

(No Model.)

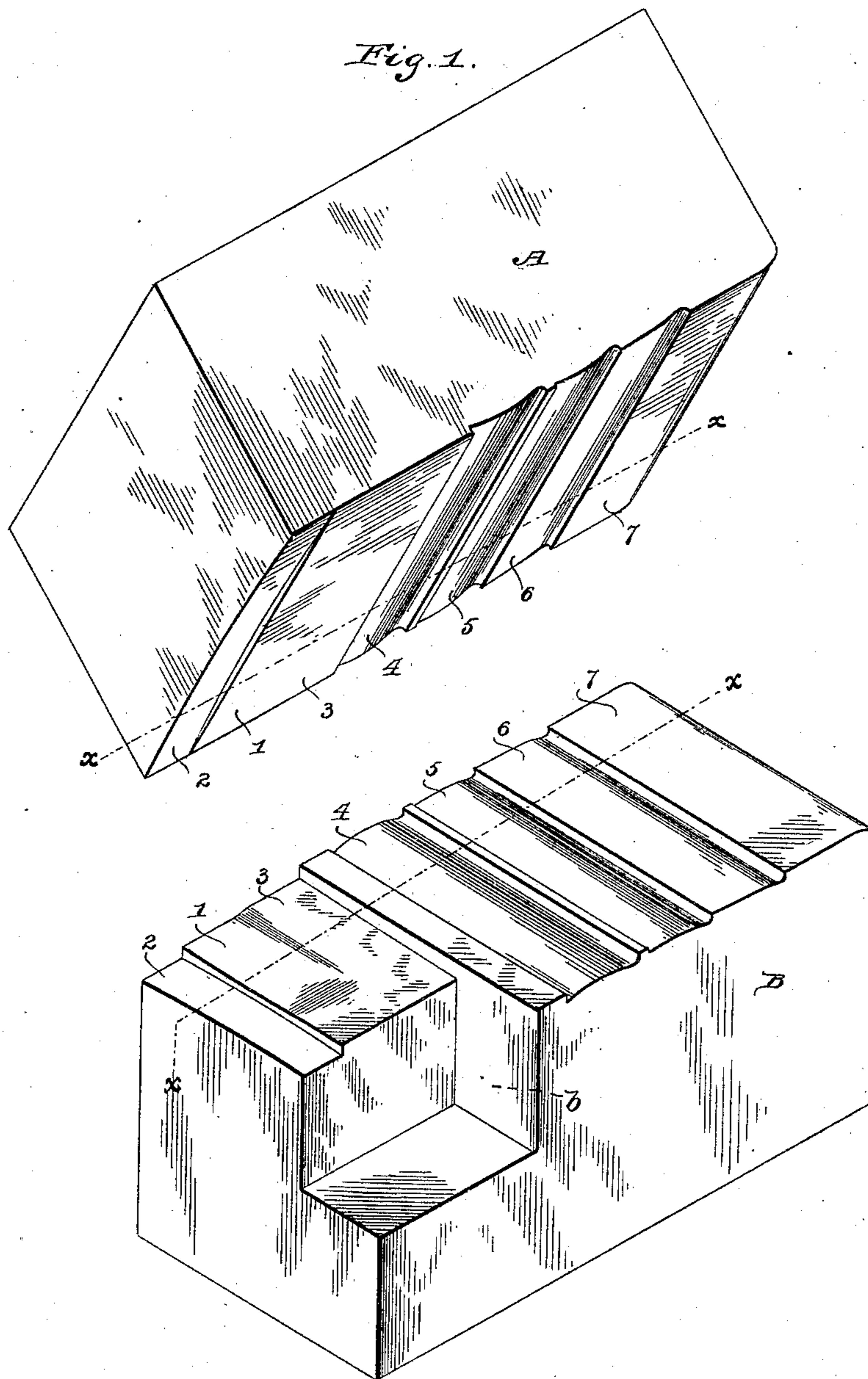
2 Sheets—Sheet 1.

J. TURNER.

DIE FOR FORGING RAZORS.

No. 370,504.

Patented Sept. 27, 1887.



Witnesses

G. G. Corbett  
H. M. Low

Inventor  
Joseph Turner  
By his Attorney  
Henry Calvert

(No Model.)

2 Sheets—Sheet 2.

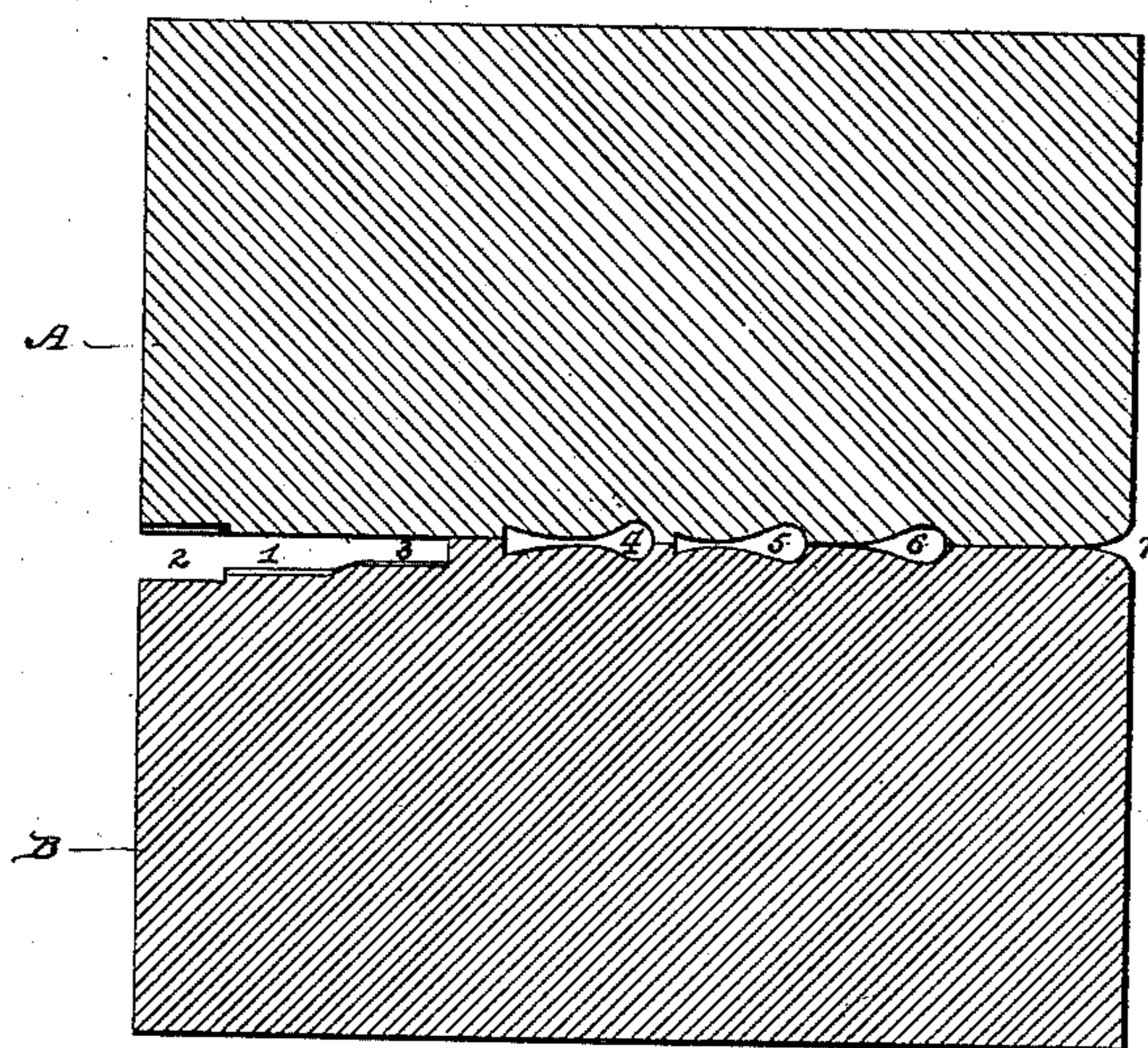
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Fig. 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOSEPH TURNER, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO THE  
J. R. TORREY RAZOR COMPANY, OF SAME PLACE.

## DIE FOR FORGING RAZORS.

SPECIFICATION forming part of Letters Patent No. 370,504, dated September 27, 1887

Application filed January 31, 1887. Serial No. 226,070. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH TURNER, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Apparatus for Forging Razors, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of my invention is to facilitate the forging of razor-blades, and also to forge them in such a manner that the steel will be properly condensed and the blades be forged into a shape so near to their finished form that the operation of grinding will be much easier than with hand-forged blades. To this end the steel from which the blades are formed is subjected to the successive action of a series of differently-formed dies under a trip-hammer, the dies being formed partly in the head of the hammer and partly in the anvil against which the hammer strikes when in operation.

In the accompanying drawings, Figure 1 is a perspective view of hammer and anvil dies by which my invention may be carried into effect; and Fig. 2 is a longitudinal section of the same on lines *x x*, Fig. 1.

A denotes the upper die-block, to be secured to or to form the head of the trip-hammer, and B is the lower die-block or anvil, against which the hammer die-block strikes. The adjacent faces of these die-blocks are each provided with the die-recesses 4, 5, and 6, and also preferably with the die-portions 1, 2, 3, and 7, and the lower die-block has also the recess *b*. The die-recesses 4, 5, and 6 are shaped differently from each other, so that each set thereof will have a different effect in shaping and condensing the metal of the blade-blanks, which is subjected to their successive action under a trip-hammer, the portions 7 being more particularly intended to act upon and condense the edge portion of the blades. The parts 1, 2, and 3 are intended for use in drawing out and forming the tangs of the blades, these parts being properly shaped, as shown, to effect this result.

In the operation of my invention the heated steel from which a razor is to be formed is first preferably subjected to the operation of the parts 1 of the dies to draw out the tang; next, to the parts 2, which form the shoulder and width of the tang, and then to the parts 3, which form the thickness and taper of the

tang. The blade portion of the steel is then subjected to the action of parts 4, which spread out the stock in the blade; then to parts 5, which render the blade-blank somewhat concave; next, to parts 6, which complete the concave and thin down the front portion of the blade to form the edge, and, finally, to parts 7, which condense and finish the edge portion of the blade, so that but little grinding will be required.

With the blade-dies formed concavo-convex, as shown in the drawings, the blades for "hollow-ground" razors can be forged more concave than can be done conveniently by hand-forging, and the numerous rapid strokes of the trip-hammer produce a more thoroughly condensed and better blade than can possibly be made, practically, by hand-forging.

While I prefer to use the die portions by which the tang is formed, I do not wish to be understood as limiting my invention to the use thereof, the essential feature of my invention being the series of differently-formed blade-dies and the presentation of the blade-blanks thereto successively under the action of a trip-hammer.

It will of course be understood that the forms of the tang and blade portions of the dies may be varied according to the shape of the tangs and blades to be produced; but the die-blocks formed as herein shown are such as I consider the best in carrying my invention into effect.

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

1. The die-blocks A and B, having the blade dies or recesses 4, 5, and 6, formed substantially as shown, for the purpose specified.

2. The die-blocks A and B, having the blade dies or recesses 4, 5, and 6, formed substantially as shown, and the finishing portions 7, as set forth.

3. The die-blocks A and B, having the tang-forming portions 1, 2, and 3, the blade-forming dies or recesses 4, 5, and 6, formed substantially as shown, and the finishing portions 7, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH TURNER.

Witnesses:

CHAS. S. HALE,  
E. H. H. WILSON.