

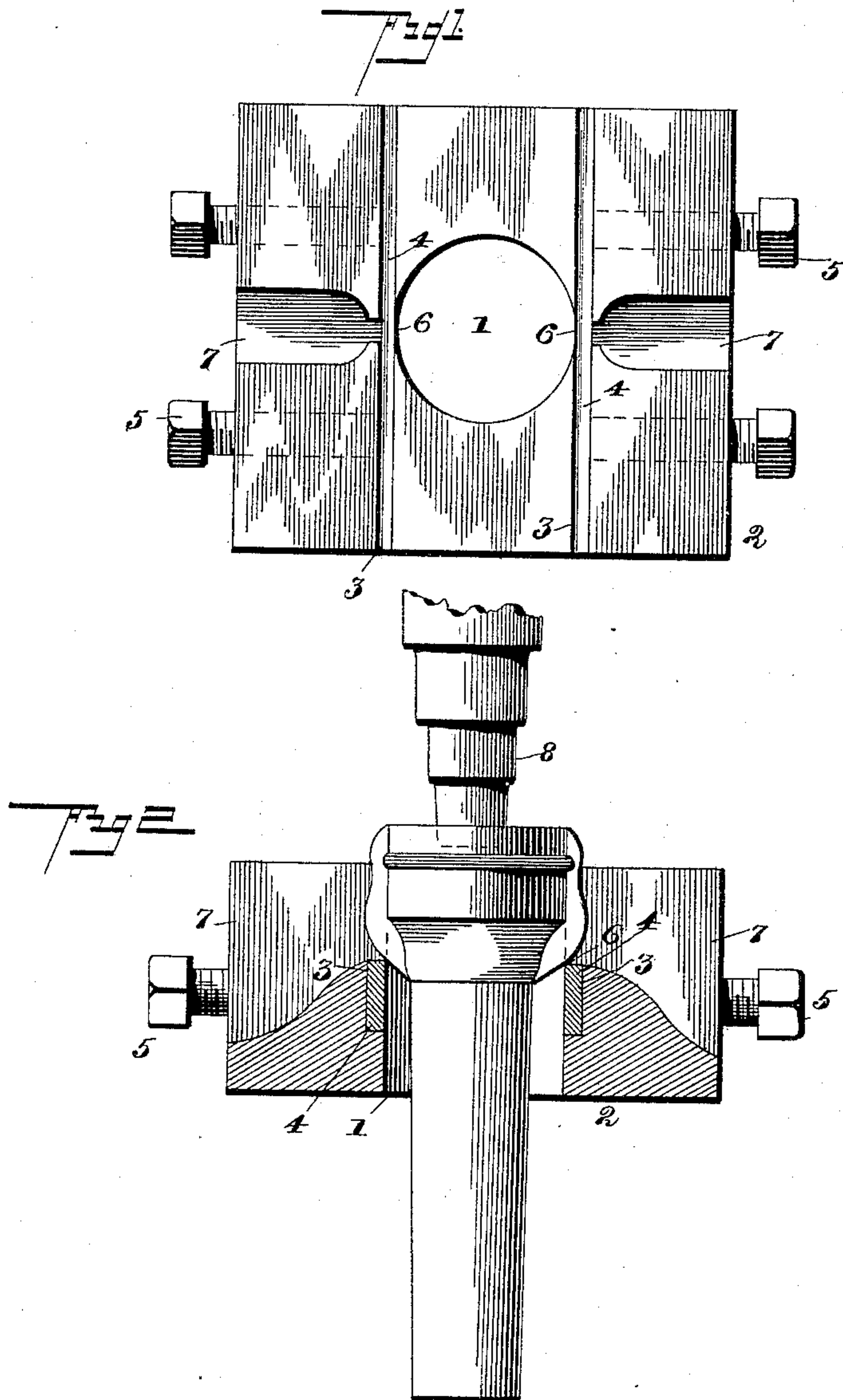
(No Model.)

W. J. PARMELEE.

DEVICE FOR TRIMMING DIE FORGED AXLE BOXES.

No. 430,540.

Patented June 17, 1890.



Witnesses

John Irvine
Wm. Baggers

By his Attorneys,

Inventor

Wolcott J. Parmelee

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UNITED STATES PATENT OFFICE.

WOLCOTT J. PARMELEE, OF WILKES-BARRÉ, PENNSYLVANIA.

DEVICE FOR TRIMMING DIE-FORGED AXLE-BOXES.

SPECIFICATION forming part of Letters Patent No. 430,540, dated June 17, 1890.

Application filed January 22, 1890. Serial No. 337,749. (No model.)

To all whom it may concern:

Be it known that I, WOLCOTT J. PARMELEE, a citizen of the United States, residing at Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Method of and Means for Trimming Die-Forged Axle-Boxes, of which the following is a specification.

This invention relates to dies for trimming axle-boxes; and it has for its object to accomplish this result in a simple, efficient, and economical manner and to avoid the labor of turning off that portion of die-forged axle-boxes which is termed the "flash" in a lathe, thus considerably reducing the expense of manufacture.

In a companion application I have shown and described dies for forging the axle-boxes and have set forth how in the process of forging such boxes a flash is invariably formed on diametrically-opposite sides of the head of the axle-box. The purpose of this invention is to trim off this flash by a simple arrangement of cutting and trimming dies, such as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Fig. 1 is a plan view of the trimming-die embodying my improvements. Fig. 2 is a vertical sectional view of the same, and showing, also, in elevation, a portion of the mandrel or male die, by means of which the axle-box, which is shown in position for operation, is forced through the trimming-die.

Like numerals of reference indicate like parts in all the figures.

The trimming-die which constitutes my invention is a female die having a central vertical opening 1, of sufficient size to admit of the passage of the axle-box. Said die, which is designated by 2, is provided on its upper side with transverse parallel slots or recesses 3 3, which are formed on opposite sides of the central bore or opening, and which are adapted to receive the knives or cutters 4 4. The latter are held in position during operation by means of set-screws 5, extending laterally through the body of the die. The knives or cutters 4 4 are rectangular in cross-section and have their edges exposed on opposite sides of the central opening or bore of the die, as

shown at 6, so that when an axle-box is forced vertically through the die such portions of the head of the axle-box as come in contact with the said cutting-edges will be removed thereby.

The upper side of the die is provided on diametrically-opposite sides at the points where the cutting-edges register with the bore of the die with beveled recesses 7, which serve to guide the trimmings away from the die.

8 designates the plunger or mandrel, which has a vertical reciprocating movement with relation to the trimming-die. The external configuration of said plunger is such as to correspond with the internal shape of the axle-box, which, by the action of the said plunger, is forced vertically down through the opening or bore of the trimming-die.

In operation the axle-box is adjusted in the trimming-die, as shown in Fig. 2, with that portion which is termed the "flash" resting upon the cutting-edges at 6 6. When the plunger descends, it forces the axle-box downward through the bore of the die, the cutters of which serve to shave off the flash smoothly and evenly. When the plunger recedes, another box is placed in position and the operation is repeated. It will be seen that by this invention the operation of trimming the flash off the axle-box may be accomplished in an exceedingly rapid, efficient, and accurate, as well as an economical, manner. When the exposed portions of the knife or cutter edges become dulled by wear, the said cutters may be moved slightly in the transverse grooves in which they rest, thus exposing new and perfect cutting-edges. When one edge in this manner has been worn out, the knife or cutter may be reversed or turned end for end. Each knife or cutter, it will be observed, has four cutting-edges, all of which may thus be utilized, thus enabling the cutting-edge to be always kept in good condition and effecting a considerable saving in the cost of the cutters.

Having thus described my invention, what I claim is—

1. The trimming of the flash from die-forged axle-boxes by means of a perforated trimming-die carrying independent knives or cutters adjacent to its bore or perforation, in conjunction with a reciprocating mandrel or

plunger serving to force the axle-box vertically through the trimming-die, in which it is placed with the flash resting against the exposed edges of the cutters, substantially as set forth.

2. The vertically-perforated trimming-die having the transversely-arranged knives or cutters, in combination with the vertically-reciprocating plunger, substantially as set forth.

3. The adjustable and reversible knives or cutters, rectangular in cross-section, arranged in the trimming-die, substantially as set forth.

4. The vertically-perforated trimming-die

having the transverse grooves and the beveled recesses, in combination with the adjustable and reversible knives or cutters mounted in said transverse grooves, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WOLCOTT J. PARMELEE.

Witnesses:

BEN C. PRICE,
S. C. STRUTHERS.