

(No Model.)

E. KEMPSHALL.  
EYELET.

No. 545,800.

Patented Sept. 3, 1895.

FIG. 1.

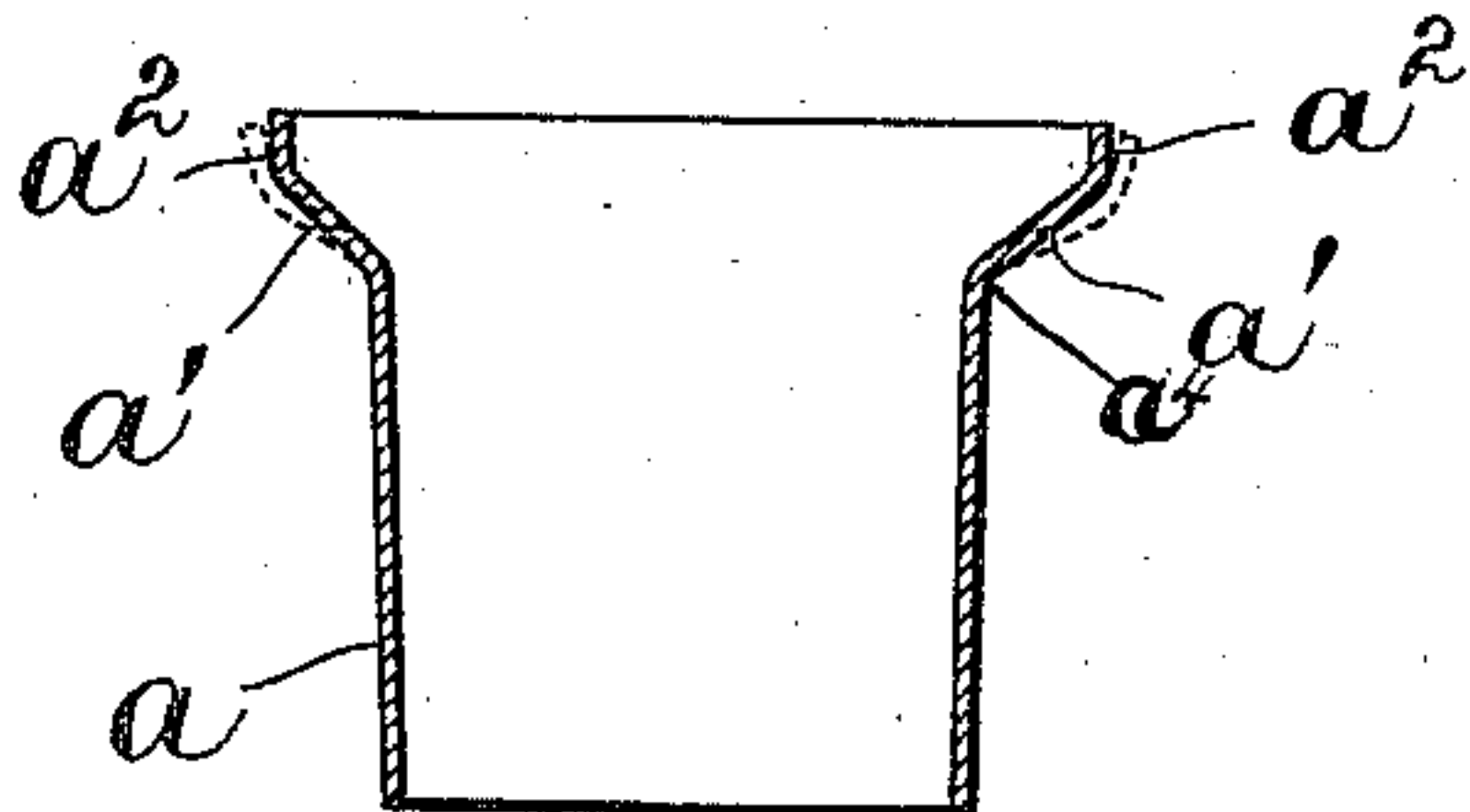


FIG. 2.

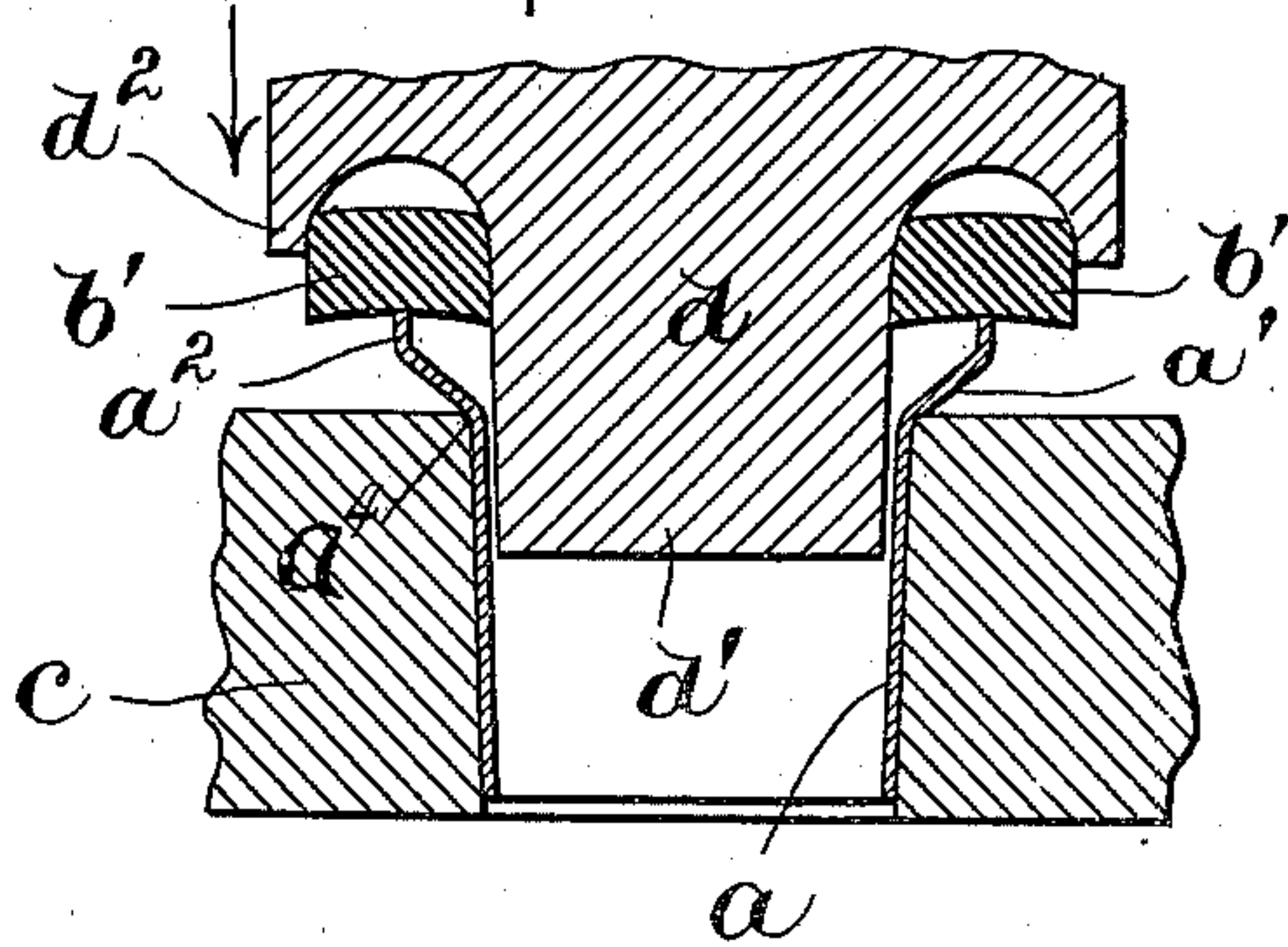


FIG. 3.

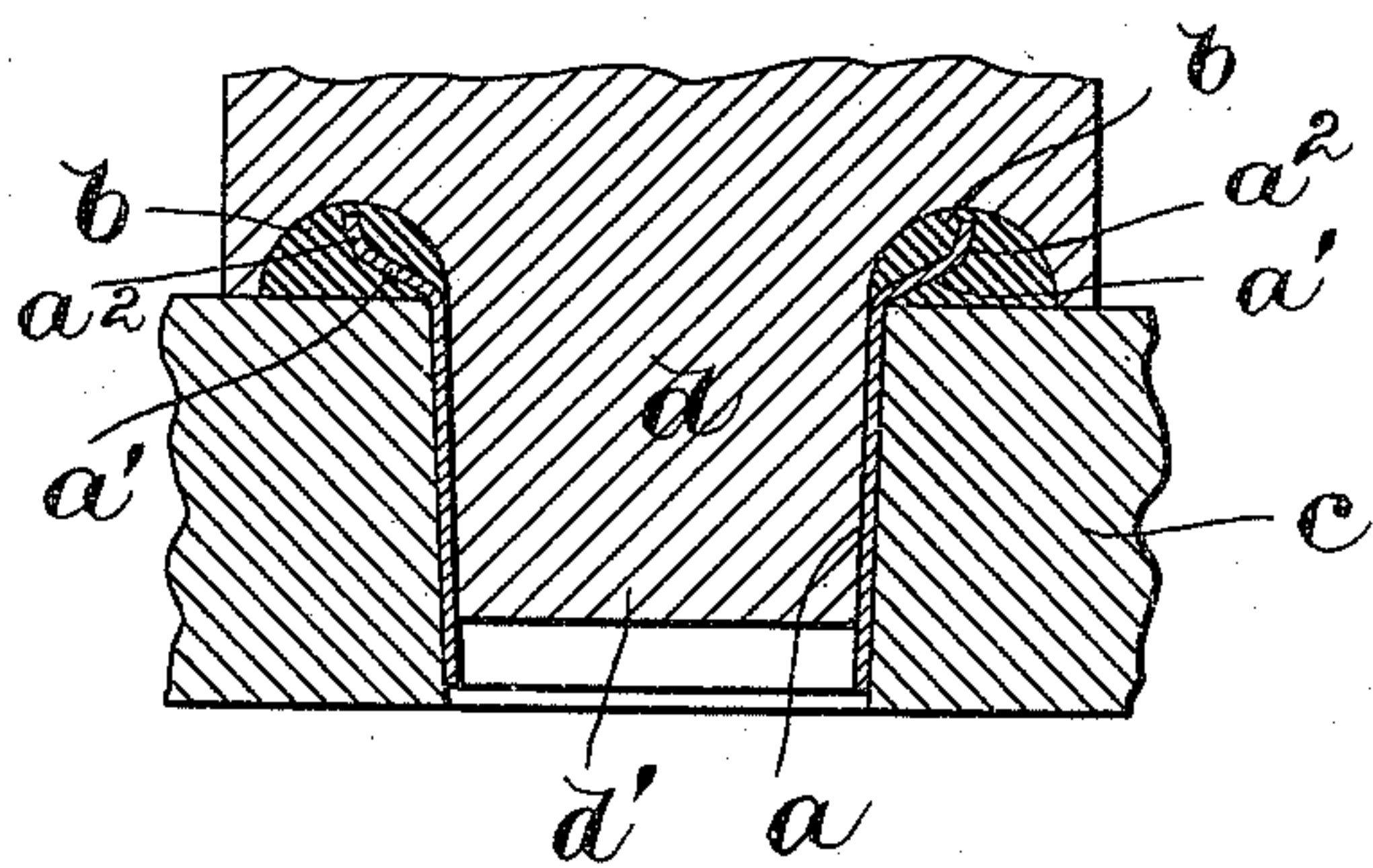
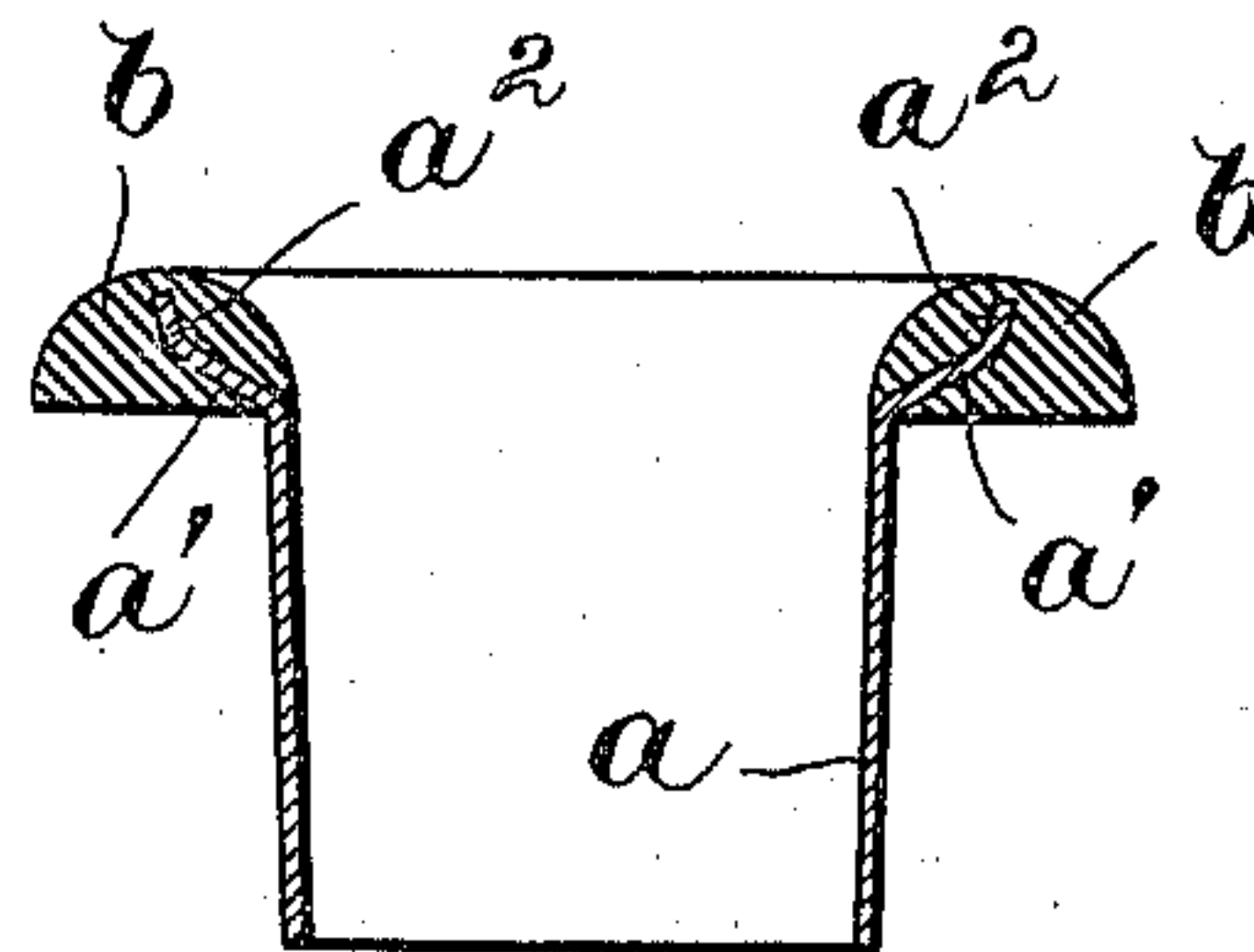


FIG. 4.



WITNESSES:

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INVENTOR:

E. Kempshall  
by night from Quincy  
Atty.



# UNITED STATES PATENT OFFICE.

ELEAZER KEMPSHALL, OF SHARON, ASSIGNOR TO THEOPHILUS KING,  
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## EYELET.

SPECIFICATION forming part of Letters Patent No. 545,800, dated September 3, 1895.

Application filed August 1, 1895. Serial No. 557,821. (No model.)

*To all whom it may concern:*

Be it known that I, ELEAZER KEMPSHALL, of Sharon, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Eyelets, of which the following is a specification.

This invention relates to eyelets, the heads or exposed portions of which are covered with a material such as pyroxyline, which is molded upon the eyelet while in a plastic condition and subsequently becomes rigid.

The invention has for its object to provide certain improvements in eyelets of this class, whereby the molded head may be readily applied to the portion of the eyelet with which it comes in contact, and will be securely engaged with the eyelet, so as to form an annular head of the desired form.

The invention consists in the improvements which I will now proceed to describe and claim.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a sectional view of the metallic portion of my improved eyelet before the covering is applied. Fig. 2 represents a sectional view of my improved eyelet and the dies which form the molded head or covering, the dies being in the position they occupy at the beginning of the head-forming operation. Fig. 3 represents a sectional view of the eyelet and dies after the completion of the head. Fig. 4 represents a sectional view of the completed eyelet. Figs. 5 and 6 represent a modified form of the eyelet.

In Figs. 1, 2, 3, and 4,  $a$  represents the body of my improved eyelet, and  $a'$  the head or flange thereof, the said body being of cylindrical form and preferably slightly tapered, as shown, while the head or flange is beveled and increases in diameter from its junction with the body to its outer end, so that its inner and outer surfaces are inclined relatively to the body  $a$ , as shown. The marginal or upper portion of the flange  $a'$  is turned upwardly to form an annular cutting-lip  $a^2$ , the function of which will presently appear. The flange joins the body of the eyelet at an obtuse angle  $a^4$ , which forms a shoulder at the lower end of the flange, said shoulder bearing

on the die-plate  $c$ , hereinafter referred to, and causing said plate to firmly support the flange, with its upper edge parallel with the die-plate, the said shoulder also preventing the eyelet from being wedged or crowded down into the body-receiving cavity in said plate.

$b$  represents the molded covering of pyroxyline or other suitable material adapted to be applied in a plastic state and to subsequently become rigid, said covering being molded upon the flange  $a'$  and having an annular form, its outer surface being preferably rounded or semicircular in cross-section, while its inner or under surface is preferably flat. In applying said covering I first place the body  $a$  of the eyelet in a hole, which it closely fits, in a die-plate  $c$ , the flange  $a'$  standing above said plate. A ring or annular blank  $b'$  of the covering material or composition is laid upon the cutting-lip  $a^2$  of the flange, and then a die  $d$ , which is formed to enter the body of the eyelet and to mold the covering  $b$  upon the flange  $a'$ , is moved downwardly, a projecting portion  $d'$  of said die entering the ring and pressing the material closely against the inner surface of the flange, while the marginal portion  $d^2$  of the die co-operates with the die-plate  $c$  in forming the outer portion of the covering  $b$ . The cutting-lip  $a^2$  readily divides or splits the lower portion of the ring or blank  $b'$ , causing its inner part to cover the inner surface of the flange and its outer part to cover the outer surface of the flange and readily enter the space overhung by the inclined portion of the flange, so that the material is pressed closely against all parts of the outer surface of the flange, the result being a head that is perfectly formed at all parts.

The cutting-lip  $a^2$ , by splitting the lower part of the ring or blank of covering material, enables the cover to be formed with a comparatively light pressure and without being softened by heat to such an extent as would otherwise be required.

The cutting-lip and flange are subjected to outward pressure of the material caused by the projecting portion  $d'$  of the die, said portion extending below the outer portion  $d^2$  and confining the inner portion of the blank, so that it cannot escape downwardly, but presses



outwardly against the lip and flange, the annular cutting-lip  $a^2$  being inclosed by the pressure outwardly and interlocked with the covering material. The cutting-lip, while  
5 yielding to a certain extent, resists the downward pressure sufficiently to prevent it from being flattened down against the die-plate. Hence it insures the presence of a raised edge within the molded cover and interlocked  
10 therewith, even though the flange  $a$  be flattened down against the die-plate, a result which might be possible in some cases. The displacement of the said lip and flange are illustrated by the full and dotted lines in Fig.  
15 1, the full lines showing the position of the lip and flange before the head is applied, while the dotted lines show the position of said parts after the head has been applied.

I claim—

20 1. An eyelet comprising a tubular body, a frusto-conical flange formed on one end of said body, the flange joining the body of the eyelet at an obtuse angle which forms a shoulder adapted to bear on a die plate, and an annular  
25 upwardly projecting cutting lip formed

on the upper edge of said flange and standing at an angle therewith, as set forth.

2. An eyelet comprising a tubular body, a frusto-conical flange formed on one end of said body, the flange joining the body of the  
30 eyelet at an obtuse angle which forms a shoulder adapted to bear on a die plate, an annular upwardly projecting cutting lip formed on the upper edge of said flange and standing at  
35 an angle therewith, and an annular covering molded on said lip and flange, the lip being formed to cut the mass of covering composition while the latter is being forced down onto the flange, the angle at which said lip projects from the flange insuring the upward  
40 projection of the lip in the molded covering, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 29th day of  
45 July, A. D. 1895.

ELEAZER KEMPSHALL.

Witnesses:

C. F. BROWN,  
A. D. HARRISON.