(No Model.)

J. ENRIGHT.

MACHINE FOR MAKING SHEET METAL CLEATS.

No. 359,066. Patented Mar. 8, 1887.

Fig. 1.

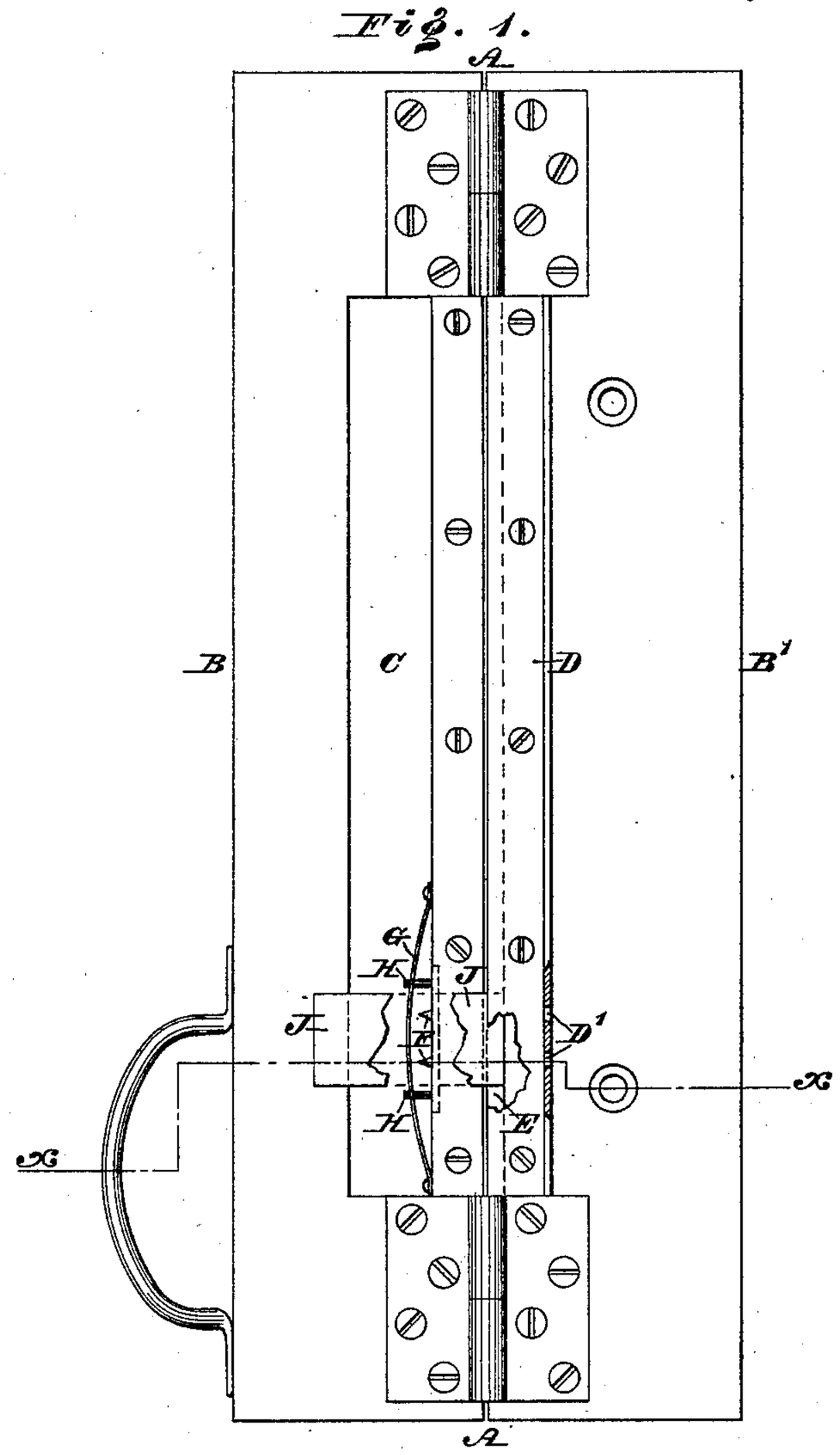


Fig. 2.

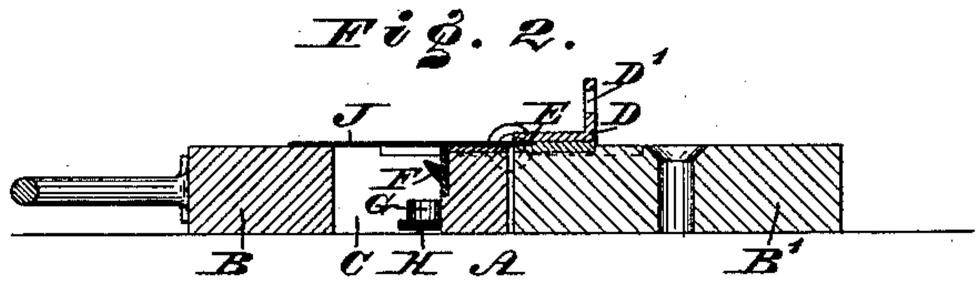


Fig. 3.

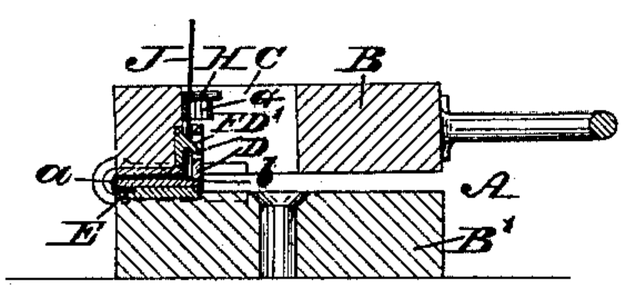
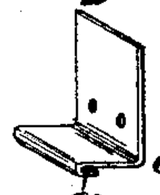


Fig. 4.



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MACHINE FOR MAKING SHEET-METAL CLEATS.

SPECIFICATION forming part of Letters Patent No. 359,066, dated March 8, 1887.

Application filed November 29, 1886. Serial No. 220,155. (No model.)

To all whom it may concern:

Be it known that I, JAMES ENRIGHT, a citizen of the United States, residing at Bordentown, in the county of Burlington, State of New Jersey, have invented a new and useful Improvement in Machine or Apparatus for Making Sheet-Metal Cleats, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a top or plan view, partly broken away, of an apparatus for making sheet-metal cleats embodying my invention. Figs. 2 and 3 represent a transverse section in line *x x*, Fig. 1, the parts being in different positions. Fig. 4 represents a perspective view of one of the cleats.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A represents the bed of the apparatus, consisting of two blocks, B B′, of wood or other material, hinged together so that one may be folded or closed over the other, as shown in Fig. 3.

In the block B is a longitudinally-extending recess, C, and to the block B′ is secured an angular flange, D, which extends parallel with the recess C, and is adapted to enter the same, as seen in Fig. 3.

Between the base of the flange and top of the block B′, at the hinged side of the latter, is a space, forming a socket, E, which receives the end of the strip of sheet metal to be formed into a cleat.

To the wall of the recess C, on the side next to the hinges of the bed A, is secured a spur or punch, F, (one or more,) a spring, G, and guide-pins H, said pins freely entering said spring, permitting the latter to yield without interference. The vertical limb of the flange D has an opening, D′, to receive the punch F when the block B is folded on the block B′, said punch being adapted to form a nail-hole in the cleat. When the bed is in its normal position, as shown in Fig. 2, the punch F is near the upper end of the block B and the spring and bed near the lower end thereof.

The operation is as follows: The bed is opened, as in Figs. 1 and 2, and a strip or plate of sheet metal, J, placed transversely thereon over the spring G, so that one end enters the socket E, whereby said end is held. In Fig. 1 the strip is shown broken, so as to exhibit said spring, and in Fig. 2 it is shown by a solid line. The block B is now folded over the block B′, and the strip is carried along with the block B, guided between the pins H, and thus prevented from lateral displacement. This bends the end of the strip in the socket E, forming a hook, *a*, and also bends the body of the strip against the flange D, forming the angle *b*. The part of the strip which becomes the top thereof enters the recess C and assumes an upright position, when it is pressed against the vertical limb of the flange D and punched, this being permitted, owing to the opening D′ in said limb, and thus the cleat is produced. The upper end of the cleat bears against the spring G and compresses the same, so that when the block B is unfolded said spring assists in stripping the upper limb of the cleat from the punch. When the block is fully unfolded, the cleat may be removed from the socket E, after which the operation of forming another cleat may be begun.

If desired, the block B may be provided with additional springs, punches, and guide-pins arranged side by side, and the socket E continued the length of the block B′, so that numerous cleats may be produced at one operation.

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

1. A bed formed of folding blocks, one of the blocks having a socket and flange and the other block having a recess and throw-off spring, said parts being combined and operating substantially as described.

2. A bed formed of folding blocks, one of the blocks having a socket and flange and the other block having a recess and a punch, said parts being combined and operating substantially as described.

3. A bed formed of folding blocks, one of the blocks having a socket and flange and the other block having a recess, throw-off spring, and guide-pins, said parts being combined and operating substantially as described.

4. A bed formed of folding blocks, one of

the blocks having a socket and flange and the other block having a recess, a punch, and throw-off spring, said parts being combined and operating substantially as described.

5. A bed formed of folding blocks, one of the blocks having a socket and a flange and the other block having a recess, a punch, a throw-off spring, and guide-pins, said parts being combined and operating substantially as described.

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