

(Model.)

A. E. ELLINWOOD.
Drill Chuck.

No. 243,116.

Patented June 21, 1881.

Fig. 1.

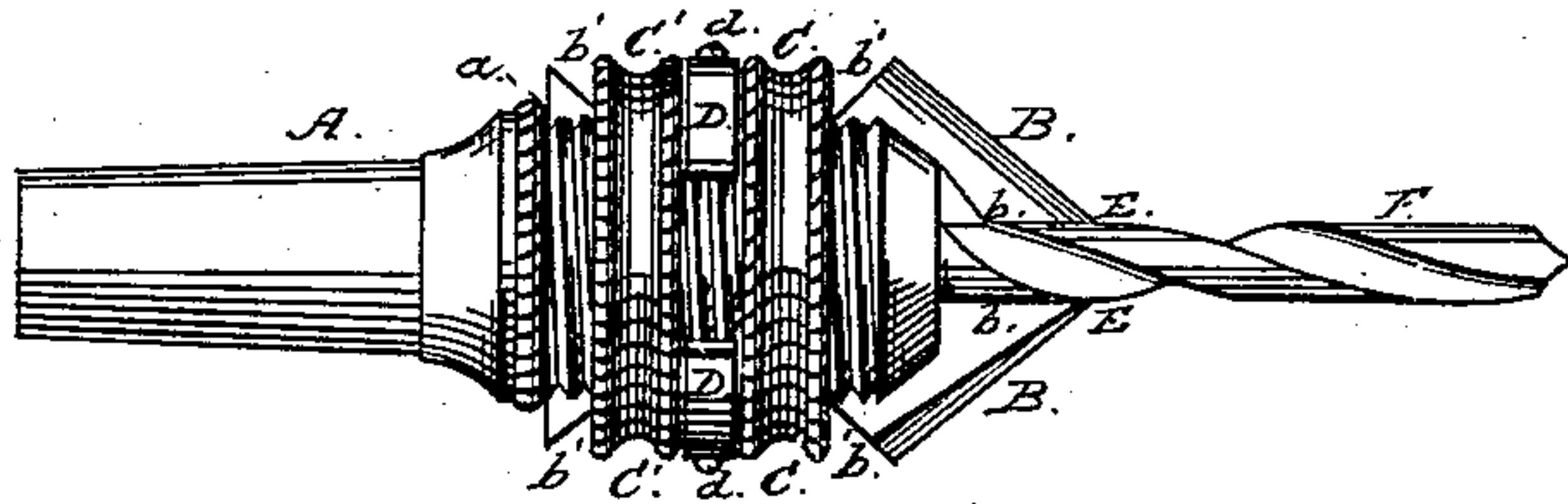


Fig. 2.

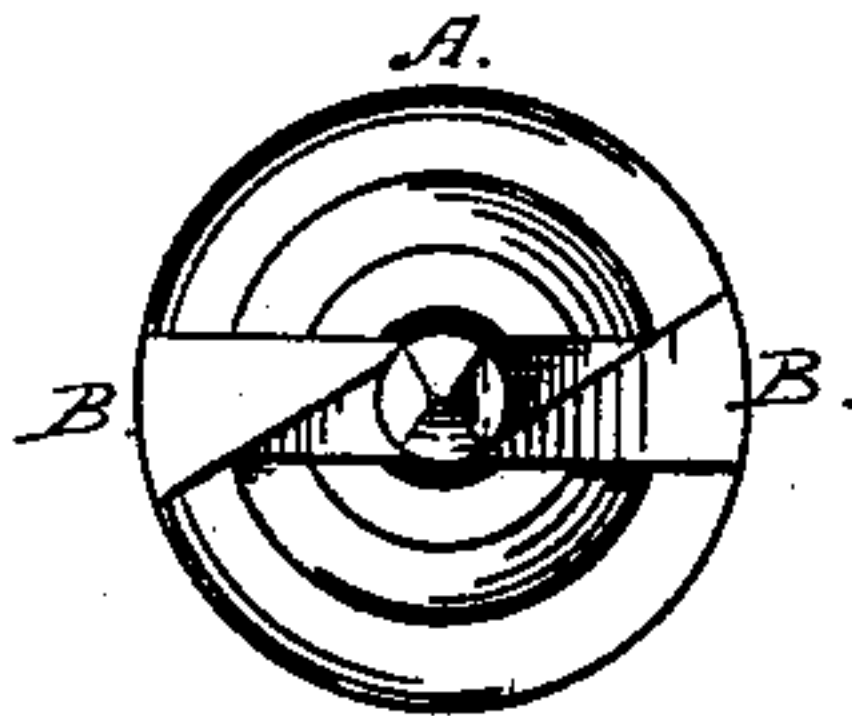


Fig. 3.

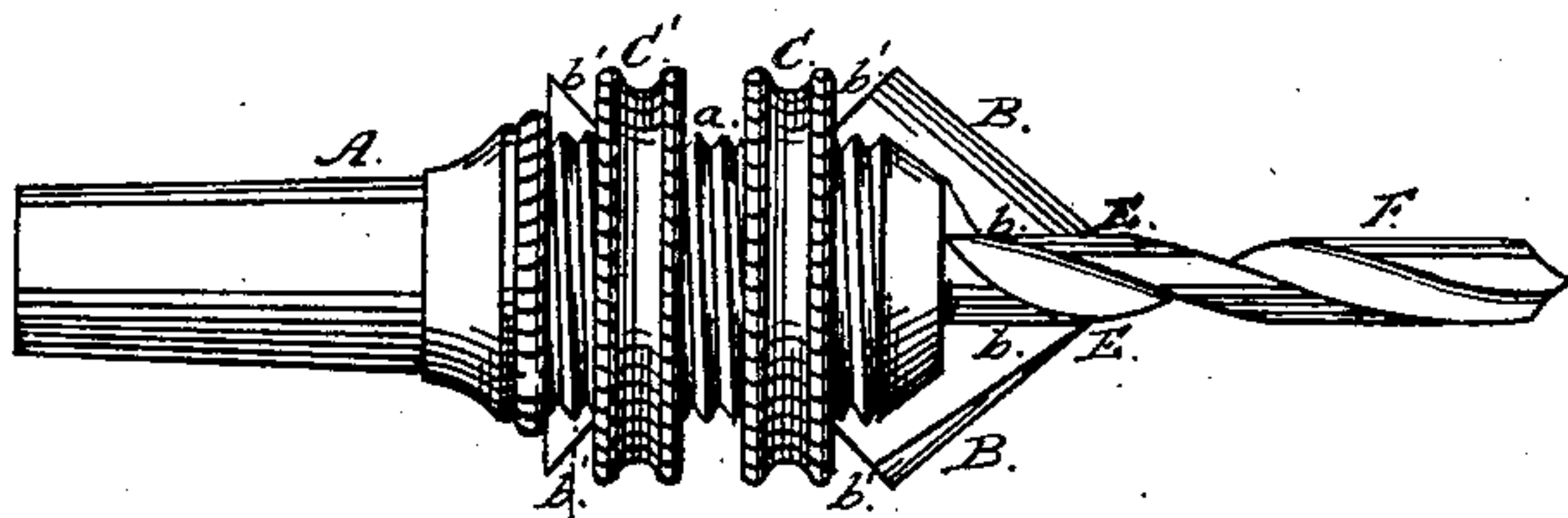


Fig. 4.

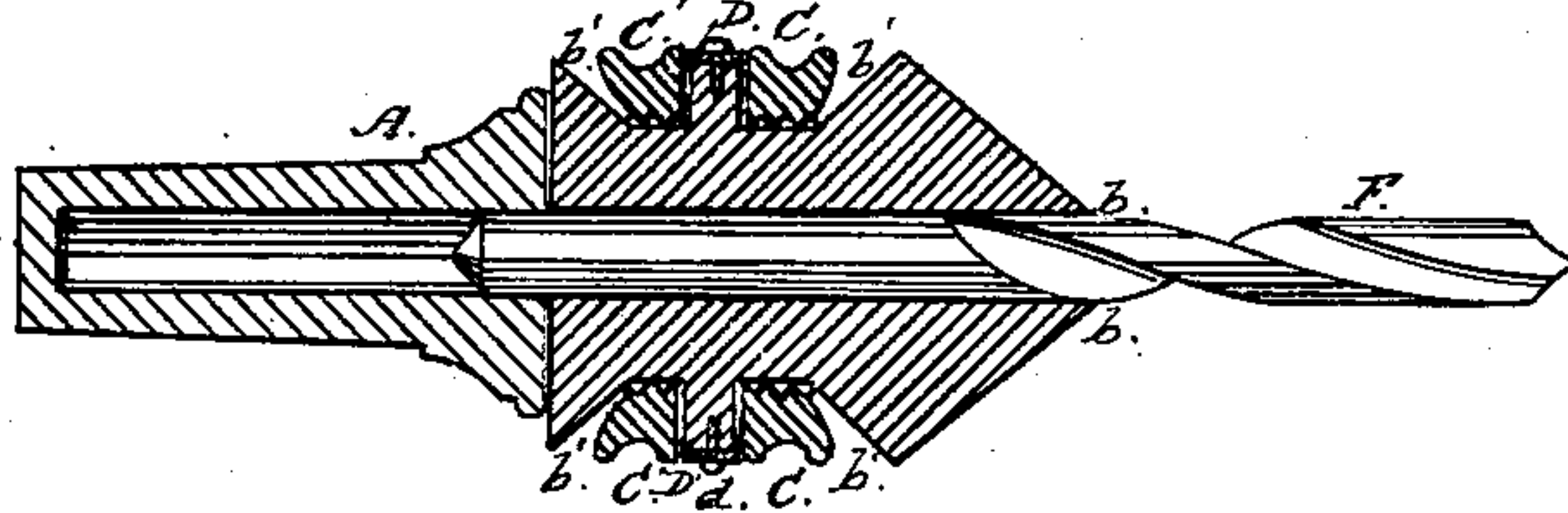
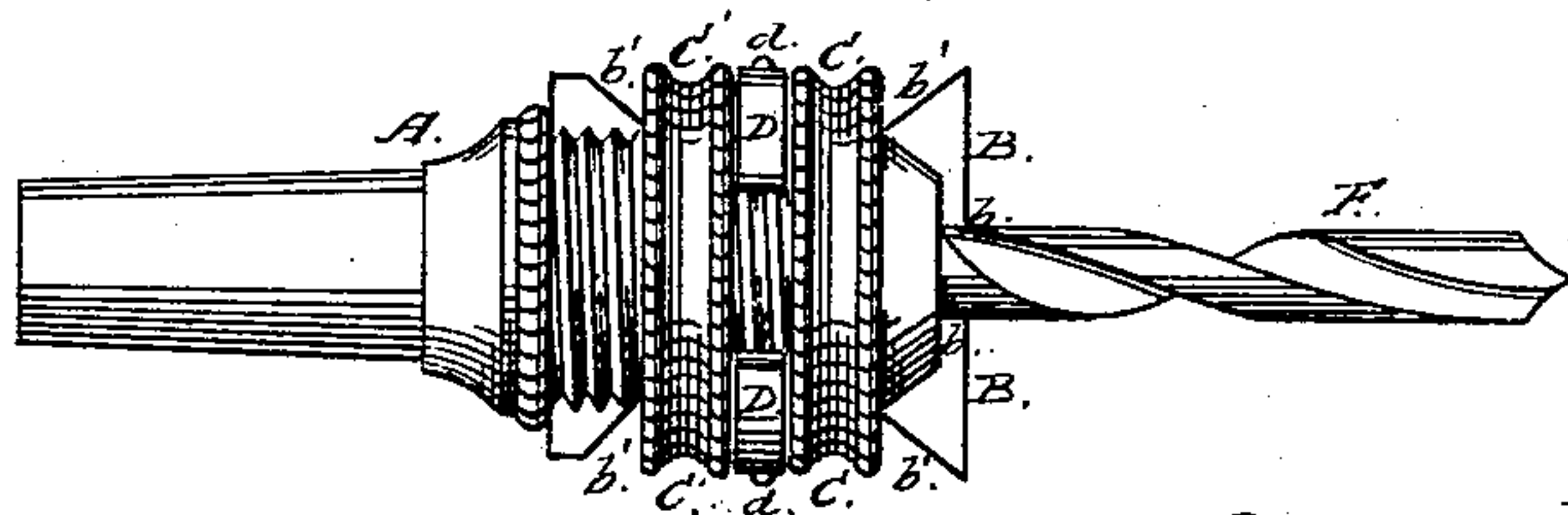


Fig. 5.



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UNITED STATES PATENT OFFICE.

AUGUSTUS E. ELLINWOOD, OF AKRON, OHIO.

DRILL-CHUCK.

SPECIFICATION forming part of Letters Patent No. 243,116, dated June 21, 1881.

Application filed May 3, 1881. (Model.)

To all whom it may concern:

Be it known that I, AUGUSTUS E. ELLINWOOD, of Akron, in the county of Summit and State of Ohio, have invented a certain new and Improved Chuck or Tool-Holder; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view of an embodiment of the invention, in which the clamping-jaws are adapted to perform the office of a countersinking-tooth; Fig. 2, an end view of the same; Fig. 3, a view of a similar embodiment, with the opening-springs omitted; Fig. 4, a sectional view; and Fig. 5, a view of a form in which plain clamping-jaws are employed.

Similar letters of reference in the several figures denote the same parts.

My invention has for its object to provide an improved chuck or tool-holder of cheap and simple construction and adapted to a variety of uses; and to this end it consists, primarily, in the combination, with a screw-threaded and longitudinally-slotted stock, of clamping-jaws working within the slotted stock and having outwardly-projecting shoulders at their ends, and with two screw-threaded rings working upon the screw-threaded portion of the stock between and against the shoulders of the jaws, whereby, by the operation of the rings against the said shoulders, the jaws may be made to clamp either a straight or a tapering shanked tool.

It further consists in the employment of springs for the purpose of pressing the jaws outward; and it also consists in constructing the jaws so as to adapt them to operate as a countersink in addition to holding the tool.

In the drawings, A represents the stock of the instrument, the cylindrical portion *a* of which is slotted longitudinally and screw-threaded, as shown. Within this stock are fitted jaws B B, two, four, or more in number, according to the number of slots in the stock, but preferably only two. These jaws are constructed straight on their inner or clamping edges, *b*, and are preferably grooved longitudinally, as shown, on said edges, and serrated or rough-

ened or not, as preferred. On their backs or outer edges they are provided with shoulders *b'* *b'*, preferably inclined inward; and working between these shoulders upon the screw-threaded portion of the stock are two screw-threaded rings, C C, the outer faces of which are made beveling to correspond to the bevel of the shoulders. By screwing the rings toward each other the jaws are permitted to be spread apart; but by screwing them in the opposite direction they come in contact with the shoulders *b'* *b'* and force the jaws together, so as to clamp the shank of a tool or other article inserted between them. Whether said shank be straight or tapering, the gripping-faces of the jaws accommodate themselves to suit either form. At or near their middles and between the rings C C the jaws are preferably provided with semi-elliptic springs D, the same being secured centrally by screws *d* or otherwise, and bearing with their ends upon the screw-threaded part of the stock, as shown. These springs operate to force the jaws outward and to keep them opened properly for the admission of the article to be held. They are not absolutely essential, as a construction like that shown in Fig. 5, omitting them, may be employed with good effect. I prefer, however, to employ them.

The projecting ends of the jaws may be made plain, as shown in Fig. 5, or, as seen in the other figures, may be formed into cutting-points E. This latter construction is very useful where the chuck or holder is employed for holding a drill or boring-tool, such as F, Figs. 1 and 2, in which case the points E operate to form a countersink, thus rendering unnecessary the employment of a special separate countersinking-tool at a subsequent operation.

The invention can be applied to lathes, drill-holders of various kinds, carpenters' braces, and to many other uses which will at once suggest themselves.

I claim as my invention—

1. The combination of the screw-threaded and longitudinally-slotted stock, the clamping-jaws working loosely therein and having the outwardly-projecting shoulders, and the two screw-threaded rings working on the stock be-

tween and against the shoulders of the jaws, substantially as described, for the purpose specified.

2. The combination of the screw-threaded
5 and slotted stock, the clamping jaws working loosely therein and provided with springs for forcing them outward, and the two screw-rings working between and against the shoulders of the jaws, substantially as described.

10 3. The combination of the screw-threaded and slotted stock, the jaws, and the clamping screw-rings, when said jaws are formed

with the cutting-points, substantially as described.

4. The combination of the screw-threaded 15 and slotted stock, the jaws having the cutting or countersinking points, with the drill clamped by said jaws, and the clamping screw-rings, substantially as described.

AUGUSTUS E. ELLINWOOD.

Witnesses:

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J. LEET YOUNG.