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E. M. HALLAHAN

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TOOTHBRUSH PACKAGE

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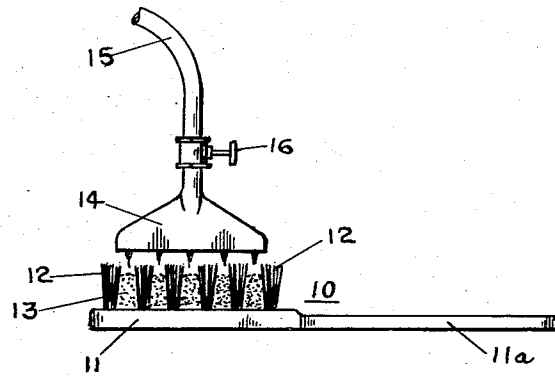


Fig-1

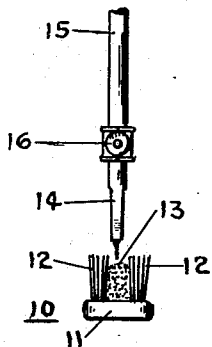


Fig-2

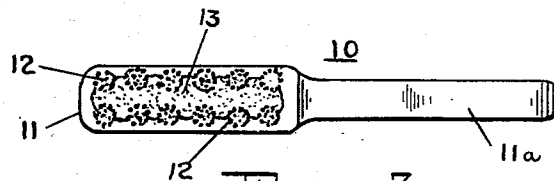


Fig-3

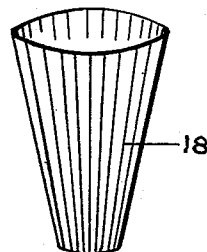


Fig-4

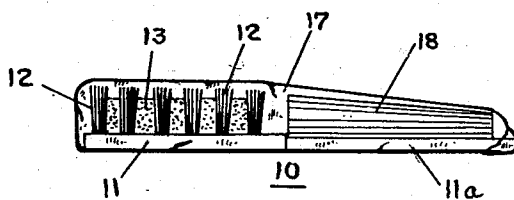


Fig-5

INVENTOR
EDWARD M. HALLAHAN.
BY *Albert J. Jacobs*
ATTORNEY

UNITED STATES PATENT OFFICE

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TOOTHBRUSH PACKAGE

Edward M. Hallahan, Philadelphia, Pa.

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1 Claim. (Cl. 206—47)

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The present invention relates to a sanitary package containing a disposable toothbrush having dehydrated toothpaste deposited thereon, with or without a drinking cup, and all wrapped in cellophane or other transparent sealing medium, together with a process for producing the same.

Powder rooms, wash rooms and other facilities of hotels, clubs, theatres, restaurants and the like provide various accessories of a sanitary character but do not provide any means for cleansing or freshening the teeth or oral cavity. There are many occasions when the latter is necessary or desirable and the present invention therefore relates to the fulfillment of such a need. It is, therefore, an object of the invention to provide, for the first time, a sterile, sanitary package which can be given away or sold at a nominal price and which is used once and then discarded.

Another object of the invention resides in the provision of an abbreviated toothbrush having one end thereof provided with bristles on and between which toothpaste has been deposited and subsequently dehydrated, the toothbrush with toothpaste being sealed within a cellophane or other outer covering and adapted to be discarded after a single use.

Other and further objects and advantages will be understood and appreciated by those skilled in this art or apparent or pointed out hereinafter.

In the accompanying drawing wherein I have illustrated a preferred embodiment of the invention:

Fig. 1 is a side elevational view of a toothbrush having toothpaste deposited thereon as by means of a discharge nozzle, therein fragmentarily illustrated;

Fig. 2 is an end elevational view looking from left to right in Fig. 1;

Fig. 3 is a plan view of the toothbrush with toothpaste deposited thereon;

Fig. 4 is a perspective view of a foldable paper cup adapted to constitute an optional part of my new package and

Fig. 5 is a side elevational view of a complete package in accordance with the invention.

For the purposes of this invention I have found it best to utilize a toothbrush 10 having a conventional head portion 11 provided with tufts or groups of bristles 12 but with only an abbreviated handle 11a, in contrast to regular toothbrushes, which would ordinarily have a much longer handle. The bristles 12 are composed of

any rough and relatively porous material such as regular hog bristles conventionally used in toothbrushes and is, therefore, in contrast with smooth, impervious material such as nylon or a synthetic plastic which has been found to be unsuitable for use in the present invention. This is because the smooth, impervious bristle material does not have the requisite holding power and is unable to effect absorption. In this connection, I have discovered that hog bristles have adequate roughness or irregularity of surface together with the capacity of absorbing appreciable amounts of moisture and of effecting a holding action upon the toothpaste 13.

This toothpaste 13 is deposited in its ordinary conventional hydrated form and this may be carried out in a sanitary fashion by discharging the same from a special nozzle indicated at 14, which is located at the end of a discharge pipe 15, valved at 16. The nozzle 14 has a plurality of spaced orifices or may discharge the toothpaste as a substantially continuous, relatively thin mass which is permitted to drop down in the space within the tufts of bristles 12, substantially filling the same as shown in the drawings. The toothpaste thus deposited terminates slightly below the upper level of the tops of the bristles and provides an adequate amount of toothpaste for a single use. The use of bristles having relatively rough and absorbent surfaces is important since it enables the mass of toothpaste to be held sufficiently in position during wrapping, handling, transporting and dispensing operations. The toothpaste is, however, shortly after its deposit as above described, subjected to a suitable drying or dehydrating medium, such as a current of warm air. This air-drying treatment is carried out until the moisture content of the exposed portions of the mass of toothpaste is reduced sufficiently to form a crust or a semi-hard exterior surface, thus aiding in holding the mass in place.

After the toothpaste has been deposited and dried as already explained, the thus-treated brush is enclosed in cellophane or other transparent material 17 and heat- or adhesive-sealed so as to provide a completely enclosed package which is adapted to be dispensed from a dispensing machine or in any other suitable manner made available to the intended users. I have found it preferable, furthermore, to provide a sanitary cup to go with the package since such is not always available and, in such case, I prefer to utilize any standard form of sanitary drinking cup such as those made of waxed or

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oiled paper and, in the drawing, I have illustrated at 18 a frusto-conical, foldable or pleated paper cup 18 which, in the completed package, takes the position shown in Fig. 5, in which it has been folded and supported upon the handle portion 11a of the toothbrush. The sheet of cellophane 17 in such case encloses the cup 18 as well as the toothbrush 10 and its bristles 12 with the toothpaste 13. As shown in Fig. 5, this forms a compact, readily merchandisable, commercial package.

Such a package can be produced at a very small cost and, therefore, can be given away, if desired, as a service, but I prefer that the package be dispensed from a suitable dispensing machine which is preferably coin-operated in the manner of various dispensing machines now available. When the user receives one of my new packages, he removes the cellophane wrapping and the cup, discards the former, wets the toothbrush with water whereupon the toothpaste is regenerated to the extent that it can be effectively used for toothbrushing purposes. After one such use, the toothbrush is discarded and the necessary rinsing can be carried out by means of the cup 18.

It is to be understood that the foregoing is presented primarily as illustrative and not as limitative and that modifications can be made without departing from the spirit or scope of the invention as defined by the appended claim. It is also to be understood that the depositing of the toothpaste on the toothbrush and the drying of the toothpaste, as explained above, can be carried out on a plurality of toothbrushes at a time, thereby reducing the time and cost of production. In this connection I contemplate the use of a battery of such nozzles or several batteries thereof in order that a substantial number of toothbrushes can be prepared at one time. The air current or other gaseous drying medium

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may be adequately extensive in its nature to pass over all such toothbrushes subsequent to the deposition of the toothpaste or, if desired or preferred, a plurality of warm air currents or streams can be readily utilized, as will be understood and appreciated. While I have referred to the use of cellophane as the wrapping medium, it is to be understood that any suitable, preferably transparent sheet material may be employed which can be heat- or adhesive-sealed so as to maintain the package sterile until used, it being understood that the toothbrush package is prepared under sterile conditions and/or is subjected to sterilization after its production in a suitable or convenient manner not per se forming a part of this invention.

I claim:

A toothbrush package adapted to be used once and then discarded, which comprises an abbreviated toothbrush having a head portion provided with tufts of bristles, a mass of dried toothpaste between and adhering to said bristles and a wrapper surrounding the toothbrush, bristles and toothpaste for maintaining the same in a sterile condition, said package also containing a folded drinking cup supported on the handle portion of said toothbrush and being located entirely within said wrapper.

EDWARD M. HALLAHAN.

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