According to the invention the valve is constituted by a disc of a yieldable material, which disc is domed in the direction of opening and is provided with a fine slit in the top of the dome.

Such a valve is simple and cheap to manufacture and occupies very little room, so that it does not inconvenience the user.

In a preferred embodiment the valve disc is detachably secured in a bushing accommodated in the material of the prosthesis, against an internal flange on the said bushing by means of an annular disc which is provided with an external screw thread, which disc is screwed into the bushing and surrounds the domed part of the valve disc.

By this means a secure attachment of the valve is obtained in addition to the possibility of exchanging the latter if for some reason or other it should prove necessary.

Depending on the character of the gum rim of the user of the prosthesis it may happen that when the user creates the suction of air to secure the prosthesis, the soft part of the gum rim is sucked in against the mouth of the channel, and hereby the admission of air into the channel is blocked, so that it will be difficult to obtain a sufficient vacuum in the cavity between the prosthesis and the gum rim.

The rectifying of this drawback is another object of the invention. In an embodiment of the invention a covering member is provided over the mouth of the valved channel in the recess, which covering member is placed in such a way that there is free admission for air from the recess to the channel, while at the same time the gum is prevented from being sucked into contact with the mouth of the channel.

The covering member prevents the said blocking of the channel, and there is no risk that the soft part of the gum will be sucked down so as to block the recess at the sides of the covering member, as at these points there is a free room for making the recess sufficiently deep for preventing such a blocking, in contradistinction to the point where the valve is located, where there is very little room due to the fact that the valve must open out at the side facing the cavity of the mouth of the user.

The covering member may have any desired shape, and it may be designed either as a separate member secured to the prosthesis, or it may be made integrally with the prosthesis, but in a preferred embodiment of the invention the covering member is shaped as a thin plate member which is hingedly connected to the gum part of the prosthesis and is so designed that its surface substantially forms a continuation of the surface of the depression which is adapted to the user's gum rim. In this manner the covering member is no obstacle to a simple and effective cleaning of the prosthesis.

In the following, the invention will be described in detail with reference to the drawing where:

Fig. 1 diagrammatically shows an embodiment of the prosthesis according to the invention viewed in section,
Fig. 2 the same prosthesis viewed from the inside,
Fig. 3 a modified embodiment of the prosthesis according to the invention viewed in section along the plane of symmetry between the front teeth of the prosthesis, and
Fig. 4 part of the prosthesis shown in Fig. 3 in plan view.

The section shown in Fig. 1 is taken between the front teeth of the prosthesis, one of which front teeth is shown in the figure and designated by 1, while the figure otherwise shows only the sectional view proper, all parts in front of as well as behind the surface of the section having been omitted for the sake of simplicity.

The teeth carrier 2 of the prosthesis has a depression...
adapted to fit the gum rim of the user. This depression 3 is provided with a recess 4 which, as appears from Fig. 2, in the example shown extends for practically speaking the full arc of the prosthesis, but is, however, terminated a little short of the nearest points 5 of the prosthesis.

It appears from the drawing that, together with the user's gum rim, this recess 4 will form a completely closed chamber or cavity.

The recess 4 is in communication with the surface of the prosthesis facing the cavity of the mouth through an aperture 6. The aperture 6 is lined with a tube 7 which at its inner end is provided with a flange 8 which, as appears from the outer circumference is provided with a projection 9 with an internal screw thread.

In the space formed by the projection 9 a valve disc 10 is seated on the flange 8. Said valve disc is outwardly domed and made of a yieldable material, such as plastic. In sufficed point it is provided with a small, narrow slit 11.

The valve disc 10 is clamped by means of an annular disc 12 with an external screw thread which is screwed into the thread of the projection 9 and surrounds the domed part of the valve disc with the slit 11.

When the prosthesis is fitted in the mouth, so that the said closed chamber or cavity is formed, and the user creates a suction with his mouth, the air is sucked from the cavity out through the slit 11, so that a vacuum is produced in the cavity.

When the suction ceases, the slit is closed due to the higher pressure prevailing outside, so that no air can flow into the cavity again, and the prosthesis will consequently be secured on account of the difference between the pressure of the quantity of air remaining in the cavity and the atmospheric pressure.

The prosthesis shown in Figs. 3 and 4 is basically designed in the same way as that described above.

It may, however, happen that the soft parts of the gum 3' are so strongly developed that the distance, designated by a in Fig. 3, between the gum 3' and the mouth of the aperture 6' towards the recess 4' becomes so slight that the said soft parts of the gum are sucked in against the mouth of aperture 6' and thereby blocks the exhaust of air, so that the vacuum necessary to secure the attachment of the prosthesis cannot be obtained. In order to remedy this drawback, a covering member 13 which, as appears from the figure, prevents the soft parts of the gum from being sucked in against the mouth of aperture 6', is provided.

Said covering member 13 is provided at the point, where the valve is located that the space within the recess 4' is limited due to the fact that the valve must necessarily open out into the cavity of the mouth and must therefore be located in a place where the prosthesis has a comparatively slight thickness of material. The remaining part of the recess 4' may be sufficiently deep so that it is filled in by the soft parts of the gum 3' when the air is sucked out. Consequently, there is no risk that the entrance of air under the covering member 13 will be blocked by the said soft parts being sucked down around the edge of the covering member.

In the embodiment shown, the covering piece 13 is pivoted on the prosthesis proper by means of a hinge member 14. When the covering member 13 is brought into the position shown in dotted lines in Fig. 3, the suctioning of the prosthesis around the valve can be performed in a simple way without the covering member forming any obstacle.

The invention is not limited to the embodiments shown and described, which may be subjected to many modifications as to details.

The recess need not extend over the whole arc of the prosthesis, and it may, for example if the shape of the gum makes it desirable, be divided into several separate parts which may be interconnected through tubular channels or each be provided with one valve. The valve may be placed at any point of the arc of the prosthesis, though as a rule it will be most convenient to place it between the front teeth as in the cases shown. The covering member need not be mounted pivotally as shown in Figs. 3 and 4, but may be secured rigidly, and furthermore it may instead of being designed as a separate member as shown be designed as an integral part of the prosthesis.

Further the covering member need not completely cover the valve, as it is often sufficient that it has the shape of a narrow tongue projecting only partly over the valve, thus affording sufficient protection against the soft parts of the gum being sucked down into the aperture 6'.

I claim:

1. Palateless dental prosthesis having a teeth carrier carrying teeth, said teeth carrier having a depression adapted to fit a user's gum, a recess being provided in said carrier opening into said depression, said carrier having an aperture extending therethrough from said recess, a tubular member being mounted in said aperture at the end of the same opposite to said recess, a valve being provided in said tubular member, said valve comprising a disc of a yieldable material, said disc being domed outwardly at the side opposite to said valve, and provided with a narrow slit at the edges of which contact each other due to the yieldability of the material.

2. Palateless dental prosthesis having a teeth carrier carrying teeth, said teeth carrier having a depression adapted to fit a user's gum, a recess being provided in said carrier opening into said depression, said carrier having an aperture extending therethrough from said recess, a tubular member being mounted in said aperture at the end of the same opposite to said recess, said tubular member having a radially extending flange with an axially turned outer edge part, said edge part being provided with an internal threading, a disc shaped valve member being seated on said radially extending flange, an annular disc having external threading being screwed into said internal threading for securing said valve member on its seat in an airtight manner, said valve member consisting of a yieldable material and having an outwardly domed part surrounded by said annular disc, said domed part being provided with a narrow slit.

3. Palateless dental prosthesis having a teeth carrier carrying teeth, said teeth carrier having a depression adapted to fit a user's gum, a recess being provided in said carrier opening into said depression, said carrier having an aperture extending therethrough from said recess, a tubular member being mounted in said aperture at the end of the same opposite to said recess, a valve being provided in said tubular member, said valve comprising a disc of a yieldable material, a cover member being provided in said depression covering said aperture in a manner permitting passage of air.

4. Palateless dental prosthesis having a teeth carrier carrying teeth, said teeth carrier having a depression adapted to fit a user's gum, a recess being provided in said carrier opening into said depression, said carrier having an aperture extending therethrough from said recess, a tubular member being mounted in said aperture at the end of the same opposite to said recess, said tubular member having a radially extending flange with an axially turned outer edge part, said edge part being provided with an internal threading, a disc shaped valve member being seated on said radially extending flange, an annular disc having external threading being screwed into said internal threading for securing said valve member on its seat in an airtight manner, said valve member consisting of a yieldable material and having an outwardly domed part surrounded by said annular disc, said domed part being provided with a narrow slit, a cover member being provided in said depression covering said aperture in a manner permitting passage of air.

5. In a palateless dental prosthesis as claimed in claim 4 said cover member being shaped as a thin plate mem-
5. In a palatineless dental prosthesis as claimed in claim 4 said cover member being shaped as a thin plate member constituting a continuation of the contour of said depression adapted to fit said user's gum.

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