

(No Model.)

A. E. HOBSON.

DIE FOR ORNAMENTING STRIPS OF METAL.

No. 444,835.

Patented Jan. 20, 1891.

Fig. 1

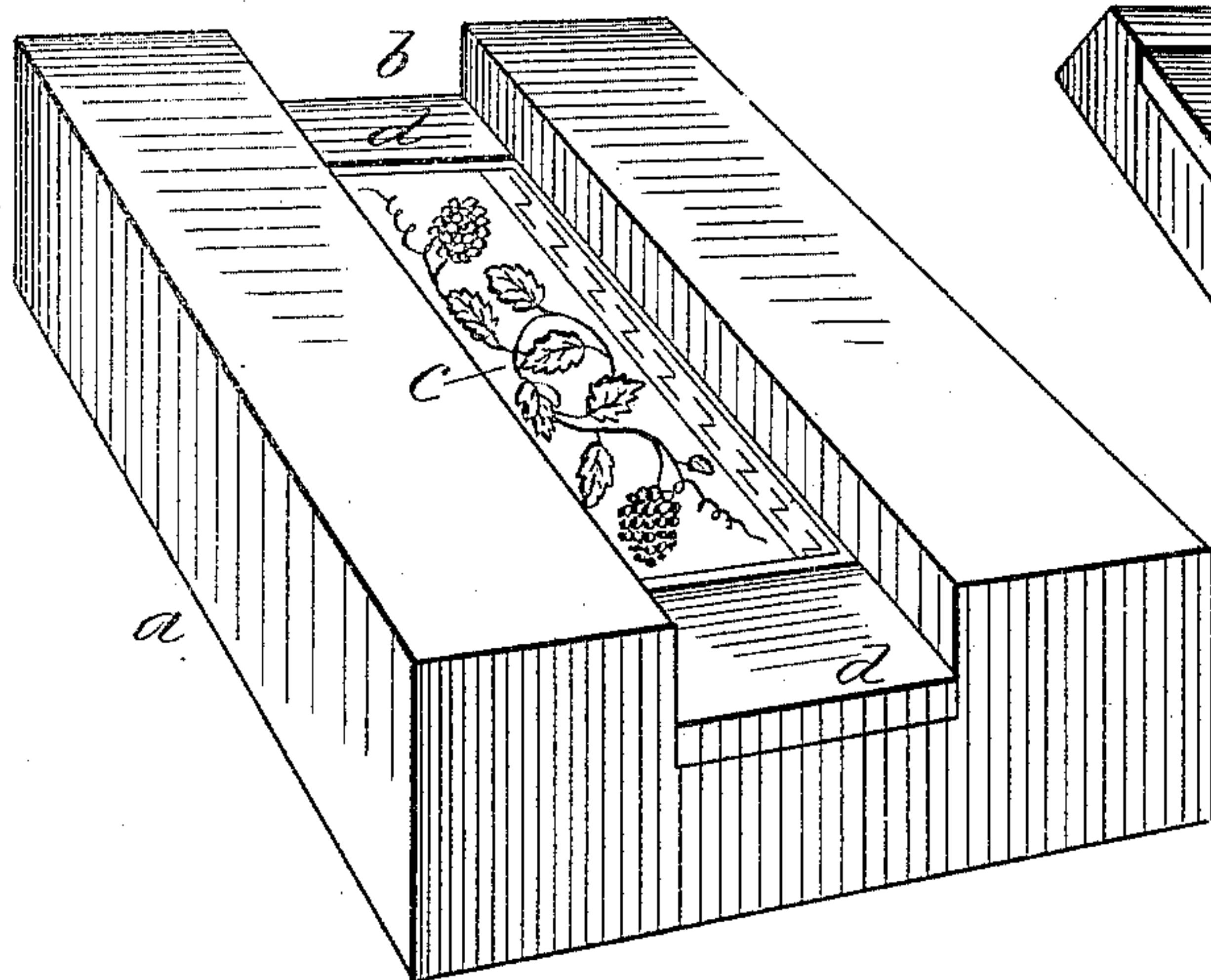


Fig. 2

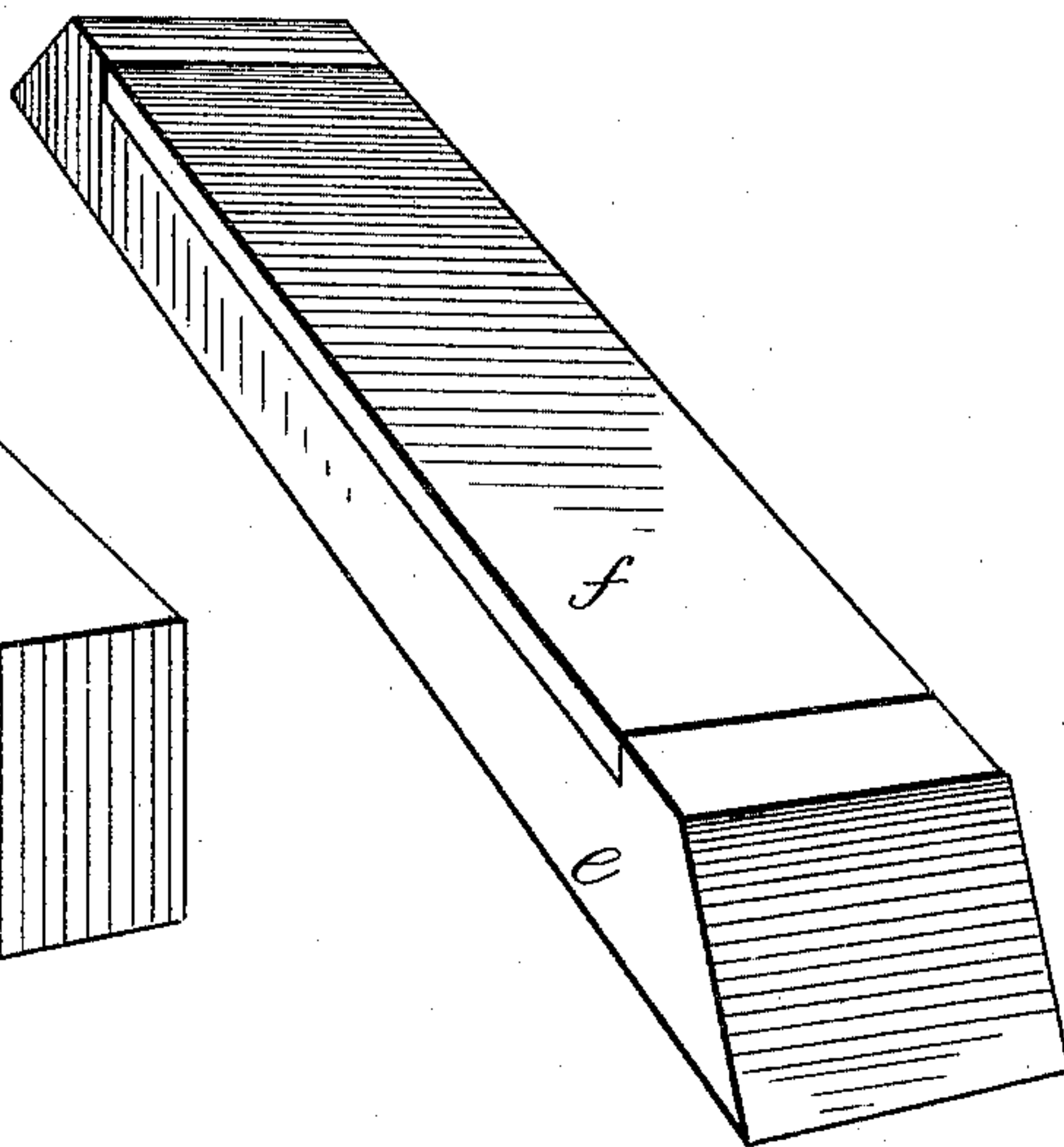
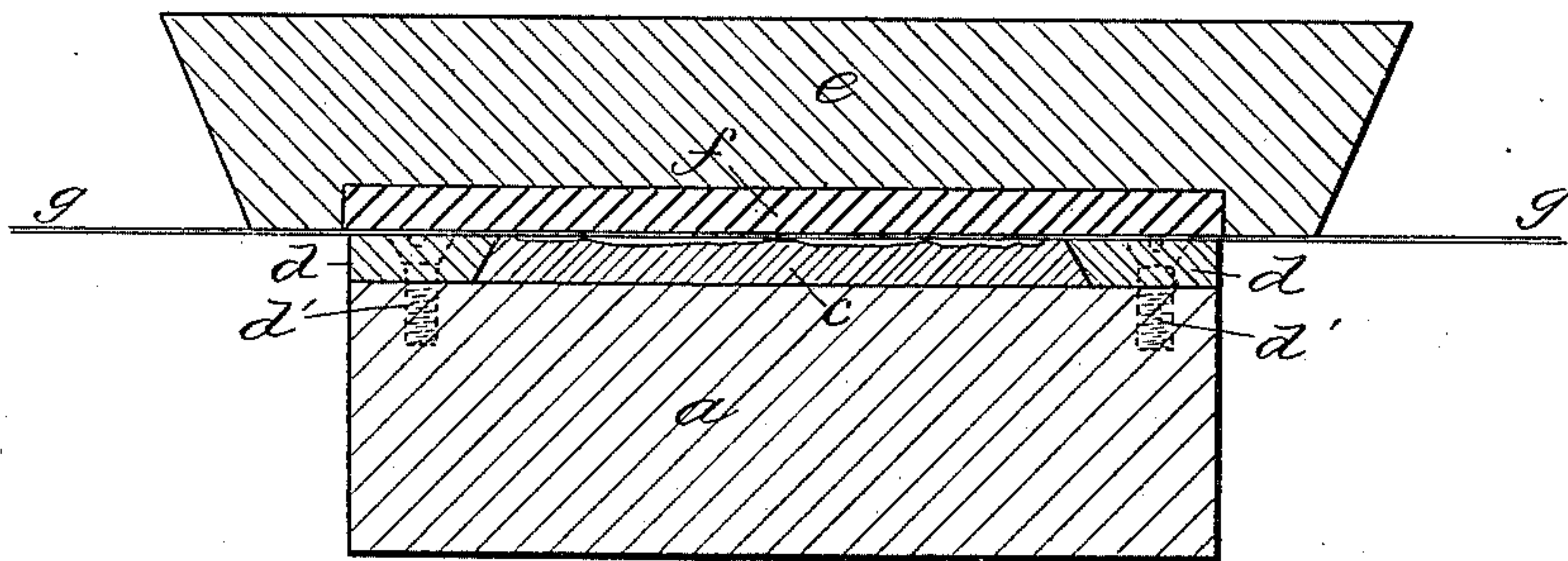


Fig. 3



Witnesses:

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UNITED STATES PATENT OFFICE.

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DIE FOR ORNAMENTING STRIPS OF METAL.

SPECIFICATION forming part of Letters Patent No. 444,835, dated January 20, 1891.

Application filed March 15, 1890. Serial No. 344,061. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR E. HOBSON, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Dies for Ornamenting Strips of Metal, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

10 The object of my invention is to provide dies of a comparatively cheap manufacture, that shall be effective in the transfer to metal blanks of the pattern or design borne on the die.

15 My invention consists of a die having an engraved working-surface secured in a socket in the die-block, in combination with an opposing platen or "force" having a non-metallic working-face, as more particularly hereinafter described, and pointed out in the claim.

20 The particular embodiment of my invention herein described relates to dies for ornamenting a strip of metal of considerable length and illustrates the principle and method of operation of the device embodying my invention.

25 Referring to the drawings, Figure 1 is a perspective view of a die-block having the die secured in place. Fig. 2 is a perspective view of the under side of the platen or force. Fig. 3 is a detail view in central section illustrating the relative position of the parts in transferring the design from the die to a strip of metal.

30 In the accompanying drawings, the letter *a* denotes a die-block having a die-socket *b* extending across the block, and in said socket is secured the die *c*, extending from side to side of the socket *b*, but terminating short of the ends of the die that abut against the end pieces *d*, that are secured as by means of screws *d'* to the bottom of the socket in the die-block. The die is held in this manner in order that
45 its several edges shall be firmly and securely supported, the die *c* being preferably formed of a somewhat soft material, as copper, packed with a filling of metal that fuses at a low temperature, or it may be wholly of cop-

per or like comparatively soft metal, instead of being made of steel, as has been heretofore necessary.

The platen *e*, with its working-face *f*, constitutes what is commonly called the "force" in the shops and designates the platen or part used in opposition to the die. This force consists of a block of metal of proper shape to fit the socket *b*, while the working-face *f* consists of leather or like non-metallic material that is preferably fibrous and elastic, although a working-face consisting of india-rubber or like gum that is sufficiently elastic but non-fibrous will answer the purpose. The working-face extends from side to side of the block *e*, but terminates short of the ends that are located, preferably, slightly below the plane surface of the working-face. When the die and the force are brought together upon the strip *g* of metal, usually Britannia or like ware, and a considerable pressure, as by means of a hydraulic press, is brought to bear upon the strip *g*, the result will be a transfer to said strip of the pattern engraved on the working-face of the die. The strip *g* is held in place and forced against the working-face of the die by reason of the fact that the non-metallic working-face *f* is held on its four edges from any lateral or endwise play, and any changes that take place occur depthwise of the material, so that the strip *g* is forced down upon the die in such manner as to cause a very exact impression of the design or pattern to be formed on that side of the strip *g* that is in contact with the working-face of the die. The non-metallic face forms a peculiarly soft and yet firm support or force capable of accommodating itself to the exact shape of the pattern or design borne on the die, the metal *g* of the strip lying between the opposing working-faces being caused to yield and flow exactly into the recesses of the design or pattern formed on the die, and this without crushing or breaking down the working-face of the die, however delicate in its outline or tracery the design may be.

The non-metallic working-face *f* is shown in the drawings as extending beyond the ends of the die *c*; but it has been found in practice

that good work can be done with the working-face simply overlying and corresponding in extent to the die.

I claim as my invention—

- 5 In combination with the die-block *a*, having a die-socket *b* channeled across the block, the die *c*, extending from side to side of the socket and secured to the die-bed between end pieces in the socket, a platen adapted to fit within

the socket and having the non-metallic working-face of leather or like material and held on all sides against lateral expansion when the die and block are in contact, all substantially as described.

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Witnesses:

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