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PATENTED FEB. 20, 1906.

H. SANFORD-BURTON.
GRINDING STONE AND DISK EMPLOYED IN MECHANICAL AND OPERATIVE
DENTISTRY.

APPLICATION FILED JULY 31, 1905.

Fig. 1.

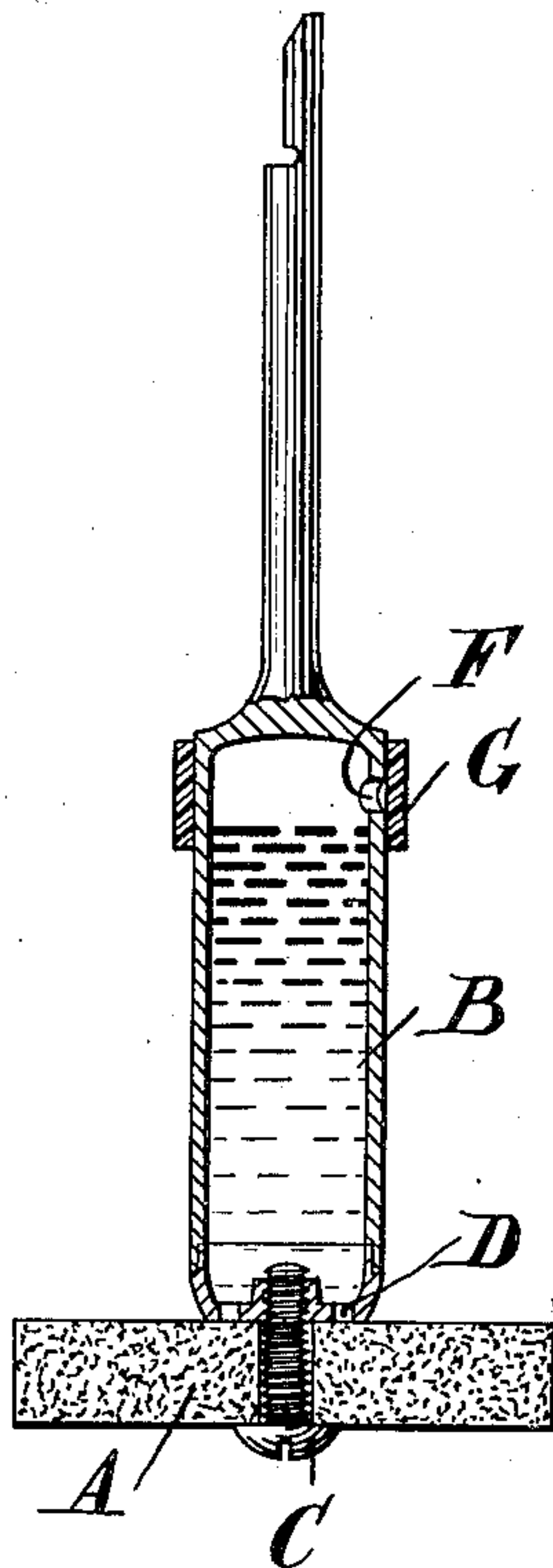


Fig. 3.

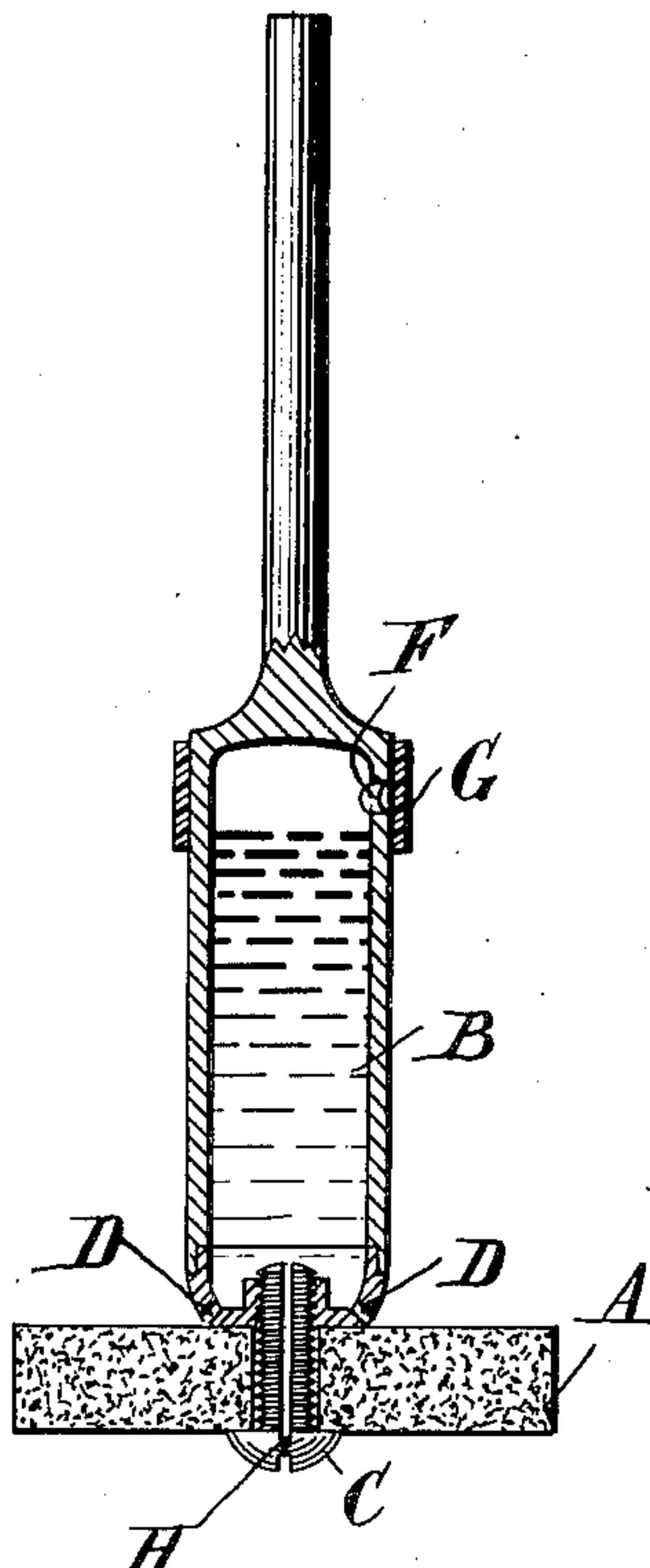


Fig. 2.

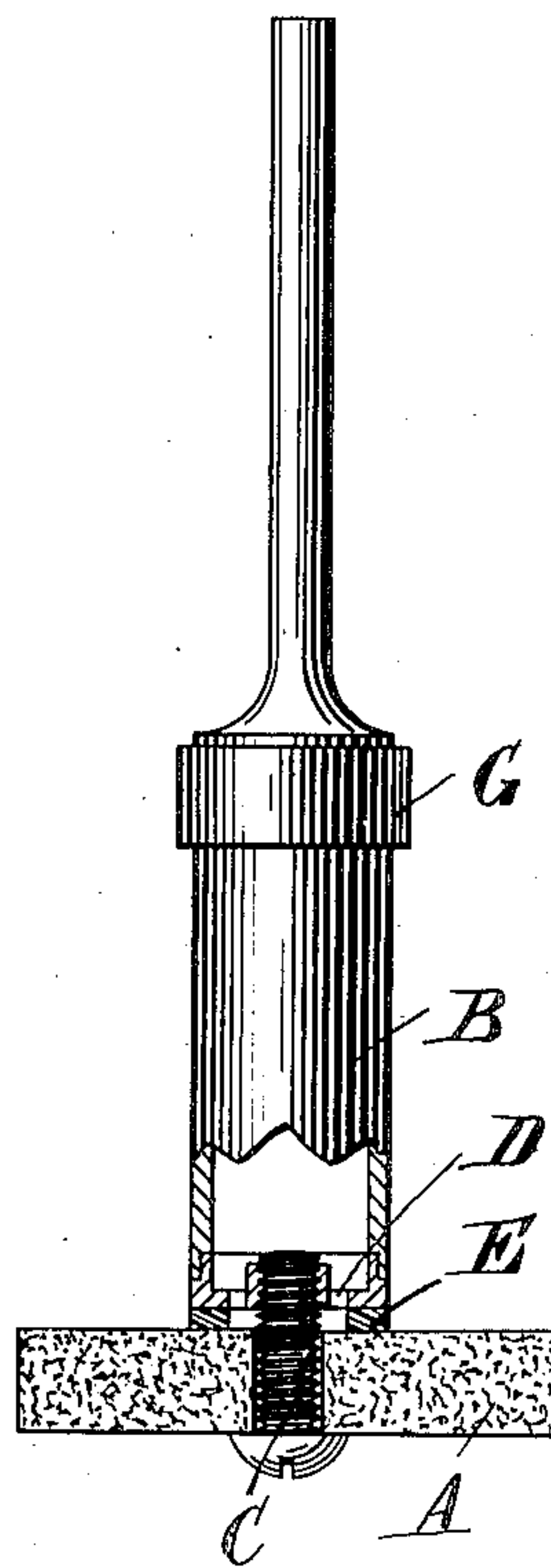
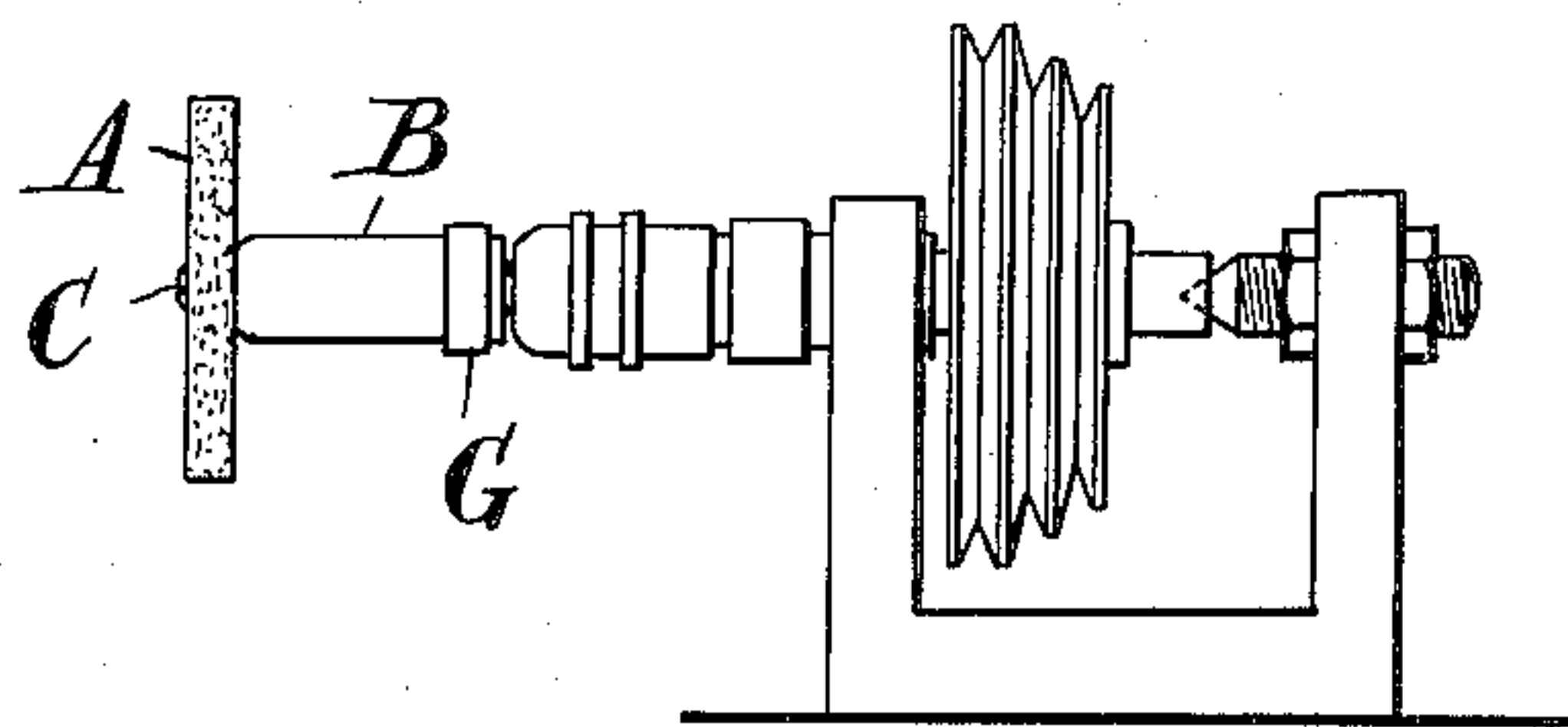


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

HARRY SANFORD-BURTON, OF OXFORD, ENGLAND.

GRINDING STONE AND DISK EMPLOYED IN MECHANICAL AND OPERATIVE DENTISTRY.

No. 813,348.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed July 31, 1905. Serial No. 271,967.

To all whom it may concern:

Be it known that I, HARRY SANFORD-BURTON, a subject of the King of Great Britain, residing at 63 St. Giles, Oxford, England, have invented certain new and useful Improvements in Grinding Stones and Disks, Especially Those Employed in Mechanical and Operative Dentistry, of which the following is a specification.

The object of my invention is to supply means for providing the grinding stones or disks with water or other fluid automatically that the work can proceed without the oftentimes interruption due to the operator having to supply and keep supplied the grinding-surface with water, the invention being specially applicable for use with grinding disks or stones used in mechanical or operative dentistry, but is also applicable to porous and other stones or disks used for other grinding.

My invention will be clearly understood from the following description, aided by the examples shown in the accompanying drawings, in which—

Figure 1 is a sectional elevation of a water-supply tube having a porous grind stone or disk attached. Fig. 2 is a similar view to Fig. 1, showing a water-tight packing between the reservoir-tube and the grinding disk or stone. Fig. 3 is a similar view to Fig. 1, but showing means for supplying water to each side of a grind stone or disk, either porous or non-porous. Fig. 4 is an elevation of a lathe-head with my reservoir-tube, axle and grinding stone or disk applied.

I attach to or make the whole or a portion of the spindle carrying the carborundum or other grinding disk or stone A as a tube B, and connect same to the disk or stone A in the usual or other manner, preferably by a screw C of a smaller diameter than the hole in the disk. The end of the tube B next the disk A is preferably closed except to one, two, or more holes D, and the connection between the tube B and the disk A may be made water-tight at the edge of the tube B in some cases by a rubber ring E, as at Fig. 2, and especially so when a porous stone or disk is used. The tube B, I fill with water through

an opening F and then seal the opening F in the tube by a band G or other means, so that the water can only pass through the holes D in the end, and I have found that on the rotation of the disk A and tube B in the usual manner the water will slowly pass from the tubular axle through or around the disk in a sufficient degree to keep the working edge or surface sufficiently moist for effective grinding. When a non-porous stone or disk is affixed to the tube B, I place the holes D that they are open to the stone or disk outside of their connection with the tube, so that water may be conveyed to that side of the stone, and I also slit the screw C, so that the water will pass through same and to the other side of the stone or disk, as at H, Fig. 3, whereby both sides can be supplied with water for efficient working; but such arrangement can equally well be applied when a porous stone is employed.

In some cases, and especially for fixed machines, the tubular axle may be open to a trough or supply of water, so that it will not be necessary to refill the tube when exhausted.

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

1. A spindle having a hollow enlarged end forming a closed water-reservoir, and a grinding-stone secured to the outer extremity of said spindle, said reservoir provided with openings forming communications with the stone for supplying water thereto.

2. A spindle having a hollow end forming a closed reservoir and provided with an inlet-port for supplying water thereto, a grinding-stone secured to the said spindle, said hollow end provided with openings forming conduits for supplying water to the stone, and an annular ring slidable on the spindle for closing the inlet-port.

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

HARRY SANFORD-BURTON.

Witnesses:

RICHARD CORE GARDNER,
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