March 17, 1959

J. J. LEVIN

2,877,477

AUDIBLE TOOTH BRUSH

Filed Dec. 12, 1955

Fig. 1

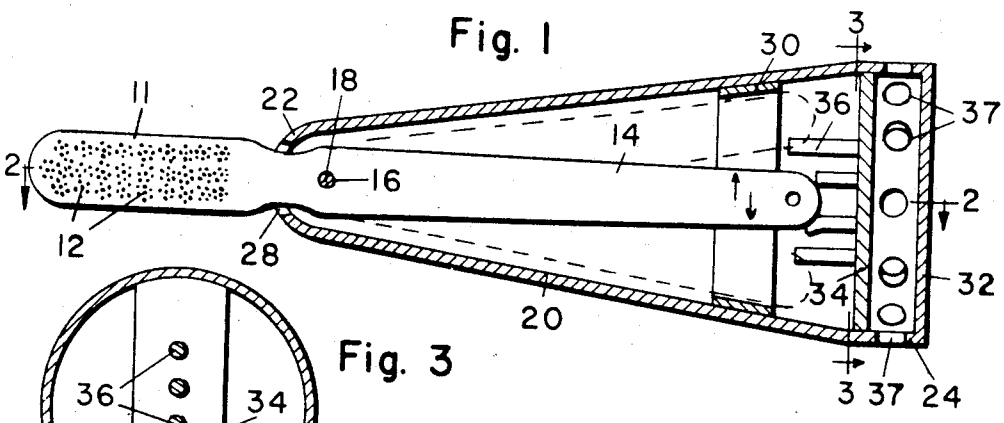


Fig. 3

Fig. 2

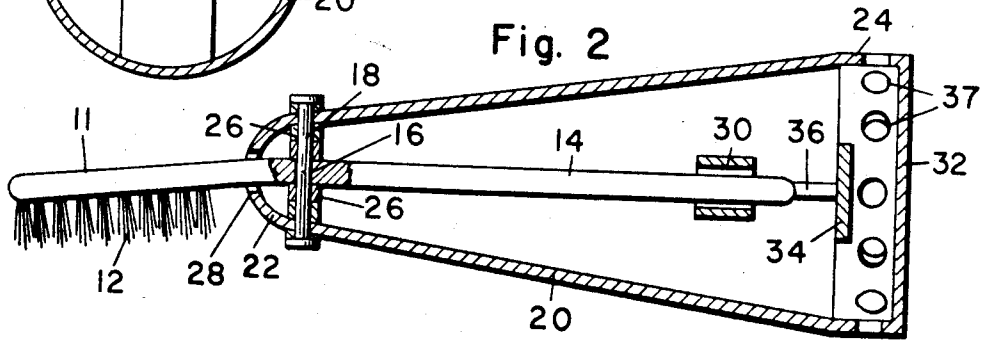


Fig. 4

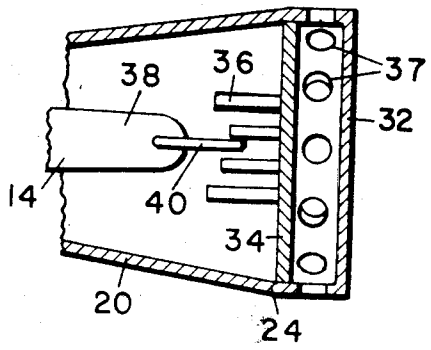
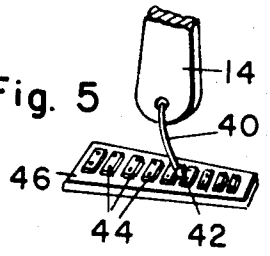


Fig. 5



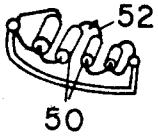


Fig. 6

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United States Patent Office 2,877,477 Patented Mar. 17, 1959

2,877,477

AUDIBLE TOOTH BRUSH

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Application December 12, 1955, Serial No. 552,543

2 Claims. (Cl. 15—105)

This invention relates to toothbrushes, more particularly to small brushes with a long handle used for cleansing the teeth.

An object of the invention is to provide a new and improved toothbrush having its handle pivotally mounted in a housing containing means engageable by a part of the handle when the brush is moved in a substantially vertical direction across the teeth so as to produce audible sounds, such as musical notes and the like.

Another object of the invention is to provide a new and improved toothbrush of the above type, which is simple in construction, inexpensive to manufacture, and reliable and efficient in use.

For a clearer understanding of the invention and the objects thereof, reference is made to the accompanying drawing, wherein particular forms of the invention are indicated. This drawing when used in conjunction with the following description serves to illustrate the invention, its principles and the operation thereof, while the claims indicate the scope thereof.

In the drawings:

Fig. 1 is a plan view of a toothbrush looking at the bristle side thereof and provided with means by which sounds may be produced when the toothbrush is used in a certain manner, the sound producing means being shown partly in section and partly in elevation;

Fig. 2 is a longitudinal section taken along the line 2—2 of Fig. 1, the toothbrush being shown mostly in side elevation;

Fig. 3 is a section taken along the line 3—3 of Fig. 1; and

Figs. 4, 5 and 6 are detail views of modified forms of sound producing means.

Referring to the drawing and especially to Figs. 1, 2 and 3, the ordinary toothbrush comprises a head 11 at one end having bristles 12 mounted on one face thereof, and an elongated handle 14 projecting rearwardly from said head.

In order to properly cleanse the teeth of a person, a toothbrush should be actuated in such direction that the bristles 12 move upwardly and downwardly over the teeth so as to effectively remove foreign matter that may be lodged in the crevices between the teeth. However, it is usually the custom when brushing the teeth to operate the toothbrush in a direction at right angles to the upwardly and downwardly direction referred to. Therefore, in accordance with the present invention it is proposed to embody with an ordinary toothbrush means so arranged with the toothbrush that when the same is operated in the desired upwardly and downwardly direction, pleasing sounds, such as musical notes, will be produced, and when the toothbrush is not operated in such upwardly and downwardly direction the sound producing means will remain silent.

At a suitable point adjacent the junction of the handle 14 with the bristle end 11, the toothbrush is formed with an opening 16 for the reception of a pin 18 carried by the forward end portion of a suitable housing 20.

The housing 20 may be formed of any suitable material and may be of any desired size and configuration. In the present instance the housing 20 is shown as being somewhat conical in form with the pivot pin 18 mounted in its apex or smaller end portion 22 and with its larger end or base portion 24 arranged beyond the extremity of the handle 14.

So that the handle will be maintained in desired position within the housing 20, washers 26 may be mounted on the pivot pin 18 at each side of said handle in the manner shown in Fig. 2.

The handle 14 extends through an opening 28 formed in the end portion 22 of the housing 20, said opening having a suitable area to permit free movement of the handle therein, as will be understood.

Also, in order to maintain the handle 14 properly aligned within the housing 20, said handle extends through guide means 30 mounted within the housing and arranged at a suitable point adjacent the extremity of the handle.

The construction and arrangement of the parts is such that the handle 14 is mounted within the housing 20 for swinging movements in a substantially straight line to and fro for a limited angle at each side of the longitudinal axis of said housing. The portion 24 of the housing 20 may be closed by an end wall 32.

Mounted within the housing 20 and spaced a suitable distance from the end wall 32, is a base plate 34 having a series of sound producing members 36 mounted thereon and projecting toward the extremity of the handle 14.

In the form of the invention shown in Figs. 1, 2 and 3, the sound producing members 36 may be reeds having various tone producing characteristics, said reeds being arranged substantially in a straight line on the base plate 34 in the path of the extremity of the handle so that when the handle moves in the direction of the arrows, Fig. 1, the reeds will be engaged by the tip of the handle and thereby actuated to produce musical sounds. It will be understood that the reeds 36 may have such characteristics that each reed, when contacted by the tip of the handle 14, will produce a sound having a tone distinguishable from the tone produced by the other reeds.

In order for the toothbrush to produce sounds, the brush is adapted to be held in the position in which the pivot pin 18 is disposed in a substantially horizontal plane, as shown in Fig. 1, so that when the toothbrush is actuated upwardly and downwardly over the teeth, the handle 14 will be moved in a substantially vertical direction, the tip of said handle moving downwardly and upwardly across the row of reeds 36. Due to the manner in which the handle 14 is pivotally mounted within the housing 20, with the toothbrush in the position shown in Fig. 1, any rectilinear movements imparted thereto in a substantially horizontal direction will be ineffective to cause the extremity of said handle 14 to move across the row of reeds 36. Consequently no sounds will be produced when the toothbrush is operated in such manner.

The exterior wall of the housing between the end wall 32 and the base plate 34 may have a plurality of holes 37 formed therein through which holes sounds produced within the housing can readily pass outwardly therefrom.

As shown in Fig. 4, in order to amplify the sounds produced by the reeds 36, the extremity 38 of the toothbrush handle 14 may be provided with a finger 40. This finger 40 may be mounted on the handle 14 in any desired manner and may be formed of any suitable material. For instance, the finger 40 may be in the form of a spring hammer trip adapted to produce greater and more musical sounds when it contacts the reeds 36.

As shown in Fig. 5, in lieu of the series of reeds 36, several metallic keys 44 may be mounted within the hous-

ing, said keys being arranged to be engaged by the spring finger 40 of Fig. 4, to produce musical notes. The keys 44 may be in the form of a xylophone, said keys being made of parallel bars of graduated length mounted on a suitable base 46. In this form of the invention the spring finger 40 may have a small ball 42 fixed to the outer end thereof for amplifying the musical sounds of the keys 44.

In lieu of the keys 44 of the xylophone of Fig. 5, a series of glass beads 50 of varying sizes and thickness strung taut with a suitable string 52, in the manner shown in Fig. 6, may be mounted within the housing 20 in the path of the finger 40.

From the foregoing, it will be seen that the present invention provides a new and improved toothbrush arranged to produce musical notes and other sounds of many different forms. The invention disclosed will adequately accomplish the functions for which it has been designed and in an economical manner and its simplicity, accuracy and ease of operation are such as to provide a relatively inexpensive device considering what it will accomplish.

While a preferred form of the invention is shown in the drawing and described in the specification, it is not desired to limit this application for patent to this particular form, as it is appreciated that other forms of construction could be made that would use the same principles and come within the scope of the appended claims.

Having thus described the invention, what is claimed is:

1. A toothbrush arrangement, comprising, a head having generally parallel bristles for brushing the teeth and an elongated handle projecting from said head, a housing associated with said handle, the end of said handle opposite said head being positioned on the interior of said

housing, said handle being pivotally mounted to said housing by a pin for movement about an axis which extends generally parallel to the direction in which said bristles project from said brush head, and means including a base located in said housing at the end thereof opposite said head with said bristles and having music elements mounted therein arranged in proximity to said end of said handle spaced from said head and adapted to be contacted by the tip of said handle when said handle is swung on its pivot to produce audible sounds.

2. A toothbrush arrangement, comprising, a head having generally parallel bristles for brushing the teeth and a handle projecting from said head, a housing enclosing said handle, said handle being pivotally mounted to said housing by a pin for movement about an axis which extends generally parallel to the direction in which said bristles project from said brush head, and means including a base located in said housing at the end thereof opposite said head with said bristles and having music elements therein arranged to be contacted by the end of said handle remote from said head when said handle is swung on its pivot to produce audible sounds, said end of said housing containing said base having apertures provided therein so that the musical notes can pass from said housing.

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