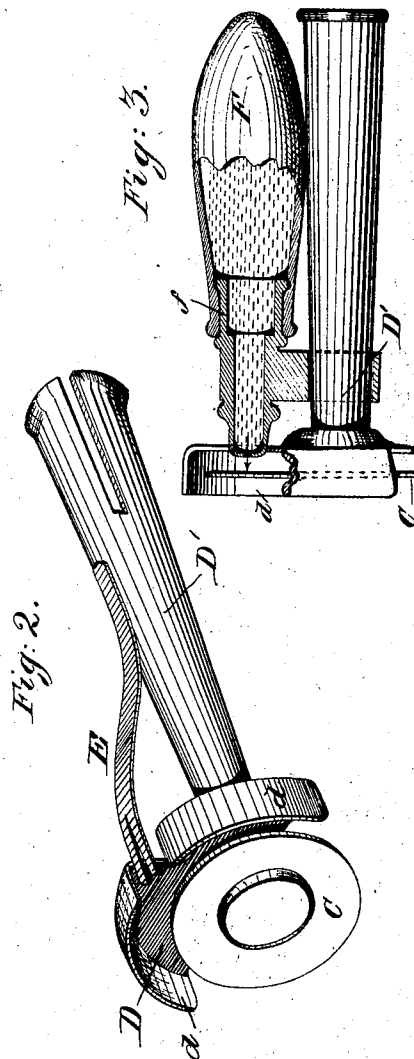
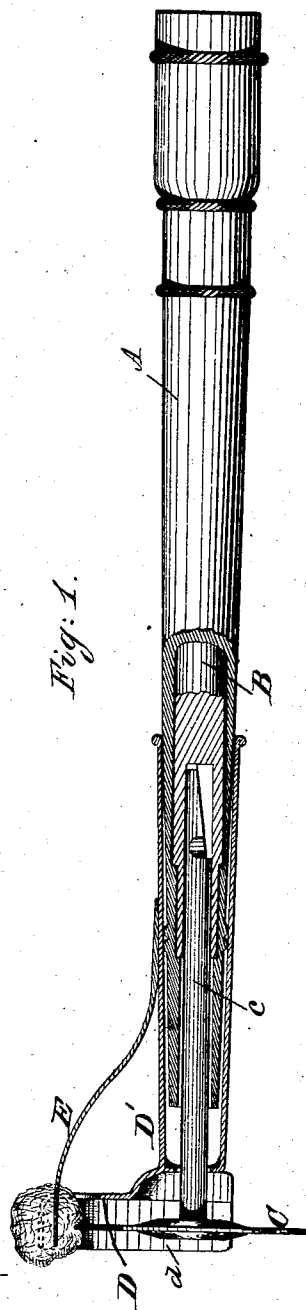


E. T. STARR.
 Apparatus for Protecting and Moistening the Disks
 of Dental-Engines.

No. 159,048.

Patented Jan. 26, 1875.



WITNESSES
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ELI T. STARR, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
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IMPROVEMENT IN APPARATUS FOR PROTECTING AND MOISTENING THE DISKS OF DENTAL ENGINES.

Specification forming part of Letters Patent No. 159,048, dated January 26, 1875; application filed
January 8, 1875.

CASE C.

To all whom it may concern:

Be it known that I, ELI T. STARR, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Protecting and Moistening the Disks of Dental Engines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a view, partly in section, of a hand-piece of a dental engine with my improved apparatus applied thereto; Fig. 2, a view in perspective of a disk, its shield or protector, and sponge-holder. Fig. 3 represents a view, partly in section, of another form of the apparatus.

The drawings are all on an enlarged scale.

In performing dental operations with rotary disks it is desirable that the disk should be protected, in order to prevent injury to the patient or operator from accidental contact therewith.

It is also desirable to keep the disk moistened, and to prevent the moistening fluid from being thrown upon the patient by the centrifugal force generated by the rotation of the disk.

It is the object of my invention to attain these desiderata, to which ends my improvements consist, first, in a shield or disk-protector, adapted to be applied to the hand-piece of a dental engine, and so constructed as partially to inclose the disk; secondly, in combining with a disk-protector a device for supplying moisture to the disk.

My invention further consists in mounting the disk-protector upon a tubular shank having elastic walls, whereby it may readily be removed from or replaced upon the hand-piece of the engine, and the shank of the disk may be inserted through it into the socket of the tool-holder.

The hand-piece A, of the usual construc-

tion, has a chuck or tool-holder, B, turning in suitable bearings therein, and provided with a socket, in which the shank *c* of the disk C is inserted, and secured in any of the well-known ways.

A shield or disk-protector, D, is mounted upon a tubular socket, D', slotted longitudinally at its back end, so as to constitute a spring to clamp the socket upon the hand-piece when slipped over it, as shown in Fig. 1.

The shield or protector in this instance is shown as made in the form of a half of a disk, provided with rims or flanges *d*, which overlap the edges of the disk, but so as to leave the side next to the tooth uninclosed. Obviously, however, the form of this shield or protector may be varied without altering its function.

The shield and its flanges *d* are cut away at one point for the insertion of the device for moistening the disk.

In Figs. 1 and 2 this device is shown as consisting of a sponge held in place by a spring-holder, E, mounted upon the socket or handle of the shield or protector.

In Fig. 3 the moistening device is shown as consisting of a small bulb-syringe, F, mounted on a collar, *f*, capable of turning freely around the socket D'. The nozzle of this syringe comes opposite the slot in the shield, and the moistening fluid is ejected at will by the operator compressing the syringe with his fingers.

I prefer this latter form of the moistening device, as it places the supply of fluid directly under the control of the operator.

The disk is applied to the hand-piece by first inserting the hand-piece in the tubular shank or handle of the disk-protector, and then inserting the shank of the disk into its socket through the disk-protector, the latter being perforated for that purpose.

I claim—

1. A shield or disk-protector constructed substantially as hereinbefore set forth, and

adapted to be applied to the hand-piece of a dental engine.

2. The combination, substantially as hereinbefore set forth, of a disk-protector and a moistening device for dental engines.

3. The combination, substantially as hereinbefore set forth, of a disk-protector, its tubular socket, a hand-piece, a chuck or tool-holder, and a rotating disk mounted on a

shank passing through the socket of the disk-protector and into the tool-holder.

In testimony whereof I have hereunto subscribed my name.

ELI T. STARR.

Witnesses:

CHAS. W. DODGE,

J. A. B. WILLIAMS.