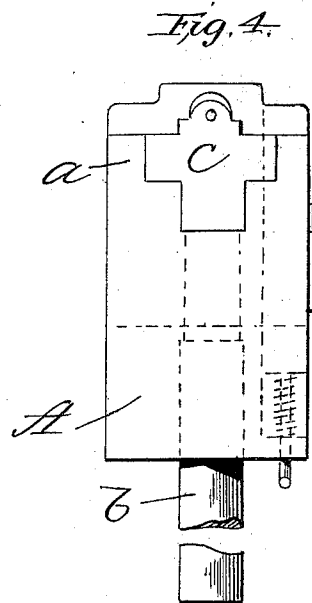
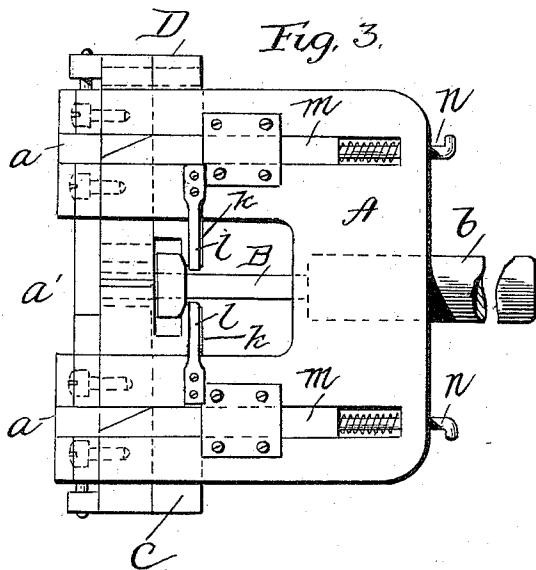
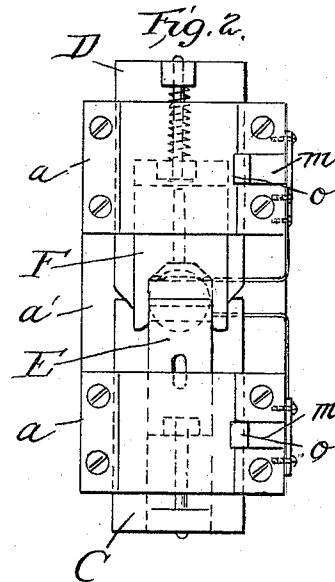
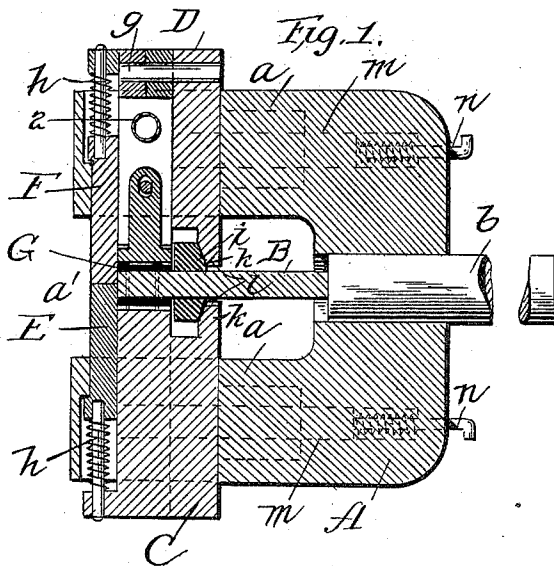


F. J. BRINGHAM.
DIE FOR PRESSING LEATHER LOOPS.

No. 537,915.

Patented Apr. 23, 1895.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 7.

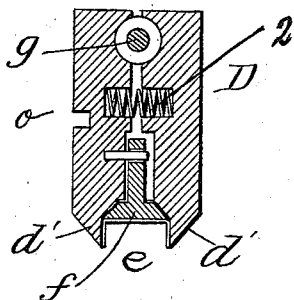


Fig. 8.

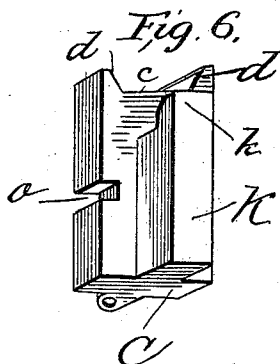
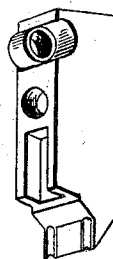


Fig. 9.

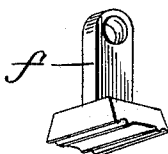


Fig. 10.

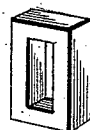
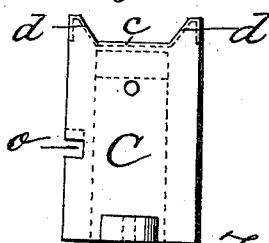


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRIEND J. BRINGHAM, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE SEAMLESS LEATHER COMPANY, OF ILLINOIS.

DIE FOR PRESSING LEATHER LOOPS.

SPECIFICATION forming part of Letters Patent No. 537,915, dated April 23, 1895.

Application filed January 9, 1895. Serial No. 534,400. (No model.)

To all whom it may concern:

Be it known that I, FRIEND J. BRINGHAM, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dies for Pressing Leather Loops, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to dies for pressing and forming leather loops, of the kind shown in Letters Patent of the United States No. 500,111. These loops are formed of split leather with uncut edges, and they are formed by pressure and expansion into the proper shape and condition.

The invention herein described consists of a special construction of die and combined with a mandrel, all as hereinafter explained, and as illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section through the frame and die sections. Fig. 2 is a face view of the same. Fig. 3 is a side elevation of Fig. 2. Fig. 4 is a bottom plan of Fig. 2. Figs. 5 and 6 show detached views of the lower die. Fig. 7 is a section through the upper die. Fig. 8 is a detail of one part of the upper die. Fig. 9 is a detail of the supplemental die piece. Fig. 10 is a view of a detail.

In the drawings A represents the block or frame in which the operating parts are mounted. This frame has two arms *a*, *a*, which leave an open space *a'* between the arms in which the die faces meet.

The principle of the invention consists essentially in movable die faces closing from opposite sides against the mandrel or against the outer surface of the loop on the mandrel combined with end pieces, one of which bears against the end of the mandrel, and one end of the loop, and the other of which surrounds the mandrel, and bears against the other end of the loop.

The mandrel is shown at B, it being a substantially rectangular bar fixed axially upon a stem *b*, which is fitted to slide accurately in a hole in the frame, and in line with the space between the die faces.

The die blocks are shown at C, D. For

convenience I call C the lower die block, and D the upper. These blocks are formed on their ends with die faces. The die face of the lower block is shown at *c*. This is a plain face to each side of which are projections *d*, the inclined faces of which bound the die face on opposite sides. The upper die has a die cavity *e*, which has parallel sides fitted to close over the loop on the mandrel. The top of this die cavity has inwardly inclined sides terminating in a narrower cavity above, and in this cavity is located a supplemental die piece *f*, the stem of which extends upwardly, and is loosely supported upon a pin. The supplemental die is loose in its cavity, and the upper die block is made in two parts pivoted at *g*, so that the die parts have a slight opening and closing movement on the supplemental die. The die parts are held normally apart by means of an inclosed spring 2.

The walls of the cavity *e* are inclined on the outside at *d'*, the inclinations corresponding to those shown at *d* in the lower die, so that when the lower die block is pressed up it crowds together the parts of the upper die block. The die faces being open from front to rear, and being arranged as shown in Fig. 1, the mandrel enters and lies in the space extending from front to rear. Covering this open space in front and bearing against the front end of the mandrel are two plates E, F, the upper plate F having an open space between two lateral arms fitted to receive the plain lower plate E, between the arms. These plates slide in guide-ways in the arm of the frame, and are pressed normally toward each other by springs upon pins *h*, the springs bearing against projections on the die blocks, in which the pins are fitted. The inner faces of these plates form a rigid wall bearing against the outer end of the loop, which is shown at G in its place on the mandrel.

Upon the mandrel and bearing against the inner side of the dies, is a plate *i*, shown in detail in Fig. 10 which is fitted upon the mandrel movable but snugly. The outer faces of the plate are beveled and against these beveled faces bear the correspondingly beveled faces of projections *k* on the die blocks, so that when the dies come together, they press

the plate *i* against the inner end of the loop, and thus the loop is pressed on all its surfaces. In order to throw the die blocks apart after each action, I provide springs *l*, which are in the path of the die blocks, these springs being compressed when the dies come together and operating to throw the dies apart as soon as they are released. The projections carrying the inclined faces *k*, are located on rear projections of the die blocks.

The faces of the die which bear against the loop may be formed with any kind of beaded or ornamental surface adapted to give suitable appearance or finish to the loop.

The apparatus above described is adapted to be placed in a press or under a hammer by means of which force is applied to the outer ends of both die blocks, so as to force them inward against the loop on the mandrel, and in order that the blocks may be held against the loop to give continued pressure after the blow, I have provided locking devices, which are shown at *m* in place in Figs. 1 and 3. These consist of bolts which slide in guides in the arms of the frame, being pressed normally forward by springs located on stems *n*. The forward ends of these bolts are beveled, and when they are thrown forward by the springs, wedge into corresponding notches *o*, in the die blocks, when the die blocks are brought together, the notches registering with the bolts when the blocks are in their most

advanced position. The bolts are withdrawn by any suitable means through the stems *n*.

I claim—

1. The die for pressing loops consisting of the die C, having the inclined projections, and the two part die D, having a supplemental die, and the inclined projections *d'*, and the mandrel arranged between the dies, substantially as described.

2. In combination, the die C and the two part die D, said dies having the inclined projections, the supplemental die, an end plate, and a plate upon the mandrel, and mechanism for pressing said plate on the mandrel, against the end of the loop, substantially as described.

3. In combination, the frame, the movable die blocks, the mandrel, and the locking devices carried by the frames and adapted to engage the die blocks, substantially as described.

4. In combination, the movable dies combined with the plates E and F, movable in guides with the die blocks and provided with springs, and stems connected with the die blocks, substantially as described.

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

F. J. BRINGHAM.

Witnesses:

HENRY E. COOPER,
JAMES M. SPEAR.