Jan. 6, 1942. H. R. NERBAS 2,269,061

DENTAL ARTICULATOR

Filed April 21, 1941 2 Sheets-Sheet 1

Fig. 1.

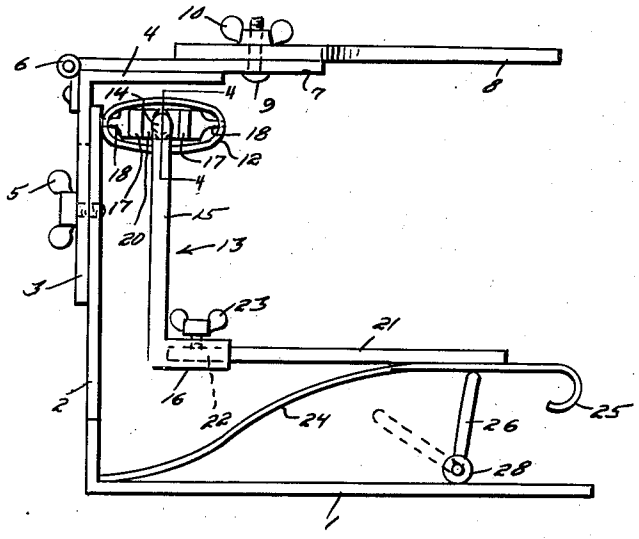
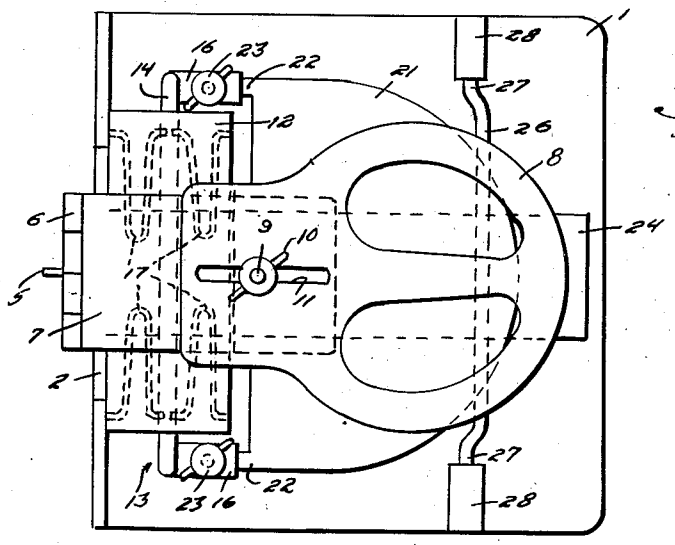


Fig. 3.



Inventor

Herman Richard Nerbas

By Clarence A. O'Brien

Attorney

Jan. 6, 1942. H. R. NERBAS 2,269,061

DENTAL ARTICULATOR

Filed April 21, 1941 2 Sheets-Sheet 2

Fig. 2.

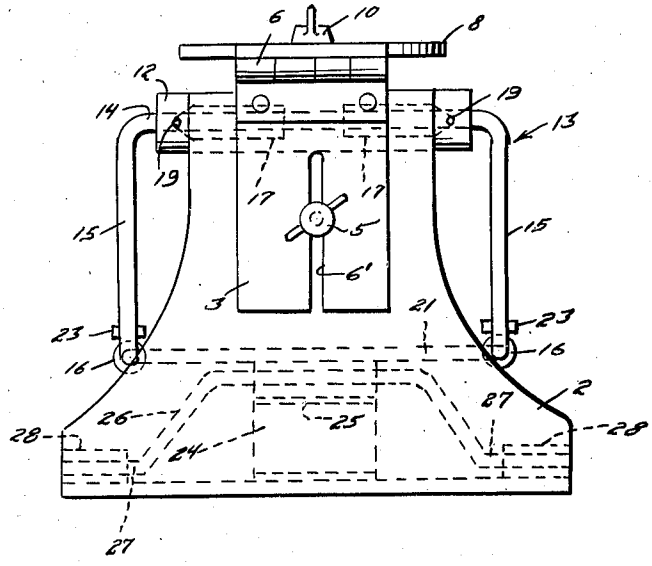


Fig. 4.

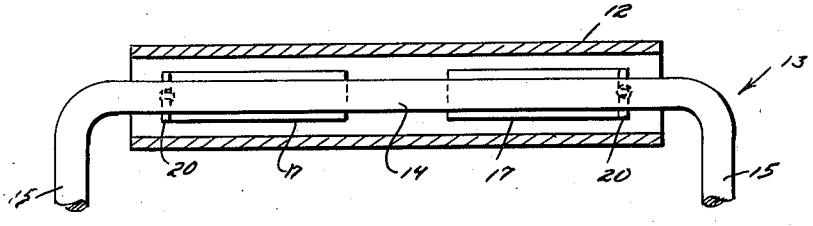
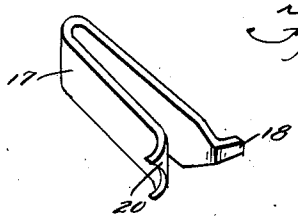


Fig. 5.



Inventor

Herman Richard Nerbas

By Clarence A. O'Brien

Attorney

Patented Jan. 6, 1942

2,269,061

UNITED STATES PATENT OFFICE

2,269,061

DENTAL ARTICULATOR

Herman Richard Nerbas, Roseburg, Oreg.

Application April 21, 1941, Serial No. 389,672

3 Claims. (Cl. 32—32)

The present invention relates to new and useful improvements in dental articulators and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character comprising a novel mounting for the lower jaw supporting member whereby the lower jaw may be moved laterally as well as forward, backward and vertically relative to the upper jaw.

Another very important object of the invention is to provide a dental articulator comprising novel means for adjustably supporting the upper jaw.

Other objects of the invention are to provide an articulator of the character described which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of a dental articulator constructed in accordance with the present invention.

Figure 2 is a view in rear elevation of the device.

Figure 3 is a top plan view.

Figure 4 is a vertical sectional view, taken substantially on the line 4—4 of Figure 1.

Figure 5 is a detail view in perspective of one of the resilient supporting elements for the lower jaw.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a flat base 1 of suitable dimensions and material. Rising from one end of the base 1 is an integral back plate 2 of substantially the shape shown to advantage in Figure 2 of the drawings.

Adjustably mounted on the back plate 2 is an angular bracket 3, said bracket including a flange 4 which projects forwardly over said back plate and the base 1. A thumb screw 5 secures the bracket 4 in position on the back plate 2. A vertical slot 6' in the bracket 3 accommodates the thumb screw 5 and permits adjustment of said bracket on the back plate 2.

Hingedly mounted at 6 on the angle of the bracket 3 for swinging movement in a vertical plane and adapted to rest on the flange 4 of said bracket is a flat bar or arm 7. Adjustably mounted on the arm 7 is an upper jaw holding member 8. A bolt 9 provided with a wing nut 10 secures the upper jaw holding member 8 in position on the arm 7. A longitudinal slot 11 in the member 8 accommodates the bolt 9 and permits adjustment of said member 8.

Secured transversely in a suitable manner, as by soldering or welding, on the upper portion of the back plate 2 is a substantially oval tube 12 of suitable material. Shiftily and swingably mounted in the tube 12 is a hanger 13. The hanger 13 includes a rod 14 which passes through the tube 12 and from the ends of which legs 15 depend. The legs 15 terminate, at their lower ends, in forwardly directed sockets 16.

The rod 14 is mounted for movement in all directions in the tube 12 through the medium of pairs of substantially V-shaped springs 17. As illustrated to advantage in Figure 5 of the drawings, the springs 17 terminate at one end in outturned lugs 18. The lugs 18 are engaged in openings 19 which are provided therefor in the longitudinal side walls of the tube 12. The springs 17 further include inturned inner end portions 20 which are recessed for the reception of the rod 14. Thus, the rod 14 is rotatably and yieldingly supported in the tube 12 in spaced relation to the walls of said tube.

A lower jaw holding member is indicated at 21 and comprises fingers or the like 22 which are releasably secured in the sockets 16 by thumb screws 23. A spring 24 has one end portion secured to the rear portion of the base 1, said spring extending forwardly and upwardly for yieldingly supporting the member 21. The spring 24 terminates at its forward end in a loop 25. Mounted for swinging movement on the base 1 is a transversely extending, substantially U-shaped prop 26 which is engageable beneath the spring 24 for positively supporting the member 21 when desired. The substantially U-shaped prop 26 terminates in offset, aligned trunnions 27 which are journaled in bearings 28 on the base 1.

It is thought that the manner in which the articulator is used will be readily apparent from a consideration of the foregoing, particularly to those of the dental profession. Briefly, the cast upper and lower jaws (not shown) are mounted on the members 8 and 21 in the usual manner. As hereinbefore indicated, the upper jaw may be swung in a vertical plane through the medium of the hinge connection 6 while the slots 6' and 11 permit other adjustments to be made as desired. The mounting of the hanger 13 for shifting and swinging movement in the substantially oval tube 12, through the medium of the pairs of springs

17, permits the lower jaw to be readily moved laterally as well as back and forth and vertically. By swinging the member 26 to the position shown in full lines in Figure 1 of the drawings, thereby engaging said member beneath the spring 24, a rigid or positive support is provided for the lower jaw.

It is believed that the many advantages of a dental articulator constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A dental articulator comprising a support, a tube mounted on said support, a rod extending through said tube, a plurality of substantially V-shaped springs mounted in the tube and having one end anchored therein, the other ends of the springs being engaged with the rod for floatingly and rotatably supporting said rod in the tube in spaced relation thereto, and a cast jaw holder mounted on the rod.

2. A dental articulator comprising a base, a back plate rising from said base, a tube of substantially oval cross section mounted horizontally on the upper portion of said back plate, a rod extending through the tube, pairs of coacting, substantially V-shaped springs mounted in the tube for yieldingly and rotatably supporting the rod therein in spaced relation to the walls of said tube, said springs including lugs on one end anchored in the tube, the other ends of the springs being recessed and engaged with the rod, legs depending from the ends of the rod, socket member projecting angularly from the lower ends of said legs, a cast jaw holder, and fingers on said holder secured in said socket members.

3. A dental articulator comprising a support, a cast jaw holder movably mounted on said support, a spring mounted on the support and engaged beneath the holder for yieldingly supporting same, and a substantially U-shaped member mounted for swinging movement on the support and engageable beneath the spring for firmly supporting the holder.

HERMAN RICHARD NERBAS.