

# UNITED STATES PATENT OFFICE.

ALBERT WESTLAKE, OF NEW YORK, N. Y.

## MOUTH-TABLET.

975,814.

Specification of Letters Patent.

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No Drawing.

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*To all whom it may concern:*

Be it known that I, ALBERT WESTLAKE, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Mouth-Tablets, of which the following is a specification.

The object of my invention is to render practicable the cleansing of the teeth and purifying the mouth by a self-acting, effervescent and antiseptic substance, preferably in tablet form and thus to do away with the use of tooth-brushes, cloths or other mechanical devices for rubbing the teeth.

It has been found that tooth brushes and other mechanical devices for rubbing powders, dentifrices, or liquids on the teeth are injurious, somewhat in proportion to their stiffness. Among the injurious effects may be mentioned the pushing back of the gums and the scraping or weakening the enamel. Frequent accidents have also occurred from swallowing loosened bristles. Various modes have been suggested for overcoming these difficulties but the practical obstacle has been found to lie in the fact that the normal healthy reaction of the human mouth is alkaline while to destroy the particles of food which may have lodged between the teeth an acid reaction seems necessary. In cases therefore in which a tooth wash or dentifrice which sets up an acid reaction is employed, it is customary to rinse the mouth with an alkaline wash such as milk of magnesia, as otherwise the injurious acid effects might remain for a long time until neutralized by the saliva.

One characteristic of my mouth tablet is that after setting up an acid re-action which exerts cleansing and antiseptic action an alkaline re-action automatically follows so that no deleterious effects can take place. To accomplish these results I employ a suitable quantity of hydrogen di-oxid and compound this with other suitable ingredients such as chalk, magnesia and some suitable flavoring extract, sometimes with and sometimes without the addition of a perborate of an alkali or alkaline earth metal such as calcium and compress the compound preferably into tablet form.

My invention therefore consists in a self acting mouth tablet composed of hydrogen di-oxid and other suitable ingredients so compounded that said tablet will dissolve with effervescence in the mouth independ-

ently of the presence of acid or alkaline reaction therein and will automatically cleanse the teeth, purify the mouth and destroy any food particles or bacteria which may be present therein.

In carrying out my invention the various component parts in liquid and powdered form are put together into a machine commonly called a mixer and when the mass has become thoroughly mixed and amalgamated it is transferred to what is known as a tablet machine and there compressed into tablet form.

The quantity of the various ingredients will vary with the strength, consistency and flavor desired for the tablet; the main thing being to use sufficient chalk and magnesia to hold the hydrogen di-oxid, and perborate if used in fixed but readily soluble form in the mass.

While the various ingredients which are to be compounded with the hydrogen dioxid have a very wide range, so that it would be of little service to try to establish a rigid formula for compounding my self-acting mouth tablet, I will here explain briefly the points which have to be borne in mind by anyone seeking to manufacture the tablet. As above stated, my improved tablet is to be compounded of hydrogen di-oxid and several other things, with a view of utilizing the antiseptic and other valuable properties of hydrogen di-oxid upon the introduction of the tablet in the mouth. As also above stated, this tablet must be so compounded as to set up a temporary acid reaction when the tablet first begins to disintegrate on contact with the moisture in the mouth. But, this acid reaction must be automatically followed by an alkaline reaction which persists until the tablet is wholly disintegrated and the insoluble residue removed from the mouth.

None of the ingredients employed are intended to have any abrading action, nor are any ingredients selected because of their capacity for such use.

It has been frequently stated that hydrogen di-oxid cannot be compounded into a dry form without losing its valuable antiseptic and cleansing properties, but I have found that I can and do mix or compound sufficient hydrogen di-oxid with the other ingredients to produce the above stated effects when the tablet is used.

In addition to the hydrogen di-oxid, the



compounder of my self-acting mouth tablet should select, according to his own judgment, various ingredients with a view of accomplishing three necessary purposes, 5 namely, he must take more or less insoluble matter, such as precipitated chalk or its equivalent, to serve as a body which will carry the hydrogen di-oxid and other ingredients so as to give a proper amount of 10 weight and hardness to the tablet that it may not pulverize too easily in handling, or effervesce too rapidly. In order to bring about a temporary acid reaction the compounder must obviously use more or less of 15 well-known ingredients which act upon each other with an acid reaction when they are brought in the presence of water.

It should be readily understood from my above statement, that an acid reaction is set 20 up first when the tablet begins to soften and disintegrate in the mouth, that some suitable ingredients should be employed the nature of which is to set up such acid reaction. As this reaction is to be only temporary these 25 ingredients would obviously form but a small proportion of the mass. It will also be obvious from the above statement that the acid reaction is to be followed automatically by an alkaline to prevent any deleterious effects 30 from the acid reaction, that the compounder must use a larger quantity of alkaline substances or substances which give an alkaline or neutral reaction on contact with water. Some of these substances are 35 well-known as capable of adding body to the mixture as well as imparting an alkaline character, and the compounder may, if he pleases, select his ingredients with a view of this double capacity.

40 As before stated, the main thing to do in making my tablet is to take a desired quantity of hydrogen di-oxid and combine it with any selection of ingredients which the compounder may desire and which are capable 45 of holding the hydrogen dioxid inert, but easily freed on contact with moisture; said ingredients to be selected with the view of giving substantial hardness or body to the mixture when compressed in tablet form, 50 and carrying in addition to the hydrogen di-oxid a small quantity of substances which give an acid reaction on contact with moisture and a larger quantity of substances which give an alkaline reaction on contact 55 with moisture.

The object of compressing the mass into tablet form instead of cake or stick form or as a powder is convenience in handling and accuracy of quantity to be used at a 60 time.

My improved tablet is preferably used by

simply placing a tablet in the mouth after eating, or at bedtime, or at any other time when there is any bad taste in the mouth and holding it there while it effervesces and 65 disintegrates and then spitting it out. If through impatience or otherwise a quicker action is desired the tablet may be chewed or worked about the mouth with the tongue, but these actions are not necessary to the 70 successful use of the tablet.

Aside from its value in cleaning the teeth and purifying the mouth which permits the dispensing with tooth washes, dentifrices or 75 other tooth-powders and with tooth brushes or other mechanical appliance for cleaning the teeth, the tablet has valuable properties in arresting the decay of teeth whether the first or second teeth and in guarding against 80 danger of germs of tuberculosis, pneumonia, diphtheria and other diseases which enter the mouth. It also renders the gums firmer and tends to prolong the life of the teeth.

To make 10,500 tablets of 5 grains each, would require about the following 85 quantities of the above specifically named ingredients, when the following very simple formula is used:—precipitated chalk, 48 ounces;—carbonate of magnesia, 35 90 ounces;—peroxid of hydrogen, 8 ounces;— and the weight of the mass is to be brought up to the necessary one hundred ounces, by the addition of such flavoring and binding materials as may be desired.

The above formula is a good one when no 95 perborate is used, but should a perborate be used, the quantities of chalk and magnesia, will be reduced accordingly. As before explained, no specifically named ingredient except hydrogen dioxid is required;—in other 100 words while sufficient neutral and alkaline ingredients have to be used, to give the tablets the characteristics mentioned, the range of such substances is so great that the compounder of my tablet is not limited in his 105 choice to chalk and magnesia but may use his intelligence in selecting ingredients.

I claim:—

A self-acting mouth tablet compounded of a solution of hydrogen dioxid and sufficient 110 alkaline and neutral ingredients to absorb the same, and pressed into the form of a tablet, which will dissolve with effervescence in the mouth with a temporary acid reaction followed by a permanent alkaline reaction, 115 whereby the teeth are automatically cleansed and the mouth purified.

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Witnesses:

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