J. A. B. WILLIAMS.

HOLDERS FOR TOOLS.

No. 170,694. Patented Dec. 7, 1875.

Fig 1.

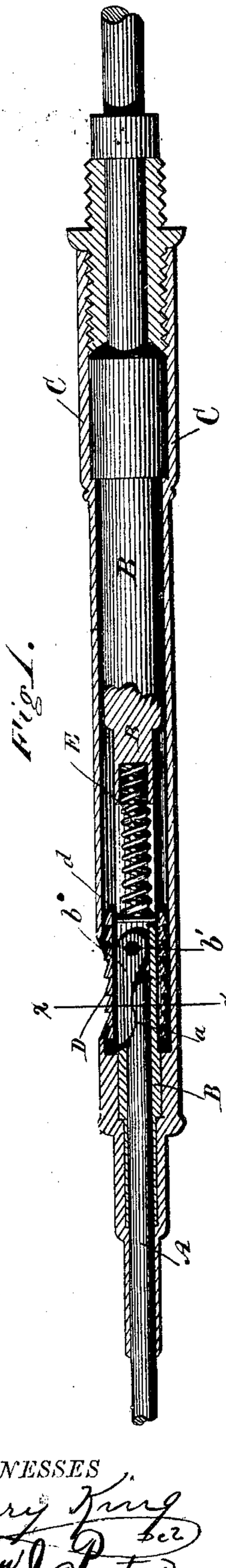


Fig 3.

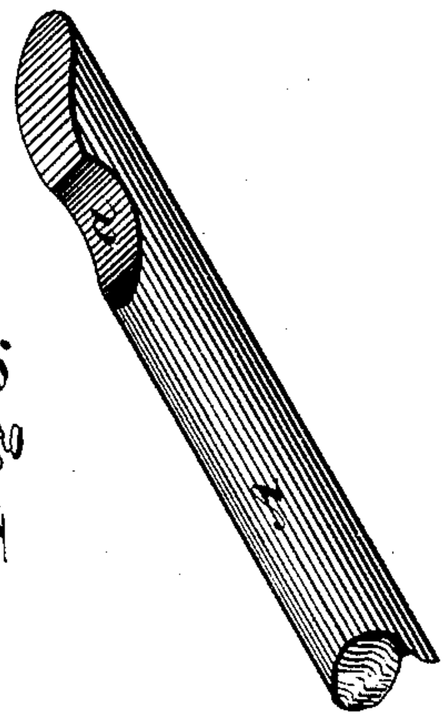


Fig 2.

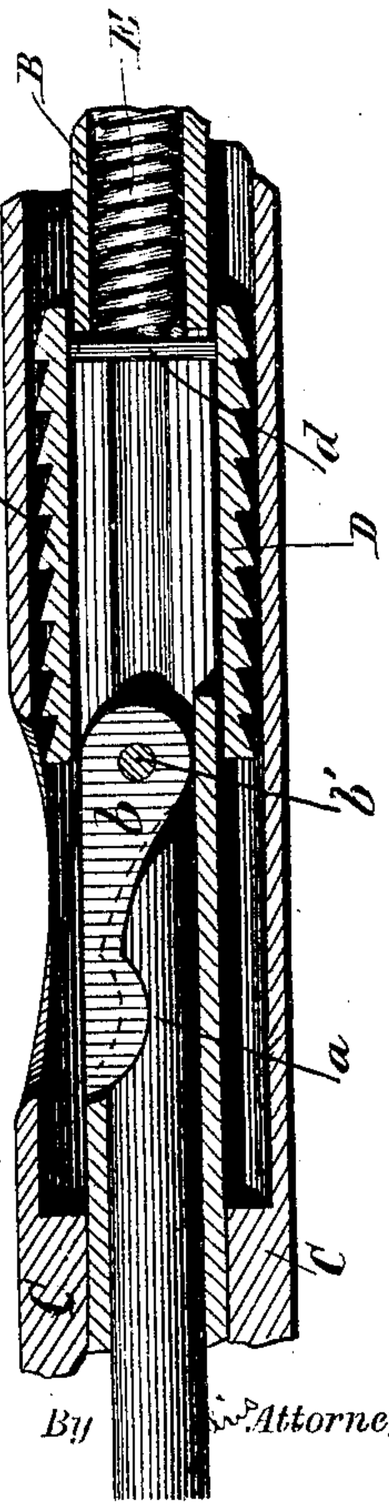
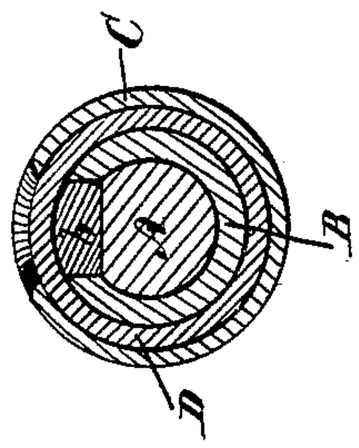


Fig 4.



WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN A. B. WILLIAMS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO SAMUEL S. WHITE, OF SAME PLACE.

IMPROVEMENT IN HOLDERS FOR TOOLS.

Specification forming part of Letters Patent No. **170,694**, dated December 7, 1875; application filed December 15, 1874.

To all whom it may concern:

Be it known that I, JOHN A. B. WILLIAMS, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Holders for Tools and Implements, of which the following is a specification:

The object of my invention is to enable a tool or implement to be readily inserted into its socket or holder, or removed therefrom, and yet to hold it securely while in operation.

The subject-matter claimed is hereinafter specified.

In the accompanying drawings, which show my invention as embodied in the best way now known to me, Figure 1 represents a vertical longitudinal central section through the hand-piece of a dental engine embracing my improvements; Fig. 2, a similar enlarged view of a portion of the same; Fig. 3, a view in perspective of the butt-end of the tool-shaft; and Fig. 4, a transverse section through the instrument on the line *x x* of Fig. 1.

In this instance the tool-shank A is shown as constructed with a beveled end, and with a notch or recess, *a*, in one side thereof, near said end. This shank is inserted in a tubular chuck or tool-holder, B, mounted in bearings in a handle or hand-piece, C. This tool-holder may be rotated in any suitable well-known way. A locking-latch, *b*, provided with a hook or projection corresponding in outline with the recess *a* in the tool-shank, rocks on a pivot-pin, *b'*, passing through the chuck, so as to swing freely transversely to the axis of the tool, the chuck or tool-holder being slotted for this purpose. A grooved thimble, D, slides freely endwise on the tool-holder, being provided with a cross-bar, *d*, working in guide-slots in the chuck, and acted upon by a spring, E, the tendency of which is to keep the thimble thrust over the joint at the junction of the latch and tool, thus keeping them securely locked.

To remove the tool, the thimble is retracted, and the tool drawn out, the latch rising for that purpose. To insert the tool, the collar or thimble is drawn back, the tool-shank inserted in the chuck and turned until its bevel-face comes parallel to that of the latch, when the latter rises, and the tool can be shoved in until the projection on the latch comes opposite the recess in the shank, when the latch drops, and the thimble is thrown forward by the spring, thus securely locking the parts together. The collar can be retracted by inserting the nail of the operator through the slot in the hand-piece, or in any other well-known way.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the slotted hand-piece, the slotted chuck revolving therein, the locking-latch pivoted in the chuck, the recessed tool-shank, the collar sliding on the chuck, and the spring acting on the collar, these members being constructed and operating in combination, substantially as hereinbefore set forth.

In testimony whereof I have hereunto subscribed my name.

JOHN A. B. WILLIAMS.

Witnesses:

R. D. BOKUM,

J. W. DE BARGER.