

No. 636,684.

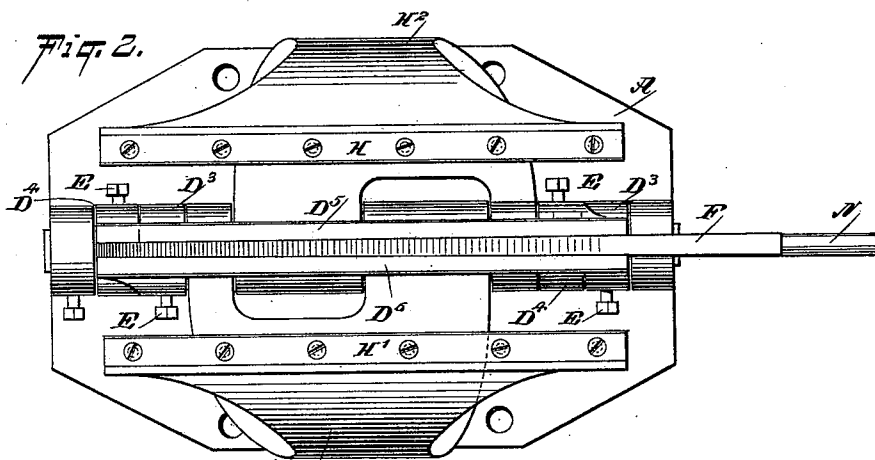
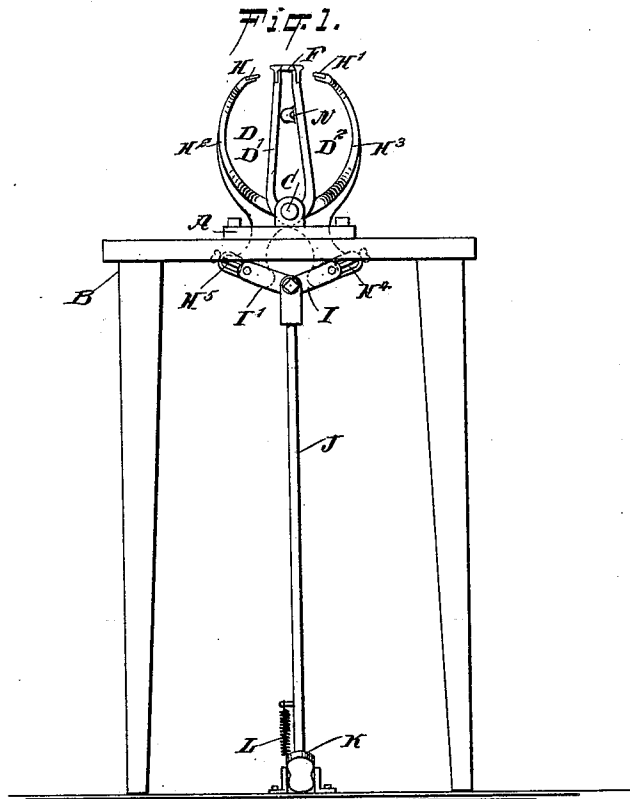
Patented Nov. 7, 1899.

D. J. MUNN.
BOOK COVER SHAPING MACHINE.

(Application filed July 31, 1899.)

(No. Model.)

2 Sheets—Sheet 1.



WITNESSES :

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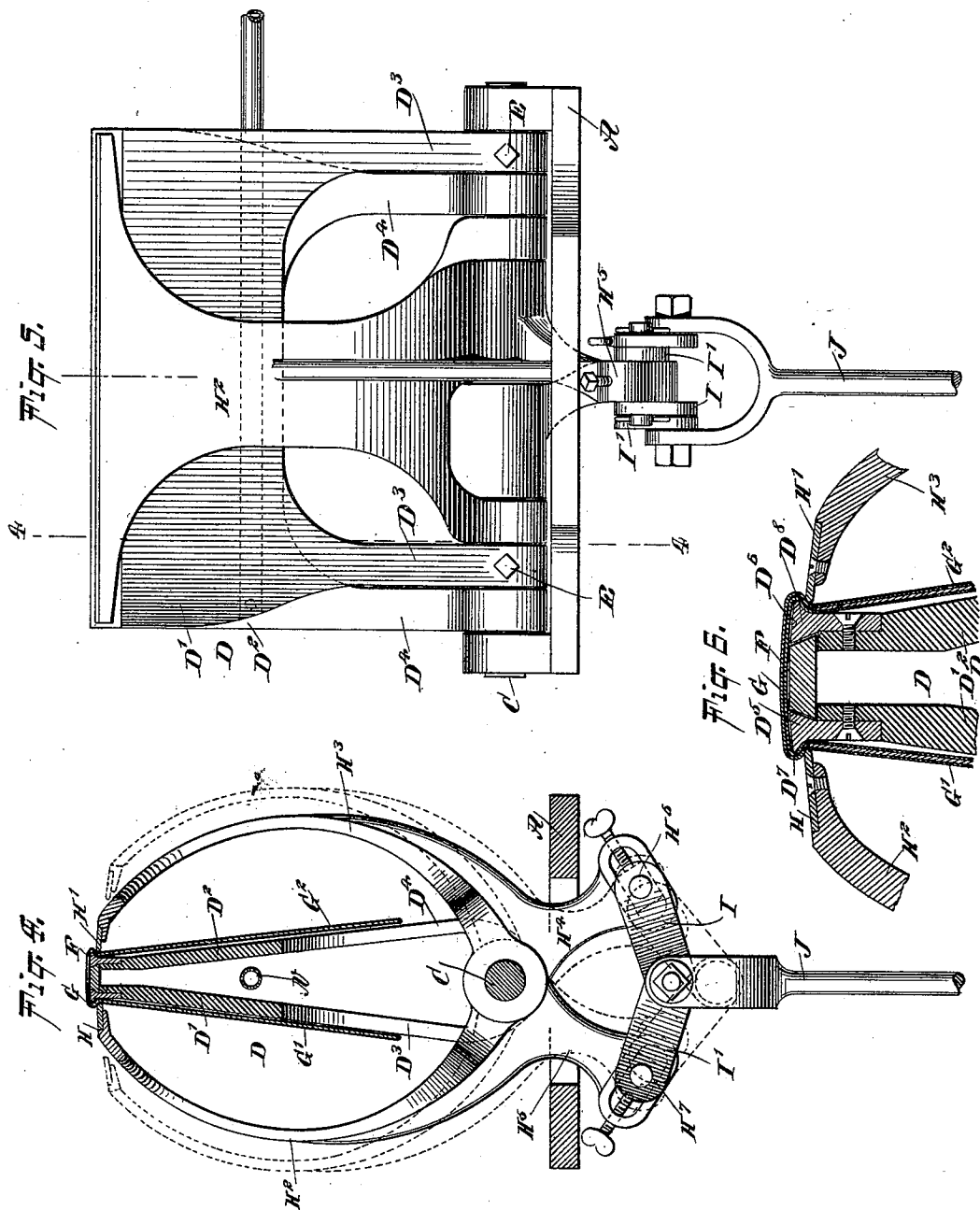
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UNITED STATES PATENT OFFICE.

DANIEL JOSEPH MUNN, OF NEW YORK, N. Y.

BOOK-COVER-SHAPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 636,684, dated November 7, 1899.

Application filed July 31, 1899. Serial No. 725,609. (No model.)

To all whom it may concern:

Be it known that I, DANIEL JOSEPH MUNN, of the city of New York, borough of Brooklyn, in the county of Kings, State of New York, have invented a new and Improved Book-Cover-Shaping Machine, of which the following is a full, clear, and exact description.

The invention relates to bookbinding; and its object is to provide a new and improved shaping-machine which is simple and durable in construction, very effective in operation, and more especially designed to give the desired permanent shape to the flexible back of the cover prior to placing the leaves in position instead of shaping the back with any tools after insertion of the leaves, as heretofore practiced.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is an end elevation of the machine with the jaws in an open position. Fig. 2 is an enlarged plan view of the same. Fig. 3 is an enlarged plan view of the adjusting-strip. Fig. 4 is an enlarged transverse section of the improvement on the line 4 4 in Fig. 5. Fig. 5 is an enlarged side elevation of the same, and Fig. 6 is an enlarged transverse section of the former with the jaws closed and the book-cover in place.

The improved machine is mounted on a suitably-constructed frame A, fastened to a table or bench B and supporting a longitudinally-extending rod C, on which is held a former D, preferably made with sides D' D², having arms D³ D⁴, respectively, engaging the rod C and secured thereon by a set-screw E, as is plainly shown in Figs. 2 and 5. The ends of the sides D' D² of the former D are provided with longitudinally-extending dies D⁵ D⁶, formed with longitudinally-extending flanges D⁷ D⁸, the inner edges of which are beveled to form a dovetail groove for the dovetailed and tapering strip F, which forms the top of the former and is longitudinally movable in said groove to regulate the width of the former from one

flange D⁷ to the other flange D⁸, according to the width of the back to be operated upon by the jaws H H', operating in conjunction with the flanges D⁷ D⁸ of the dies D⁵ D⁶, respectively.

The book-cover is placed with the under side of its back G over the former-top formed by the dies D⁵ D⁶ and the strip F, the sides G' G² of the cover extending downward in front of the sides D' D² of the former, as is plainly shown in Figs. 4 and 6. The jaws H H' then extend outside of the book-cover directly opposite the flanges D⁷ D⁸ at the junction of the flexible back G with the sides G' G², so that when the jaws H H' are now closed and the former D heated then a permanent crease or recess is pressed into the back G at the junction of the back with the sides G' G², owing to the edges of the jaws H H' working in conjunction with the flanges D⁷ D⁸, as is plainly shown in Figs. 4 and 6. It is understood that during this operation the operator has hold of the sides G' G² and draws the same downward to firmly stretch the back over the former-top at the time the jaws H H' move in engagement with the back at the points indicated.

The jaws H H' are secured on the upper ends of the curved jaw-arms H² H³, fulcrumed loosely on the rod C and having their crossing arms H⁴ H⁵ slotted, with blocks H⁶ H⁷ in the slotted ends, said blocks being connected by toggle-links I I' with the rod J, extending downward to a treadle K under the control of the operator. A spring L presses on the rod G to hold the latter normally in an uppermost position and with the jaws open. When the treadle K is pressed, the jaws H H' are caused to close for the purpose above mentioned, and when the treadle is released the spring L returns the jaws H H' back into an outermost open position, as shown in Fig. 1. In order to heat the former, I prefer to employ a gas-pipe N, connected with a gas-supply and extending between the sides D' D² of the former, the pipe having openings or burners for burning the gas between the sides to properly heat the former, principally the top thereof.

The strip F is made somewhat longer than the former-dies D⁵ D⁶ and can be readily moved longitudinally in its pivotal groove for-

ward or backward to increase or decrease the width of the top of the former, according to the width of the back of the book-cover to be formed with the crease. It is understood
 5 that although the arms D^3 D^4 are secured on the rod C they spring sufficiently upon shifting the stip F for the purpose mentioned; but, if desired, the arms may be adjusted by set-screws E to properly accommodate a strip F
 10 of more or less width.

It is understood that when the jaws close, as indicated in Fig. 6, they pass with their free edges in contact with the flexible material of the back G at the beginning of the
 15 cover sides G' G^2 and directly under the projecting flanges D^7 D^8 , so that the crease or recess is formed on each side of the cover at the junction of the cover-back with the sides. As the former-back is heated it is
 20 evident that this crease, forced into the material at the time the latter is heated by contact with the heated former, becomes permanent, no matter whether the cover is made of cloth, linen, buckram, or other suitable material or whether the cover is for a flat-back
 25 book or a round-back book.

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

30 1. A shaping-machine for book-covers, comprising a heated former over which the cover-back is stretched, and movable jaws operating in conjunction with said former, to engage the cover-back at the junction of the
 35 cover-sides to form permanent recesses or creases in said back, substantially as shown and described.

2. A shaping-machine for book-covers, comprising a fixed former adapted to be heated
 40 and over which the movable cover-back is stretched, said former being provided at its up-

per end with longitudinally-extending flanged dies, and movable jaws operating in conjunction with said dies to engage the cover-back at the junction with the cover-sides, to form
 45 permanent recesses or creases in the cover-back, substantially as shown and described.

3. A shaping-machine for book-covers, comprising a fixed former adapted to be heated and over which the movable cover-back is
 50 stretched, said former being provided at its upper end with longitudinally-extending flanged dies, movable jaws operating in conjunction with said dies to engage the cover-back at the junction with the cover-sides, to form per-
 55 manent recesses or creases in the cover-back, and means, substantially as described, for adjusting the width of the top of the former between the flanges of the dies, as set forth.

4. A shaping-machine for book-covers, comprising a fixed former adapted to be heated and over which the movable cover-back is
 60 stretched, said former being provided at its upper end with longitudinally-extending flanged dies, movable jaws operating in conjunction
 65 with said dies to engage the cover-back at the junction with the cover-sides, to form permanent recesses or creases in the cover-back, and a dovetailed strip movable between said dies, to adjust the width of the former at the
 70 top thereof, substantially as shown and described.

5. A shaping-machine for book-covers, provided with a former having flanged dies, and a dovetailed tapering strip fitting between
 75 said dies to adjust the width of the former at the top thereof, substantially as shown and described.

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