Oct. 10, 1939. A. G. STALL 2,175,487

TOOTH BRUSH

Filed Sept. 22, 1937

FIG. 1

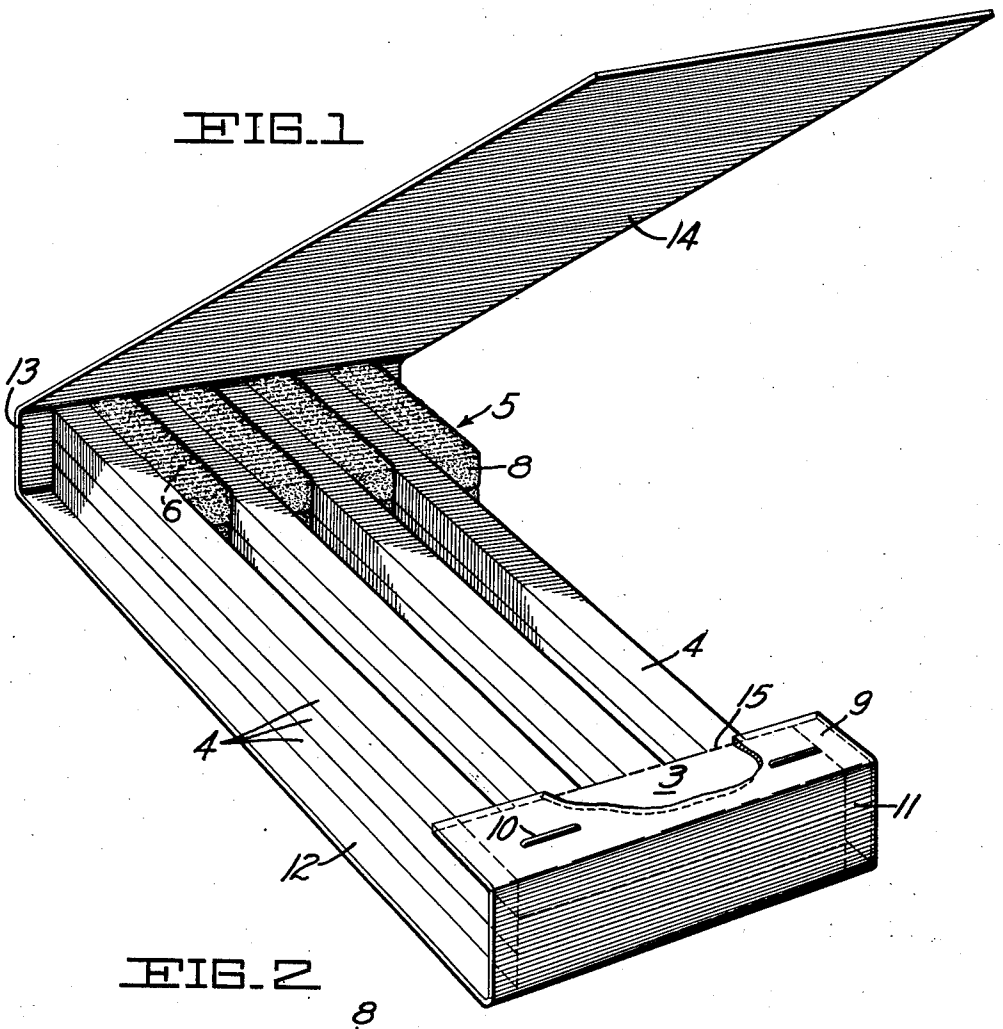
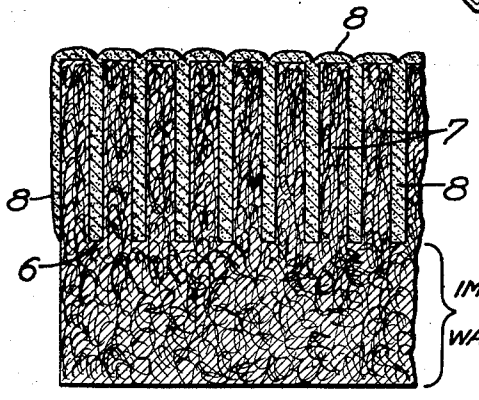


FIG. 2



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TOOTH BRUSH

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3 Claims. (Cl. 15—210)

This invention relates to brushes and more particularly to the type known as tooth brushes.

It is an object of the invention to provide a tooth brush which is capable of such economical manufacture as to warrant its being discarded after being used but once.

Another object of the invention is to provide a tooth brush which is supplied, during manufacture, with a quantity of dentifrice so that the user will not be required to furnish the latter substance.

A further object of the invention is to provide a tooth brush which lends itself well to mass production and also to group assembly in compact packages.

This invention possesses other objects and features of advantage, some of which, together with the foregoing, will be specifically set forth in the detailed description of the invention hereunto annexed. It is to be understood that the invention is not to be limited to the particular species thereof shown and described as various other embodiments thereof may be employed within the scope of the appended claims.

Referring to the drawing:

Figure 1 is a perspective view showing a group of the tooth brushes of my invention assembled into a packet.

Figure 2 is an enlarged fragmental sectional view taken longitudinally through the head of the tooth brush.

While the tooth brush of my invention may be manufactured and sold as a separate unit I prefer to assemble a group of the brushes into a packet as shown in Figure 1. This packet, which is much like, although larger than, the familiar packet for paper matches, serves to protect the brushes against damage and, in a large measure, prevents their contamination by dirt. The brushes are formed, in groups of four, from a parent sheet 3 of thick fiberboard which is cut to form the handles 4 having the brush heads 5 formed integrally therewith at their distal ends. Each head is provided, as is shown in Figure 2, with a plurality of slits 6 which divide the head into a number of narrow tabs 7. The fiberboard, of which the brushes are made, is preferably about one-fourth of an inch in thickness and is of the variety which when frayed or immersed in water will separate into a plurality of laminations. Fiberboard, of the type commonly used in the manufacture of paper matches, possesses this property of separation into laminae when repeatedly flexed, either in a dry or moist state, and it is contemplated to use such material in the manufacture of the toothbrush of this invention. This separation of the material will cause fraying of each of the tabs 7 so that the brush head will be composed of numerous fine bristles.

After the brushes have been formed the heads thereof are dipped into a fluid solution composed of a mixture of powdered dentifrice, sugar and water which is deposited on the brush and in the slits 6 thereof in the form of a coating 8 as is shown in Figure 2. This coating upon evaporation of the water will become sufficiently hard that ordinary rough handling of the packet will not dislodge it, and yet will instantly start to dissolve upon coming into contact with saliva when the brush is inserted into the user's mouth.

In order to prevent the absorption of moisture by any portion of the brush other than the tabs 7, the handle portion 4 and the portion of the head forming the extension of the handle are impregnated with a moisture-proofing compound which may be paraffin, shellac, or any other material which is insoluble in water. This latter feature of construction is very important since without being water-proofed the head portion of the brush and the portion of the handle immediately adjacent thereto would, upon becoming wet, fray and allow the bristles of the brush to become easily torn therefrom. By water-proofing the brush head the bristles, formed by the separated laminae, are held in position more rigidly than would otherwise be the case.

In packaging the brushes a number, preferably three, of the groups are placed one above the other and a cover is attached thereto as is shown in Figure 1. The cover is composed of a sheet of cardboard having at one end a flap 9, which overlies the stack of brushes and is secured to each of the latter by means of wire staples 10, an end panel 11, a back panel 12, a hinge panel 13 and a closure flap 14.

Although it has been found not to be essential, the junction of the handles 4 with the sheet portion 3 may be provided with perforations 15 to facilitate the ready removal of the brushes from the packet.

It will be seen from the above description of my invention that I have provided an improved tooth brush for use by campers, travelers, diners out and the like who may be, for extended periods, away from the conveniences of home or who find it impractical to carry with them the regular tooth brush and container of dentifrice, since an ample supply of cleanser is provided in the coating 8 and the brush, although composed of fiber-

board, is capable of doing as thorough a job of cleansing as is the regular tooth brush.

What is claimed is:

1. A tooth brush comprising a unitary piece of fiberboard having superposed integrally joined laminae which may severally separate upon repeated flexing of the said fiberboard in directions normal to the plane of the said laminae, said piece of fiberboard being formed to provide a relatively narrow handle and a wider head at one end of the handle, said head having therein a plurality of slits extending transversely of the said laminae to provide in the head a plurality of tabs, and a coating of dentifrice covering said tabs.

2. A tooth brush comprising a unitary piece of fiberboard having superposed integrally joined laminae which may severally separate upon repeated flexing of the said fiberboard in directions normal to the plane of the said laminae, said piece of fiberboard being formed to provide a relatively narrow handle and a wider head at one end of the handle, said head having therein a plurality of slits extending transversely of the said laminae to provide in the head a plurality of tabs, all portions of said piece of fiberboard with the exception of said tabs being impregnated with a waterproofing composition, and a coating of dentifrice covering said tabs.

3. A tooth brush comprising a unitary piece of sheet fiberboard of substantial thickness having superposed integrally joined laminae paralleling the broad surfaces of the sheet and which may be severally forcibly separated upon repeated flexing of the sheet in directions normal to the plane of the said broad surfaces thereof, said piece of fiberboard having a relatively narrow handle and a wider head at one end of the handle, said head having in a portion thereof a plurality of slits extending entirely therethrough in a direction transversely with respect to the plane of the said laminae, a coating of dentifrice covering said slitted portion of said head, and the remaining portions of said piece of fiberboard being impregnated with a waterproofing composition.

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