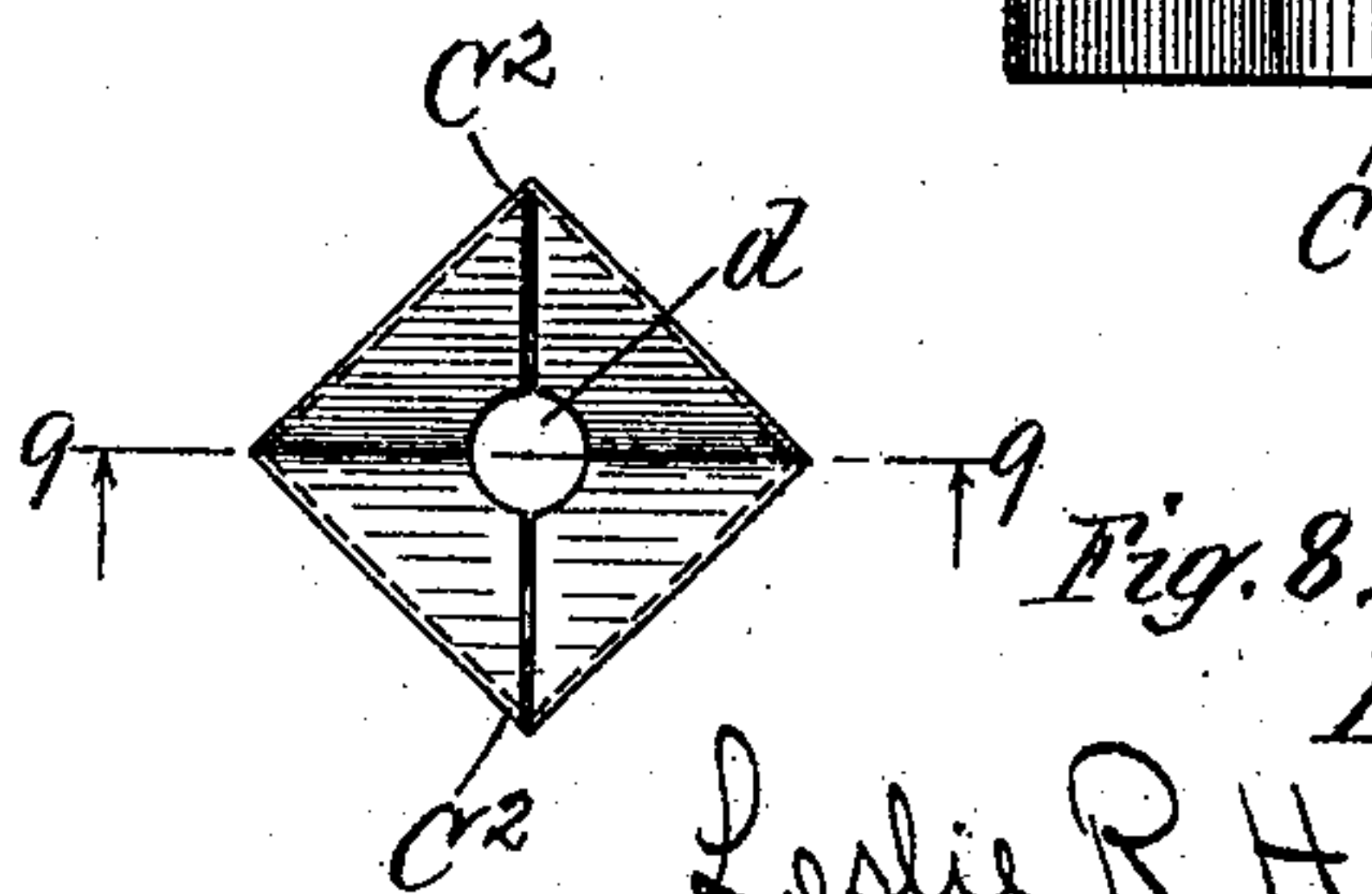
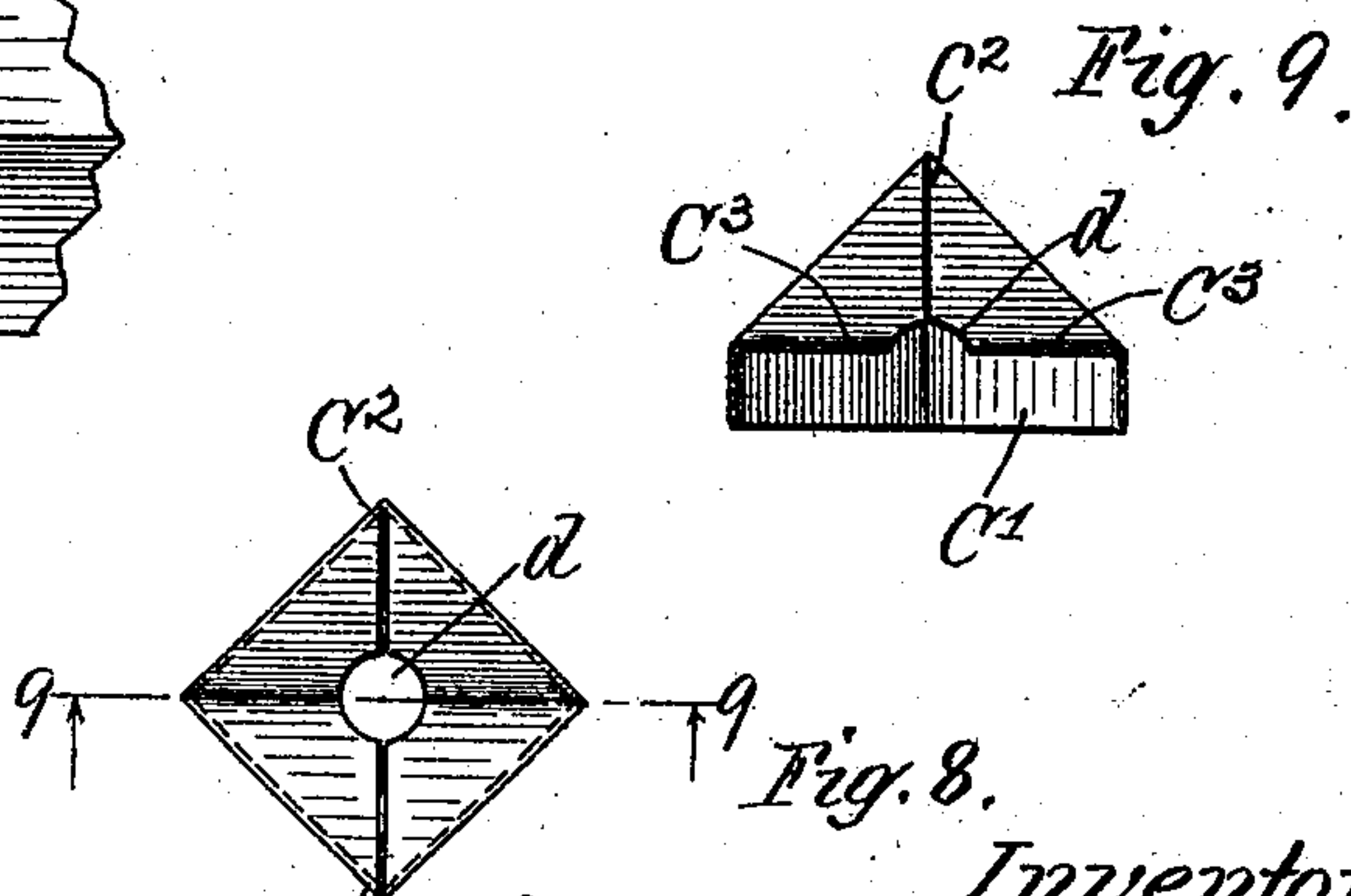
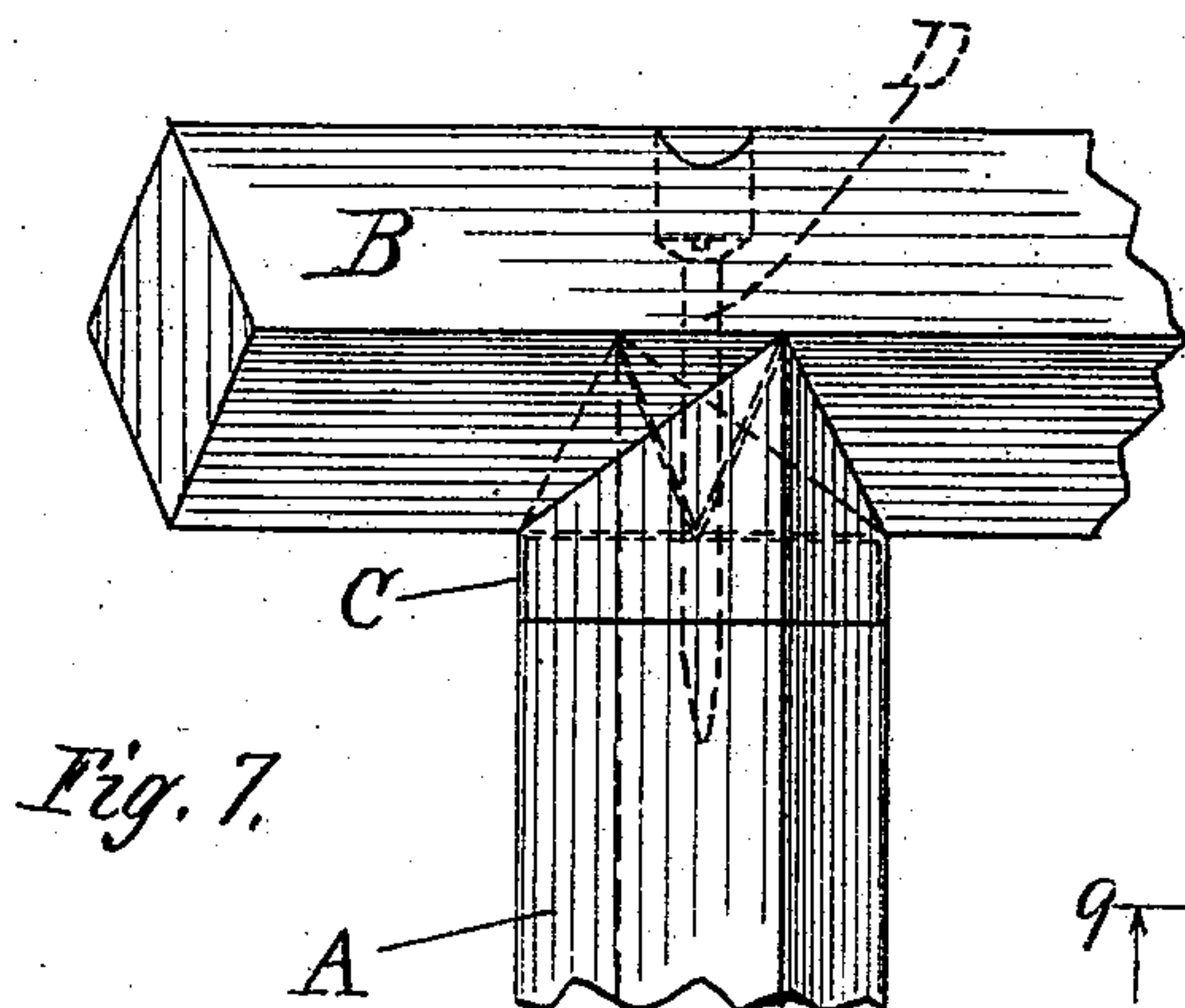
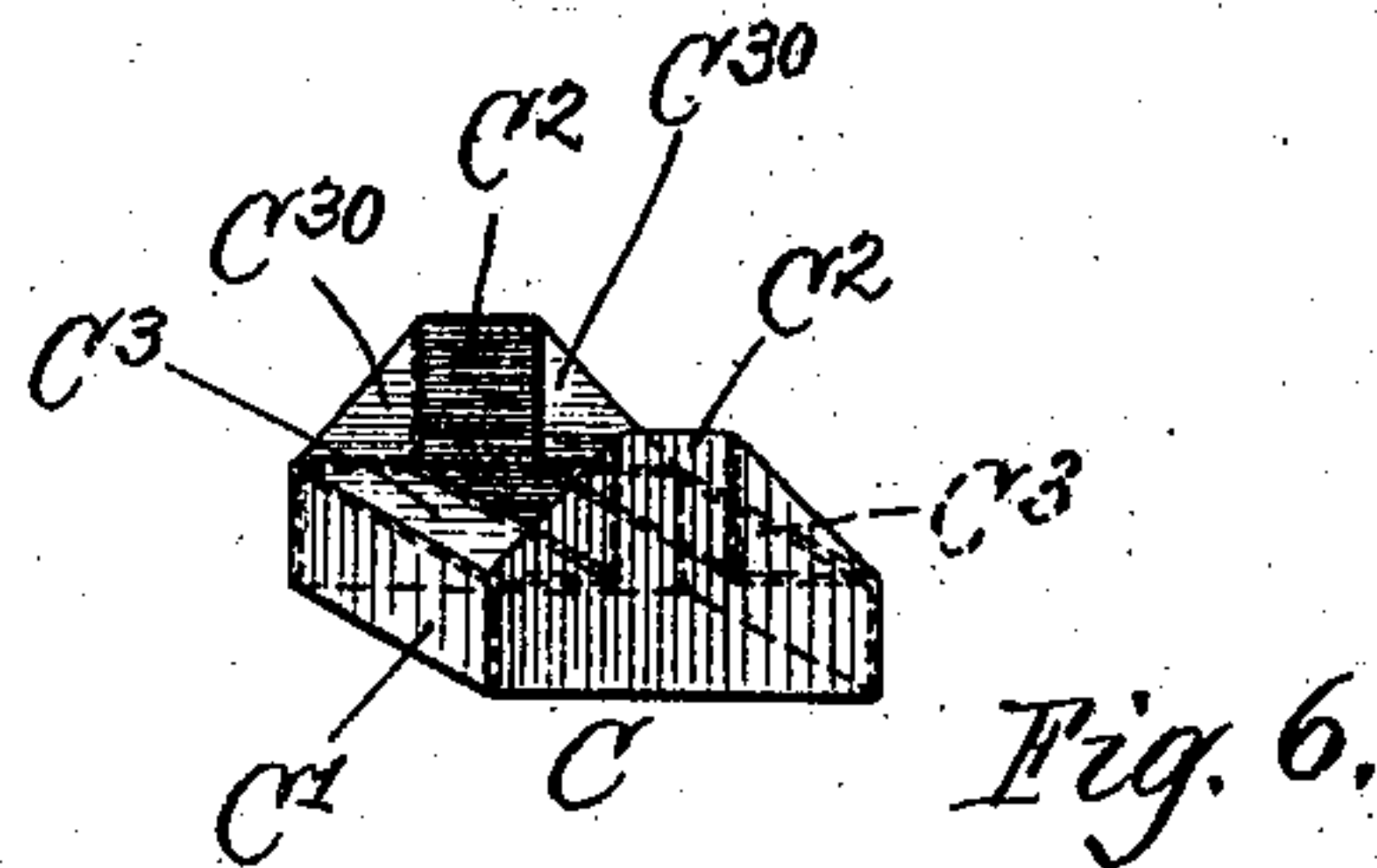
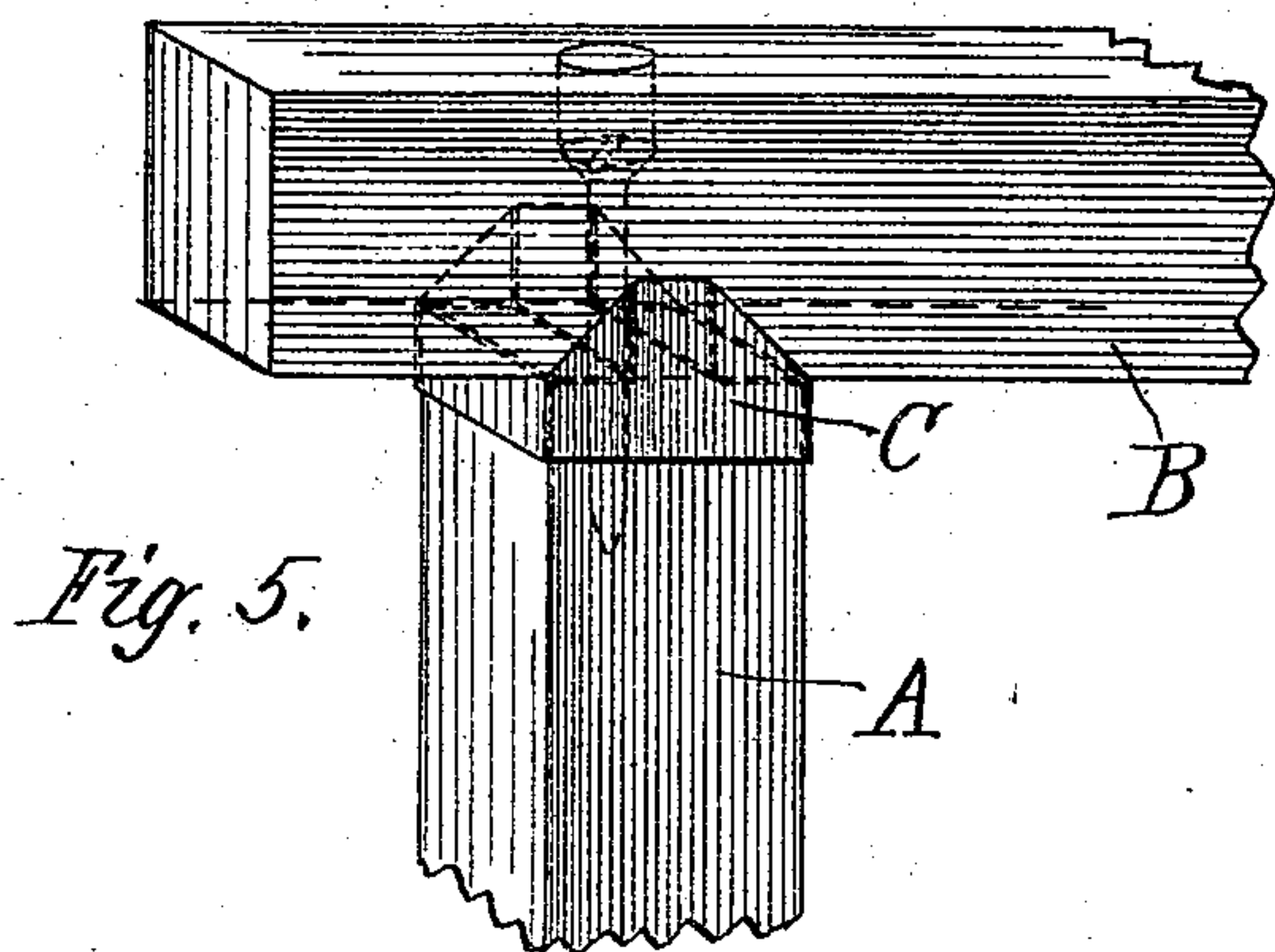
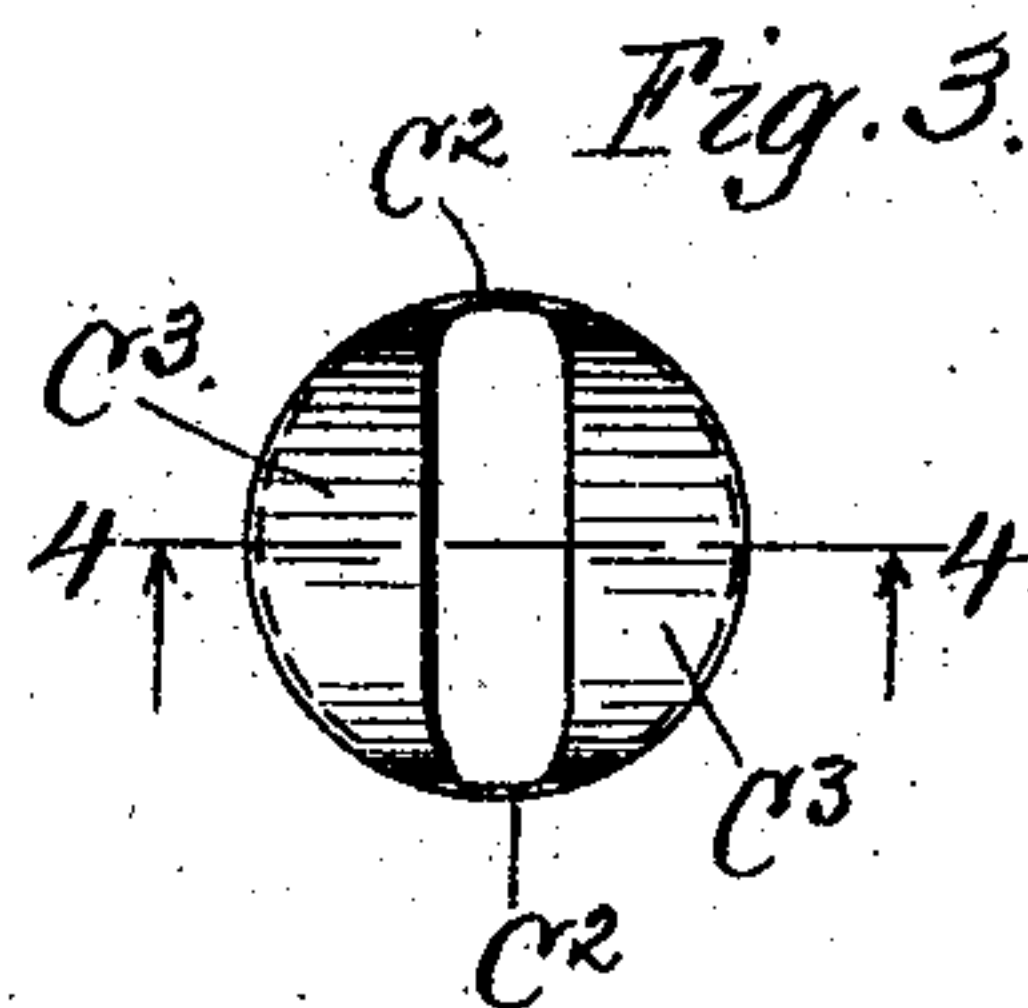
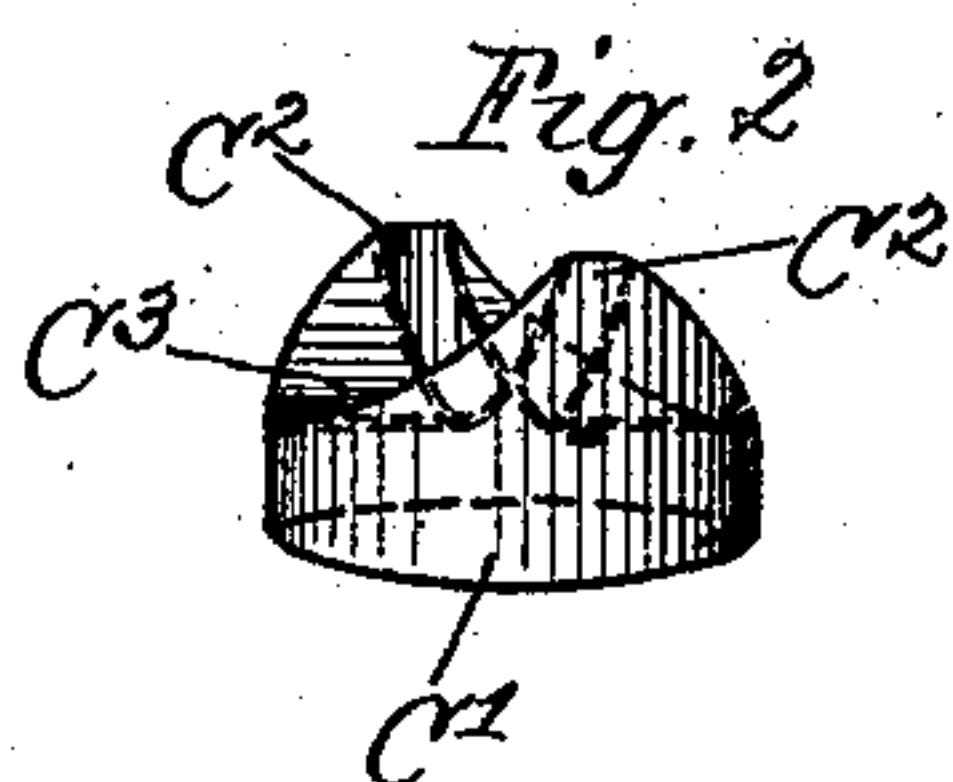
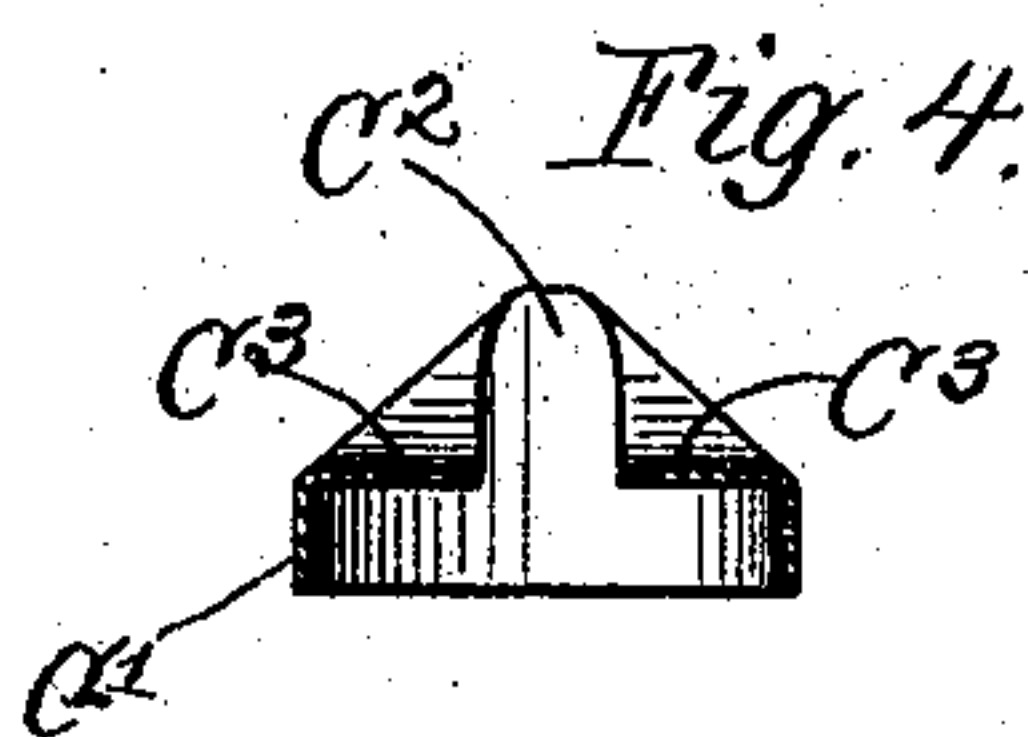
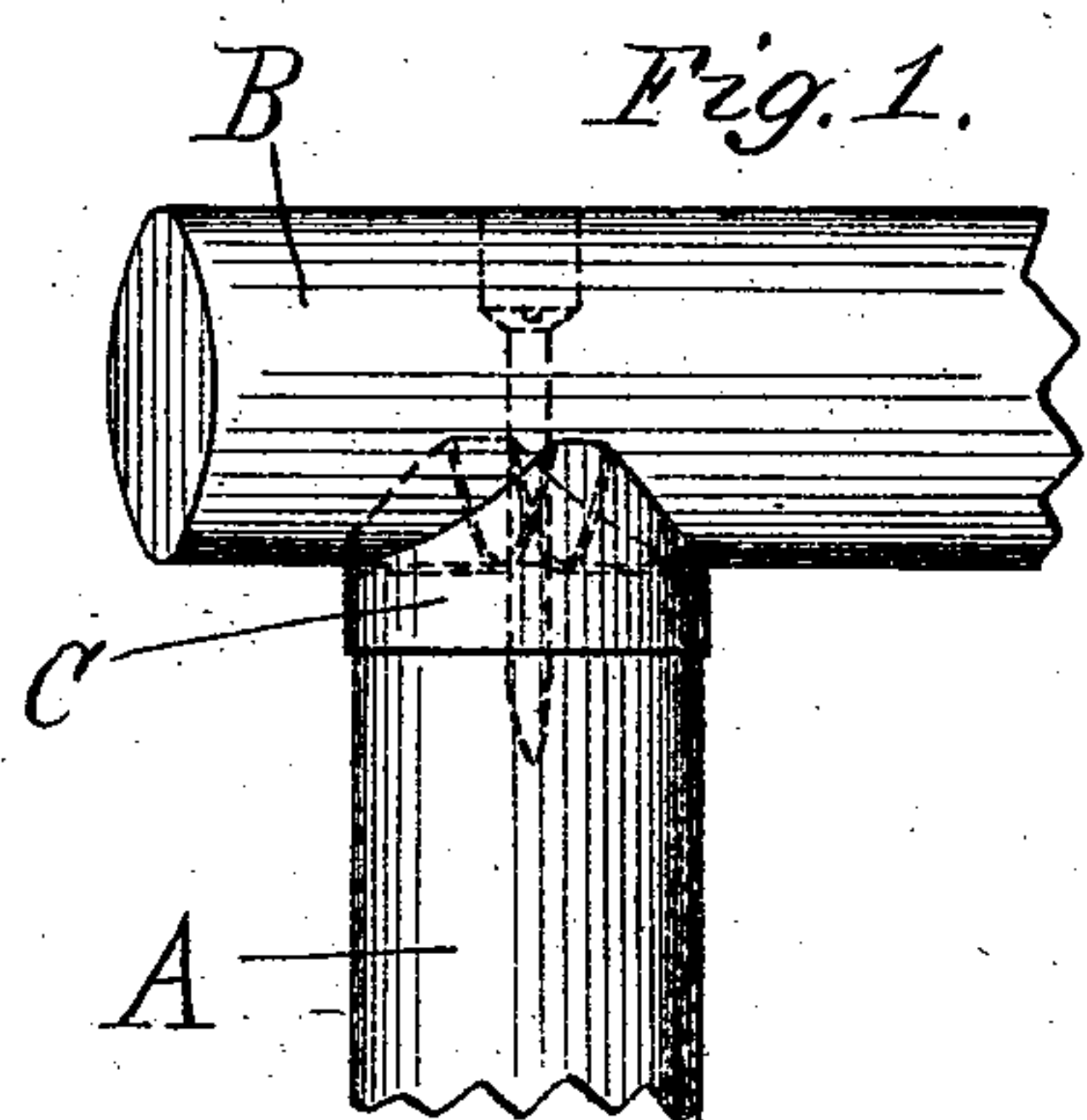


(No Model.)

L. R. HARSHA.
FURNITURE JOINT.

No. 501,935.

Patented July 25, 1893.



Witnesses.

E. T. Wray.
Jean Elliott

Inventor.

Leslie R. Harsha
By Burton & Burton
his atty

UNITED STATES PATENT OFFICE.

LESLIE R. HARSHA, OF CHICAGO, ILLINOIS.

FURNITURE-JOINT.

SPECIFICATION forming part of Letters Patent No. 501,935, dated July 25, 1893.

Application filed November 28, 1892. Serial No. 453,359. (No model.)

To all whom it may concern:

Be it known that I, LESLIE R. HARSHA, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Furniture-Joints, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part thereof.

This invention is designed to provide a novel clip or metal junction piece adapted to secure and ornament the joint formed between two rods or bars, one of which abuts endwise against the other.

In the drawings,—Figure 1 is a perspective of such a joint, formed between two cylindrical bars and finished with my improved clip. Fig. 2 is a perspective of the clip itself detached from the joint. Fig. 3 is a plan or end view of the clip. Fig. 4 is a section at the line 4—4 on Fig. 3. Fig. 5 is a perspective of a joint between two rectangular bars abutting end to side and finished with my clip. Fig. 6 is a perspective of the clip in this rectangular form. Fig. 7. is a perspective of a joint formed between two rectangular bars matched diamondwise,—that is, so that the two bars have a diagonal plane of each coinciding. Fig. 8 is a plan of the clip adapted to this form of junction. Fig. 9 is a section at the line 9—9 on Fig. 8.

The two bars between which the joint in question is formed, I will distinguish as the "stem" and "cross" respectively, the "stem" being the bar whose end abuts against the side of the other bar, termed the "cross."

A is the stem in each joint, and B, the cross.

C is the clip which is formed of a short piece of metal tubing, whose cross-section conforms to the shape of the stem bar to be joined by it, so that it is adapted to be placed as a ferrule on the end of the stem A. The portion of the metal tube which affords the ferrule remains in the original form of the tube, and is indicated by the letter C' in each of the several forms illustrated. Extending longitudinally from the ferrule portion, opposite portions of the tube are left standing in their original position to form two lateral wings C² C², between which the cross B will be clasped. The remaining opposite portions intermediate the wings C² C² are folded inward to form a

seat C³ C³ for the cross B, this folding being effected without severance from the lateral wings C² C², thereby causing the edges of the lateral wings to be folded obliquely, as seen in the several views. In the form shown in Figs. 5 and 6, the rectangular bars being joined flatwise, that is, the end of one abutting against the flat side of the other, the seats C³ C³ are distinctly marked, and a right-angle triangular portion C³⁰ C³⁰ of what would otherwise be the lateral wings, are folded at an angle of forty-five degrees inward upon said lateral wings, as seen in the drawings, the angles or folds between the seat proper, C³, and the triangular lateral portions C³⁰ being at the same lines as the original angles of the tubing, the angles, however, being reversed. In the other forms, the portions corresponding to the triangular portions C³⁰ C³⁰, in Figs. 5 and 6, merge in the seats, and are not distinguished from them by special lettering, the seat in the form adapted to the curved bars being, of necessity, a curved seat, and the curve being the same as that of the original tubing except that it is reversed in folding down the seats to the transverse position. Also, in the form shown in Figs. 7, 8 and 9, the seats are angular, corresponding to the angle of the cross-bar B, which, being the same as the stem A, makes the seat identical in form with the original angle of the tube before it is folded in, except that it is reversed at the fold.

The identity of form of the original tubing and the infolded seats, except as to reversal of the angles or curves, as above described, it will be understood is dependent upon the identity of form of the two bars of the joint, but the invention is not limited to use with bars of identical form. On the contrary, from this description, it will be evident to any mechanic in what manner to adapt the clip to other special forms of bar and to other combinations. The clip need not be and is not usually relied upon to hold the two bars together, this being accomplished usually by a screw set through the cross-bar into the end of the stem, the oppositely infolded seats in the forms, except the last illustrated, leaving a space between them for the screw without special contrivance, and in the last form, shown in Figs. 7, 8, and 9, the proximate edges

of the seats having each a notch forming together an opening *d*, through which the screw D enters.

I claim—

5 1. A tubular metal clip for furniture joint having the ferrule portion, and lateral wings extended therefrom; portions intermediate the lateral wings folded inward without severance from the lateral portions to form a
10 transverse seat between the wings: substantially as set forth.

2. A metal clip for furniture joint, consisting of a tubular portion which serves as a ferrule upon the stem; longitudinal continuations of such tubular portion forming lateral

wings to clasp the cross-bar, and transverse continuations of said tubular portion between the longitudinal continuations and unsevered therefrom, forming the seat for the cross bar between the wings which clasp it: substantially as set forth. 20

In testimony whereof I have hereunto set my hand, in the presence of two witnesses, at Chicago, Illinois, this 18th day of November, 1892.

LESLIE R. HARSHA.

Witnesses:

CHAS. S. BURTON,
JEAN ELLIOTT.