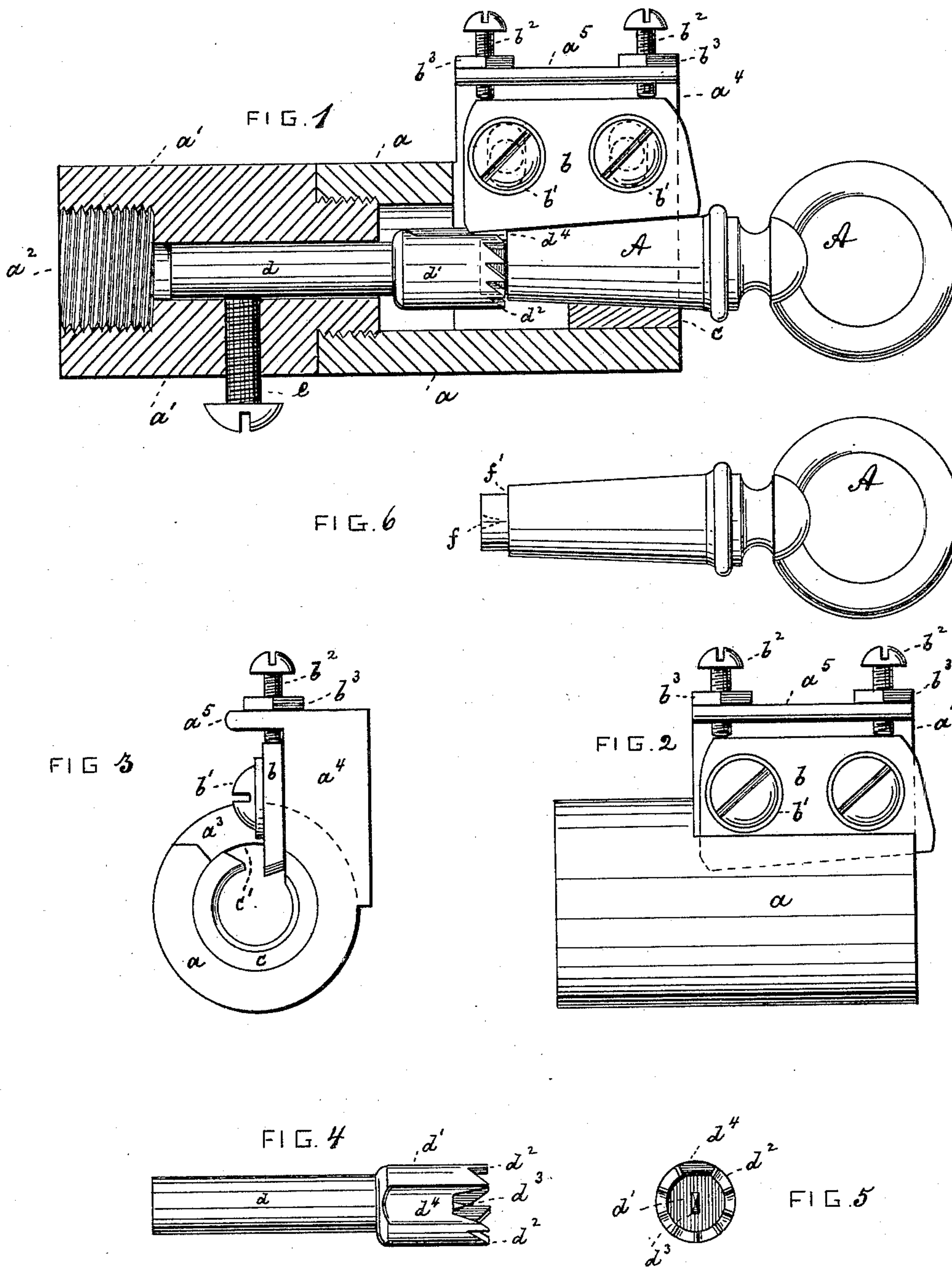


(No Model.)

J. F. BROWN.
TOOL FOR TAPERING PLUGS.

No. 433,615.

Patented Aug. 5, 1890.



WITNESSES

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JOHN F. BROWN, OF BROOKLYN, NEW YORK.

TOOL FOR TAPERING PLUGS.

SPECIFICATION forming part of Letters Patent No. 433,615, dated August 5, 1890.

Application filed May 13, 1890. Serial No. 351,708. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. BROWN, of Brooklyn, New York, have invented an Improved Finishing-Tool for Tapering Plugs, of which the following is a specification.

This invention relates to a tool by which the surface of cast tapering plugs may be quickly planed or finished.

It consists in the various features of improvement, more fully pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal central section of my improved tool; Fig. 2, a side view of sleeve *a*; Fig. 3, an end view thereof; Fig. 4, a side view of the centering-pin *d*; Fig. 5, an end view thereof, and Fig. 6 a side view of a plug finished by the tool.

The letter *a* represents a tubular sleeve having a tapped end, by which it is connected to a second sleeve *a'*. This sleeve has a tapped socket *a''*, by which it may be mounted upon the spindle of a lathe. If desired, the sleeves *a a'* may, however, be made in one piece. The sleeve *a* is partly cut away at one end, as at *a''*, for the introduction of a knife, cutter, or planer *b*. This knife has a tapering cutting-edge, Fig. 2, and is secured by screws *b'*, entering slots in the knife, to a projection *a''* of sleeve *a*. Set-screws *b''*, passing through a flange *a'''* of projection *a''* and bearing upon the upper edge of the knife, permit its adjustment. The set-screws *b''* carry jam-nuts *b'''*, as shown. Within the sleeve *a* there is placed a tapering bushing *c*. This bushing may be removed when worn, and it is slotted, as at *c'*, in line with the slot *a'''* of sleeve *a* for the introduction of the knife *b*. Through the sleeve *a'* there passes a centering-pin *d*, having a head or enlargement *d'*, that enters the bore of sleeve *a*. This head is provided with a serrated circular cutting-edge *d''* and with a central prong or drill *d'''*. The pin *d* is adjustable lengthwise, and is locked in position by a screw *e* passing through a tapped perforation of sleeve *a'*. By pushing the pin more or less far into the sleeve *a* the tool is set to finish plugs of different lengths. In order to permit the head *d'* to be pushed beyond the end of the knife *b*, Fig. 1,

it is provided with a longitudinal groove *d''*. In use the cast plug *A* to be finished is fed by hand or otherwise into the open end of the tapering bushing *c*, Fig. 1.

The tool is revolved while the plug is not revolved, and thus the knife will gradually finish the circumference of the plug. As the plug is being reduced, it is gradually fed deeper into the sleeve *a*, until it finally strikes the head *d'* of the centering-pin *d*. The central drill *d'''* of this pin will cut a small central socket *f* into the end of the plug. In this way the plug is centered, while the socket *f* is subsequently tapped for the reception of the usual cock-screw. The circular cutting-edge *d''* will at the same time cut the usual offset or shoulder *f'* into the end of the plug.

With this tool tapering plugs can be quickly finished, and unskilled labor may be employed.

What I claim is—

1. The combination of a slotted sleeve with a tapering slotted bushing and an adjustable cutter projecting into the bushing, substantially as specified.

2. The combination of a slotted sleeve with a cutter entering the same and with an adjustable centering-pin, substantially as specified.

3. The combination of a slotted sleeve with a cutter entering the same and with a centering-pin provided with the central drill *d'''* and the circular cutting-edge *d''*, substantially as specified.

4. The combination of a slotted sleeve with a tapering bushing, an adjustable cutter, and an adjustable centering-pin, substantially as specified.

5. The combination of the following elements: a slotted sleeve, a tapering bushing, an adjustable cutter, and an adjustable centering-pin having head *d'*, that is provided with drill *d'''*, circular cutting-edge *d''*, and longitudinal groove *d''*, substantially as specified.

JOHN F. BROWN.

Witnesses:

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