

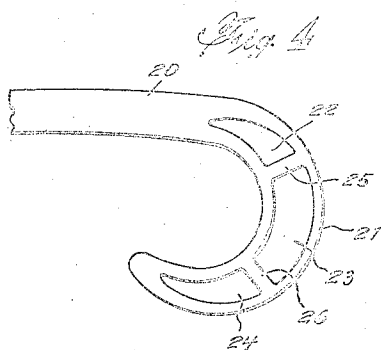
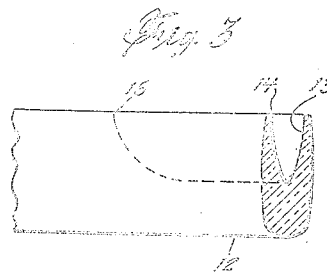
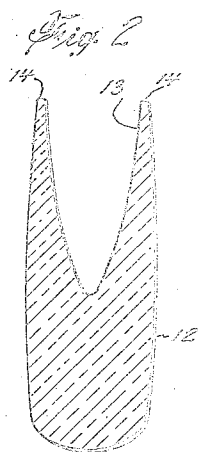
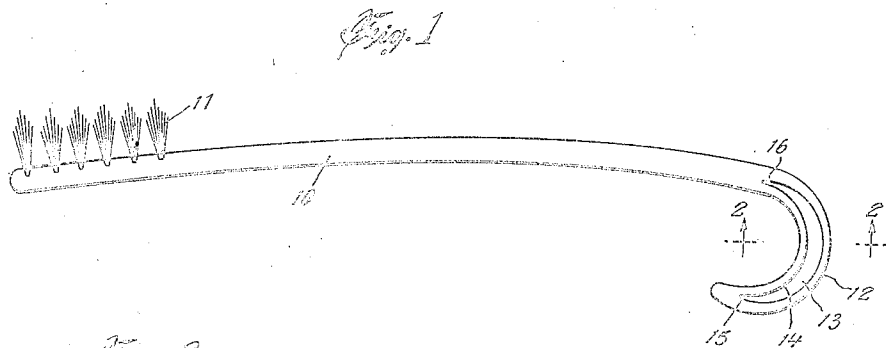
July 30, 1946.

I. E. GALLANTY ET AL

2,405,029

TONGUE CLEANING DEVICE

Filed May 7, 1943



INVENTORS
Irving B. Gallanty
Robert W. Hansen
John P. Hendler
 Their Attorney

UNITED STATES PATENT OFFICE

2,405,029

TONGUE CLEANING DEVICE

Irving B. Gallanty, New York, and Robert
M. Larsen, Rockville Centre, N. Y.

Application May 7, 1943, Serial No. 486,070

1 Claim. (Cl. 128—304)

1

This invention relates to new and useful improvements in tongue-cleaning devices, and has for its principal object the provision of an improved device of this general character which will enable the user to quickly and easily clean the tongue without, however, causing any injury to the delicate membranes.

In the past, tongue-cleaning devices have generally been of two kinds, to wit, tongue "scrapers," and tongue brushes. The scraper has usually comprised a curved scraping element mounted on a handle, or a straight scraper resembling a miniature hoe mounted at right angles to the handle. These scrapers, being exactly what the name implies, have been objectionable for a number of reasons, chief of which is the very imminent possibility of injuring the delicate mucous membranes forming the tongue surface. In order to perform the operation with any measure of success, relatively sharp edges were required, which frequently produced cuts and abrasions of the membranes. If the edges were sufficiently dulled to eliminate with certainty this danger, the device was not capable of removing the deposits on the tongue surface, since this accumulation clings to the tongue surface, and particularly to the many interstices therein, with a high order of adhesion. Moreover, devices of this general character were entirely incapable of removing the secretions in these minute interstices, so at best the tongue scrapers, per se, were incapable of accomplishing their intended purpose. Also, the number of instances of positive injury to the tongue is legion.

The second type of tongue-cleaning element, the brush, had fewer of the foregoing objections, providing the individual bristles were soft enough, but such soft bristles did a most poor cleaning operation. The nature of the accumulated deposits on the tongue is such as to be incapable of removal by a brushing device, and if the bristles were relatively hard, the danger of infection was considerable. It is an object of the present invention to provide a novel tongue-cleaning element which will eliminate all of the foregoing objections inasmuch as means are provided in the element for creating a suction as the device moves over the tongue, thus withdrawing the accumulated substance without any scraping or brushing action whatsoever.

Specifically, the device of the present invention may comprise a handle member of any suitable material—preferably one of the plastics, because of their easy-cleaning qualities—which has a curved or otherwise shaped terminal portion.

2

The precise shape of this terminal portion is a matter of choice, and is generally immaterial just so long as it includes a portion having a length less than the width of the tongue, which portion is generally flat or convexly curved in transverse section. It is preferred, however, to have this portion generally curved throughout its length. There is formed in this surface an elongated recess of lesser length than the length of the surface, and of fair depth. The marginal edges of the recess, as well as the marginal edges of the surface of this cleaning portion, are slightly rounded to positively prevent any injury to the tongue.

When this element is drawn over the tongue, a fair degree of pressure being applied to the tongue surface, a distinct suction is created between the walls of the recess and the tongue surface. The reason why this suction or partial vacuum is created is perfectly obvious. The length of the recess is less than the width of the tongue. When the surface of the recessed cleaning element is pressed gently into engagement with the tongue surface, the adjacent portion of such tongue surface moves into the recess throughout its length. When the pressure is slightly relaxed, a partial vacuum is created, thus drawing the accumulated substance into the recess. After a few gentle strokes over the tongue surface, placing the cleaning element under a spray of water after each stroke to remove the accumulation, the tongue surface is clean.

It will accordingly be obvious that another object of the present invention is to provide a tongue-cleaning device which, by virtue of its construction and ease of cleaning, is perfectly sanitary, may be readily sterilized, and may be safely used without any danger of depositing germs on the tongue.

In the drawing:

Fig. 1 is a plan view of one embodiment of the present invention.

Fig. 2 is an enlarged section taken on line 2—2 of Fig. 1.

Fig. 3 is an enlarged detailed section of a portion of the device.

Fig. 4 is a broken plan view of a modified form of the present invention.

The tongue cleaner constituting the present invention may be embodied in a separate device intended only for the purpose of cleaning the tongue, or it may be incorporated in a tooth-brush handle. In Fig. 1 of the drawing, the latter form is shown, and the device in this in-

stance includes the usual tooth-brush handle 10 having the brushing elements 11 at one end thereof. The handle may, if desired, be slightly curved over the major portion of its length, and the end opposite the brushing element is curved in a generally semi-circular fashion, as shown at 12. This handle may be made of the usual plastic material, or any other suitable material which is readily cleaned and easily formed or molded to any desired shape.

The precise cross-sectional area of the handle 10 and of this semi-circular terminal portion 12 is, of course, a matter of choice. Elements of this character are usually of generally rectangular or elliptical cross-sectional shape, and such shape is suitable for the present purposes, as shown clearly in Fig. 2. On one or both of the narrower surfaces, a relatively deep recess 13 is formed in the curved terminal portion, thus providing marginal edges 14 which are desirably somewhat rounded in order to definitely prevent any injury to the tongue as the cleaning element is moved thereover.

In the embodiment illustrated in Figs. 2 and 3, the recess 13 is formed on one edge only and extends somewhat more than half the total depth of this portion. The precise shape and size of this curved terminal portion 12 is, of course, a matter of choice, although it is preferred to make it substantially as shown in Fig. 1 of the drawing which illustrates what may constitute a full-sized embodiment. In any event, the total width of the curved terminal should be somewhat less than the width of the tongue. At the free end of the curved portion, the recess should stop short of the terminal, as shown at 15, and at its opposite end, the recess should terminate adjacent to a point 16 where the handle proper begins. It will thus be seen that when the working surface of the cleaning element is placed in firm engagement with the tongue in such a way that all portions of the marginal edges 14 of the recess are pressed firmly into engagement with the tongue, and the cleaning ele-

ment moved over the surface of the tongue, a suction will be formed which will withdraw the accumulated deposits from the tongue, all as was pointed out at some detail earlier in the specification.

In the embodiment shown in Fig. 4, the handle 20 is also formed with a curved terminal portion 21, and in this instance, three recesses 22, 23 and 24 are formed, such recesses being separated by walls 25 and 26. There is thus provided a plurality of independent, unconnected, suction-creating recesses. For simplicity in manufacture, it is preferred to form the handle and the tongue-cleaning element integrally by molding both portions from a single piece of plastic material. It will be appreciated, however, that they may be formed separately and the handle appropriately joined to the tongue-cleaning element, which may be curved, as shown, or which may be straight.

The foregoing embodiments of the invention are illustrative only and are not to be taken in any limiting sense. In other words, many changes and modifications may be made without departing from the spirit of the invention, as defined by the appended claim.

What we claim is:

A tongue scraper of the character described comprising a handle portion formed with a hook-shaped end, said hook-shaped end being of lesser width than the width of the tongue and having on one face thereof a relatively deep crescent-shaped recess which is disposed generally laterally of the handle portion, the walls of the recess diverging from the base thereof to the face of the hook-shaped end and forming scraping edges on such face, said walls meeting at their opposed terminals and forming a pocket with closed ends, the opposed terminals of such scraping edges directing accumulated matter on the tongue to a position substantially centrally of the recess and effecting removal thereof.

IRVING B. GALLANTY.
ROBERT M. LARSEN.