

E. L. BULLION.
MOLDING DIE.

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1,057,618.

Patented Apr. 1, 1913.

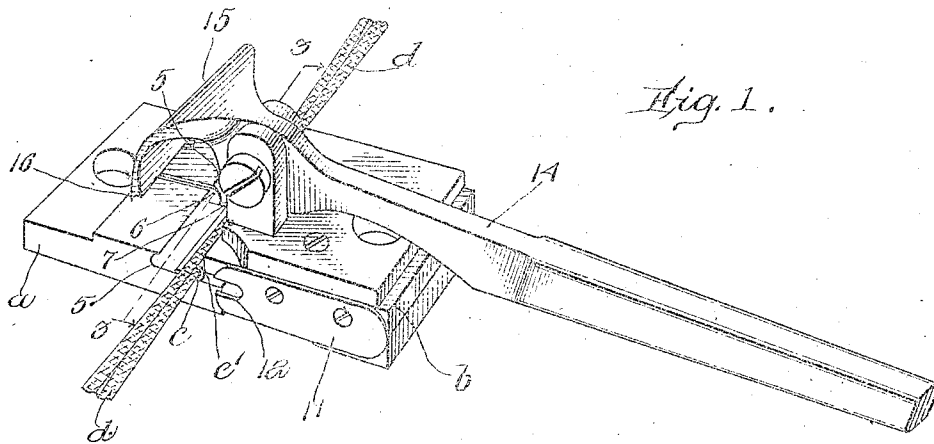


Fig. 1.

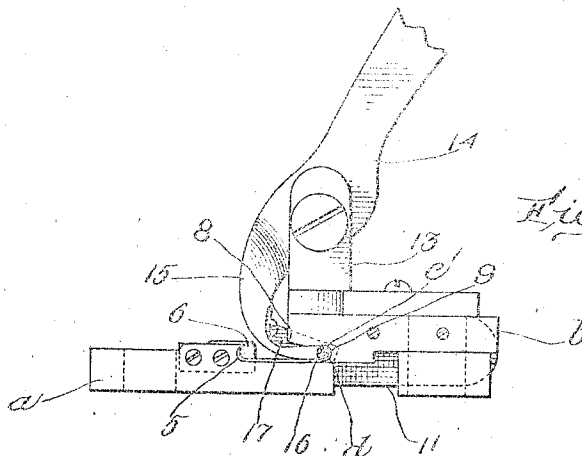


Fig. 2.

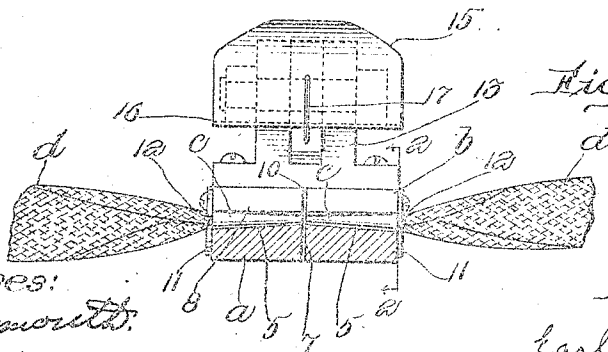


Fig. 3.

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UNITED STATES PATENT OFFICE.

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MOLDING-DIE.

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To all whom it may concern:

Be it known that I, EARL L. BULLION, of Prescott, in the county of Yavapai, Arizona, have invented certain new and useful improvements in Molding-Dies, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

This invention relates to improvements in dies for molding plastic articles and refers particularly to dies for molding and applying tips of plastic material to shoe and other laces.

One object of this invention is to so construct a molding die that the material to be molded may be mechanically pressed or tucked into position prior to the actual molding operation.

Another object of this invention is to so construct a molding die for simultaneously molding two articles from a single piece of material that, as one of the initial steps in its operation, said single piece of material may be severed and that the two parts may be retained in position for the completion of the molding operation.

Other objects of the invention will appear from the following description.

The invention consists in a two part molding die, one of said parts having pivotally mounted thereon a tucking device adapted to swing into the die chamber.

The invention also consists in such other novel features of construction and combination of parts as shall hereinafter be more fully described and pointed out in the claims.

Figure 1 represents a perspective view of the improved molding die with the material to be molded in position to be operated upon. Fig. 2 represents a side view of positions of the same partially in section as on line 2—2 Fig. 3. Fig. 3 represents a sectional view, taken on line 3—3 Fig. 1 showing the molded tips before removal from the die.

Similar numbers of reference designate corresponding parts throughout.

As shown in the drawings, in its preferred form, the die comprises two parts or members *a* and *b* slidable with respect to each other. Die member *a* has oppositely extending and outwardly flaring concavities 5, 5 which are intersected by the blade 6 mounted at the median line of said die member and from said blade extends the slot 7; the upper surface of said member *a* is beveled

from said slot to the edges of the die member on the angles defined by the flare of the concavities 5, 5. Die member *b* has at its forward end the beveled shoulder 8 which forms the entrance to the oppositely flaring concavities 9, 9 which are intersected by the slot 10, registering with slot 7 of the die member *a* and the lower surface of this die member *b* is beveled to slidably receive the upper surface of die member *a*. At the sides of member *b* are secured the guard plates 11, 11, between which member *a* may be slidably received, and having forward ends which overlap the ends of concavities 9 and 9 are furnished with slots 12, 12 of less diameter than the outer ends of the concavities 9, 9.

Secured to the member *b* is the bracket 13 on which is pivotally mounted the shank 14 having the bent end 15 furnished with the concave edge 16 and the cutting blade 17 which intersects said edge and is adapted at times to enter slot 10 of the die member *b*.

In the operation of this die the members *a* and *b* are arranged approximately as shown in Fig. 1 of the drawings. A thin strip of celluloid or similar material *c*, having its rear portion turned up, approximately as shown at *c'*, is placed on the upper surface of die member *a* and on this strip of celluloid is placed a braid or tape *d* to which the tips are to be applied; the portion of braid or tape *d* resting on the strip of material *c* is preferably supplied with a solvent of material *c*. Shank 14 is now thrown upward, ultimately, to the position shown in Fig. 2 of the drawing and the concave edge 16, of the bent end 15 thereof, engages the braid *d* and forces or tucks the same, with the strip *c*, into the concavities 9, 9 of the die member *b* and simultaneously the blade 17 severs said braid and the upwardly extending portion *c'* of the strip *c*; shank 14 is now depressed to withdraw its end 15 from between the die members and die member *a* is moved toward die member *b* until the concavities 5, 5 of member *a* effect the turning of the flat portions of the strip *c* around the braid *d* and the blade 6 enters the slot 10 of die member *b* and acts to separate the ends of the tips while such material is setting. When the strip *c* of material is thus completely severed and the final compression of the tips occurs the tendency of such compression is to force outward the bent tips from the concavities 9, 9 and it is the office

of the guard plates 11, 11 to prevent such outward movement of said tips.

It is not my intention to limit my invention to the specific construction herein shown and described.

Having thus described my invention I claim as new and desire to secure by Letters Patent—

1. A two part molding die comprising a member having a transverse concavity and a slot intersecting said concavity, and a tucking member mounted on said die member and having an edge coöperating with said concavity and a cutting blade registering with said slot.

2. A two part molding die comprising a member having a transverse concavity and a tucking member pivotally mounted on said die member and having an edge coöperating with said concavity.

3. A two part molding die comprising a die member having a transverse concavity and means for supporting the material to be molded, and a second die member slidable with respect to said first member and having a transverse concavity adapted to coöperate with said concavity of the first

member, and means mounted on one of said members for effecting the tucking of the material to be molded into the concavity of said second member.

4. The combination with a die member having a transverse concavity having flared ends and a blade intersecting said concavity of a die member slidable with respect to the first mentioned die member and having a transverse concavity having flared ends and a slot intersecting said concavity and adapted to receive the blade of the first die member, and a tucking device pivotally mounted on said second die member and having a concave edge and a cutting blade extending from said edge and registering with the slot of said second member, as and for the purpose described.

5. A molding die comprising two members having formed between them a transverse molding cavity, and means for tucking material to be molded into the cavity of one of said members.

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