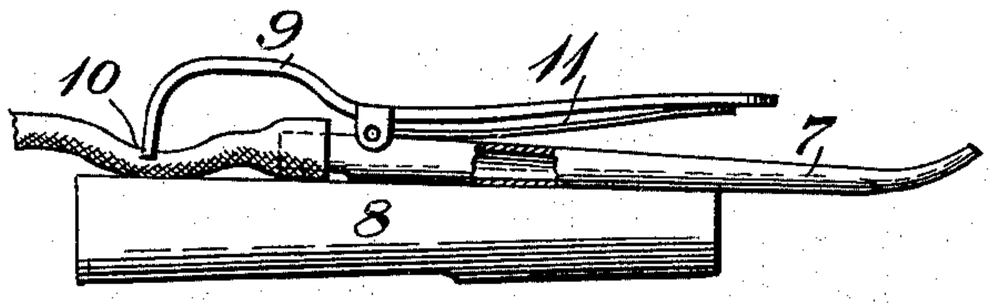
(No Model.)

T. E. DAUGHERTY.

DRIP APPARATUS FOR DENTAL ENGINES.

No. 568,163. Patented Sept. 22, 1896.

Fig. 2.



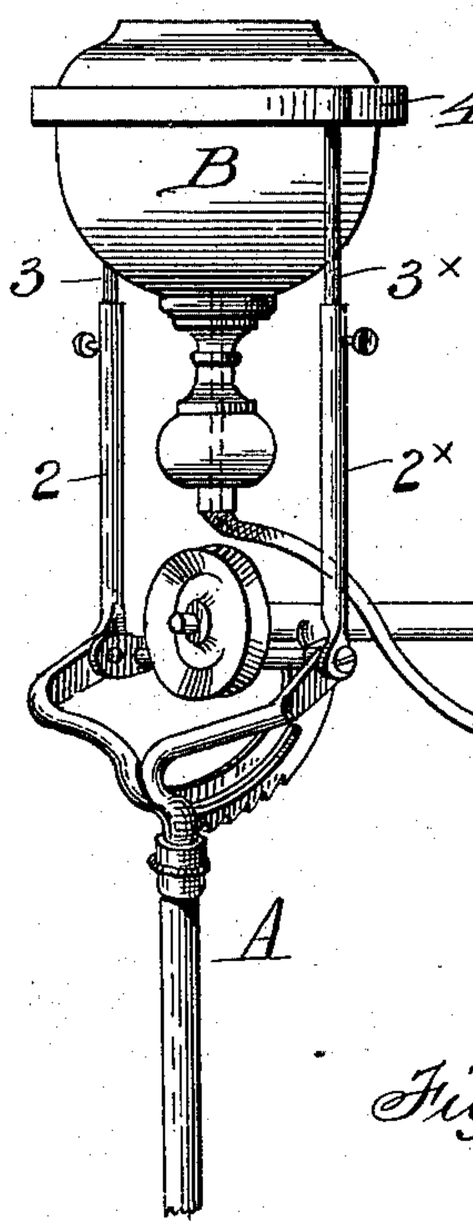


Fig. 1.

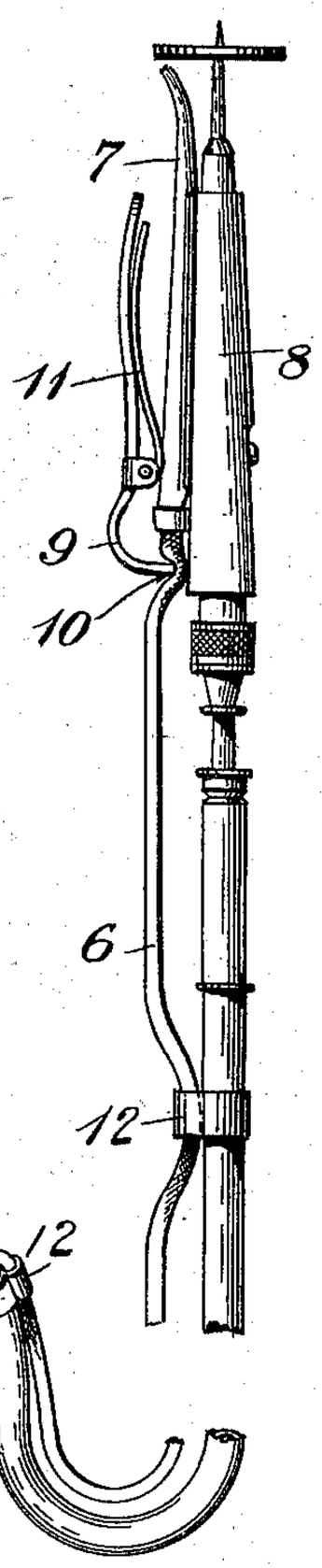


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

THOMAS E. DAUGHERTY, OF GUTHRIE CENTRE, IOWA.

DRIP APPARATUS FOR DENTAL ENGINES.

SPECIFICATION forming part of Letters Patent No. 568,163, dated September 22, 1896.

Application filed January 23, 1896. Serial No. 576,614. (No model.)

To all whom it may concern:

Be it known that I, THOMAS E. DAUGHERTY, a citizen of the United States, residing at Guthrie Centre, in the county of Guthrie and State of Iowa, have invented certain new and useful Improvements in Drip Apparatus for Dental Engines; and I do declare the following to be full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to improvements in drip apparatus for dental engines and similar devices and mechanisms, and the object is to provide an improved and useful apparatus to convey water to a tool requiring cleansing or lubrication during the processes of operation and manipulation.

I have fully and clearly illustrated my invention in the accompanying drawings, wherein—

Figure 1 is a view in elevation showing my invention applied to a dental engine. Fig. 2 is a detail of the nozzle and compression-valve removed from the hand-piece. Fig. 3 is a detail of the support for the water-cup.

Referring to the drawings, A designates a dental engine of any approved construction comprising the usual principal parts, as the engine-post, the cable or flexible shaft-tube, and metal hand-piece carrying the emery-wheel or other rotating tool.

To the head of the engine-post, on the ends of the yoke 1, are secured two oppositely-arranged socket-pieces 2 $2^{\times}$, which take in two standards or rods 3 $3^{\times}$, supporting on their tops a ring or annulus 4, in which the water-cup B is hung by means of oppositely-arranged arbors 5 $5^{\times}$, substantially as shown. In the cup is formed a small discharge-port, as indicated by the dotted lines, and on the end of the post-tube is secured one end of a small flexible tube 6, preferably of india-rubber, carrying on its free end a metal drip-nozzle 7, secured to the forward portion of the hand-piece by means of a sleeve 8, fitted thereto and fixed to the drip-nozzle, substantially as shown. The end of the nozzle is arranged closely adjacent to the tool or wheel, so that the water may fall thereon during the process of operation. On the nozzle is fulcrumed a compression-valve or cut-off 9, having its one end reaching over onto the flexible tube, as at 10, which is borne down to close the tube by a spring 11, forcing up the hand-piece of the cut-off, and operating to stop or regulate the flow of water through the nozzle. The flexible tube is held detachably to the cable of the engine by means of two or more **S**-shaped keepers 12, as indicated in Fig. 1 of the drawings.

The use of my device is apparent by examination of the drawings, taken in connection with the foregoing description, but may be here stated as follows: The cup being arranged and disposed in its seat or position on the engine-post, the flexible tube is then attached by the keepers to the cable and the nozzle-piece arranged and adjusted on the hand-piece, and then the cup being supplied with water the apparatus is ready for being used in connection with the engine for the purpose of delivering water to the tool rotated by the engine.

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

In a dental engine, and in combination with the engine-post, the cable and the hand-piece, of a drip apparatus, comprising the vertical socket-pieces 2, $2^{\times}$ secured to the yoke of the engine-post, the supporting-rods 3, $3^{\times}$, arranged in the sockets, and provided with a ring 4 at their tops, the water-cup B supported on arbors in the ring, the tube 6 secured to the bottom of the cup, and the drip-nozzle 7 on the outer end of the tube formed with a sleeve 8 to fit over the hand-piece of the engine, and provided with a spring-actuated cut-off 9 arranged to bear on the tube in advance of the nozzle, substantially as and for the purpose set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

THOMAS E. DAUGHERTY.

Witnesses:
E. C. LANE,
CARL H. LANE.