

No. 696,652.

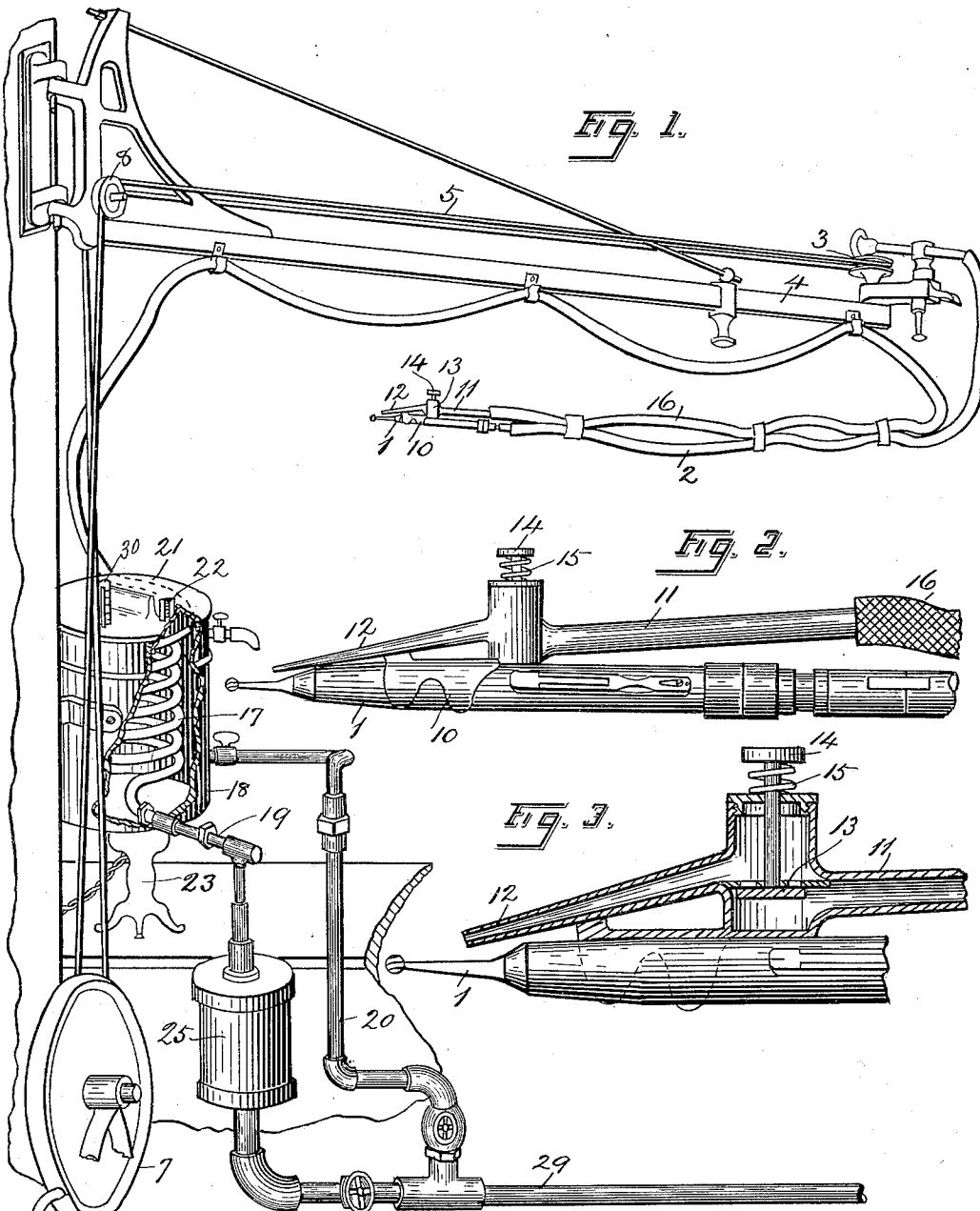
Patented Apr. 1, 1902.

A. F. MERRIMAN, JR.

DENTAL OBTUNDER.

(Application filed Feb. 27, 1900.)

(No Model.)



WITNESSES:

W. R. Daniels
J. A. Danick

INVENTOR

A. F. Merriman, Jr.

BY

Francis M. Wright

ATTORNEY

UNITED STATES PATENT OFFICE.

ALVIN FOX MERRIMAN, JR., OF OAKLAND, CALIFORNIA.

DENTAL OBTUNDER.

SPECIFICATION forming part of Letters Patent No. 696,652, dated April 1, 1902.

Application filed February 27, 1900. Serial No. 6,754. (No model.)

To all whom it may concern:

Be it known that I, ALVIN FOX MERRIMAN, Jr., a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Dental Instruments, of which the following is a specification.

My invention relates to improvements in dental instruments, and especially in that class of instruments comprising a dental handpiece holding a drill, bur, or any other necessary point for excavating or grinding the teeth which may cause pain or be disagreeable to the patient, the object of my invention being to provide an apparatus which may be used in conjunction with such a handpiece for the purpose of reducing as much as possible the pain caused by the operation of the drill or similar device.

My improved apparatus comprises improved means for applying constantly to the part operated upon simultaneously with the operation of drilling or the like a jet of warm, almost hot, water under suitable pressure, said means insuring that the water shall be maintained at the required uniform temperature during the whole of the operation.

My invention also resides in the novel construction, combination, and arrangement of parts for the above ends hereinafter fully specified, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the entire apparatus. Fig. 2 is a side elevation, on an enlarged scale, of a drill having a portion of the apparatus attached thereto; and Fig. 3 is a partial longitudinal section of the terminal portion of the drill and jet on a still larger scale.

In the drawings I have illustrated my invention as applied to a drill carried at the end of a swinging bracket and rotarily driven by a water-motor. It is readily understood, however, that the apparatus can be equally well applied to a drill driven by foot-power or from any other suitable source of power.

Referring to the drawings, 1 represents a hand-drill, to which rotation is imparted by a flexible connection 2 from a pulley 3, carried on the end of a bracket 4, said pulley 3 being driven by a cord 5 from a pulley driven

by a water-motor 7, said cord passing over idle pulleys 8. Upon said drill is attached, by means of a spring-clamp 10, a tube 11, terminating in a nozzle 12, so directed as to project a jet of water from the tube onto the exact spot operated upon by the point of the bur. A valve 13 in said tube is so controlled by the operator that pressure upon the head 14 of the valve opens the same and permits the water to flow therethrough, the valve immediately closing by the action of a spring 15 when said pressure is removed. A reinforced flexible tube 16 conducts the water to the tube 11 from a coil of pipe 17 in a reservoir 18, said coil being supplied by a pipe 19 from a branch 29 of the house-pipe, and thus being supplied with water under the city pressure. The reservoir 18 is filled from another branch pipe 20, and the top 21 carries a safety-valve 22. The water in said reservoir is heated by any suitable means. I have here shown an electric heater 23 under said reservoir for heating the water therein, and said water is maintained at a high temperature, so as to impart sufficient heat to the water passing through the coil of pipe 17 to raise the same to the temperature of not less than 100° Fahrenheit. A thermometer 30, extending from the top of the reservoir 18, indicates the proper temperature.

I have found that the effect of the above apparatus is very soothing to the patient, and I have also found that it assists the operation of drilling or excavating the teeth.

In order that the water supplied may be perfectly pure, there is interposed a filter 25 in the stream of water which passes through the coil 17.

It will be understood that any suitable means will be provided for drawing off the water from the mouth of the patient into a basin.

It is evident that many changes may be made in the specific construction above described without departing from the spirit of my invention.

I claim—

1. In combination with a handpiece for operating upon a patient, means for relieving the pain of the operation, comprising a tube attached thereto having a nozzle directed to the point operated upon, a supply of water

under constant pressure, a reservoir, means for heating water in said reservoir, a coil of pipe in said reservoir connected at one end with the water-supply, and a flexible connection from the other end of the coil to the tube, substantially as described.

2. In combination with a handpiece for operating upon a patient, means for relieving the pain of the operation, comprising a tube attached thereto having a nozzle directed to the point operated upon, a reservoir, a coil of pipe in said reservoir, means for heating water in said reservoir, a flexible connection

from the coil of pipe to the tube, two water-supply pipes, one connected to the reservoir and the other connected to the coil of pipe therein, and a filter in said last-mentioned water-supply pipe, substantially as described.

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

ALVIN FOX MERRIMAN, JR.

Witnesses:

FRANCIS M. WRIGHT,
Z. A. DANIELS.