

[54] SALIVA EJECTOR

3,373,492 3/1968 Batch..... 32/33

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[57] ABSTRACT

[21] Appl. No.: 408,754

A pliant, light-weight saliva ejector which comprises a tubular stem having an inverted U-shaped end portion and a hollow, flexible collector head mounted on said end portion and in communication with said tubular stem. The collector head is provided with a plurality of perforations for inducting saliva therethrough and with a plurality of substantially parallel accordion pleats in outer wall of the collector head.

[52] U.S. Cl. 32/33

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[58] Field of Search..... 32/33; 128/276

[56] **References Cited**
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5 Claims, 4 Drawing Figures

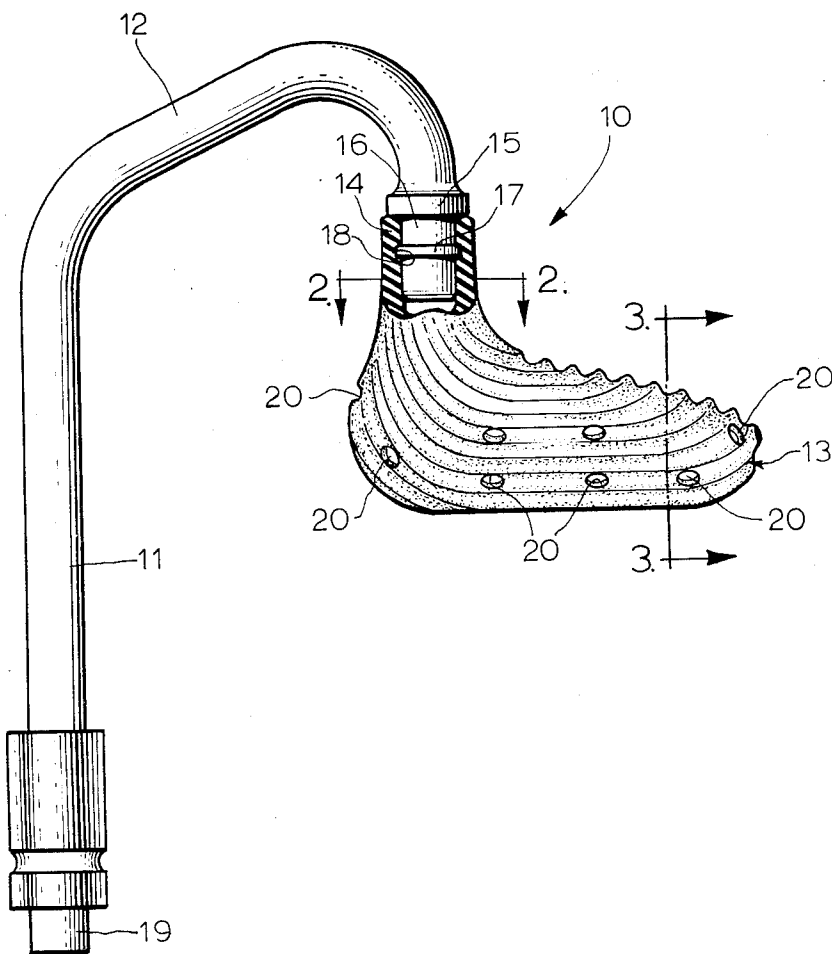


FIG. 1

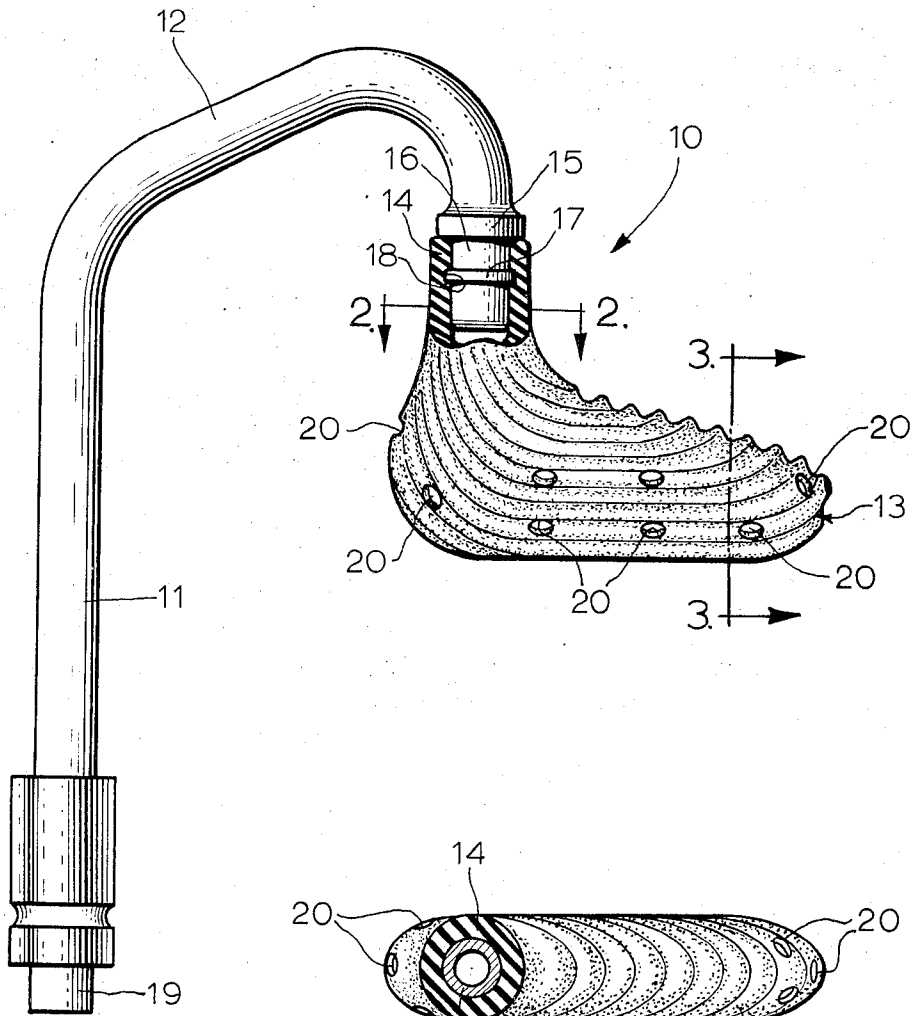


FIG. 2

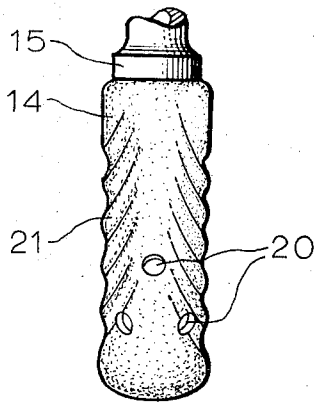
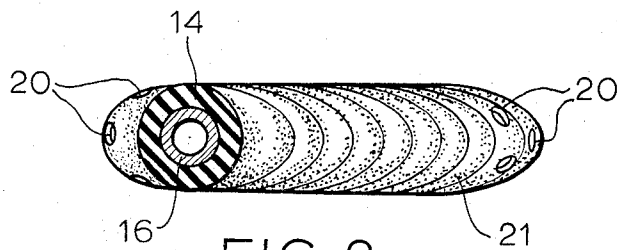


FIG. 3

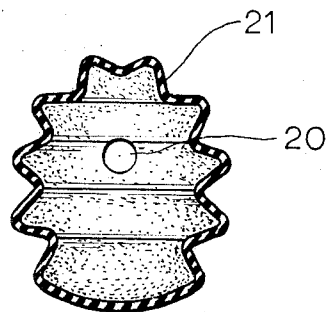


FIG. 4

SALIVA EJECTOR

BACKGROUND OF THE INVENTION

This invention relates to dental appliances. More particularly, this invention relates to means for removing saliva, water, and the like fluids from the oral cavity of a patient undergoing dental treatment.

It is an object of this invention to provide a pliant, light-weight saliva ejector which is more comfortable to the patient and which provides greater access to fluid accumulation areas within a patient's mouth.

Another object of this invention is to provide a saliva ejector which has improved lateral flexibility.

Yet another object of the present invention is to provide a saliva ejector which can be held more comfortably in a patient's mouth at any reclining angle of the patient.

SUMMARY OF THE INVENTION

This invention contemplates a pliant, light-weight saliva ejector for a patient which comprises a tubular stem provided at one end with an end portion in the shape of an inverted U and a hollow, flexible collector head mounted on the end portion and communicating with the tubular stem. The tubular stem also communicates with an aspirator means. The collector head is provided with a plurality of spaced perforations for inducting saliva therethrough and with a plurality of substantially parallel accordion pleats in an outer wall of the collector head, thereby providing adaptability for said collector head to physical features of a patient's mouth.

BRIEF DESCRIPTION OF THE DRAWING

In the drawing,

FIG. 1 is a side elevational view of a saliva ejector embodying the present invention;

FIG. 2 is a plan view, partly in section, taken along line 2 - 2 in FIG. 1.

FIG. 3 is an end elevational view of a collector head embodying the present invention; and

FIG. 4 is a cross-sectional view of the collector head shown in FIG. 1 and taken along line 3 - 3.

DESCRIPTION OF PREFERRED EMBODIMENTS

Referring to FIG. 1, saliva ejector 10 comprises tubular stem 11 having end portion 12 shaped as an inverted U. Hollow, elongated collector head 13 is mounted on end portion 12 so that boss 14 abuts flange 15. Dimensions of end portion 12 are chosen so that the inverted U rests upon the patient's jaw and so that tip 16 of end portion 12 terminates above the floor of the patient's mouth. Tip 16 can also be provided with retainer ring 17 which is received within complementary groove 18 situated in the bore of boss 14 so that collector head 13 can be rotated relative to end portion 12 to a position more comfortable to the patient.

End 19 of tubular stem 11 is adapted for attachment to and communication with a suitable aspirator means (not shown).

Perforations 20 are provided in outer wall of collector head 13 to drain or induct saliva or like fluids from the oral cavity into collector head 13.

As can be best seen in FIGS. 2, 3 and 4, outer wall of elongated collector head 13 is provided with a plurality of accordion pleats 21 which are substantially parallel relative to each other and which extend in a

longitudinal direction about the periphery of collector head 13. Accordion pleats 21 substantially contribute to the lateral flexibility and compressive elasticity of collector head 13 as well as make the ejector more comfortable in the patient's mouth. Preferably grooves between adjacent accordion pleats in the side wall have an included angle of about 60 degrees.

It is preferable that collector head 13 is longer than it is wide, i.e., the length-to-width ratio of collector head 13 preferably is greater than 1. Such dimensions, in combination with accordion pleats 21, permit distortion of collector head 13 within patient's mouth without impairing the saliva removal capability thereof and without discomfort to the patient. For example, the tip portion of collector head 13 can be bent upwardly as much as about 90 degrees and downwardly as much as about 60 degrees, thereby effecting a front-to-back plane change and compression of collector head 13 without applying much force and without discomfort to the patient. Accordion pleats 21 also permit substantial lateral flexing and vertical flexing. The available flexing planes permit simultaneous multidirectional flexing of collector head 13 and thus provide excellent adaptability to the contours of a particular oral cavity.

A preferred material of construction for collector head 13 is relatively soft latex rubber. However, other materials having similar softness and resilience characteristics are also suitable. Tubular stem 11 and end portion 12 preferably are made of stainless steel; however, other materials such as chrome-plated copper tubing, polyethylene tubing, and the like are also suitable.

The saliva ejector of this invention is used by connecting tubular stem 11 to a suitable aspirator means and by placing collector head 13 in a comfortable position in the patient's oral cavity below the tongue so that end portion 12 rests upon, or is supported by, the lower jaw of the patient.

The foregoing discussion and the drawing are intended to be illustrative of the present invention and are not to be taken as limiting. Still other variations are possible without departing from the spirit and scope of this invention.

I claim:

1. A pliant, light-weight saliva ejector for a patient comprising

a tubular stem adapted for communication with an aspirator means and having an inverted U-shaped end portion adapted to rest upon the lower jaw of said patient and terminating above the floor of said patient's mouth, and

a hollow, flexible, elongated collector head mounted on said inverted U-shaped end portion in communication with said tubular stem and adapted to be received in said patient's mouth;

said collector head having a plurality of spaced perforations for inducting saliva therethrough and a plurality of substantially parallel accordion pleats in an outer wall of the collector head extending in a longitudinal direction about the periphery of the collector head and turning upward at each end providing adaptability for said collector head to physical features of said patient's mouth by both lateral and vertical flexing.

2. The saliva ejector in accordance with claim 1 wherein the collector head is made of latex rubber.

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3. The saliva ejector in accordance with claim 1 wherein vertical grooves between said accordion pleats have an included angle of about 60 degrees.

4. The saliva ejector in accordance with claim 1 wherein the collector head is mounted on said end por- 5

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tion near one end of the collector head.

5. The saliva ejector in accordance with claim 1 wherein said flexible collector head is rotatably mounted on said inverted U-shaped end portion.

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