

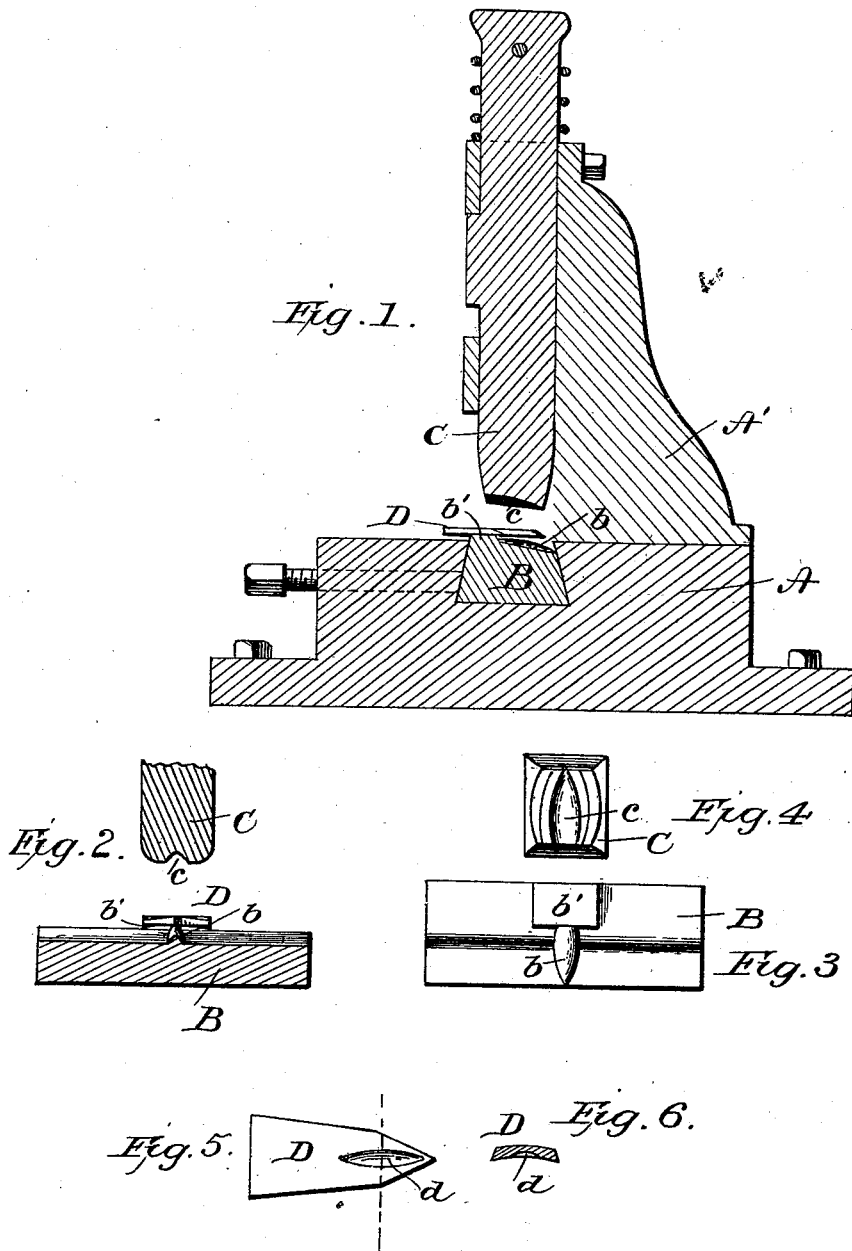
(No Model.)

R. E. POINDEXTER.

MACHINE FOR SHAPING AND SETTING SAW TEETH.

No. 543,752.

Patented July 30, 1895.



WITNESSES
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ROBERT E. POINDEXTER, OF INDIANAPOLIS, INDIANA.

MACHINE FOR SHAPING AND SETTING SAW-TEETH.

SPECIFICATION forming part of Letters Patent No. 543,752, dated July 30, 1895.

Application filed May 15, 1895. Serial No. 549,380. (No model.)

To all whom it may concern:

Be it known that I, ROBERT E. POINDEXTER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Machines for Shaping and Setting Saw-Teeth; and I do hereby 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.

My said invention consists in certain improvements in the dies of machines for setting and shaping saw-teeth—such as is shown in my Patent No. 309,875, dated December 30, 1884, the object being to provide dies by which an indentation may be made in the face of the tooth close to its point at the same time it is given a concave formation and set, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, which are made a part hereof and on which similar letters of reference indicate similar parts, Figure 1 is a central vertical section through one of said machines provided with my improved dies; Fig. 2, a detail sectional view through said dies, showing their formation in cross-section; Fig. 3, a plan view of the stationary die or anvil; Fig. 4, an under side plan of the sliding die; Fig. 5, a plan view of the face of the tooth, and Fig. 6 a cross-section through said tooth.

In said drawings, the portions marked A represent the base supporting the frame carrying the dies; B, the stationary die or anvil; C, the sliding die, and D the saw.

The base A is provided with a standard A', which supports guides in which the sliding die C is mounted, said die being spring supported, as shown. A suitable seat is provided in the base A for the anvil B. This general construction and arrangement are similar to that shown in my former patent above referred to, and, therefore, need not be particularly described herein.

The anvil or stationary die B consists of a block of steel having its upper face horizontal for a portion of its width and tapered toward the back of the machine for the remaining portion of its width, said tapered portion being of the angle required to impart the

proper degree of set to the saw-tooth and of sufficient width to accommodate the length of tooth to be operated upon. An approximately oval-shaped ridge *b* is formed across the tapered portion of said anvil of substantially the form shown in the drawings. Its top is slightly rounded, as shown, while its sides are tapered in nearly straight lines, and it is narrowed and also reduced in height from its center toward the point. Immediately behind said transverse ridge, upon the horizontal portion of said anvil, is formed a rest *b'* for the base of the tooth. Said rest is very slightly convex in form toward its front edge.

The die C is formed with its face tapering to correspond with the taper of the anvil B, and has a groove in its face substantially V-shaped, except that the apex is rounded, as shown. Said groove widens from the back side or point of the die toward the front to correspond with the shape of the ridge on the anvil and the tooth to be operated upon.

The dies are arranged in the machine so that the groove in the die C will be exactly above and register with the ridge on the anvil, as will be readily understood. In actual practice it has been found very difficult to impart this formation, which has been found very desirable, to a saw-tooth, and especially difficult to make any indentation or concave formation in the tooth near its point. My former machine, above referred to, has been used with much success, but the result it accomplishes is only that of concaving the tooth and that at a point a considerable distance back from its point. In operating upon a saw with any such machine the difficulty encountered and to be overcome is that of bursting or cracking the teeth, one such tooth resulting in spoiling an entire saw. My former machine overcame this difficulty successfully when the tooth was operated upon sufficiently back from its point to obviate the danger referred to, but it has not been possible to bring it as near the point of the tooth as is desirable. By the use of my improved dies, as will be readily seen, the operation is entirely changed. The tooth is placed upon the rest on the anvil with its point extending out over the ridge on the inclined portion of the anvil, the extreme point of said tooth ex-

tending slightly beyond the point of said ridge. The die C being then operated by a blow from a hammer or by any power desired operates to bend said tooth down over said ridge, giving
5 it the desired set, at the same time indenting its face close to its point and curving it in cross-section, as shown in Figs. 5 and 6. By reason of the peculiar formation of the dies
10 and their arrangement the operation upon the tooth is that of drawing the sides toward each other or drawing the metal down over the ridge and compressing it, instead of a spreading operation, and the tooth may thus
15 be safely operated upon to give it the desired formation close to the point without danger of splitting it.

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

20 1. In a machine for setting and shaping saw teeth, the combination of a stationary die or anvil formed with a portion of its face ta-

pered, a transverse ridge across said tapered portion, and a movable die formed with a substantially V-shaped groove in its face arranged to register and co-operate with said
25 ridge, substantially as set forth.

2. In a machine for setting and shaping saw teeth, the combination of the stationary die or anvil, B, having a portion of its face tapered and a portion horizontal, the transverse ridge, *b*, on its tapered portion, the rest, *b'*, on its horizontal portion, and the movable
30 die, C, having the flaring V-shaped formation, *c*, in its face and arranged to register and co-operate with the ridge, *b*, on said anvil, substantially as set forth.
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In testimony whereof I affix my signature, in presence of two witnesses, at Indianapolis, Indiana, this 11th day of May, A. D. 1895.

ROBERT E. POINDEXTER.

Witnesses:

GEORGE R. BARBOUR,
JAMES E. NEIGHBOR.