

No. 734,199.

PATENTED JULY 21, 1903.

J. M. STETTER.

DIE.

APPLICATION FILED APR. 23, 1903.

NO MODEL.

Fig. 1.

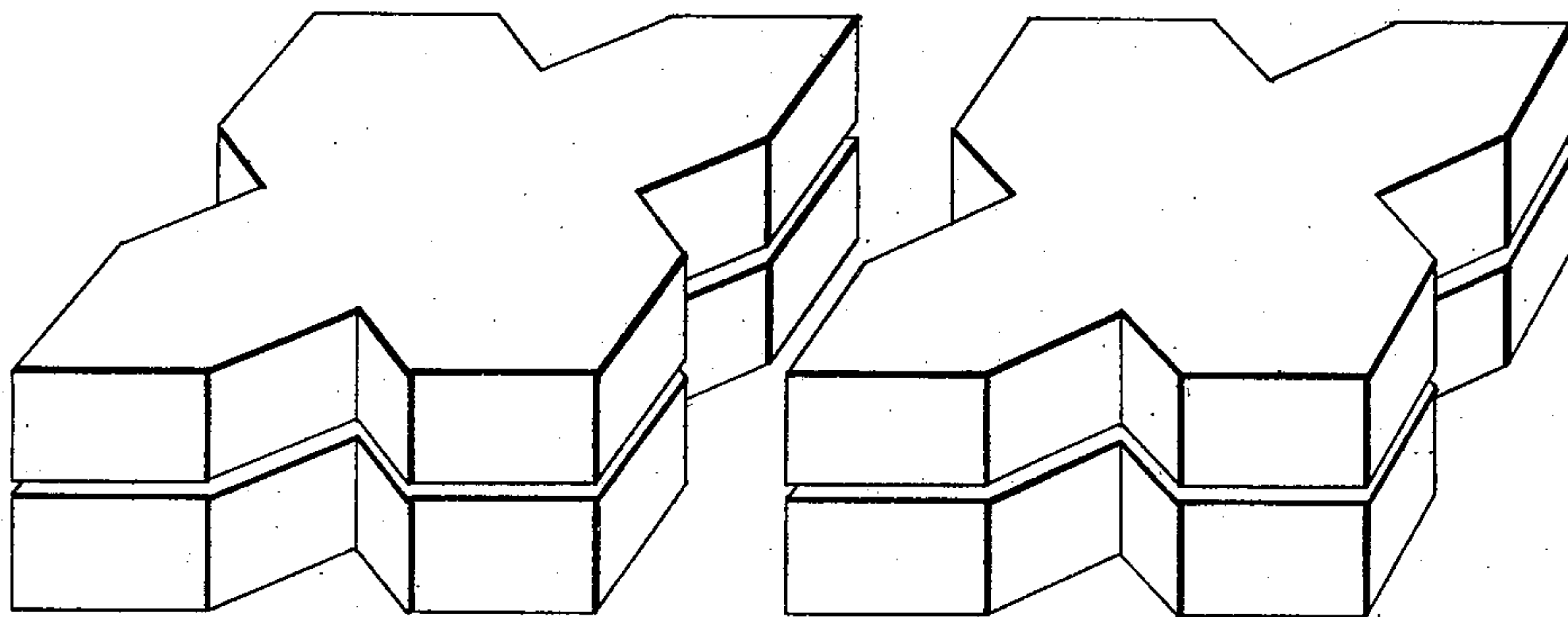


Fig. 2.

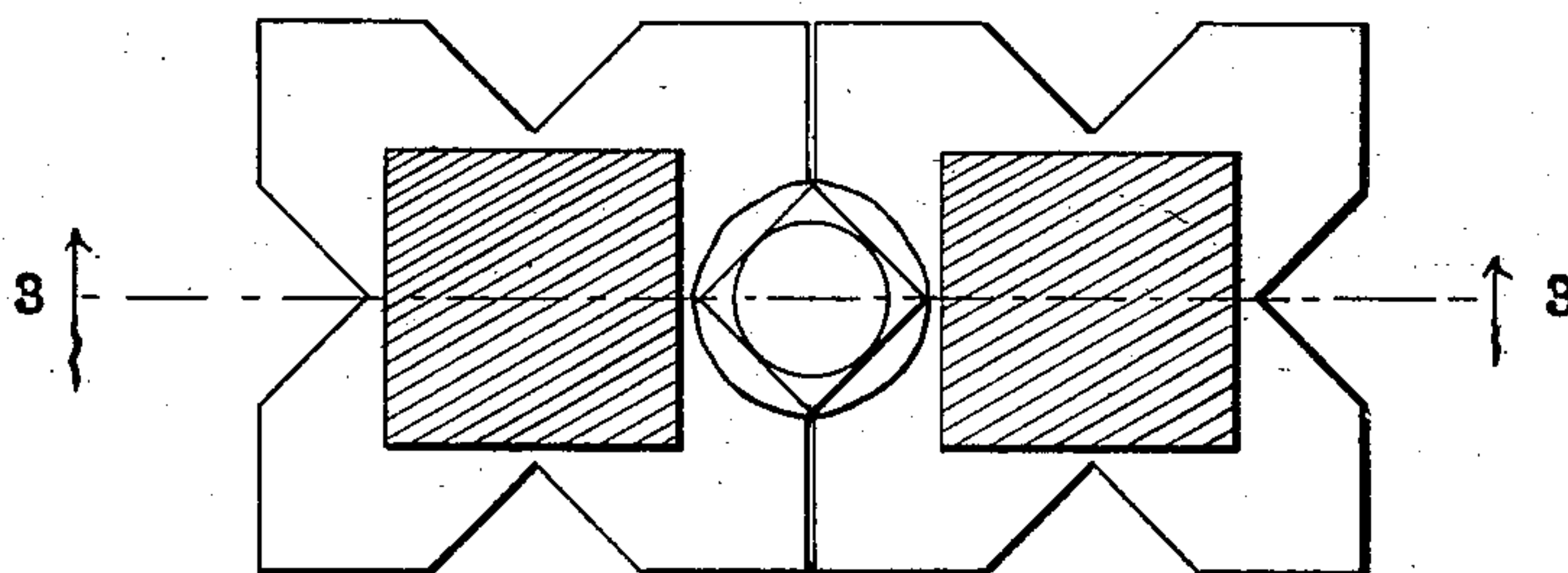
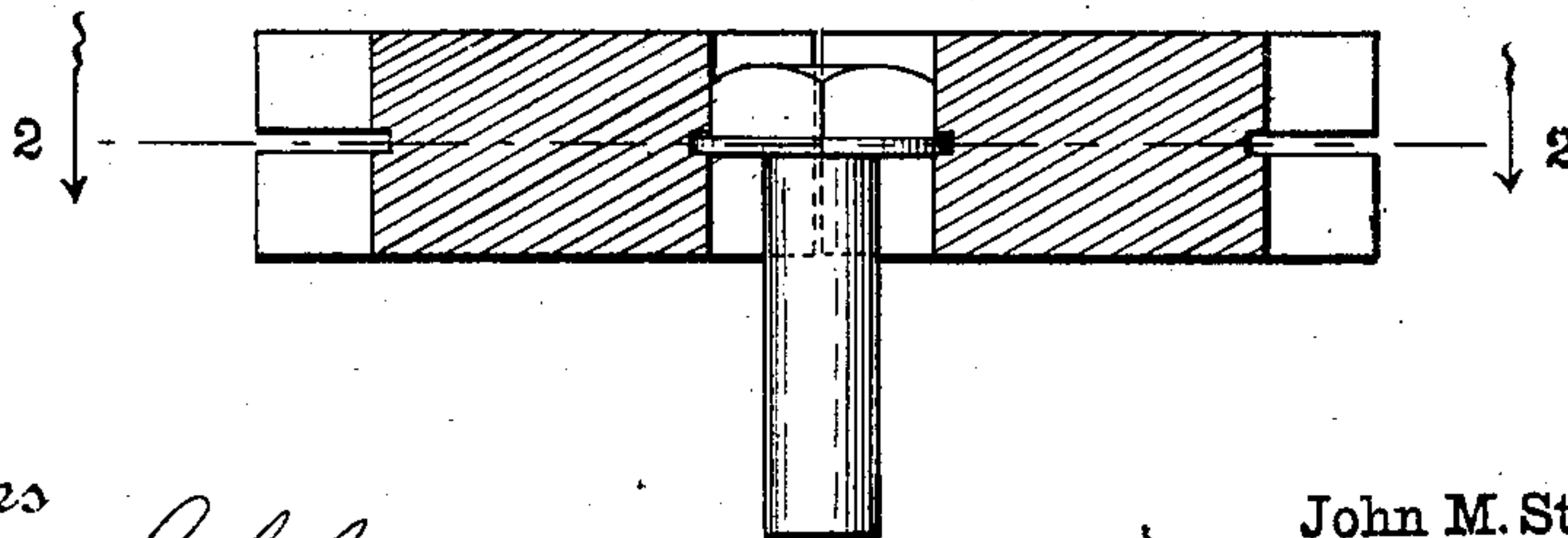


Fig. 3.



Witnesses

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JOHN M. STETTER, OF MUNCIE, INDIANA.

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SPECIFICATION forming part of Letters Patent No. 734,199, dated July 21, 1903.

Application filed April 23, 1903. Serial No. 153,998. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. STETTER, a citizen of the United States, residing at Muncie, in the county of Delaware and State of Indiana, have invented certain new and useful Improvements in Dies, of which the following is a specification.

The object of my present invention is to produce a die for efficiently and cleanly trimming the fins left by the foregoing operation in producing headed blanks. I will especially illustrate and describe such a die adapted for use with square-headed blanks, such as machine-bolts.

My application, Serial No. 154,000, filed concurrently herewith, illustrates an organized machine in which my improved dies may be used.

Referring to the accompanying drawings, which are made a part hereof and on which similar reference characters indicate similar parts, Figure 1 is a perspective view of a pair of such dies separated a little distance apart; Fig. 2, a horizontal sectional view through a pair of such dies, taken at the point indicated by the dotted line 2 2 in Fig. 3; and Fig. 3 a vertical sectional view at the point indicated by the dotted line 3 3 in Fig. 2, the position for use with a blank between them ready to be trimmed.

It is obviously necessary in rapidly-working dies of this character that the head of the blank itself should serve as the guide whereby the cutting edges of the die are caused to trim the fin off closely and evenly along the sides of such head. Heretofore in order to accomplish this without the aid of a separate guide it has been found necessary to have the cutting stroke travel toward that side of the blank-head upon which the pin is formed, and this in turn has produced a small downwardly projecting cut fin on the under side of the head, which it has been necessary to remove by still another operation, as by grinding or filing. With my improved dies the cutting-stroke can be in the opposite direction, cutting the fin from beneath and carrying it past the sides of the head, which are left finished and smooth while the die serves as its own guide.

In carrying out my invention I divide the operating sides of my improved dies by means

of grooves, which practically makes them double dies, and into these grooves the fins enter when the blanks are placed in position to be operated upon, as clearly shown in Fig. 3 of the drawings. The upper and lower die faces (above and below these grooves) being exactly alike, one of the said faces serves as the blank-guide and the other as the cutting-die, and as said surfaces are of course unchangeable in their relative positions the guiding is quite as effective as where the old form of single die into which the blank-head extends and whereby it is guided is used. I am also able by this means, by making the dies equal-sided, to make each die take the place of a multiplicity of single dies. In the form shown, which is square and has four equal sides, each side is fitted as an operating side, and as each side can be used in either direction I have eight separate cutting-surfaces, thus making each die practically the equivalent of eight dies—that is, when the dies are new or freshly-sharpened they are placed in the machine and used until the cutting edges first put into use become dulled. The dies are then either turned upside down or shifted around so as to bring another face into service and used again, and so on until each side has been used both as a cutting and as a guiding die, a face with a dulled edge being quite as useful as a guiding-die as it is when the edge is sharp.

Each die-block in the form shown is provided with a V-shaped groove, and two of these grooves when the dies come together fit the side of the square blank-head and embrace it closely. If the blank-head is of a different shape, then of course these recesses in the sides of the die-block will be shaped differently to correspond.

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

1. A trimming-die having its operative face divided by a groove adapted to receive the projection to be trimmed, the portion of the die upon one side of the groove serving to guide the article to be trimmed, and the portion upon the other side of the groove serving to do the trimming.

2. A pair of trimming-dies having recesses in their adjacent faces conforming to the

shape of the article to be trimmed, and also having grooves arranged transversely of said faces to receive the fin which is to be trimmed off.

- 5 3. A die having a multiplicity of equal sides and provided with article-receiving recesses in each of its sides, and grooves extending transversely of said recesses to receive the fins to be trimmed off said articles, whereby
10 each die-block becomes a multiplex die hav-

ing a multiplicity of cutting and of guiding faces, each face being adapted to be used both as a cutting and as a guiding face.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 15 15th day of April, A. D. 1903.

JOHN M. STETTER. [L. s.]

Witnesses:

CHESTER BRADFORD,
JAMES A. WALSH.