C. F. GARRETSON.

DENTAL APPARATUS.

APPLICATION FILED APR. 8, 1921.

1,402,225. Patented Jan. 3, 1922.

Fig. 1.

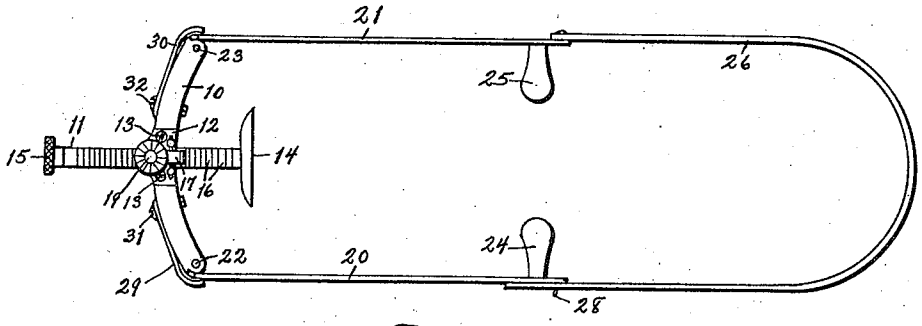


Fig. 2.

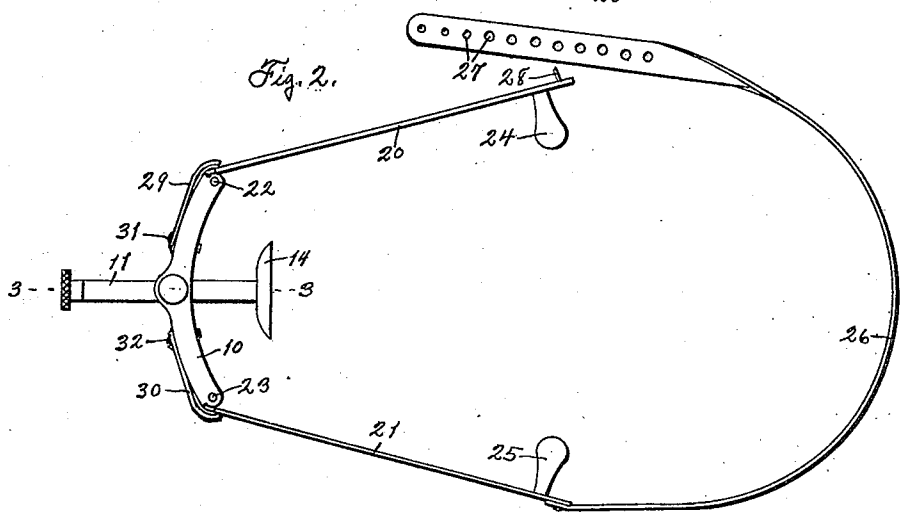
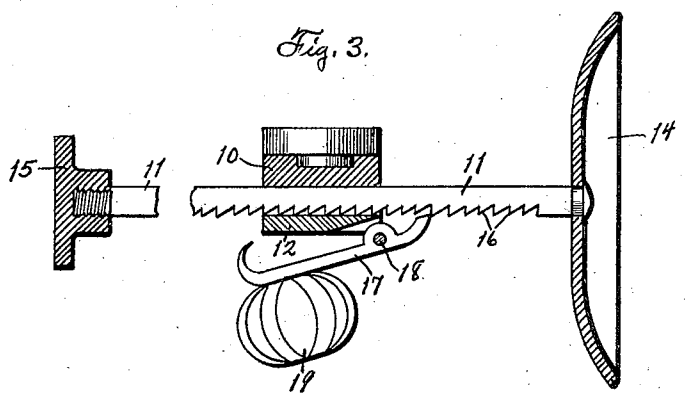


Fig. 3.



Inventor:

Charles F. Garretson

UNITED STATES PATENT OFFICE.

CHARLES F. GARRETSON, OF KNOXVILLE, IOWA.

DENTAL APPARATUS.

1,402,225. Specification of Letters Patent. Patented Jan. 3, 1922.

Application filed April 8, 1921. Serial No. 459,806.

To all whom it may concern:

Be it known that I, CHARLES F. GARRETSON, a citizen of the United States of America, and resident of Knoxville, Marion County, Iowa, have invented a new and useful Dental Apparatus, of which the following is a specification.

This invention relates to and is an improvement on the dental articulator described and claimed in Letters Patent of the United States No. 996,075, granted to me on June 27, 1911.

The object of this invention is to produce a device of the class described which is easily adjusted to the desired position and is extremely efficient in use.

My invention consists in the construction, arrangement and combination of elements hereinafter set forth, pointed out in my claims and illustrated by the accompanying drawing, in which—

Figure 1 is a bottom plan of the apparatus showing the parts in their relative positions as required for practical use. Figure 2 is a plan view showing the parts in a slightly different relation. Figure 3 is a section on an enlarged scale on the indicated line 3—3 of Figure 2.

In the construction of the apparatus as shown the numeral 10 designates a cross-head which preferably is slightly curved on a vertical axis. A bar 11 is slidably mounted through the central portion of the cross-head 10 in a horizontal position, said bar being mounted in a notch opening to the lower side of said cross-head and closed by a plate 12 held in place by screws 13. The bar 11 has secured to its inner end a chin pad 14 and to its outer end a head or knob 15, which members normally prevent removal of said bar from its seat in the cross-head by limiting sliding movement thereof. The bar 11 is formed on its lower face with ratchet teeth 16 extending throughout a major portion of its length. A pawl 17 is pivoted between its ends on a pin 18 transversely arranged and carried by the plate 12. One end of the pawl 17 is adapted to engage selectively the ratchet teeth 16 of the bar 11 and prevent outward movement of said bar in its seat in the cross-head. A combined weight and finger piece 19 is secured to the opposite end of the pawl 17 and when the device is in its normal position as shown in Figures 2 and 3 said member 19, by force of gravity, normally causes said pawl to engage the ratchet teeth of the bar 11. The member 19 also is adapted to be engaged manually by an operator to oscillate the pawl 17 as desired.

Arms 20, 21 are pivoted on vertically arranged pins 22, 23 respectively, carried by opposite end portions of the cross-head 10. Ear tips 24, 25 are carried by the opposite end portions of the arms 21 on the inner faces thereof and said tips are adapted to enter the ears of a patient to assist in holding the apparatus in position for use. A leather strap 26 is pivotally secured to the free end portion of the arm 21 and at its opposite end is formed with a series of holes 27 adapted to engage selectively a stud 28 projecting outwardly from the free end portion of the arm 20. Leaf springs 29, 30 are secured by means of screws 31, 32 to the outer face of the cross-head 10 on opposite sides of the center thereof and said springs are curved at their free ends and engage the outer faces of the arms 20, 21. It is the function of the springs 29, 30 to press the arms 20, 21 inwardly, thus tending to hold the ear-tips 24, 25 in the ears of a patient.

In practical use the apparatus is arranged as shown in Figures 2 and 3, with the pawl 17 on the lower side of the cross-head. The arms 20, 21 are spread manually against the action of the springs 29, 30 and the ear tips 24, 25 are placed within the ears of a patient, after which the strap 26 is caused to embrace the rear portion of the head and the free end is secured to the arm 20 by engaging one of the holes 27 over the stud 28 in such manner that said strap is held tightly against the back of the patient's head. In this manner the apparatus is held in position for use. Then the bar 11 is moved inwardly by manual pressure on the head 15 until the chin pad 14 engages the chin of the patient, and the pawl 17, controlled by the weight 19, engages a tooth of said bar and tends to prevent reverse movement thereof. The chin pad 14 is arranged in this way so as to support the lower jaw of the patient in the desired position to obtain the proper articulation.

The arrangement of the pawl and the combined weight and finger piece relative to the head 15 of the bar is such that the bar and pawl may be manipulated simultaneously by one hand of the operator; the head 15 being engaged between the thumb and

fore-finger for sliding movement of the bar, while the finger-piece 19 is engaged and raised by another finger, whereby the apparatus may be very quickly and easily adjusted to the desired position.

I claim as my invention—

1. A dental articulator, comprising a cross-head, a bar slidably mounted in the central portion thereof, a chin pad on the inner end of said bar, means to prevent outward movement of said bar, arms pivotally connected to end portions of said cross-head, ear tips carried by opposing faces of said arms and flexible means for connecting free end portions of said arms.

2. A dental articulator, comprising a cross-head, a bar slidably mounted in the central portion thereof, a chin pad on the inner end of said bar, means to prevent outward movement of said bar, arms pivotally connected to end portions of said cross-head, ear tips carried by opposing faces of said arms and flexible means for connecting free end portions of said arms, together with springs mounted on said cross-head and impinging and acting upon said arms and urging them toward each other.

3. A device of the class described, comprising a cross-head, a bar slidably mounted in the central portion thereof, a chin pad carried by the inner end of said bar, means secured to the outer ends of said cross-head for securing the device to the head of a patient, said bar being formed with ratchet teeth, and a gravity pawl pivoted on said cross-head and adapted to engage the teeth of said bar to prevent outward movement thereof.

4. In a device of the class described, having a cross-head, means secured to the outer ends of said cross head for attaching the device to the head of a patient, a bar slidably mounted in the central portion of said cross-head, and a chin piece carried by the inner end of said bar, said bar being formed on its lower face with ratchet teeth, the combination with said cross-head and bar of a pawl pivoted between its ends on said cross-head beneath said bar, the inner end of said pawl being adapted for engagement with the teeth of said bar between the chin piece and cross-head to prevent outward movement thereof, and a combined weight and finger piece carried by the outer end of said pawl and adapted by gravity to hold it normally in engagement with the teeth of said bar.

CHARLES F. GARRETSON.