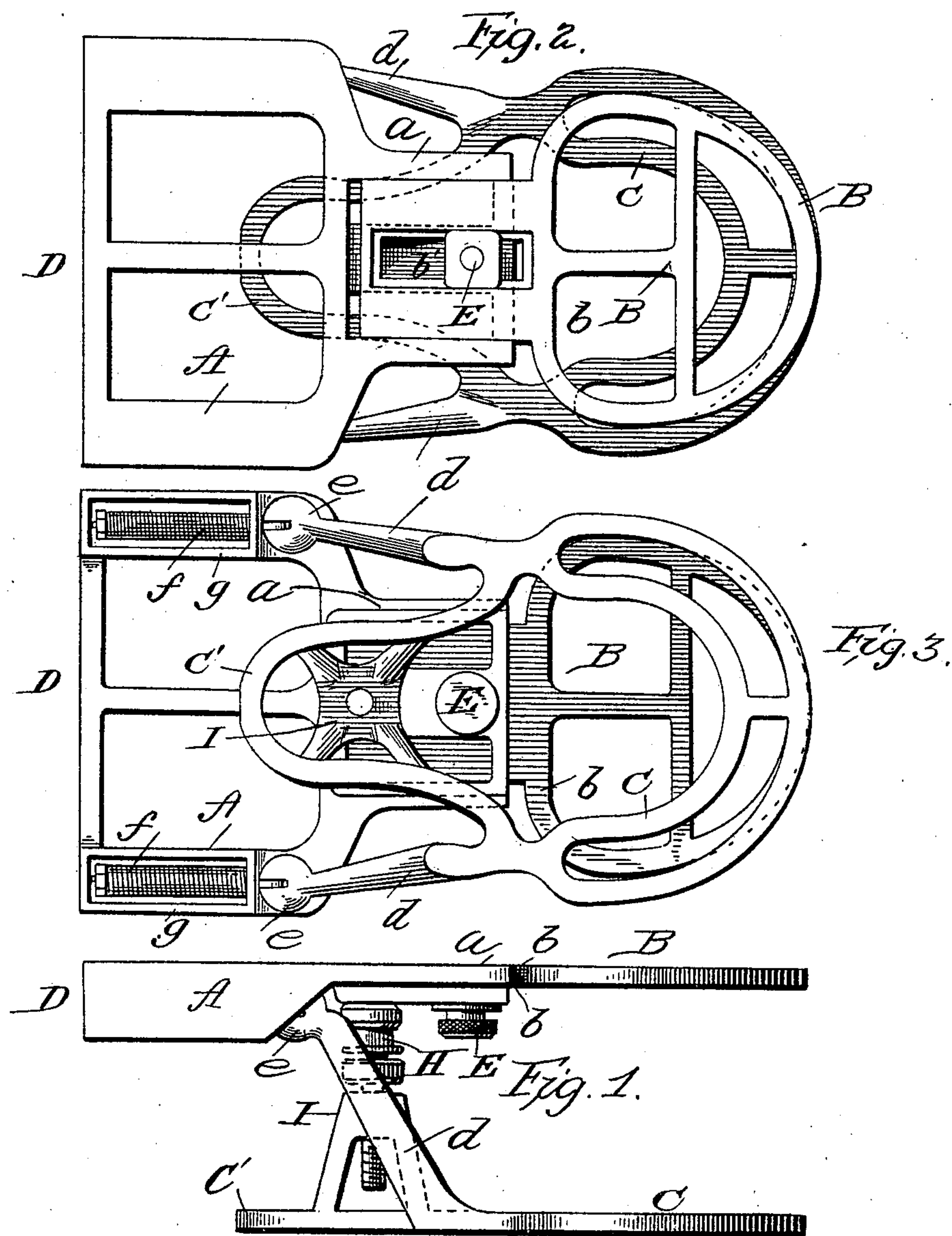


(No Model)

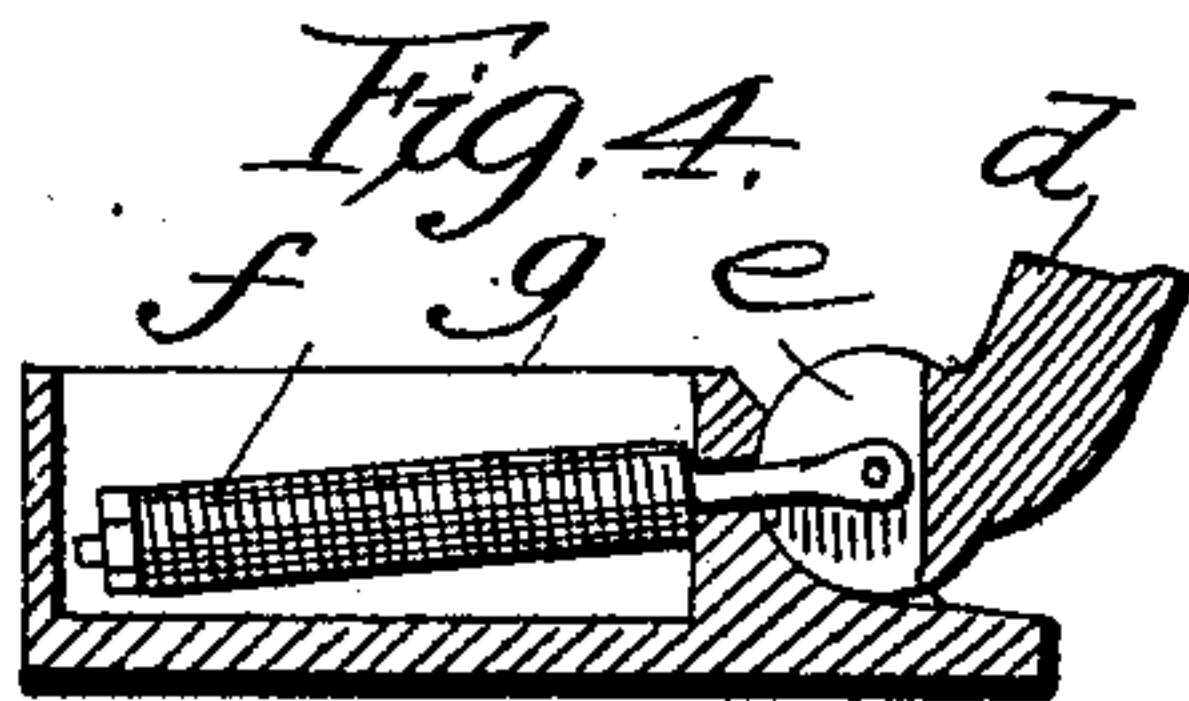
F. FOURT.  
DENTAL ARTICULATOR.

No. 582,731.

Patented May 18, 1897.



Attest  
*Charles S. Richardson*  
Charles S. Richardson



Inventor  
Frank Fourt  
by *Richardson*  
Att'y.



# UNITED STATES PATENT OFFICE.

FRANK FOUNT, OF FAIRFIELD, IOWA.

## DENTAL ARTICULATOR.

SPECIFICATION forming part of Letters Patent No. 582,731, dated May 18, 1897.

Application filed February 5, 1896. Serial No. 578,134. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK FOUNT, a citizen of the United States, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented an Improved Dental Articulator, of which the following is a specification.

My invention relates to dental articulators having upper and lower members hinged together; and it consists, first, of the construction of the hinged or jointed parts with rearwardly-extending ends and hinging or jointing them together so their rearwardly-extending ends will, when the articulator is opened, come in contact and hold the members substantially at right angles to each other, and the articulator will stand on the outer face of either member and be readily tilted from one position to the other without doubling up or falling over; also, of an improved form of hinge or joint and of other improvements in the details of construction hereinafter set forth.

In the accompanying drawings, Figure 1 is a side elevation of the device. Fig. 2 is a plan view. Fig. 3 is a bottom view, and Fig. 4 is a detail view.

In the drawings, A represents a body-piece, and B the upper-jaw piece secured to said body-piece so as to have longitudinal adjustment thereon.

C represents a lower-jaw piece having upwardly-extending arms *d*, which are hinged to the body-piece at *e*. The joint *e* is placed a sufficient distance above the base of the lower-jaw piece to permit the upper-jaw piece to stand parallel with it and leave sufficient room between them for the dentist's models, which are not shown in the drawings.

The rear end C' of the base of the lower-jaw piece is extended a little backward of the joint *e*, and the rear end D of the body-piece is extended as far behind the joint *e* as it is above the base of the lower-jaw piece. By this arrangement the rear end of the body-piece will, when the articulator is opened, come in contact with the rear end of the base of the lower-jaw piece and will hold the upper and lower jaw pieces at substantially right angles to each other. The upper-jaw piece will be held in a perpendicular position, while the rear end D of the body-piece, which is preferably made broad and rectan-

gular, will rest on the table upon which the articulator may be standing and will help support it in position.

Should the dentist desire to place the upper-jaw piece in a horizontal position while the articulator is open to manipulate the model which may be secured thereto or for any other purpose, all he has to do is to tip the articulator over on its upper face. The faces of the body-piece and the upper-jaw piece, which is secured to it, being flat and in alinement with each other, will support the articulator firmly and hold the lower-jaw piece in a perpendicular position. In tipping the articulator from one position to the other the upper edge of the rear end of the body-piece will form the pivot or fulcrum, and the articulator may be readily tipped from one position to the other without doubling up or falling over.

In order to keep the upper face of the body-piece in alinement with the face of upper-jaw piece and yet retain their longitudinal adjustment, I form a recess in the face of the inner end *a* of the body-piece and make the end *b* of the jaw-piece to fit this recess and fill it flush with the face of the body-piece. I also form a recessed slot *b'* in the end *b* of the jaw-piece and pass a thumb-screw E up through a hole in the recessed part of the body-piece and also through the slot *b'*. The thumb-screw E is fitted with a nut which fills the recessed portion of the slot *b'* flush, but does not extend above the face of the jaw-piece. By loosening this thumb-screw, which is readily done from the under side, the jaw-piece may be readily adjusted on the body-piece to the extent of the slot *b'*, and by tightening it the parts will be firmly held together. With the exception of this longitudinal adjustment, which is necessary at some point between the upper and lower jaw pieces of dental articulators, the body-piece A and the upper-jaw piece B practically form a single part, and I consider them as constituting the upper member of my articulator. By providing for this longitudinal adjustment of the upper and lower jaw pieces in other ways known to the art the body-piece and upper-jaw piece might be made in one integral part; but I prefer to construct them of two parts, as herein described.



To support the thumb-screw II, which regulates the distance the jaw-pieces are held apart, I form a pyramidal-shaped frame I on the inner central part of the base of the lower-jaw piece toward its rear end and mount the thumb-screw in the upper end of this frame. Hitherto this support has been a bar extended across the frame of the articulator or a bracket formed thereon. These bars or brackets are more or less in the way, but with my pyramidal or cone shaped support extended up from the inner central part of the base of the lower-jaw piece there is but little more space occupied than is required for the thumb-screw alone, and there is nothing to impede the sweep of the fingers of the operator around it.

The hinge or joint between the body-piece and lower-jaw piece is formed by the upwardly-extending arms *d* terminating in ball-shaped ends which turn in sockets formed on the under edges of the body-piece at *e*. In the rear of these sockets the side portions of the body-piece are formed with recesses which are surrounded by walls *g*. A perforation is made in the center of each socket through the wall separating it from the end of the recess.

A slot is cut in the ball ends of the arms *d*, and rods or strips of metal are secured therein by pins passed laterally through them and the ball ends, so as to form a jointed connection. These connecting rods or strips are passed through the perforations in the walls of the sockets and are then encircled by coiled springs *f*, which are secured thereon by nuts on the ends of the rods, as shown in Figs. 3 and 4, Fig. 4 being an inverted longitudinal section of one of the side portions of the body-piece A. By this arrangement the ball ends of the arms *d* are securely held in the center of the sockets at *e* by the tension of the springs *f*, and the lower-jaw piece C is securely hinged to the body-piece A and by it to the upper-jaw piece B. The ball ends will always turn snugly in the sockets, and will thus prevent the looseness of ordinary joints which may be caused by wear or by careless fitting. The spring connections will

permit either one or both of the ball ends to be drawn a little away from their sockets, so as to produce a lateral or grinding movement of the jaw-pieces, as in masticating, or a protruding movement of the lower-jaw piece, as in incising.

I do not wish it understood that I restrict myself to the precise construction herein described, as I desire to avail myself of the equivalents permitted by law.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of upper and lower members hinged together at a point above the base of the lower member, and at approximately an equal distance from the rear end of the upper member, the rear ends of the members being adapted to come in contact when the articulator is opened, and to hold the members at approximately right angles with each other, substantially as described.

2. In dental articulators, the combination of an upper member having spherical-shaped sockets set at an angle of substantially forty-five degrees on the under sides of its body, a lower member having arms projecting into said sockets and having ball-shaped ends adapted to turn therein, and means to adjustably connect the parts together, substantially as described.

3. The combination of a body-piece having rearwardly-extended side portions, a lower-jaw piece having upwardly-extending ends adapted to fit in sockets in the side portions of the body-piece and hinge therein, pins jointed to said ends and passed through the walls of said sockets, and springs encircling said pins so as to draw the ends of the jaw-piece into the sockets, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

FRANK FOUNT.

Witnesses:

WILLIAM JAMES HOWELL,  
MABEL CLETUS CLAPPER.