

J. Crookes,

Saw-Set,

N^o 66,304.

Patented July 2, 1867.

Fig 1

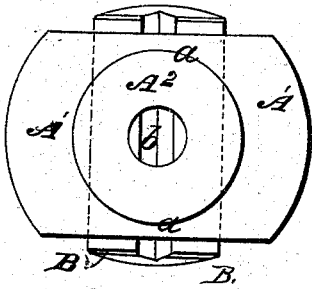
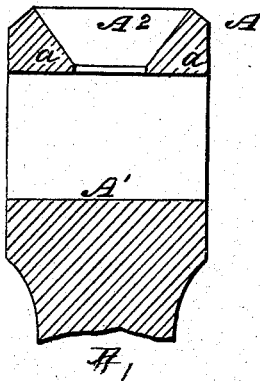
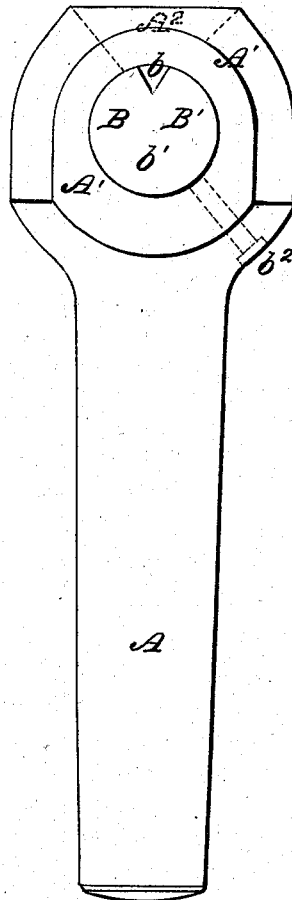


Fig 2



WITNESSES:

S. M. Randolph,
Chas. H. Boyle.

INVENTOR:

Joseph Crookes.

United States Patent Office.

JOSEPH CROOKES, OF ST. LOUIS, MISSOURI.

Letters Patent No. 66,304, dated July 2, 1867.

IMPROVEMENT IN SWAGES FOR UPSETTING SAW-TEETH.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOSEPH CROOKES, of the city and county of St. Louis, and State of Missouri, have invented a new and useful Upsetting Tool for Upsetting Saw-Teeth; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of this invention will be clearly understood by reference to the accompanying drawings, of which—

Figure 1 is an end plan, and

Figure 2 is a side elevation.

To enable those skilled in the art to make and use my improved tool, I will proceed to describe its construction and operation.

A is the handle of the instrument, and one end of this same piece is enlarged into a head, A¹. Through the said head A¹ a circular hole is bored to receive the dies B B', the two dies together forming a perfect cylinder, with the exception of the triangular groove *b*, which is formed by bevelling off two adjacent corners of the said dies, and the groove so formed should be fixed in the front part of the die when it is placed in the head A¹, and the dividing line *b'*, between the two pieces B B', should coincide with the axial line of the handle, prolonged through the head part of it. The two dies B B' may be held in position in the head A¹ by means of the set-screw *b*². An orifice, A², shown in plan in fig. 1, and by the dotted lines in fig. 2, is made in the forward end of the head A¹, so as to admit the end of the tooth to be operated upon to contact with the dies.

I am aware that dies have been inserted in the ends of handles before now, for this same purpose, but the excessive wedging or splitting action to which they were subjected while in use has produced not only the destruction of the die, but also of its handle. This destructive feature of the aforesaid instruments is wholly obviated in the present invention by boring the hole for the dies directly through the solid metal of the head, and thus leaving the metal parts *a a* to act, as it were, as bands around the dies, to prevent such bursting or splitting tendency during use. A detail section of the head more clearly shows the construction of the orifice A² and the parts *a a*.

One great advantage of the instrument constructed as above described is that the parts are circular, and hence may be perfectly fitted in a lathe. The advantage of the construction of the dies B B' in two pieces is, that the sharp edge of the saw-tooth will pass down into the line *b'*, and thereby be prevented from becoming dull in the upsetting operation.

I am aware that in the Letters Patent granted J. E. Emerson, cylindrical dies are shown, these being seated or fixed in the tool-end of a die-stock, and that, moreover, split dies have been used and described, as in the Letters Patent to A. F. Stone. I therefore in nowise claim the forms or arrangements thus shown in prior use; but what I do claim, and desire to secure by Letters Patent, is—

The die-stock A, having the mortises for setting the die B B' transversely in the stock, and the passage A², when arranged and combined with the split die B B', substantially as set forth.

JOSEPH CROOKES.

Witnesses:

S. M. RANDOLPH,

CHAS. H. BOYLE,