

No. 696,155.

Patented Mar. 25, 1902.

I. N. WILLIAMS.

GUARD ATTACHMENT FOR DENTAL ENGINES.

(Application filed June 25, 1901.)

(No Model.)

Fig. 1.

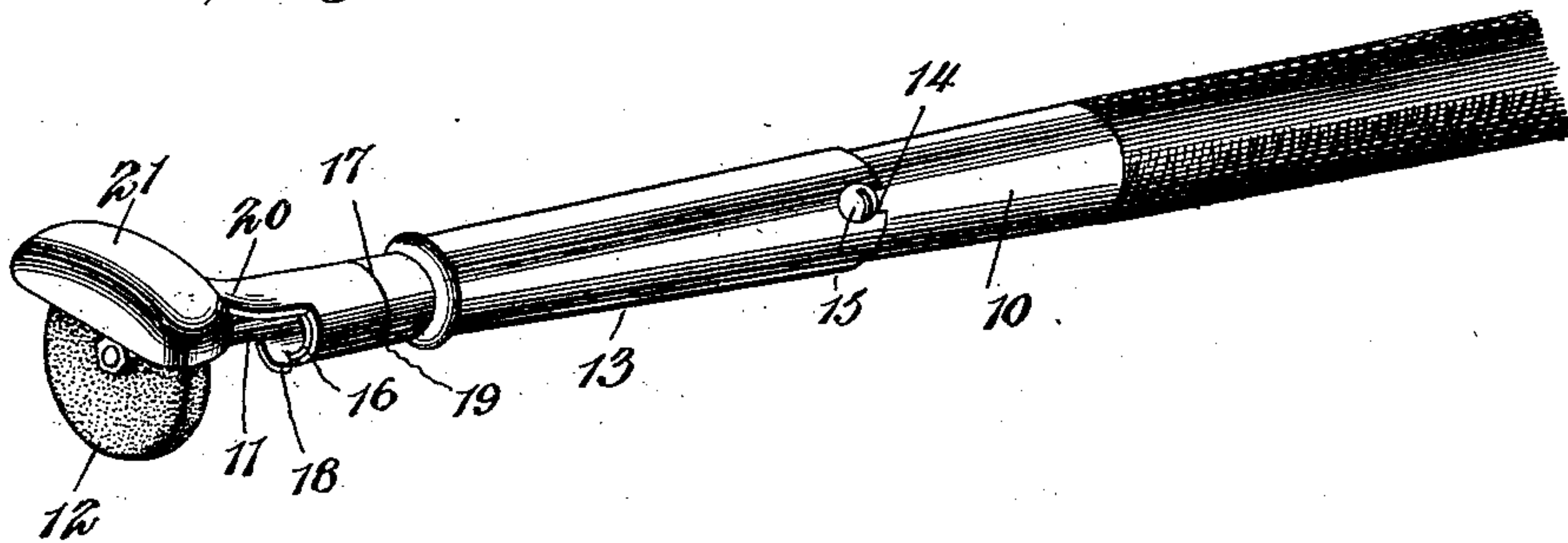


Fig. 2.

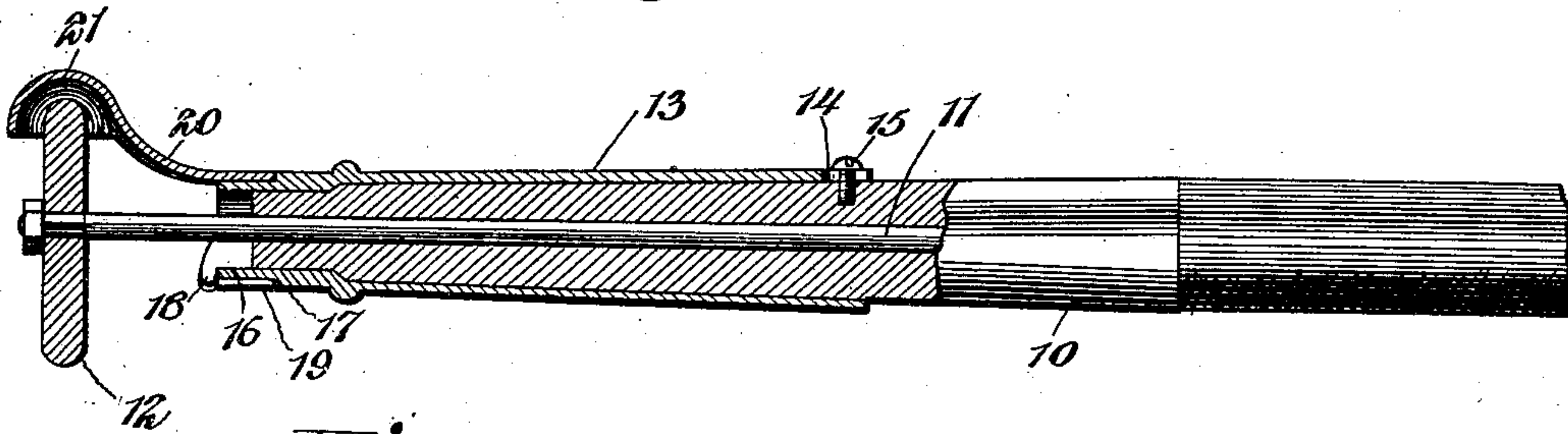


Fig. 3.

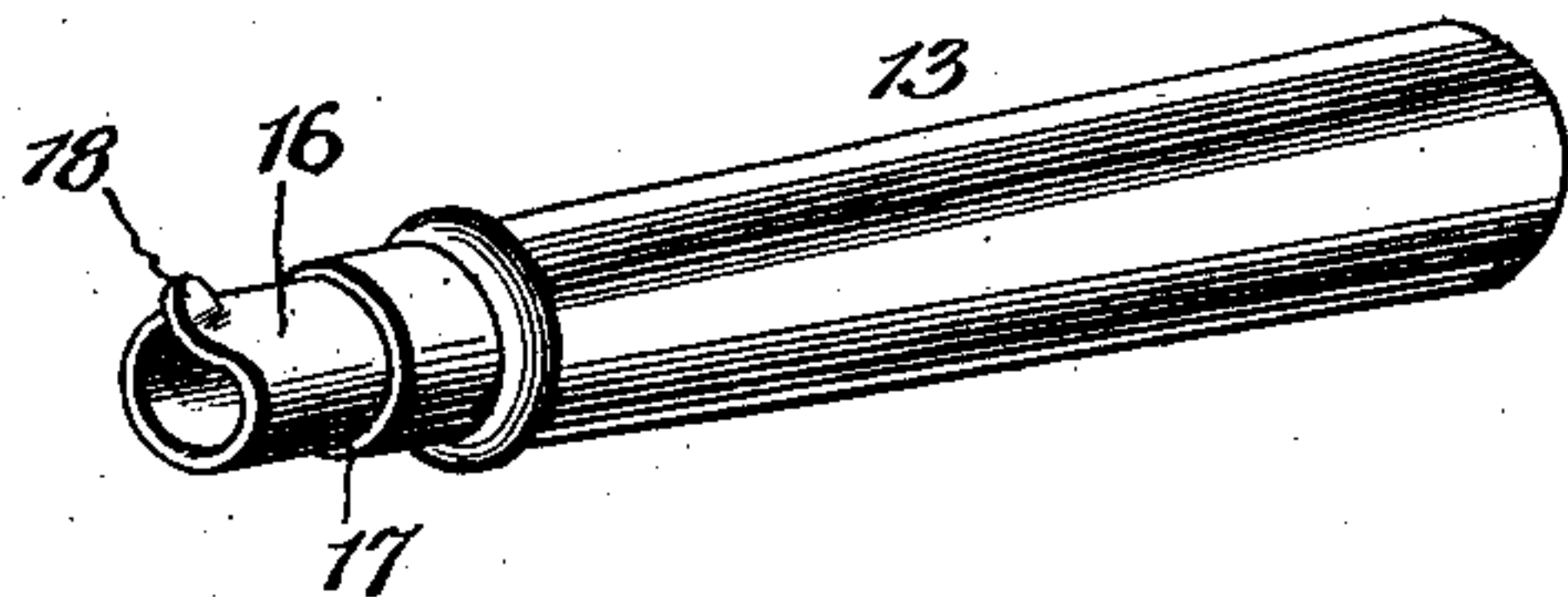


Fig. 4.

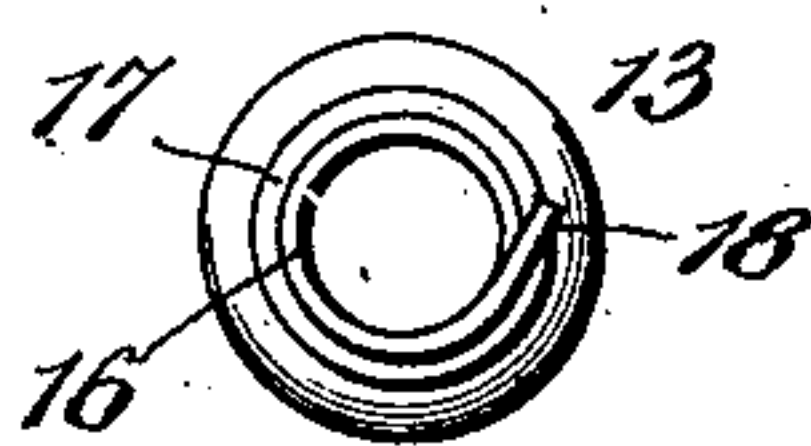
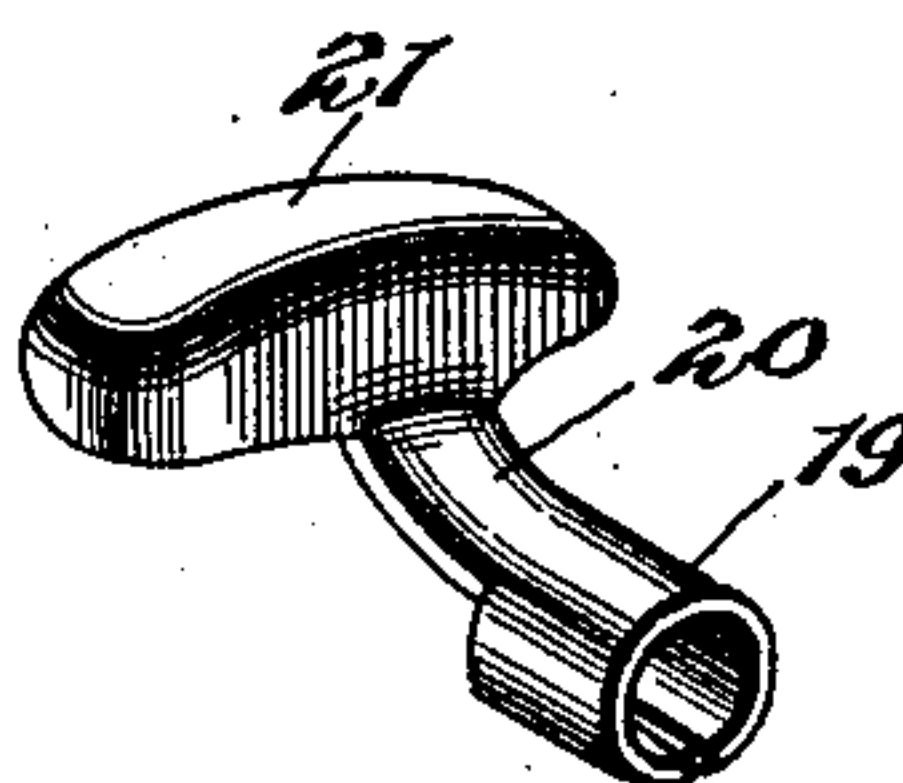


Fig. 5.



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ISAAC N. WILLIAMS, OF SULLIVAN, INDIANA.

GUARD ATTACHMENT FOR DENTAL ENGINES.

SPECIFICATION forming part of Letters Patent No. 696,155, dated March 25, 1902.

Application filed June 25, 1901. Serial No. 65,998. (No model.)

To all whom it may concern:

Be it known that I, ISAAC N. WILLIAMS, a citizen of the United States, residing at Sullivan, in the county of Sullivan and State of Indiana, have invented a new and useful Guard Attachment for Dental Engines, of which the following is a specification.

The present invention relates to guards for grinding-disks and similar instruments employed on dental engines; and one of the principal objects thereof is to provide a simple device that will protect the mouth and tongue of a patient from the abrasive action of such instruments, said device being in the form of an attachment that can be readily applied to any well-known form of dental engine and as readily removed, so that it will not in the least interfere with the use of other tools upon the engine.

Another object is to provide a guard that may be shifted about the grinding-disk, so that said disk may be employed under varying conditions and positions.

In the accompanying drawings the preferred embodiment is fully illustrated, and said embodiment is set forth in the following specification. It will of course be understood that such slight modifications and changes may be made from the construction shown and described as are within the scope of the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a dental handpiece, showing the improved guard applied thereto. Fig. 2 is a longitudinal sectional view through the same. Fig. 3 is a detail perspective view of the base-sleeve detached. Fig. 4 is an end view of the same, and Fig. 5 is a detail view of the holding-collar and guard-hood.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

In order to more clearly illustrate the application of the invention, a tapered handpiece of a dental engine is shown and designated in the drawings by the numeral 10. Through this handpiece extends the usual longitudinal shaft 11, that projects beyond the end of the same and carries the grinding-disk 12. The construction thus far set forth forms no part of the present invention and may be changed and modified as desired.

The invention relates to a guard that partially covers the grinding-disk, said guard being constructed in the present instance in the following manner: A base-sleeve 13 is provided, which is tapered and is arranged to be fitted snugly over the handpiece 10, the inner end of said sleeve being provided with a notch 14, through which is passed a set-screw 15, that engages in the handpiece. By this means the sleeve is detachably secured to said handpiece. The outer end of the sleeve is provided with a cut-away portion 16, forming an annular shoulder 17 at its inner end, and an upturned spring-finger 18 is located at the end edge of said sleeve. A holding-collar 19 is fitted upon the outer end of the sleeve, between the shoulder 17 and the spring-finger 18, said collar in the present instance comprising a circular spring the ends of which are separated slightly, thus affording means whereby the collar may be applied to sleeves of different sizes. This collar is freely rotatable upon the sleeve and carries a projecting shank 20, to the outer end of which is secured a hood 21. By referring to Figs. 1 and 2 it will be seen that when the attachment is in place upon the handpiece said hood will thus be located over a portion of the grinding-disk 12.

In order to apply the device to a handpiece, it is only necessary to remove the grinding-disk or other tool and place the sleeve over said handpiece, securing it in the manner already described. The collar is then placed upon the end of the sleeve, and the desired grinding-disk may be applied. By reason of the detachable engagement of the collar with the sleeve the hood may be removed from over the disk to permit the changing of the same, and said hood may be entirely removed when it is desired to use some other instrument for which no guard is needed. Furthermore, the hood may be shifted around to any side of the disk because of the rotatable engagement of the collar with the sleeve, and thus the disk may be used from any side, while the guard will prevent the opposite portion from coming into contact with the patient's mouth.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be under-

stood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages
5 of the invention.

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

1. In a guard attachment for dental en-
10 gines, the combination with a base, of means for securing the base to the handpiece of an engine, and a grinder-guard having a detach-
able connection with the base and arranged
15 to be located over a portion of a grinding de-
vice.

2. In a guard attachment for dental en-
gines, the combination with a base, of means
for securing the base against movement on
the handpiece of an engine, and a grinder-
20 guard rotatably mounted upon the base and
arranged to be located over a portion of a
grinding device.

3. In an attachment for dental engines, the
combination with a base-sleeve arranged to
25 be secured upon the handpiece of a dental en-
gine, of a collar rotatably mounted upon the
sleeve, and a guard carried by the collar and
adapted to be located over a grinding-disk se-
cured to the shaft of the engine.

30 4. In a guard attachment for dental en-
gines, the combination with a base-sleeve ar-
ranged to be detachably fitted upon the hand-
piece of a dental engine, of a collar having a

detachable interlocking connection with the
sleeve, and a guard carried by the collar and 35
adapted to be located over a grinding-disk se-
cured to the engine.

5. In a guard attachment for dental en-
gines, the combination with a base-sleeve hav-
ing a shoulder and a spring-retaining finger, 40
of a collar detachably fitting upon the base-
sleeve between the shoulder and the finger,
and a guard carried by the collar and adapted
to be located over a grinding-disk secured to
the shaft of the engine. 45

6. In a guard attachment for dental en-
gines, the combination with a base-sleeve hav-
ing a shoulder contiguous to one end and a
terminal spring-retaining finger, said sleeve
being furthermore provided at its opposite 50
end with a notch, of a set-screw for fastening
the sleeve to the handpiece of a dental en-
gine, said screw engaging in the notch, a col-
lar detachably and rotatably fitted upon the
base-sleeve between the shoulder and the fin- 55
ger thereof, and a guard-hood carried by the
collar and adapted to be located over a grind-
ing-disk secured to the shaft of the engine.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in 60
the presence of two witnesses.

ISAAC N. WILLIAMS.

Witnesses:

W. D. EATON,
THOS. J. WOLFE.