

No. 726,070.

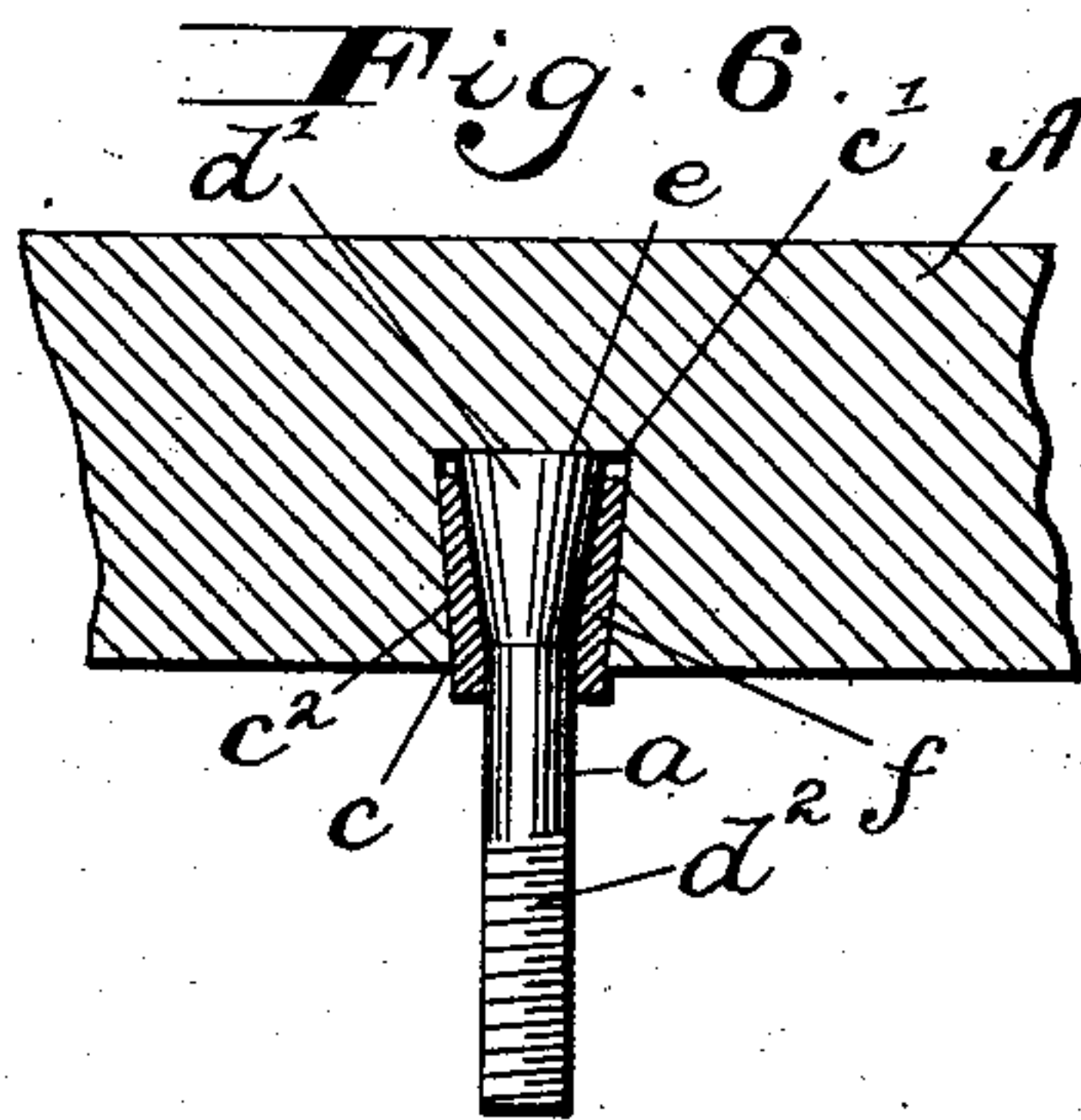
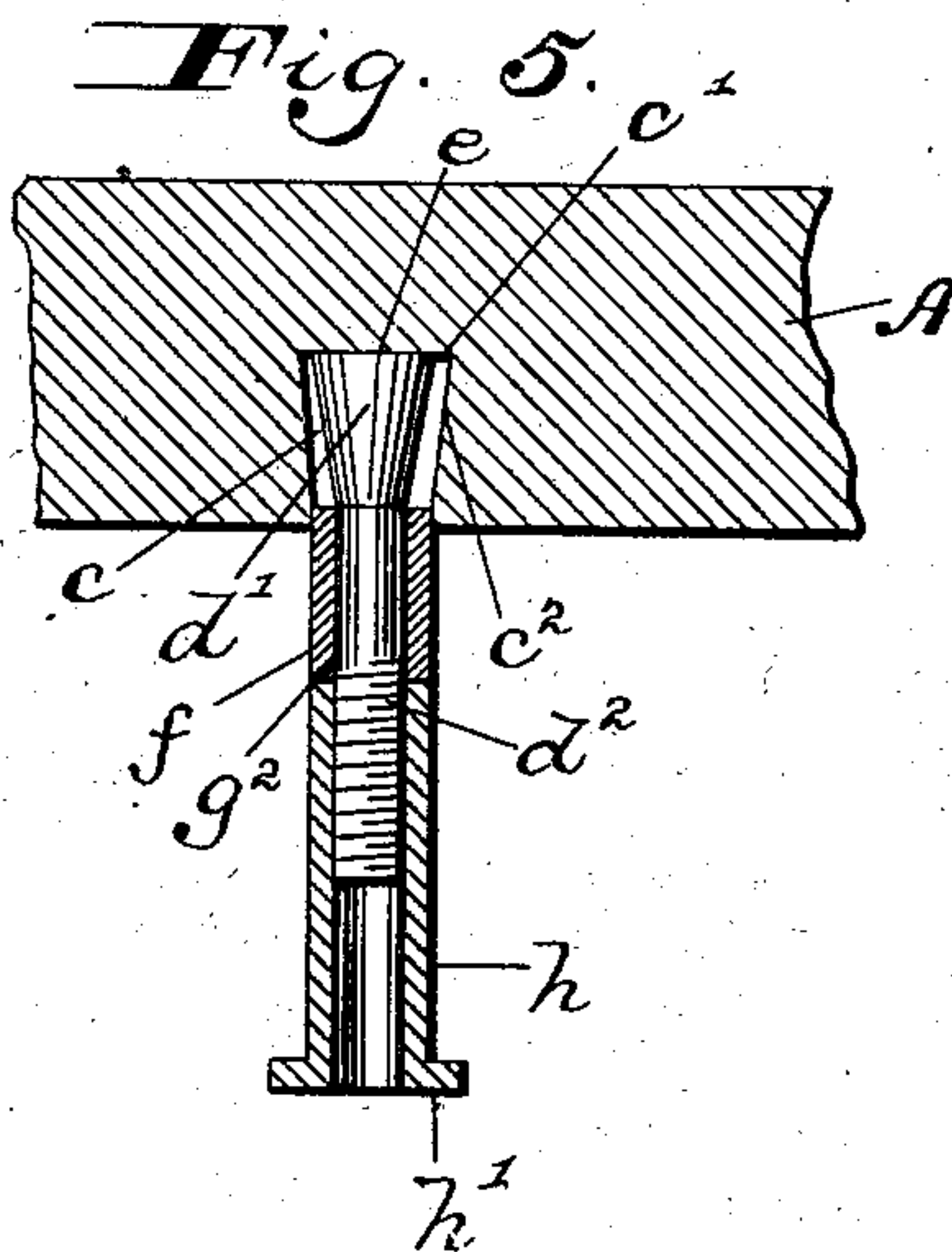
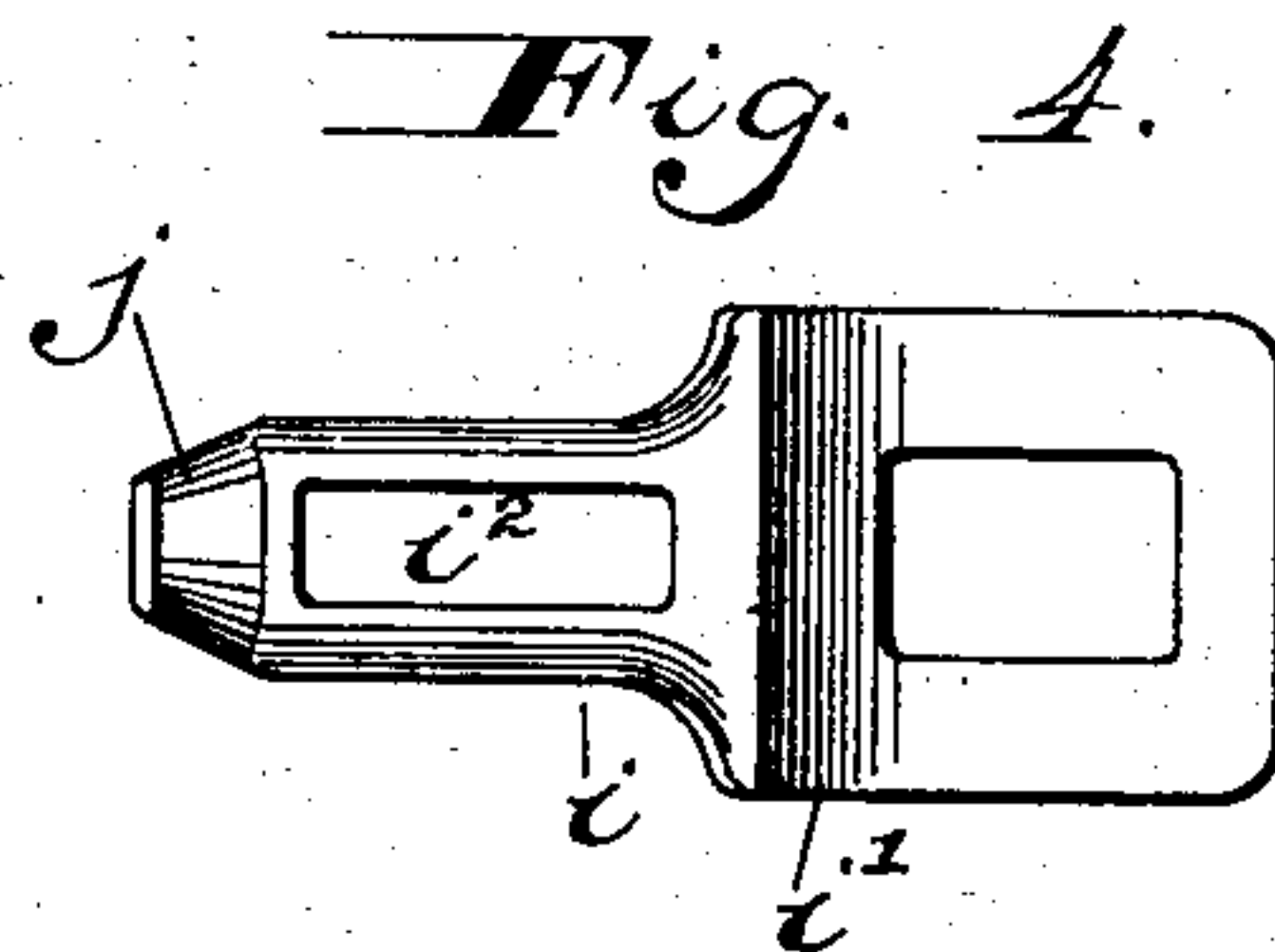
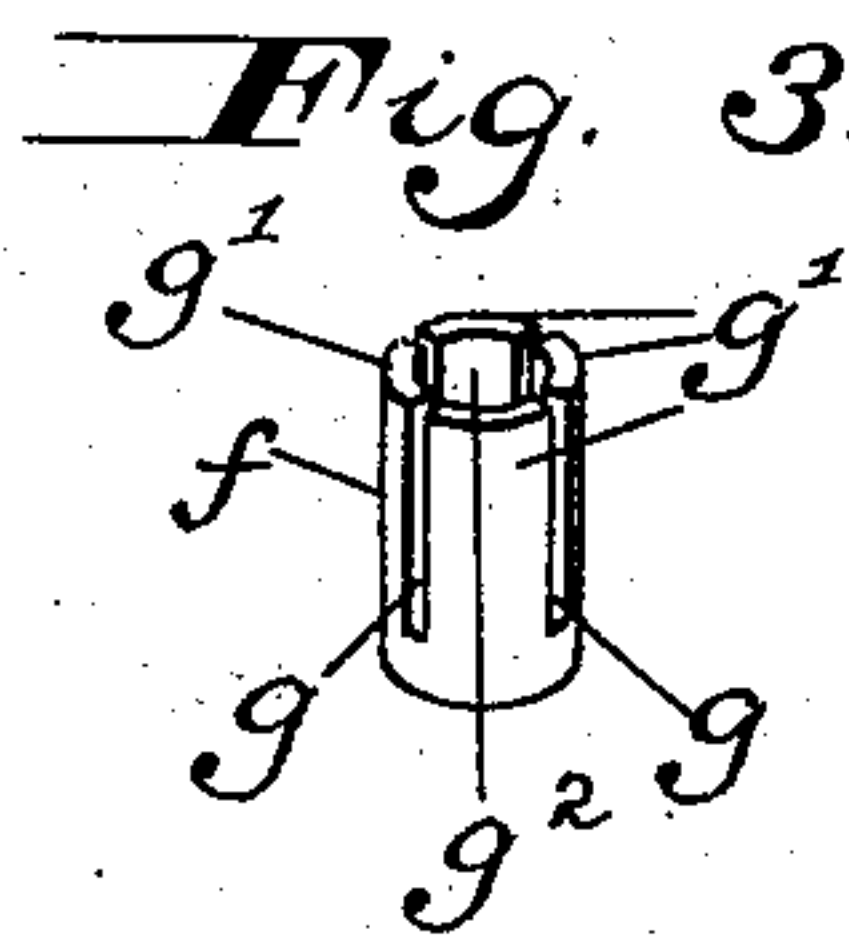
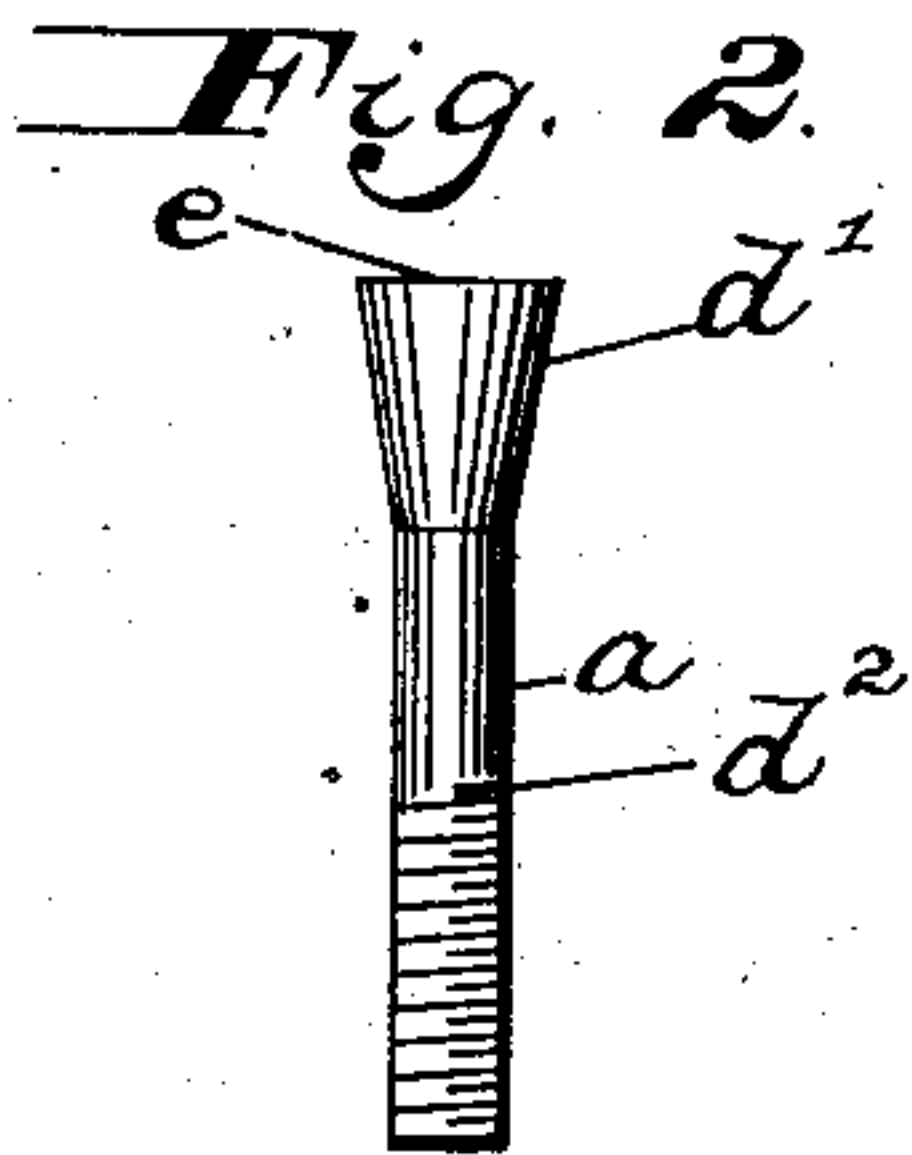
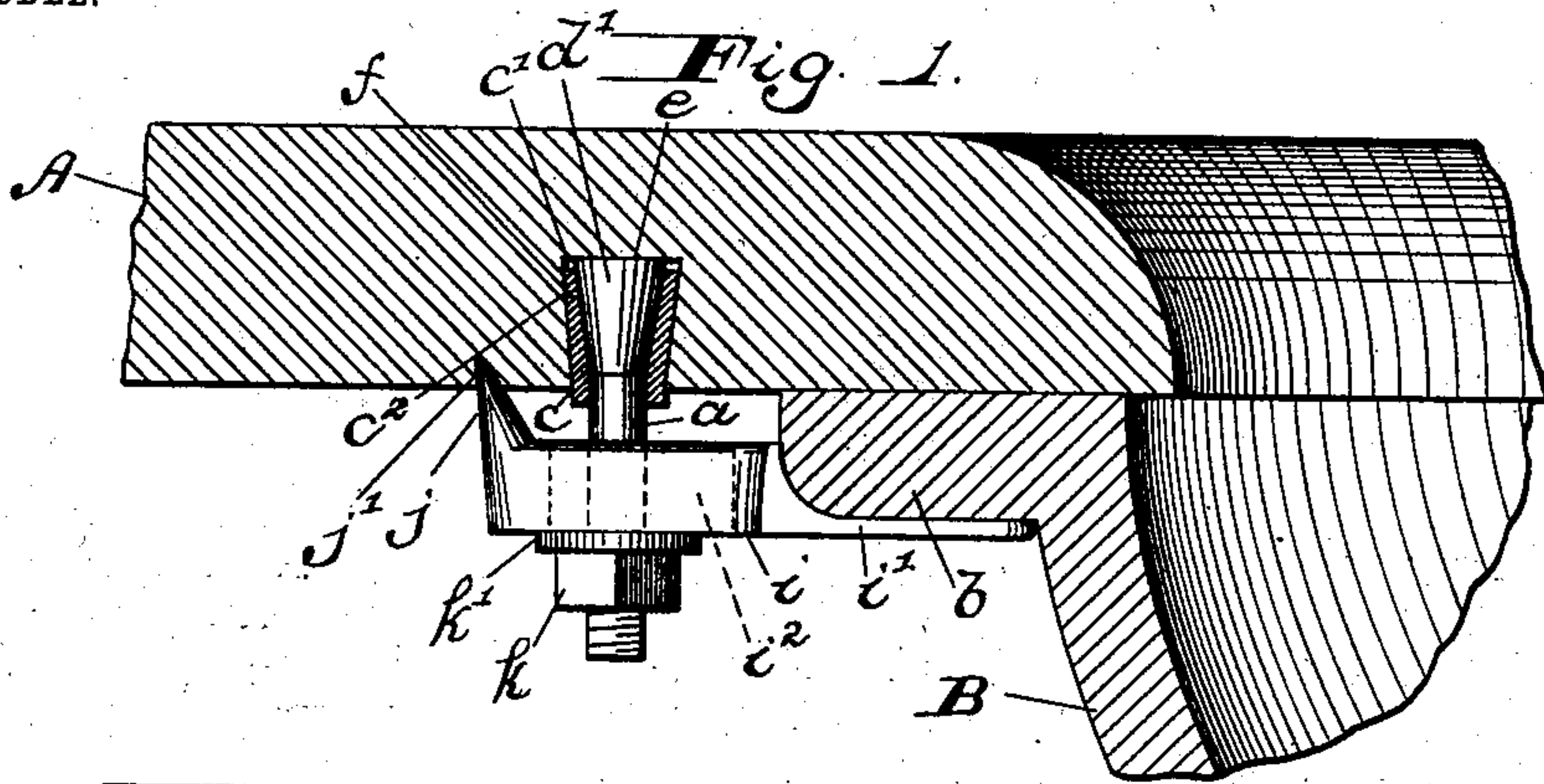
PATENTED APR. 21, 1903.

W. A. KEEN.

MEANS FOR SECURING BASINS, &c., TO SLABS.

APPLICATION FILED JAN. 31, 1903.

NO MODEL.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

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## MEANS FOR SECURING BASINS, &c., TO SLABS.

SPECIFICATION forming part of Letters Patent No. 726,070, dated April 21, 1903.

Application filed January 31, 1903. Serial No. 141,245. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. KEEN, a citizen of the United States, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in Means for Securing Basins or other Articles to Slabs, of which the following is a specification.

My invention relates to improvements in means for securing washbasins or other articles to marble, slate, or other stone slabs.

The present invention relates more particularly to securing the bolt to the slab, the object being to provide means whereby the bolt may be quickly secured rigidly in place.

At the present time the most common practice is to drill holes or form a recess into the slab and insert the head end of the bolt and then pour molten metal into the hole around the bolt-head. This is not satisfactory because of the trouble and labor involved, and, further, because the molten metal when cooling shrinks and the bolt is not held rigidly, and the metal must then be hammered and packed in around the bolt to secure the latter rigidly. Another practice is to provide an expanding bolt to be inserted into the recess, and while this is quicker than the other way it is too expensive.

By my invention the bolt may be quickly and rigidly secured in place and at very little cost.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 illustrates a sectional detail view of a portion of a slab and basin secured together by my improved device. Fig. 2 is a side elevation of the bolt. Fig. 3 is a perspective view of the expansible bushing. Fig. 4 is a plan view of the clamp device. Fig. 5 illustrates a sectional view of a slab with the bolt in place and the expansible bushing and tool for driving the same into place. Fig. 6 illustrates a sectional view of a slab with the bolt rigidly secured in place by the expansible bushing.

In the drawings, A designates a slab, and B the basin, having a flange b, which is to be secured to the bottom side of said slab. The slab A is provided with a hole c, having a top surface c' and an annular inclined wall c<sup>2</sup>, which extends from said top surface c' of the hole, where its diameter is largest, toward the

bottom surface of said slab. The bolt a has a head d', which is tapered from its end toward the body or threaded portion d<sup>2</sup>. The taper or inclination of the head differs slightly from the inclination of the annular wall c<sup>2</sup> in the slab, the inclination of said head being greater. The advantage in this construction will be presently pointed out.

The head of said bolt has a flat top surface e, the diameter of which is such that it will just pass through the smaller end of the hole c in the slab. The bushing f, preferably of some suitable soft metal, is provided with a plurality of vertical slots g, which divide the bushing circumferentially into a plurality of sections g', and said bushing also has a central opening g<sup>2</sup>, through which the body portion d<sup>2</sup> of the bolt passes.

To secure the bolt in the hole of the slab, the tapered head d' is inserted in the hole. The bushing is now placed over the threaded end of the bolt, with the section g' pointing toward the tapered head. A tool h, comprising a hollow tube, is then inserted over the threaded portion d<sup>2</sup> of the bolt, with its end contacting with the bushing f. Now by tapping on the end h' of the tool the bushing is driven up around the tapered head d' of the bolt and the sections expanded and wedged in the hole c between the tapered head and the inclined wall of the hole, as shown in Fig. 6, and rigidly secure the head in said hole. As the bushing is provided with the slots g and spring-sections g', the latter will spring and readily conform to the shape of the head d' and the hole c in the slab. It will also be seen that the farther the bushing is driven into said hole the tighter it will bind between said inclined surfaces. The clamp i has a laterally-projecting flange i' and a longitudinal slot i<sup>2</sup>, through which latter the threaded portion d<sup>2</sup> of the bolt passes, and said clamp is also provided with an upwardly-projecting lug j, which takes in a notch j' on the bottom side of the slab and prevents the clamp from slipping laterally. A nut k and washer k' serve to hold the clamp i' in engagement with the basin-flange b and also to hold the lug j in the notch j'.

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

1. The combination of a slab having a hole with a top surface which is parallel with the bottom surface of said slab, said hole also having an annular inclined wall which tapers  
5 from said top surface where it is largest to the entrance where it is smallest; a bolt having a tapered head with a top surface which is parallel with the top surface of said hole, and a bushing of expansible material inter-  
10 posed between said tapered head and the annular inclined wall of said hole.

2. The combination of a slab having a hole with a top surface which is parallel with the bottom surface of said slab, said hole also  
15 having an annular inclined wall which is smaller at its entrance than at said top surface; a bolt having a flat head which is parallel with the top surface of said hole, and a tubular expansible bushing having longitudi-

nal slots forming a plurality of spring-sections which take circumferentially around the tapered head of said bolt and expand as they are forced into said hole.

3. The combination of a slab having a hole with an annular inclined wall; a bolt having  
25 a tapered head which is adapted to fit into said hole, the taper of the walls of said hole and the taper of said head being at different angles whereby to form an inclined space between the two and a bushing of expansible  
30 material interposed between said head and said inclined wall.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM A. KEEN.

Witnesses:

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