

(No Model.)

C. W. DODGE.
DENTAL POLISHING DISK.

No. 583,735.

Patented June 1, 1897.

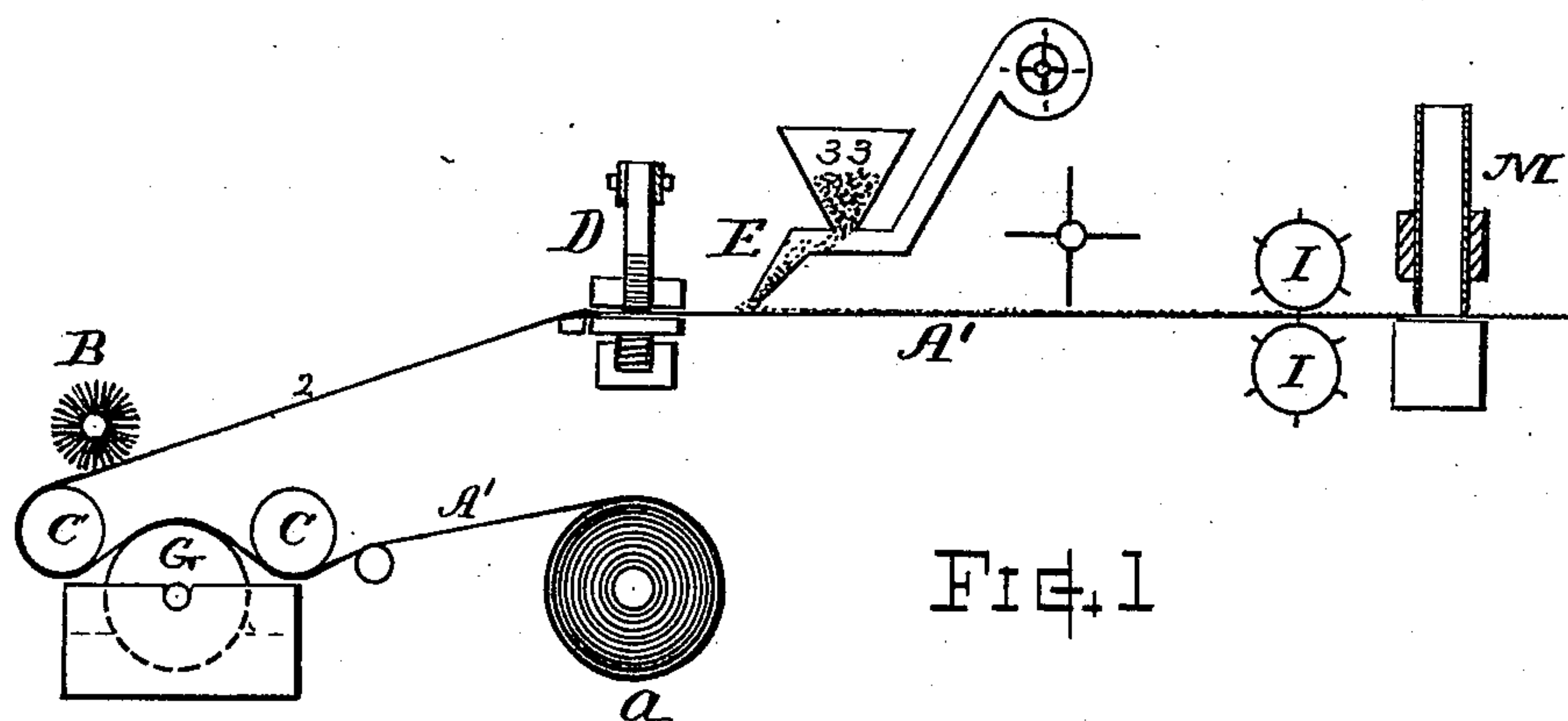


FIG. 1



FIG. 5

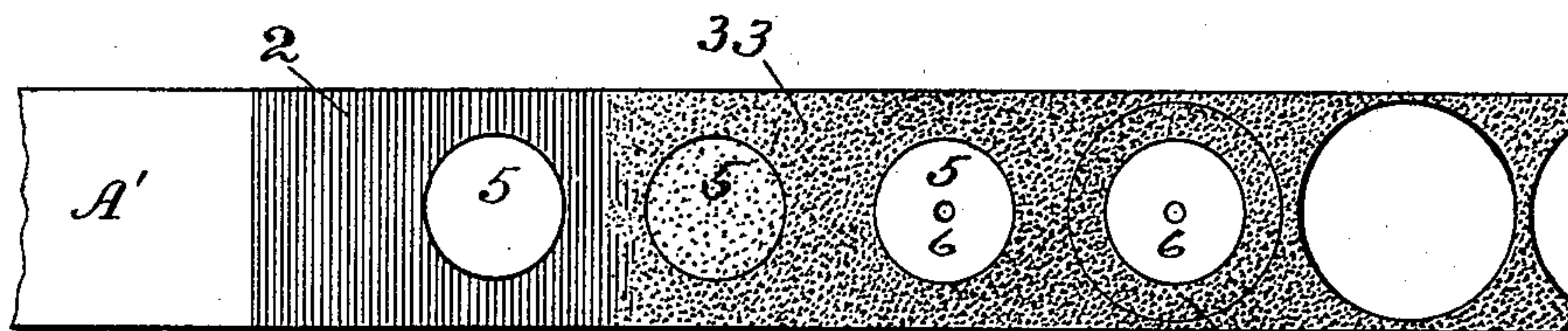


FIG. 2

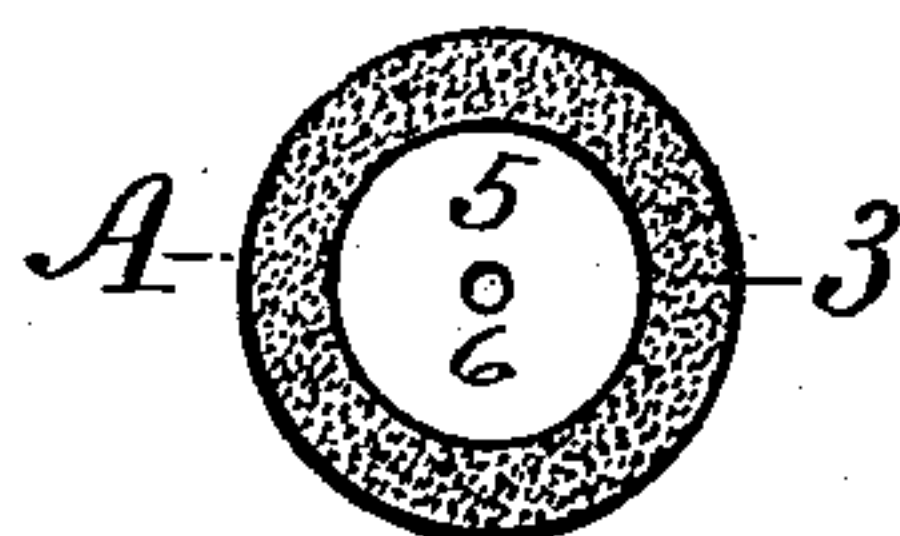


FIG. 3

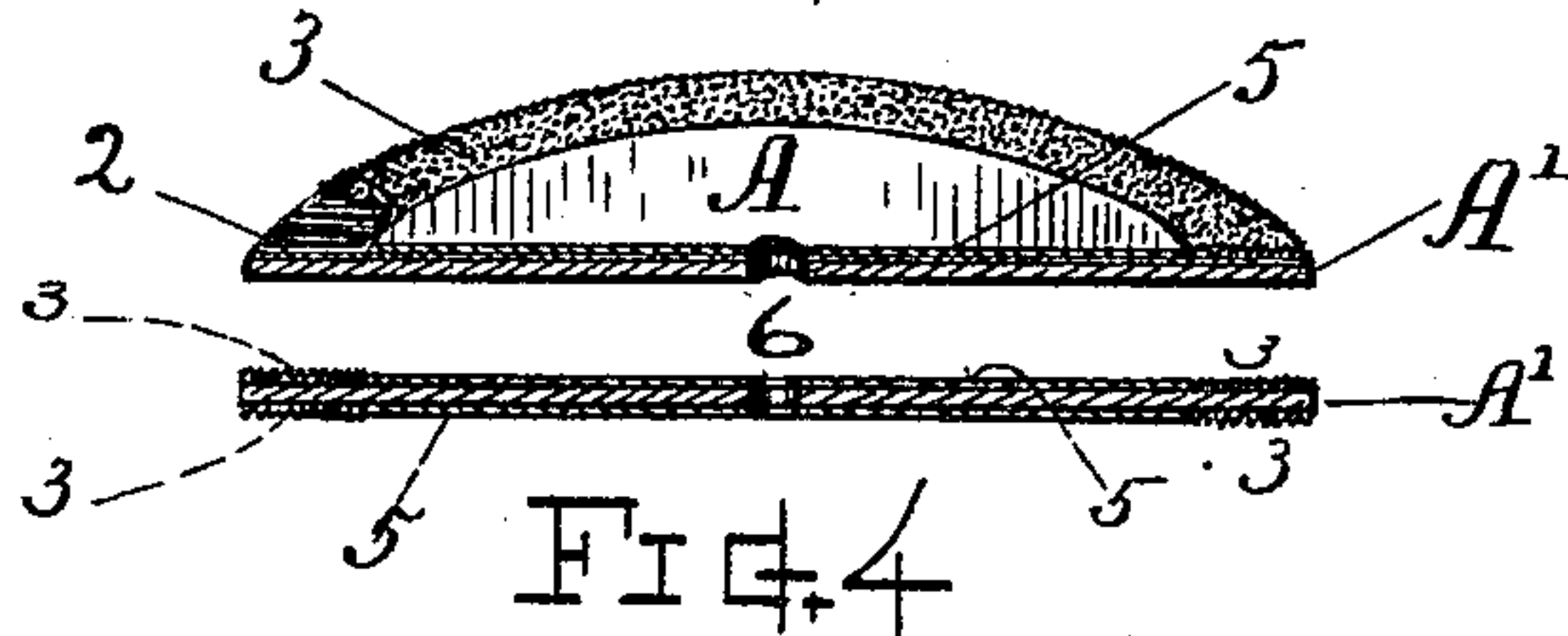


FIG. 4

Witnesses.

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DENTAL POLISHING-DISK.

SPECIFICATION forming part of Letters Patent No. 583,735, dated June 1, 1897.

Application filed December 6, 1895. Serial No. 571,244. (No model.)

To all whom it may concern:

Be it known that I, CARROLL W. DODGE, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Dental Polishing-Disks, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

The object of my present invention is to provide an improved disk for the purpose named having its annular rim of polishing or abrading material defined by the peripheral edge of a non-abrasive reinforced center. These objects I attain by the peculiar means and method of production hereinafter described, and shown by the drawings, whereon—

Figure 1 is an outline diagram illustrating one system that can be employed for producing the polishing-disk hereinafter claimed. Fig. 2 is a front view of the blank in course of transformation. Fig. 3 is a front view of the finished article. Fig. 4 shows enlarged transverse sections of my improved dental polishing-disks as made for general use, single-faced, and also as made double-faced; and Fig. 5 shows the form of the applied reinforce or surface disk.

The article produced according to my invention is a paper disk A, having near its periphery an annular rim or border 3, of greater or less width, as desired, composed of a coating of grit, abrading or polishing material attached to the surface of the paper fabric by glue or other suitable cementing substance 2, and within the said annular rim the disk area is surfaced or reinforced by an applied ply of paper or fabric 5, secured to the main disk by the same adhesive coating 2 as the polishing-grit and by its peripheral edge sharply defining the limit of the grit surface, while affording a clean guard along the inner edge of said grit.

For general use these disks are made with the polishing-rim 3 and reinforce 5 on one side only, but in some instances, when desired, are provided with the annular polishing-surface and plain surface reinforce upon both sides.

My method of making this article is as follows:

The fabric A'—moderately thick Manila paper being generally used—is preferably employed in the form of a roll or strip (see Figs. 1 and 2) of suitable width to form the size of disk required—say five-eighths or seven-eighths of an inch, more or less. The surface of this strip or ribbon as it comes from the roll *a* is first coated with glue or similar semiliquid adhesive substance 2 by an even coating upon the surface of the paper. To this glue-coated surface I then affix small disks or reinforcing-planchets 5, of thin plain paper or fabric. A central hole 6 can be formed through the fabric. The grit or comminuted polishing material 33, which may be of any suitable kind and of the required degree of fineness, is then distributed over the entire surface of the strip A' and attached disks 5, which polishing material attaches to the fresh glued surface, but not to the plain reinforce fabric 5, from which the grit can be fanned off. The glue or adhesive substance is then dried or hardened, causing the firm attachment of the grit. The circular disks A are then cut from the strip concentric with but of larger diameter than the reinforcing-planchets 5, thus forming an article presenting a plain reinforced center with a surrounding annular portion that is surface-coated with grit, as indicated in Fig. 3, the rim portion being only the thickness of the main fabric plus the quantity of grit fixed thereon.

In case it is desired to make dental polishing-disks A with an annular rim of grit or abrading material upon both side faces of the disk then the fabric A', after being grit-coated and reinforced upon one side, is, before cutting out the finished articles, in like manner coated with glue, and reinforcing-planchets 5 are affixed thereto directly opposite the first and polishing-grit distributed over the second glue-coated surface, after which, when the glue is sufficiently hardened, the disks are cut out, substantially as above described. A section of such a disk is shown at the lower part of Fig. 4. The central hole 6 is preferably formed through the fabric at the center of the reinforce when the latter is affixed in position on the strip, and such hole serves as a guide for accurately centering the cutting-tool in the subsequent steps of manufacture and finally for receiving the arbor

of the dental-engine handpiece when the disk is applied to use.

The polishing-disk made as above described has a peripheral polishing-rim which is not materially increased in thickness by the attached grit and a comparatively stiff plain non-gritted center for the support of the same in operation, thus providing a very desirable and more efficient article for the purpose designed, while the method of making the same renders their manufacture practically expeditious, economical, and inexpensive.

It will be understood that I do not broadly claim a dental polishing-disk having an annular grit surface irrespective of the construction, as I am aware that such disks have been made by applying an annular grit-coated rim to a body-disk, and also by applying a line or marking of glue about the circle of a disk and supplying grit thereto; but neither of such methods attains the advantageous results incident to my improvement—viz., economy in manufacture, perfect definition of the grit annulus, and the production of a thin, even, and well-guarded disk of comparatively high resilience.

What I claim as of my invention, and desire to secure by Letters Patent, is—

1. A dental polishing-disk, consisting of a body fabric, a film of adhesive substance uniformly laid thereon, and a facing composed in part of paper, and in part of grit, both at-

tached to the same adhesive film, and forming a substantially uniform thickness throughout the disk area, as set forth.

2. A ribbon or strip for producing dental polishing-disks, consisting of a strip of suitable fabric having upon its face a film of adhesive substance, and provided at intervals with circular planchets of plain thin paper adhering to and covering portions of its surface, the remaining surface of the band being coated with comminuted grit attached thereto by said adhesive film, substantially as set forth.

3. As an improved article of manufacture, the within-described dental polishing-disk formed of suitable fabric, and having the annular-rim surface of polishing-grit adjacent to its periphery, and a plain non-gritted central area the extent of which is defined by a thin paper surfacing-disk adhesively connected to the main fabric by the same adhesive film that holds the grit, the peripheral edge of said surfacing-disk presenting an approximately flush ground along the adjacent central limit of said grit surface, substantially as set forth.

Witness my hand this 4th day of December, 1895.

CARROLL W. DODGE.

Witnesses:

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ELLA P. BLENUS.