

W. McCROSSON.

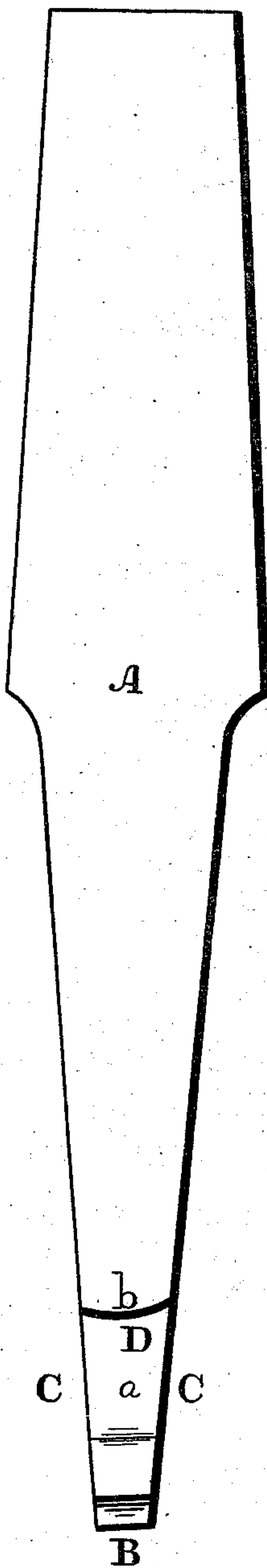
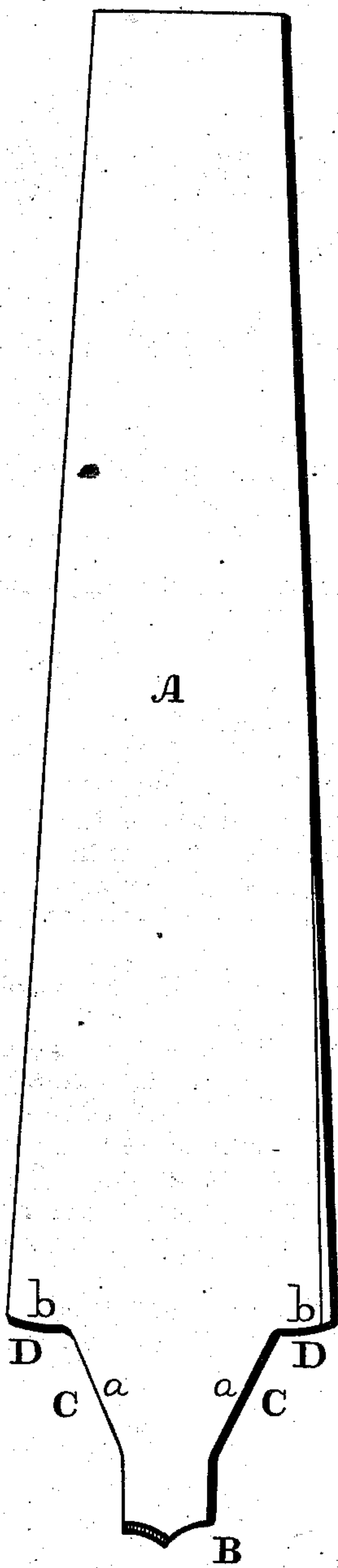
Combined Drills, Countersinks, and Planers.

No. 158,958.

Patented Jan. 19, 1875.

Fig. 1.

Fig. 2.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN COMBINED DRILLS, COUNTERSINKS, AND PLANERS.

Specification forming part of Letters Patent No. **158,958**, dated January 19, 1875; application filed  
December 24, 1874.

*To all whom it may concern :*

Be it known that I, WILLIAM McCROSSON, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in a Combined Drill, Countersink, and Planer; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of the device embodying my invention. Fig. 2 is an edge view thereof.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists in a tool that will serve the purposes of a drill, countersink, and planer.

Referring to the drawings, A represents the body of the tool, whose lower end is formed into a drill-point, B. The sides *a* of the body above the drill-point are conical or flaring, the widest part being above, and constitutes a countersink, C. At the upper termination

of the conical sides *a* there are shoulders *b*, which form the planer D of the tool.

The operation is as follows: The drill B forms the opening in the metal. The conical sides *a* countersink the opening. The shoulders *b* plane the top edge of the opening, and remove therefrom the roughness usually produced in drilling.

It will be seen that the operations of drilling, countersinking, and planing are performed successively in the same tool.

If the metal is previously drilled, the point B merely enters the formed opening, and the conical sides *a* immediately perform their countersinking operation.

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

The combined drill, countersink, and planer, substantially as and for the purpose set forth.

WM. <sup>his</sup> X McCROSSON.  
mark.

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