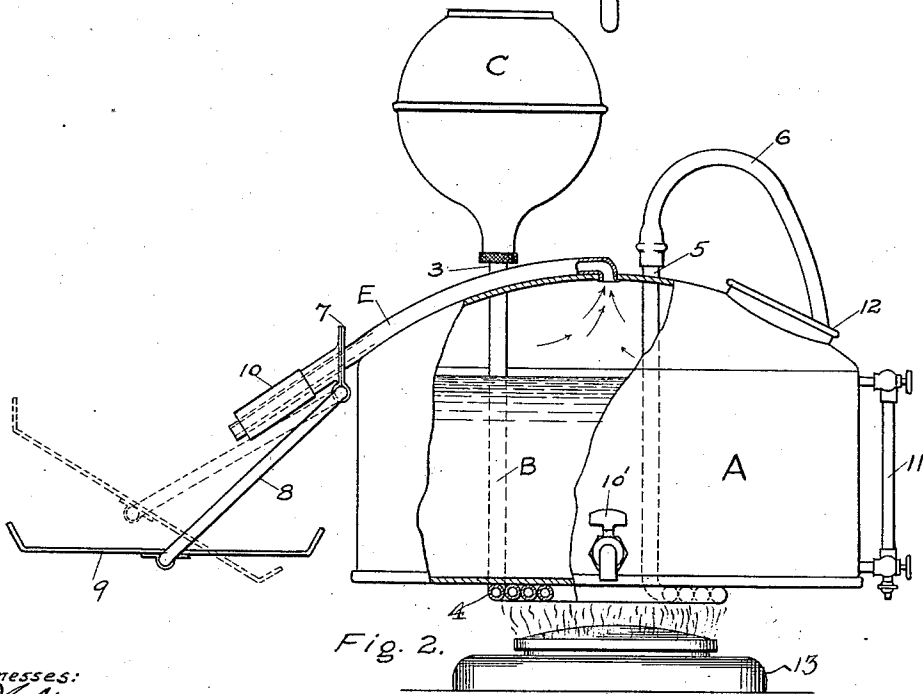
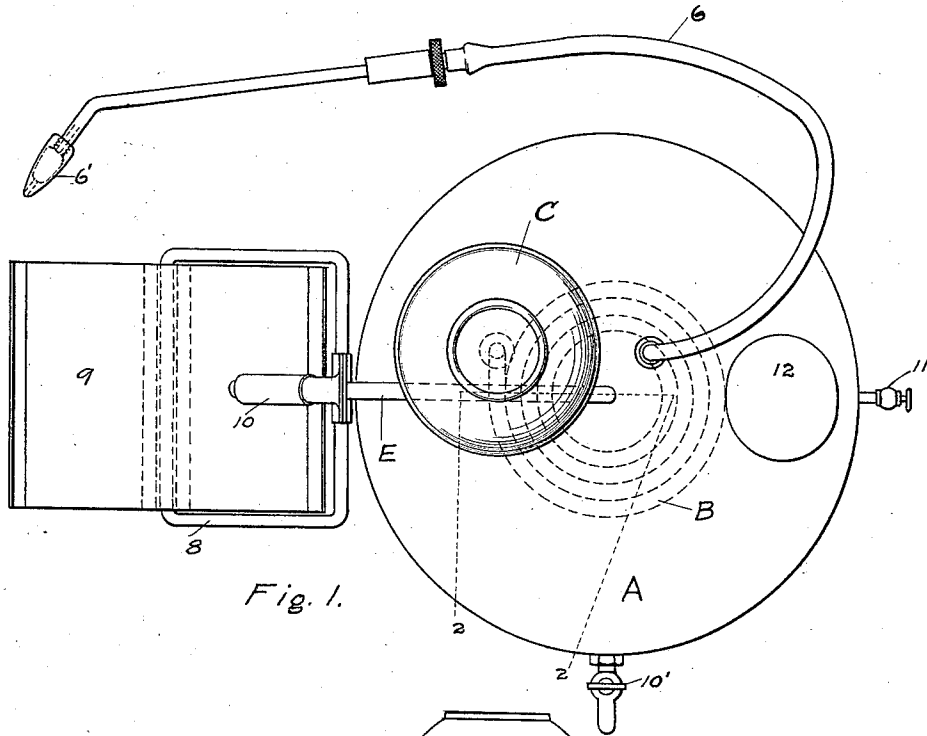


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DENTAL APPARATUS.
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1,043,284.

Patented Nov. 5, 1912.



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UNITED STATES PATENT OFFICE.

ROBERT E. ZELLERS, OF PORTLAND, OREGON.

DENTAL APPARATUS.

1,043,284.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed April 5, 1912. Serial No. 688,716.

To all whom it may concern:

Be it known that I, ROBERT E. ZELLERS, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Improvement in Dental Apparatus, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to a class of devices used or which may be used immediately about the dental operating chair.

The object of my invention is to provide a device which will enable the operator to quickly and effectually melt gutta percha for use in artificial teeth plates, also to provide heated air and water for use in operating. In my device I have attained these objects, as well as other advantages, by the construction, combination, and arrangement of parts illustrated in the accompanying drawings, which form a part thereof.

Figure 1 is a plan view of my device with attachments thereon. Fig. 2 is a side elevation of the same partly broken away in section on line 2—2 of Fig. 1.

Like numerals and letters refer to like parts throughout the views.

A is a reservoir of suitable form and dimensions.

B is a pipe the end 3 of which is above the reservoir A. From the end 3 the pipe B extends downward through the reservoir, and below said reservoir the pipe is formed in a horizontal coil 4. At the termination of the coil the pipe extends upward and again through the reservoir terminating above the same in the opposite pipe end 5. A flexible air forcing bulb C is secured to the end 3 of the pipe B. One end of a flexible tube 6 is secured to the opposite end 5 of the pipe B and has a nozzle 6' on its free end. The nozzle has a chamber in which medicament may be placed.

E is a rigid steam pipe which extends from a suitable position within the dome of the reservoir to a position without the reservoir and at one side thereof. On the outer end of the pipe E a bracket 7 is secured. The lower arm 8 of the bracket 7 is pivoted therein so it can be moved upwardly. On the free end of the arm 8 a small pan 9 is rigidly secured in horizontal position. On the end of the pipe E a short envelop 10 is secured, the same being of some material which is a non-conductor of heat. A faucet

10' and a water gage 11 are provided on the reservoir. A small heater 13 is provided to heat the coil 4. A gas jet or electric apparatus may be used instead. The reservoir is filled through an opening 12.

It will now be seen that when heat is applied to the coil 4, as well as to the bottom of the reservoir, the water and the pipe B are heated at the same time. Also, when the heater is withdrawn, the water maintains a heat about the pipe B and thus a supply of heated air is for a desirable time accessible for use in dental operations. The air is forced by the bulb C through the pipe B and pipe 6 to the desired location for use. It will be further observed that the outlet for the steam is through the pipe E and that the movable pan 9 secured to this pipe allows the steam to be directed against its contents as desired.

The envelop 10 is to enable the operator to take hold of the heated end of the pipe E. It will thus be seen that when gutta percha is placed in the pan 9, it can be reduced to the desired softness by the direct and convenient application of steam, so near the dental chair that the gutta percha can be quickly molded in the mouth of a patient.

My device is intended to supply a rapid, convenient and effective means for artificial dentures on a gutta percha base. When in operation, it permits of reducing gutta percha in one thickness or more, to the consistency of soft wax, and after securing the teeth impress, the material can be invested and vulcanized perfectly. My device and the process which it so provides are most useful in forming and molding gutta percha for the class of dental work indicated. In addition to this the device also provides in itself a means of heating air uniformly and retaining it for a desirable time at a temperature required for dental work. It further provides heated water conveniently near the dental operating chair.

Having thus described my invention I claim:

1. A dental apparatus comprising a reservoir, a pipe E extending from within the reservoir and without the same to a suitable location, a bracket secured on the outer end of the pipe and having an arm pivoted at one end to the bracket, the opposite end being free, a pan secured on the free end of the bracket arm, means to heat fluid within the reservoir, substantially as described.

2. A dental apparatus comprising a reservoir, a horizontally coiled pipe beneath the lower surface of the reservoir, the ends of the pipe extending from the coil upward
5 through the reservoir and above the same, a flexible bulb secured on one end of the pipe and a flexible tube secured on the other end, a pipe E extending from within the reservoir and without the same to a suitable loca-
10 tion, a bracket secured on the outer end of

the pipe and having an arm pivoted at one end to the bracket, the opposite end being free, a pan secured on the free end of the bracket arm, means to heat fluid within the reservoir, substantially as described.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
