Smith & Young,

Making Eyelets.

No. 112,086. Patented Feb. 21, 1871.

Fig 1.

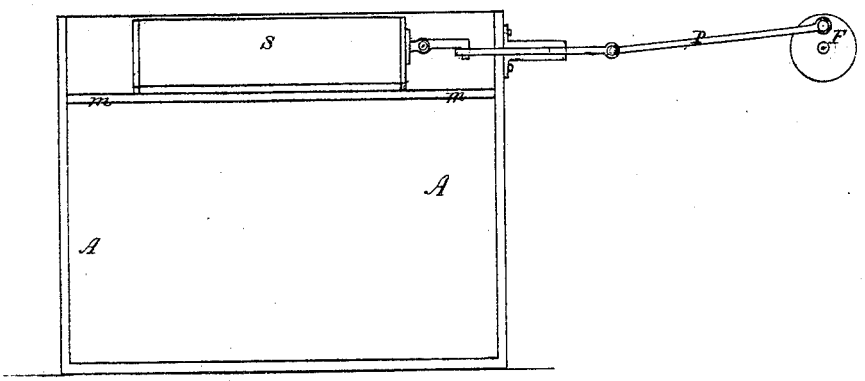

Fig 2.

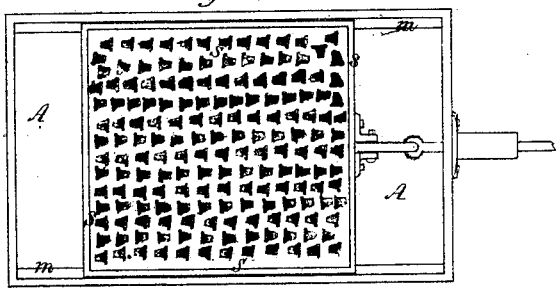

Fig 4.

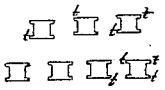

Fig 5.

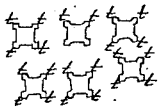

Fig 3.

Witnesses.

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STEPHEN N. SMITH AND SOLOMON W. YOUNG, OF PROVIDENCE, RHODE ISLAND, ASSIGNORS TO UNION EYELET COMPANY, OF SAME PLACE.

Letters Patent No. 112,086, dated February 21, 1871.

IMPROVEMENT IN DEVICES FOR SEPARATING EYELETS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, STEPHEN N. SMITH and SOLOMON W. YOUNG, both of the city and county of Providence and State of Rhode Island, have invented a new and useful Improvement in Devices or Means for Separating Eyelets after the Process of Enameling; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a side elevation and section of an apparatus embodying our said improvement.

Figure 2 is a plan, showing the interior or bottom of the sieve S, hereinafter mentioned, as the means for separating said eyelets.

Figures 3 4 5, exhibit modifications of the shape of the perforations in the bottom of the said sieve, for performing the separating operation.

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

In the process of enameling or "blacking" eyelets, a large quantity is immersed in a black enamel varnish, which deposits a glossy black coating upon each, and these are afterward baked in an oven or otherwise subjected to a high degree of heat, to thoroughly dry and harden the varnish and complete the "black finish," and, on account of the eyelets being thus finished in a mass, they are liable to adhere to each other in bunches of twos and threes, which, if not separated before being put into the package in which they are sold, are inconvenient for use, especially in the automatically feeding and inserting machines that are generally employed by large consumers for inserting the eyelets rapidly in boots and shoes, and other articles in which such eyelets are used.

To separate these eyelets when a large proportion, as is frequently the case, stick together, by manual labor is obviously costly and impracticable, and the object of our said invention is therefore to provide mechanical means for separating said eyelets one from another, so that a mass or large quantity can be operated upon, and the eyelets delivered single and separate, in proper form and condition to be used in the automatic machinery alluded to or any other; and

Our invention for this purpose consists in the use of a sieve with a sheet-metal bottom, in which are peculiar-formed perforations, that will not only admit the single separated eyelet to pass through, but will retain and prevent the passage of any two or more that may be stuck together.

In the drawing—

S is the sieve, which, as shown in fig. 1, may be mounted on slides M, in the upper part of a box or receptacle, A, and operated with a rapid reciprocating movement upon the said slides by means of a pitman, P, and crank F, or other suitable mechanism.

The bottom of the said sieve is of sheet metal, and its entire surface is perforated with holes that are shaped like the section of the eyelet as it is cut through the center, so that the single eyelets will easily pass through as they naturally lie upon their side, as shown in fig. 2, while it will be impossible for even a single eyelet to pass through endwise, and equally impossible for either one or two eyelets, that may be stuck together, to pass through the perforation that is of a size and shape for passing one eyelet singly.

The eyelets are turned into this sieve in a mass, so that they occupy a depth of from one to two inches upon the bottom, and being rapidly shaken, all the separated eyelets readily pass through the perforations into the receptacle A below, while at the same time those which adhere to each other become, by shaking and stiring motion of the mass, separated, and finally pass through the perforations; also, so that all at last become separated and are deposited in the box below ready to be put in packages for sale.

Instead of the shape of perforation shown in fig. 3, that shown in fig. 4 may be used, in which side notches *t t* are cut at both ends of the perforation, so that the larger flange end of the eyelet can readily pass through either end of the said perforation, as it may chance to present itself; or the perforation may be shaped as shown in fig. 5, with a notch, *t t*, &c., at each corner, by means of which the flange end of the eyelet may pass through in either of four positions in which it may present itself, and by reason of the greater number of positions in which the eyelet may thus pass through such perforations, the greater number will pass through in a given time, and the operation ably facilitated, without however permitting the passage of more than one at a time through any single perforation.

Instead of a sieve, of the form shown in the drawing, a closed cylinder, pierced with the perforations described, may be employed, and by revolving the same slowly, the eyelets inclosed within will, by the continual agitation of the same thus produced, become separated from each other and be delivered singly from the cylinder through the perforations in the manner already explained.

Having described our invention and its modifications,

What we claim, and desire to secure by Letters Patent, is—

A sieve, the apertures of which correspond in size and shape with the form or outline of a single eyelet, whereby the eyelets are caused to pass singly through said apertures when agitated, substantially as described.

In testimony whereof we have hereunto subscribed our names this 7th day of July, A. D. 1869.

STEPHEN N. SMITH.
SOLOMON W. YOUNG.

Witnesses:
ISAAC A. BROWNELL,
WILLIAM BROWNELL.