

R. Cook.

Making Augers.

N^o 13,780.

Patented Nov. 13, 1855.

Fig. 12.

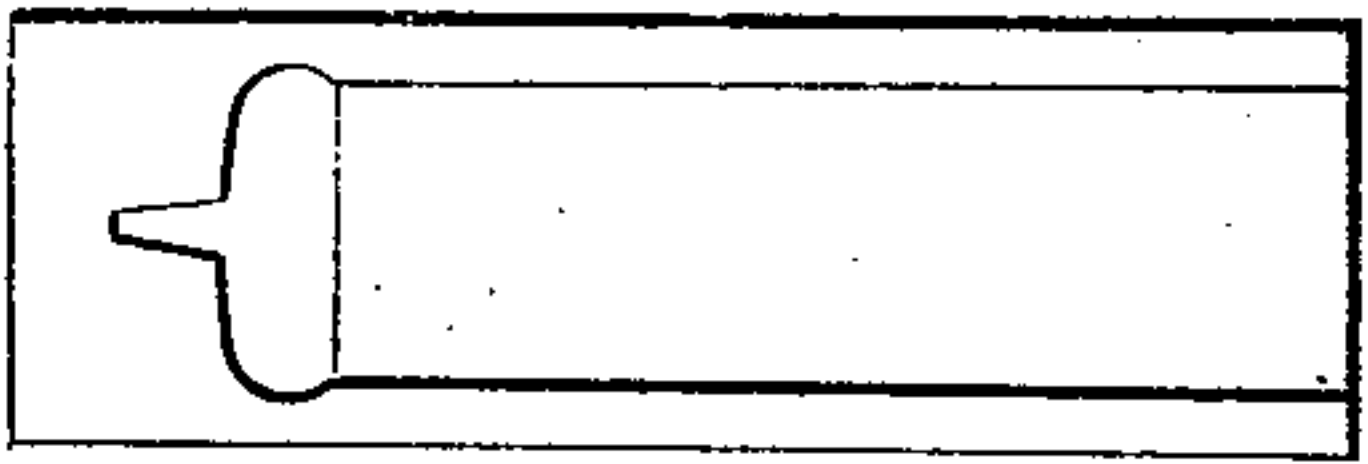


Fig. 11.

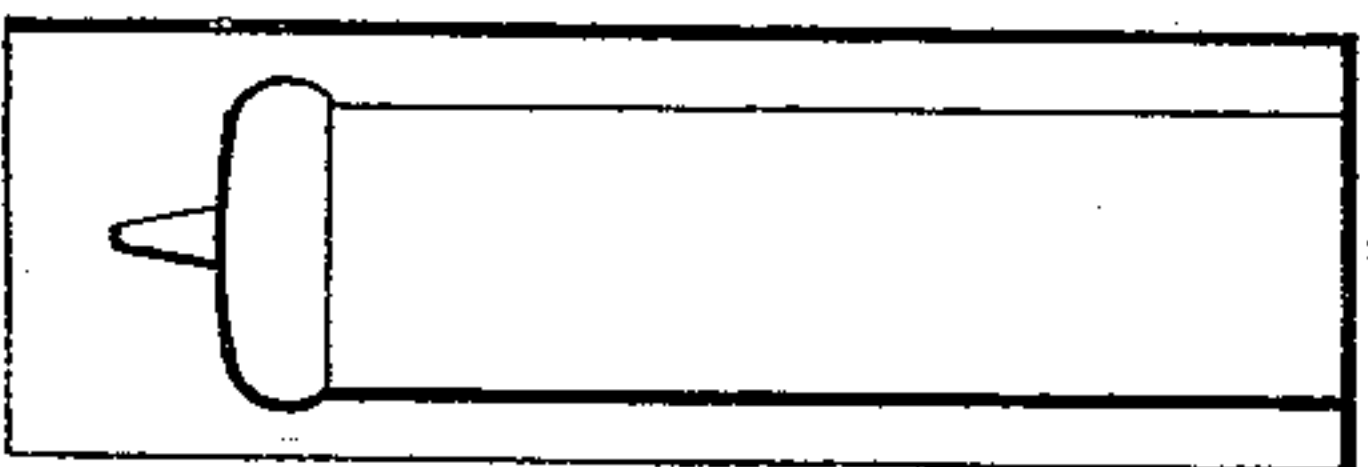


Fig. 14.

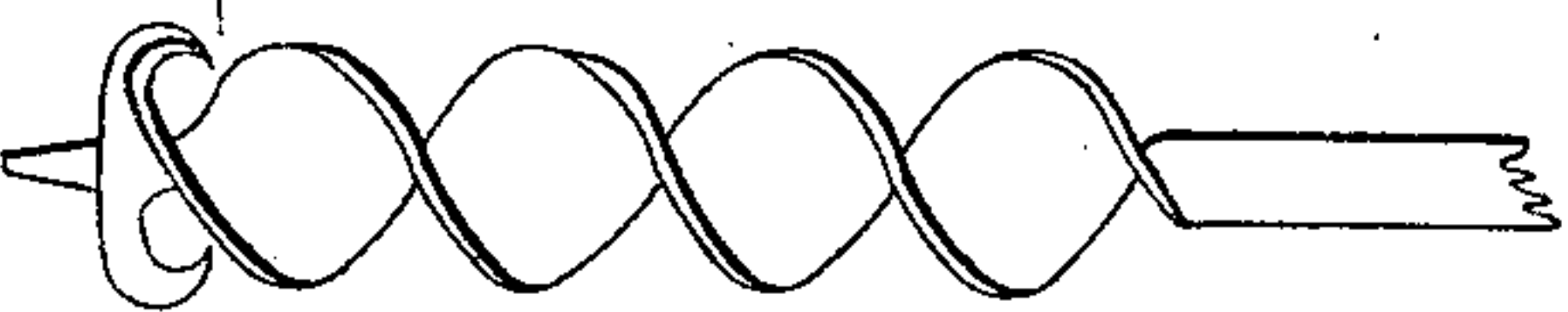


Fig. 13.

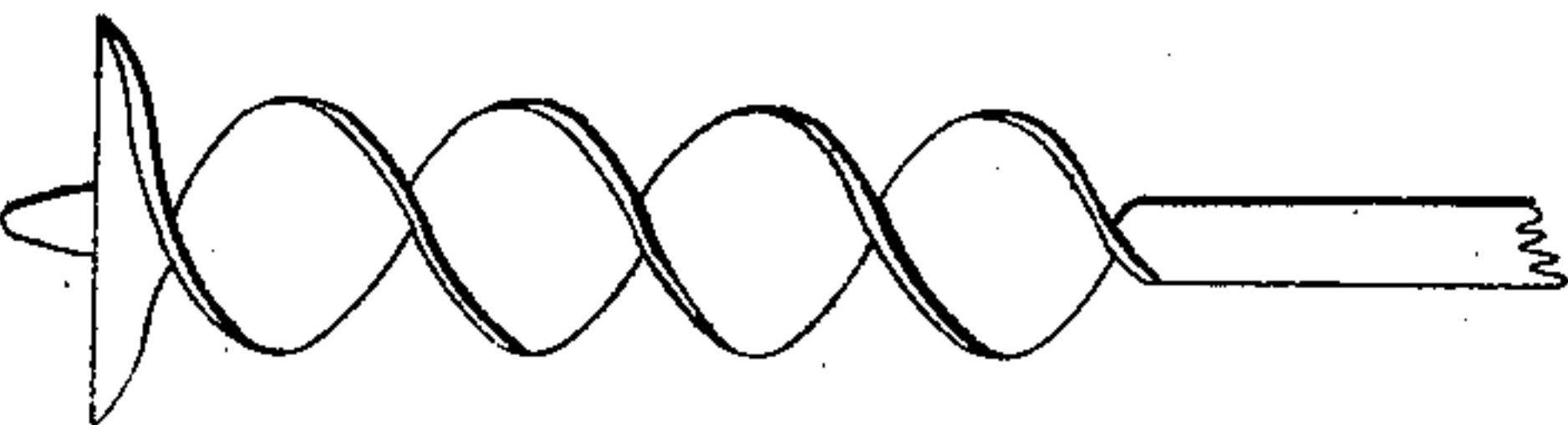


Fig. 9.



Fig. 8.

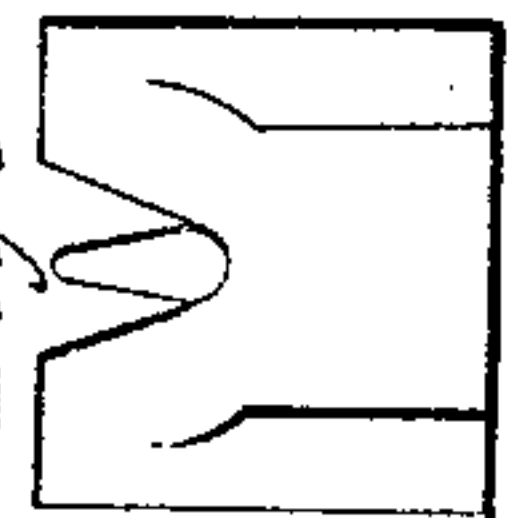


Fig. 10.

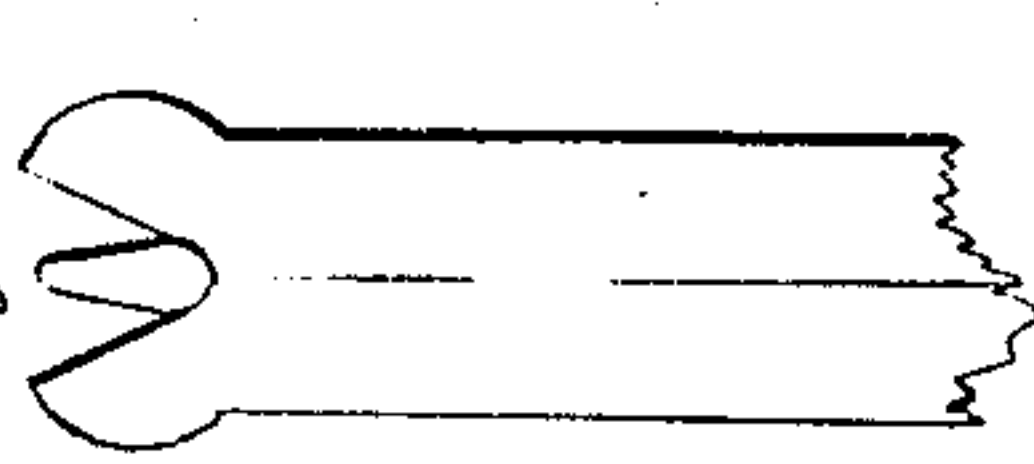


Fig. 7.



Fig. 6.

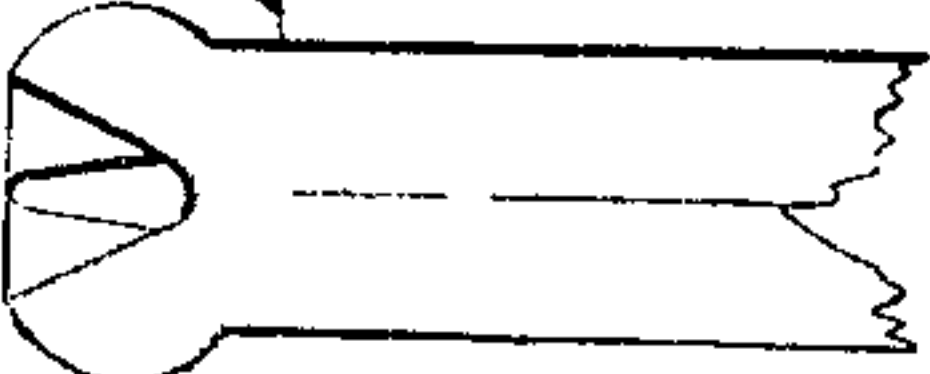


Fig. 5.

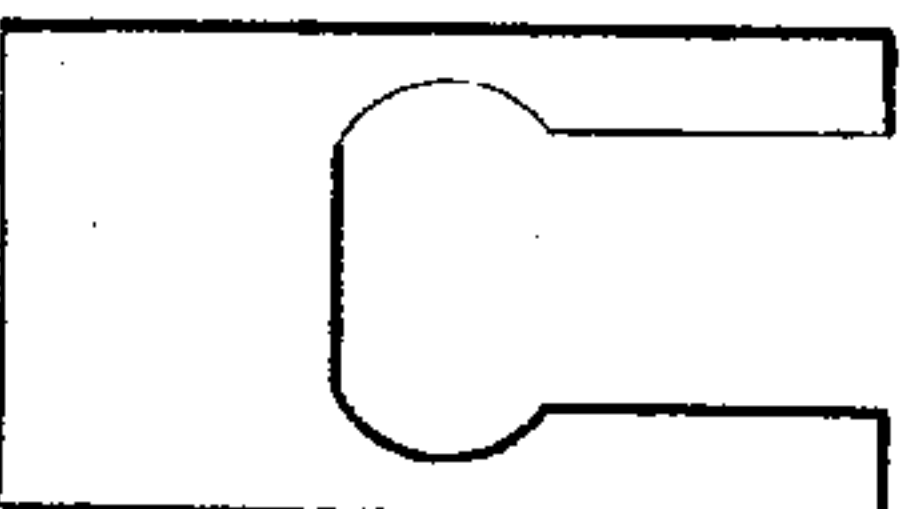


Fig. 2.

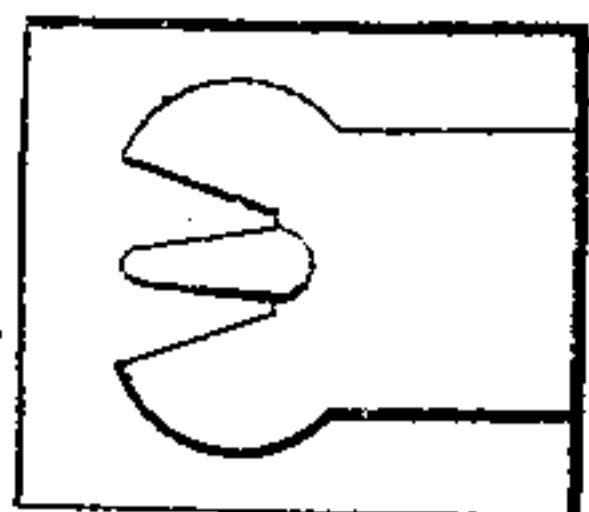


Fig. 3.

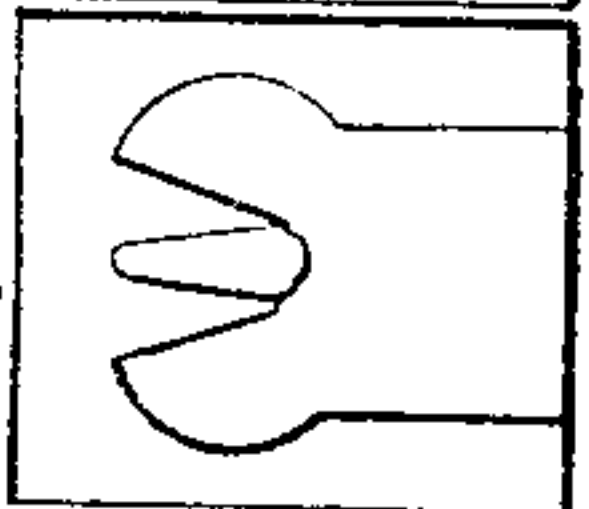


Fig. 4.

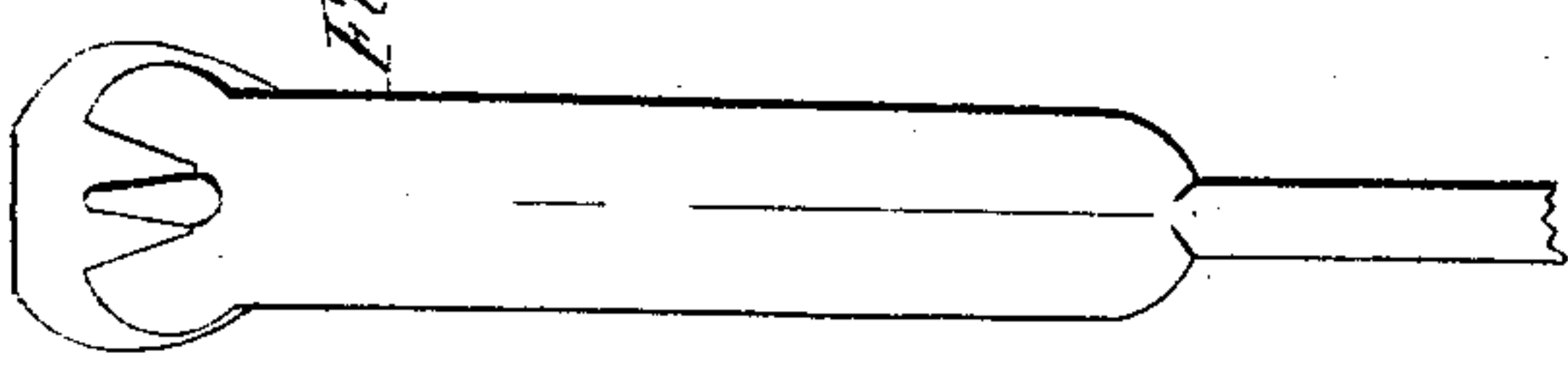
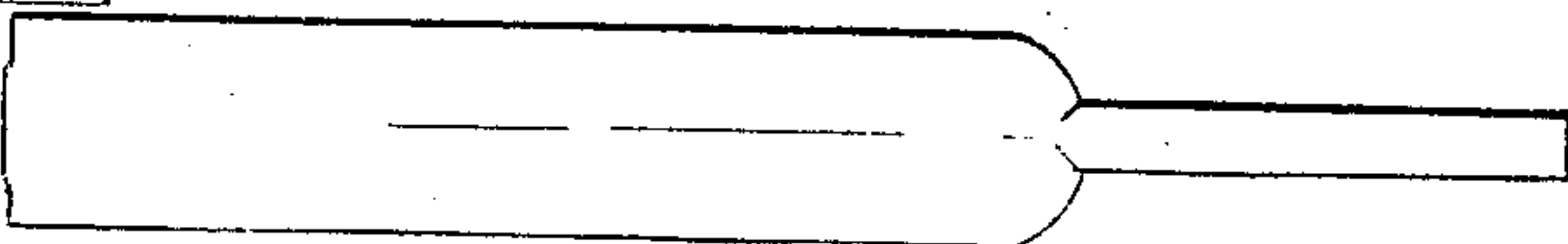


Fig. 1.



UNITED STATES PATENT OFFICE.

RANSOM COOK, OF SHELBURNE FALLS, MASSACHUSETTS.

MAKING BORING IMPLEMENTS.

Specification of Letters Patent No. 13,780, dated November 13, 1855.

To all whom it may concern:

Be it known that I, RANSOM COOK, of Shelburne Falls, in the county of Franklin and State of Massachusetts, have invented
5 a new and useful Improvement in the Manufacture of Certain Boring Implements; and I do hereby declare that the following is a full and exact description thereof, reference
10 and to the figures of reference marked thereon.

The nature of my invention consists in a new method or process of forging and shaping the lips and heads of the particular
15 boring implements described, by which means a uniformity of shape and increased expedition in the manufacture is secured, while much of the injury to the steel produced by oft repeated heatings is avoided;
20 all as hereinafter set forth.

To enable others skilled in the art to follow the same method or process, I proceed to describe it as follows.

Having first made and prepared of steel,
25 the dies and implements represented in Figures 2, 3, 5, 7, 8, 9, 11, 12, which should be hardened and tempered, I secure Figs. 2 and 3, in a drop, trip hammer or other mechanical contrivance by which they may at pleasure
30 be brought forcibly together with their cut faces toward each other. Figs. 5 and 7, I secure in a press, placing Fig. 5, in the bed or stationary part of the press and Fig. 7, in the upper or movable part of it, so that
35 in use Fig. 7, may alternately enter within the cutting in Fig. 5, and withdraw from it, as the press is put in motion by mechanical or human power. Figs. 8 and 9, are also
40 used in a press; 8, being stationary and 9, movable in the same manner as 5 and 7. Figs. 11 and 12, I use in a small trip hammer which has a quick and light movement.

The following are the manipulations of this process: The steel for the boring implement being drawn and plated or forged
45 into the shape shown as Fig. 1, is heated red hot at the flat end and then laid on Fig. 2, when Fig. 3, which is secured in the lower end of a sliding weight or pawl, resembling
50 that of a pile driver, is dropped upon the

auger plate, thus instantly producing the form or shape shown by Fig. 4. A sufficient number of plates being kept in the fire this operation is performed as fast as they can be conveniently handled. When thus prepared they are taken to the press containing
55 the cutting punches or dies, Figs. 5 and 7, which press is moved by machinery. The workman embracing the opportunity when Fig. 7 is rising, places the plate Fig. 4 over
60 the cavity in Fig. 5, when Fig. 7, by its descent forces the plate into the cavity, thereby cutting off the surplus stock without reheating the plate and with as much rapidity
65 as the first operation, thus bringing the plate to the shape shown by Fig. 6. The auger plates are next taken to the press where Figs. 8 and 9 are used, by which the surplus stock yet remaining between the center
70 and the lips is cut and by a movement similar to the one last described. Thus by three mechanical movements, each occupying about one second of time, the plate is brought
75 from the condition shown by Fig. 1, to that represented by Fig. 10, and with entire uniformity of shape.

The plate being then twisted in the usual manner and the lips turned as shown by Fig. 13, is again heated and the lips are bent
80 into shape in part, around a small stake or rod, when the implement is placed between the dies Figs. 11 and 12, and turned around while the hammer is quickly moving, thus bringing the head of the boring implement,
85 (by which name the cutting end is called) into the perfect form shown in Fig. 14.

I am aware that some dies have been used in the manufacture of augers but differing entirely from mine and not accomplishing
90 the same purposes.

I therefore merely claim—

The method herein described of forging and shaping the lips and heads of the particular kind of boring implements set forth by the successive stages of the stamping,
95 substantially in the manner described.

RANSOM COOK.

Witnesses:

E. R. COOK,
ARTHUR MAXWELL.