

July 6, 1926.

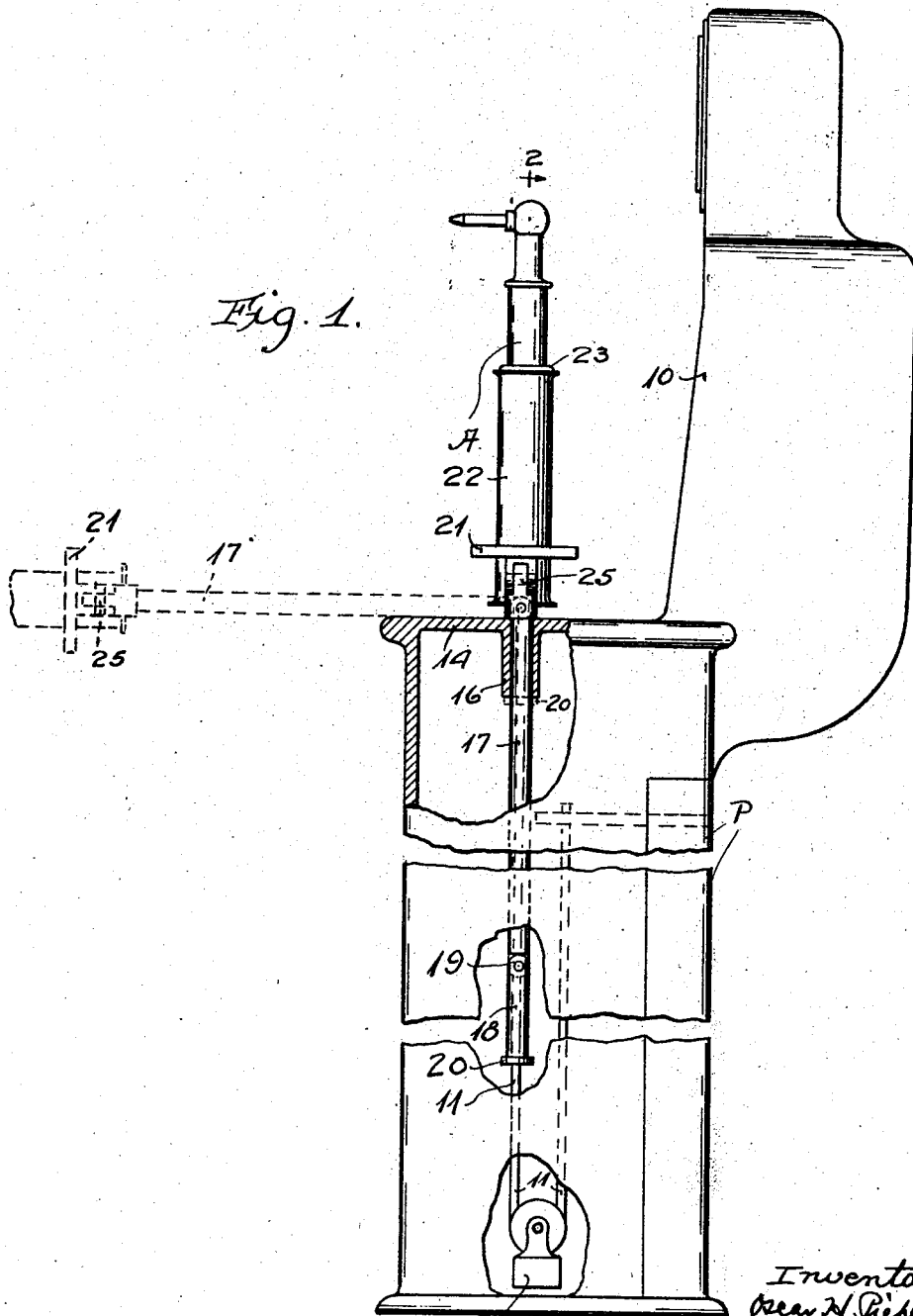
O. H. PIEPER

1,591,335

DENTAL UNIT

Filed July 25, 1925

2 Sheets-Sheet 1



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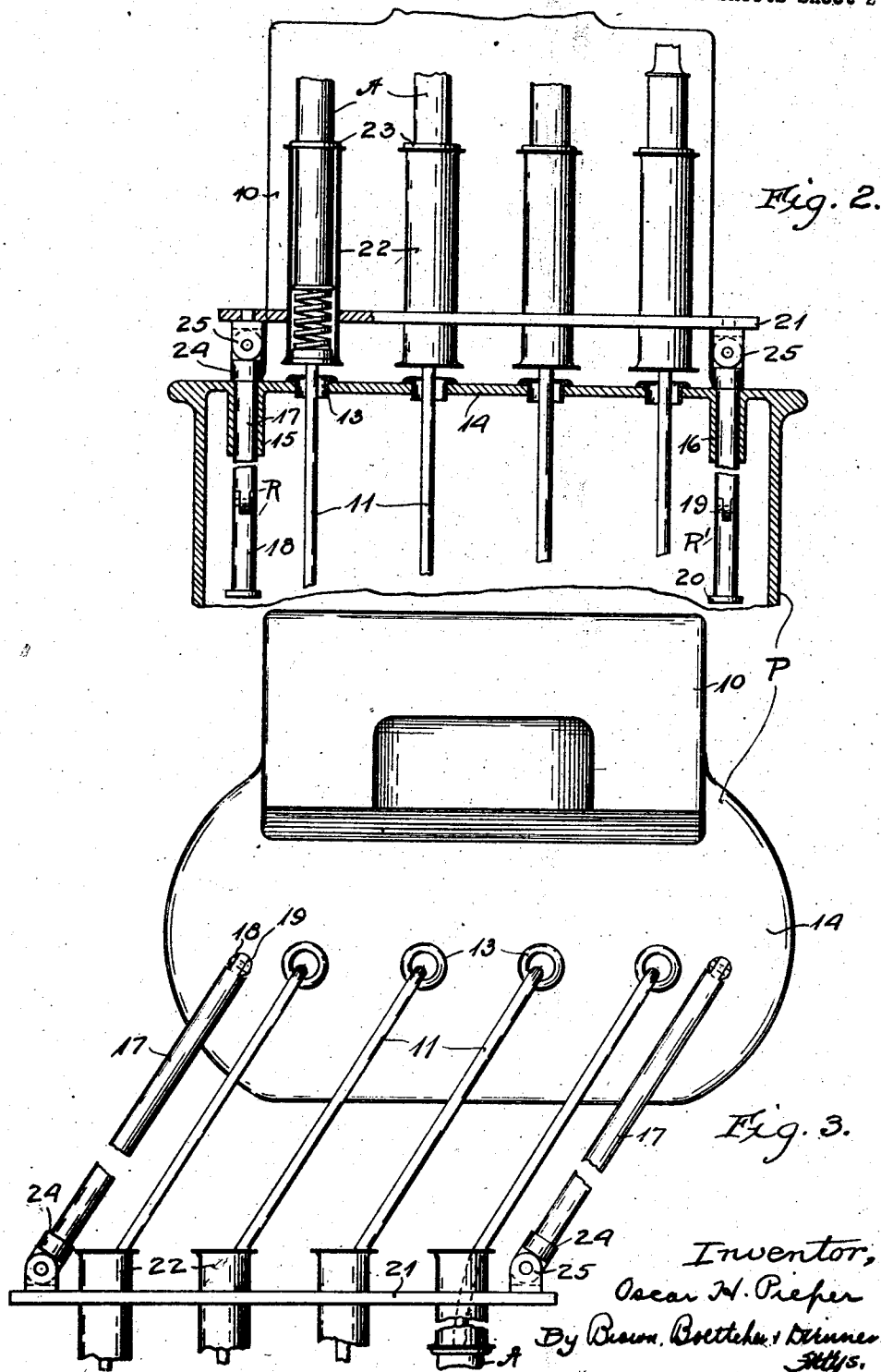
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Patented July 6, 1926.

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UNITED STATES PATENT OFFICE.

OSCAR H. PIEPER, OF ROCHESTER, NEW YORK.

DENTAL UNIT.

Application filed July 25, 1925. Serial No. 45,962.

My invention relates to dental units of the type disclosed in Patent #1,376,356, issued April 26, 1921, to Oscar H. Pieper and Alphonse F. Pieper, the object being to provide improved means for enabling the instrument holder or shelf to be readily extended and positioned away from its supporting pedestal in order to increase the range and facility of use of the various tools and appliances supported on the shelf and connected through flexible cords with the various supply sources, such as for gas, electric power, and air. The invention contemplates a jointed supporting structure for the instrument shelf, which structure will normally securely hold the shelf on the pedestal top and which will permit the shelf to be raised and to be swung forwardly of the pedestal and then laterally to bring the instruments into convenient position for the operator.

On the drawings—

Fig. 1 is a side elevational view of the upper end of the dental unit with part of the pedestal and the shelf structure in section;

Fig. 2 is a sectional view on plane 2—2 of Fig. 1; and

Fig. 3 is a plan view.

The pedestal P is of the same construction as that in the patent referred to, and it has the offset or extending part 10 at the top and rear for containing the various appliances, as disclosed in said patents. "A" represents various instruments or tools connected by flexible cords or tubes 11 with air, gas, or electric controlling devices housed within the pedestal, all as disclosed in said patent, weights 12 yieldably holding the cords down in the pedestal. The cords or tubes extend through guide thimbles secured in the top 14 of the pedestal and arranged in a transverse row in front of the extension 10.

Extending downwardly from the pedestal top 14 at the opposite sides thereof, are the tubular guide lugs 15 and 16, through which are slidable the guide rod structures R and R'. Each guide rod structure comprises the outer rod section 17 and an inner comparatively short rod section 18. The rod sections are connected together by a suitable joint 19 so constructed that it can pass through the respective lug 15 or 16. The lower end of each rod structure terminates in a stop flange or head 20 for engaging with the lower end of the guide lug when

the rods are raised, the distance between the stop flange and the joint being such that the joint will be just above the pedestal top 14 when the stop flange engages with the lug. The joint shown is of the tongue and groove type, although any other form of joint may be used.

At their upper ends, the rod structures support the instrument shelf 21. Secured on the shelf are the vertical instrument supporting sleeves or sockets 22 which, during normal position of the shelf above the pedestal top, are in axial alignment with the thimbles 13 through which the cords or tubes 11 extend, the sleeves receiving the instruments A and holding them in proper position by engagement with their upper edges of seating flanges 23 formed on the instrument bodies.

The upper ends of the upper rod sections 17 are of increased diameter to provide seating shoulders 24 for engaging with the pedestal top to normally support the shelf 21 in horizontal position above the top. In the joints 19 shown, the pivot or hinge axis is parallel with the shelf 21 so that with the arrangement thus far described, the shelf with the instruments thereon can be raised until the stop flanges 27 engage with the guide lugs 15 and 16, and the shelf can then be swung forwardly and downwardly on the joint axes until the upper rod sections 17 are horizontal and resting against the pedestal top 14, the shelf 21 being then in a vertical plane with the sleeve 22 and instruments horizontal, as shown in Fig. 1 and Fig. 3. To increase the adjustability of the instrument shelf, joints 25 may be provided between the shelf and the upper rod sections 17 with the axes of the joints at right angles with the axes of the joints 19, so that after the shelf has been swung in front of the pedestal, the axes of the joint 25 will be vertical and the shelf can then be swung laterally, as indicated in Fig. 3, the supporting rod structures during such lateral swinging turning in the guide lugs 15 and 16, respectively. The shelf has thus a wide range of movement and the instruments and tools thereon can be supported in convenient position for the operator. The thimbles 13 are flared and well rounded at their upper edges so that the cords or tubes may readily follow the movement of the shelf when it is adjusted and when the tools or instruments are being used. When the operator is fin-

ished, he swings the shelf into position in front of the pedestal and then swings it back into position over the pedestal top and then lowers it to permit the guide rods to slide into the pedestal and the plate and instruments thereon will then be in their normal position secure on top of the pedestal.

I thus provide simple and efficient means for enabling the various instruments and appliances to be extended from the pedestal to be supported in convenient position for the operator and for the work to be performed. I do not desire to be limited to the exact construction, arrangement and operation shown and referred to, as changes and modifications are possible which will still come within the scope of my invention, which I claim as follows:—

1. In a dental unit, the combination of a pedestal, an instrument supporting shelf and supporting means for said shelf, said supporting means permitting said shelf to be first raised and then to be swung to inclined position.

2. In a dental unit, the combination of a pedestal structure, an instrument supporting shelf, supporting rods normally supporting said shelf a distance above said pedestal top, said rods being slidable in said pedestal to permit said shelf to be raised, and joints in said rods permitting said shelf to be swung forwardly to be in front of said pedestal.

3. In a dental unit, the combination of a pedestal, an instrument supporting shelf over the top of said pedestal, supporting rods for said pedestal, said rods being shiftable to permit said shelf to be raised, and said rods comprising hinged sections for permitting said shelf to be swung forwardly of the pedestal after raising thereof and then to be swung laterally.

4. In a dental unit, the combination of a pedestal, rods supported on said pedestal to slide vertically, an instrument supporting shelf mounted on the upper end of said rods, means for limiting the upward movement of said rods and the shelf thereon, and hinged joints in said rods normally within said pedestal and adapted when brought above the pedestal top to permit the upper rod sections and the shelf thereon to be swung to bring the shelf in front of said pedestal.

5. In a dental unit, the combination of a pedestal, vertical rods supported in said pedestal to have sliding movement, a hinge joint in said rods normally within the pedestal and adapted when shifted above the top of the pedestal to permit said rods to be swung forwardly into horizontal position, an instrument shelf at the outer ends of said rods arranged horizontally when said rods are in vertical position within said pedestal and assuming a position in a ver-

tical plane when said rods are swung downwardly, and a hinged connection between said rods and shelf, said hinged connection co-operating with the lower ends of said rods to permit lateral swing of said shelf.

6. In a dental unit, the combination of a pedestal, vertical guide lugs on the top wall of said pedestal, guide rods slidable in said lugs, each guide rod comprising an upper section and a lower section hinged together, said lower section being normally below the pedestal top, an instrument shelf secured to the upper ends of the upper rod sections to be normally above the pedestal top in horizontal position, said sliding rod structures permitting said shelf to be raised, means stopping the upward movement of said rod structures when their joints are brought above the pedestal top, said joints being arranged so that the top may then be swung forwardly into horizontal position to bring the top into a vertical plane in front of the pedestal.

7. In a dental unit, the combination of a pedestal having vertical guide lugs, a guide shelf normally positioned horizontally and above the pedestal top, guide rod structures hinged at their upper ends to said shelf and extending downwardly through said guide lugs, lower sections for said rods secured thereto by hinged connections, means at the lower ends of said lower sections for stopping upward movement of said rod structures when said hinge connections are raised above the pedestal top, said rod structures being then adapted to be swung forwardly into horizontal position to bring the instrument shelf into a vertical plane in front of the pedestal, the hinge connections between said rods and shelf then permitting said rods to swing laterally to carry said shelf to various lateral positions.

8. In a dental unit, the combination of a pedestal, vertical guide lugs on said pedestal, an instrument supporting shelf, guide rods having connection at their upper ends with said shelf and extending through said guide lugs whereby said shelf and rods may be raised and lowered, extensions at the lower ends of said guide rods having hinged connection therewith and adapted when raised into said guide lugs with the hinged connections above the pedestal top to permit swing of said rods into horizontal position to bring said plate in front of said pedestal, the connection between said rods and shelf permitting horizontal hinge movement whereby said shelf, after being brought into position in front of said pedestal, may be swung with said rods into various lateral positions.

In witness whereof, I hereunto subscribe my name this 22nd day of July, 1925.

OSCAR H. PIEPER.