

No. 619,586.

Patented Feb. 14, 1899.

T. G. LEWIS.
DENTAL ARTICULATOR.

(Application filed Oct. 29, 1898.)

(No Model.)

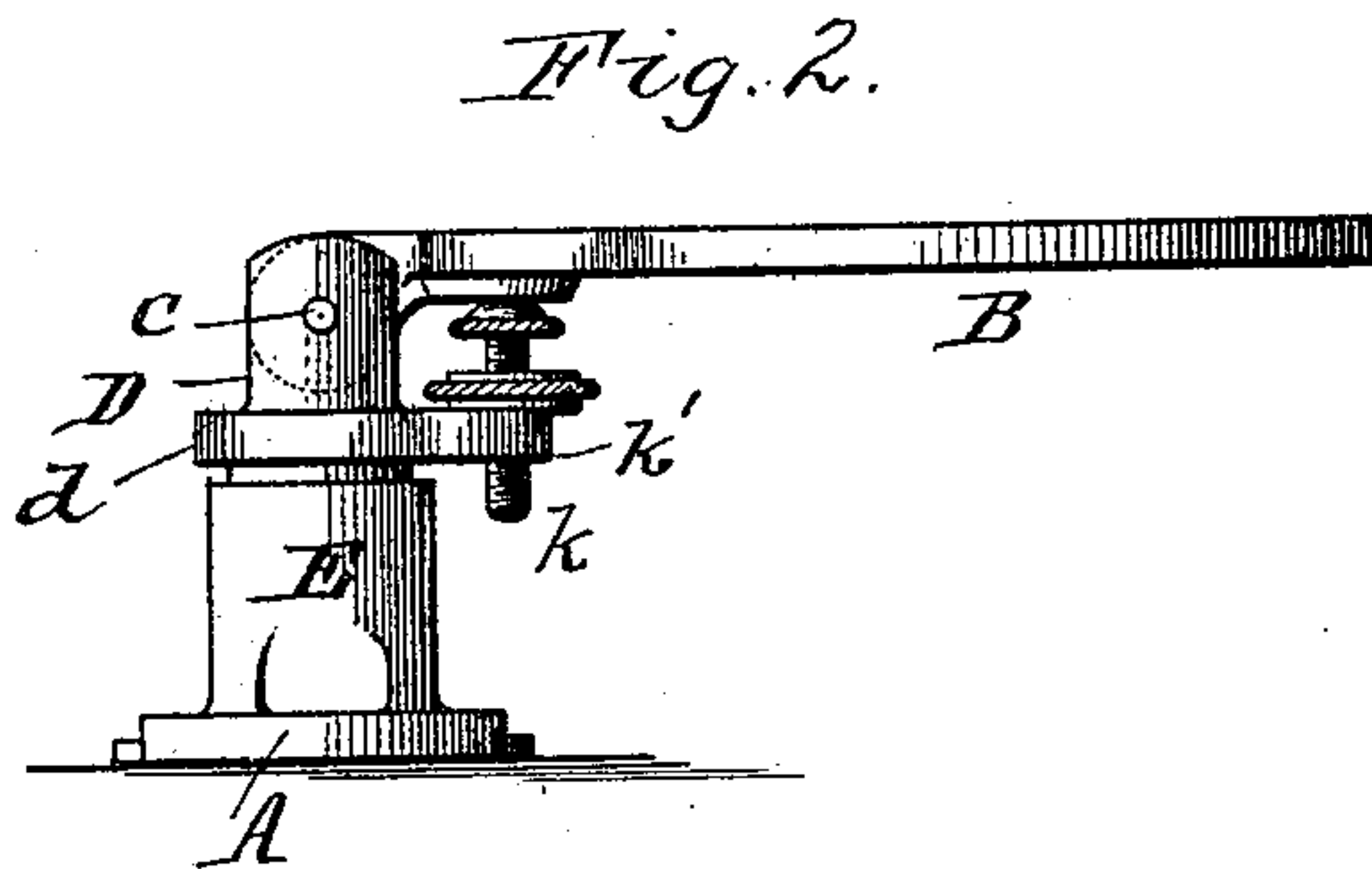
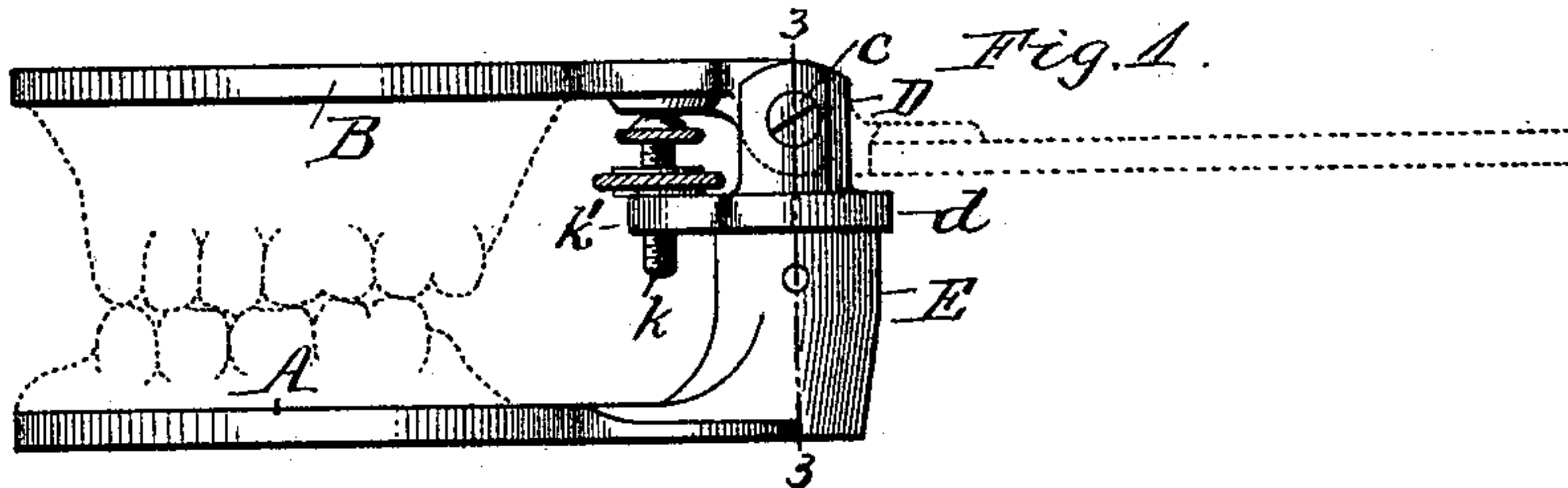


Fig. 5.

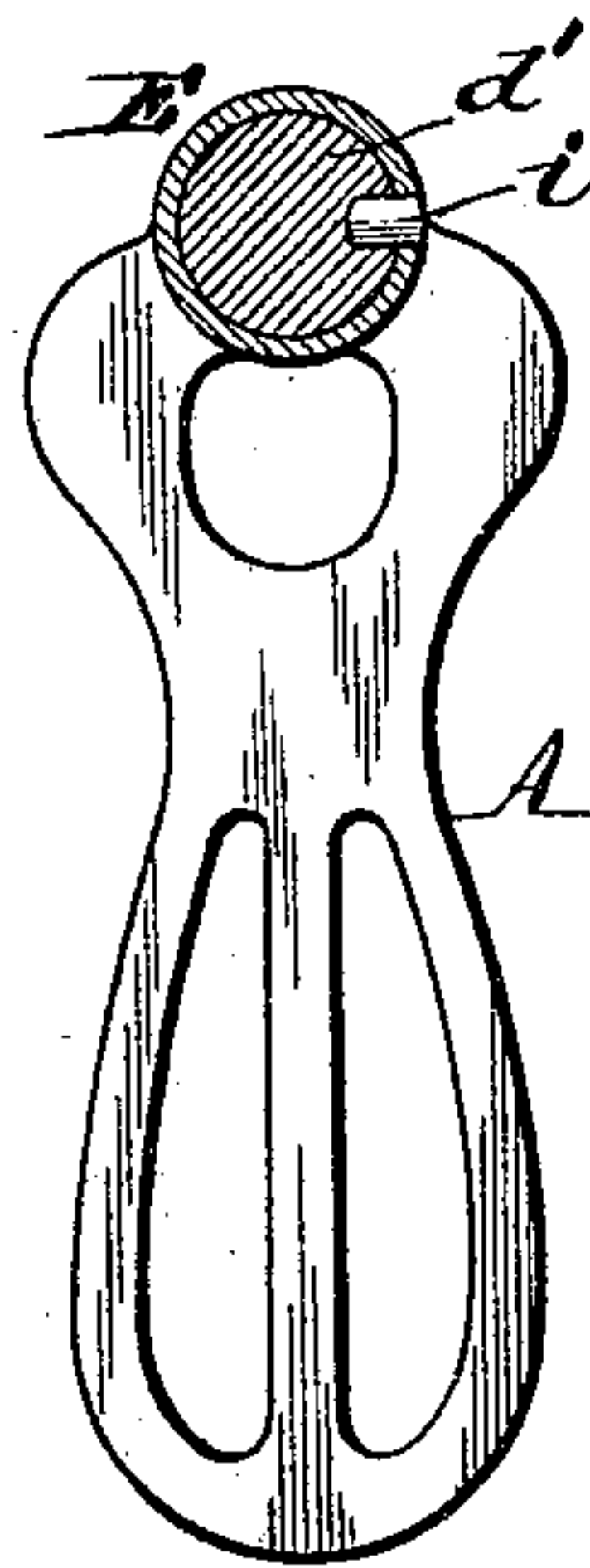


Fig. 3.

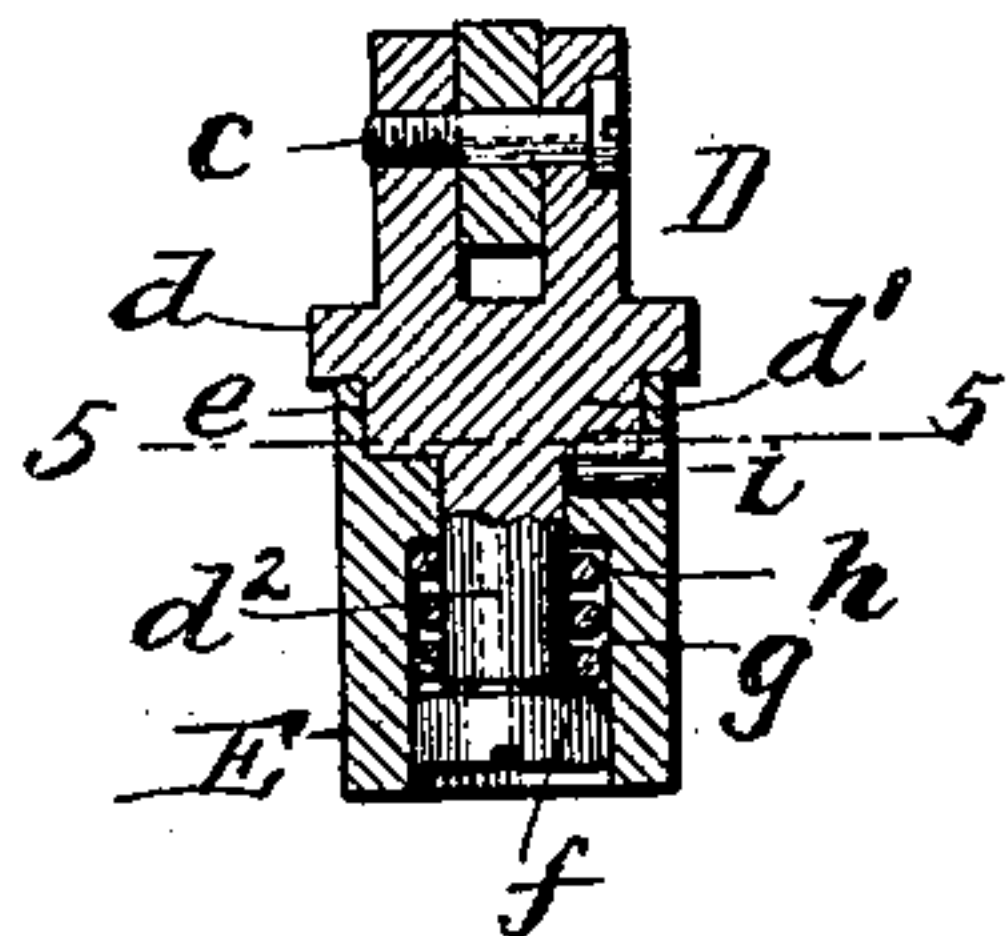


Fig. 4.

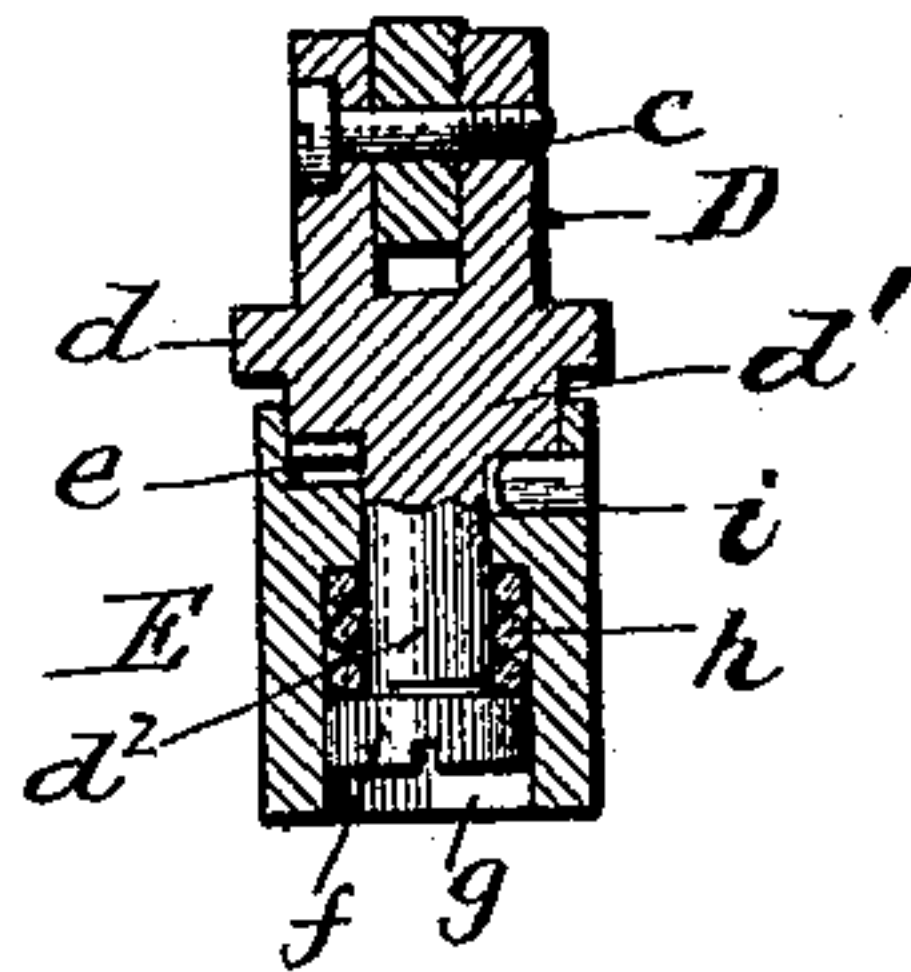
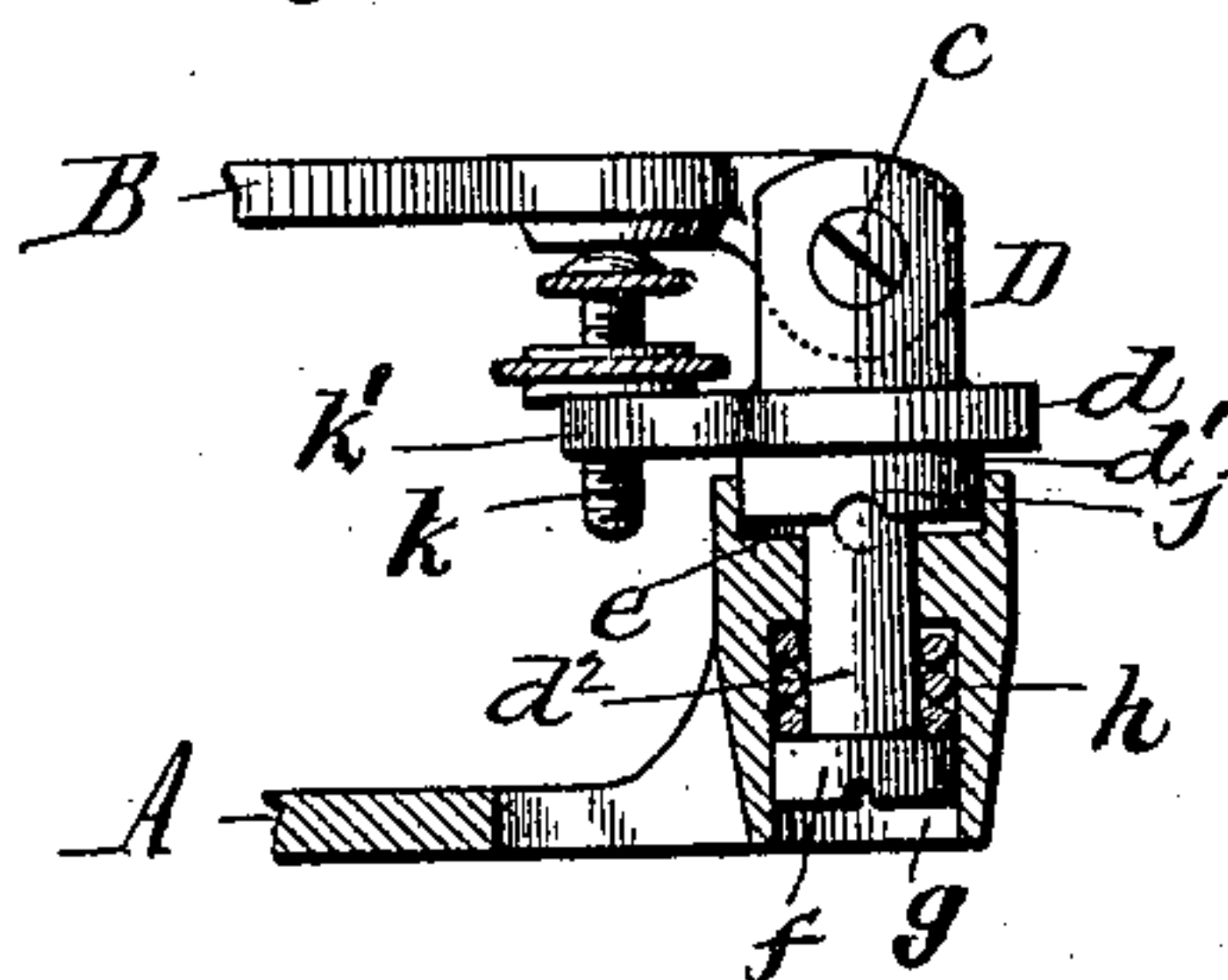


Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

THEODORE G. LEWIS, OF BUFFALO, NEW YORK, ASSIGNOR TO THE BUFFALO DENTAL MANUFACTURING COMPANY, OF SAME PLACE.

DENTAL ARTICULATOR.

SPECIFICATION forming part of Letters Patent No. 619,586, dated February 14, 1899.

Application filed October 29, 1898. Serial No. 694,883. (No model.)

To all whom it may concern:

Be it known that I, THEODORE G. LEWIS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Dental Articulators, of which the following is a specification.

This invention relates to dental articulators, and more especially to an articulator for fitting an artificial crown in position and testing the proper occlusion of its cusps before the final adjustment in the mouth.

The object of my invention is to produce an inexpensive articulator of this character which is capable of performing the necessary movements to make the desired test and to provide the device with simple means for holding the upper-jaw plate in its normal position above the base or lower-jaw plate, while at the same time permitting the requisite lateral movement of the plate.

In the accompanying drawings, Figure 1 is a side elevation of my improved articulator. Fig. 2 is a front view thereof with the upper-jaw plate turned at right angles to the base or lower jaw. Fig. 3 is a transverse vertical section in line 3 3, Fig. 1, showing the position of the parts when the upper-jaw plate is locked in its normal central position. Fig. 4 is a similar section showing the position of the parts when said plate is unlocked and turned laterally to a position on the rear side of its vertical pivot. Fig. 5 is a horizontal section in line 5 5, Fig. 3. Fig. 6 is a sectional side elevation of the rear portion of the articulator.

Like letters of reference refer to like parts in the several figures.

A is the base or lower-jaw plate of the articulator, and B the upper-jaw plate, which is capable of swinging both vertically and laterally with reference to the lower-jaw plate. For this purpose the rear or inner end of the upper-jaw plate is hinged by a horizontal pivot or screw *c* to the bifurcated upper end of an upright post or pivot D, which turns in a standard or bearing E, rising from the rear end of the lower-jaw plate. This post is provided with a projecting flange or collar *d*, adapted to rest on the upper end of the standard E, and below this flange with a cylindrical

portion *d'*, which is seated in a corresponding socket *e*, formed in the upper portion of the standard. The lower portion *d²* of the pivot-post is reduced to form a cylindrical stem, and this stem is screw-threaded at its lower end and provided with a nut *f*. The standard E is formed in its lower portion with a recess *g*, which receives the lower portion of the stem *d²* and its nut, and the solid portion or web of the standard between this recess and the socket *e* is provided with an opening for the passage of the stem, as shown in Figs. 3 and 4.

h is a spring applied to the stem *d²* between its nut *f* and the upper end of the recess *g* and tending to hold the enlarged portion *d'* of the pivot-post in its depressed position in the seat of the standard D, as shown in Figs. 1 and 3.

i is a horizontal locking or retaining pin arranged in one side of the standard and projecting into the socket *e* thereof. The enlarged portion of the pivot-post is provided in its under side with a radial locking recess or notch *j*, which is adapted to interlock with the pin *i* of the standard when brought into register therewith, as shown in Figs. 3 and 5, thereby holding the post and the upper-jaw plate carried by the same against turning. This locking pin and notch are so located that the pivot-post is locked when the upper-jaw plate is in its normal position directly over the lower-jaw plate. The locking-pin projects above the bottom of the socket *e*, so that when the upper-jaw plate is turned laterally on either side of its normal or central position the enlarged portion *d'* of the pivot-post rides up on the locking-pin, causing the post to rise on the standard and compressing the spring *h*. When the upper jaw is restored to its central position, the spring draws the post down in the standard, interlocking its notch with the pin *i*. The pin is cylindrical or provided with a convex upper surface, and the locking-notch of the post is correspondingly curved, as shown. By this construction when the jaw-plate after having been swung aside is turned back toward its normal position it is automatically centered over the lower-jaw plate and locked in that position as soon as either side of the

locking-notch enters into engagement with the locking-pin, this automatic rotary movement of the pivot-post being effected by the downward pressure of the spring *h* and the
 5 cam action of the notch against the locking-pin.

The vertical movement of the pivot-post in the standard not only permits of this locking action, but also allows the upper-jaw plate
 10 to rise and fall at its hinged end as well as at its free end, as in the human jaw. This movement of the upper-jaw plate, in conjunction with its lateral movement, enables the operator to accurately test the proper occlu-
 15 sion of the cusps of an artificial crown or tooth.

k is the usual adjusting-screw for adjusting the height of the upper-jaw plate, which screw is arranged in a lug *k'*, projecting forwardly from the flange of the pivot-post.

20 I claim as my invention—

1. The combination with the base or lower-jaw plate provided at its rear end with a standard or bearing, of an upright rotary pivot journaled in said standard and capable of
 25 sliding vertically therein, a spring which tends to hold said pivot in its depressed position, and an upper-jaw plate attached to said pivot, substantially as set forth.

30 2. The combination with a base or lower-jaw plate provided with a standard having a

locking pin or projection, of a rotary pivot or post turning in said standard and capable of sliding vertically therein and having a notch or recess adapted to interlock with said locking-pin, a spring which holds the notched pivot
 35 in engagement with said locking-pin, and an upper-jaw plate carried by said pivot, substantially as set forth.

3. The combination with the base or lower-jaw plate provided with a standard having a
 40 recess in its lower portion, a cylindrical socket in its upper portion and a locking-pin which projects into the lower portion of said socket, of a pivot or post having a cylindrical upper
 45 portion seated in said socket and provided in its under side with a locking-notch adapted to interlock with said pin and having a reduced stem extending downwardly into the recess of the standard and provided at its
 50 lower end with a nut or enlargement, a spring applied to said stem between its nut and the upper end of said recess, and an upper-jaw plate carried by said post, substantially as set forth.

Witness my hand this 18th day of October, 55 1898.

THEODORE G. LEWIS.

Witnesses:

CARL F. GEYER,
 ELLA R. DEAN.