

WILLIAM H. RICHARDS.

Improvement in Center Bits.

No. 125,759.

Patented April 16, 1872.

Fig. 1.

Fig. 2.

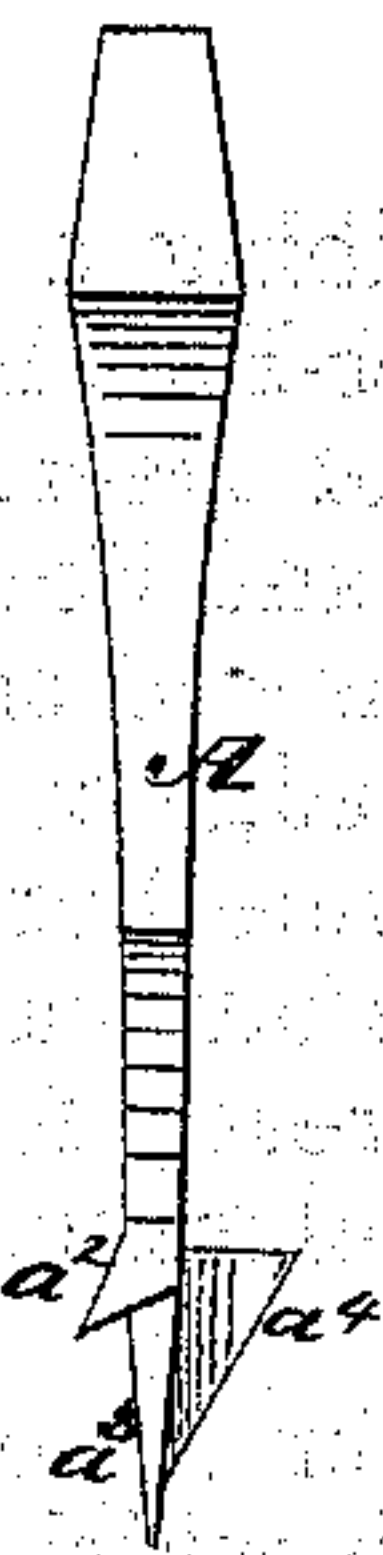
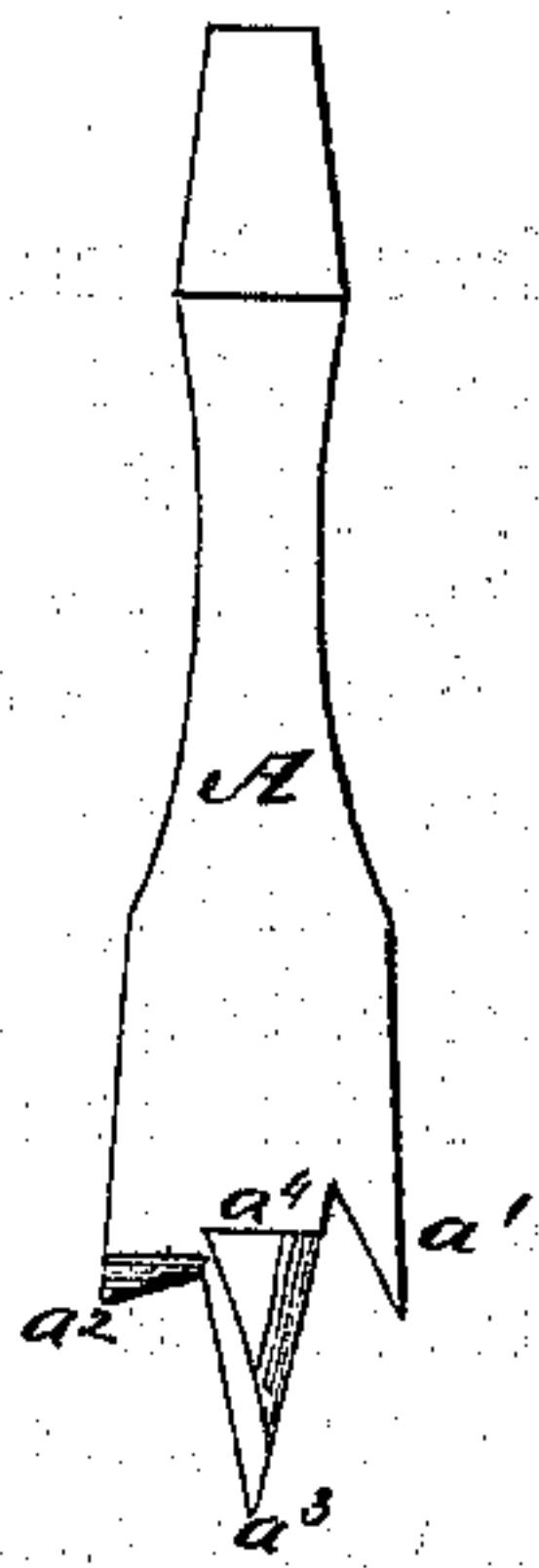


Fig. 3.

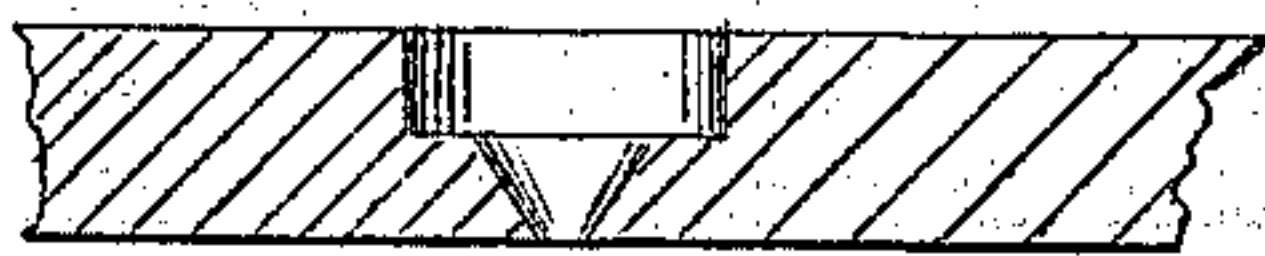
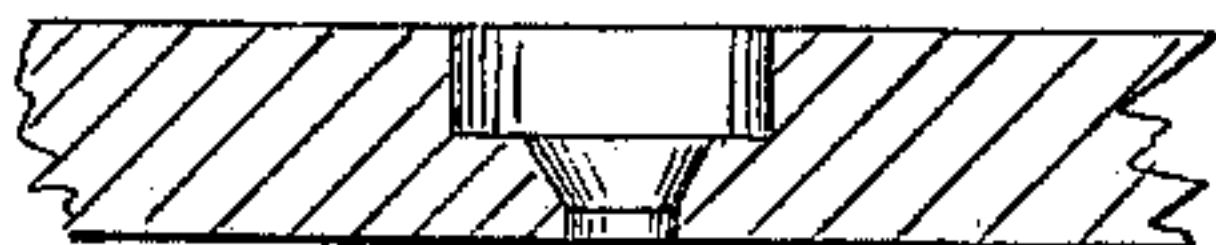


Fig. 4.



Witnesses:

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## UNITED STATES PATENT OFFICE.

WILLIAM H. RICHARDS, OF DEERFIELD CORNERS, NEW YORK.

## IMPROVEMENT IN CENTER-BITS.

Specification forming part of Letters Patent No. 125,759, dated April 16, 1872.

Specification describing a new and useful Improvement in Center-Bits, invented by WILLIAM H. RICHARDS, of Deerfield Corners, in the county of Oneida and State of New York.

Figure 1 is a side view of my improved center-bit. Fig. 2 is an edge view of the same. Fig. 3 represents a hole bored with my improved bit just as the bit leaves it; and Fig. 4 represents the hole ready for the screw.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved center-bit which shall be so constructed as to bore the hole and countersink it for the screw-head and plug at one operation, and which shall at the same time be simple in construction, convenient in use, and inexpensive in manufacture, and which may be used for many different-sized screws; and it consists in the combination of a countersink lip or wing with the center-bit, as hereinafter more fully described.

A is the center-bit, the shank of which is attached to a bit stock or holder in the ordinary manner.  $a^1$  is the point or cutter that cuts

around the circumference of the hole.  $a^2$  is the lip which cuts out the chips or shavings; and  $a^3$  is the center-point. Upon the side of the point  $a^3$  is formed an inclined or semi-conical lip,  $a^4$ , which forms the conical countersink for the head of the screw. With this bit the hole is left, as shown in Fig. 3, and the central hole has only to be enlarged according to the size of the body of the screw, as shown in Fig. 4. The hole thus formed allows the plug to rest upon the bottom or shoulder of the first or plug countersink, which gives the glue a much better hold than when the hole is bored with an ordinary bit.

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

The inclined or semi-conical lip or countersink  $a^4$ , formed upon the central point  $a^3$  of a center-bit, substantially as herein shown and described, and for the purpose set forth.

WILLIAM H. RICHARDS.

Witnesses:

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