

(No Model.)

A. C. ESTABROOK.
DEVICE FOR ASSEMBLING EYELETS.

No. 563,757.

Patented July 14, 1896.

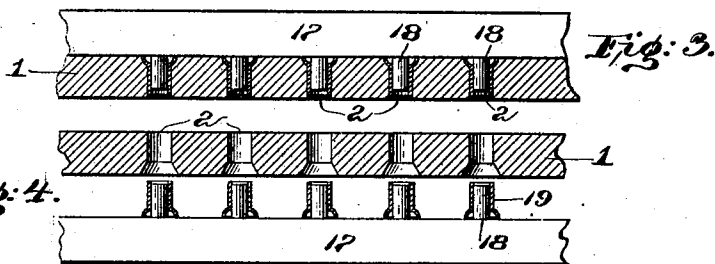
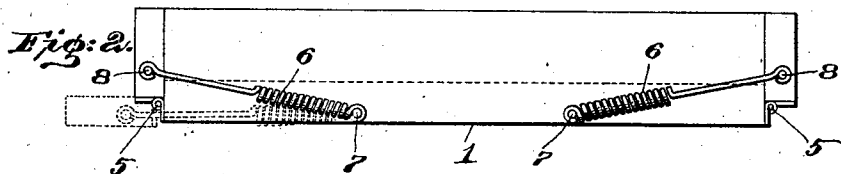
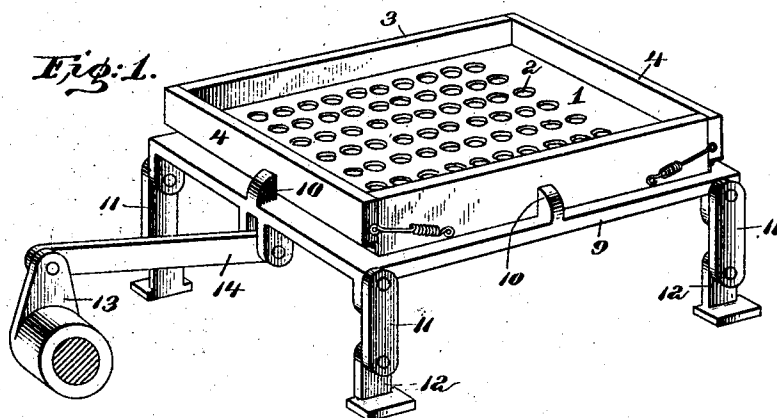


Fig: 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

ALANSON C. ESTABROOK, OF NORTHAMPTON, MASSACHUSETTS.

DEVICE FOR ASSEMBLING EYELETS.

SPECIFICATION forming part of Letters Patent No. 563,757, dated July 14, 1896.

Application filed July 13, 1895. Serial No. 555,864. (No model.)

To all whom it may concern:

Be it known that I, ALANSON C. ESTABROOK, 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 Devices for Assembling Eyelets, of which the following is a specification, reference being had therein to the accompanying drawings.

In some cases eyelets for use on boots and shoes and in other places have applied to one of the ends of each thereof a covering or finish of plastic material or the like. In order to facilitate the application of the said covering or finish, it is usual to arrange the eyelets in a series in a perforated plate forming one part of a mold, the ends of the eyelets which are to be covered or finished being exposed in position to receive the covering or finish. As is well known, eyelets commonly have one end thereof expanded or larger than the other, and when this is the case the covering or finish aforesaid is applied to the enlarged or expanded end of each. In the operation of assembling the eyelets having enlarged or expanded ends, as just mentioned, the latter ends must all be presented in position for the reception of the covering or finishing material.

My present invention has for its object to provide improved means for assembling a series of eyelets in proper position and in readiness for subsequent transfer to the perforated molds, plates, or the like, to which it is necessary to apply them for the covering or finishing operation.

The invention consists in devices of novel character and construction for performing this work, all as will first be described with reference to the accompanying drawings, and afterward will be more particularly pointed out, and clearly defined in the claims at the close of this specification.

Figure 1 of the accompanying drawings is a perspective of assembling devices embodying my invention. Fig. 2 is a view in side elevation of what I am accustomed to call the "assembling-plate," showing it detached from the other devices which are represented

in Fig. 1. Fig. 3 is a view in section of a part of the said assembling-plate, showing the holes which are provided therein for the reception of the eyelets, with the said holes occupied by the eyelets, and also showing portions of a transferring device with projections thereon that extend into the holes through the eyelets. This view shows the parts in the position which they occupy when the transferring device is first applied to the assembling-plate. Fig. 4 is a similar view showing the same parts, but representing them as inverted as required for the discharge of the eyelets from the assembling-plate onto the transferring device, the assembling-plate being represented as raised above the transferring device, and the eyelets being shown as disengaged from the assembling-plate onto the projections or pins of the transferring device.

At 1 is what I term the "assembling plate" or device. It is formed with a series of holes 2, at spaced distances apart, and it has around its edges raised sides or flanges 3, 3, 4, and 4. The sides 3 3 are fixed, while each of the sides 4 4 is hinged, as at 5, to the plate 1, so as to enable it to be turned down when desired into the dotted-line position which is represented in the case of one thereof. Each of the said sides 4 is normally held in its upright position by means of a spring 6, one end of which is connected to the edge of the plate at 7, while the other end thereof is connected to the end of the hinged side 4 as at 8. When one of the hinged sides 4 is swung downwardly into the dotted-line position in Fig. 2, the point of connection 8 passes below a straight line passing through point 7 and the axis on which the said side 4 turns, and hence in the dotted-line position of the hinged side the spring 6 operates with a tendency to maintain the side in its open condition. While I have shown two sides hinged, only one side may be hinged, if preferred. The holes in the bottom of plate 1 correspond closely in diameter with the eyelets, but are enough larger to permit the latter to pass readily into the same, and when in place in the said holes 2 the eyelets stand as in Fig. 3 with their cylindrical portions in upright position. The

fit between the holes and the eyelets is as close as is practicable, in order that the holes may serve to determine with accuracy the positions of the eyelets and thereby facilitate the transfer of the eyelets as hereinafter described. To provide for the enlargement which is formed at one end of each of the eyelets, the upper portion of the hole 2 is or may be enlarged as shown clearly in Figs. 3 and 4. This enlargement of the upper portions of the holes facilitates the entrance of the eyelets into said holes.

The assembling of a series of eyelets in the holes 2 of the plate 1 is effected by placing a quantity of eyelets on top of the said plate, and then giving a shaking motion to the latter. This shaking motion will cause the eyelets speedily to find their way into the holes 2, in which they will stand in the position that is indicated in Fig. 3, with the enlargements uppermost. The plate 1 may be shaken by hand, but preferably in practice, for the purpose of giving a shaking motion to the said plate 1, I shall provide a shaking-table 9, upon which the plate is to be placed. The said table 9 is or may be provided with suitable retaining devices for keeping the plate in position thereon. For example, I have illustrated projections 10 10 adjacent to the edges of the table, the plate being placed between these projections, as will be obvious. Any convenient means for supporting the table may be employed. I have represented the table as supported by means of links 11 11, the upper ends of which are pivotally connected with the table, while the lower ends thereof are applied to brackets or stands 12 12. Any convenient means of actuating the table may be employed. I have shown a rotating crank 13, which is connected by means of a link or rod 14 with the table. In the use of the assembling-plate, it is first placed on the shaking-table in proper position between the retaining devices or projections 10. A quantity of eyelets is then placed on top of the same, the said eyelets being retained from falling off by the sides or flanges 3, 3, 4, and 4. As above indicated, the shaking motion causes the eyelets to find their way into the holes. The holes will speedily become filled, after which one of the hinged sides 4 will be turned down into the dotted-line position in Fig. 2, and the excess of eyelets will be brushed or poured off into a suitable receptacle.

For the purpose of taking the eyelets from the assembling-plate 1 and applying them properly to the holes in the perforated mold-plate hereinbefore mentioned, I may employ a transferring device on the order of that designated in Figs. 3 and 4, the said transferring device consisting of a plate having applied to one side thereof a series of pins or projections 18, that are adapted to enter the holes in the eyelets which are contained in

the holes in the assembling-plate. Fig. 3 shows this transferring device applied to the assembling-plate 1 preparatory to removing the eyelets from the latter. The parts having been put together as in Fig. 3, either before or subsequent to the removal of the assembling-plate 1 from the shaking-table, they are then inverted and are separated by raising the assembling-plate 1 from the transferring device 17, as indicated in Fig. 4, leaving the eyelets 19 upon the projections 18 of the transferring device. The eyelets are now in position to be applied to the holes of the perforated mold-plate. The said mold-plate then has applied thereto the cooperating mold-plate used in the art, the desired composition being applied in proper manner, and the molding of the covering is effected in obvious manner.

As will be obvious, the spacing apart and arrangement of the holes in the assembling-plate 1 and mold-plate correspond with those of the pins or projections on the transferring device 17. In other words, the said pins or projections register with both the holes 2 in the assembling-plate 1 and the holes in the mold-plate, as is necessary in order to enable the transferring device to cooperate with the assembling-plate and the mold-plate successively, in the manner hereinbefore described.

I have described my devices as intended for use in assembling eyelets as aforesaid. While in fact they are more especially designed for use in connection with eyelets, it will be obvious that by slight and obvious adaptation they may be utilized without change in the principle thereof, in connection with other articles as well which require to be arranged in series like unto the arrangement of the eyelets which is set forth and indicated hereinbefore. I wish it to be understood, therefore, that I regard such adaptation and use as within the scope of my present invention and claims.

I claim as my invention—

1. The assembling-plate adapted to be removed from the support provided therefor, and having a series of holes 2 at spaced distances apart for the reception and retention of a series of eyelets, and also having upright sides or flanges around the said series of holes to retain the eyelets from falling off, one or more of the said upright sides or flanges being hinged to enable the same to be turned into position to permit the surplus eyelets to be brushed or poured off the surface of the said plate and having means for holding the same in normal position to prevent the escape of eyelets at the edge of the plate, substantially as described.

2. The combination with an assembling-plate having a series of holes at spaced distances apart for the reception and retention of a series of eyelets and also having upright sides or flanges, one or more of which is

hinged and is provided with means for holding it in upward-turned position, of a table or support to which the said assembling-plate may be removably applied, and means for shaking the said table or support to cause the eyelets to work their way into the holes in the said assembling-plate, substantially as described.

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

ALANSON C. ESTABROOK.

Witnesses:

CHAS. O. PARSONS,
JENNIE C. STAHL.