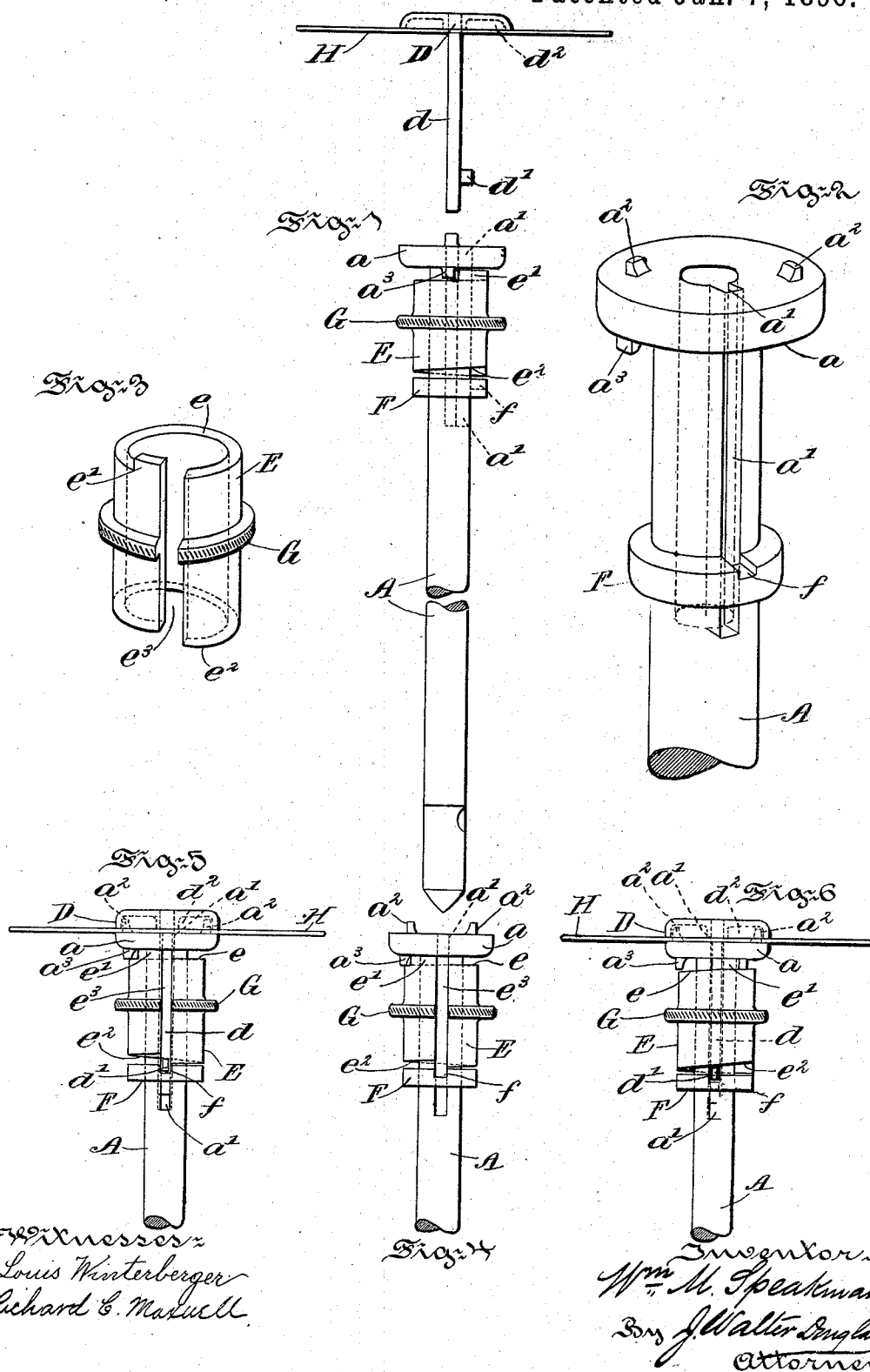


W. M. SPEAKMAN.
DENTAL DISK CARRIER.

Patented Jan. 7, 1896.



UNITED STATES PATENT OFFICE.

WILLIAM M. SPEAKMAN, OF PHILADELPHIA, PENNSYLVANIA.

DENTAL-DISK CARRIER.

SPECIFICATION forming part of Letters Patent No. 552,625, dated January 7, 1896.

Application filed June 6, 1895. Serial No. 551,816. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. SPEAKMAN, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Dental-Disk Carriers, of which the following is a specification.

My invention has relation to disk carriers or holders for dental engines; and in such connection it relates particularly to the construction and arrangement of such a carrier or holder.

The principal objects of my invention are, first, to provide a suitable means for readily mounting a dental disk upon the mandrel of the dental engine and to retain firmly the same thereon; second, to provide a dental-disk carrier or holder having a cap provided with a locking-lug adapted to enter the shank of the mandrel and to be locked thereto by a sleeve, and, third, to provide a dental-disk carrier or holder in which the cap and its locking-lug adapted to enter the shank of the mandrel are locked thereto by a sleeve having a lower spiral or cam surface adapted to bear against the locking-lug of the cap and to thereby clamp the cap down more or less tightly upon a disk interposed between the cap and a complementary flange of the mandrel.

My invention consists of a dental-disk carrier or holder constructed and arranged in substantially the manner hereinafter described and claimed.

The nature, characteristic features, and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a side elevation of the mandrel, the locking-sleeve, and the cap and disk removed from the mandrel, illustrating the main features of my invention. Fig. 2 is an enlarged perspective view of the upper end of the mandrel, the locking-sleeve being removed therefrom. Fig. 3 is a similar view of the locking-sleeve removed from the mandrel. Fig. 4 is a front elevation of the upper end of the mandrel and locking-sleeve, illustrating the position of the slot of said sleeve when the stem and lug of the cap are adapted to enter the mandrel. Fig. 5 is a front elevation of the

mandrel, sleeve, cap, and disk, showing the disk held between the cap and complementary flange of the mandrel and the position of the sleeve when the cap is adapted to be removed; and Fig. 6 is a similar view illustrating the position of the sleeve when the cap is locked down upon the flange of the mandrel with the disk clamped between the cap and mandrel.

Referring to the drawings, A represents the main shank of a mandrel adapted to be secured into a handpiece of a dental engine. The upper end of the shank A is enlarged or flanged, as at *a*, and provided with a slot *a'* to receive the stem *d* and lug *d'* of the cap D. On the upper face of the flange *a* are placed the fins or projections *a²*, the under face of the cap D being hollowed out, as at *d²*, to receive these fins *a²*, as illustrated in Fig. 1. Immediately below the flange *a*, and surrounding the shank A, is placed a split or slotted sleeve E, a portion of the upper end of which is cut away, as at *e*, so as to leave a shoulder *e'*. The cut away portion *e* serves to permit of the rotation of the sleeve E around the shank A, and the shoulder *e'*, in connection with a pin *a³* on the mandrel, serves as a stop to limit the rotation of the said sleeve. The lower end *e²* of the sleeve E is cut spirally in order to form a cam-face at that point. The sleeve is confined upon the shank A to prevent longitudinal movement by means of the collar F, having a recess *f*, registering with the slot *a'* of the shank A. On the sleeve E is formed a roughened ring G, broken at the slot or split *e³* in the sleeve, by means of which ring the sleeve may be turned upon the shank A.

In assembling the parts together a disk H, of sand, emery-paper, or the like, is first mounted upon the flange *a* of the shank of the mandrel and the fins or projections *a²* of the flange forced through the disk H. The sleeve E is then turned until the pin *a³* of the mandrel-shank A abuts against the shoulder *e'*, when the slot *e³* of the sleeve will register with the slot *a'* of the shank and the recess *f* of the collar, as illustrated in Figs. 4 and 5. In this position the stem *d* and lug or dog *d'* of the cap D are introduced into the slot of the mandrel and sleeve until the lug or dog *d'* rests under the spirally-cut or cam face *e²* at the lower end of the sleeve. By turning the sleeve

E through its ring G until its slot e^3 no longer is in line with the slot of the mandrel the end e^2 will bear upon the lug d' , thus locking the cap through its stem and lug down upon the disk H and upon the fins a^2 of the flanged ends of the mandrel-shank, as illustrated in Fig. 6. By turning the sleeve more or less the cap D will be brought more or less close to the flange a , thus permitting of an adjustment according to the thickness or character of the disk H.

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

1. In a dental disk carrier, the combination with a flanged slotted main shank, of a cap carrying a stem provided with a lug adapted to enter the slot of the shank, until the cap rests upon the flange of said shank, a slotted locking sleeve surrounding the main shank and adapted to rotate thereon, the slot of said sleeve in one position registering with the slot in the main shank to permit of the introduction of the cap stem and lug until the lug rests below the lower end of said sleeve, and means for turning said sleeve until its slot is out of alignment with the slot of the main shank to thereby lock said lug and stem of the cap to the shank, substantially as described.

2. In a dental disk carrier, a slotted main shank flanged at its upper end and having fins or projections, a cap and its stem entering the slot of said shank, a sleeve surrounding said shank and adapted to lock the cap stem thereto, said cap being hollowed out on its under surface to fit over the fins of the flanged end of the shank when the stem is locked to said shank, substantially as described.

3. In a dental disk carrier, a slotted main shank, a cap and its stem adapted to enter said slotted shank, a lug carried by said stem, a split or slotted sleeve surrounding said shank and adapted to be turned thereon, said sleeve having a spirally cut or cam shaped lower end and said lug adapted to rest below the same and to be clamped thereby when the sleeve is turned to lock the stem and cap to said main shank, substantially as described.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

WM. M. SPEAKMAN.

Witnesses:

RICHARD C. MAXWELL,
LOUIS WINTERBERGER.