

(No Model.)

2 Sheets—Sheet 1.

J. PICKLES.
DEVICE FOR CUTTING EYELET BLANKS.

No. 582,990.

Patented May 18, 1897.

Fig. 1.

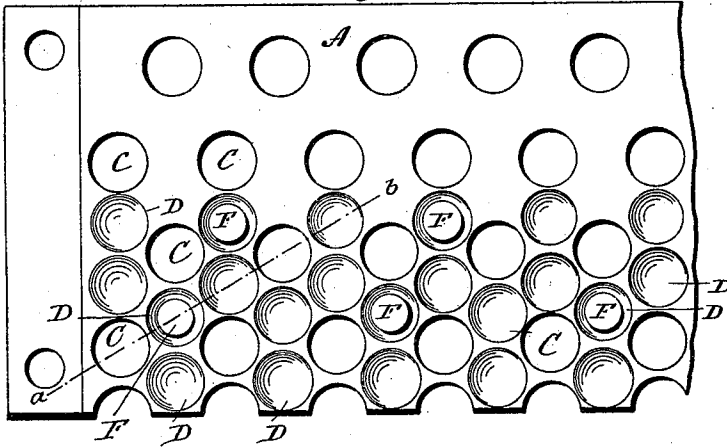


Fig. 2.

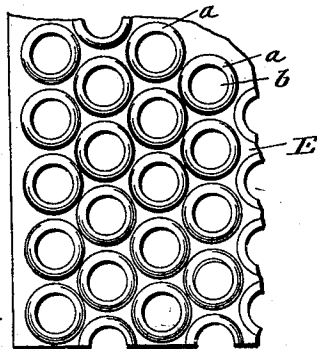
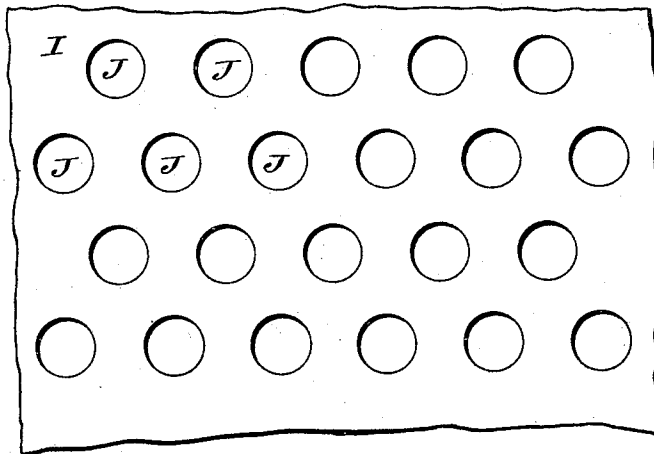


Fig. 6.

Witness.
J. H. Thompson
Lillian D. Kelley.

James Pickles.
Inventor.
By atty. Earle R. Symon.

(No Model.)

2 Sheets—Sheet 2.

J. PICKLES.
DEVICE FOR CUTTING EYELET BLANKS.

No. 582,990.

Patented May 18, 1897.

Fig. 3

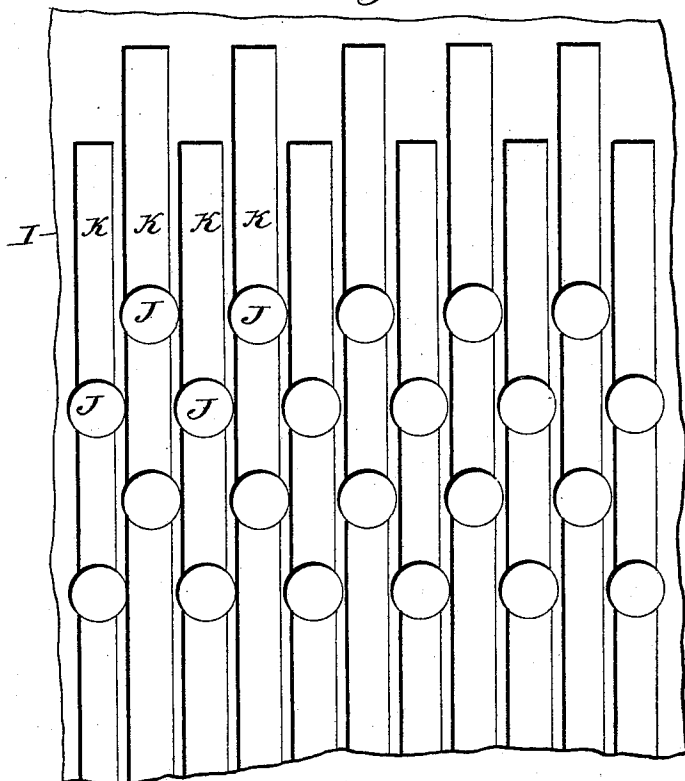


Fig. 4

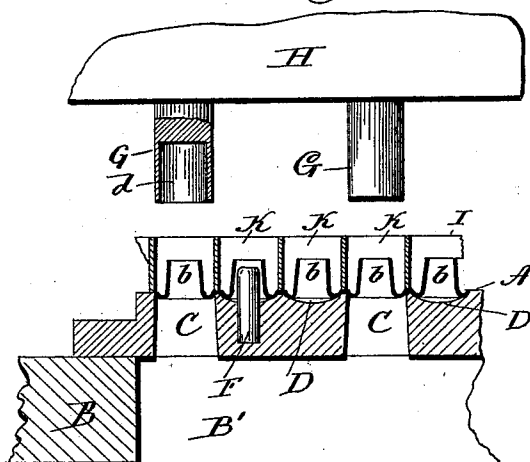
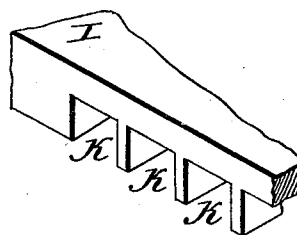


Fig. 5



Witness.
J. H. Sheppard
Lillian D. Kelley.

James Pickles—
Inventor.
By atty. Earl Hymon

UNITED STATES PATENT OFFICE.

JAMES PICKLES, OF ANSONIA, CONNECTICUT, ASSIGNOR TO THE S. O. & C. COMPANY, OF SAME PLACE.

DEVICE FOR CUTTING EYELET-BLANKS.

SPECIFICATION forming part of Letters Patent No. 582,990, dated May 18, 1897.

Application filed January 25, 1897. Serial No. 620,509. (No model.)

To all whom it may concern:

Be it known that I, JAMES PICKLES, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new Improvement in Devices for Cutting Eyelet-Blanks; 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 plan view of a portion of the cutting-plate; Fig. 2, a top view of a corresponding portion of the stripper-plate; Fig. 3, an under side view of a portion of the stripper-plate; Fig. 4, a sectional view on line *a b* of Fig. 1, illustrating the arrangement of the cutting-plate, stripper-plate, and punches; Fig. 5, a perspective view of a portion of the outer end of the stripper-plate; Fig. 6, a plan view of the under side of a portion of the sheet of blanks.

For convenience of illustration the drawings represent the parts enlarged.

This invention relates to an improvement in devices for cutting eyelet-blanks, and is an improvement on the invention for which Letters Patent of the United States No. 238,810 were granted March 15, 1881, to George O. Schneller. As in the said patent, the eyelets are made from long strips of metal which have been previously operated upon to form the barrels of the eyelets, which project from one side of the sheet, and so that a large number of eyelets are cut from the sheet at a single operation. As described in that patent, the sheets were fed between the punch and die with the barrels downward and the die or cutting plate was formed with a series of recesses around the cutting-openings to receive the intermediate barrels, but in cutting eyelets with barrels extending downward the edges of the eyelets were naturally turned upward, which is the reverse of the position which it is desired they shall take when set. The eyelets described in that patent were formed with a flat face which it was intended should be rounded by the setting-tool.

The object of this invention is to feed the previously-formed sheets with the barrels ex-

tending upward, and preferably to form the sheets with a rib around each barrel, which rib will form the rounded face of the finished eyelet; and the invention consists in combining with a cutting-plate similar to that of the Schneller patent referred to a series of hollow punches and a stripping-plate between the cutting-plate and punches, which plate is formed with grooves to receive the barrels and so that the sheets may be fed between the punches and cutting-plates with the barrels upward and so that the said stripping-plate bears upon and supports the stripping portion above the surface of the cutting-plate, and as more fully hereinafter described, and particularly recited in the claims.

A represents the cutting-plate, which is substantially similar to the cutting-plate in the patent before referred to and is arranged upon a block B, having a central opening B'. In the plate are cutting-openings C, around which are preferably formed shallow recesses D; which not only enable me to properly harden the plate, but also provide space to receive the ribs *a*, which surround the barrels *b* on the sheet E.

Extending upward on the plate and concentric with a number of the recesses D are pins F, adapted to receive the barrels *b* and by which the barrels are properly located with a portion of them over the openings C. The punches G, which correspond in arrangement to the openings C, are mounted in a head H and formed with vertical recesses *d*, into which the barrels *b* may extend. Between the cutting-plate and the punches is a stripper-plate I, formed with openings J, corresponding in location to the cutting-openings C and the punches G, which extend through them. In line with said cutting-openings and extending transversely across the plate are grooves K, corresponding in width to the diameter of the barrels *b* and so that as the sheet E passes beneath the stripper-plate the barrels *b* extend upward into the grooves K, by which they are guided in proper position over the cutting-openings C. As the strip of blanks is fed inward it is set over the cutting-plate A, upon which it is properly located by the pins F entering a portion of the eyelets, as shown in Fig. 4. When thus located, the

stripper-plate descends and, taking a bearing upon the cutting-plate, securely holds the strip in position and supports the stripping portion above the cutting-plate, whereupon the punches move downward and cut from the strip the eyelets standing over the openings C. The punches then lift and when clear from the lower face of the stripping-plate the said plate rises, and with it the sheet, which is lifted off from the pins F by suitable mechanism (not shown) and advanced one step, so as to present another series of blanks over the cutting-openings C, when the cutting operation again takes place, and this continues until all the blanks are cut from the sheet.

The edges of the stripper-plate and the metal between the grooves K virtually form supports to hold the stripper-plate proper above the surface of the cutting-plate.

In cutting the eyelets with the barrels upward the edges of the flanges are given a slight downward bend which greatly improves the appearance of the eyelet when set, and this is particularly advantageous when the flanges are rounded as herein shown and described.

Having thus described the construction and arrangement of my improved mechanism, what I claim, and desire to secure by Letters Patent, is—

1. The herein-described mechanism for cutting eyelets from a sheet, consisting of a cutting-plate provided with cutting-openings, a series of hollow punches corresponding to said openings, and a stripper-plate arranged between the said cutting-plate and punches,

and provided with openings through which said punches extend, and longitudinal grooves intersecting said openings, substantially as described.

2. The herein-described mechanism for cutting eyelets from a sheet, consisting of a cutting-plate provided with cutting-openings, each of which is surrounded by shallow recesses, and pins extending upward concentric with a portion of the said recesses, a series of hollow punches corresponding to said openings, and a stripper-plate arranged between the said cutting-plate and punches, and provided with openings through which said punches extend, and longitudinal grooves intersecting said openings, substantially as described.

3. The herein-described mechanism for cutting eyelets from a sheet, consisting of a cutting-plate provided with cutting-openings, a series of hollow punches corresponding to said openings, and a stripper-plate arranged between the said cutting-plate and punches, provided with openings through which said punches extend, and constructed to bear upon the cutting-plate for holding the stripping portion of said stripper-plate above the cutting-plate and movable therefrom, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES PICKLES.

Witnesses:

FRED C. EARLE,
LILLIAN D. KELSEY.