(Model.)

J. PUGH.

MANDREL FOR DENTAL DISKS.

No. 428,019. Patented May 13, 1890.

Fig. 1.

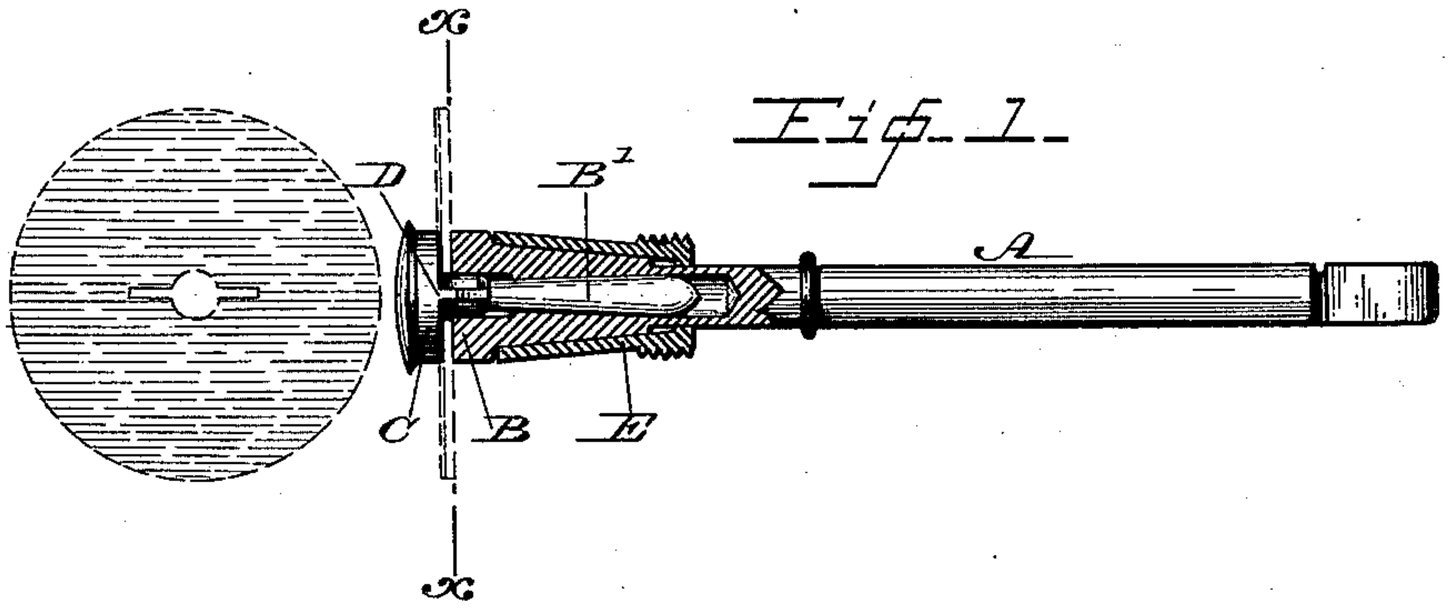


Fig. 2.

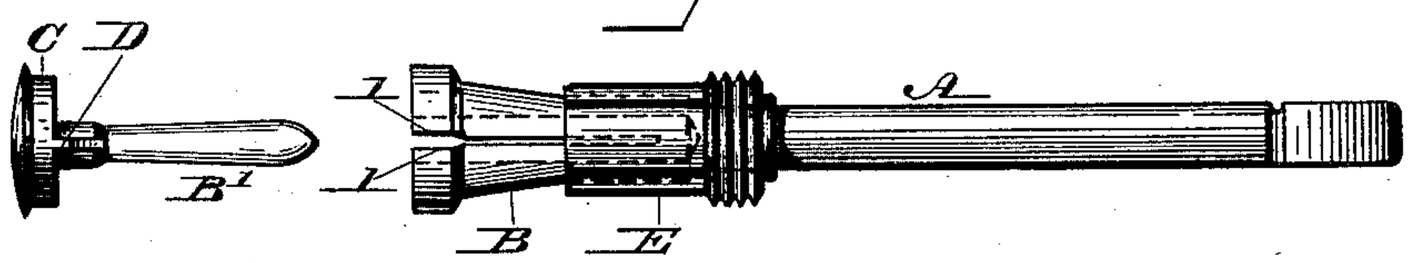


Fig. 3.

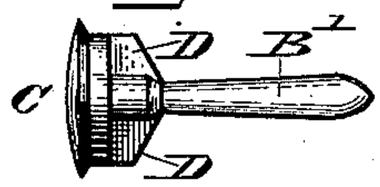


Fig. 4.

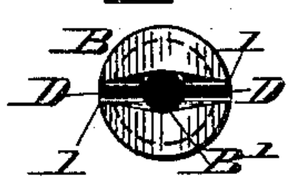
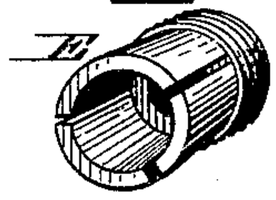


Fig. 5.



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MANDREL FOR DENTAL DISKS.

SPECIFICATION forming part of Letters Patent No. 428,019, dated May 13, 1890.

Application filed January 25, 1889. Serial No. 297,515. (Model.)

To all whom it may concern:

Be it known that I, JOHN PUGH, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Mandrels for Dental Disks, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in mandrels for carrying a grinding, cutting, polishing, or other disk employed in dentistry, more particularly with a dental engine, the same being formed with a split therein; and it consists of the disk-carrying pin being of tapering form, the widest portion being at the end opposite to the head thereof, and the inner faces of the jaws corresponding with the reversed taper of the pin.

Figure 1 represents a partial side elevation and partial vertical section of a mandrel embodying my invention. Fig. 2 represents a side elevation thereof, the parts being separated. Fig. 3 represents a side elevation of the tapering pin employed. Fig. 4 represents a section on line *x x*, Fig. 1. Fig. 5 represents a perspective view of the split sleeve employed.

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

Referring to the drawings, A designates a mandrel, which is adapted to be connected with a dental engine in usual manner. The forward end of the mandrel has formed with or secured to it a collar which is split in longitudinal direction, forming jaws B, within which the pin B′ is received, the outer end of said pin having a head C, the back whereof is provided with a feather D, the said feather preferably extending radially from the shank of the pin, as shown in Fig. 3.

On the jaws B is a sliding split sleeve E, it being seen that said jaws are exteriorly of tapering form, the widest part being at the outer end thereof, so that when said sleeve is moved toward said end the jaws B are contracted or closed and compressed upon the pin B′. The disk is fitted on the pin against the head C, and the feather D enters the slit in said disk around the central opening thereof, whereby the disk is prevented from rotating on the pin. The sleeve E is moved back, whereby the jaws open, as will be seen in Fig. 2. The pin is now inserted into the jaws, the feather entering the recesses *l* at the sides of the jaws. The sleeve is then moved outwardly, or toward the disk, whereby it rides over the jaws and closes the same on the pin, thus firmly clamping or gripping the latter in position and reliably holding the same. The grip exerted on the pin by the jaws is increased by making the pin of tapering form, the widest end being opposite to the head C, the inner faces of the jaws coinciding with the shape of said pin, whereby there is a wedging interlocking action of the jaws and pin, and the latter is prevented from being withdrawn, an outward draft on said pin serving to tighten the pin more tightly to the jaws.

I am aware that it is not new in devices of the character herein described to construct the same with a feathered and headed locking-pin and a screw or clamp nut fitted to work on the threaded edges of said pin, and thereby binding the jaws of the carrier. Neither is it new to provide the head of the shaft or mandrel with spurs adapted to fit in recesses in the head of the pin, and such I do not broadly claim; but I am not aware that it is old to make the device as herein described, wherein the locking-pin has a radial feather extending from the shank thereof and connected with the inner face of the head, and the jaws have the recesses, as shown, in which the said feathers fit. Neither is it thought to be old to taper the pin as described, the larger end being opposite or at the other end from the head.

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

1. In a mandrel for a dental disk, the disk-carrying pin constructed of tapering form, the widest portion being at the end opposite to the head thereof, substantially as described.

2. A mandrel for a dental disk, consisting of jaws, a sliding split sleeve on said jaws, and a disk-carrying tapering pin entering said jaws, said pin having at one end a head and feather, to which the disk is fitted, the tapering of the pin being reversed or widest at the end opposite to the head, the inner face of the jaws coinciding with the reversed taper of the pin, substantially as described.

JOHN PUGH.

Witnesses:
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