Feb. 26, 1963 J. B. FONTANA 3,078,575

DENTAL UNIT BRACKET TABLE

Filed May 5, 1961 2 Sheets-Sheet 1

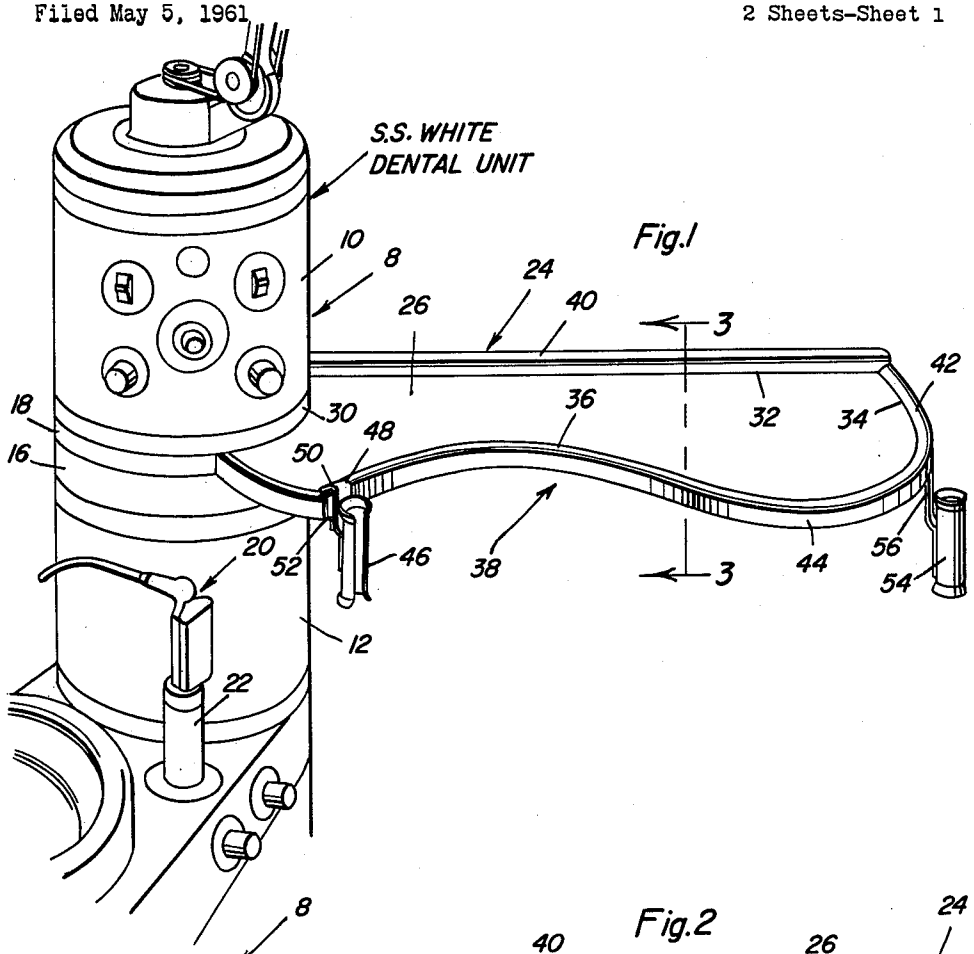

Fig.1

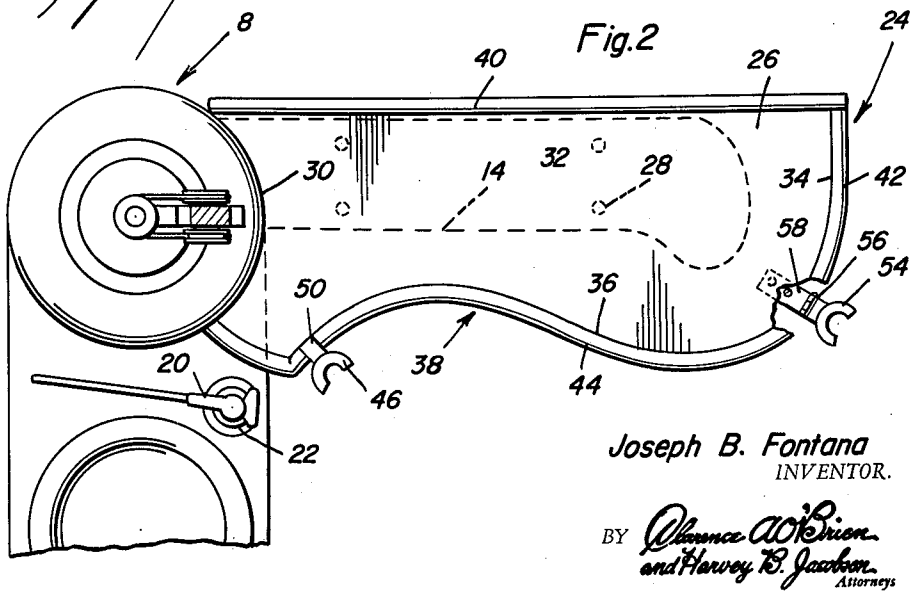

Fig.2

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Filed May 5, 1961 2 Sheets-Sheet 2

Fig.3

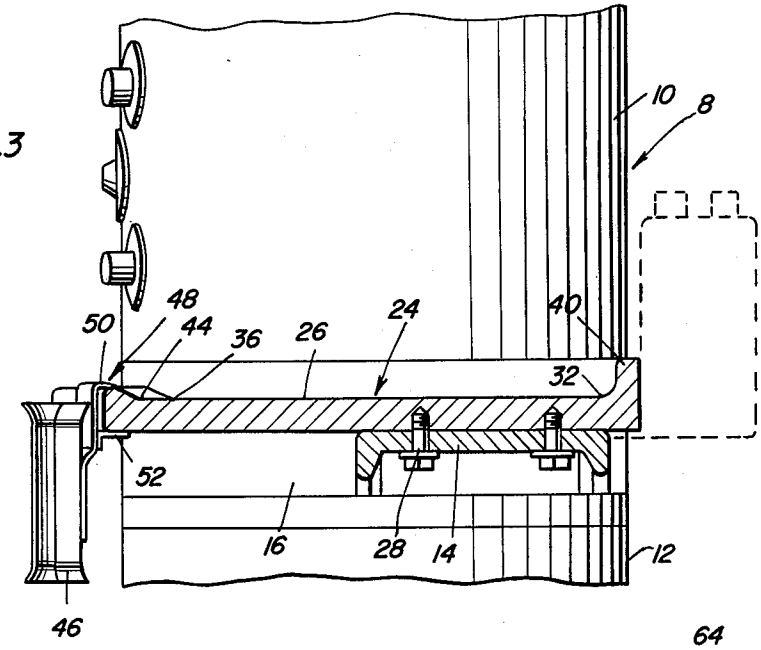


Fig.4

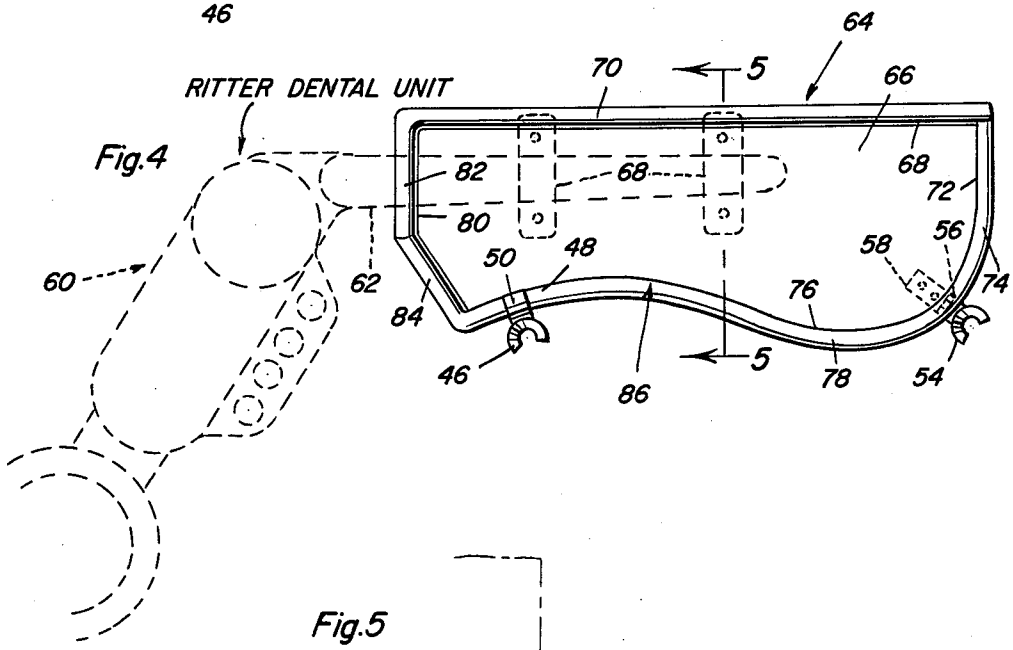
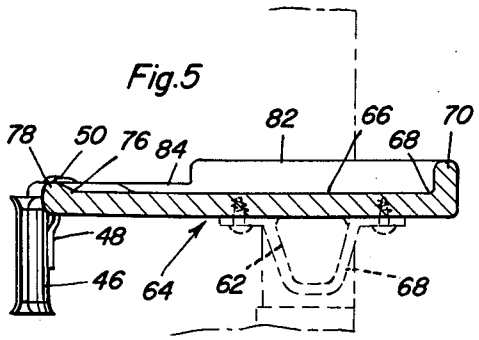


Fig.5



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DENTAL UNIT BRACKET TABLE

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This invention relates to movable bracket tables, trays and shelves which are commonly used on and in conjunction with dental units (S. S. White, Ritter and others) and has to do, more particularly, with an improved shallow tray-type plate or table which is expressly and uniquely constructed and designed to increase the utility thereof in that it affords the operator a maximum support area for uncluttered retention of intstruments and equipment while treating a patient.

Bracket tables such as are currently in use are small and are usually circular in plan. Despite the fact that they have been and are being used daily in dentists' offices, they nevertheless are outmoded. A change has long been needed but the desire to meet the challenge has posed a difficult-to-solve problem. Therefore, it is the object of the instant endeavor to solve the problem. To this end the improved bracket table herein disclosed has been devised and experimental use shows that it well serves the purposes for which it is intended.

In carrying out the principles of the present invention a table is provided which not only affords widespread and maximum implement and instrument support surface but also places the shelved instruments within immediate accessibility and yet reduces body movement activities to an appreciable minimum. The shape, size and location of the improved table are factors which facilitate treating a patient from a position in front of the patient and also treating the patient from a position behind the patient. The improvements and features which are relied upon to attain these desired end results will become more readily apparent from the following description and illustrative, but not restrictive, drawings.

Briefly the concept has to do with a stationary dental unit having an outstanding horizontal bracket arm movable in a horizontal plane about a vertical turning axis, and a horizontal table attached to and carried by said arm and swingable therewith in an arcuate path of movement, said table being elongated in plan and providing the user with maximum space for readily available support of equipment such as burs, instruments and miscellaneous items which are needed while treating a patient, whereby to avoid perplexing cluttering on an inadequate unsuitable support surface of restricted proportions as is currently being used.

The improved table also embodies an elongated rearward distal marginal edge, an elongated forward proximal marginal edge and longitudinally spaced facilities (simple and practical holders) on the proximal edge, these holders serving to detachably and momentarily support a water-air syringe and an air-rotor hand piece when the latter are being used.

More specifically the invention comprehends the use of an equipment supporting table which is characterized by an elongated plate having flat top and bottom surfaces, the bottom surface being adapted to be attached to and supported by the bracket arm, said plate being of a length and width to fully accommodate the various things which must be accessibly laid atop the same while treating a patient, the lengthwise edge farthest from the patient and user constituting a distal edge and being linearly straight from end to end, the lengthwise edge nearest the patient and user constituting a proximal edge and being ogee-shaped in plan and providing a curvate clearance area receding toward the transverse median part of the plate proper, and the transverse end portions being symmetrically contoured for prerequisite adaptability.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a view in perspective showing a fragmentary portion of a conventional-type dental unit and illustrating the improved tray-type bracket table and how it is constructed and intended to be used.

FIG. 2 is a top plan view of the structure depicted in FIG. 1 with a portion broken away and a portion appearing in section.

FIG. 3 is an enlarged detail view in section and elevation taken on the plane of the section line 3—3 of FIG. 1, looking in the direction of the arrows.

FIG. 4 is a plan view of a modified bracket table showing the dental unit in phantom lines.

FIG. 5 is a cross section on a suitably enlarged scale taken on the plane of the line 5—5 of FIG. 4.

Reference will be had first to FIGS. 1 to 3 inclusive showing the invention applied and being used on a conventional dental unit (S. S. White). The unit as an entity is denoted by the numeral 8 and has upper and lower component portions 10 and 12. The bracket arm 14 (see FIG. 3) radiates from the turnable annulus 16 directly below the spacing washer 18. A customarily used air-water syringe 20 is shown removably supported in its holder 22. Manifestly these are all old parts. The improved bracket table is denoted as a unit by the numeral 24. It has the longitudinally elongated generally rectangular shape shown in FIGS. 1 and 2. The body or plate proper, denoted at 26 has flat top and bottom surfaces and the bottom surface rests atop the bracket arm 14 and is secured thereto by headed fasteners 28 as illustrated in FIG. 3. This arrangement disposes the plate or table in a position horizontal to the vertical axis of the dental unit 8. The left hand transverse edge portion is arcuately shaped as at 30 to conformingly fit against the surfaces of the dental unit movably contacted thereby. The edge of the plate farthest from the patient and which is here denoted by the numeral 32 is conveniently designated as the rearward or distal edge and it is linearly straight from end to end. The right hand transverse end portion is arcuately curved in the manner illustrated in FIG. 2 in particular. The forward or proximal edge 36 is ogee-shaped (long S-curve) and this defines a median receding or clearance area or portion at 38 making this edge portion conformable to the desired top plan contour of the over-all plate. The marginal edges are encompassed or surounded by suitably raised beads which properly constitute an appropriately delineated rim. The distal edge bead 40 is linearly straight and commensurate with the length of the edge 32. The bead portions 42 and 44 conform to the shape of the end portion and edge portion, the cross section of the beads being such as shown in FIG. 3 to define a shallow tray-like construction.

One instrument holder, the one adjacent to the unit at the left is denoted by the numeral 46 and comprises a vertical split open-ended sleeve with means for bracketing the same on the bead. This means may be referred to as a bracket 48 which as shown best in FIG. 3 has grips or clips 50 and 52 whereby it is resiliently and removably held in place. The other holder at the right likewise comprises a vertically slotted or split open-ended sleeve 54 which is joined by a hinge 56 to an attaching bracket 58 whereby when it is not in use it may be folded beneath the table.

In FIGS. 4 and 5 the dental unit is denoted at 60 and has a bracket arm 62 (Ritter dental unit) and in this arrangement the bracket table 64 comprises a plate 66 the bottom side of which is provided with suitable brackets

68 which serve to mount the plate on the bracket arm 62. Here again the distal longitudinal straight edge is denoted at 63 the same having a rim bead 70 thereon. The right hand edge portion 72 has a companion bead 74 and the ogee-shaped proximal edge portion 76 has a correspondingly shaped bead 78. The left hand transverse end portion 80 has bead portions 82 and 84 cooperable therewith. Basically this plate or table corresponds to the one previously designated by the numeral 24. Moreover the holders on the proximal edge portion are the same in construction and for convenience are referred to by the same reference numerals employed in FIGS. 1 to 3 inclusive. Here the receding clearance portion of the proximal edge is denoted by the numeral 86.

When treating a patient from a position in front of the patient, the instruments and table with covering sheets, doilies (or whatever cover media may be used for this purpose) may be placed away from the operator, or as close to the dental unit, as desired. The air-water syringe remains at its usual place on the dental unit while the air-rotor hand piece (if one is used) is placed on the syringe-air rotor bracket or holder 46, close to the dental unit. In this manner, all procedures can be followed with all instruments within reach and more than sufficient table area available without having to step back and turn the body, as must be done with the conventional bracket table.

When treating the patient from a position behind the patient, the instruments and bracket table are placed in the circular area (farthest from the dental unit). The air-water syringe is supported by (if separate syringes are used for water and air) a separate bracket adapted for this purpose which can be folded under the table when not in use. This air-water syringe is placed on the holder closest to the dental unit, while the air-rotor hand piece, if used, is placed on the holder 54 farthest from the dental unit. In this maner all procedures can be coordinated and resorted to from behind the patient with all instruments within easy reach. More than ample table area is available. It will be noted that when a chair-side assistant is situated to the left of the patient, the assistant will also have the unit side of the table within immediate reach.

This bracket table when in use is attached to the arm 14. Slight modifications are necessary with different types of dental units. Attached to the arm, the bracket table swings toward or away from the patient similar to the conventional bracket table. A slight beading or "lip" is necessary around the periphery except where a back-stop is indicated, as the cross section indicates. This will prevent burrs and other shall items (not illustrated) from rolling off the table.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In combination, a stationary dental unit having an outstanding horizontal bracket arm movable in a horizontal plane about a vertical turning axis, and a horizontal table attached to and carried by said arm and swingable in an arcuate path of movement, said table being elongated in plan and providing the user with space for readily available support of equipment such as burs, instruments and miscellaneous items which are needed while treating a patient, whereby to avoid perplexing cluttering on an inadequate unsuitable support surface of restricted proportions as is currently being used, said table comprising a smooth flat-top plate having a rearward distal marginal edge, a forward proximal marginal edge, and left and right end portions, a first holder provided on the proximal edge adjacent the left end portion, and a second holder provided on said proximal edge adjacent the right end portion, said holders being spaced well apart from each other and being selectively usable for temporary readily accessible retention of a water-air syringe and an air-rotor hand piece, each holder comprising a vertical open-ended sleeve with a lengthwise slot therein, said sleeves being suspended from the table below the plane of the said table with said slots facing the user of the table.

2. In combination, a conventional-type stationary dental unit provided on a vertical side thereof with an outstanding horizontally disposed bracket arm, said bracket arm being movably mounted on the unit to swing in a horizontal plane in respect to a vertical turning action, a horizontal table fixed atop said arm, said table having a smooth flat top providing a readily accessible support surface for burrs, instruments and things customarily needed by the dentist while treating a patient, the lengthwise edge farthest from the patient and user constituting a distal edge and being straight from end to end, the lengthwise edge nearest the patient and user constituting a proximal edge and being ogee-shaped in plan and providing a curvate clearance area receding toward the transverse median part of the plate proper, said plate having an inwardly disposed transverse end which is arcuately curved and conformingly abuts correspondingly curved peripheral surfaces of that portion of the unit cooperating therewith, the top surface of said plate being provided with a marginal rim defining a relatively shallow tray, and selectively usable holders for a water-air syringe and air rotor handpiece, respectively, each holder having an open top disposed in a plane below the level of the plate, means mounting the holders on the proximal edge adjacent the inner and outer transverse end portions of the plate, the means mounting the outwardly disposed holder comprising a bracket including a hinge related to the cooperating edge portion of the plate in a manner to permit the holder associated therewith to be folded completely beneath the plate when not being used.

3. For use on a swingably mounted bracket arm on a dental unit; an equipment supporting table comprising an elongated plate having top and bottom surfaces, the bottom surface being adapted to be attached to and supported by the bracket arm, said plate being of a length and width to accommodate the various things which are placed accessibly atop said top surface while treating a patient, the lengthwise edge farthest from the patient and user constituting a distal edge and being linearly straight from end to end, the lengthwise edge nearest the patient and user constituting a proximal edge and being ogee-shaped in plan and providing a curvate clearance area receding toward the transverse median part of the plate proper, the transverse end portions being symmetrically contoured for adaptability, the latter marginal edges of said plate being encompassed by a bead, the latter defining a rim, portions of said bead projecting above said top surface and defining a shallow article confining tray, and selectively usable holders for a water-air syringe and air-rotor hand piece bracketed on the proximal edge adjacent the right hand and left hand end portions, respectively, of said plate, each holder embodying a vertically slotted open-ended sleeve, the open top of each sleeve being suspended below the level of the plate for convenience of access and use.

4. For use on a swingably mounted bracket arm on a dental unit; an equipment supporting table comprising an elongated plate having top and bottom surfaces, the bottom surface being adapted to be attached to and supported by the bracket arm, said plate being of a length and width to accommodate the various things which are placed accessibly atop said top surface while treating a patient, the lengthwise edge farthest from the patient and user constituting a distal edge and being linearly straight

from end to end, the lengthwise edge nearest the patient and user constituting a proximal edge and being ogee-shaped in plan and providing a curvate clearance area receding toward the transverse median part of the plate proper, the transverse end portions being symmetrically contoured for adaptability, and selectively usable holders for a water-air syringe and air-rotor hand piece bracketed on the proximal edge adjacent the righthand and left-hand end portions, respectively, of said plate, each holder embodying a vertically slotted open-ended sleeve, the

open top of each sleeve being suspended below the level of the plate for convenience of access and use.

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