(No Model.)

G. O. SCHNELLER.

Device for Cutting Eyelet Blanks.

No. 238,810. **Patented March 15, 1881.**

fig. 1

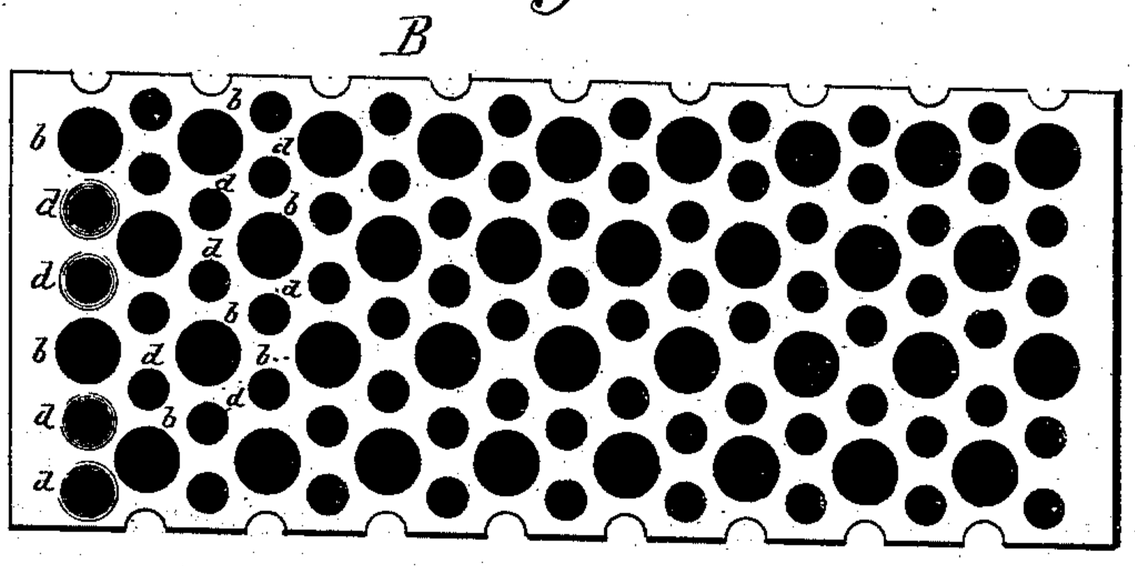

fig. 2

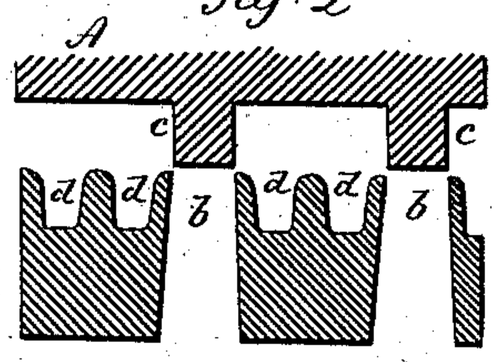

fig. 3

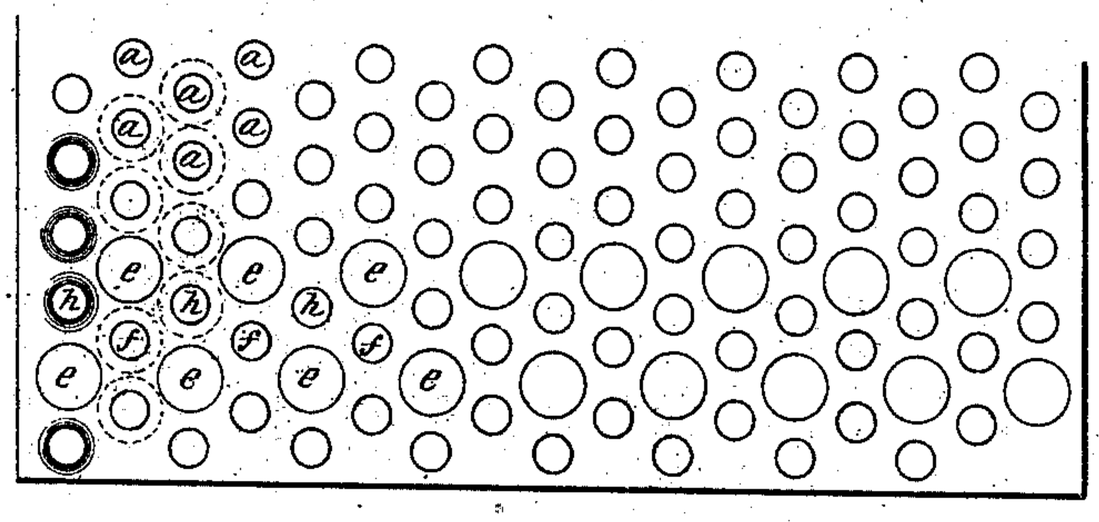

fig. 4

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UNITED STATES PATENT OFFICE.

GEORGE O. SCHNELLER, OF ANSONIA, CONNECTICUT.

DEVICE FOR CUTTING EYELET-BLANKS.

SPECIFICATION forming part of Letters Patent No. 238,810, dated March 15, 1881.

Application filed July 2, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEO. O. SCHNELLER, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new Improvement in Dies for Making Eyelets; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a top view of the lower or cutting die; Fig. 2, a transverse section of two parts of the die; Fig. 3, the sheet illustrating the operation of the dies; Fig. 4, a section of the sheet.

This invention relates to an improvement in dies for cutting eyelets from the strip, with special reference to a process of manufacture indicated in my application for patent filed May 13, 1878.

In the method above referred to, the eyelets are formed in a sheet or strip of metal in series, several eyelets in each series, and all in as close proximity to each other as possible, so that when the shaped or formed eyelets are cut from the sheet there will be the least possible waste of metal. To cut these eyelets singly from the sheet would be an expensive operation, and because of their close proximity to each other it is practically impossible to make series of punches and dies corresponding to all the eyelets in one or more series, as they would be in so close proximity to each other that there would not be sufficient metal in the die around the openings to stand the operation.

The object of this invention is the construction of a die which will cut several or a large number of the shaped eyelets from the sheet at a single operation.

It will be evident that in order that the sheet may lie flat upon the die there must be a cavity in the die corresponding to the shape of each of the formed eyelets in the sheet, as seen in Fig. 4. I therefore form a die, as seen in Fig. 1, with an opening, *b*, in every fourth series, corresponding to the size of the eyelet to be cut; and surrounding these are the intermediate series or depressions *d*, corresponding to the other depressions or eyelets in the sheet, so that when a sheet, as seen in Fig. 3, is placed upon the die, Fig. 1, the depressions or eyelets will enter the openings *b* and the recesses or depressions *d*. I make a second part or punching-die, A, on which are punches *c*, corresponding to the openings or perforations *b* of the die, as seen in Fig. 2, the said perforations and dies corresponding in size to the extreme diameter of the flange of the eyelet. Then when the sheet is placed upon the die B, Fig. 1, and the part A struck thereon, it will cut from the sheet the eyelets corresponding to the punches *c* and as at *e*, Fig. 3. This leaves each eyelet cut surrounded by blanks uncut. Then the sheet is advanced one step or series, so as to bring the next blank, *f*, of the next series over the same perforation *b;* then a like cut is made, separating the eyelets of that series; then another step or series forward brings the next series, *h*, over the cutting-dies *b*, and that series is cut. Hence, by forming the die with a cutting-opening surrounded by depressions or recesses for the blanks, I am enabled to successively cut each series of eyelets from the sheet, and yet preserve a strong and practical working-die.

From the foregoing it will be understood that the gist of this invention consists in a die in which the cutting-openings are surrounded by openings of smaller diameter to receive the forms in the sheet which are not to be cut at the first or same operation as the first cutting, and in order that each of the cutting-openings may be surrounded by sufficient metal to sustain them and to hold the sheet in proper position for cutting the eyelet.

I claim—

The herein-described dies for cutting eyelets from a sheet, consisting of the one part provided with cutting-openings *b* and surrounding smaller openings or depressions to receive the forms in the sheet, and a second part provided with punches corresponding to the openings *b*, substantially as described.

GEO. O. SCHNELLER.

Witnesses:

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