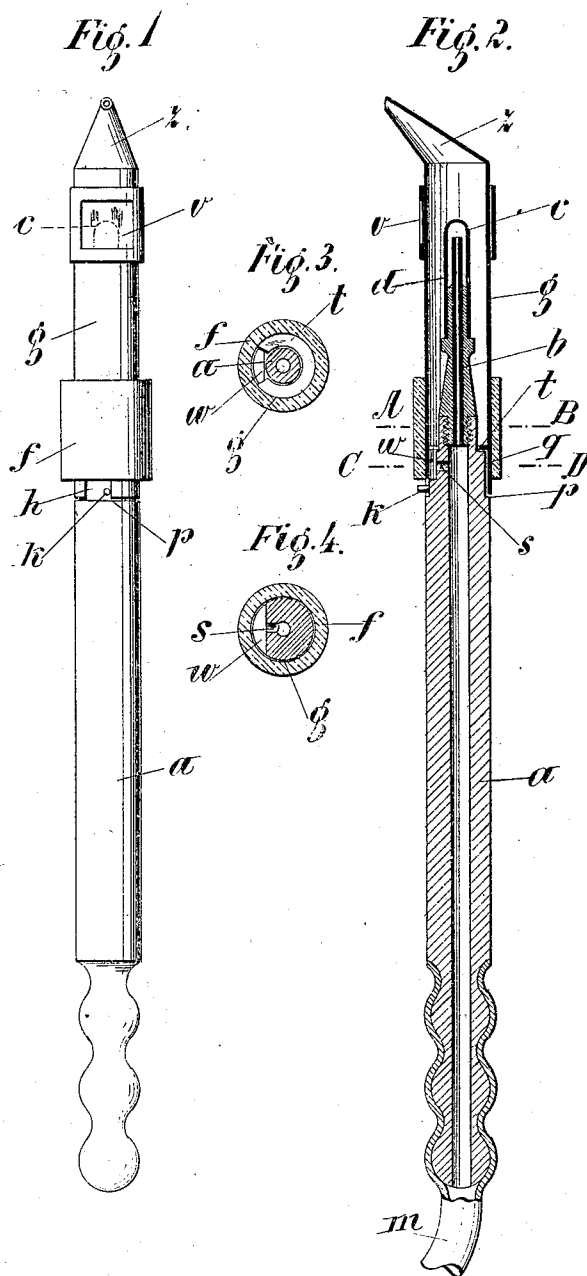


V. MONATH.

INSTRUMENT FOR SUPPLYING CONSTANT CURRENTS OF HOT AIR.

APPLICATION FILED MAY 25, 1905.



Witnesses.

Geo. Heinicke
F. Dittmar

Inventor.

Victor Monath
by G. Dittmar
Attorney

UNITED STATES PATENT OFFICE.

VICTOR MONATH, OF VIENNA, AUSTRIA-HUNGARY, ASSIGNOR TO EDUARD THOMAS, OF VIENNA, AUSTRIA-HUNGARY.

INSTRUMENT FOR SUPPLYING CONSTANT CURRENTS OF HOT AIR.

No. 806,694.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Application filed May 25, 1905. Serial No. 262,288.

To all whom it may concern:

Be it known that I, VICTOR MONATH, a citizen of the Empire of Austria-Hungary, residing at Vienna, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in the Construction of Instruments for Supplying Constant Currents of Hot Air, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of my invention is the construction of an instrument to be used in dentistry for supplying a constant current of hot air.

My invention is based upon the well-known principle that a capsule of platina is kept in red-hot state by the constant passage of a mixture of air and benzin.

The improvement consists in a device to regulate the flow of gases, so as to produce any desired degree of heat.

In carrying out my invention I inclose a platina capsule in a jacket ending in a nozzle, so that the partly-burned gases when leaving the capsule are collected in the jacket and will escape through the nozzle in a constant current. In order to permit varying the temperature of this current, provisions are made that part of the gas mixture may be brought to escape through the nozzle without entering the red-hot platina capsule.

In the annexed drawings an instrument constructed according to my invention is shown, of which—

Figure 1 is a front elevation, and Fig. 2 a longitudinal section on a plane vertical to Fig. 1. Figs. 3 and 4 are sections on lines A B and C D of Fig. 2.

In all figures similar letters of reference indicate like parts.

The instrument essentially consists of a narrow tube *b*, attached to the mouth of a tube *a*, which supplies the mixture of air and benzin from a flexible tube *m*, fastened to the other end of the tube *a*. Over the free end of the narrow tube *b* is placed a platina cap *c*, provided with an orifice *d*. This cap *c* is attached to the end of the tube *a* and is inclosed in a wider tube *g*, which turns with one end upon the end of the tube *a*. At its other end, above the cap *c*, the tube *g* ends in a nozzle *z*. To the tube *g* is fastened a sleeve *f*, which serves as a handle for turning the tube. The rotary movement of the tube *g* is limited by a pin *k*, attached to the tube *a* and engaging

into a slit or recess *h* in the tube *g*. Above the shoulder *p* of the tube *a*, upon which rests the tube *g*; a second shoulder *q* is provided, and between the two the tube *a* is cut out or flattened, thereby removing a small segment of the metal, so that between the tubes *a* and *g* a small chamber *w* is formed, which communicates by a small passage *s* with the interior of the tube *a*.

To the inside of the tube *g* a ring *t* is attached in such manner that it rests upon the shoulder *q* and closes the chamber *w* in the side of the tube *a*. The ring *t* is provided with a sector-shaped aperture, which by turning the tube *g* may be brought in partial or full communication with the chamber *w* in the manner of a valve, so that more or less of the mixture of air and benzin may be permitted to escape from the tube *a* through the passage *s* and tube *g* at the nozzle *z*.

The tube *g* is provided with a small mica window *v* for observing the incandescence of the platina cap.

The instrument is used in the following manner: The tube *g* is first removed, and the platina cap is made incandescent by any suitable flame. The tube *g* is now put on again, and the mixture of air and benzin supplied through the tube *a* will ignite at the cap *c*, the combustion-gases escaping out through the nozzle *z*. To regulate the temperature of the gases escaping through the nozzle, the tube *g*, with the ring *t*, is turned by means of sleeve *f* so that either the whole or only part of the mixture of air and benzin is driven through the cap *c*. The more of this gas which travels through the passage *s* into the tube *g* without being ignited by the cap *c* the cooler will be the jet of gas escaping at the nozzle.

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

1. Dental instrument for supplying a jet of heated gas, comprising a platina capsule adapted to be kept in incandescent state by a continuous current of a mixture of air and benzin, a nozzle-tube inclosing the platina capsule, and provided with means to allow more or less of the gas mixture to pass outside of the platina capsule without combustion, substantially as described.

2. In a dental instrument for supplying a jet of heated gas the combination with a platina capsule adapted to be kept in incan-

descent state by a continuous current of a mixture of air and benzin, of a nozzle surrounding said cap, having a limited rotation, of a chamber in shape of a segment formed
5 on the tube carrying the capsule by flattening said tube between two offsets p and q , of a communicating channel s between said chamber and the inside of the tube, of a ring t secured to the nozzle and being cut open for a
10 length about equal to the length of the segment, of a stop-pin k secured to the tube and

of a notch h in the lower edge of the nozzle-tube to limit its revolution with ring t , substantially as described and for the purpose set forth. 15

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

VICTOR MONATH.

Witnesses:

ALVESTO S. HOGUE,

AUGUST FUGGER.