

Aug. 23, 1932.

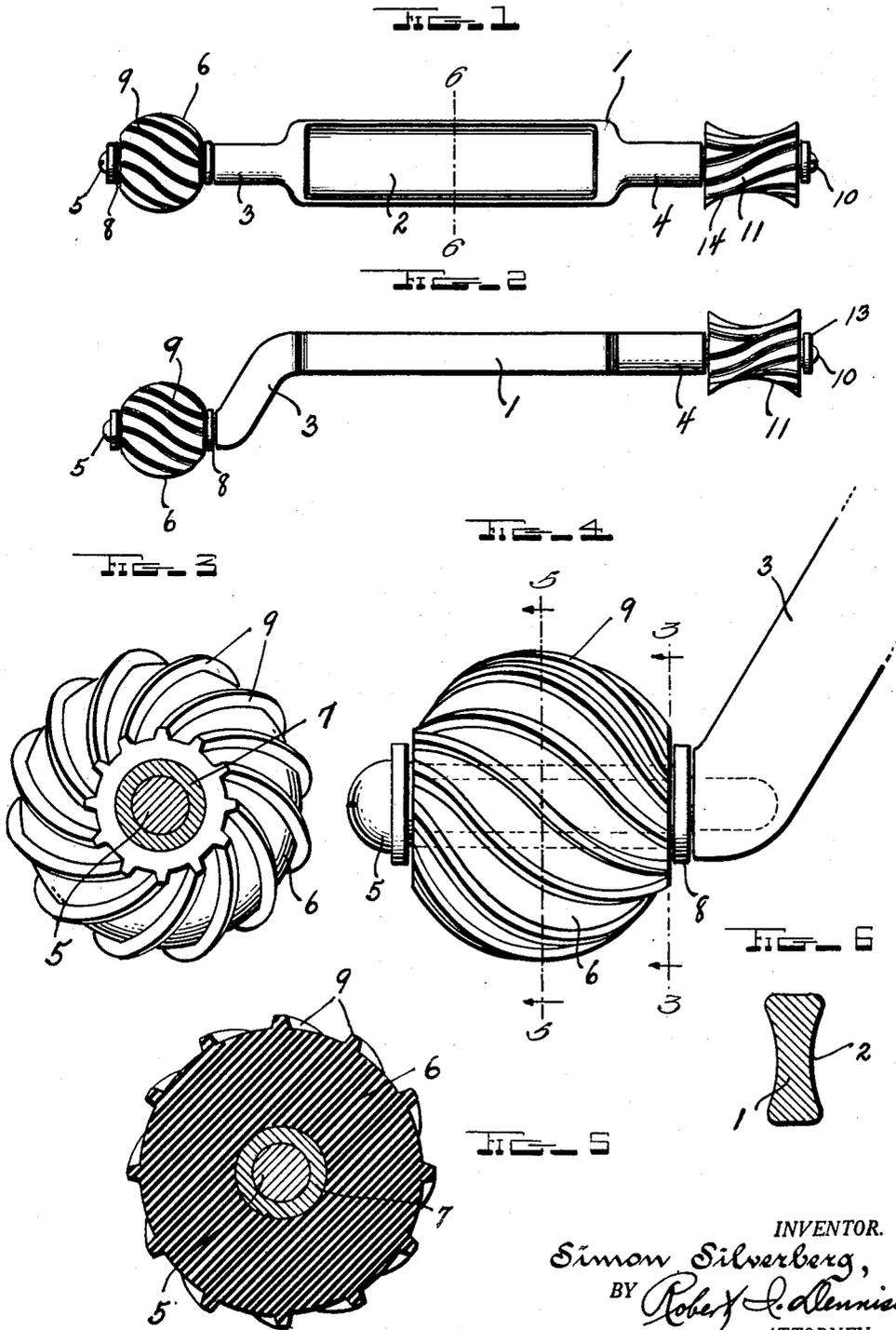
S. SILVERBERG

1,872,832

DENTAL DEVICE

Filed April 16, 1931

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

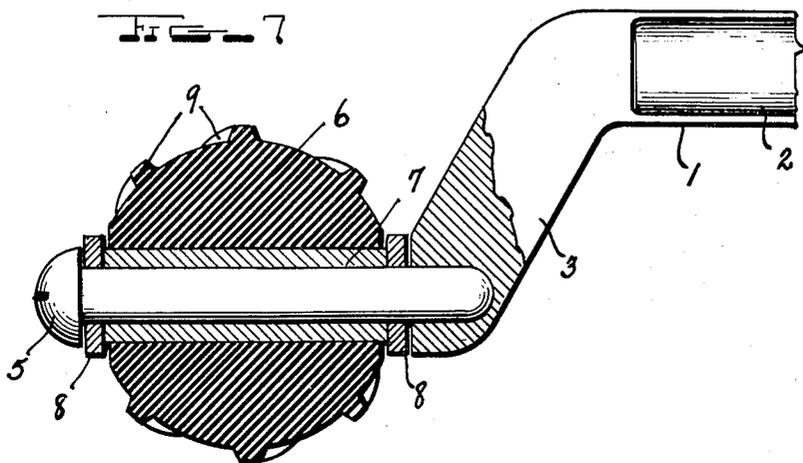


Fig. 8

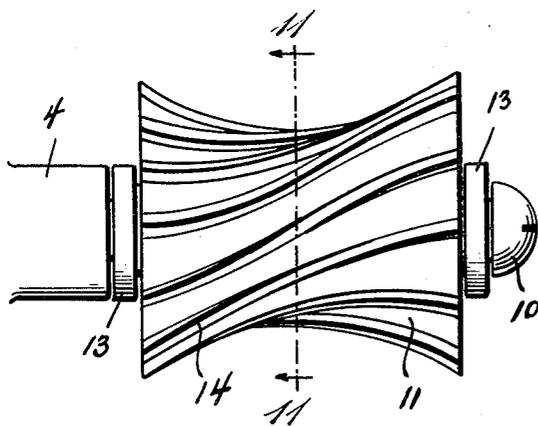


Fig. 9

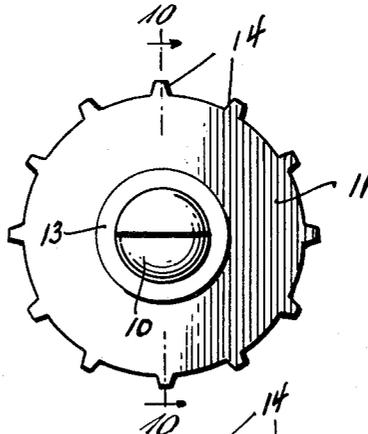


Fig. 10

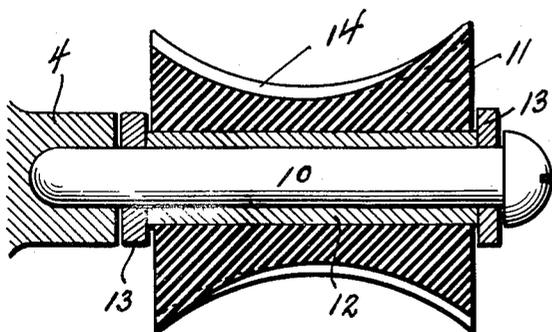
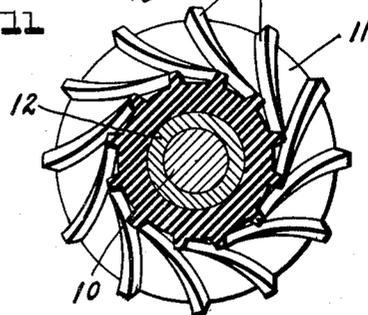


Fig. 11



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UNITED STATES PATENT OFFICE

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DENTAL DEVICE

Application filed April 16, 1931. Serial No. 530,636.

The present invention relates to improvements in dental devices and has reference more particularly to an implement for the hygiene and treatment of the gums.

One of the important objects of the present invention is to provide a dental device that includes a freely rotatable massaging roller that is mounted on a suitable handle and which roller is formed with spirally arranged ribs that are adapted to press from beneath the gums, accumulations and pathological secretions.

A further and important object is to provide a massaging device of the above mentioned character which when in use will create a temporary vacuum beneath the gums, thus enhancing the penetration beneath the gums and into the tissues of any germicide or other therapeutic agent that is introduced into the mouth.

Another object is to provide a gum massaging device that will stimulate the circulation of the blood in the gums and at the same time facilitate the expulsion of secretions, and this in a positive and efficient manner.

A further salient object of the present invention is to provide a dental implement or device of the above mentioned character whereby a single handle may be employed to carry both of the massaging rollers, one roller being employed for use in massaging the external surface of the gums while the other roller is employed for massaging the concavity of the internal alveolar surface, the handle being further of such construction as to permit the use of either massaging roller without causing any injury to the teeth.

A further object is to provide a dental device of the above mentioned character which is simple in construction, inexpensive, and further well adapted to the purposes for which it is designed.

Other objects and advantages of the invention will become apparent from the following description when taken in connection with the accompanying drawings.

In the accompanying drawings, wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a top plan view of the dental device embodying my invention showing the two massaging rollers mounted on the respective ends of the handle.

Figure 2 is a side elevation thereof;

Figure 3 is a vertical sectional view taken approximately on the line 3—3 of Figure 4, looking in the direction of the arrows;

Figure 4 is an enlarged detail elevational view of the spherical massaging roller that is mounted for rotation on the offset end of the handle;

Figure 5 is a vertical sectional view taken on the line 5—5 of Figure 4;

Figure 6 is a similar section taken approximately on the line 6—6 of Figure 1, showing the cross sectional shape of the handle;

Figure 7 is a central longitudinal sectional view through the spherical massaging roller and the adjacent element showing the manner in which the same is mounted for rotation on the offset end of the handle;

Figure 8 is a view similar to Figure 4 showing the concave massaging roller that is mounted for rotation on the opposite end of the handle;

Figure 9 is an end elevation thereof;

Figure 10 is a vertical sectional view taken approximately on the line 10—10 of Figure 9; and

Figure 11 is a vertical sectional view taken approximately on the line 11—11 of Figure 8.

In the drawings, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates the handle of the device, the same being constructed of any suitable material. The opposed side faces of the handle are channelled out as indicated at 2 with reference more particularly to Figure 6, to allow a firm grip with the fingers when the device is used. Reduced extensions 3 and 4 project from the respective ends of the handle and upon referring to Figure 2, it will be observed that the extension 3 is slightly offset while the extension 4 is disposed in substantially the same horizontal plane as the body portion of the handle. The offset portion 3 is disposed at an angle of approximately 45°.

At headed pin designated by the numeral 5 is fitted in the end of the offset extension 3 and

is disposed horizontally in a plane substantially parallel with the handle to provide a shaft for supporting the rotatable spherical massage roller 6, the specific construction of which will be presently described in detail. The pin or shaft 5 has its axis disposed parallel with the axis of the handle.

While I have shown the shaft as comprising a pin, it is to be understood that the shaft may be in the form of a bolt, rivet and may be either fixedly or detachably connected to the outer end of the offset extension 3. Furthermore, if desired, the shaft may form a continuation and integral part of said offset portion and I do not wish to limit myself to this particular construction of the shaft.

The spherical massage roller 6 may be constructed of any resilient material such as rubber or the like and the same is formed with a horizontal bore in which is fitted a metallic sleeve 7, the sleeve being adapted for rotation on the shaft 5. Suitable washers 8 encircle the shaft 5 and are arranged at the respective ends of the sleeve 7 for spacing the sleeve and the spherical rubber massage roller 6 from the end of the offset extension 3 and the head of the pin 5, respectively, as is clearly suggested in Figure 7 of the drawings. Upon referring to this particular figure, it will also be observed that the ends of the sleeve 7 project slightly beyond the flattened sides of the spherical roller.

Formed on the periphery of the rubber roller 6 are the spirally arranged ribs 9 and it is obvious that the space between the spiral ribs will vary. The purpose of the ribs will be hereinafter and more fully described. The ribs preferably extend from one flattened end of the roller to the other flattened end.

The substantially spherical massage roller 6 is of such diameter as to be suitable to the concavity of the internal alveolar surface and the offset portion 3 will allow clearance of the edges of the teeth by the handle when the roller is applied to the internal alveolar surface.

When properly positioned in the mouth, the handle 1 is manipulated to effect a rolling action of the roller and when rolled from above downward on the upper, and from below upward on the lower internal alveolar surfaces, with varying degrees of pressure, will have a stimulating, hardening, cleansing action upon the gums.

By reason of the pressure in a continuous direction, together with the action of the spirally arranged ribs creating what I term "a milking action," accumulations and secretions will be pressed from beneath the gums.

A temporary vacuum will thus be created, which will readily facilitate the penetrating action of any germicide introduced into the mouth.

In order that the dental device may be equally as well used for massaging the exter-

nal surfaces of the gums, there is mounted for rotation on the shaft 10 carried by the outer end of the extension 4, a substantially concaved rubber roller 11 and this massage roller 11 is also formed with a central bore within which is fitted the metallic sleeve 12, whereby the massage roller 11 will be free to rotate on the shaft 10 and suitable washers 13 are arranged on the shaft 10 for disposition between the respective ends of the sleeve 12 and the end of the extension 4 and head of the shaft 10, respectively, as suggested very clearly in Figure 10 of the drawings.

Spirally arranged ribs 14 are formed on the peripheral surface of the concaved roller 11, and these ribs 14 function in the same manner as the ribs 9 that are formed on the peripheral surface of the rubber roller 6. The roller 11 is preferably shaped to conform to the contour of the external surface of the gums. The external surface of the gums may be massaged by manipulating the handle 1 with the concaved roller pressed against the external surface of the gums in the same manner as the spherical massage roller massages the internal surfaces of the gums.

It will thus be seen from the foregoing description, that I have provided a dental device for massaging the gums that will at all times be positive and efficient in its operation and due to its simplicity, the implement can be handled without any difficulty and by merely reversing the position of the device, first one side of the gums may be massaged and then the other side.

While I have shown the preferred embodiment of the invention, it is to be understood that minor changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention and the scope of the appended claim.

Having thus described the invention, what I claim as new is:

In a dental device of the class described, a handle, one end of the handle being offset at an angle of approximately 45°, a shaft carried by the end of the offset portion and extending therefrom with its axis substantially parallel with the axis of the handle, a substantially spherical massage roller mounted for rotation on the shaft and shaped to conform to the concavity of the internal alveolar surface, and spirally arranged ribs formed on the periphery of the roller.

In testimony whereof I affix my signature.
SIMON SILVERBERG.