(No Model.)

R. G. STANBROUGH.

DENTAL DISK HOLDER.

No. 505,490. Patented Sept. 26, 1893.

Fig. 1.

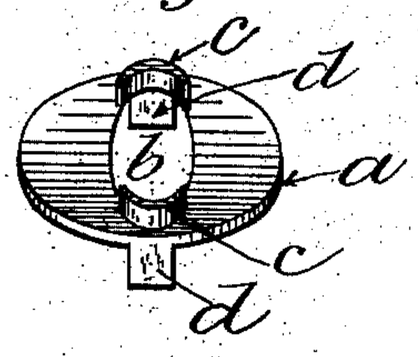


Fig. 2.

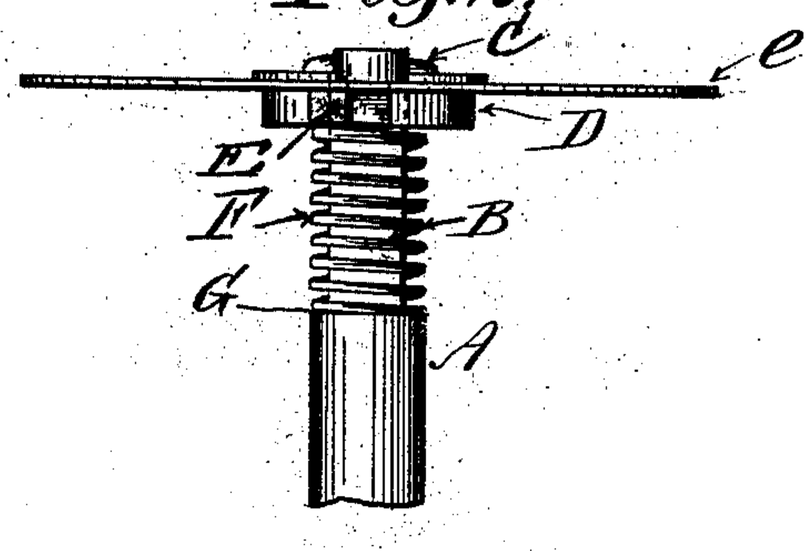


Fig. 3.

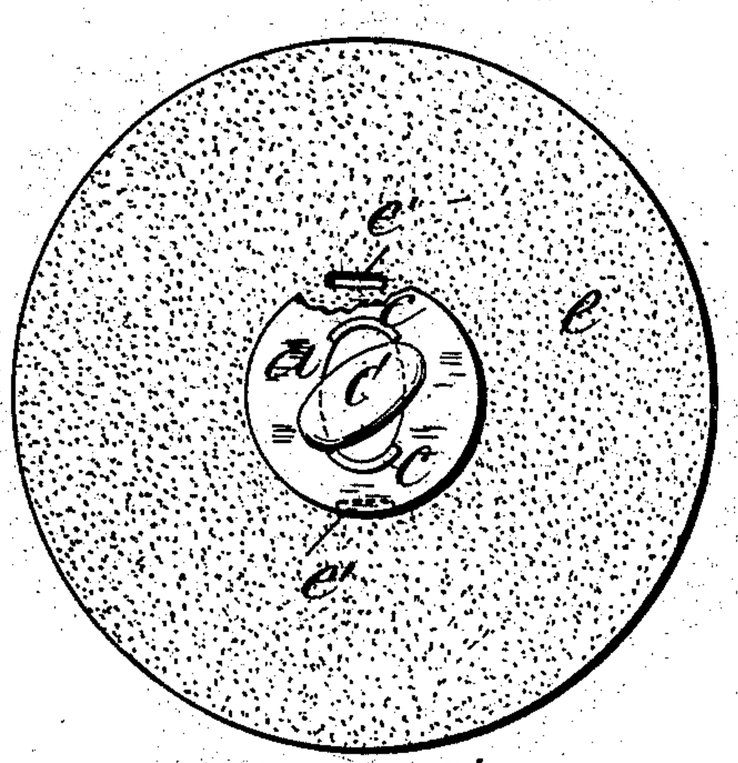
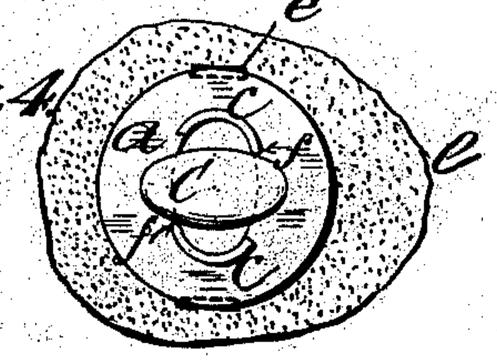


Fig. 4.



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UNITED STATES PATENT OFFICE.

RUFUS G. STANBROUGH, OF NEW YORK, N. Y.

DENTAL-DISK HOLDER.

SPECIFICATION forming part of Letters Patent No. 505,490, dated September 26, 1893.

Application filed April 4, 1892. Serial No. 427,720. (No model.)

To all whom it may concern:

Be it known that I, RUFUS G. STANBROUGH, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Metal Binders for Dental Disks, of which the following is a specification.

My invention relates to certain new and useful improvements in metal binders for dental disks, the object being to provide a metal binder of cheap and simple construction which can be readily applied to the disk and when so applied, will interlock with those parts of the disk-carrier which serve to hold the disk in operative position.

My present invention is specially designed as an improvement upon the metal binder described in a concurrent application filed by me and designated as Serial No. 458,818, in which I have shown, described and claimed a dental disk provided with a central elongated opening having slits at either end thereof and at right-angles thereto; a metal binder for such disk, comprising a substantially circular portion having an elongated opening corresponding to the elongated opening in the disk, and having also depending lugs adapted to pass through the slits in said disk and be inwardly inclined to retain said binder in place, but omitting the upwardly projecting lugs upon said binder hereinafter described.

The device is used in connection with an operating tool substantially as hereinafter set forth.

In the application just referred to I have described a disk of the ordinary grinding, polishing, or burnishing material, provided with an elongated opening and a slit near each end of said elongated opening. I have also described a metal binder provided with an elongated opening corresponding to that of the disk and having downwardly extending flanges or lugs which, when the binder is in place, project into and through the said slits extending below the disk and forming locking shoulders, against which projections of a spring acting pressure plate impinge to hold the disk in place between the head of the carrier and the said pressure plate.

In my present invention I employ all the elements above described and in addition I also provide the metal binder with interlocking shoulders for the head of the disk carrier, as well as the interlocking shoulders for the pressure plate, so that the disk will be more firmly and certainly held against displacement during the dental operation.

In the accompanying drawings, Figure 1, is a perspective view of my improved metal binder. Fig. 2, is a side elevation of the upper end of the disk-carrier with a disk in place thereon, provided with my improved metal binder. Fig. 3, is a top plan view thereof. Fig. 4, is a top plan view of a modification.

Referring to the drawings, the metal binder is composed of a substantially circular body *a*, having an elongated opening *b*, provided at its extremities with raised flanges or struck up portions *c*, *c*, and having downwardly depending lugs *d*, *d*, arranged opposite to each other and in a line central to the length of said opening.

The disk carrier is composed of a shank A of the usual construction, for connection to a dental engine; this shank is provided with a stem B, of reduced diameter, terminating in a T-head C. Upon this stem is mounted a plate D, having lugs or projecting fingers E, E, and this plate is held and operates as a pressure plate by means of a spring F, coiled around the stem and having a bearing against the shoulder G at one end and the plate D at the other.

The disk *e* is of the usual material used for grinding, polishing or burnishing, and is provided with an elongated opening (or one of similar form), and a slit near each end of said elongated opening and at right angles to the length thereof. The metal binder *a* is attached to the disk *e* by inserting the lugs *d*, *d*, through said slits, thus bringing the opening in the binder in proper relation to the opening in the disk. The disk, with its binder, is then secured to the carrier by depressing the pressure plate D, inserting the T-head C through the openings in the disk and binder, turning the shank A and stem B to bring the T-head C transversely across said openings, and releasing the pressure plate, so that by the action of the spring F, it will bear against the under side of the disk and clamp it in place between the plate and the T-head. In this position, the T-head is engaged with the

struck up portions or shoulders *c*, *c*, of the upper face of the binder, and the projecting lugs or fingers of the pressure plate are engaged with the downwardly projecting lugs *d*, *d*, of the binder. Hence it follows that a clamping action is exerted against both faces of the disk, thus securely locking to the carrier and preventing displacement during the dental operation.

In the modification shown in Fig. 4, I have arranged the struck up portions *c*, *c*, so that bearing faces *f*, *f*, are provided to secure the T-head at right angles to the openings in the disk and binder. It will be understood that the rotation of the carrier is transmitted to the disk through the medium of the T-head, pressure plate, and the interlocking members of the binder. It is obvious that the interlocking shoulders *c*, *c*, may be wholly or partially formed by concaving or depressing the metal of the binder at the extremities of the opening for the T-head, or these shoulders may be formed of struck up portions as shown in the drawings. If material as heavy, for instance, as twenty-eight gage, is used for the binder, and the binder is made flat, the shoulders may be formed by depressing the material at the points named, and when lighter material is used, the binder may be concaved at these points. In either case, the principle of my invention will be employed, and any departure from the method shown in the drawings, of forming the shoulders would be merely a matter of mechanical skill.

What I claim as new, and desire to secure by Letters Patent, is—

1. A metal binder for dental disks having shoulders *c*, *c*, on one face, and lugs *d*, *d* depending from the other face, substantially as described for the purposes set forth.

2. The combination with a metal binder having a substantially elongated opening, shoulders projecting from the upper face and lugs depending from the under face, of said metal binder, of a dental disk having an opening corresponding to the opening in the binder, and at each end of said opening a slit at right-angles thereto, substantially as described for the purposes set forth.

3. The combination with a dental disk provided with a metal binder having an elongated opening, shoulders on the upper face, and lugs projecting from the lower face, of a disk carrier comprising a shank having a reduced stem, terminating in a T-head, adapted to enter the openings and engage opposite sides of the upper shoulders and a spring acting pressure plate having projecting fingers adapted to engage opposite sides of the depending lugs, substantially as and for the purpose described.

Signed at New York, in the county of New York and State of New York, this 15th day of March, A. D. 1892.

RUFUS G. STANBROUGH.

Witnesses:

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