

[54] TONGUE DEPRESSING ASPIRATING TIP

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[58] Field of Search **128/15, 276-278; 32/33**

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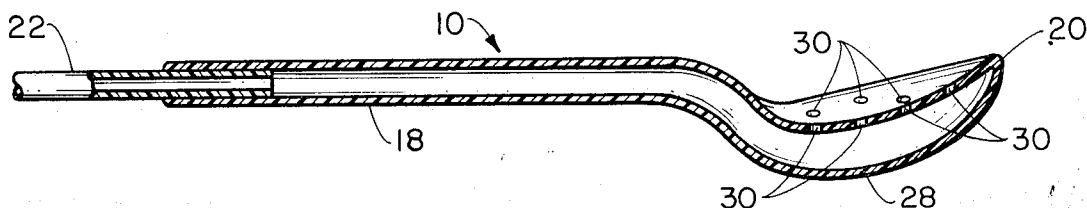
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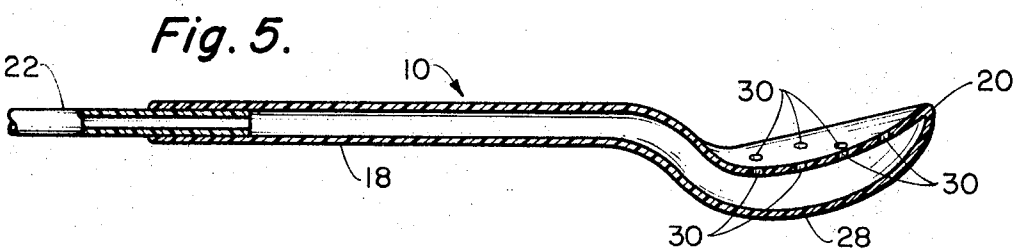
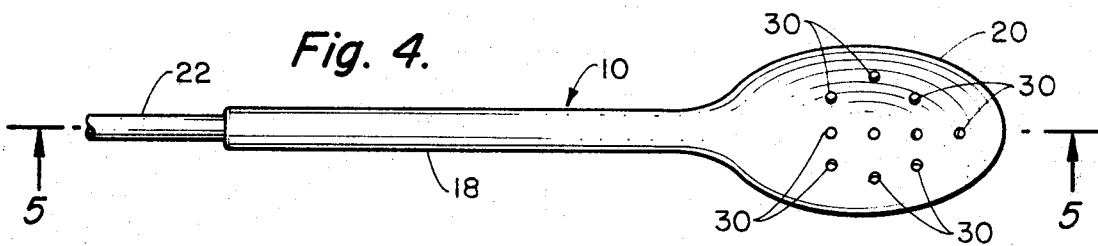
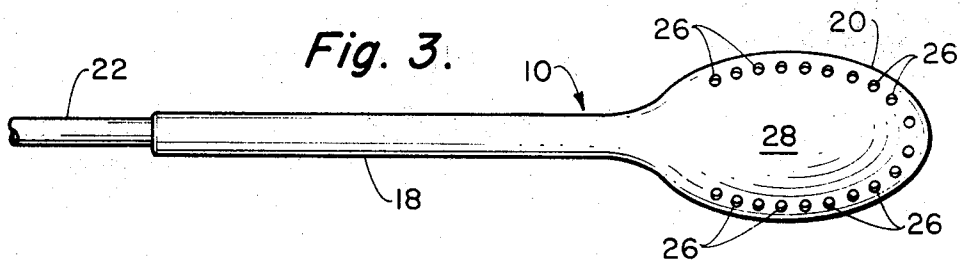
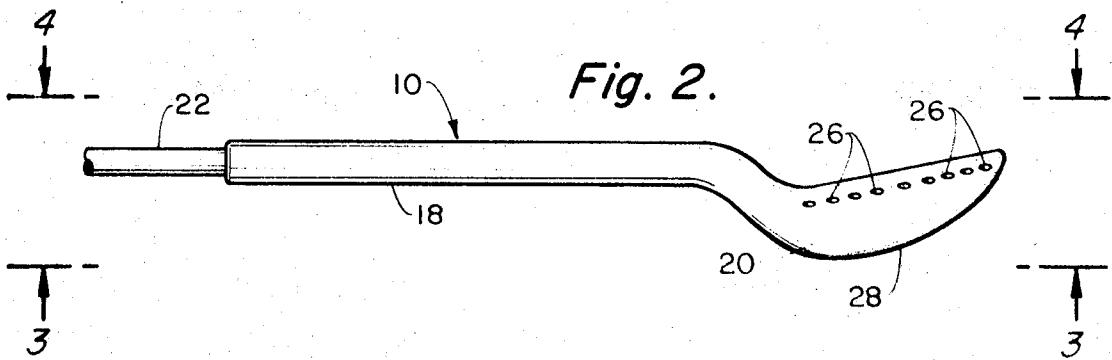
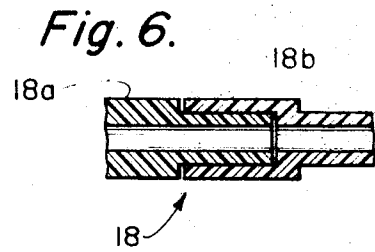
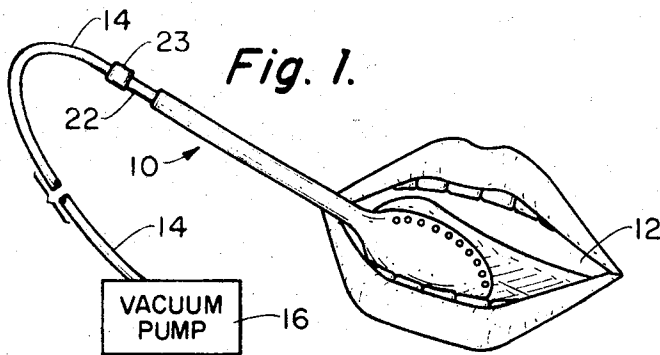
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[57] **ABSTRACT**

Herein described is a tongue depressing aspirating tip for use in dentistry which includes a handle which is substantially hollow and a substantially flat wide portion in some embodiments shown as being spoon-shaped which is also substantially hollow and communicates with the hollow portion of the handle. A tube extends from the end of the handle which is of a type which may be directly coupled into a tube leading from an aspirator. The wider tip portion has a plurality of apertures around the periphery of the bottom thereof which communicates into the hollow portion of the tip and handle. The top portion may include a plurality of apertures which communicates into the hollow portion of the tip and handle. In one embodiment the tip portion can be disposable by having it removable into a second portion.

8 Claims, 6 Drawing Figures





TONGUE DEPRESSING ASPIRATING TIP

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to dentistry equipment and more particularly to a novel and improved tongue depressing aspirator tip which forms the dual function of aspirating a patient's mouth and depressing the tongue of the patient so that it is out of the way during the time that the dental work or surgery is being performed on the mouth.

2. Description of the Prior Art

A need arises during the time that the dentist is working on the mouth of the patient to remove water, saliva, blood and other fluid materials therefrom which accumulate in the patient's mouth. It is necessary in some of these operations to keep the mouth almost completely dry so that it does not interfere with the work being performed. Presently the prior art provides a simple tube-shaped arrangement which is coupled to tubing leading into an aspirator which is normally a vacuum pump type of arrangement whereby a suction is continually applied to the tip drawing the foreign fluid material from the mouth.

Normally a nurse or dental assistant assists a dentist in performing his work by holding the aspirator tips into the mouth of the patient. If at certain times the dentist is working in particular areas in the mouth, it is necessary that the patient's tongue be held away from the area where he is working. Sometimes the nurse must not only use the aspirator to remove the foreign fluid but also use a tongue depressor at the same time. This means that there are two hands near the patient's mouth. Of course, this leaves very little room for the two instruments in the mouth to allow the dentist to also work therein. It is hard to take impressions at the same time the instruments are in there and it is also hard and difficult to get other dentistry equipment such as drills, etc., into the mouth.

SUMMARY OF THE INVENTION

Briefly described, the present invention comprises a combination of an aspirator and tongue depressor in a single instrument to not only remove all of the foreign fluids from the mouth of the patient but also is used to hold the patient's tongue out of the way of the dentist.

Briefly described, the present invention provides a tongue depressing aspirating tip for use in dentistry and includes an elongated member having a hollow handle. On one end of the hollow handle is a hollow wider portion tip where the hollow of the handle communicates with the hollow of the wider shaped tip. A plurality of apertures are spaced around the periphery of one side of the tip and communicates with the hollow tip. An aspirator may be connected through suitable tubing into the hollow handle of the elongated member and a suction is applied thereto which continually draws the water, saliva and blood from the patient's mouth. Because the apertures are spaced all around the periphery, it is immaterial the position for which the wide-shaped tip is placed into the patient's mouth and also because the wide-shaped, is shown one embodiment as being spoon-shaped, it can be used to also depress the tongue out of the dentist's way.

Further, there may be provided a plurality of grouped apertures in the other side of the wider tipped portion and communicating into the hollow portion within the

tip and handle. Preferably the second set of apertures are centrally grouped within the center of the spoon-shaped area and it can be used to be placed against the patient's tongue and the vacuum supplied thereto will allow it to substantially affix itself gently onto the patient's tongue so that the tongue can be moved at will.

DESCRIPTION OF THE DRAWINGS

These and other features and advantages will become more apparent to those skilled in the art when taken into consideration with the following detailed descriptions wherein like reference numerals indicate like and corresponding parts throughout the several views and wherein:

FIG. 1 is a perspective view showing the aspirating tip in accordance with this invention as it could be used in the patient's mouth;

FIG. 2 is a side elevation view of an aspirating tip made in accordance with the principles of this invention;

FIG. 3 is a bottom view of the aspirator tip taken along lines 3—3 of FIG. 2;

FIG. 4 is a top view taken along the lines 5—5 of FIG. 2;

FIG. 5 is a section view of the aspirator tip in accordance with the principles of one embodiment of this invention taken along the lines 5—5 of FIG. 4; and

FIG. 6 is a partial section view illustrating a further embodiment of this invention.

DESCRIPTION OF PREFERRED EMBODIMENTS

Turning now to a more detailed description of this invention, there is shown in FIG. 1 an aspirator tip 10 constructed in accordance with the principles of this invention. It is shown in FIG. 1 as it may possibly be used in a mouth 12. The tip 10 has a tube 14 leading therefrom and which is coupled into an aspirator or vacuum pump 16.

FIG. 2 shows a side view of the aspirator tip in accordance with the principles of this invention which includes a handle portion 18 and a wider tongue depressor portion 20. Leading from the handle portion 18 is a connector tip 22 which may be coupled into the hose 14. As shown in FIG. 1, the tip portion 22 may be connected by a press fit into an enlarged portion 23 of the hose 14.

As shown in FIG. 5, for example, the handle 18 is substantially hollow as is the depressor portion 20. The connector 22 is also hollow and fits directly into the hollow portion of the handle 18. A plurality of apertures 26 are placed around the periphery of the bottom 28 of the depressor portion 20 and communicated directly into the hollow portion of the depressor portion 20.

A further plurality of apertures 30 are drilled through the top 32 of the depressor portion 20 and communicate into the hollow portion of the depressor portion 20. Preferably these apertures 30 are grouped more toward the center of the depressor portion 20.

In operation, as shown in FIG. 1, as the dentist is performing work on the teeth in the mouth 12, the depressor portion 20 is placed into the mouth 12 of the patient and a suction is applied thereto from the pump 16 through the handle 18 and draws blood, saliva and water from the patient's mouth in a manner well known to those skilled in the art.

The inclusion of the holes 26 around the depressor portion 20 allows suction to be maintained from any position which the tip 10 is placed into the patient's mouth and it need not be adjusted in any manner to assure good suction. Also, because of the wider portion 20, the depressor 20 is also used as a tongue depressor and the tongue can be moved in any desired position by the nurse assisting the dentist to allow easy access to the area to be worked upon.

The plurality of apertures 30 on the top of the depressor 20 can be placed directly against the tongue in the mouth 12 and a suction thereon will allow a slight gripping of the tongue so that it can be moved in a direction as desired or needed to facilitate proper access to the work area.

As shown in FIGS. 2 through 5, the depressor portion 20 may be substantially spoon-shaped to increase and enhance the suction of the tongue against the depressor portion 20 to assure proper movement.

Referring now to FIG. 6, there is shown the handle 18 in two portions designated 18a and 18b. There is shown a thicker annular portion 18b and a substantially thinner annular portion on the half 18b so that the particular tip can be press fitted into the handle portion so that it can be easily removed. This is particularly helpful if the tip portion is to be of a plastic disposable material so that they can be discarded each time and would eliminate the need for sterilization equipment.

Thus, there has been shown a device which can be used to assist in dentistry which performs a dual function. First it provides aspiration of saliva, blood and water by a tip that is operable in most every position in which it is placed within the mouth. Because of the fact that the holes are substantially spaced around the periphery of the tip, suction is always assured in some area. Secondly, the particular shape of the aspirator tip allows a tongue depressing apparatus in combination with the aspirator tip so that the patient's tongue can be repositioned to allow easy access to the area to be worked on. The apertures in the spoon-shaped handle allow a suction to be made upon the tongue so that it can be easily grasped and moved to a desired position.

Having thus described but one preferred embodiment of this invention, what is claimed is:

1. A tongue depressing aspirating tip for use in den-

tistry including:

an elongated member having a hollow handle and a hollow wider shaped tip portion communicating with said hollow handle;

a plurality of apertures spaced around the periphery of one side of said tip portion communicating into said hollow tip, and

a further plurality of apertures disposed on said tip portion of said member on the opposite side of said first mention plurality of apertures.

2. The tongue depressing aspirating tip as defined in claim 1 wherein said further plurality of apertures are centrally grouped.

3. The tongue depressing aspirating tip as defined in claim 1 and further including means coupled to said hollow portion of said handle for coupling to an aspirator.

4. The tongue depressing aspirating tip as defined in claim 3 wherein said means being a tube.

5. The tongue depressing aspirating tip as defined in claim 1 wherein said elongated member being removably connected to said wide tip portion.

6. In combination:

an elongated member being hollow and having an opening on a first end and an opening on a second end;

a wider substantially flat member formed in the first end of said elongated member said flat member including a cavity therein, said cavity communicating into said hollow member, said flat member having a substantially curved periphery, said flat member including a first side and a second side;

a first plurality of apertures spaced around the first side of said curved periphery of said flat member and into the cavity of said flat member;

a second plurality of apertures centrally grouped in the second side of said flat member and into said cavity of said flat member; and

a tube leading into the second end of said elongated member.

7. The combination of claim 6 and wherein said flat member being spoon-shaped.

8. The combination of claim 6 and further including an aspirating pump coupled to said tube.

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