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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

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ISARD & CASTRO LTDA	CONSIGNACION	BANCO DE BOGOTA	062754387	3635362	28/02/2008	23,935,600.00

***** CONCEPTO *****

CANT.	RENTISTADO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-01	SOLICITUDES	
		05 EXAMEN DE PATENTABILIDAD DE INVEN	420,000.00
		TOTAL :	420,000.00

SON: CUATROCIENTOS VEINTE MIL PESOS

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Industria y Comercio
SUPERINTENDENCIA

DIVISIÓN DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No. 07-11453

EL EXTRACTO DE LA PRESENTE SOLICITUD DE **PATENTE DE INVENCION**

FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No **587** DE

FECHA **18 DE ENERO DE 2008** EL TÉRMINO HÁBIL SEÑALADO POR LA LEY

EXPIRA EL **16 DE ABRIL DE 2008**

NOTA: Dentro del plazo de los seis (6) meses siguientes a partir de la fecha de publicación en la gaceta de Propiedad Industrial, deberá solicitar y cancelar el examen de patentabilidad so pena de que la solicitud caiga en abandono, de acuerdo con lo establecido en el Artículo 44 de la Decisión 486/2000.

SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.

SI _____

NO X



US006352545B1

(12) **United States Patent**
Wagner

(10) **Patent No.:** **US 6,352,545 B1**
(45) **Date of Patent:** **Mar. 5, 2002**

(54) **BREATH SYSTEM APPLIANCE WITH
DORSAL APPLICATOR AND SCRAPER**

(76) **Inventor:** **Eugene C. Wagner, c/o Dental
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(*) **Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** **09/422,313**

(22) **Filed:** **Oct. 21, 1999**

Related U.S. Application Data

(63) **Continuation-in-part of application No. 09/307,705, filed on
May 10, 1999, now Pat. No. 6,083,235.**

(51) **Int. Cl.** **A61B 17/24**

(52) **U.S. Cl.** **606/161; 15/111**

(58) **Field of Search** **606/1, 160, 161;
600/56; 604/77; 424/435, 439; D24/101,
135, 136; D1/105; 15/110, 111, 114**

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6,083,235 A * 7/2000 Wagner 606/161

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(57)

ABSTRACT

A breath system appliance includes a planar thin elongate body having an applicator head at one end and a scraper head at the other end. The applicator head carries a troche having an oral hygiene and/or breath freshening active constituent. The active constituent may include an antibacterial agent, an antiseptic agent, a flavoring agent, an oxidizing agent and an anesthetizing agent. The active constituent is applied as a coating to dorsal surfaces of a user. The scraper head is applied against dorsal surfaces of the user to dislodge food debris and other odor generating matter from the dorsum of the user after application of the troche, before application of the troche, or both before and after. The appliance may be packaged in a sealed packet.

18 Claims, 3 Drawing Sheets

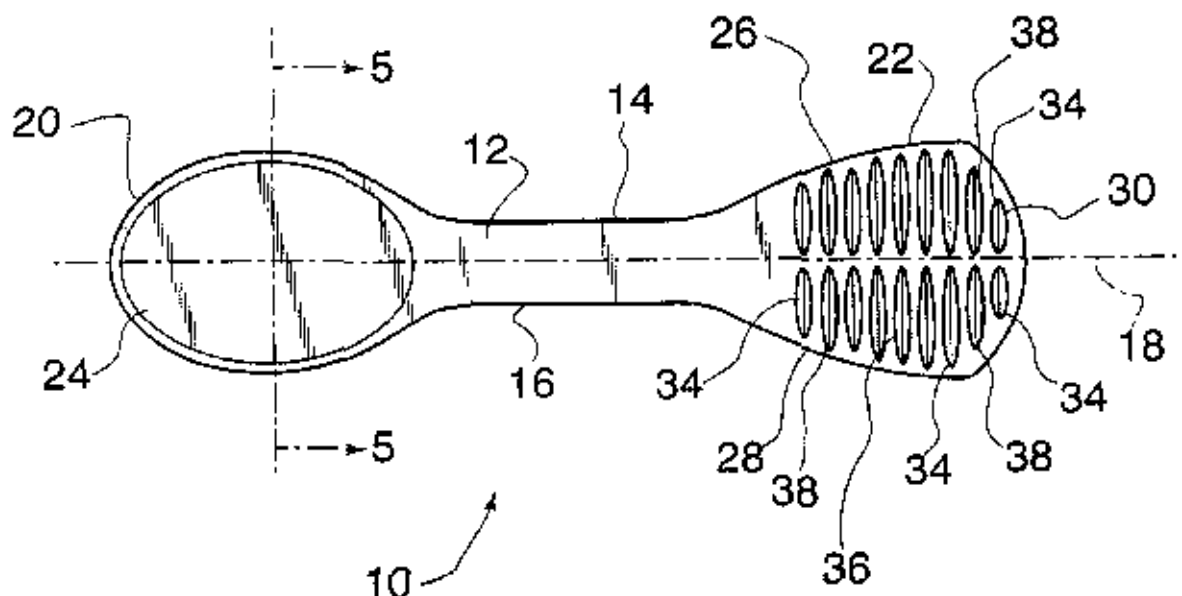
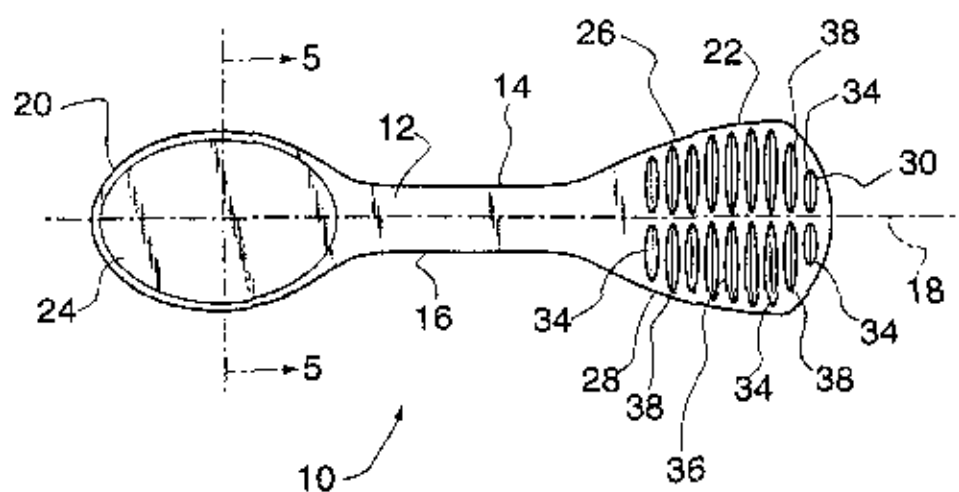
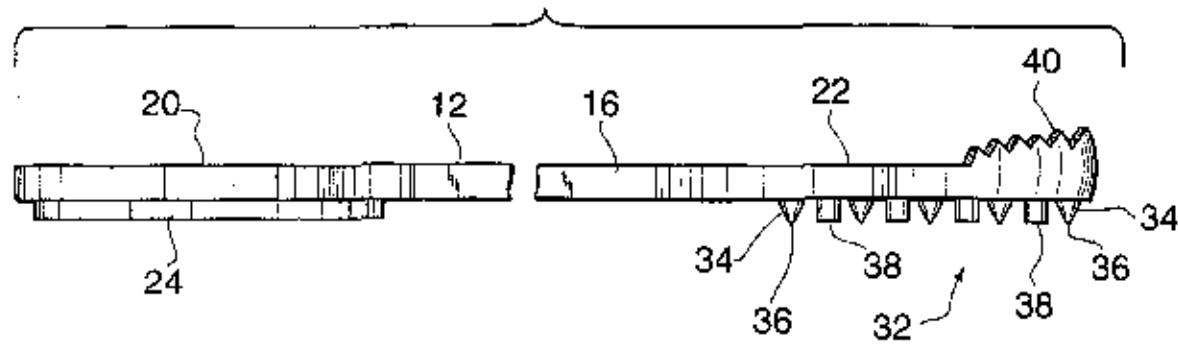


Fig. 1*Fig. 2*

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Fig. 3

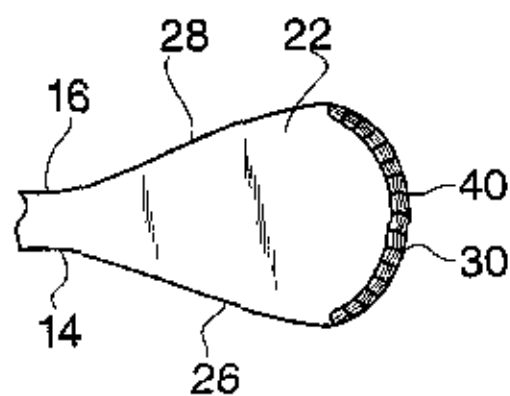


Fig. 4

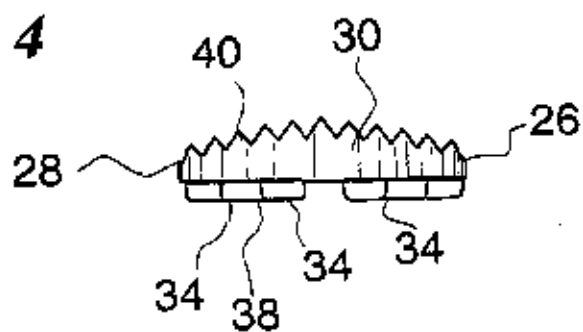
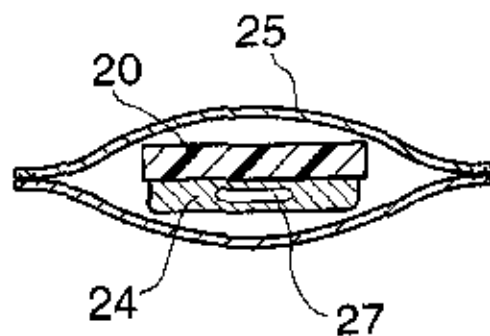


Fig. 5



BREATH SYSTEM APPLIANCE WITH DORSAL APPLICATOR AND SCRAPER

RELATED APPLICATION

This is a continuation-in-part of Application Ser. No. 09/307,705 filed May 10, 1999, now U.S. Pat. No. 6,083,235 entitled BREATH SYSTEM APPLIANCE WITH DORSAL APPLICATOR AND SCRAPER.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to oral hygiene appliances and more specifically to devices which promote oral hygiene by removing debris from one's tongue.

2. Antecedents of the Invention

The general public has been highly conscious of oral hygiene, not only from a social standpoint, but additionally in its relationship to overall health. While basic oral hygiene devices such as toothbrushes, toothpaste, tooth powder, interdental stimulators, interproximal brushes, dental floss, toothpicks and dental picks, e.g. U.S. Pat. No. 4,326,548, have been in use through the years, in recent years there has been a proliferation of do-it-yourself oral hygiene cosmetic products, including various tooth whitening preparations, e.g. U.S. Pat. No. 5,084,268 as well as tooth polishers, for improvement of the appearance of one's mouth.

The public has also been cognizant of the need to combat mouth malodor in daily social encounters. Various factors have been attributed to the generation of oral malodor including improper brushing, failure to brush and/or failure to floss. Other factors include the presence of various compounds in the oral cavity which are alleged to cause malodor, such as hydrogen sulfide.

It has also been recognized that minute food particles and debris as well as odor producing bacteria resided on the tongue, particularly on the dorsal (upper) surface thereof, i.e. the dorsum.

The dorsum has been characterized as a rough surface which is covered with papillae. The anterior of the dorsum is covered with fungiform papillae and the posterior (pharyngeal) surface is covered with fungiform papillae interspersed with filiform papillae.

Food particles and the breakdown products of foods became lodged in crevices between the papillae. Dense bacterial populations and the many bacterial species resident on the dorsum have been known to colonize. It is believed that the dorsum is the source of most of the bacteria in the oral cavity and the source of oral malodor.

The prevalent use of mouthwashes, breath mints and breath sprays did not alleviate or reduce the source of malodor, but merely served to mask the condition.

Various tongue scrapers such as those disclosed in the patents to Heisinger (U.S. Pat. No. 5,735,864), Andrews (U.S. Pat. No. 4,079,478), Nuck (U.S. Pat. No. 5,226,179) and Blasker (U.S. Pat. No. 3,943,592) are among the devices which have been suggested for cleaning the tongue to remove food debris and other material accumulated on the dorsum.

Although such devices were capable of scraping the dorsum and loosening debris accumulated thereon, absent was the ability to adequately scrape the pharyngeal tissue surface due to the tendency of any scraping appliance to induce a gag reflex. Additionally, treatment of existing malodor conditions required the employment of a mouth-

wash or other breath freshener since tongue scrapers provided primarily prophylactic, rather than immediate relief.

Further, none of the prior devices gained a measure consumer acceptance, either because they were too difficult to use, too costly to manufacture, or were otherwise unsuited for general use.

SUMMARY OF THE INVENTION

A breath system appliance with a dorsal troche applicator and a scraper includes a generally flat, relatively thin, elongate body. Projecting transversely from the longitudinal axis of the body at one end thereof is a generally planar, relatively thin troche applicator head while a scraper head projects transversely from the other end of the body.

Adhered to a face of the applicator head is a thin troche having oral hygiene and/or breath freshening active constituents. The troche is applied by rubbing over dorsal surfaces whereby the active constituents are released when the troche dissolves in saliva.

The troche may be applied to the dorsal surfaces either before or after scraping the dorsal surfaces with an array of ribs and/or teeth which project from the scraper head.

The lower face of the scraper head includes the ribs, while the opposite face carries a peripheral array of teeth.

From the foregoing compendium, it will be appreciated that it is an aspect of the present invention to provide a breath system appliance of the general character described which is not subject to the disadvantages of the antecedents of the invention aforementioned.

A feature of the present invention is to provide a breath system appliance of the general character described which is well suited to promote overall oral hygiene and to reduce the rate of plaque formation in the oral cavity.

A further aspect of the present invention is to provide a breath system appliance of the general character described which is simple to use.

Another further feature of the present invention is to provide a self-contained oral hygiene appliance of the general character described which is well suited to effectively dislodge debris from surfaces of the dorsum.

To provide a breath system appliance of the general character described which reduces the tendency of a user to gag is a still further aspect of the present invention.

Another consideration of the present invention is to provide a breath system appliance of the general character described which is portable and well suited for carrying about one's person for routine usage away from home.

Yet another feature of the present invention is to provide a breath system appliance of the general character described which is disposable and thus well suited for one time usage by hotel guests, at health spas, and the like.

It is a further aspect of the present invention is to provide a breath system appliance of the general character described which is relatively low in cost and well suited for economic mass production fabrication.

Yet another consideration of the present invention is to provide a breath system appliance of the general character described wherein dorsal surfaces are coated with a breath freshening and/or oral hygiene medium for effective removal of food debris, bacteria and other risk factors associated with oral odor as well as for providing immediate alleviation of oral malodor.

Yet another aspect of the present invention is to provide a breath system appliance of the general character described

which is well suited to utilize any of a number of active constituents or combinations thereof for efficacious treatment of oral malodor.

An additional feature of the present invention is to provide a breath system appliance of the general character described which is capable of dispensing a coating of active constituents over dorsal surfaces for enhanced freshening of dorsal surfaces.

A still further consideration of the present invention is to provide a breath system appliance of the general character described which is highly efficacious for both immediate and long term alleviation of oral malodor.

Other aspects, features and considerations of the present invention in part will be obvious and in part will be pointed out hereinafter.

With these ends in view, the invention finds embodiment and certain combinations of elements, arrangements of parts and series of steps by which the aforesaid aspects, features and considerations and certain other aspects, features and considerations are attained, or with reference to the accompanying drawings and the scope of which will be more particularly pointed out and indicated in the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings in which is shown one of the various possible exemplary embodiments of the invention:

FIG. 1 is a bottom view of a breath system appliance constructed in accordance with and embodying the invention and showing an elongate planar body having at one end, an enlarged troche applicator head with a troche fixed to its lower face and at the other end of the body, an enlarged scraper head with an array of ribs projecting downwardly;

FIG. 2 is an enlarged scale side elevational view of the appliance and showing a plurality of teeth projecting from the upper face of the scraper head adjacent the periphery thereof;

FIG. 3 is a fragmentary top plan view showing the peripheral teeth;

FIG. 4 is an enlarged scale right end view of the appliance showing the peripheral teeth projecting upwardly and the ribs projecting downwardly from opposite faces of the scraper head;

FIG. 5 is an enlarged sectional view through the appliance, the same being taken along line 5—5 of FIG. 1 and through a packet in which the appliance is wrapped;

FIG. 6 is a fragmentary bottom view of an alternate embodiment wherein a troche is carried within a peripheral wall; and

FIG. 7 is an enlarged scale side elevational view of the alternate embodiment showing the peripheral wall and an alternate array of ribs.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now in detail to the drawings, the reference numeral 10 denotes generally a breath system appliance constructed in accordance with and embodying the invention. The appliance comprises a generally flat relatively thin elongate body 12 having a pair of longitudinal side edges 14, 16 substantially parallel to a longitudinal axis, 18. Projecting transversely from the axis 18 at one end of the body 12 is an enlarged elliptical troche applicator head 20. At the opposite

end of the body 12 is an enlarged paddle shaped scraper head 22 which also extends transversely from the longitudinal axis 18.

Adhered to the lower face of the applicator head 20 is a troche 24. In accordance with the invention, the troche 24 is formed with one or more active constituents having breath freshening and/or oral hygiene characteristics including anesthetic, antiseptic and astringent characteristics. Anesthetizing properties are particularly beneficial if the troche 24 is applied prior to scraping dorsal surfaces in order to retard a gag reflex.

Among active constituents are antibacterial agents, antiseptic agents, plaque inhibiting agents and flavoring agents. Typical constituents include thymol, eucalyptus oil, zinc chloride, menthol, microencapsulated peroxides and/or stabilized chlorine dioxide and polydimethylsiloxane-polyoxamer 407.

While the troche 24 maybe formulated in accordance with traditional techniques, e.g. *The Dispensatory of the United States of America*, 24th Edition, 1947 J. B. Lippencott Co., Page 1243, incorporated herein by reference, one or more of the active constituents may be incorporated in a hard candy or mint for example, with or without a center envelope 27 which encapsulates one or more active constituents in liquid form. The term "troche" should be interpreted as including not only troches in the conventional sense but also lozenges, pastilles, hard candies as well as semi soft candies, mints and the like.

As illustrated in FIG. 5, the appliance may be individually wrapped in a sealed packet 25 for ease in carrying in one's pocket for example without the danger of contaminant contact.

The troche 24 is applied to dorsal surfaces by rubbing over the surfaces, whereby the troche is dissolved in saliva and the active constituents are released to coat the dorsal surfaces. Such troche application may take place either before or after scraping dorsal surfaces with the scraper head 22 or both before and after scraping.

To apply the troche, the appliance 10 is grasped at the mid-portion of the body 12 and the applicator head 20 is inserted into the oral cavity with the troche 24 facing the user's tongue. The troche 24 is pressed against and moved across the dorsal surfaces of the user's tongue with saliva dissolving the troche to release a coating of active constituents over surfaces of the dorsum.

After the dorsum has been coated with the active constituents, the applicator head 20 is removed from the oral cavity and the scraper head 22, at the opposite end of the body 12, is inserted.

It should be noted that the scraper head 22 differs from the applicator head 20. In lieu of having an elliptical plan configuration, the scraper head 22 has a generally paddle shaped configuration with a pair of diverging side edges 26, 28. A curved end surface 30, having a radius of curvature significantly larger than the radius of curvature of the end of the applicator head 20 is also found on the scraper head 22.

Symmetrically positioned along a lower face of the scraper head 22 is an array 32 of ribs 34, 36. As will be noted from an examination of FIG. 3, the array 32 is symmetric about the longitudinal axis 18. The array 32 includes rows of downwardly projecting transverse ribs 34, 36 with alternate ribs 34 having a relatively keen scraping edge 36 and with adjacent ribs 36 having terminal surfaces which are blunt.

It should be noted that alternating rows of keen and blunted edge ribs are but one of any number of rib configura-