(No Model.)

F. N. LOOK.

COVERED EYELET.

No. 582,359. Patented May 11, 1897.

Fig. 1.

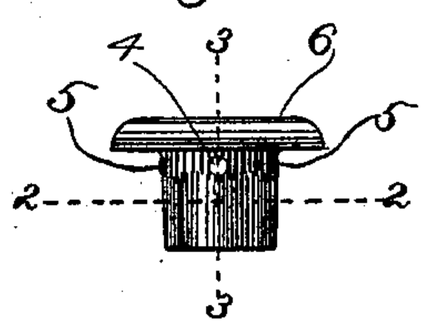


Fig. 2.

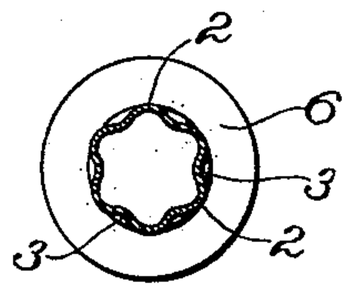
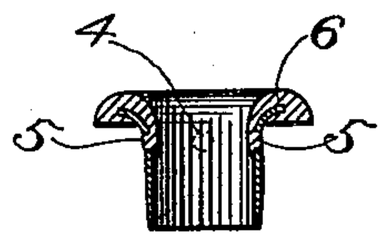


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRANK N. LOOK, OF NORTHAMPTON, MASSACHUSETTS.

COVERED EYELET.

SPECIFICATION forming part of Letters Patent No. 582,359, dated May 11, 1897.

Application filed January 20, 1896. Serial No. 576,076. (No model.)

To all whom it may concern:

Be it known that I, FRANK N. LOOK, a citizen of the United States, residing at Northampton, in the county of Hampshire and State of Massachusetts, have invented certain new and useful Improvements in Covered Eyelets, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates more particularly to eyelets of the class which are provided with molded heads or coverings. In the production of the said molded heads or coverings the eyelets are applied to mold-plates or die-plates, one of which has holes into which the barrels of the eyelets are inserted and wherein they remain seated and held during the molding operation. It is desirable that the barrels of the eyelets should be held in the holes aforesaid with sufficient firmness to cause them to remain therein at the time when the mold-plates or die-plates are separated, in order that all of the eyelets which are operated upon at one time may be removed, together with their molded heads or coverings, from the other mold-plate or die-plate. To this end it has been proposed heretofore to make the said holes in practice sufficiently small in diameter to bind tightly upon the barrels of the eyelets when the said barrels have been driven or forced into the same. It is found in practice that there are unavoidable variations in the diameters of the barrels of the eyelets that are operated upon. These variations result from different causes—to wit, accidental differences in the different machines that are employed in the production of a given quantity of eyelets, the product of each machine being thrown into a common lot; changes in the parts of a given eyelet-making machine, resulting from the wear which is incident to use, and variations in the thickness of the sheet metal that is used in the production of the eyelets. To compensate for these variations in the diameters of the barrels of the eyelets, it has been proposed to form the eyelet-receiving holes of the mold-plate aforesaid sufficiently small in diameter to engage firmly with the barrels of smallest diameter. This will cause them to retain securely, also, all barrels of greater diameter which are driven into the same; but it will be obvious that when the time comes for ejecting the said barrels of greater diameter from the said holes considerable force will have to be exerted in consequence of the great compression of the eyelets within the holes and the frictional hold upon their barrels.

The first object of my present invention is to obviate injury to the eyelets caused by marring the outside thereof and the crushing of the said barrels in the endeavor to eject them from the holes of the mold-plate.

To this end the first part of my invention consists in an eyelet having the barrel thereof shaped in cross-section to present alternating prominent or raised portions and depressed portions, as will hereinafter be more fully explained with reference to the accompanying drawings.

One embodiment of my present invention is illustrated in the accompanying drawings, in which—

Figure 1 illustrates in elevation an eyelet having my invention applied thereto. Fig. 2 shows the barrel of the said eyelet in cross-section on the line 2 2 of Fig. 1. Fig. 3 shows the said barrel in vertical section on the line 3 3 of Fig. 1.

Instead of being truly circular in cross-section the eyelet shown in the drawings is formed irregular in cross-section—that is, it is provided with prominent portions 2 and intermediate depressions 3. In effect the barrel of the eyelet throughout substantially its entire length is corrugated on lines extending lengthwise of the eyelet.

The precise form of the eyelet in cross-section is not material, all that is requisite being that there should be raised portions separated by intermediate relatively-depressed portions. The raised portions are intended to make contact with the inner surface of the die or mold when the barrel of the eyelet is inserted into the hole in the latter prior to the performance of the molding operation. Inasmuch as the interior of the die or mold contacts solely with the raised or prominent portions of the barrel, the extent of the surface contact between the barrel and the interior of the die or mold is lessened; also, the elasticity of the metal of the eyelet is permitted to come into play. The result is that

while an eyelet formed as shown and described will be held with sufficient tenacity and firmness in the die or mold to retain the eyelet in the hole of the said die or mold at the time of the separation of the two mold-plates or die-plates, yet when pressure is applied to the inner end of the barrel of the eyelet or otherwise for the purpose of effecting the removal or disengagement of the eyelet from the die or mold the ejection or discharge of the eyelet will be effected with readiness and without injury to the eyelet or crushing of the barrel thereof.

At 4 4 are shown perforations which I form through the cylindrical portion of the barrel of the eyelet, and at 5 5 are shown the portions of the plastic material which extend through the holes or perforations 4 4 from the part 6 of the molded head or covering which extends into the barrel of the eyelet. The holes 4 4 enable the covering material effectually to be tied to the barrel of the eyelet.

What I claim is—

An eyelet having the barrel thereof shaped to present in cross-section alternating prominent and depressed portions, the corrugations extending throughout substantially the length of the said barrel, whereby the barrel is made slightly compressible and its entrance into a die or mold and ejection therefrom are facilitated, substantially as set forth.

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

FRANK N. LOOK.

Witnesses:
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