

United States Patent

Fuller et al.

[15] 3,636,633

[45] Jan. 25, 1972

[54] DENTAL CONSOLE

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FOREIGN PATENTS OR APPLICATIONS

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[73] Assignee: Dental Designs

Primary Examiner—Robert Peshock

[22] Filed: Dec. 31, 1969

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[21] Appl. No.: 889,471

[57] ABSTRACT

[52] U.S. Cl.32/22, 32/DIG. 7

[51] Int. Cl.A61c 19/02

[58] Field of Search4/293; 32/22, DIG. 7; 128/6, 128/22, 398, 11

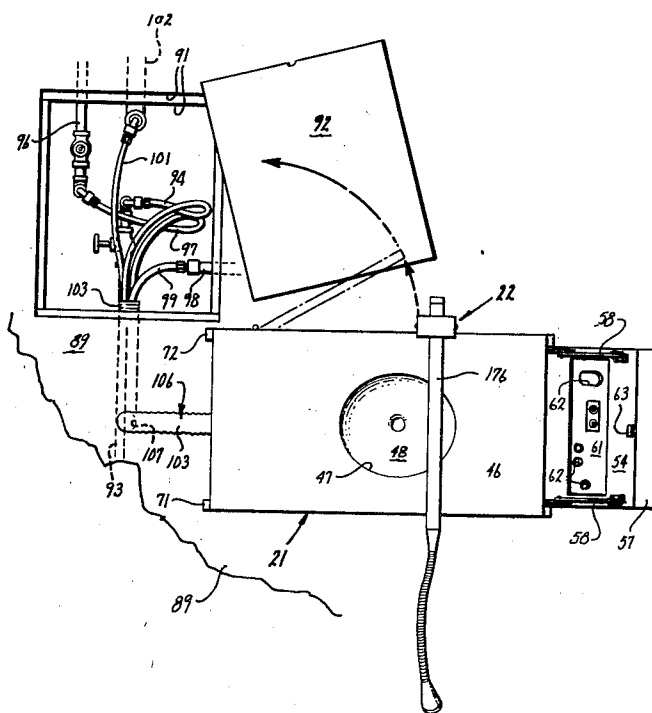
Dental console having a cabinet with a plurality of dental instruments mounted in the cabinet. A source of light is mounted in the cabinet. A flexible fiber optics cable is mounted in the cabinet and has one end positioned so that it is facing the source of light. Means is provided for mounting the fiber optics cable so that the other end of the fiber optics cable will remain in any one of a plurality of predetermined positions so that it can be utilized to supply general illumination to the mouth of the patient.

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15 Claims, 14 Drawing Figures



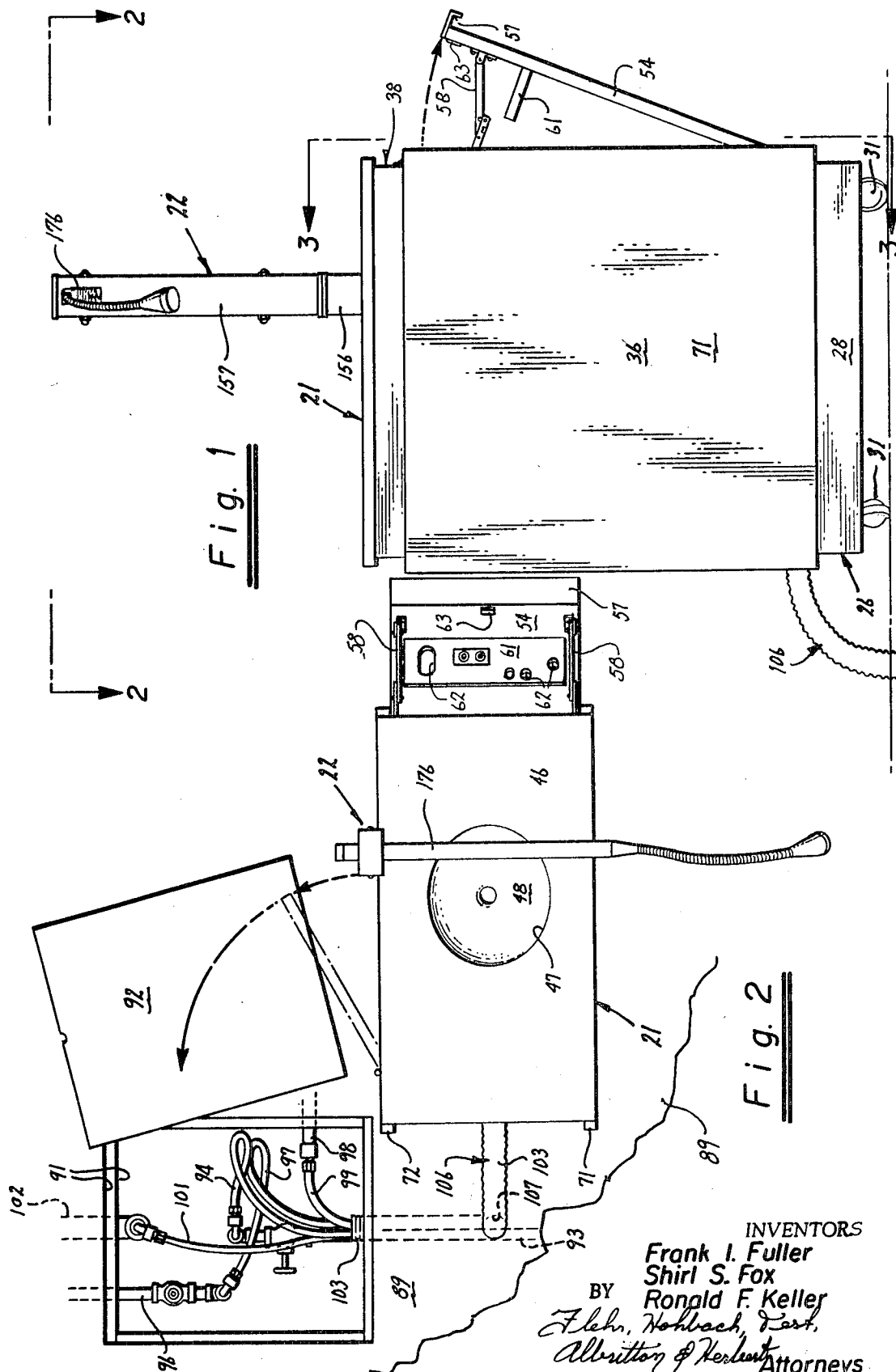


Fig. 2

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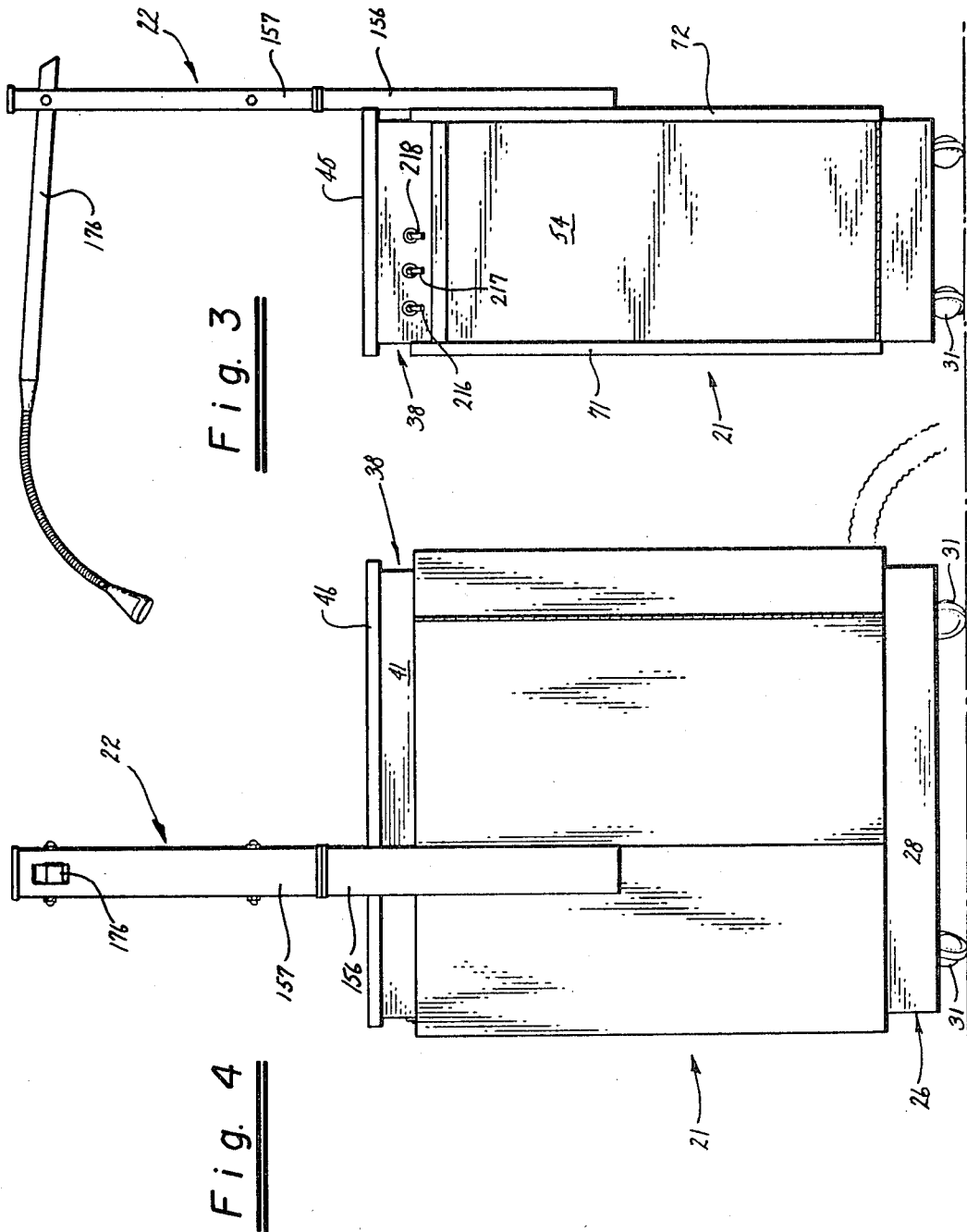
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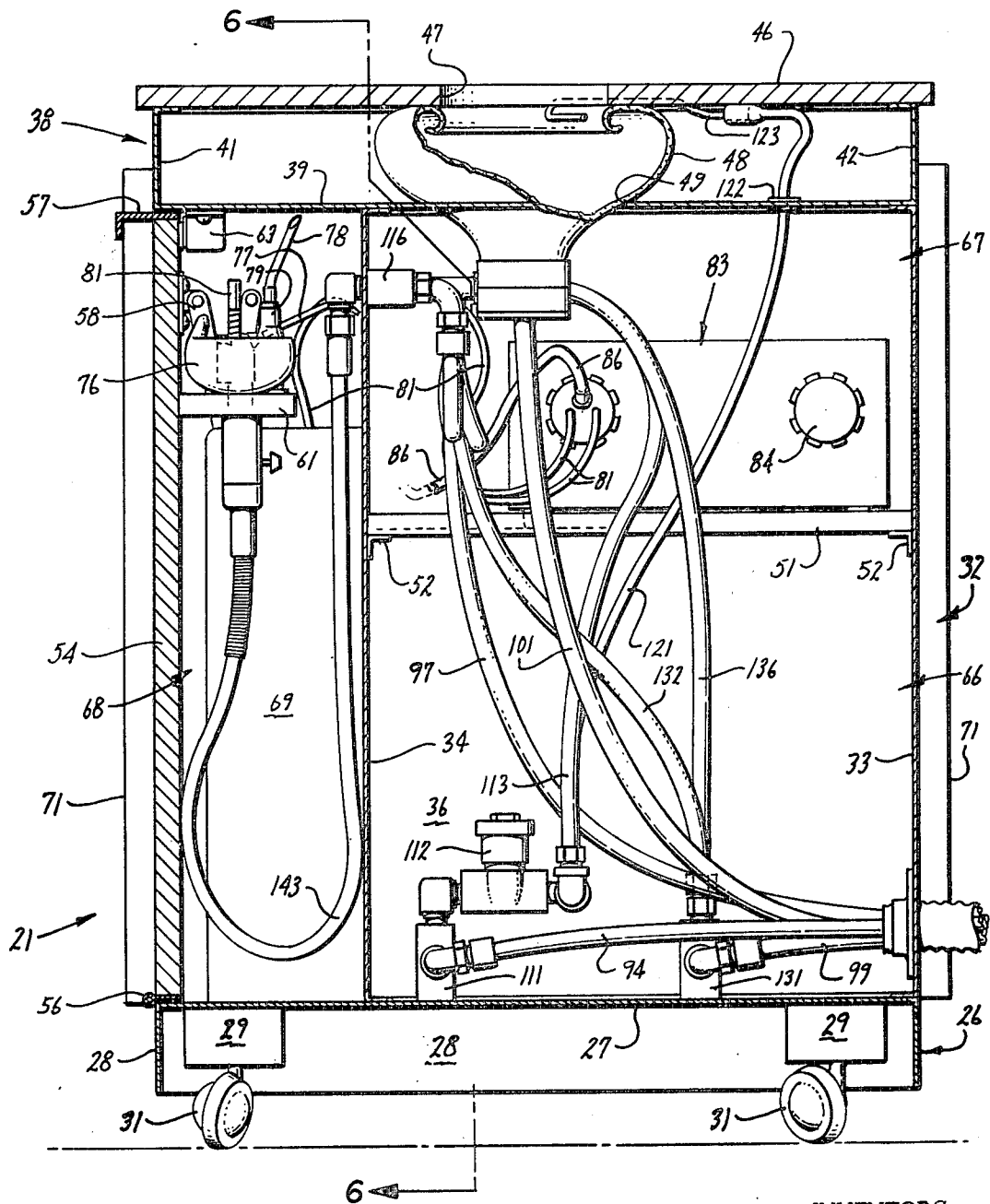
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Fig. 5



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Fig. 6

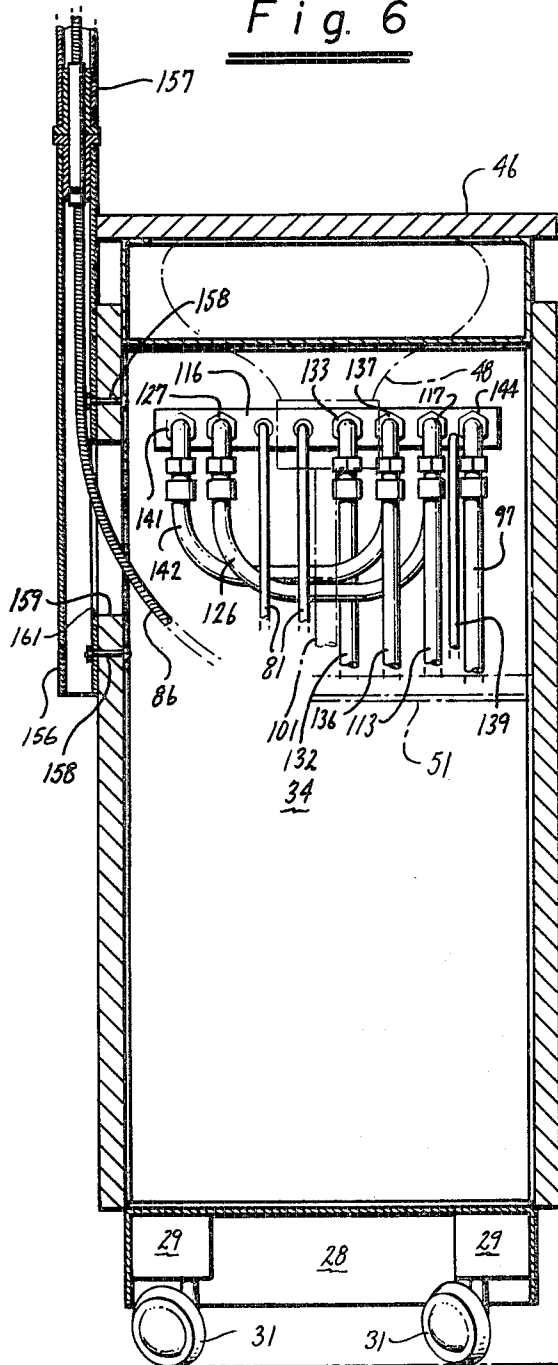
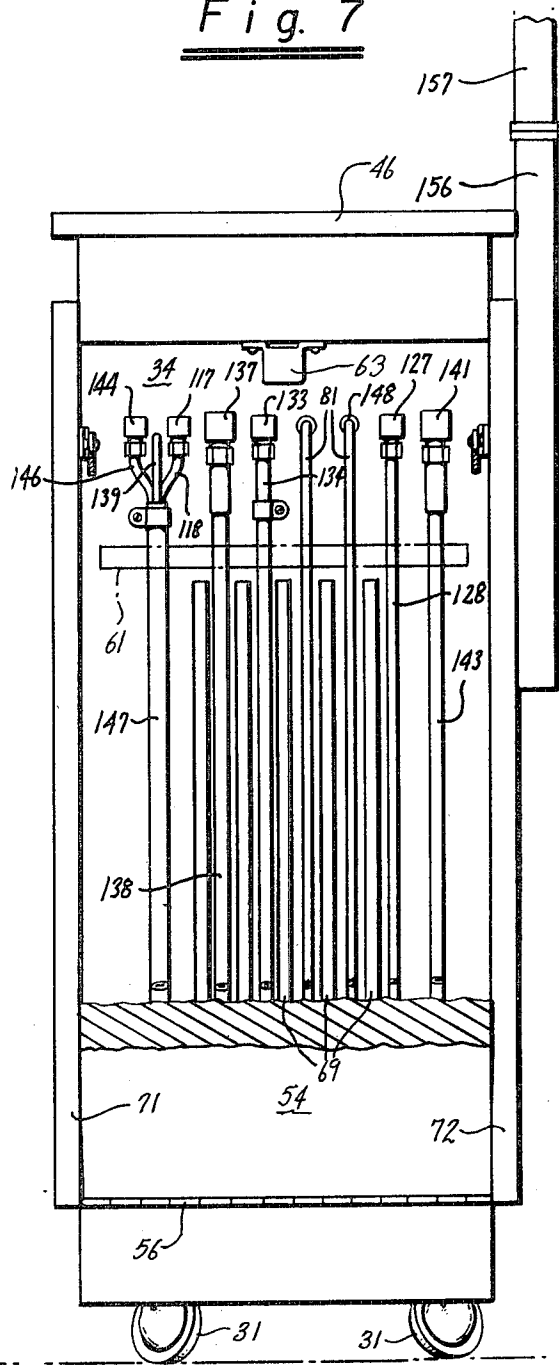


Fig. 7



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Fig. 8

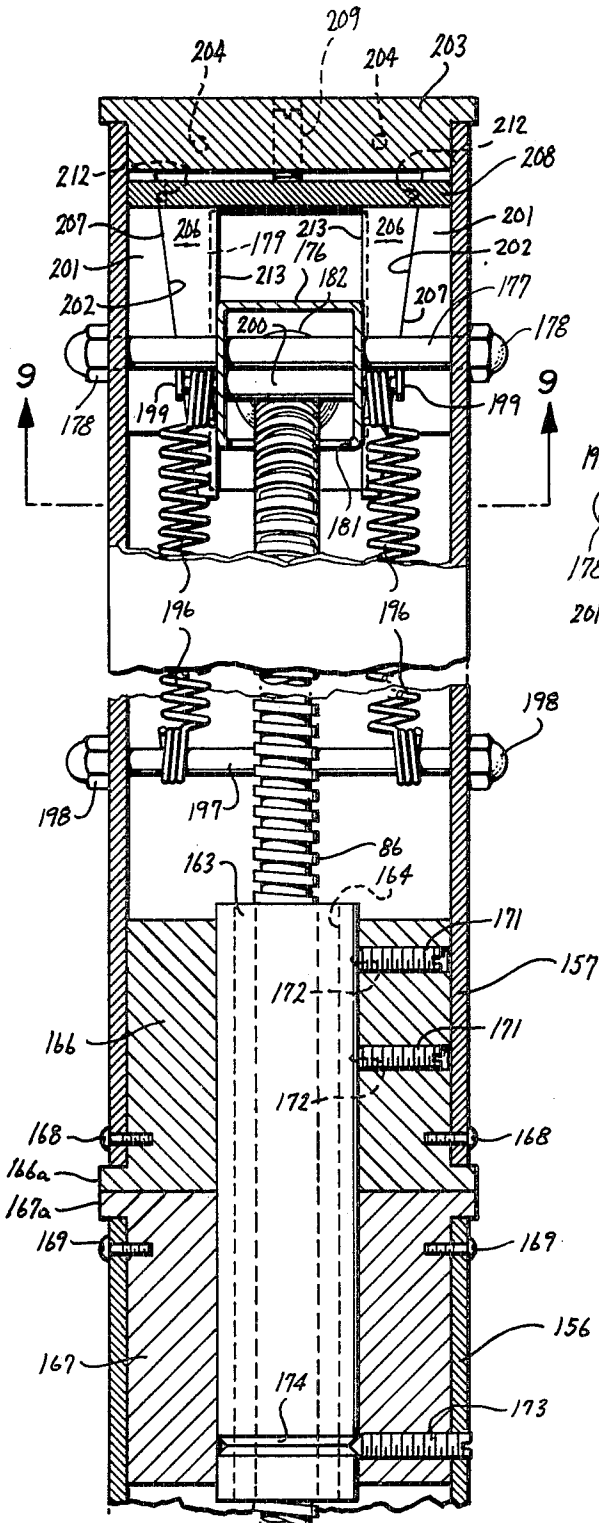
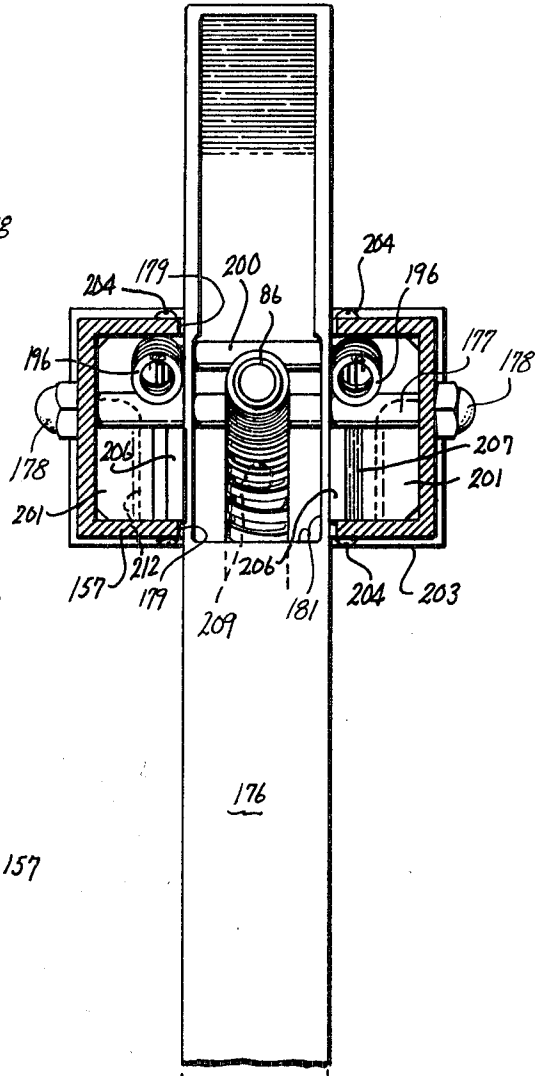
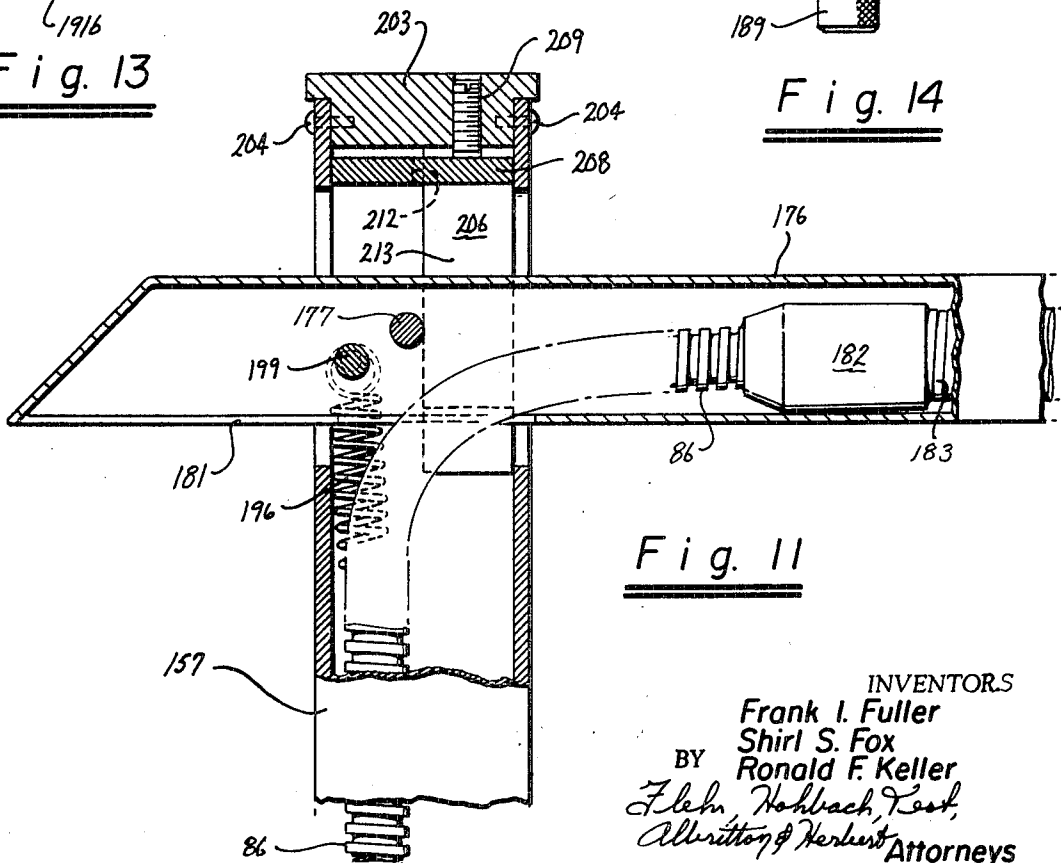
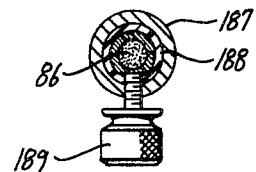
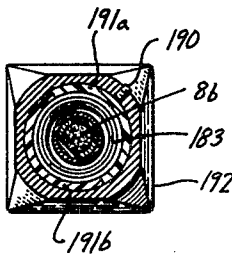
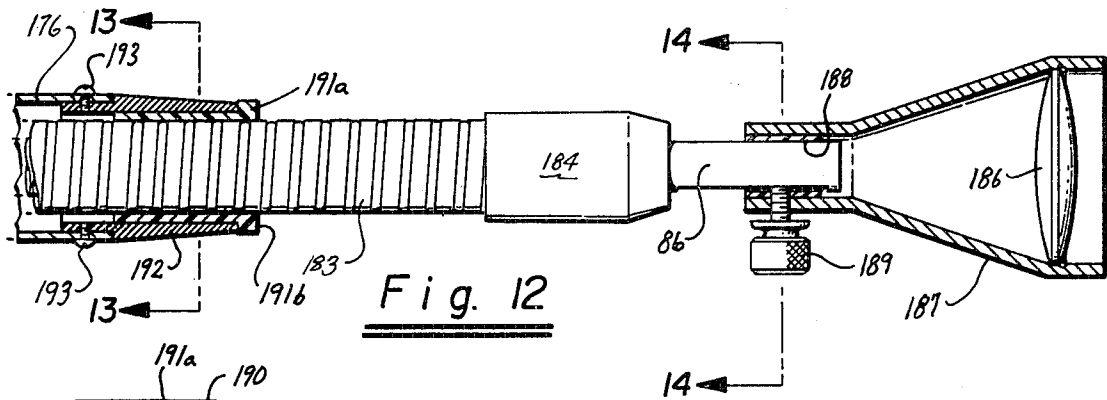
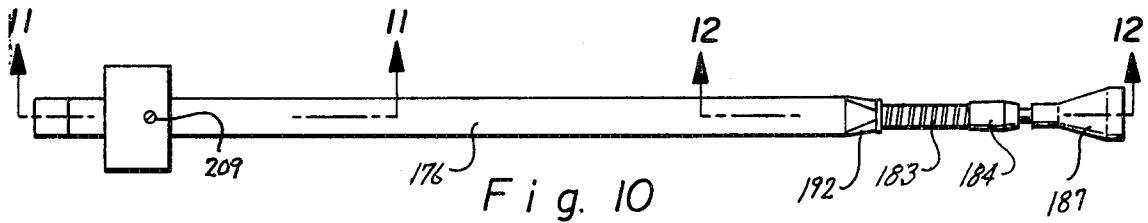


Fig. 9



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DENTAL CONSOLE

BACKGROUND OF THE INVENTION

Attempts have heretofore been made to improve the dental equipment which is utilized by dentists. Such attempts have primarily involved improving the dental chair which is conventionally used by dentists. There is a need for reexamining the dental equipment which is in use by dentists because it has disadvantages. For example, typical dental equipment is not particularly adapted for either sitdown or standup dentistry. In addition, it is not particularly adapted for use with four-handed dentistry. Also, the dental lights which have been provided for use with such dental equipment have had objectionable features both for the patient and for the dentist. There is, therefore, a need for new and improved dental equipment.

SUMMARY OF THE INVENTION AND OBJECTS

The dental console consists of a cabinet with a plurality of dental instruments mounted in the cabinet so that they are readily accessible to the dentist or dental assistant for use on the patient. A source of light is mounted in the cabinet. A flexible fiber optics cable is mounted in the cabinet and has one end positioned so that it is facing the source of light. Means is provided on the cabinet for mounting the cable so that the other end of the fiber optics cable will remain in any one of a plurality of predetermined positions so that it can be utilized to supply general illumination to the mouth of the patient being worked upon by the dental instruments.

In general, it is an object of the present invention to provide a dental console which can be readily used by a dentist or dental assistant and which carries a source of illumination for the mouth of the patient.

Another object of the invention is to provide a dental console of the above character in which the source of light can be positioned in different positions as desired by the dentist.

Another object of the invention is to provide a dental console of the above character in which all the instruments are recessed within a cabinet.

Another object of the invention is to provide a dental console of the above character which is provided with a large cuspidor.

Another object of the invention is to provide a console of the above character which can be readily moved from one location to another so that it can be readily positioned for four-handed dentistry.

Another object of the invention is to provide a dental console of the above character which is provided with a source of air, water and vacuum which is adaptable to all styles of dentistry.

Another object of the invention is to provide a dental console of the above character in which sitdown dentistry can be utilized and in which the source of light can be readily adjusted without the dentist standing up.

Another object of the invention is to provide a dental console of the above character in which the dental instruments are readily accessible.

Additional objects and features of the invention will appear from the following description in which the preferred embodiment is set forth in detail in conjunction with the accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevational view of a dental console incorporating the present invention with the swingout door in the open position. swing-out

FIG. 2 is a top plan view hooking along the line 2—2 of FIG. 1 with the dental instruments removed.

FIG. 3 is a front elevational view of the dental console shown in FIG. 1.

FIG. 4 is a side elevational view of the dental console shown in FIG. 1 showing the side opposite that shown in FIG. 1.

FIG. 5 is an enlarged cross-sectional view of the dental console as shown in FIG. 1.

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FIG. 6 is a cross-sectional view taken along the line 6—6 of FIG. 5.

FIG. 7 is a cross-sectional view taken along the line 7—7 of FIG. 5.

FIG. 8 is an enlarged cross-sectional view of the arm assembly which forms a part of the dental console.

FIG. 9 is a reduced cross-sectional view looking along the line 9—9 of FIG. 8.

FIG. 10 is a top plan view of the arm assembly of the dental console.

FIG. 11 is an enlarged cross-sectional view taken along the line 11—11 of FIG. 10.

FIG. 12 is an enlarged cross-sectional view taken along the line 12—12 of FIG. 10.

FIG. 13 is a cross-sectional view taken along the line 13—13 of FIG. 12.

FIG. 14 is a cross-sectional view taken along the line 14—14 of FIG. 12.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The dental console incorporating the present invention consists of a cabinet 21 which has an arm assembly 22 mounted thereon. The cabinet 21 consists of a base 26 formed of a suitable material such as sheet metal. The base consists of a planar top wall 27 with a depending skirt 28. Four blocks 29 are secured to the bottom surface of the top wall 27 of the base 26 and have mounted therein caster assemblies 31 of a conventional type. As can be seen, this permits the base 26 to be readily moved about from one location to another. The cabinet also consists of a boxlike enclosure 32 which is secured to the base 26. The enclosure 32 is provided with a pair of spaced parallel upstanding end walls 33 and 34 and spaced parallel sidewalls 36 and 37.

The cabinet 21 also includes a top framework 38 which is secured to the enclosure 32 and which is provided with a bottom wall 39, spaced parallel end walls 41 and 42, and spaced parallel sidewalls 43 and 44. A counter 46 formed of a suitable material such as synthetic marble is mounted upon the top framework 38 and serves to cover the top side of the framework 38. The counter 46 is provided with a large hole 47 immediately below which is mounted a large cuspidor 48. The cuspidor 48 is mounted in a hole 49 provided in the bottom wall 39 of the top framework 38.

A shelf 51 is mounted within the enclosure 32 and is supported by brackets 52 secured to the end walls 33 and 34. As can be seen particularly from FIG. 5, the brackets 52 and the shelf 51 are positioned so that the shelf is in the upper one-half of the enclosure 32. The enclosure 32 is provided with a hinged or swinging door 54 which has a hinge 56 at its lower end that is secured to the base 26 so that the door 54 can be swung between open and closed positions. The door is provided with a handle 57 which is secured at the top end of the door and which is adapted to be grasped by the hand so that the door can be readily moved to an open position. Suitable means is provided for limiting the outward movement of the door 54 and as shown in FIG. 1 consists of conventional door-retaining assemblies 58. A small shelf 61 is carried by the swinging door 54 and is provided with a plurality of holes 62 which are adapted to receive dental instruments as hereinafter described. A magnetic latch assembly 63 of a conventional type is provided for retaining the door 54 in a closed position. It can be seen that the shelf 51 divides the enclosure 32 into a lower compartment 66 and an upper compartment 67 and that the end wall 34 and the door 54 forms another compartment 68 which is accessible through the swinging door 54. A plurality of spaced parallel vertically extending dividers 69 are mounted within the compartment 68 and are secured to the end wall 34. As can be seen from FIG. 5, these dividers are of such a length so that they are immediately below the shelf 61 carried by the door 54 when the door 54 is closed.

Decorative panels 71 and 72 formed of a suitable material such as "Formica" are mounted upon the sidewalls 36 and 37.

A plurality of dental instruments are mounted within the cabinet 21. The type of dental instruments which are provided in the cabinet is dependent upon the choice of the dentist. As shown in the drawings, such dental equipment can include a vacuum cuspidor or cup 76, a water-air syringe 77 with a heating element, an oral evacuator 78, and a saliva ejector 79. It also includes a small fiber optic cables 81 for use with dental instruments.

Means is provided within the cabinet 21 for providing a source of light. As shown particularly in FIG. 5, such means can take the form of a commercial type of unit which is available from Fiber Photics, Inc. of Santa Cruz, California, and is shown as an illuminator 83 which is mounted upon the shelf 51 and which is connected to a suitable source of electrical energy. As is well known to those skilled in the art, such an illuminator includes a quartz iodide lamp which is a color-corrected lamp that provides the source of light energy. The intensity of the light is controlled by a knob 84. The two small fiber optic cables 81 are mounted in such a manner in the illuminator 83 so that their ends face the lamp. In addition, there is provided a large fiber optics bundle or cable 86 which also has one end of the same facing the source of light within the illuminator 83.

Means is provided for supplying a source of water, compressed air, vacuum waste and electricity to the dental equipment which is mounted within the cabinet 21 and for supplying it to the cabinet 21. Typically, such means can take the form shown in FIG. 2 in which suitable piping or conduit is provided under the floor 89 of the dental office and access to which can be had through an opening 91 provided in the floor of the office and which is adapted to be closed by a cover 92. Thus, there is provided a water line 93 which is connected to a hose 94. Similarly, there is provided a compressed air line 96 which is connected to a tube 97. Also, there is provided a vacuum line 98 which is connected to a tube 99. A waste tube 101 is provided and is connected to a waste line 102. All of these tubes 101, 94, 97 and 99 together with an electrical cord (not shown) are disposed within a larger flexible tube 103 (see FIG. 5) to provide what in effect is an umbilical cord 106 which leads from beneath the floor 89 through an opening 107 and into the cabinet 21. The umbilical cord is flexible and is of a length so that the dental console can be shifted from one location to another within the dentist's office.

As can be seen from FIG. 5, the water tube 94 is connected into a block 111 which has a solenoid-operated valve 112 mounted thereon. The output of the valve is connected by a tube 113. The tube 113 is connected to a block 116 which serves as a manifold mounted upon the wall 34. The output from the tube 113 is supplied to a fitting 117 which extends through the wall 34. A tube 118 is connected to the fitting 117 and is also connected to the water-air syringe 77. Another tube 121 is connected to the valve 112 and extends upwardly through a grommet 122 provided in the bottom wall 39. The flexible tube 121 is connected to a small metal tube 123 which extends into the cuspidor 48 and supplies water to the cuspidor 48. The water which drains from the cuspidor 48 drains into the waste tube 101.

Water is supplied from the tube 113 to a fitting 127 by a coupling tube 126. A tube 128 is connected to the fitting 127 and is connected to the vacuum cuspidor cup 76. The vacuum line 99 is connected to a blocklike manifold 131 mounted upon the bottom wall 27. A flexible tube 132 is connected to the manifold 131 and to the block 116. The tube 132 is in communication with a fitting 133. A tube 134 is connected to the fitting 133 and is connected to the saliva ejector 79. Another tube 136 is connected to the manifold 131 and to the block 116. The tube 136 is in communication with a fitting 137. A tube 138 is connected to the fitting 137 and is connected to the vacuum oral evacuator. An electrical cord 139 is provided and is utilized for supplying heat to the heating element of the water and air syringe 77. A vacuum is also supplied to a fitting 141 by an interconnecting tube 142. A tube 143 is connected to the fitting 141 and is connected to the

cuspidor cup 76. The air tube 97 is also connected to the block 116 and is in communication with a fitting 144. A tube 146 is connected to the fitting 144 and is connected to the water-air syringe 77. The tubes 118 and 146 and the cord 139 are encased in a larger tube 147. The small fiber optic cables 81 extend through grommets 148 provided in the block 116 and the wall 34 and are mounted in the shelf 61 so that they can be readily connected to dental instruments.

It is readily apparent that additional dental instruments can be provided and also that their arrangement on the shelf 61 can be changed to suit the desires of the dentist using the dental console.

It can be seen that the various tubes which are connected to the dental instruments are separated from each other by the dividers 69 so that the tubes connected to the same cannot become entangled with each other and so that the dental instruments can be readily lifted up by the dentist from the shelf 61 when he intends to use the same.

As pointed out previously, the dental console is provided with an arm assembly 22 which is provided for supplying general illumination to the mouth of the patient. This arm assembly consists of a pair of vertical support members 156 and 157. The lower support member 156 is secured to the cabinet 21 in a suitable manner such as by bolts 158. (See FIG. 6). As can be seen from FIG. 6, the support members 156 and 157 are hollow and are generally rectangular in cross section. The large fiber optics cable 86 extends through an opening 159 provided in the cabinet and through a hole 161 provided in the lower support member 156, and into the support member 157.

Means is provided for permitting rotational or pivotal movement of the support member 157 with respect to the support member 156 and consists of a rigid cylindrical sleeve 163 which is provided with a hole 164 through which the fiber optics cable 86 extends. A pair of blocks 166 and 167 formed of a suitable low friction material such as aluminum are provided. The block 166 is affixed to the lower extremity of the support member 157 by suitable means such as screws 168 and similarly, the block 167 is secured to the upper extremity of the support member 156 by screws 169. Both the blocks 166 and 167 are provided with flange portions 166a and 167a, respectively, which overlap the ends of the support members 156 and 157 and which engage each other as shown particularly in FIG. 8. Means is provided for securing one of the blocks to the sleeve 163 and for preventing rotation of one of the blocks with respect to the sleeve 163 and as shown in FIG. 8 consists of set screws 171 threaded into the block 166 and seated in small holes 172 in the sleeve 163. The other block 167 can rotate freely about the sleeve 163. Means is provided for preventing longitudinal movement of the sleeve relative to the block 167 and consists of an adjustable setscrew 173 which extends through the support member 156, the block 167 and is adapted to engage an annular recess 174 which is V-shaped in cross section and adapted to receive the tip of the setscrew 173. (See FIG. 8).

The arm assembly 22 also includes a cantilevered arm 176 which is pivotally mounted upon the upper support member 157 by a threaded rod 177 which extends through the support member 157 and has nuts 178 mounted on the ends thereof. The arm 176 extends through holes 179 provided in the upper end of the support member 157 as can be seen particularly from FIG. 11. The arm 176 is generally rectangular in cross section and is provided with a hole 181 through which the cable 86 can extend upwardly from the support member 157 into the arm 176. The cable 86 extends into a coupling 182 and through a larger flexible conduit 183 provided within the arm 176. One end of the conduit is connected to the coupling 182 and the other end of the conduit 183 is connected to a coupling 184. As can be seen from FIG. 12, the fiber optics cable 86 extends through the coupling 184 so that its outer end is free.

In order to provide a cone of light which emanates from the fiber optics cable 86, a lens element 186 is provided. The lens element 186 is mounted in a cone-shaped lens housing 187

which fits over the end of the fiber optics cable 86. A resilient sleeve 188 of a suitable material such as nylon extends over the fiber optics bundle and is disposed within the lens housing. A setscrew 189 is provided for securing the lens housing 187 to the end of the fiber optics cable 86.

Means is provided for securing the flexible conduit 183 in the forward extremity of the arm 176 and consists of a resilient flanged sleeve 191. The sleeve 191 is split into two parts 191a and 191b. The sleeve 191 is mounted on the conduit 183 and is held in place by a metal sleeve 192 that is secured to the free end of the arm 176 by screws 193. A setscrew 190 (see FIG. 13) clamps the cable 183 between the two parts 191a and 191b.

Means is provided for counterbalancing the cantilevered arm 176 and consists of a pair of large tension springs 196. One end of each of the springs is secured to a threaded rod 197 which is secured in the upper support member 157 by nuts 198. The other end of each of the springs is secured to a pin 199 provided on the arm 176. The pin 199 extends through a sleeve 200 provided in the arm 176. As can be seen, the pin 199 is mounted on the arm 176 in such a manner that it is slightly to the rear and below the pivot rod for the arm 176 so that the force exerted by the springs 196 tends to counterbalance the cantilevered arm 176.

Friction means is provided so that the cantilevered arm will remain in any one of a number of positions as selected by the dentist. Such friction means consists of a pair of wedges 201 which have inclined surfaces or faces 202. The wedges 201 are formed integral with a flanged block 203. The flanged block 203 is secured to the end of the support member 157 by screws 204. A pair of additional wedges 206 formed of a suitable low-friction material such as nylon are provided which are adapted to cooperate with the wedges 201 and are provided with inclined surfaces 207 which are inclined in a direction opposite to that of the surfaces 202. The wedges 206 are secured to a plate 208 which is disposed in the upper portion of the support member 157 and which is engaged by a setscrew 209 that is threaded into the block 203. The plate 208 is provided with cutouts 211 in two of its four corners as indicated by the broken lines 212 so that the plate 208 will clear the wedges 201. The wedges 206 are provided with planar surfaces 213 which again engage opposite sides of the arm 176 as can be seen particularly in FIG. 8. By adjustment of the screw 209, it can be seen that the wedges 206 can be moved longitudinally of the arm 176 and at the same time toward or away from the arm 176 to increase or decrease the frictional engagement between the wedges 206 and the sides of the arm 176.

Three switches 216, 217 and 218 are provided in the front of the cabinet 21 adjacent the upper extremity of the same and are positioned in such a manner that they are readily accessible by the dentist. Typically the switch 216 can be utilized for turning the illuminator 83 containing the light source on or off. The switch 217 can be utilized for energizing or deenergizing the solenoid-operated valve 112 and the switch 218 can be utilized for turning the main power on or off.

Operation and use of the dental console may now be briefly described as follows. Let it be assumed that the dentist desires to practice sitdown dentistry and that the dental console has been moved into a position alongside the chair in which the patient is seated. Assuming that the dentist is ready to commence dental work, the main power switch 218 is turned on. Similarly, the switches 216 and 217 are turned on. As soon as the illuminator 183 is placed in operation, light rays will emanate from the lamp housing 187. The dentist or his dental assistant positions this lamp housing 187 so that it is in relatively close proximity to the mouth of the patient so that the cone of light emanating therefrom will illuminate the mouth. This cone of light is relatively small so that the light will not strike the patient's eyes while the mouth is being illuminated. The arm assembly makes possible the positioning of the lamp housing 187 in any position desired by the dentist. The lamp housing 187 can be moved up and down by shifting the arm

176 up and down. This can be readily accomplished because the arm is counterbalanced as hereinbefore described. In addition, the arm 176 will remain in the desired position because of the frictional engagement provided by the wedges 201 and 206. The arm 176 can be rotated into the desired position because of the rotatable connection between the support members 156 and 157 hereinbefore described. Additional flexibility can be obtained by adjustment of the flexible conduit 183 which carries the fiber optics cables. This conduit 183 is sufficiently rigid so that it will remain in the position into which it is bent by the dentist.

After the light has been properly positioned, the dentist can readily undertake the desired dental work. It is merely necessary for the dentist to swing open the door 54 of the dental console to the position shown in FIG. 1. The conventional dental instruments which require the use of air, vacuum and water are mounted on this swinging door and are readily accessible to the dentist. For example, the saliva ejector can be readily lifted out of the shelf 61 and placed in the patient's mouth. The other dental apparatus or equipment provided on the shelf 61 can be utilized in a similar manner. Since the dental instruments are connected by flexible hoses, they can be readily shifted from one location to another. They also can be readily replaced without any difficulty and without the tubes becoming entangled with each other because of the dividers 69.

In the event that the patient or the dentist does not wish to utilize the vacuum cuspidor cup 76, the large cuspidor 48 which is mounted within the cabinet can be readily utilized by the dental patient.

During the time the dentist is carrying out his operations, the light from the lamp housing 187 provides adequate illumination, however, if the dentist wishes to provide additional illumination from fiber optics bundles for certain of the instruments which he is utilizing, the fiber optics cable 81 mounted in the shelf 61 can be utilized.

As soon as the dentist has completed his dental work, the dental instruments can be readily replaced in the shelf 61 and the door 54 closed. When the work for the day is completed, the switches 216, 217 and 218 can be turned off.

It is readily apparent that the dental console which has been provided has many advantages. The dental instruments when they are not in use are completely enclosed within the dental console where they are out of sight from the patient. The controls for the console are conveniently located, that is immediately above the swinging door so that the dental instruments and the controls are all readily available to the dentist or dental assistant. A large cuspidor is provided which many patients desire to use.

The console is mobile and can be readily moved from one location to another. In addition, it can be readily shifted into the desired position with respect to the patient so as to permit either sitdown dentistry or standup dentistry. In addition, this adjustable positioning of the dental console makes it very usable in connection with four-handed dentistry. The light source is completely built into the console and provides light immediately adjacent to the mouth of the patient. Thus, the dentist need not be concerned with his head or other parts of his body coming between the mouth of the patient and his source of overhead light. The fiber optics which are utilized in the dental console are built in so that the dental console gives a neat and uncluttered appearance for a dental office. The construction of the light source makes it possible for the dentist to adjust the position of the light without getting up in the case of sitdown dentistry. The source of light is cold so there is no infrared energy to cause discomfort to the patient. The lens housing provides a small cone of light which only is sufficiently large to illuminate the mouth and does not disperse into the patient's eyes. In addition, the light is color corrected so that it can be utilized for matching false teeth with the patient's teeth.

We claim:

1. In a dental console for use with a patient, a cabinet, a plurality of dental instruments mounted in the cabinet, a source of light mounted in the cabinet, a flexible fiber optics cable mounted on said cabinet, means mounting the cable so that one end is positioned so that it is facing the source of light and so that the other end will remain in any one of a plurality of predetermined positions whereby it can be utilized to supply general illumination to the mouth of the patient, said means for mounting said cable including a rigid arm assembly mounted on said cabinet and extending upwardly from said cabinet and an additional rigid arm assembly pivotally mounted on said upwardly extending arm for pivotal movement about a horizontal axis.

2. A console as in claim 1 together with means mounted on the end of the fiber optics for providing a cone of light.

3. A dental console as in claim 1 wherein said rigid arm assembly extending upwardly from said cabinet is formed in at least two parts together with means permitting rotational movement about a generally vertical axis of one part with respect to the other part.

4. A console as in claim 1 together with means mounted within the cabinet for supplying vacuum, water and air to the dental instruments.

5. A console as in claim 4 together with a plurality of flexible tubes connecting said dental instruments to said means in said cabinet for supplying vacuum, water and air and a plurality of spaced dividers disposed between said tubes for maintaining said tubes separate as the dental instruments are used.

6. A dental console as in claim 1 together with a shelf, means mounting said shelf in said cabinet, said dental instruments being mounted on said shelf, and means mounted on the cabinet to permit access to the dental instruments mounted on the shelf.

7. A console as in claim 6 wherein said means mounting said shelf includes a door hingedly mounted on said cabinet and means mounting said shelf for said dental instruments on said door.

8. A dental console as in claim 6 wherein said hinged door includes hinged means mounted on the bottom portion of said cabinet to permit said door to swing about a substantially horizontal axis, and means mounted on the door for preventing said door from moving outwardly beyond a predetermined position.

9. A dental console as in claim 1 wherein said means mounting the cable includes spring means connected between said upwardly extending rigid arm and said additional rigid arm for

counterbalancing the weight of said additional arm, and friction means for maintaining said additional arm in a predetermined position with respect to said upwardly extending rigid arm, said friction means including first and second pairs of wedges mounted within said upwardly extending arm and mounted on opposite sides of said additional arm, each of said first and second pairs of wedges having inclined surfaces inclined in opposite directions, and means mounted on said upwardly extending arm for causing relative movement between the wedges of each pair to increase or decrease the pressure applied to said additional arm to thereby increase or decrease the frictional engagement between said wedges and said additional arm.

10. A dental console as in claim 1 wherein said upwardly extending arm includes first and second support members, a sleeve extending between said first and second support members and having the fiber optics cable passing therethrough, means mounting one portion of said sleeve in one of said support members and affixing the same to said one support member and to said sleeve and means mounting another portion of said sleeve in the other of the support members and permitting rotation of said sleeve relative to said other support member.

11. In a dental console, a cabinet having a generally horizontal top wall with an opening therein, a cuspidor mounted in the top wall and having an opening in registration with said opening in said top wall, a shelf mounted in said instruments disposed generally below said top wall, a plurality of dental instruments mounted on said shelf, means mounted in said cabinet for permitting access to said shelf, and means mounted within said cabinet for supplying air, water and vacuum to said dental instruments and for supplying water to said cuspidor.

12. A dental console as in claim 11 wherein said means connecting sources of air, water and vacuum to said dental instruments includes a plurality of tubes and means for maintaining said tubes separate from each other as the dental instruments are used.

13. A dental console as in claim 11 wherein said means for permitting access to said shelf includes a door hingedly mounted on said cabinet and wherein said shelf is mounted on said door and means for preventing said door from moving beyond a predetermined position.

14. A dental console as in claim 11 wherein said cuspidor is centrally disposed in the top wall of said cabinet.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,636,633 Dated January 25, 1972

Inventor(s) Frank I. Fuller, Shirl S. Fox and Ronald F. Keller

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Claim 15 has been omitted from the Letters Patent and it is requested that Claim 15 be inserted as follows:

15. A dental console as in Claim 11 together with a cantilevered arm, means mounting said cantilevered arm on said cabinet so that the arm will remain in any one of a number of selected positions, a source of light disposed within the cabinet, a fiber optics cable mounted in the cabinet having one end facing the source of light, and means mounting the other end of said cable on said cantilevered arm.

Signed and sealed this 14th day of November 1972.

(SEAL)

Attest:

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