

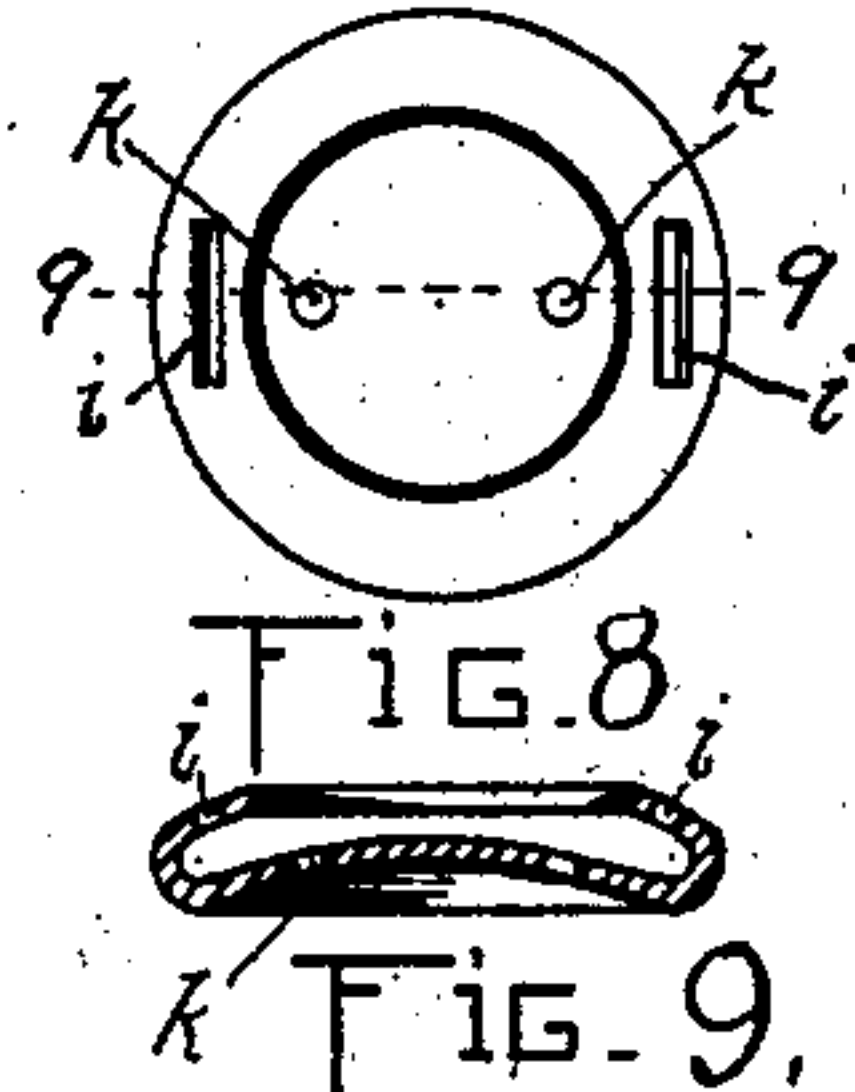
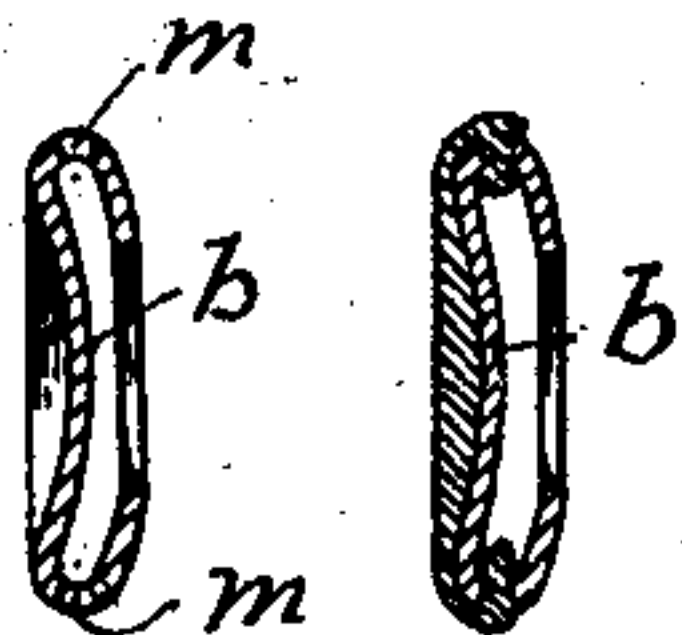
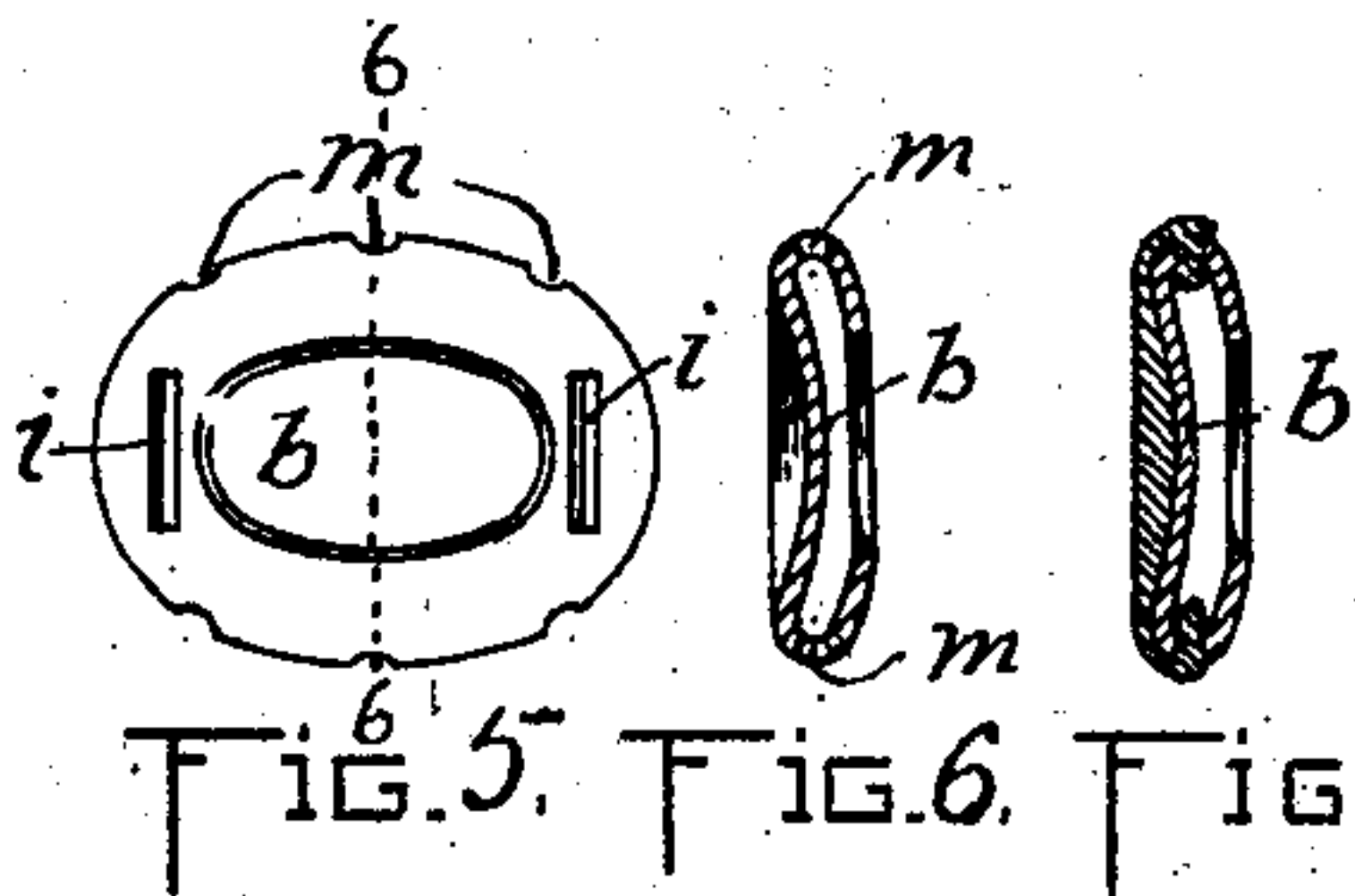
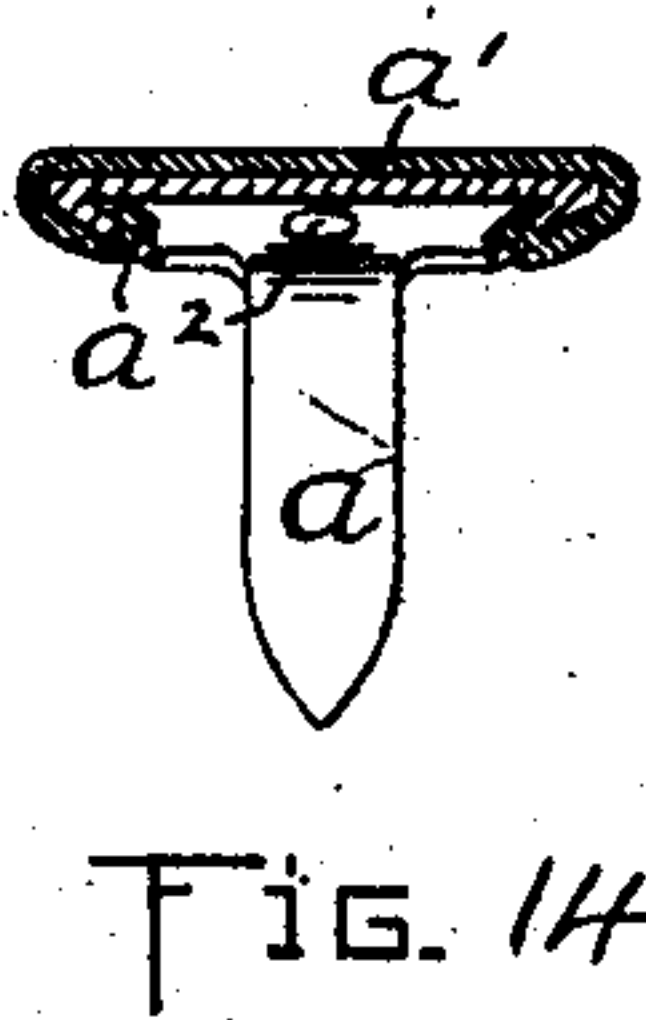
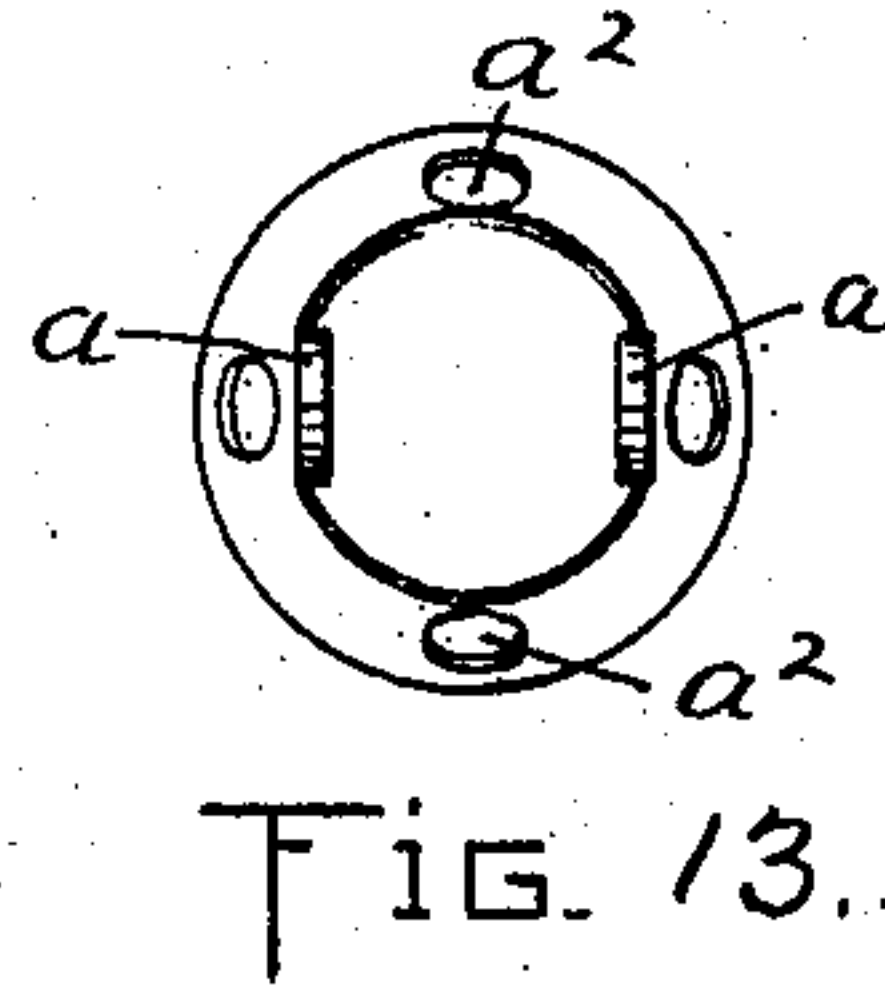
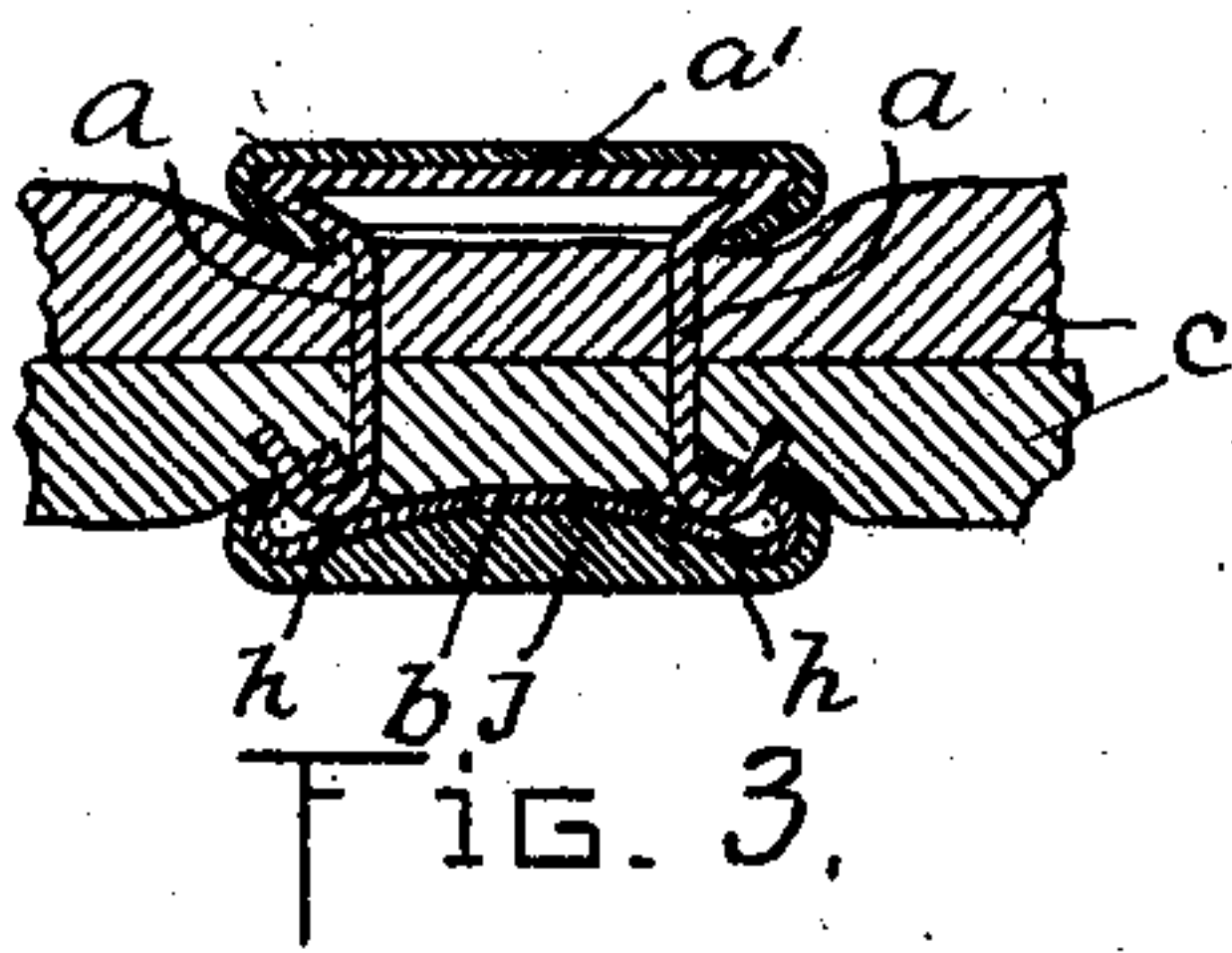
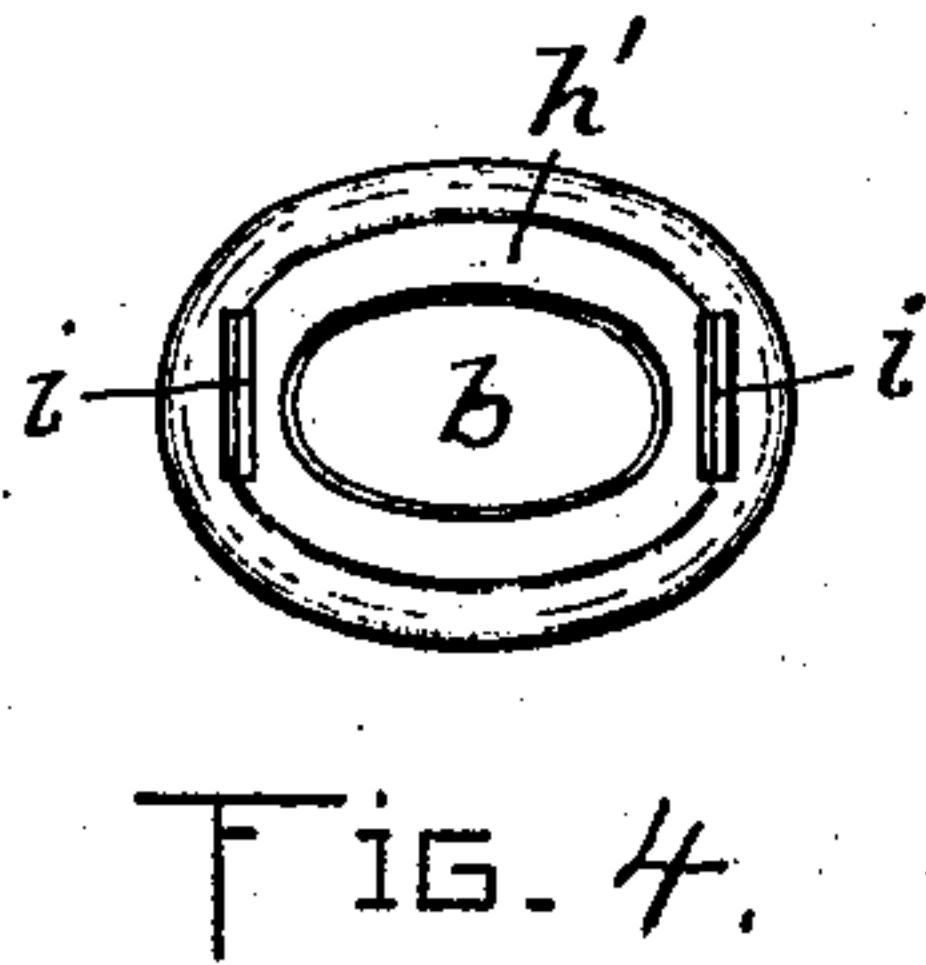
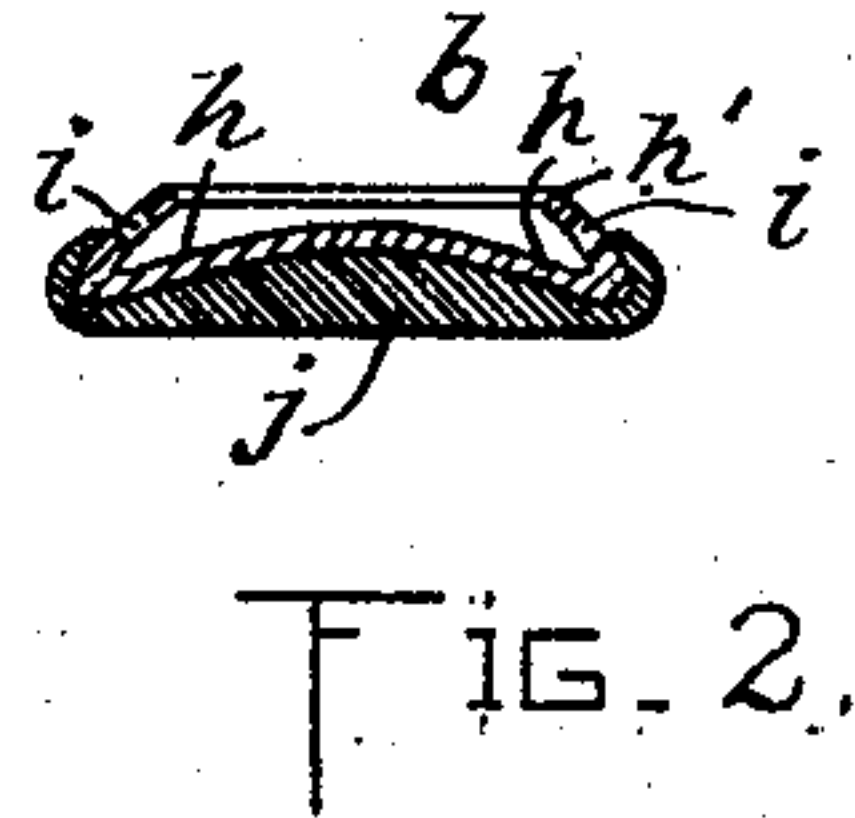
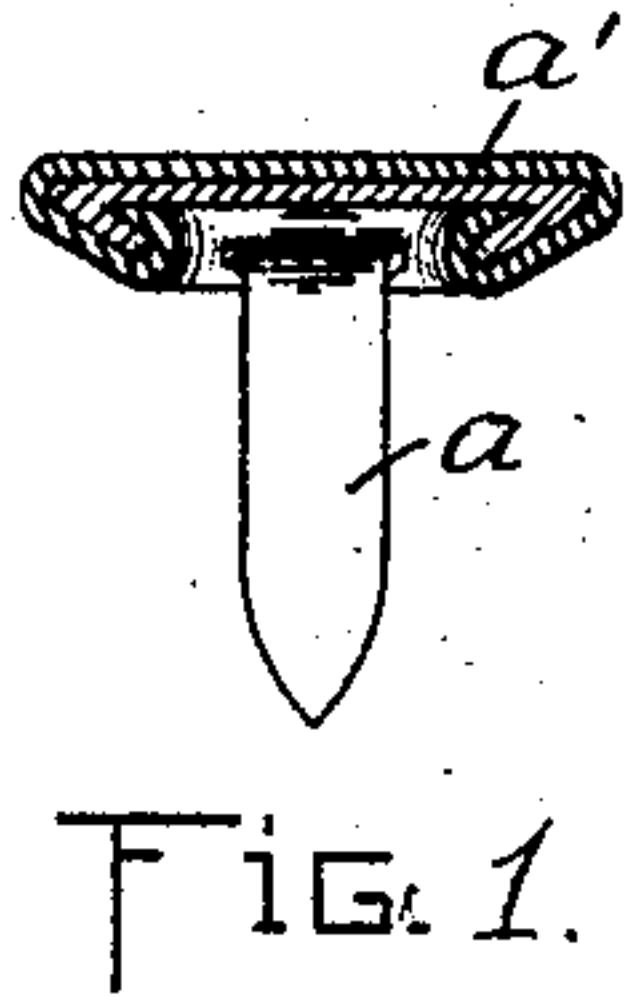
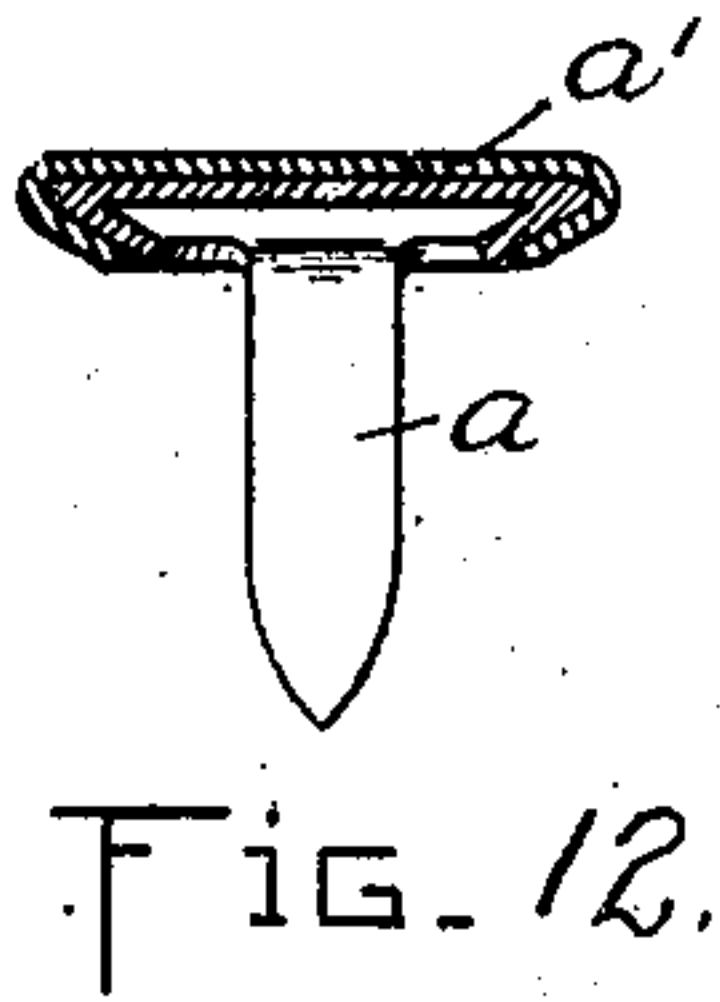
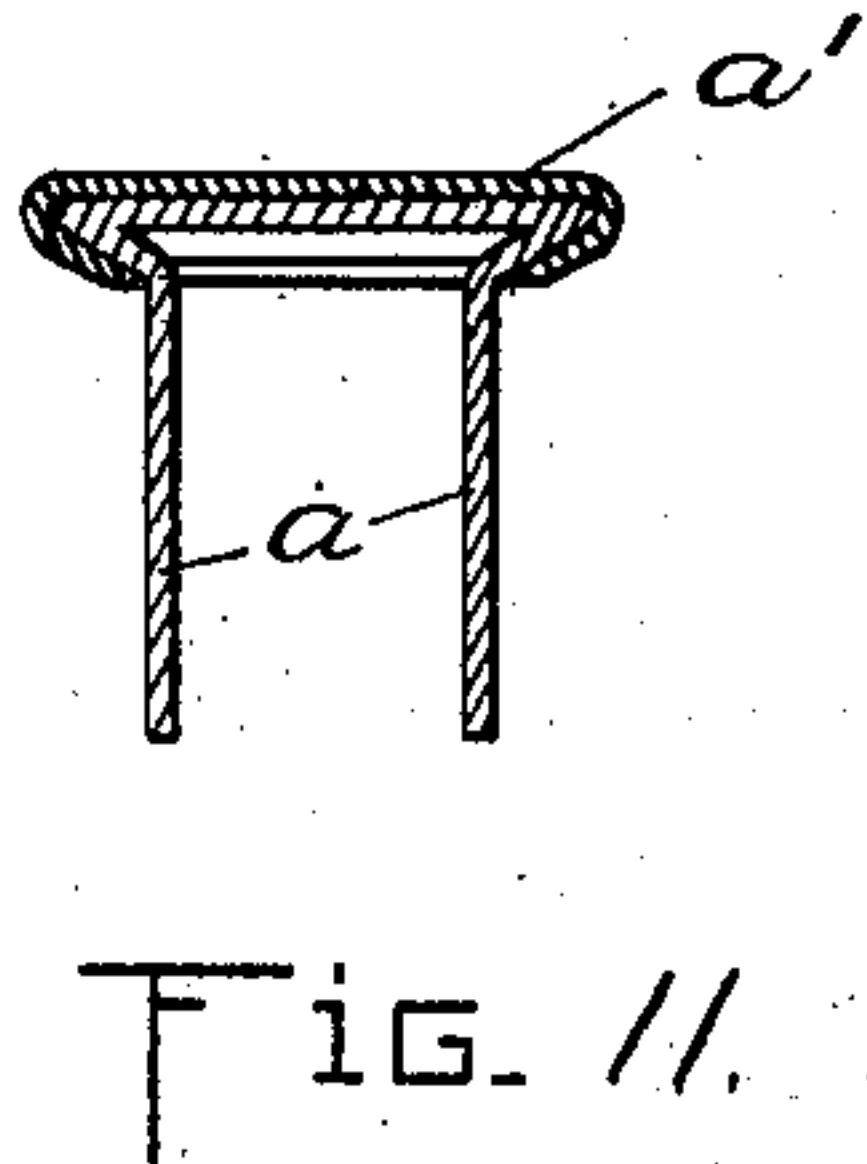
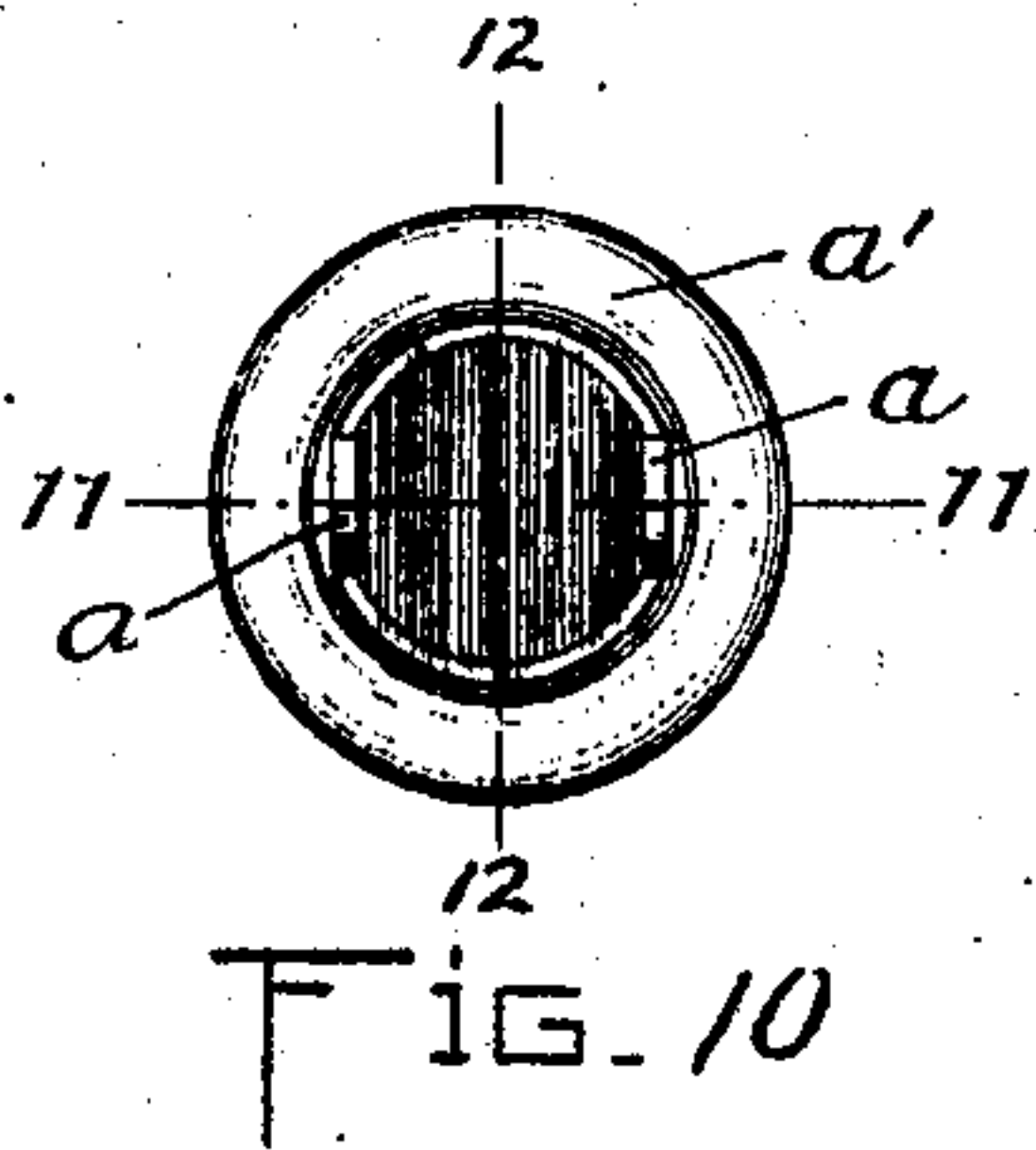
No. 693,338.

Patented Feb. 11, 1902.

J. L. THOMSON.  
RIVET CLENCHING CAP.

(Application filed Jan. 27, 1900. Renewed July 1, 1901.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

JUDSON L. THOMSON, OF CLAYTON, NEW YORK.

## RIVET-CLENCHING CAP.

SPECIFICATION forming part of Letters Patent No. 693,338, dated February 11, 1902.

Application filed January 27, 1900. Renewed July 1, 1901. Serial No. 66,741. (No model.)

*To all whom it may concern:*

Be it known that I, JUDSON L. THOMSON, of Clayton, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Rivet-Clenching Caps, of which the following is a specification.

This invention relates to a clenching-cap for use in connection with a rivet having a head and prongs projecting therefrom, the rivet-head bearing on the outer side of one of the pieces of material through which the prongs extend, while the cap bears on the outer side of the other piece and is engaged with the outer end portions of the prongs.

The invention has for its object to provide an improved cap adapted to be engaged or interlocked with the rivet-prongs more securely than heretofore, a special object of the invention being to provide a construction that will be exceedingly cheap to manufacture and that will prevent the cap from turning or rotating relatively to the rivet.

To these ends the invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figures 1 and 2 represent sectional views, respectively, of a rivet and a clenching-cap therefor, the latter embodying my present invention. Fig. 3 represents a sectional view showing the cap and rivet united. Fig. 4 represents a plan view of the cap of oval form. Fig. 5 represents a plan view of the cap without a wear-resisting facing and showing orifices in the cap for the anchorage of the facing. Fig. 6 represents a section on line 6 6 of Fig. 5. Fig. 7 represents a view similar to Fig. 6, showing the facing in place on the cap. Fig. 8 represents a plan view of a circular form of cap embodying my invention. Fig. 9 represents a section on line 9 9 of Fig. 8. Fig. 10 represents a plan view of a rivet from the pronged side thereof, which rivet may be employed with my improved cap. Fig. 11 represents a section on the line 11 11 of Fig. 10. Fig. 12 represents a section on line 12 12 of Fig. 10. Fig. 13 represents a view similar to Fig. 10 without the wear-resisting facing on the head of the rivet. Fig. 14 represents a section of the form of rivet shown in Fig. 13, said Figs. 13 and 14 showing a form of rivet in which holes

are made in the flange of the rivet to anchor the wear-resisting facing, the latter being represented in Fig. 14.

The same letters of reference indicate the same parts in all of the figures.

My improved clenching-cap *b* comprises an anvil portion *h*, having a convex inner surface formed to deflect or bend outwardly the prongs *a a* of a rivet, such as that shown in Fig. 1, and a flange *h'*, which is integral with the anvil portion and overhangs the same. In the flange are formed slots *i i* to receive the deflected end portions of the prongs *a a*, said slots being separated from each other, so that when the end portions of the prongs of the rivet are passed through the slots and into one of the pieces *c* of the material united by the prongs the cap cannot turn or rotate relatively to the rivet and neither the cap nor the rivet can turn or rotate in the material. A very secure connection between the prongs and the cap is thus effected, the separation of the parts being impossible excepting by the breakage of the prongs or of the flange, and this is secured by means of an exceedingly cheap and durable form of connection.

The cap is constructed to insure the proper position of the slots *i i* with relation to the prongs *a a* of the rivet in the machine which sets the rivets, such machine having provisions for presenting the rivets with their prongs in a predetermined position and a bed or die for supporting the cap.

In Figs. 4 and 5 I show the cap of elliptical form and the slots crossing the line of the longer axis of the ellipse, so that by providing the machine with an elliptical bed or die to fit the cap the slots will be caused to occupy the desired position to receive the prongs. In Figs. 8 and 9 I show the cap provided with two orifices *k k*, adapted to receive suitable small studs affixed to the bed or die of the machine, the orifices and studs insuring the desired position of the slots to receive the prongs of the rivet. When the cap is provided with the orifices *k*, the cap may be made circular, as shown in Fig. 8.

The cap is or may be provided with a wear-resisting facing of material, such as pyroxylin, adapted to be applied in a plastic condition by the employment of suitable dies. The facing may be extended over a portion of the



flange  $h'$ , as shown in Figs. 2, 3, and 4, care being taken to prevent the pyroxylin from filling the slots  $i$ .

In Figs. 5, 6, and 7 I show the flange provided with orifices  $m$ , adapted to receive portions of the facing material, said portions forming spurs or tongues which anchor the facing to the cap.

I may provide the head of the rivet with a wear-resisting facing  $a'$ , which may extend entirely over the edges of the flange of the head, as shown in Fig. 1, or said wear-resisting facing may extend only to the edge of the head-flange, as indicated in Figs. 10, 11, and 12. As shown in the drawings, the flange of the rivet-head is so formed as to present an inclined or beveled surface adapted to depress the material, as shown in Fig. 3, when the rivet and the clenching-cap are united, and, as also shown in Fig. 1, the wear-resisting facing  $a'$  extends not only over the edges of the head, but is carried under the head and extends into the crevice or recess under the flange for safe anchorage to the head. This also provides means whereby the flange is more strongly supported and is more surely prevented from being flattened against the head when the rivet and the clenching-cap are united, as shown in Fig. 3. The flange of the head of the rivet may be provided with openings  $a^2$ , as shown in Figs. 13 and 14, to

receive portions of the facing material  $a'$  to anchor the facing to the head of the rivet.

I claim—

1. A clenching-cap for pronged rivets, comprising a central anvil portion formed to outwardly deflect the prongs of the rivet, and a flange overhanging the anvil portion and integral therewith and provided with separated openings to receive the deflected portions of the prongs.

2. A clenching-cap for pronged rivets, comprising a central anvil portion formed to outwardly deflect the prongs of the rivet, and a flange overhanging the anvil portion and integral therewith and provided with separated prong-receiving openings, the cap being of elliptical form to position the openings.

3. A rivet having a head provided with a flange formed to present an inclined or beveled surface, and with a crevice or recess under said flange, and a hard, wear-resisting facing carried over the head and flange, and extending into the crevice or recess, substantially as and for the purposes set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

JUDSON L. THOMSON.

Witnesses:

C. F. BROWN,

C. W. HARRISON.