

No. 666,585.

Patented Jan. 22, 1901.

W. R. WOOD.
AX FORGING DIE.

(Application filed Sept. 11, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 2.

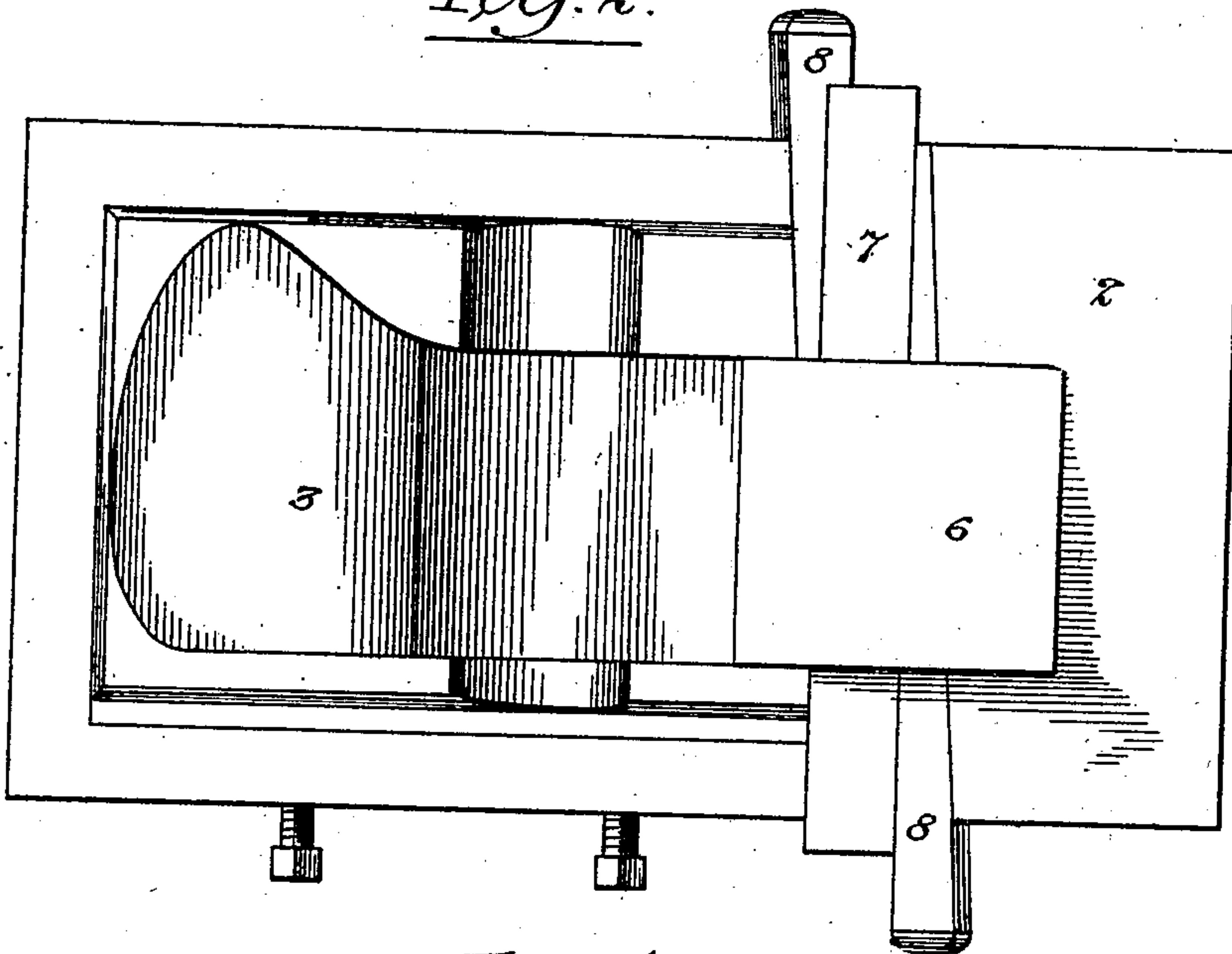
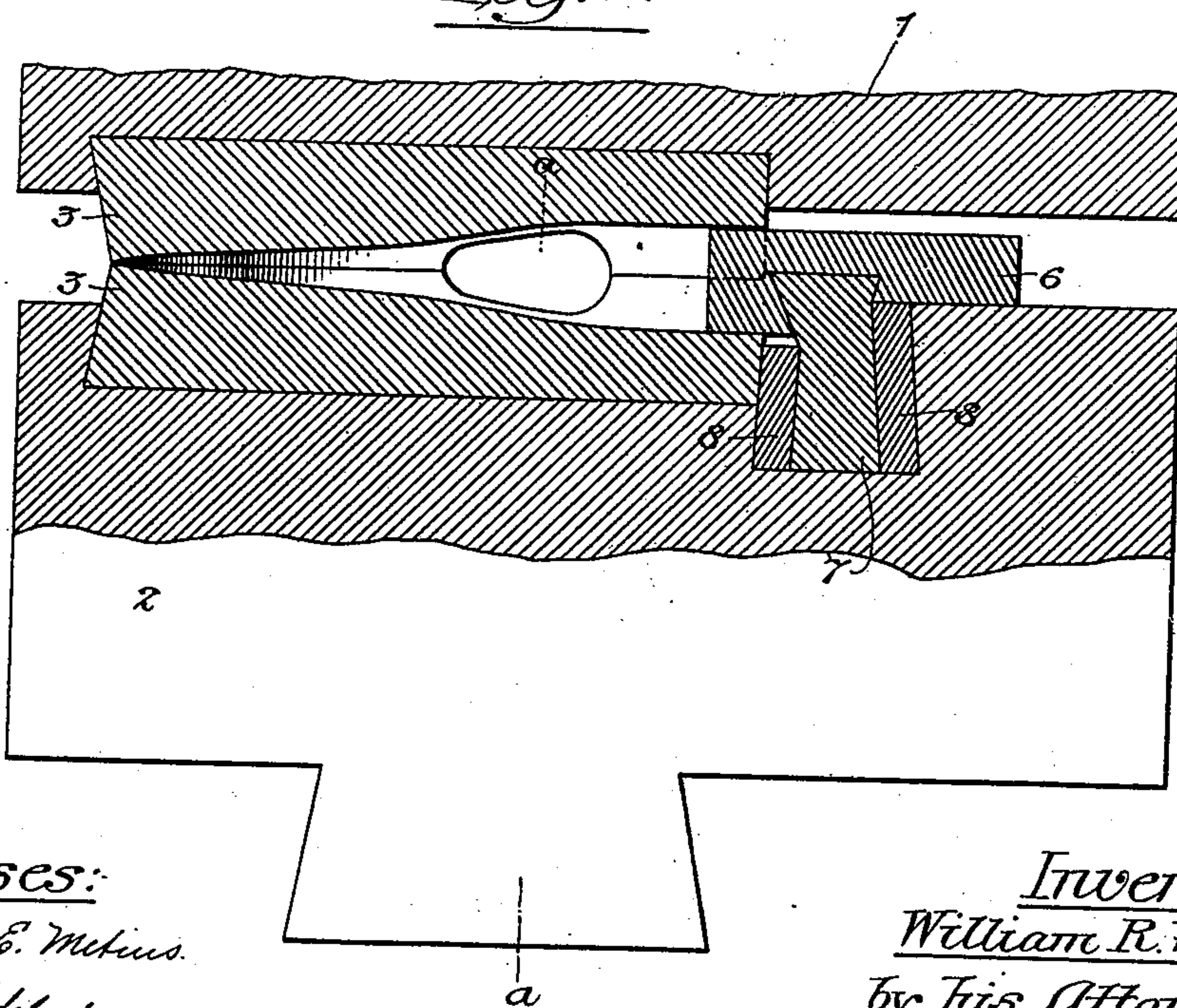


Fig. 1.



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Inventor:

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by His Attorneys:

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Fig. 3.

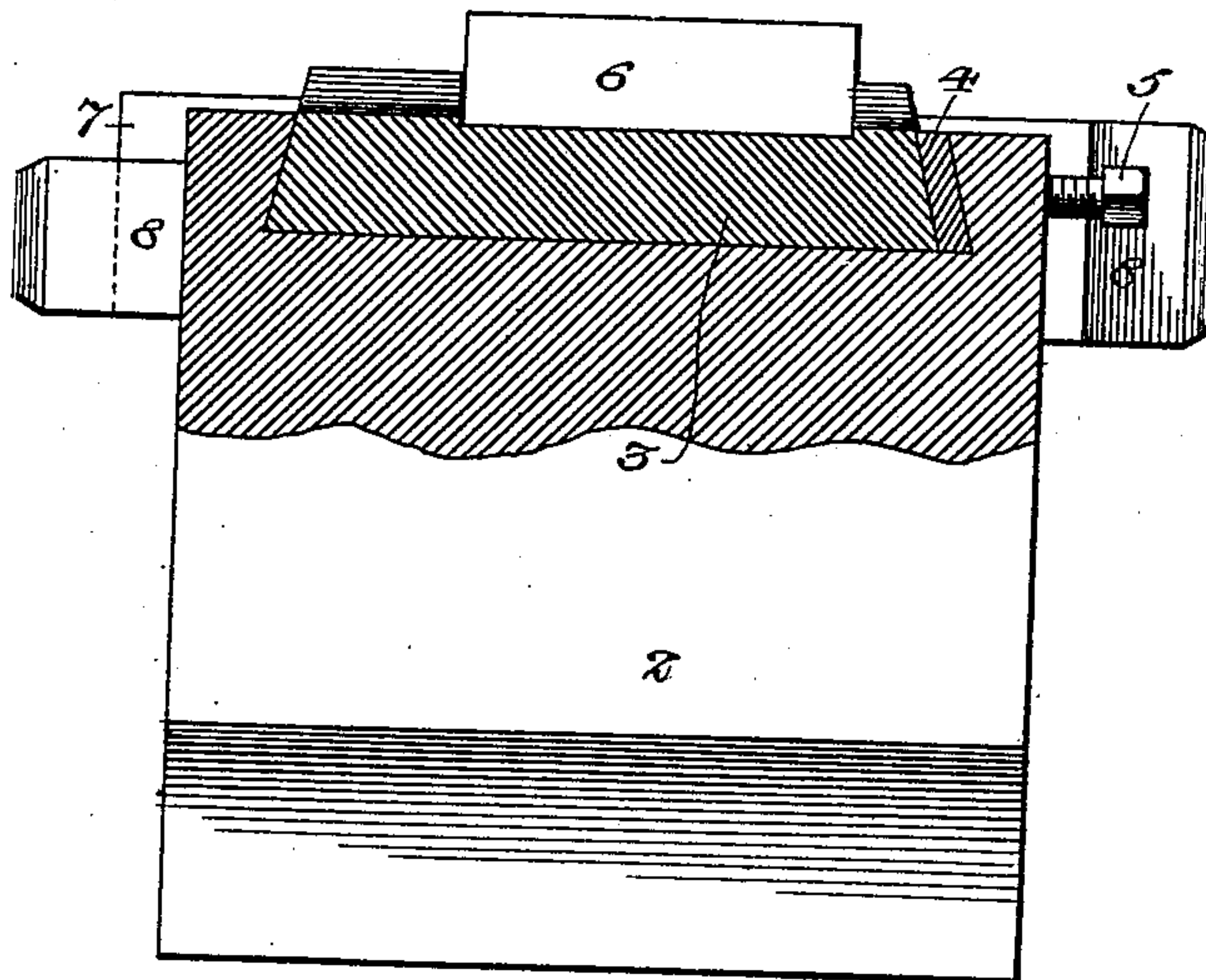
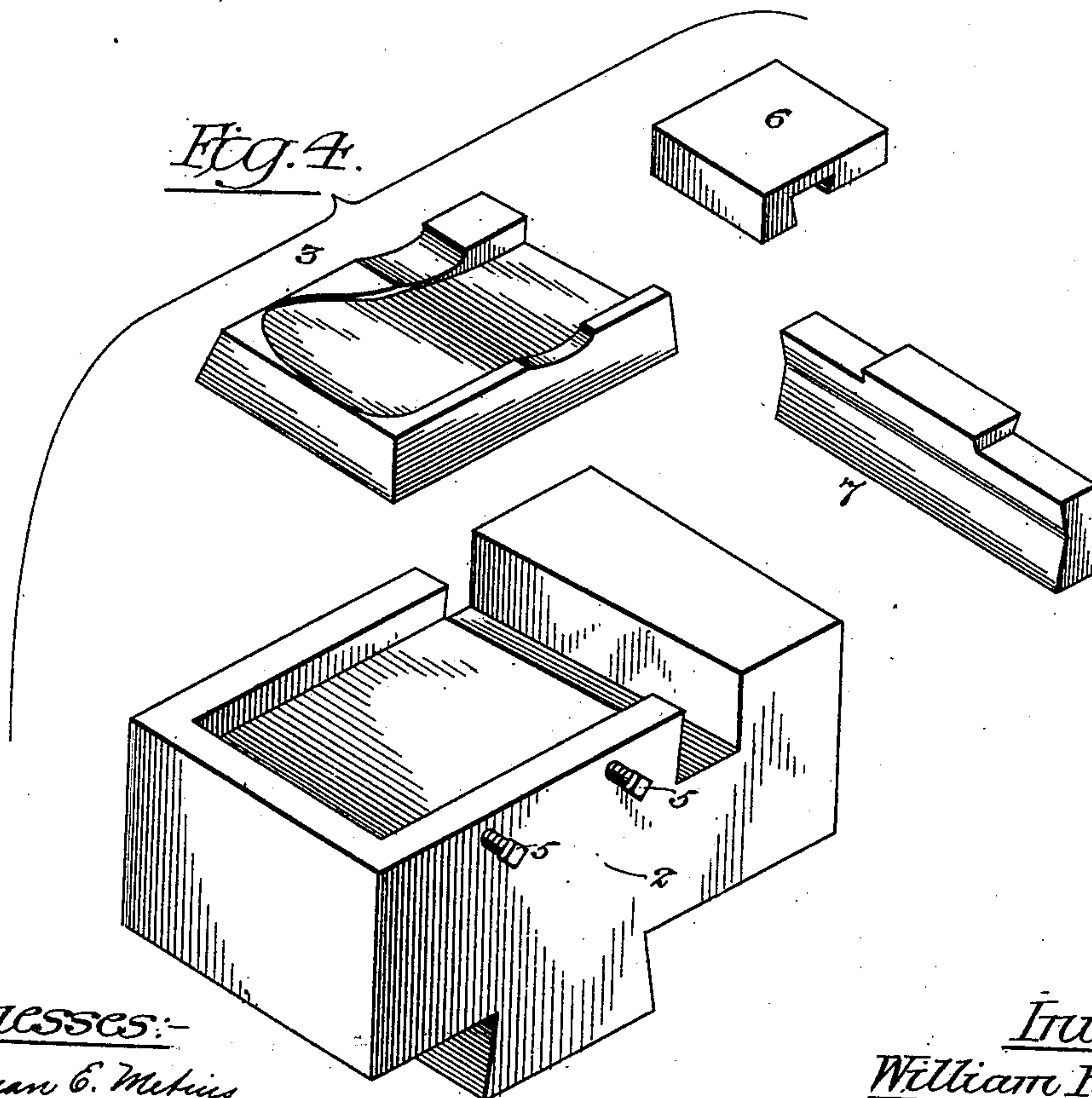


Fig. 4.



Witnesses:-

Herman E. Metcalf
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UNITED STATES PATENT OFFICE.

WILLIAM R. WOOD, OF LEWISTOWN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO THOMAS S. JOHNSON, OF SAME PLACE.

AX-FORGING DIE.

SPECIFICATION forming part of Letters Patent No. 666,585, dated January 22, 1901.

Application filed September 11, 1900. Serial No. 29,640. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. WOOD, a citizen of the United States, and a resident of Lewistown, Pennsylvania, have invented certain Improvements in Ax-Forging Dies, of which the following is a specification.

My present invention consists of an improvement upon the ax-forging die for which I obtained Letters Patent of the United States No. 653,602, dated July 10, 1900, the object of my present invention being to provide for the production of axes having heads of different sizes and shapes without the necessity of changing the entire die. This object I attain by providing each of the dies of the press with a detachable matrix-block, one of the dies being also provided with a detachable and adjustable head-block having separable head and shank.

In the accompanying drawings, Figure 1 is a vertical sectional view of the upper and lower dies of an ax-forging press constructed in accordance with my invention. Fig. 2 is a plan or top view of the lower die and of the parts used in connection therewith. Fig. 3 is a transverse section, partly in elevation, of the lower die and its appurtenances, the section being taken on the line *a a*, Fig. 1; and Fig. 4 is a perspective view showing the various parts of the lower die detached from each other.

In the drawings, 1 represents the upper die, and 2 the lower die, said dies being constructed for application to a forging-press in the usual manner. Each of the dies has a detachable matrix-block 3 let into the face of the same and suitably secured therein by any desired means. Thus, as shown in the drawings, the matrix-block has beveled edges, and the recess in the die for the reception of the matrix-block has correspondingly beveled sides, a shim or filling-piece 4 being introduced between one edge of the matrix-block and the corresponding side of the die and being acted upon by adjusting-screws 5, so as to effect the secure confinement of the matrix-block to the die. Other means of accomplishing this result may, however, be adopted within the scope of my invention. In connection with the matrix-blocks of the dies I also employ a head-block substantially similar to that shown and described in my for-

mer patent, with the exception that in the present case said head-block is composed of a top block 6 and a shank 7, separate and detachable one from the other, the upper portion of the shank having beveled sides for adaptation to a correspondingly-beveled recess in the top block, as shown in Fig. 1, whereby the vertical separation of the two is effectually prevented. The top 6 of the head-block fits snugly into the opening at the head end of the recesses in the matrix-blocks 3, and the shape of the inner face of said block 6 determines the shape of the head of the ax in the same manner as did the head-block of the previous patent, and different forms of top block can be used in connection with the single shank 7, the extent of projection of the block into the open end of the recess in the die being determined by the adjustment of wedges 8, disposed on opposite sides of the shank 7, as before.

By the use of detachable matrix-blocks 3 I am enabled to use the same dies for the production of axes having bodies of different sizes and shapes, the matrix-blocks only being removed and replaced whenever it becomes necessary to change the size and shape of the ax which is being forged.

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

1. An ax-forging die constructed for application to the hammer or bed of a forging-press and having a detachable matrix-block combined with means for securing it in place on said die, substantially as specified.

2. An ax-forging die constructed for application to the hammer or bed of a forging-press and having a detachable matrix-block and a detachable head-block, in combination with means for securing them in place upon the die, substantially as specified.

3. An ax-forging die having a detachable head-block comprising a separable top block and shank, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM R. WOOD.

Witnesses:

T. S. JOHNSON,
WM. S. SETTLE.