

UNITED STATES PATENT OFFICE.

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ABRASIVE DENTURE GUM.

No Drawing.

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This invention relates to improvements in abrasive denture gum, and more particularly to an abrasive chewing compound for use by persons who have acquired new sets of artificial teeth, or plates, as they are commonly termed in the dental profession.

Inasmuch as the foregoing statement of the subject-matter of the invention may appear incongruous, or at least unusual to the layman, it may be well to state that the use of artificial teeth has become rather extensive as a remedy for dental troubles, particularly among persons of advanced age, and it is not an uncommon practice to replace all of the natural teeth with plates for both the upper and lower jaws.

The object of the invention is to provide a gum which will facilitate the fitting of plates to the mouth, and while its use is contemplated by persons having complete sets of artificial teeth, it may also be used where partial replacements are made but within the limits hereinafter set forth.

Plates or sets of artificial teeth consist generally of a foundation or plate of hard rubber or other suitable composition in which the teeth are fixed or embedded, the plates being carefully made to fit the mouth of the user. The teeth are made of baked porcelain and in perfect imitation of natural teeth, and if the plates are properly fitted, the user experiences no particular inconvenience or discomfort after they have been "worn in", so to speak.

The process of fitting and adjusting false dental plates, is quite exacting, but even after they have been properly fitted to the mouth, they must undergo a certain amount of treatment before perfect satisfaction is possible. In the first place, the teeth of a new plate are very smooth, due to the glaze on the surface of the baked porcelain, and as a result, considerable difficulty is experienced in masticating food properly, because it has a tendency to slip from between the teeth. In the second place, it is quite difficult in preparing the plates to insure the proper registration of the teeth in the upper plate with those in the lower plate. In other words, it is seldom that the teeth will properly occlude even though perfect in every other respect. As a result, it often requires much time and numerous visits to the dental practitioner before proper occlusion is secured between the teeth of new plates.

The present practice is to rub the teeth with an abrasive substance for the purpose of removing the hard glaze on the surface of the teeth and to obtain the same degree of roughness that is characteristic of natural teeth. This, of course, requires time, as it is done by hand in the dental laboratory and is a very tedious process. To obtain proper occlusion between the teeth is even more laborious, and requires the use of an apparatus consisting of articulating parts in which the plates are fixed as they are in the mouth, and the teeth ground in contact with each other by manipulating the parts with a movement simulating the various jaw movements. An abrasive compound, such as oil and emery or carborundum dust, is used for grinding down the teeth, and the operation requires careful manipulation and painstaking effort on the part of the dental operator. Invariably several treatments are required before the results are satisfactory.

It is conceived, therefore, that a gum containing a quantity of abrasive, if chewed by the user of the plates, would accomplish in a relatively short time and with little or no inconvenience, the same results now accomplished by the tedious operation heretofore employed, not to mention the time and trouble in frequent trips to the practitioner's office and temporary absence of teeth while the wearing-in process is going on.

I contemplate as the base of such a denture gum, the ordinary chewing gum made of chicle, this being readily obtainable on the market and quite satisfactory for the purpose. To the pure gum, which may or may not be sweetened and flavored, is incorporated a quantity of fine abrasive, such as carborundum dust, the amount being determined by the degree of effectiveness desired. The impregnation of the gum with the abrasive is readily accomplished by melting the gum to a liquid state and then thoroughly mixing the abrasive into the liquid mass. When allowed to cool, the gum can then be reduced to stick or other suitable form for sale and use.

Since the chewing of such a product is not for pleasure or diversion, the flavoring may be eliminated, although it may well be included, to relieve any real or imaginary discomfort in chewing a gritty substance, but bearing in mind that none of the sensitive parts of the mouth come into contact with

the compound, the chewing of such a substance is not as unpleasant as might otherwise seem.

The chief merit in the use of an abrasive gum is, first, that the wearing down process is carried on while the plates are in the mouth and hence the natural biting or chewing motions of the jaws are used. Furthermore, it is a natural tendency for the person to work the gum toward the points where the teeth occlude, and consequently the wearing action takes place where it will be most effective. It follows, therefore, that by the periodic chewing of this gum, the time required to wear in the teeth, is greatly shortened, and without any particular discomfort or inconvenience.

Actual results show that the particles of abrasive do not separate from the gum, and therefore the chewing of the gum is not distasteful. Moreover, the fine particles of material removed from the teeth by the abrasive or grinding action are caught and held by the gum, and are discarded with it.

Owing to the character of the carborundum and its known abrasive qualities, the desired results are obtained in a relatively short time. In fact, so positive is its abrasive action, that its use should not be recommended except where both upper and lower plates are used, since it would have a very detrimental abrasive effect on natural teeth. For this reason, it would be desirable to

provide different grades of this denture gum, varying in the kind and quantity of abrasive used. For instance, where natural teeth are still present in the mouth, or an upper or lower plate only is used, a gum containing powdered pumice stone, chalk or other mild abrasive would be substituted, particularly where a polishing effect is desired in an equal or greater extent than the abrasive or wearing down action.

At the present time, it is a common practice among a great number of dentists, to prescribe the chewing of ordinary gum as an aid to the training of the muscles of the mouth, and becoming accustomed to the plates.

Thus both the above results and the grinding to a perfect occlusion are accomplished at the same time, by the use of this denture gum.

Having therefore set forth the purposes and advantages of the product, I claim as my invention:

1. An abrasive denture gum, consisting of a chewing compound impregnated with carborundum in powdered form.

2. An abrasive denture gum for the purpose described, consisting of chewing gum impregnated with carborundum in finely divided form.

Signed at Chicago Ill. this 8 day of June, 1925.

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