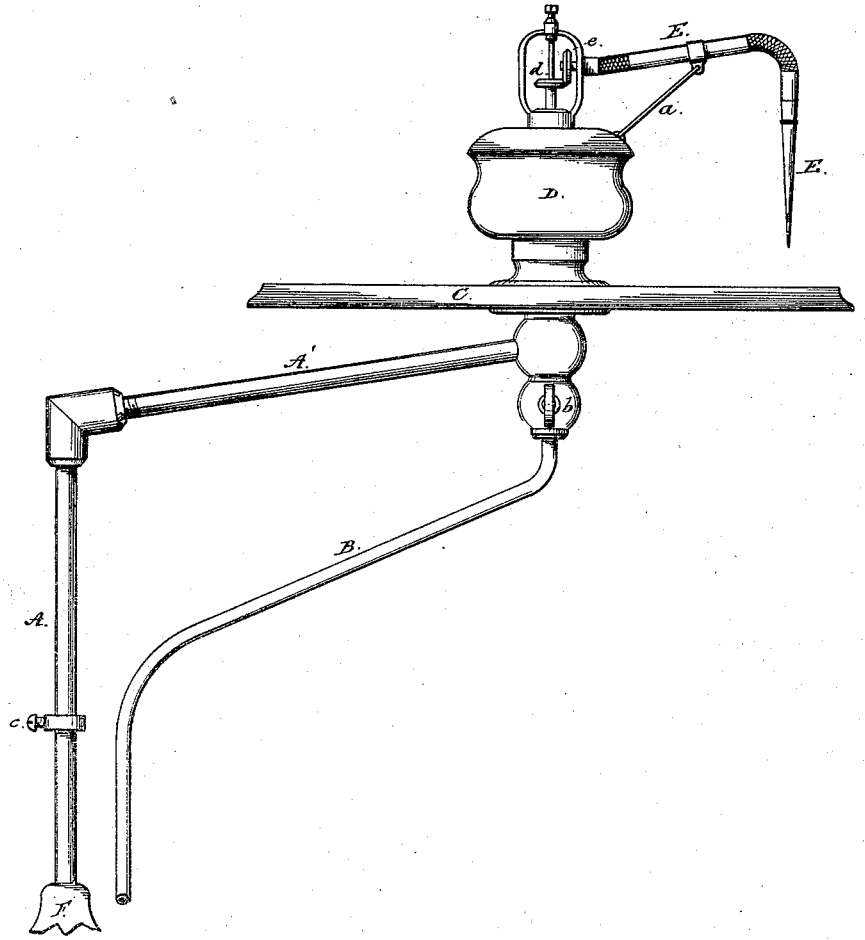
W. W. EVANS.

DENTAL-ENGINE

No. 169,346. Patented Nov. 2, 1875.



Witnesses:

J. C. Dowell

Rich.d H. Manning

Inventor:

W. Warrington Evans

UNITED STATES PATENT OFFICE.

W. WARRINGTON EVANS, OF GEORGETOWN, DISTRICT OF COLUMBIA, ASSIGNOR TO SAMUEL STOCKTON WHITE, OF PHILADELPHIA, PA.

IMPROVEMENT IN DENTAL ENGINES.

Specification forming part of Letters Patent No. **169,346**, dated November 2, 1875; application filed June 23, 1874.

CASE B.

To all whom it may concern:

Be it known that I, WILLIAM WARRINGTON EVANS, of Georgetown, in the District of Columbia, have invented certain new and useful Improvements in Dental Engines or Attachments thereof, of which the following is a specification:

My invention relates to that class of dental engines in which a water-motor is employed, and constitutes an improvement on Letters Patent No. 151,653, granted to me June 2, 1874. Its object is to secure a simple and efficient apparatus, which end I attain by mounting the engine on a dental chair, or on a swinging bracket attached to the wall, or on a standard projecting from the floor, the water for the engine being conducted to and allowed to escape therefrom through said bracket or standard, it being made hollow for that purpose; or the supply and waste pipes may be brought up through the chair.

The accompanying drawing represents a view in elevation of so much of my improved apparatus as is necessary to illustrate the subject-matter hereinafter claimed.

A hollow swinging rigid bracket, A A′, is shown as mounted in a suitable hollow standard or sleeve, F, attached to the chair or wall, or coming directly from the floor. It can also be well arranged in or upon a spittoon-standard. The bracket may be raised or lowered, and held in any desired position, by means of a sliding ring and clamp-screw, *c*, which allows the bracket to move up and down in the socket. A casing, D, inclosing a turbine or battery water-wheel, of well-known construction, is mounted on this bracket. The water enters through a supply-pipe, B, which may also serve as a brace to the bracket, and constitute a portion thereof, and is provided with a stop-cock or regulating-valve, *b*, through which the water passes to the turbine-wheel, escaping through the bracket pipes A A′ after doing its work. The table C, for the reception of tools, instruments, &c., is likewise mounted upon the bracket. The flexible shaft E, of well-known construction, drives a tool mounted in the usual hand-piece, and is provided with a hinged support, *a*, by which it may be raised or lowered. This shaft is driven by friction or gear wheels *d e*, the former of which, being the driving-wheel, is mounted directly upon the shaft of the water-wheel, while the latter, *e*, is mounted on a short shaft connected directly with a flexible portion of the shaft E. The driving-wheel *d* is beveled on its upper edge to obtain a better hold of the friction-wheel *e*, and is also secured to the shaft of the water-wheel by a set-screw, so as to regulate the friction.

I have now explained my preferred mode of operating, but do not wish to confine myself to the exact mode herein shown of connecting or constructing the several parts, as they may be varied within certain limits without departing from the spirit of my invention.

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

1. The combination, substantially as hereinbefore set forth, in a dental engine, of flexible shafting and a water-motor mounted upon a hollow bracket or support, through which the supply and waste water for the motor flows.

2. A dental engine constructed substantially as hereinbefore set forth, and mounted upon a swinging bracket or support, whereby its position relatively to the operator may be varied.

3. The combination, substantially as hereinbefore set forth, of the swinging bracket, the dental engine mounted thereon, and the table surrounding the engine, for the purposes specified.

4. The combination, substantially as hereinbefore set forth, in a dental engine, of a swinging bracket or support, a water-motor mounted thereon, a dental tool driven by the water-motor, and a water-supply-regulating valve mounted on the bracket, whereby it is always kept within easy reach of the operator.

W. WARRINGTON EVANS.

Witnesses:

WM. D. BALDWIN,

E. C. DAVIDSON.