TOOTHBRUSH WITH GRIPPING HANDLE

Applicant: ANDY THANG TRAN, San Jose, CA (US)

Inventor: ANDY THANG TRAN, San Jose, CA (US)

Appl. No.: 13/910,090

Filed: Jun. 4, 2013

Publication Classification

Int. Cl.
A46B 5/02 (2006.01)
A46B 9/04 (2006.01)

U.S. Cl.
CPC ... A46B 5/026 (2013.01); A46B 9/04 (2013.01)
USPC ........................................ 134/6, 15/167.1; 15/22.1

ABSTRACT

A toothbrush with secure grip and a method for brushing teeth are disclose, including picking up a toothbrush below the neck portion, a toothbrush head extending from one end of the neck portion, a round/octagon/oval shaped handle, and a grip handle extending from the other end of the neck portion, wherein the grip handle includes an array of gripping elements extending 360 degrees around the gripping handle; and brushing a user’s teeth and gum pockets.
TOOTHBRUSH WITH GRIPPING HANDLE

[0001] This application is a continuation-in-part application of application Ser. No. 13/889,807, filed 8 May 2013, the content of which is incorporated by reference.

BACKGROUND

[0002] The present application relates to manual toothbrushes and mechanical/electric toothbrushes with round, oval or octagon handles with secure grips.

[0003] Cleaning teeth and gum pockets with a toothbrush is a very important practice of today’s daily personal oral hygiene care. An ergonomic toothbrush handle with a 360 degree secure grip and the user’s pencil grip tooth brushing technique similar to the grip that of dentists and dental hygienists are using will help promoting the bristles to get between teeth and under gingival pockets, prevent damage to the gum (gum recession), minimizing tooth abrasion and effectively and easily removing food debris and dental plaque on teeth and under gingival pockets. Dental plaque is a colorless or pale yellow layer of bacteria that colonizes the surface of all teeth and in gingival pockets. If dental plaque and food debris are left on teeth surfaces or under gum pockets for a period of time, they can irritate the gum and lead to bad breath, gum disease, other serious health problems as well as tooth decay. Dental plaque that is not removed in time will also harden into dental tartar—a combination of hardened plaque and mineral from saliva forming rough surfaces—which can harbor more dental plaque and increase a person’s chance of getting gum inflammation (gingivitis) and later periodontal disease (periodontitis). Periodontitis is known for promoting inflammation of the blood vessels, an important risk factor for atherosclerosis. Atherosclerosis is a chronic, progressive disease in which plaques (consisting of deposits of cholesterol and other lipids, calcium, and large inflammatory cells called macrophages) build up in the walls of the arteries and cause cardiovascular disease. Periodontitis causes destruction of bone and gum around a tooth and can lead to premature tooth loss. In addition, if food particles and dental plaque are left on teeth surfaces and in gum pockets for too long, bacteria in the mouth will turn them to acids which will eat away your tooth structure and over time can lead to tooth decay. If tooth decay is left untreated, it will lead to tooth pain due to tooth sensitivity, tooth infection, and in worst case scenario tooth root canal and tooth loss. Brushing teeth and gum pockets properly using a toothbrush also help with halitosis (bad breath) and having a naturally white set of teeth without the need for teeth whitening procedures which can cause teeth sensitivity and gum irritation. Thus, it is necessary to have an ergonomic toothbrush handle in order to help the users remove as much as possible food and dental plaque, to prevent gingivitis, periodontitis, bad breath and to have a white set of teeth.

[0004] The prior art is replete with various renditions of toothbrush designs. The vast majority are mainly concerned with the technical aspects of improving the brushing efficiency of the toothbrush as a whole. There are some with larger handles that are intended to house an electric motor or store some other tooth brushing aid. Some handles are made large enough to store the head of a traveling toothbrush. None of the above designs make any conscious effort to ease the user’s control of the toothbrush bristles (keeping them in straight shapes as they are making contact with the teeth and gum sulcus). No toothbrush that are designed to ease user’s accurate placement of the bristles (placing bristles between teeth, and between teeth and gum (gum pocket brushing). None of the toothbrush is designed to ease user’s maintaining gentle pressure on teeth and gum.

[0005] Current methods of tooth brushings and tooth handle designs require users to hold the toothbrush handles in the users’ first and navigate around each tooth or angle bristles against teeth surfaces by bending the users wrists lifting users arms, and other convoluted moves that make it extremely difficult if not impossible for the users to access all teeth surfaces and gum pockets of all teeth. As a result, many users are unable to effectively reaching gum pockets, fine angles of teeth, interproximal of teeth, lingual surfaces of anterior teeth and distal surfaces of the last teeth in the mouth. Other users try extremely hard to gets into the above areas but causing gum damage (gum recession) and too abrasion (grooves at the neck of the teeth) due to the powerful force and action from the arm as well as poor control, poor accuracy of the user’s fist. Beebe, U.S. Pat. No. 4,283,808, teaches an after-market gripping device for tooth brushes adapted to be positioned over the handle of the toothbrush wherein the device is formed of soft plastic foam material. The problem with the plastic foam gripping device is that plastic foam tends to absorb moisture, therefore, by its very nature, is unsanitary. Furthermore, the consistency of plastic foam enables the toothbrush handle to move independently from the exterior surface of the slip on gripping device. The independent movement of the toothbrush, caused by the inherent mechanical instability of foam plastic, creates a condition wherein the all-important rotational and longitudinal control of the toothbrush handle is virtually nonexistent.

[0006] U.S. Pat. No. 5,305,490 discloses a light weight monolithically fabricated toothbrush affording a person with inadequate hand strength greatly improved gripping and control characteristics by utilizing an enlarged lightweight tubular handle with an anti-slip gripping surface specifically designed to deter retention of bacteria forming moisture and excess toothpaste. In a parallel note, U.S. Pat. No. 6,081,928 discloses a thin elastomeric glove with enhanced gripping surfaces molded into the gripping surfaces of the glove is described.

[0007] Conventional toothbrush often slips in the hand due to leakage of toothpaste and saliva from the mouth and such slippage can cause injury to the user. For example, one user jammed the plastic edge of her toothbrush hard against her lower right-hand outside gum. No bleeding occurred, but in the days since, some sort of white blister has developed and is sensitive to the touch. It looks like a short (inch-long) line along her gum where the toothbrush hit. Another user reported that his toothbrush slipped in his mouth while brushing and cut up his upper gums. Such slippage can cause severe pain in certain cases, and may lead to inadequate brushing of the teeth. Thus, what is needed is a toothbrush that is easy to handle and that provides a secure grip.

SUMMARY

[0008] A toothbrush with a round/octagon/oval handle and a secure grip and a method for brushing teeth and gum are disclose, including picking up and hold a toothbrush right below the neck portion, a toothbrush head extending from one end of the neck portion, and a grip handle extending from the other end of the neck portion, wherein the grip handle includes an array of gripping elements extending 360 degrees around the grip handle; and brushing a user’s teeth.
Implementations of the invention may include one or more of the following. The method includes holding the toothbrush as though the toothbrush is a pen, a pencil or a chopstick or similar to the way the dentists and dental hygienists hold their instruments when they perform the teeth cleaning procedure by maintaining a holding elbow in down position next to a user's side; maintaining the wrist straight and letting fingertips do the brushing; rolling the grip handle in the fingertips to adjust angles of the toothbrush bristles against the teeth to form the 45 degree angles when brushing teeth. The grip handle can be cylindrical-shaped, oval-shaped or octagon-shaped. The method includes comprising providing bumps or studs covering 360 degrees of the surface of the grip handle. The method includes comprising providing concave indentations covering 360 degrees of the surface of the grip handle. The method includes comprising providing suction cups covering 360 degrees of the surface of the grip handle. The method includes comprising forming continuous line extrusions or continuous concave depressions covering 360 degrees of the surface of the grip handle. The method includes comprising holding the grip handle with a chopstick finger grip or a pencil finger grip. For motorized toothbrushes, the method includes all of the features as described above for a manual toothbrush plus a vibrator in the grip handle. Brush bristles on the toothbrush head can have varying height to allow the head to brush a hard-to-reach dental region. The vibrator comprises a motor that is improperly balanced for vibration.

Advantages of the preferred embodiments may include one or more of the following. The toothbrush includes a cylindrical, oval or octagon handle with gripping portions such as bumps or recesses around the cylindrical/oval/octagon handle that help the user with keeping a grip on their toothbrush or rolling the toothbrush handle in their fingertips to adjust the bristle angle with tooth surfaces as they brush. The gripping elements completely encase the toothbrush handle in such a way that wherever the user wants to hold, there is gripping element present. This allows for many different gripping positions and ensures that the grip is not lost during tooth brushing. The use of this toothbrush also allows the user to hold the brush at a 45 degree angle, and still keeping their wrist perfectly straight. The handle can be held similar to a pencil or chopstick due to the cylindrical/oval/octagon handle not having pre-cut grooves for the hand, allowing for unique grips on the brush.

The preferred embodiments prevent the problem of the typical toothbrushes including battery powered ones which have pre-cut grooves on the handles which lead most if not all users to hold the toothbrushes firmly as though they hold file handles or hammer handles in their fists. This kind of firm grip is not recommended by toothbrush makers or dental professionals but average toothbrush users never know that they are not supposed to hold their toothbrushes in such ways. In addition, all toothbrush makers don't have instructions showing toothbrush users how to handle the toothbrushes that they are purchased by printing such information on packages or user's manuals. As a result, most users just hold the toothbrushes the same way of which they hold the toothbrushes as they were kids which is a firm grip on the toothbrush handles and brushing with heavy force from the arm which will lead to splaying of bristle tips and excessive friction and pressure on teeth and gum as the bristles making contact with them, as a result, gum recession and tooth abrasion are today's common dental problems. To effectively brush teeth and gum, gentle pressure must always be applied to allow the bristle tips staying straight and make direct contact with plaque and food particles on teeth surfaces and under gum pockets which have very tiny access areas (like threading a needle kind of action). If excessive pressure and fast brushing actions are applied, the bristle tips will be damaged and remain outside of the intended areas. The system provides an affordably priced practical one piece toothbrush having a secured tubular/oval/octagon handle specifically designed to afford a left or right handed person to comfortably and controllably grip the toothbrush handle to give them the precision and gentle pressure that protect the users' teeth and gum from toothbrush abrasion. The toothbrush provides an anti-slip sanitary appliance handle fabricated of impermeable material to prevent moisture absorption and designed in such a manner to discourage the retention of moisture and excess toothpaste and the resultant potentially harmful bacteria. The handle can be held as though it is a pencil or a chopstick or dental instruments and thus provides fine-grain brushing motion to clean hard to reach surfaces. Additionally, the toothbrush is compatible with left or right hand users. The claimed studded outside can also be applied to electrical toothbrushes. Since the automatic toothbrush has a tendency to slowly slip out of the user's hand, they can use the studded handle to keep the toothbrush from slipping and still receive feedback from the bristles as they make contact with teeth and gum sulcus. This also allows the handle to act as a massager for the user's hand. The bumps on the handle of the brush are placed at even intervals and reach from the base of the neck to near the end of the brush handle.

Further advantages of this invention will be outlined in the accompanying drawings and specifications.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGS. 1A, 1B and 1C show a back view, a side view, and a front view of an exemplary tooth brush in accordance with the present invention.

FIG. 2 shows an exemplary toothbrush embodiment with protruding lines or recessed lines and/or dots covering 360 degrees of the grip handle.

FIG. 3 shows an exemplary grip with on embodiment of the toothbrush.

FIG. 4 shows control circuitry of an exemplary motorized vibrating toothbrush.

DESCRIPTION

A toothbrush is disclosed that includes toothbrush handle that has round/tubular/oval/octagon shape with non-slip grip which enables the user to hold it the way s/he holds the pen/pencil or chop-stick or dental cleaning instruments. As he or she brushes his teeth holding the toothbrush in his finger tip, the elbow on his toothbrush holding side will be in relax/down position next to his side (if he holds the toothbrush in his fist, he has to keep the elbow at shoulder level as he brushes his opposite side with his toothbrush holding hand). In addition, with the toothbrush in his fingertips, the wrist is always staying straight and not bent or turned like in the first grip tooth brushing. Because the fingertips and sometimes forearm do all the works, while holding the toothbrush as holding a pencil/dental cleaning instruments, s/he can easily rolls the toothbrush handle in his fingertips to adjust angles of the toothbrush bristles against his teeth to form the 45 degree angles as recommended by dental professionals when
brushing teeth. The non-slip grip that surround the toothbrush handle will help the user keep the toothbrush handle from slipping about as he moves the toothbrush in back and forth, vibrating or circular motions.

[0018] Brushing when holding the toothbrush the way the user holds a pencil/dental cleaning instruments will give him more control (precision) to get to where he wants his toothbrush to brush or make circular motion much easier and smaller versus the traditional first grip (e.g., writing/tracing a letter with pencil in fingertips versus pencils in the fist).

[0019] Brushing when holding the toothbrush the way he holds the pencil/teeth cleaning instruments will dramatically decrease the pressure on gum and teeth which will help decrease or even eliminate tooth abrasion, gum loss and teeth sensitivity which cause by heavy force from the arm brushing action which commonly happened on people holding the toothbrush in the fist. (Normal writing with fingertips always generates less pressure against the paper surface than writing holding pen in one’s fist).

[0020] Advantageously, brushing when holding the toothbrush as holding a pencil will not crush the tips of the toothbrush bristles or bending them backward as much as holding the toothbrush in the fist. When the bristle tips stay standing up they will effectively remove plaque and food debris. Most of people who hold the toothbrush in their fists will damages the toothbrush bristles in a few times of brushing. Once the bristles are splayed (even slightly) the toothbrush becomes less or non-effective in removing plaque and food debris. As a result, many users mistakenly think that they have not brushed well enough and try brush harder in order to get to the plaque and food. Such harsh, aggressive brushing will causes gum loss and tooth abrasion.

[0021] FIGS. 1A, 1B and 1C show a back view, a side view, and a front view of an exemplary toothbrush in accordance with the present invention. The toothbrush has a narrow neck 12 that widens on a toothbrush head 10 to support toothbrush bristles 12-14. The narrow neck 12 also widens into a cylindrical gripping portion (grip handle) 20.

[0022] In one embodiment, the narrow neck is directed downward with a slant. This structure enables the user to easily brush his or her teeth in a relaxed posture without widely opening his or her mouth.

[0023] The grip handle 20 includes gripping elements such as bumps or recesses around the cylindrical handle that help the user with keeping a grip on their toothbrush. The gripping elements completely encase the toothbrush handle leaving no part uncovered. This allows for many different grips and ensures that the grip is not lost. The use of this toothbrush also allows for the user to hold the brush at a 45 degree angle, keeping their wrist perfectly straight. The handle can be held similar to a chopstick/pencil/dental cleaning instruments due to the cylindrical/oval/octagon handle not having pre-cut grooves for the hand, allowing for unique grips on the brush.

[0024] The cylindrical or octagon or oval grip handle 20 includes an end portion 28 which can be curved in one embodiment, or can be flat and has no curve, similar to the bottom of a can. The bristles 12-14 on the brush are spaced evenly on the brush to help with even brushing. Preferably, the length of the brushes at the end of the brush increases to help reach different areas of the mouth. During manufacturing, the bristles 12-14 are bundled up and secured to the brush using small staples which fit into brackets on the mold of the brush.

[0025] In one embodiment, the gripping handle 20 includes a plurality of bumps or studs 22 arrayed 360 degrees around the surface of the gripping handle 20. The bump, stud, or concave indentations provides the gripping portion 20 with increased surface area in the form of areas of bumps or suction on each of the gripping surfaces of the toothbrush. In one embodiment, the toothbrush has an outer surface for coming into contact with a finger. The bumps, studs, or concave indentations may be a single size and depth or various sizes and depths and are molded into the glove wherever additional grip is needed.

[0026] Alternatively, instead of bumps or studs, the gripping handle 20 can have concave indentations thereon. The concave or convex indentations are molded onto the brush to help with gripping the brush.

[0027] In yet another embodiment of the invention, the gripping handle 20 has an outer surface with an array of suction cups for coming into contact with finger(s). The suction cups define a plurality of suction portions on the outer surface of the glove. The suction cups may be a single size and depth or various sizes and depths and are molded into the surface of the glove wherever additional grip is desired.

[0028] The toothbrush of the invention has superior gripping effectiveness as compared to typical toothbrushes. The increased gripping effectiveness of the gripping handle also allows the handle to be used “on demand” which means a gripping surface present wherever the user’s finger touch the toothbrush handle.

[0029] This toothbrush handle is also superior to conventional toothbrush handle because it provides increased grip strength/effectiveness without affecting the tactile feel of the toothbrush. The toothbrush can be manufactured using conventional processing lines, injection molding, or other thin-walled plastic forming technologies (e.g., thermoforming, blow molding). To manufacture the toothbrush with a gripping surface comprised of a plurality of concave indentations, the toothbrush formers are provided with a surface comprised of a plurality of convex protrusions in those areas where improved grip strength is desired.

[0030] The material used in the toothbrush is a celluloid material and the bristles of the toothbrush are made from nylon. The way a toothbrush is made is through a mold in which plastic pellets are squeezed through pressure. The mold has holes for the brush bristles to be inserted into. The bristles are clamped together and stapled into the mold of the brush. Finishing touches are then added into the mold.

[0031] FIG. 2 shows yet another embodiment with protruding lines or recessed lines and/or dots covering 360 degrees of the grip handle. In this embodiment, a series of lines 44 cover 360 degrees of the grip handle in combination with the bumps or concave indentations, or a combination thereof. Thus, alternating ridges followed by depressions can be formed on the surface of the grip handle. Another embodiment can alternatingly mix the protruding lines with a row of concave indentations. Other embodiments can have only protruding lines or recessed lines covering 360 degrees of the grip handle. In these embodiments, the array of gripping elements includes continuous line extrusions as the case for one implementation. In another implementation, continuous concave depressions can be provided on the surface of the grip handle.

[0032] The cylindrical/octagonal shape of the brush allows for varied grips on the brush including a pencil dental cleaning instruments or chopstick-like grip, as shown in FIG. 3. The user is holding the handle like a pencil. In one embodiment,
ment, the user can put his or her fingers on the handle 20 while holding them about two-thirds of the way from the bottom of the handle 20. In one usage scenario, the user can hold the toothbrush in a basic tripod grip. The basic tripod grip is the same as the one the user uses for writing. The thumb and forefinger form a triangle with the middle finger as shown, which is supported by the ring finger and pinkie. This grip allows the toothbrush to be finely controlled by the fingers, so holding a toothbrush this way is ideal for brushing teeth with precision in the same way that a pencil can be used for drawing fine detail. The upright position of the toothbrush allows for accurate brushing with the brush tip, rather than side, of the brush. This gripping style is greatly aided by the secure grip afforded by the array of gripping elements of the preferred embodiment.

[0033] The toothbrush, coupled with the user’s fingertip, is used to help the toothbrush user avoid toothbrush abrasion, gum abrasion/recession, and teeth sensitivity due to strong thrusting, poking, and pulling when toothbrush user holds the toothbrush in their first and brushes his teeth with his arm and forearm. The holding methodology also helps keep the user wrist staying perfectly straight during his/her brushing. The toothbrush, along with the user’s fingertips, supports a 45 degree angle contact of the brush with his or her teeth and engages the gum sulcus with ease.

[0034] The brittle tips can stay in constant contact with the teeth surfaces, slip between teeth and access gum sulcus with minimal effort. The toothbrush of FIGS. 1 and 2 can access any surfaces of his teeth without the need of raising his or her brushing arm.

[0035] FIG. 4 shows an example of a secure grip electric toothbrush that has a design similar to the brush shown in FIG. 1 or 2. Since electric toothbrushes are more likely to slip than a regular toothbrush due to vibrations, adding friction to counteract the vibrations can greatly reduce the effects of the vibrating. The vibrating of the brush is intended to aid in removing plaque from the teeth. Although this can be helpful at times, it hinders the ability to have a secure grip on the brush handle. The motor of the brush is made to imitate the motion of using hands to hold the brush.

[0036] In FIG. 4, a battery 100 is connected by a switch 102 to provide power to a motor 110 with an unbalanced head 112 to form a vibrating motor, which is essentially a motor that is improperly balanced. In other words, there is an off-centered weight attached to the motor’s rotational shaft that causes the motor to wobble. The amount of wobble can be changed by the amount of weight attached to the motor. The vibrating motor can be done by attaching any off centered weight to any motor shaft. They can also be created by breaking in half balanced components already attached to motor shafts. When the brush is turned on, the motor is activated and starts to move, imitating hand motions that help to increase food debris and plaque removal.

[0037] The toothbrush includes a cylindrical handle with gripping portions such as bumps or recesses around the cylin-
drical handle that help the user with keeping a grip on their toothbrush. The gripping elements completely encase the toothbrush handle in such a way of which gripping material presents wherever the user’s finger touches it. This allows for many different grips and ensures that the grip is not lost. The use of this toothbrush also allows for the user to hold the brush at a 45 degree angle, keeping their wrist perfectly straight. The handle can be held similar to a chopstick or dental cleaning instruments due to the cylindrical/octagon/oval handle not having pre-cut grooves for the hand, allowing for unique grips on the brush.

[0038] The preferred embodiments prevent the problem of the toothbrush from slipping out of the user’s hand due to manufacturers’ recommendation of holding the toothbrush lightly but palm facing downward. To effectively brush teeth, stability must be maintained to make effective contact with the teeth to remove plaque. If the toothbrush constantly falls out of position or being held too tightly, then the brushing will be less effective and teeth will not be cleaned as expected. The system provides an affordable priced practical one piece toothbrush having a secured gripping covering tubular/octagon/oval handle specifically designed to afford a left or right handed person to comfortably, precisely and controllably grip the toothbrush handle. The toothbrush provides an anti-slip sanitary appliance handle fabricated of impermeable material to prevent moisture absorption and designed in such a manner to discourage the retention of moisture and excess toothpaste and the resultant potentially harmful bacteria. The handle can be held as though it is a pencil or a chopstick or dental cleaning instruments and thus provides fine-grain brushing motion to clean hard to reach surfaces. Additionally, the toothbrush is compatible with left or right hand users. The claimed studied outside can also be applied to automatic toothbrushes. Since the automatic toothbrush has a tendency to slowly slip out of the user’s hand, they can use the studied handle to keep a solid grip on the toothbrush. This also allows the handle to act as a massage for the user’s hand. The bumps on the handle of the brush are placed at even intervals and reach from the base of the neck to the midsection of the brush.

[0039] In one exemplary method of use, to brush the outside (facial) of the lower arch the user picks up and holds the toothbrush handle the way s/he holds a pencil to write (proper way) or the way the dentists/dental hygienists hold their teeth cleaning instruments with the bristles facing the user. S/He then rolls the handle between his fingers to position the bristles slight downward to form a roughly 45 degree angle against teeth surfaces. This also allows the bristle tips to engage and get into gum pockets as he brushes with ease. S/he then proceeds to brush the teeth on the opposite side of his toothbrush holding side (right handed person will brush his left side of his mouth and other way around for left handed user) either in circular motions of short vibrating motions for each tooth as he is working toward the front of his mouth. He then flips the toothbrush head toward the opposite side and continues brushing the teeth starting from where he stops earlier to brush the remaining side of his lower teeth. To brush the outside (facial) of the upper arch, the user repeats the same brushing way s/he did with the lower teeth with now rolling the toothbrush bristles slightly up to form a roughly 45 degree angles against the upper teeth surfaces and gum pockets. To brush the inside/linguval surfaces of upper teeth, the toothbrush is held in user’s pencil grip or dental cleaning instrument grip with the butt of the handle pointing downward (writing with the eraser end of a pencil) and bristles facing away from the user face. The user then maintains his/her elbow close to the body and brings the toothbrush toward the user mouth in the same position. Next, the user leans the brush head backward slightly toward the back of his mouth to reach the lingual of his upper back teeth. The user can roll the toothbrush in his or her fingertip to form a 45 degree angle against the tooth which he wants to brush as well as makes contact with the distal of that tooth (typically, last
tooth), as he brushes the distal then straight-lingual then roll the handle slightly to brush toward the mesial surface of the same tooth. The cleaning repeats with the next tooth in front of the tooth which he/she has just brushed and working toward the back of the upper front teeth with the toothbrush now in perfect vertical direction. The same type of brushing procedures repeats as the user works on the remaining side of the same arch.

To brush the lingual surface of the lower teeth, the user holds the tooth brush with his pencil grip or dental cleaning instrument grip, the handle butt pointing upward (writing with the erasing end) and the brush head pointing upward and bristles facing toward the user’s face. He/she then uses his fingers to tips the brush head toward his lower front teeth but still maintains his elbow close to his side. He/she then brings the brush head toward the last tooth of either side of his mouth, rolls the toothbrush in his finger tips to form a 45 degree angle against the side of the tooth which he intends to brush and starts brushing. He can shift the toothbrush handle to the corner of his mouth so the toothbrush bristles can make full contact and clean the mesial lingual surfaces of his teeth. He/she then brushes toward the front of his lower teeth (lingual of anterior teeth), his toothbrush handle will be in vertical direction with the handle butt points upward. The same way of brushing is repeated for the remaining side of the user’s lower lingual teeth.

Both techniques are recommended by dental professionals but traditional tooth brushing methods make it extremely difficult if not impossible to do let alone achieving a satisfactory result.

Of course the present invention is not intended to be restricted to any particular form or arrangement, or any specific embodiment, or any specific use, disclosed herein, since the same may be modified in various particulars or relations without departing from the spirit or scope of the claimed invention hereinabove shown and described of which the apparatus or method shown is intended only for illustration and disclosure of an operative embodiment and not to show all of the various forms or modifications in which this invention might be embodied or operated.

The present invention has been described in considerable detail in order to comply with the patent laws by providing full public disclosure of at least one of its forms. However, such detailed description is not intended in any way to limit the broad features or principles of the present invention, or the scope of the patent to be granted. Therefore, the invention is to be limited only by the scope of the appended claims.

What is claimed is:

1. A toothbrush, comprising
   a neck portion;
   a toothbrush head extending from one end of the neck portion; and
   a grip handle extending from the other end of the neck portion, wherein the grip handle includes an array of gripping elements extending 360 degrees around the grip handle.

2. The toothbrush of claim 1, wherein the grip handle is cylindrical-shaped or octagon-shaped oval-shaped.

3. The toothbrush of claim 1, wherein the array of gripping elements includes bumps or studs on the surface of the grip handle.

4. The toothbrush of claim 1, wherein the array of gripping elements includes concave indentations on the surface of the grip handle.

5. The toothbrush of claim 1, wherein the array of gripping elements includes suction cups on the surface of the grip handle.

6. The toothbrush of claim 1, wherein the array of gripping elements includes continuous line extrusions or continuous concave depressions on the surface of the grip handle.

7. The toothbrush of claim 1, comprising a vibrator in the grip handle.

8. The toothbrush of claim 1, comprising brush bristles on the toothbrush head with varying height to allow the head to brush a hard-to-reach dental region.

9. The toothbrush of claim 1, wherein the grip handle comprises a motor that is improperly balanced for vibration.

10. A method for brushing teeth, comprising
    picking up a toothbrush with a neck portion, a toothbrush head extending from one end of the neck portion, and a grip handle extending from the other end of the neck portion, wherein the grip handle includes an array of gripping elements extending 360 degrees around the grip handle; and brushing a user’s teeth.

11. The method of claim 10, comprising holding the toothbrush as though the toothbrush is a pen, a pencil or a chop-stick;
    maintaining a holding elbow in down position next to a user’s side;
    maintaining the wrist straight and letting fingertips and/ or forearm do the brushing;
    rolling the grip handle in the fingertips to adjust angles of the toothbrush bristles against the teeth to form the 45 degree angles when brushing teeth.

12. The method of claim 10, wherein the grip handle is cylindrical-shaped octagon-shaped or oval-shaped.

13. The method of claim 10, comprising providing bumps or studs covering 360 degrees of the surface of the grip handle.

14. The method of claim 10, comprising providing concave indentations covering 360 degrees of the surface of the grip handle.

15. The method of claim 10, comprising providing suction cups covering 360 degrees of the surface of the grip handle.

16. The method of claim 10, comprising forming continuous line extrusions or continuous concave depressions covering 360 degrees of the surface of the grip handle.

17. The method of claim 10, comprising holding the grip handle with a chopstick finger grip or a pencil finger grip or dentists/dental hygienists dental cleaning instruments/grip.

18. The method of claim 10, comprising a vibrator in the grip handle.

19. The method of claim 10, comprising providing brush bristles on the toothbrush head with varying height to allow the head to brush a hard-to-reach dental region.

20. The method of claim 10, wherein the vibrator comprises a motor that is improperly balanced for vibration.