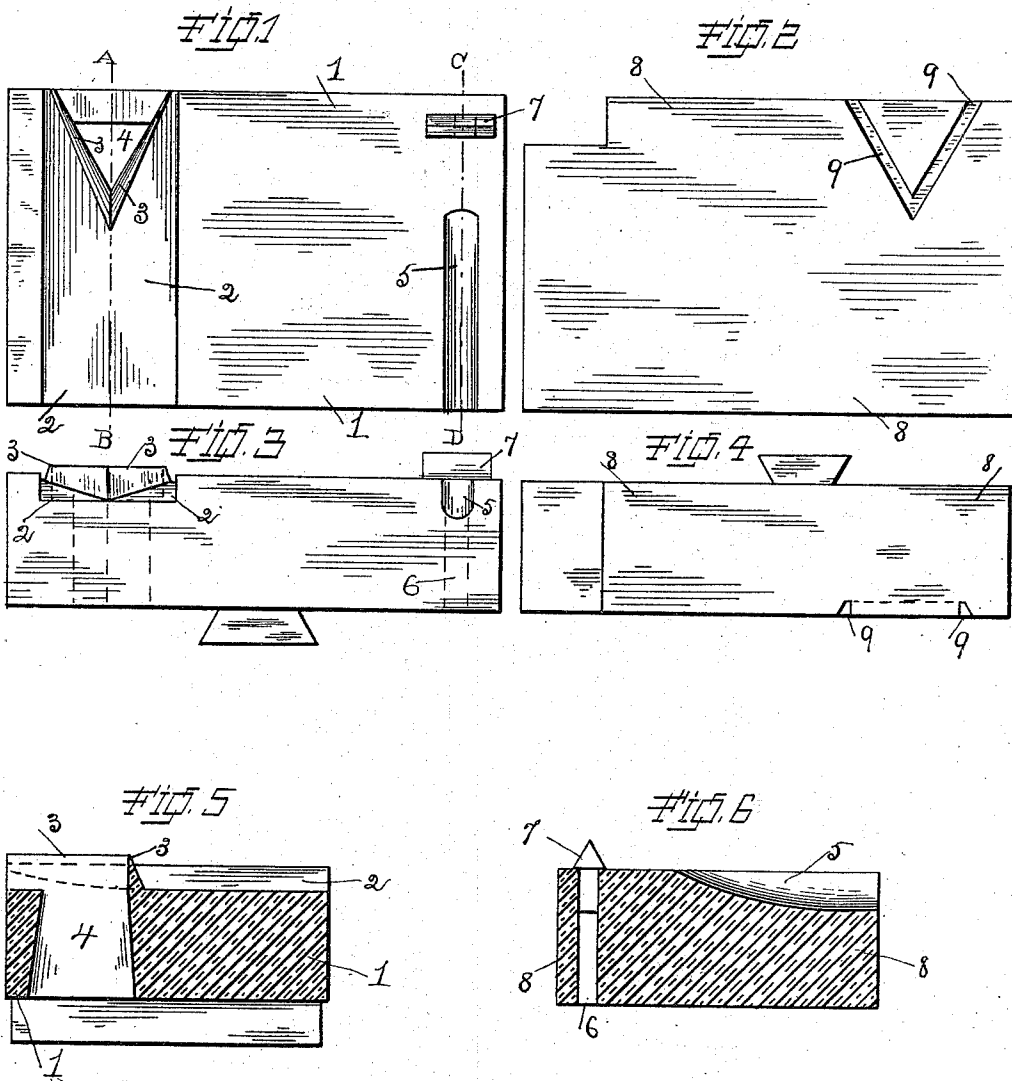


(No Model.)

J. J. THEOBALD.  
DIE.

No. 573,371.

Patented Dec. 15, 1896.



Witnesses:  
Richard D. Harrison.  
H. C. Lewis

INVENTOR  
John J. Theobald  
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Att'y

# UNITED STATES PATENT OFFICE.

JOHN J. THEOBALD, OF MOUNT OLIVER, PENNSYLVANIA.

## DIE.

SPECIFICATION forming part of Letters Patent No. 573,371, dated December 15, 1896.

Application filed July 17, 1896. Serial No. 599,508. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. THEOBALD, a citizen of the United States, residing at Mount Oliver, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Dies; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in dies for forming and re-forming the cutter bar or points and the drift-keys used in coal-mining machinery.

The invention has for its object the construction of dies for the above-described purpose that will effectually form the said points and keys. Heretofore the said points and keys were made or repaired entirely by hand, and when the cutting-points were broken it required considerable labor and skill on the part of the operator to properly repoint the cutters and key.

With the above object in view the invention consists in the novel construction, combination, and arrangement of parts to be herein-after more specifically described.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like figures of reference indicate similar parts throughout the different views, in which—

Figure 1 is a face view of the bottom die. Fig. 2 is a face view of the top die. Fig. 3 is a front side view of the bottom die. Fig. 4 is a side view of the back of the top die. Fig. 5 is an end sectional view of the bottom die on the line A B. Fig. 6 is an end sectional view through the same die on the line C D.

In the drawings the bottom die is referred to as 1, and has formed therein the recess or depression 2, which is of the depth and width of the cutter-point to be formed. Within the

said recess is formed the angular cutter 3, which extends up a short distance above the face of the die, as shown. Between the angular cutter and the sides of the die is formed the opening 4 to allow the escape of any scale which may be removed from the metal while being cut by the cutter. A recess 5 is formed at the opposite end of the die, shaped as shown, and is adapted to be used for finishing the points of drift-keys. An opening 6 is formed within the die and has fitted therein the hardy 7 for cutting off the material. In the top die the corner is cut out, as shown, so as to clear the hardy. Within the face of the said die is formed the angular recess 9, which is of sufficient depth to properly fit over the cutter of the lower die when they are placed in position.

After the dies have been fitted to a suitable hammer and put into operation the metal is cut off by means of the hardy and is drawn down to the proper sizes (which may be done in the space between the recesses of the dies) and finished up to their proper forms with the recesses.

In forming the double-pointed cutter-point and after the metal is drawn to the size it is placed within the recess with the end over the cutter, and when the top die descends the point is sheared out by the cutter and forced down into the recess which forms it into shape.

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

The upper and lower dies, one having the rectangular recess or depression, within which, at one end, is arranged the V-shaped cutter, an opening being made through said die, falling within the plane of said cutter, and the other die having a V-shaped recess receiving the V-shaped cutter of the aforesaid die, substantially as set forth.

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

JOHN J. THEOBALD.

Witnesses:

RICHARD S. HARRISON,  
P. B. REILLY.