C. D. SMITH.

EYELET.

No. 52,614. Patented Feb. 13, 1866.

Fig: 1.

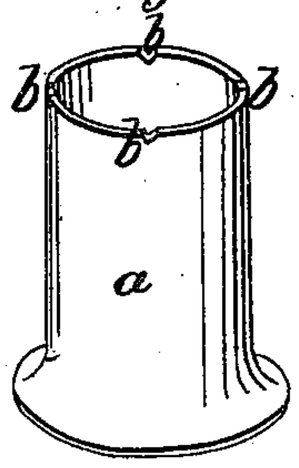


Fig: 2.

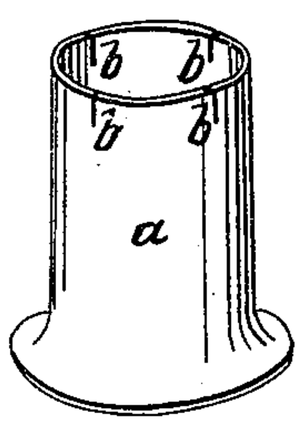


Fig: 3.

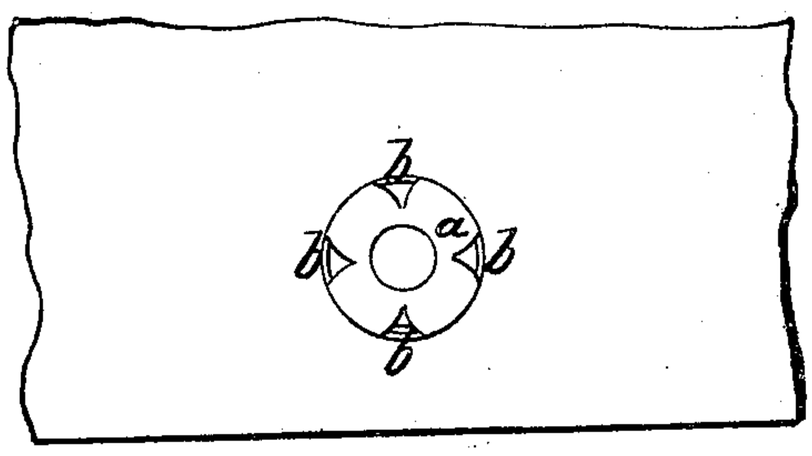


Fig: 4.

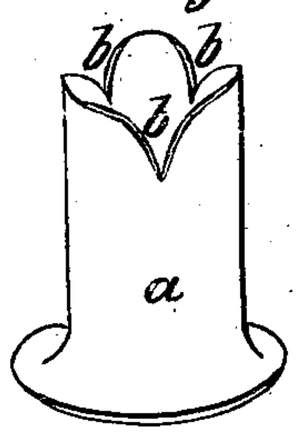
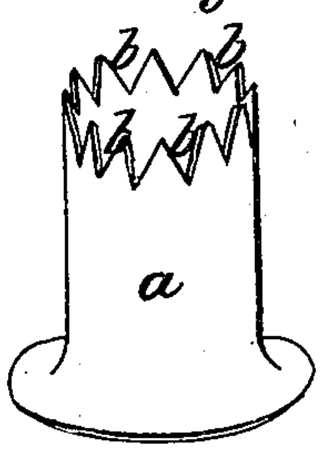


Fig: 5.



Witnesses;
Jas. L. Ewin.
W. F. Hall.

Inventor;
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UNITED STATES PATENT OFFICE.

CHARLES D. SMITH, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN EYELETS.

Specification forming part of Letters Patent No. **52,614**, dated February 13, 1866.

To all whom it may concern:

Be it known that I, CHARLES D. SMITH, of the city and county of Washington, and District of Columbia, have invented a new and useful Improvement in Eyelets; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which are made part of this specification, and in which—

Figures 1, 2, 4, and 5 are perspective views of an eyelet on an enlarged scale, illustrating my invention. Fig. 3 is a top view, showing the condition of the eyelet after it is clamped in the material.

Similar letters of reference indicate corresponding parts in the several figures.

The universal employment of the eyelet for many purposes, as in wearing-apparel, shoes, different varieties of articles of leather, stationery, and, in fact, wherever it is applicable, is sufficient evidence of its utility; but from the following it will be seen that it is imperfect as heretofore made and applied, and that its application is attended with considerable difficulty.

The mode of applying the eyelet by means of a moving die which turns or deflects its end outward, so as to form a clamping-flange of annular shape, is well understood, and hence the die itself is the only part of the eyeleting-machine that need be referred to here. It sometimes happens that the deflecting-surface of the die does not conform to or fit accurately within the part of the eyelet which is bent or deflected, which may be due to either irregularity in the form of the eyelet or of the die. Hence a portion of the flange is sometimes bent inward instead of outward by the action of the die, or is mashed down flat, whereby the eyelet is rendered less efficient than when the entire flange is turned outward. The cause of this imperfection in deflecting and clamping the eyelet is that at the commencement of the action of the die the as yet unflanged end of the barrel of the eyelet does not snugly embrace the die all round, so that while some parts of the end of the barrel are turned outward by the pressure of the deflecting-surface of the descending die, other parts or another part which may not touch the said deflecting-surface is drawn inward by the tension of the outwardly-moving parts, or at least occupies an inner position relatively to the portion which has been deflected outward, and being in this condition when the shoulder of the die comes in contact with it is either bent inward or mashed down irregularly. It is a noticeable fact in this connection that where the tension upon the edge of the bore of the eyelet is so great during its deflection as to make it split the entire flange thus broken is bent outward and a good application of the eyelet is effected.

My invention consists in making a special provision for the splitting of that portion of the eyelet which is deflected by the die, so that when the deflection commences the barrel is opened or divided, so that it splits in one, two, three, or more places, and in this divided state it is deflected and clamped down upon the material into which the eyelet is to be inserted, as shown in Fig. 3.

The means for adapting the eyelet to thus split or divide consists in slitting or nicking the eyelet at the unflanged end of the barrel.

Incisions or nicks may be made by machinery or in any suitable way, one, two, or more being made in each eyelet, according to the number of clamping parts into which it may be designed to have the eyelet split.

In the annexed drawings, *a* represents the eyelet, and *b* the slits, nicks, or incisions therein.

Under the common mode of construction the continuous edge of the barrel of the eyelet is subjected to more or less tension all round from the cause hereinbefore explained; but when the eyelet is slit each portion embraced between the slits is deflected and clamped independently of the contiguous portion of the eyelet, and hence no portion of the eyelet is affected by tension in consequence of the deflection of another portion. Therefore when this special provision for dividing or splitting is made the eyelet is almost invariably clamped in a proper manner, and a reduced application of strength is required to deflect and clamp it. Practical test shows that the splitting of the eyelet increases its clamping and retaining capacity.

It is manifest that a provision for a definite split or division may be made by making a par-

tial nick or slit in the end of the barrel—that is to say, such as will not extend entirely from the periphery to the interior of the barrel, thus being a simple indentation.

The eyelet shown in Fig. 4 is nicked at the top, so as to present the appearance of a scallop, so that the several parts of the eyelet which are deflected and clamped will be round instead of angular on the edge. Various means of ornamentation may be employed.

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

An eyelet which is slit, nicked, or indented, substantially as and for the purpose specified.

CHARLES D. SMITH.

Witnesses:
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