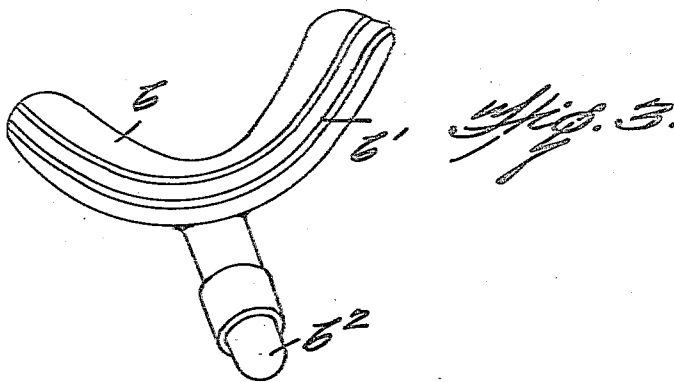
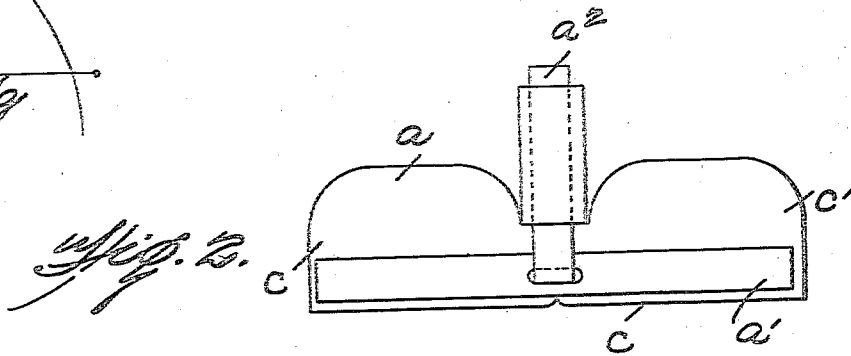
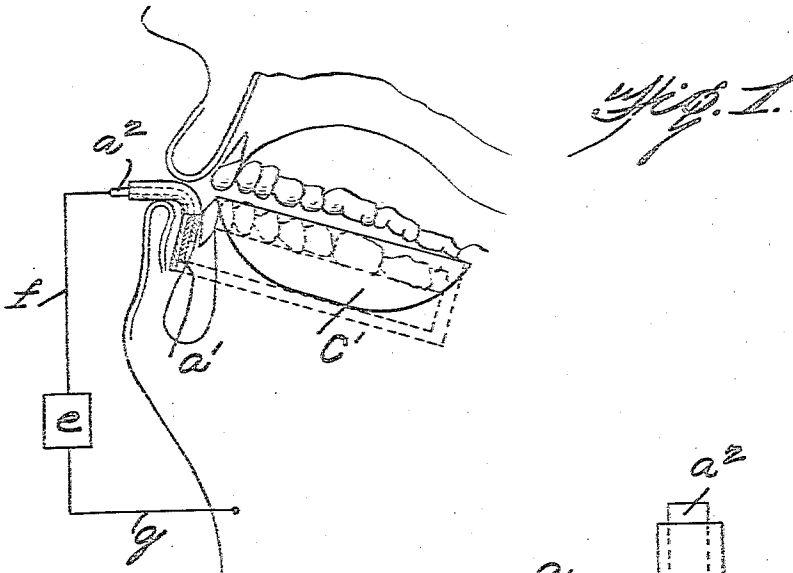


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T. H. PERLMAN
DIATHERMY METHOD AND APPARATUS

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DIATHERMY METHOD AND APPARATUS.

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The object of my invention is to provide apparatus and a method of using the same by which the science of diathermy can be adapted to be used in the treatment of pyorrhea, Vincents angina, trenchmouth and allied pathological conditions which affect the membranes covering the alveolar process. The generally accepted theory of the beneficial use of diathermy is that the heat set up deep in the tissues stimulates the latter so as better to perform their functions to take care of pathological conditions. That is, the treatment does not serve to relieve the condition directly but stimulates the local bodily functions to better enable the latter to relieve the condition and thus the treatment only indirectly produces the desired result.

The difficulty heretofore in utilizing this treatment in oral therapy is that the bony and unyielding structure of the mouth is not adapted to permit of uniform contact by the electrode or applicator and thus concentrated flow of high frequency current at such limited contacting surfaces produced burning of the delicate tissues.

I have discovered that if a pliant electrode is used and is carefully molded or formed to provide a continuous and uniform contact over the entire surface to be treated, such method can be effectively used. To this end I have provided an electrode or applicator which is either temporarily or permanently moldable and such element is carefully fitted over the part to be treated and is provided with a retaining and insulating portion which can be gripped between the jaws so as to hold such electrode or applicator in place in the mouth.

Such method is comfortable to the patient and permits the application of penetrating heat to the local parts or part affected. The stimulating heat is essential in all conditions and in bacterial infections, such as Vincents angina, in which the bacteria must also be destroyed or at least inactivated, bactericidal agents used are beneficially influenced by my improved method of treatment.

I illustrate several different types of electrodes and diagrammatically show my improved method of treatment in the accompanying drawings, in which:

Fig. 1 is a fragmentary view of the oral cavity with my improved electrode in place over the alveolar ridge adjacent the roots of the teeth;

Fig. 2 is a view of one type of electrode which is easily molded and set to fit substantially any surface to be acted upon; and

Fig. 3 is a view of a modified type of apparatus which is molded and set to the peculiarities of the individual patient.

In both types of electrodes *a* and *b*, shown in the drawings, the metal bodies *a'* and *b'* respectively are preferably of sufficient width to cover the mucous membrane over the bucal aspect of the alveolar ridge from the gingivæ to the mucous fold and of sufficient length to extend from the mucous membrane covering the alveolar ridge opposite the most posterior tooth in the arch on one side to the mucous membrane covering the alveolar ridge opposite the most posterior tooth in the arch on the opposite side, thus being in contact with such mucous membrane over all of the teeth in either the upper or lower jaw of the patient. A metal arm, *a²* or *b²*, is in electrical connection with such metal body *a'* or *b'*, respectively, and extends from the median line of the metal body upward or downward relatively to the latter to the plane of separation of the lips and outward to a point about one-half inch beyond the latter.

In the treatment of post-operative infection the metal bodies must be of sufficient size merely to adequately cover the infected area, and it is not necessary to cover the entire ridge.

Covering the metal body *a*, is an insulating covering *c*, preferably rubber, which serves to prevent the discharge of electrical energy to any portion of the lips or cheeks and also serves as a retainer for holding the electrode in place. That is, two upstanding ears *c'* are provided which are of sufficient length that they can be bent over the occlusal surfaces of the teeth and clamped between the jaws.

Similar covering material *d* is provided in the electrode shown in Fig. 3 except that such material is molded and set in place to extend along the occlusal plane of the teeth and forward to follow the line of the arch and over the ends of the metal body *b*.

A source of high frequency current is shown diagrammatically as *e*, and is connected to the metal body *a* by a conductor *f* and is connected to some other part of the patient's body to make a circuit thru a conductor *g* which also includes an auto-condensation pad (not shown).

I claim:

1. In apparatus of the character described,
a continuous pliant electrode, and a simi-
larly pliant insulating element overlying the
5 latter, adapted to be fitted closely over the
infected portion to be treated, and formed
relatively thereto, such insulating element
overlying the whole of such electrode and
having one portion extending beyond such
10 electrode and being adapted to be gripped
between the jaws, thereby to hold such elec-
trode in place.

2. In apparatus of the character described,
an electrode conforming closely to the cur-
vature of the surface to be treated and hav- 15
ing an arm electrically connected therewith
extending laterally therefrom and at an
angle thereto, such arm being completely in-
sulated, and the electrode having an insulat-
ing element overlying the whole thereof 20
thus leaving but one exposed surface for the
purpose described.

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