

(No Model.)

F. F. HAWKINS.
EYELET.

No. 584,354.

Patented June 15, 1897.

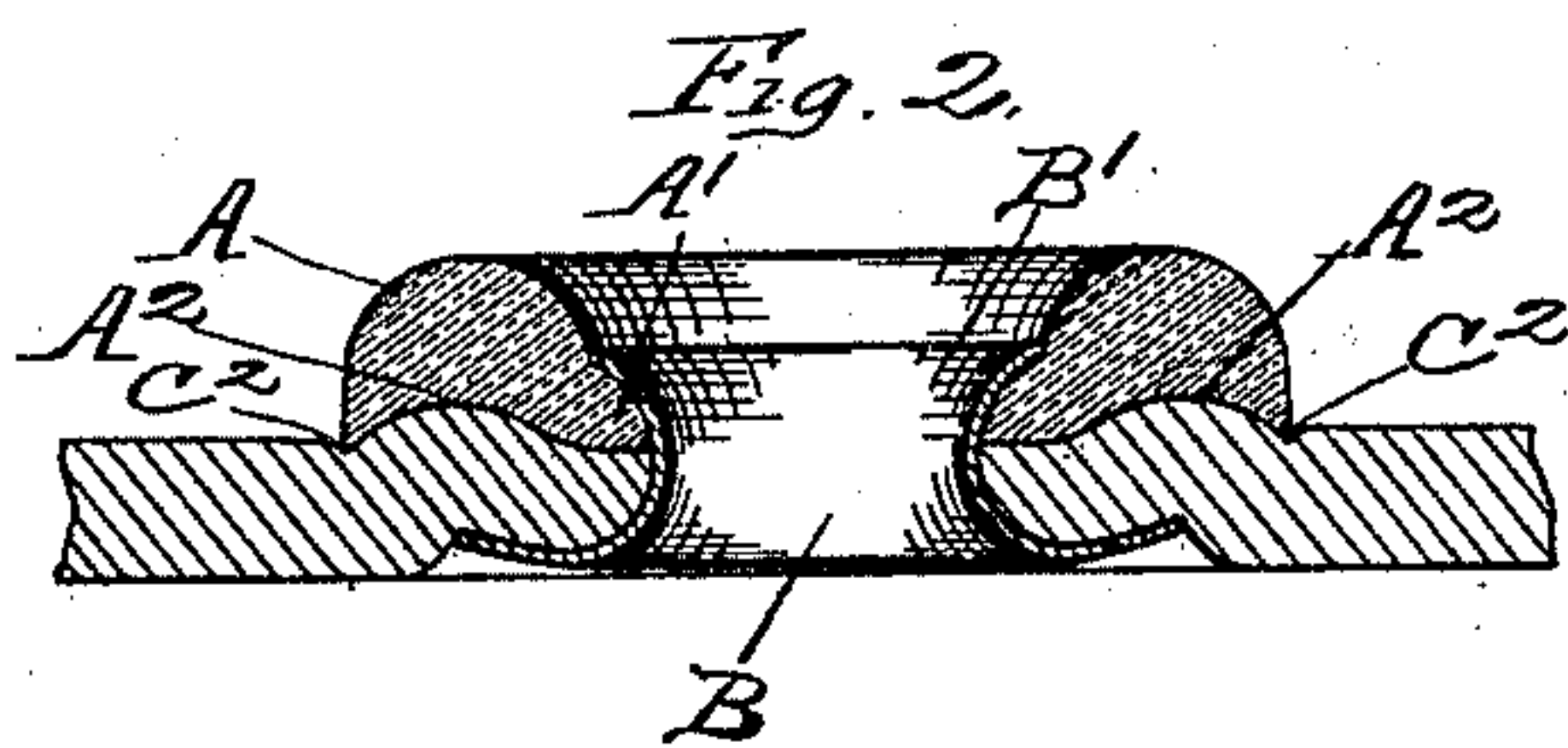
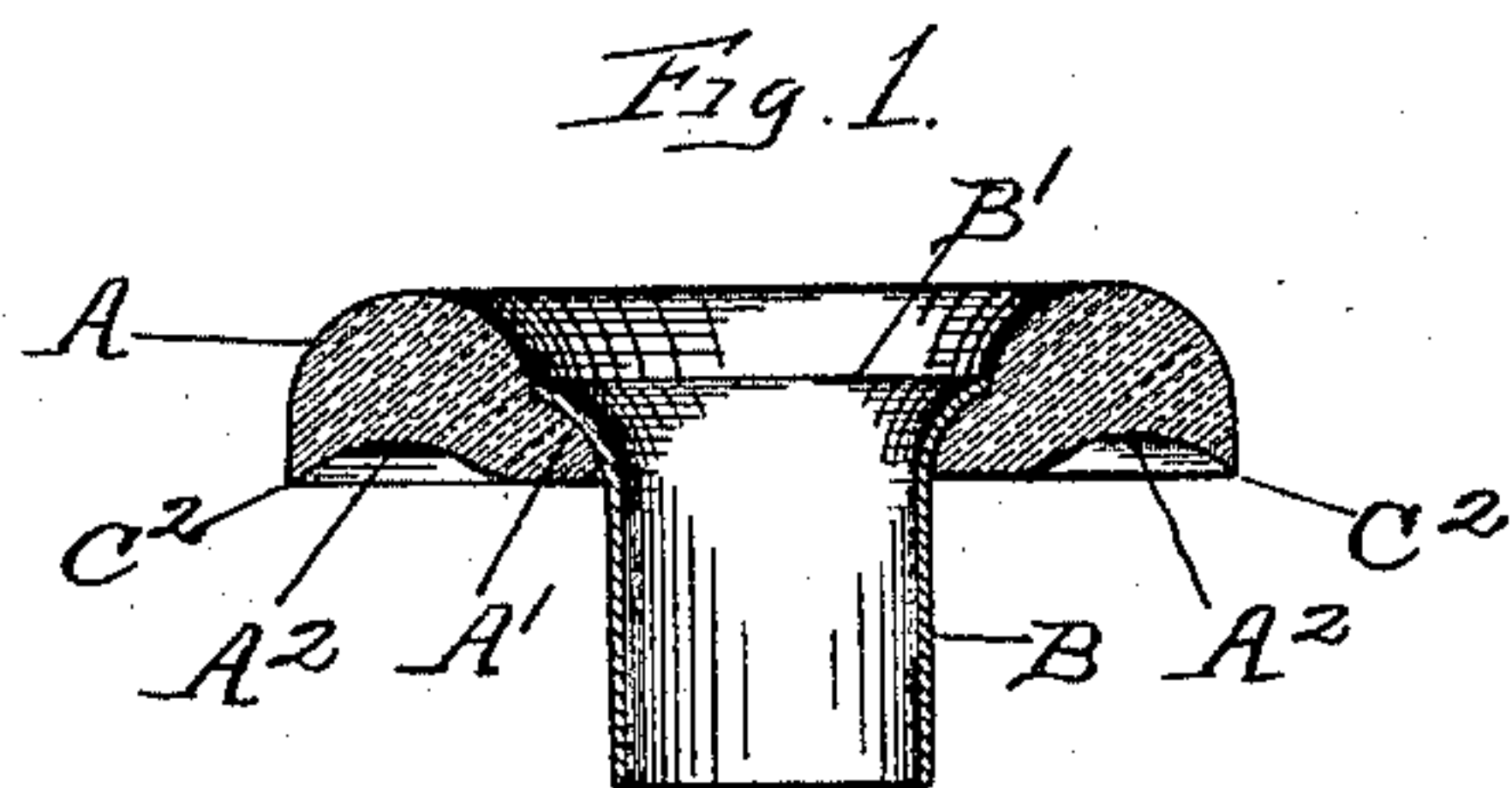
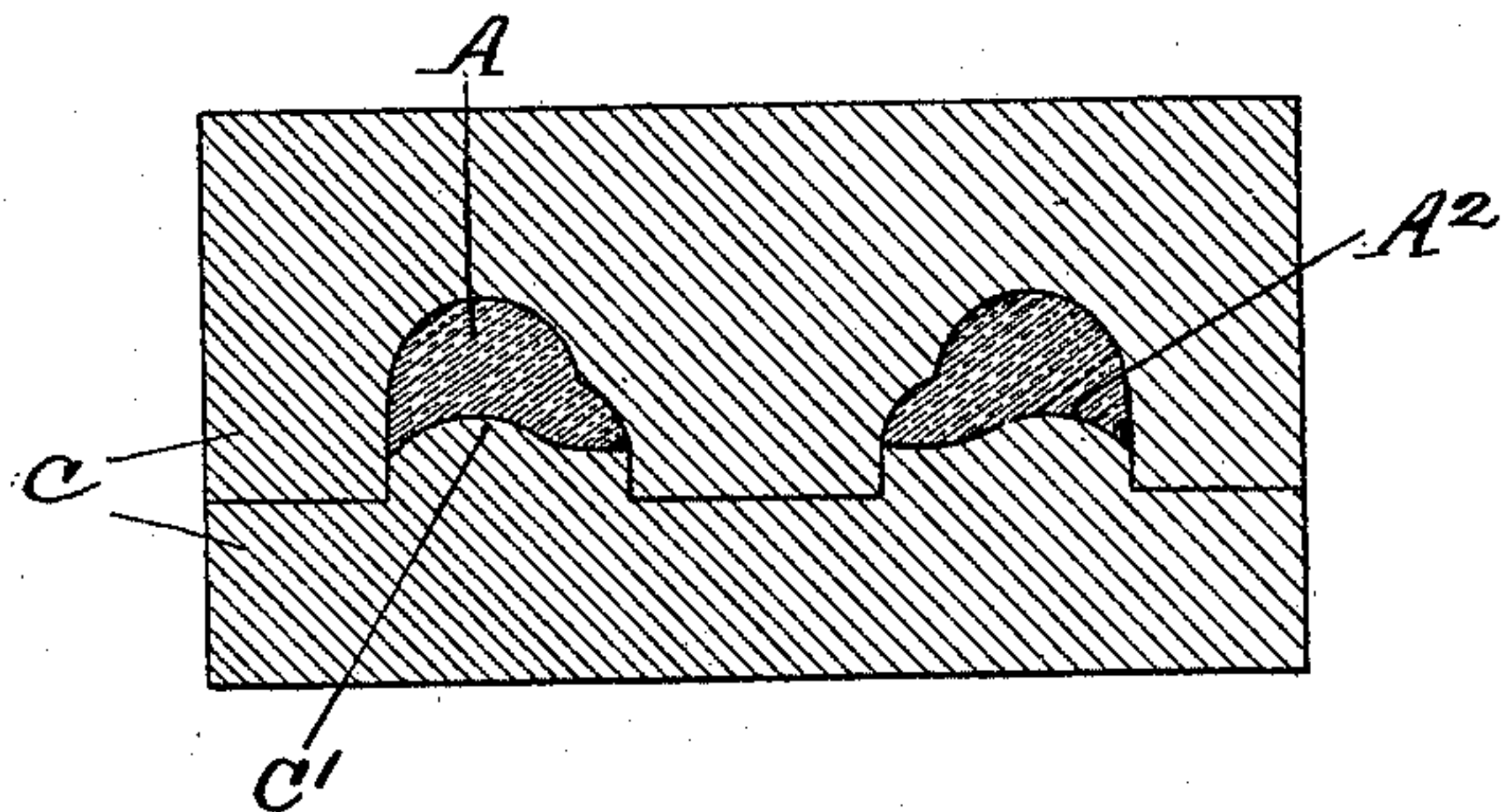


Fig. 3.



Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK F. HAWKINS, OF LANSINGBURG, NEW YORK.

EYELET.

SPECIFICATION forming part of Letters Patent No. 584,354, dated June 15, 1897.

Application filed January 21, 1896. Renewed February 3, 1897. Serial No. 621,873. (No model.)

To all whom it may concern:

Be it known that I, FRANK F. HAWKINS, a citizen of the United States, residing at Lansingburg, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Eyelets, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a view in central longitudinal section of my improved eyelet. Fig. 2 is a similar view of the eyelet inserted and secured in a lacing-aperture in a piece of leather. Fig. 3 is a similar view of the molded hard-rubber head before the annular groove has been formed in its under face. Fig. 4 is a similar view of the head inclosed in a die under compression.

Similar letters refer to similar parts in the several figures.

My invention is intended to be applied to that class of eyelets wherein a non-metallic annular head is combined with a tubular metallic clenching-shank.

The object of my invention is to strengthen the non-metallic head of the eyelet and at the same time to add to the ornamental appearance, both exteriorly and interiorly, of the finished article to which the eyelets are applied.

The eyelet comprises the annular non-metallic head A and the tubular metallic clenching part B, inserted through the central opening in the annular head and adapted to form a clenching-shank for the eyelet. As shown, an exterior flange B' on the upper end of the tubular metallic part engages an interior flange A' on the non-metallic head to secure the parts together. The tubular metallic clenching part may be of any desired form and be secured to the non-metallic head in any known manner. The head may be made of any suitable non-metallic material, preferably of hard rubber vulcanized in a mold to the general form desired. After the rubber head has been molded and vulcanized, as

shown in Fig. 3, I submit it to the action of a die C under great pressure. The upper member of the die conforms to the shape imparted to the upper surface of the head in the mold, while the lower member is provided with an annular rib or flange C', adapted to engage the under surface of the head and form therein a concavity or annular groove A² by compression while the head is confined by the die-walls. By thus concaving the under side of the head by compression while retaining the molded form of the upper side I decrease the volume of the head, thereby making it more dense and increasing its strength. An eyelet having a head thus formed is better adapted to withstand the strain of the clenching operation incidental to its application to a shoe or other article. It also affords a neater appearance when clenched or "set" upon the article to which it is attached, due to the fact that in the clenching operation the tool employed forces the clenched end of the metallic shank tightly against the supporting material, which material is driven upward against the seating-surface of the eyelet-head and into the groove formed therein. The upward movement of such portions of the supporting material as enter said groove permits the clenched end of the eyelet to be forced inside of the normal plane of the inner surface of the shoe or other article, instead of forming a conspicuous projection therefrom, as does the common eyelet in use.

By extending the concavity in the seating-surface to the periphery of the head I am able to form thereon a sharp edge C², which is embedded in the supporting material when the eyelet is secured thereon, thereby insuring a close union between the supporting material and the periphery of the eyelet, which adds to the attractive appearance of the finished article to which the eyelets are applied.

I am aware that an eyelet has been provided with a sheet-metal washer bent to a semicircular form in cross-section, so that on its outer edge the entire thickness of the metal was presented to the supporting-body of fabric when the eyelet was set thereon, and I make no claim to the same. Such a construction is wholly impracticable in an eyelet-head made of rubber and of the diminutive size applicable to shoes, &c., for

which my improved eyelet is adapted. If the inner and outer surfaces of the rubber head were parallel, a construction sufficiently strong to resist the clenching operation could not be secured without greatly increasing the size of the head.

It is characteristic of my invention that the cross-sectional form of the rubber ring or annular head is convexo-concave—that is, that the top surface is more sharply curved than the bottom surface, whereby a sharp outer edge is formed thereon by the intersection of the top and bottom surfaces of the head. Such an edge is well adapted to be embedded in the leather by the clenching operation, and is strengthened and supported by the considerable thickness of material which extends almost to such edge, so that the head will not be broken along its sharp edge by the clenching operation.

To force the fabric or leather into a bottom face-groove of the form shown herein does not require any sharp bending or sudden

change in surface, as would a construction wherein the under surface of the head is so abruptly curved as to present the entire thickness of material to the fabric or leather, as in the prior construction above referred to.

What I claim as new, and desire to secure by Letters Patent, is—

A clenching-eyelet having an annular non-metallic head-die formed by compression to a convexo-concave form in cross-section whereby such head is provided with a bottom face-groove extending to a sharp peripheral edge, which edge is formed by the intersection of the upper convex and under concave surfaces of the head, substantially as described.

In testimony whereof I have hereunto set my hand this 16th day of January, 1896.

F. F. HAWKINS.

Witnesses:

GEO. A. MOSHER,
FRANK C. CURTIS.