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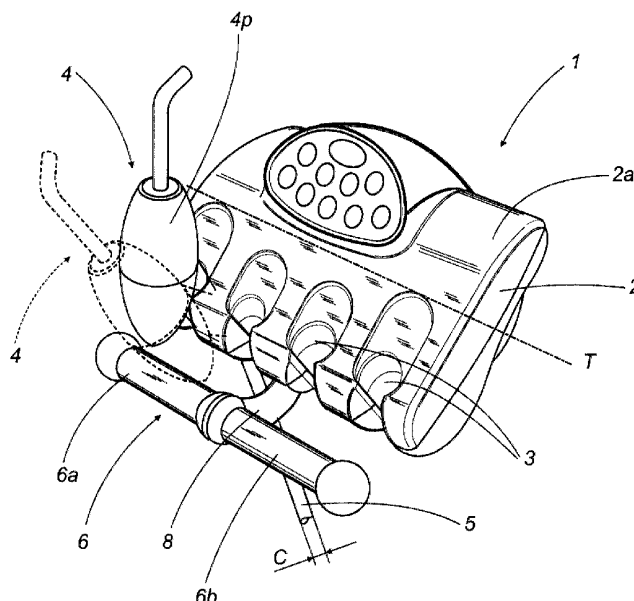
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(54) A support for accessory dental instruments on dental units.

(57) A support for accessory dental instruments comprises a central body (2) with, on one of its surfaces (2a), a plurality of open seats (3), extending in a transversal direction (T) and over an operating section (U), which removably hold instruments (4) with a diameter (S) which can be attached to relative supply cables and/or pipes (5) with a diameter (C); the support (1) comprises a rod-shaped grip element (6), connected by removable connecting means (7) to a single central support arm (8) on and projecting from the central body (2);

this grip element (6) extends parallel with the central body (2), in the transversal direction (T) and has a length (L) at least equal to the operating section (U); the grip element (6) is also positioned opposite the open seats (3) and at a distance (D) from the seats (3) equal to the diameter (C) of the cables and/or pipes (5), and less than the diameter (S) of the instruments (4), to prevent the instruments (4) from accidentally dropping below the central body (2) and, respectively, to allow sliding operation and repositioning of the instruments (4) with the relative cables and/or pipes (5) in the seats (3).

FIG.1



Description

[0001] The present invention relates to a support for accessory or auxiliary dental instruments, in particular applicable on dental units.

[0002] On the above-mentioned dental units, in addition to the presence of a small support tray for a set of primary handpieces, such as the turbine, micromotor, syringe, etc., there is almost always a second small support tray for known accessory dental instruments, such as the hydraulic suction unit, needed to allow the dentist or dental assistant to work correctly in the patient's mouth and, normally, a polymerising lamp for fillings or dental reconstruction.

[0003] The second small support tray is normally located close to the central column of the dental unit, on the side of the chair, that is to say, in the area opposite that in which the dentist works. This zone is normally occupied by the dental assistant, who assists the dentist using the instruments on the second tray.

[0004] At present, the second tray consists of a central body with special seats for stably holding corresponding instruments and relative suction pipes connected, upstream, to hydraulic - pneumatic means which allow operation of the entire unit and, to power cables directly connected to the polymerising lamp.

[0005] The free ends of the pipes are fitted with quick connection mouths for the cannula (flexible or rigid) used by the dentist each time as required, whilst the polymerising lamp is normally already stably connected to the power cable.

[0006] The central body is, in turn, attached to the fixed central column (on the upper section of which there are the zones for a cuspidor and a cup rest) by an arm which pivots on the column, allowing the dental assistant or dentist to adjust the position of the support relative to the chair (by means of a handle on the support). Alternatively, the central body may be independent and may move along the floor.

[0007] However, the second tray structured in this way is not particularly practical, since the position of and distance between the handle and the seats does not provide enough protection for the pipe holder seats. In addition, during use of the instruments, the patient (or the dentist or dental assistant holding them) must support a good part of the weight of the pipes or cables attached to the instruments.

[0008] The support handle is always fixed to the main body, with the possibility of bacterial agents increasing or accumulating in areas of the handle, which cannot be removed for suitable cleaning or sterilisation.

[0009] The aim of the present invention is, therefore, to overcome the above-mentioned disadvantages by providing a support for accessory dental instruments which is extremely practical, providing a secure holder for the instruments and with improved overall hygiene features on the entire support.

[0010] The present invention, as described in the

claims, solves the problem of providing a support for accessory dental instruments comprising a central body with a plurality of open seats, extending in a transversal direction and over an operating section, for removably holding instruments with a relative diameter, to which supply cables and/or pipes with a corresponding diameter may be connected. The support comprises a rod-shaped grip element, attached by removable connecting means to a single central support arm on and projecting from the central body. The grip element extends parallel with the central body, in the transversal direction and its length is at least equal to that of the operating section. The grip element is also positioned opposite the open seats and at a distance from the seats which is less than the diameter of the instruments and equal to the diameter of the cables and/or pipes, in order to prevent the instruments from accidentally dropping below the central body and, respectively, to allow sliding operation and repositioning in the seats of the instruments and relative cables and/or pipes.

[0011] The technical features of the present invention, in accordance with the above aims, are apparent in the claims herein, and the advantages are more clearly described in the detailed description below, with reference to the accompanying drawings, which illustrate a preferred embodiment of the invention, without limiting the scope of its application, and in which:

- Figure 1 is a perspective view with some parts cut away to better illustrate others, of a support for accessory dental instruments on dental units, made in accordance with the present invention;
- Figure 2 is a side view of the support illustrated in Figure 1;
- Figure 3 is a top plan view of the support illustrated in the previous figures.

[0012] With reference to the accompanying drawings, and in particular Figure 1, the support disclosed is used on dental units (not illustrated, being of the known type and not forming part of the subject matter of the present invention) for accessory dental instruments.

[0013] The support, labelled 1, is normally close to the chair (not illustrated), and in the zone opposite that in which the dentist works. Said zone is normally occupied by the dental assistant, who assists the dentist with the instruments on the support 1. The support 1 may be directly connected to the dental unit by an adjustable arm, or it may be independent of the unit and on a mobile base with a column (not illustrated, being of the known type).

[0014] This support 1 comprises, amongst its basic elements, a central body 2 with, on one surface 2a, a plurality of open seats 3, extending in a transversal direction T and over an operating section U of the central body 2. The seats removably hold instruments 4 with a diameter S, which can be attached to supply cables and/or pipes 5 which have a diameter C.

[0015] The instruments 4 supported are normally suction units (not illustrated), a polymerising lamp 4p (illustrated in Figures 1 and 2), etc.

[0016] The main body 2 comprises a rod-shaped grip element 6 attached, by removable connecting means 7, to a single support element 8 on the central body 2, projecting from the central body 2 (see also Figures 2 and 3).

[0017] Figures 2 and 3 also illustrate how the grip element 6 extends parallel with the central body 2, in the above-mentioned transversal direction T, with a length L at least equal to the operating section U. More specifically, the length L of the rod-shaped grip element 6 is equal to the width of the central body 2.

[0018] In greater detail, the grip element 6 is positioned opposite the open seats 3 and at a distance D from said seats 3 which is less than the diameter of the instruments 4 and at least equal to the diameter C of the cables and/or pipes 5. This prevents the instruments 4 from accidentally dropping below the central body 2 (see also dashed line in Figure 1) and allows sliding operation of the cables and/or pipes 5, with repositioning of the instruments 4 in the seats 3 (see arrow F in Figure 1).

[0019] Structurally, the rod-shaped grip element 6 comprises a pair of rods 6a and 6b, opposite one another, which can be attached to a fixed, central arm 8 on the central body 2, projecting from the central body 2.

[0020] Operating between the rods 6a and 6b and the arm 8 there are the removable connecting means 7 (illustrated with a dashed line in Figure 3), which comprise a pair of pins 9a and 9b, opposite one another, on either side of the arm 8 and having a tooth 10, projecting radially from each pin 9a and 9b. The tooth allows the rotary connection and release of the corresponding rod 6a and 6b (see arrow F1 in Figure 3) with an internal screw thread 11.

[0021] A support for accessory dental instruments structured in this way, therefore, achieves the preset aims with the following advantages.

[0022] Easier adjustment of the support, thanks to the presence of the twin rod, which allows a rapid grip, irrespective of the position occupied by the dental assistant/dentist, or the support itself.

[0023] Greater convenience during use of the instruments, thanks to the fact that the cables and/or pipes rest on the rods of the grip, which may be removed for cleaning and/or sterilisation, thus increasing the overall hygiene of the support.

[0024] Greater protection of the good condition of the instruments, thanks to the special structure of the grip element, which allows, on one hand, cable sliding for positioning close to the patient, and on the other, prevents the instruments from sliding down, that is to say, below the support, if incorrectly placed in their seats.

[0025] This allows the dental assistant/dentist to use this temporary support as a means of focusing more attention on the patient, without having to worry about returning the instrument to its home position.

[0026] The invention described can be subject to modifications and variations without thereby departing from the scope of the inventive concept. Moreover, all the details of the invention may be substituted by technically equivalent elements.

Claims

1. A support for accessory dental instruments, the support (1) being of the type which comprises a central body (2) with, on one surface (2a), a plurality of open seats (3), extending in a transversal direction (T) over an operating section (U), the seats removably holding the instruments (4) which have a diameter (S) and may be connected to supply cables and/or pipes (5) with a diameter (C), the support being **characterised in that** it comprises a rod-shaped grip element (6) attached, by removable connecting means (7), to a single support element (8) on and projecting from the central body (2); the grip element (6) extending parallel with the central body (2), in the transversal direction (T), and having a length (L) at least equal to the operating section (U); the grip element (6) being opposite the open seats (3) and at a distance (D) from the seats (3) which is less than the diameter (S) of the instruments (4) and at least equal to the diameter (C) of the cables and/or pipes (5), thus preventing the instruments (4) from accidentally dropping below the central body (2), and allowing sliding operation and the return of the instruments (4) and cables and pipes (5) to the seats (3).
2. The support according to claim 1, **characterised in that** the rod-shaped grip element (6) comprises a pair of rods (6a, 6b) set opposite one another, which may be attached to a fixed, central arm (8), the latter being on the central body (2) and projecting from the central body (2).
3. The support according to claims 1 and 2, **characterised in that** the removable connecting means (7) comprise a pair of pins (9a, 9b) set opposite one another, on either side of the arm (8) and having a tooth (10), extending radially from each pin (9a, 9b) and designed to allow the rotary connection and release of the corresponding rod (6a, 6b) with an internal screw thread (11).
4. The support according to claim 1, **characterised in that** the length (L) of the rod-shaped grip element (6) is at least equal to the width of the central body (2).

FIG.1

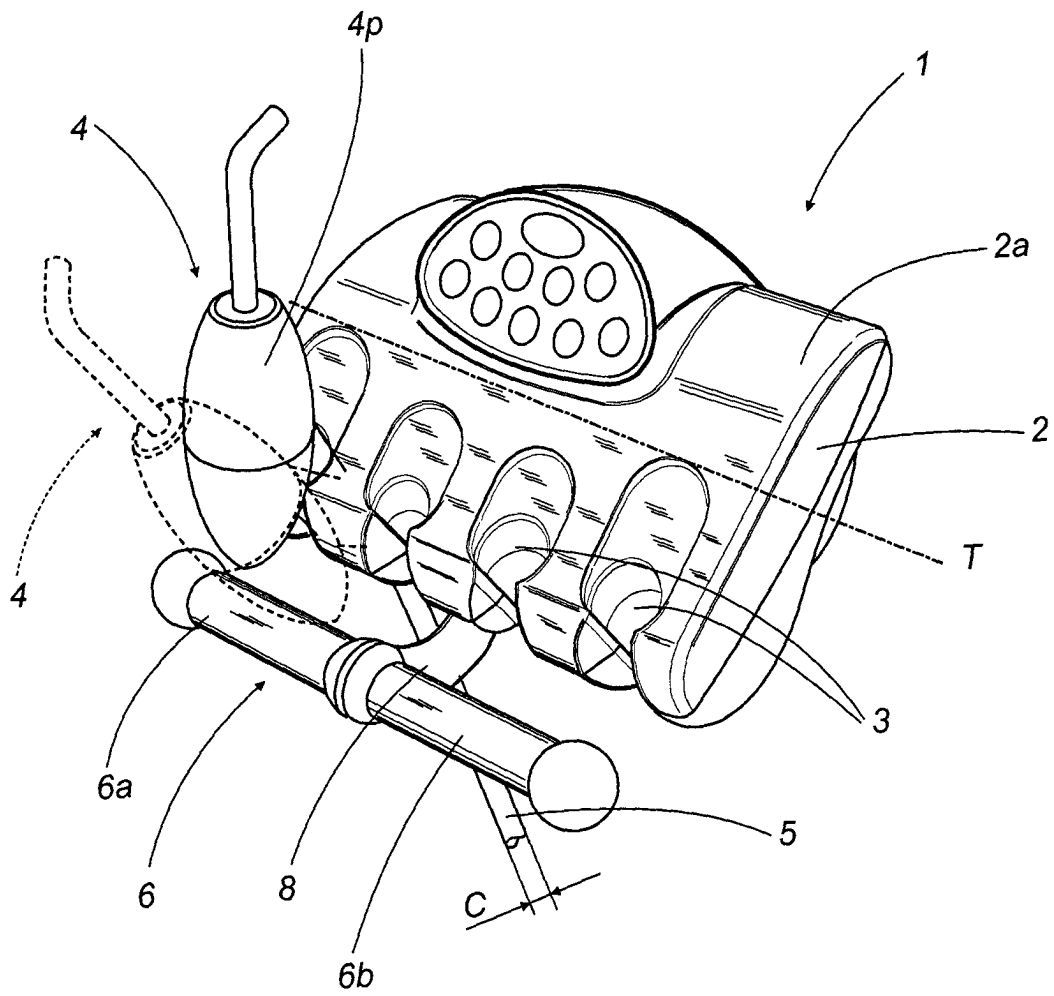


FIG.2

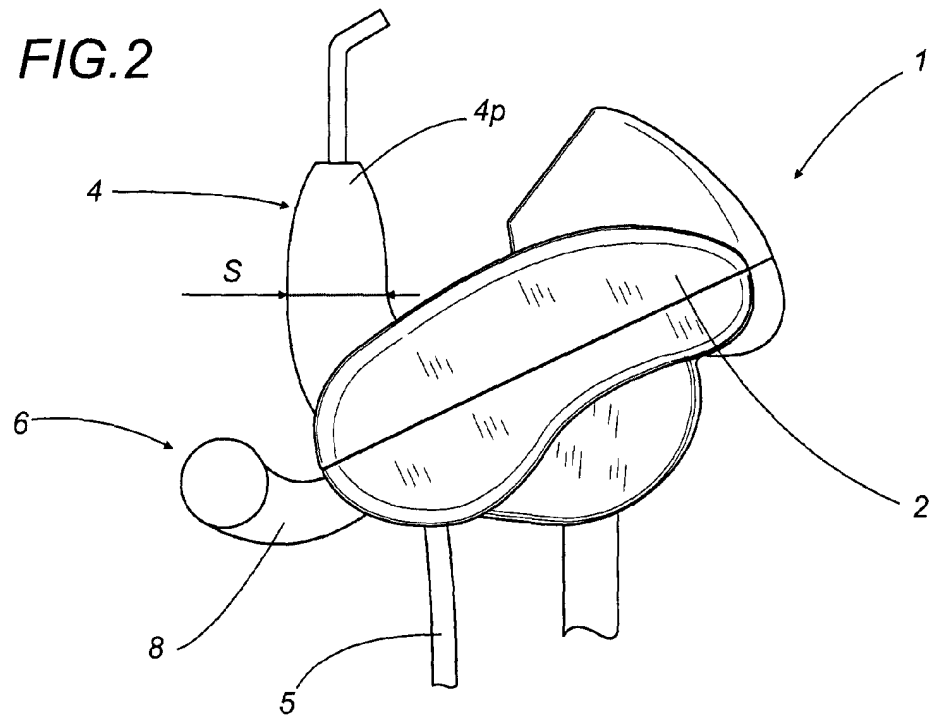


FIG.3

