L. C. DAVIS.

SANITARY WRAPPER FOR TOOTHBRUSH BODIES.

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1,386,398. **Patented Aug. 2, 1921.**

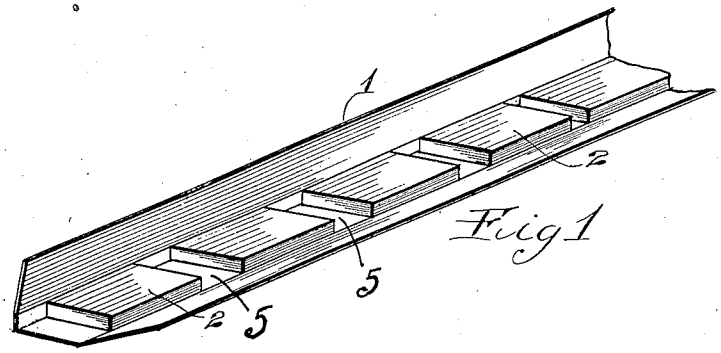


Fig 1

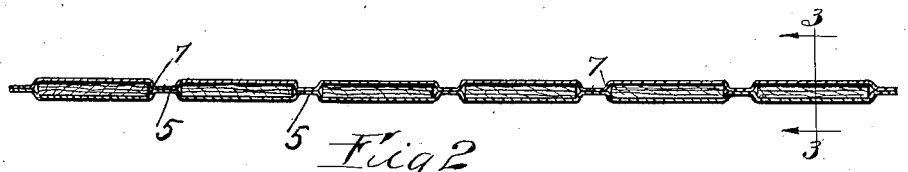


Fig 2

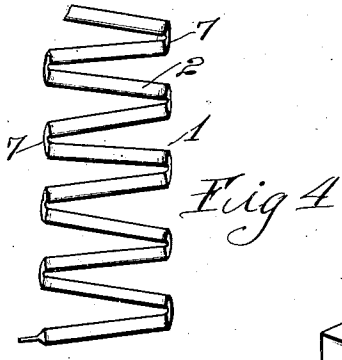


Fig 4

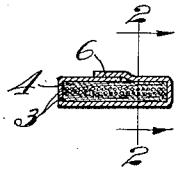


Fig 3

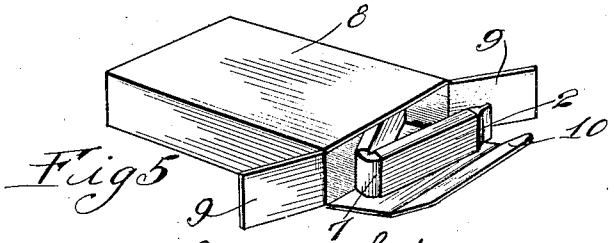


Fig 5

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SANITARY WRAPPER FOR TOOTHBRUSH-BODIES.

1,386,398. Specification of Letters Patent. Patented Aug. 2, 1921.

Application filed July 9, 1920. Serial No. 395,005.

To all whom it may concern:

Be it known that I, LAWRENCE C. DAVIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sanitary Wrappers for Toothbrush-Bodies, of which the following is a specification.

The object of the invention is to enable the manufacturer of sterilized tooth brush bodies of the kind which are adapted for a single use with a separable handle, to conveniently assemble and pack said bodies in such a way as not only to preserve their sterility until the packages are closed and ready for shipment, but to enable the user to readily separate one of the bodies from the package and place it in a suitable holder without exposure to infection by direct handling.

The tooth brush bodies to which the invention specifically relates, are composed of vegetable fibers, such as loofah, within which are inclosed abrasive bast filaments, the bodies being impregnated with a suitable binding dentifrice and compressed into blocks. The wrapper is a strip of paper which is preferably impregnated with paraffin wax, and is long enough to envelop a number of the brush bodies arranged in spaced relation to each other. The brush bodies are, preferably, laid endwise on the strip so that when the wrapper is folded at points intermediate the brush bodies, as it is designed to be, said brush bodies will lie face to face in a compact group. A suitable paper carton capable of being opened at one end thereof, is provided for each group of the enveloped brush bodies, and from this carton the user may remove the individual brush bodies, one by one, as needed, the separation of one of them leaving the adjacent brush body in position to be grasped by the fingers, others being meantime drawn nearer to the mouth of the carton. The wrapper is folded in such a manner as to be easily and partially opened, in order that the individual units of the brush body may be protected from contamination by the fingers as they are inserted in the handle of the brush. It is well established that a tooth brush is a certain source of infection unless it is sterile, and that it should be retained in an aseptic condition until it is actually used.

The drawing accompanying this specification, illustrates one embodiment of the invention. In this drawing,

Figure 1 is a perspective view showing a partially completed package;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 3;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 is a view showing a closed package partially folded, and

Fig. 5 shows in perspective a carton and brush bodies partially withdrawn therefrom.

The several tooth-brush bodies of a single package are wrapped in a long and narrow strip 1 of paper which is sterile and saturated with paraffin to exclude air and moisture and to maintain the steriliy of the brush bodies which are packed in a germ-free room. The separable portions of the strip 1 envelop compressed and sterile brush bodies 2, each consisting of a row of bast or other stiff fibers 3, enveloping folds of loofah, and a binding dentifrice such as tooth powder mixed with sugar. The brush bodies will remain compressed if only the loofah is impregnated with a binder. If, however, it it wetted it swells and loses its density, and it is, therefore, desirable to keep the tooth-brush bodies dry until used. Compression of the brush bodies facilitates packing since they are all reduced to the same dimensions and may be wrapped in strips of the same length and width.

The brush bodies are preferably laid endwise, and are slightly spaced from each other within the strip which, at the intermediate points 5 is sufficiently flexible to allow the units 2 to be arranged face to face in a compact formation. If these units are folded alternately in opposite directions, the individual brush bodies may be removed from an inclosing carton without disturbing all of the members of the group. Furthermore, if all were folded in the same direction, the successive units would have to be made increasingly larger and the distances between the brush bodies would require amplification. The strip is overlapped, as shown at 6, and is creased at the points 7 for the purpose of facilitating the folding of the individual units during the packing operation, as well as their removal by the user. The ease with which this may be accomplished will be appreciated if refer-

ence is made to Fig. 5 wherein one of said units is shown protruding from the carton. It is, of course, possible to pack the brush bodies in other ways without subjecting them to infection during the period of transportation and while on sale, and the invention in one aspect thereof is not confined to the described method of packing. In so far as I am aware, no one has heretofore produced a package of compressed tooth-brush bodies, or a package of compressed and sterile tooth-brush bodies, or a package containing tooth-brush bodies of block formation. The known types of tooth brushes include separable handles and bodies which are designed to be used once and then thrown away, but these bodies for most part resemble those of the ordinary type of tooth brush, while a few are composed of substances, such as blotting paper, which may be formed into blocks without resorting to compression. Compression is an important feature of the present invention, the loofah employed in the manufacture of the brush body being a substance which is naturally bulky and yet, as I have ascertained, capable of reduction of volume under pressure and of retaining its compactness if dried under pressure. If again wetted, as at the time of use, loofah assumes substantially its original bulk, and is then more serviceable for use as the constituent element of a tooth brush.

The carton may be of any usual construction provided it may be opened to admit of withdrawal of the several brush bodies in sequence in the manner above described, although it would be possible and advantageous to inclose the group of brush bodies in a carton of less convenient construction than that herein disclosed. This carton is provided with flaps 8, 9, 10, of ordinary character.

Having thus described my invention, what I claim is:

1. The combination with a carton having a cover at one end thereof, of a pile of wrapped and alternately-laid rectangular tooth-brush bodies extending from the closed end of said carton toward the cover thereof, the wrapper for the said bodies being creased at points between the brush bodies to admit of the flexure thereof and permit one brush body when removed to draw a succeeding brush body with it and thereby leave it in position to be grasped by the fingers when said cover is open.

2. A carton having a removable cover at one end thereof, and containing a series of compressed tooth-brush bodies arranged in a pile and separably connected to each other at alternate ends, said brush bodies being so laid in the carton as to successively appear at the mouth of the carton as the individual brush bodies are drawn out and severed from the group.

Signed at Chicago, State of Illinois, this 29th day of May, 1920.

LAWRENCE C. DAVIS.