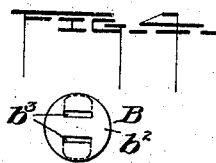
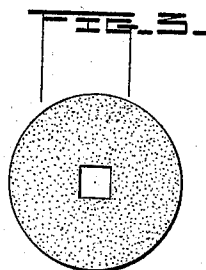
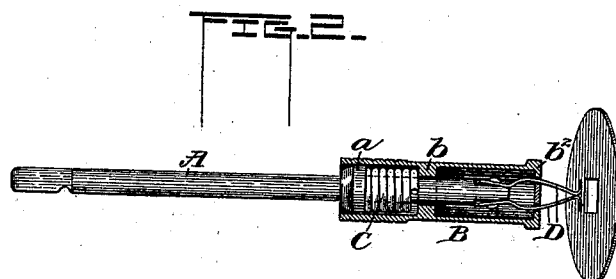
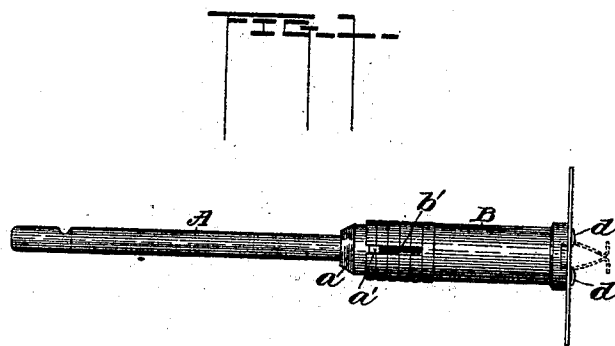


(No Model.)

R. M. CHIVERS.
DENTAL DISK HOLDER.

No. 552,514.

Patented Jan. 7, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

ROLAND M. CHIVERS, OF FALL RIVER, MASSACHUSETTS.

DENTAL DISK-HOLDER.

SPECIFICATION forming part of Letters Patent No. 552,514, dated January 7, 1896.

Application filed June 8, 1895. Serial No. 552,049. (No model.)

To all whom it may concern:

Be it known that I, ROLAND M. CHIVERS, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Disk-Holders for Dental Engines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to dental tools, and its object is to provide a convenient and simple holder for the sandpaper disks used on the rotating mandrel of the engine.

Various devices have been proposed for this purpose. The ordinary mode of fastening is by a screw passing through the center of the disk into a tapped socket in the end of the mandrel. The disadvantage of this is that the screw is liable to be lost or misplaced when it is taken out to allow the worn disk to be removed and a new one attached. In any event the manipulation of the screw or other means of fastening consumes considerable time, thereby interrupting the operation and increasing the discomfort of the patient.

My invention aims to permit the disk to be changed very quickly, and without the removal of any separate fastening device.

The invention consists of two or more clamps, inclosed in a sleeve which is mounted on the shank of the tool, and is movable axially to open the clamps, which are automatically closed by a spring in the sleeve, and engage with a hole in the center of the disk.

In the drawings, Figure 1 is a side elevation of my disk-holder enlarged to about twice its natural size. Fig. 2 is a longitudinal section. Fig. 3 shows one of the disks, and Fig. 4 is an end view of the sleeve.

The shank A is suitably formed at one end for attachment to the hand-piece of the engine, as usual in such implements. Inclosing the other end of the shank is a sleeve B, which has the internal rib *b*, having a sliding fit on the shank. The rear end of the sleeve fits over a collar *a* formed on said shank, and between the collar *a* and the rib *b* is a helical

spring C encircling the shank. The sleeve has a longitudinal slot *b'* in which slides a lug *a'* on the collar *a* to keep the parts in proper relation. The outer end *b²* of the sleeve is closed, with the exception of two parallel slots *b³*, through each of which passes a curved flat strip D loosely attached at its inner end to the end of the shank A, and having its outer end bent to form a hook *d* parallel with the closed end *b²* of the sleeve. When the sleeve is thrust outwardly by the spring, the hooks are brought tightly against the end of the sleeve. When the sleeve is forced back, compressing the spring, the hooks are brought together by reason of the divergence of the strips, as clearly shown in Fig. 2.

The sandpaper or other disks E are provided with a central square hole *e*, just large enough to permit the hooks *d* to pass through when they are brought together. The sleeve is then released, and in its outward movement it separates the hooks and causes them to clamp the disk tightly against the end of the sleeve, as shown in Fig. 1.

It will be seen, then, that this disk-holder can be quickly and easily manipulated; that there are no loose parts to get lost; that the disks can be changed almost instantly; that it holds the disks tightly, and is self-centering.

While especially intended for dentists' use, it is, nevertheless, capable of use in other arts and in other relations.

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

1. A disk holder comprising a shank, a sleeve sliding thereon, a spring acting to thrust the sleeve outwardly, and clamping hooks permanently attached to the end of the shank and adapted to coact with the end of the sleeve, substantially as described.

2. A disk holder, comprising a shank, a sleeve sliding thereon, and having a closed end containing two slots, a spring acting to thrust the sleeve outwardly, and clamping hooks permanently attached to the end of the shank, and passing through the slots in the sleeve, substantially as described.

3. A disk holder comprising a shank A having a collar *a*, a sleeve B fitting the collar and having an internal rib *b* fitting the shank, and a closed end *b²* containing slots *b³*, a spring C

inclosed between the collar and the rib, and
flat, curved diverging strips D attached to the
end of the shank and passing through the slots
 b^3 and having hooks d parallel with the end
5 of the sleeve, substantially as described.

4. The combination with a disk having a
square central hole, of a disk holder having
separable clamping hooks adapted when

brought together to pass through said hole,
substantially as described. 10

In testimony whereof I affix my signature
in presence of two witnesses.

ROLAND M. CHIVERS.

Witnesses:

ARBA N. LINCOLN,
ANNEL L. ANELTT.