

No. 709,834.

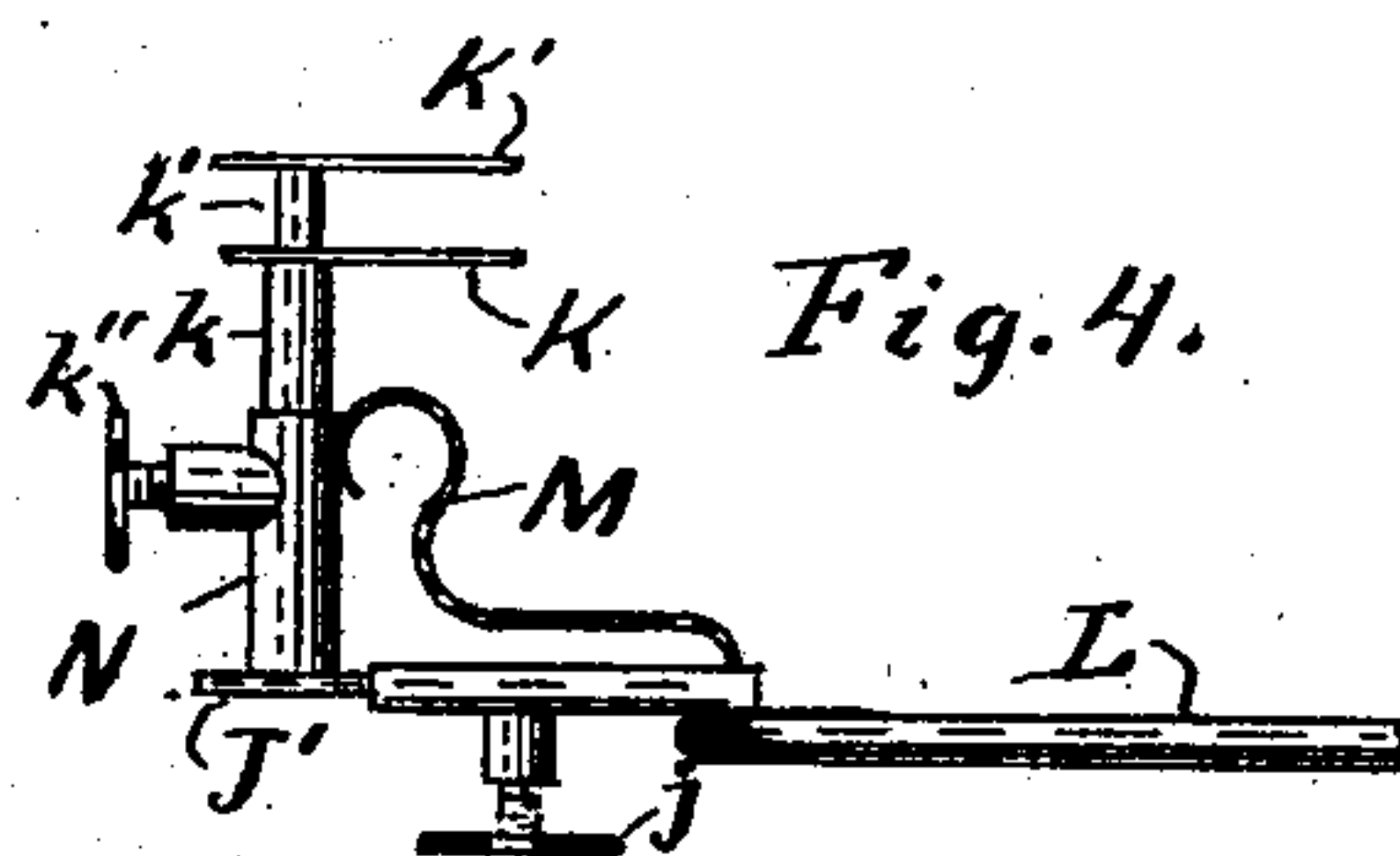
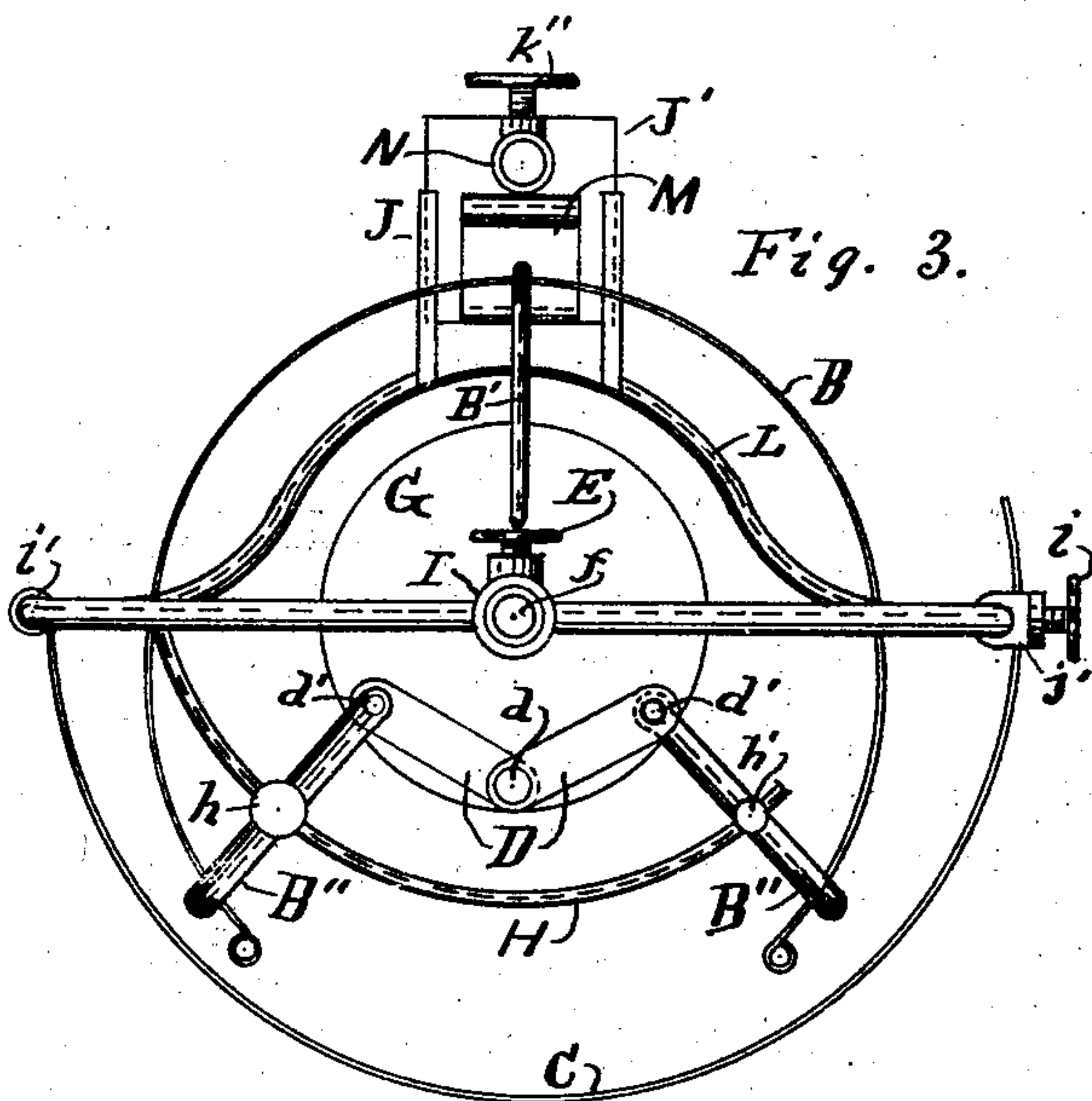
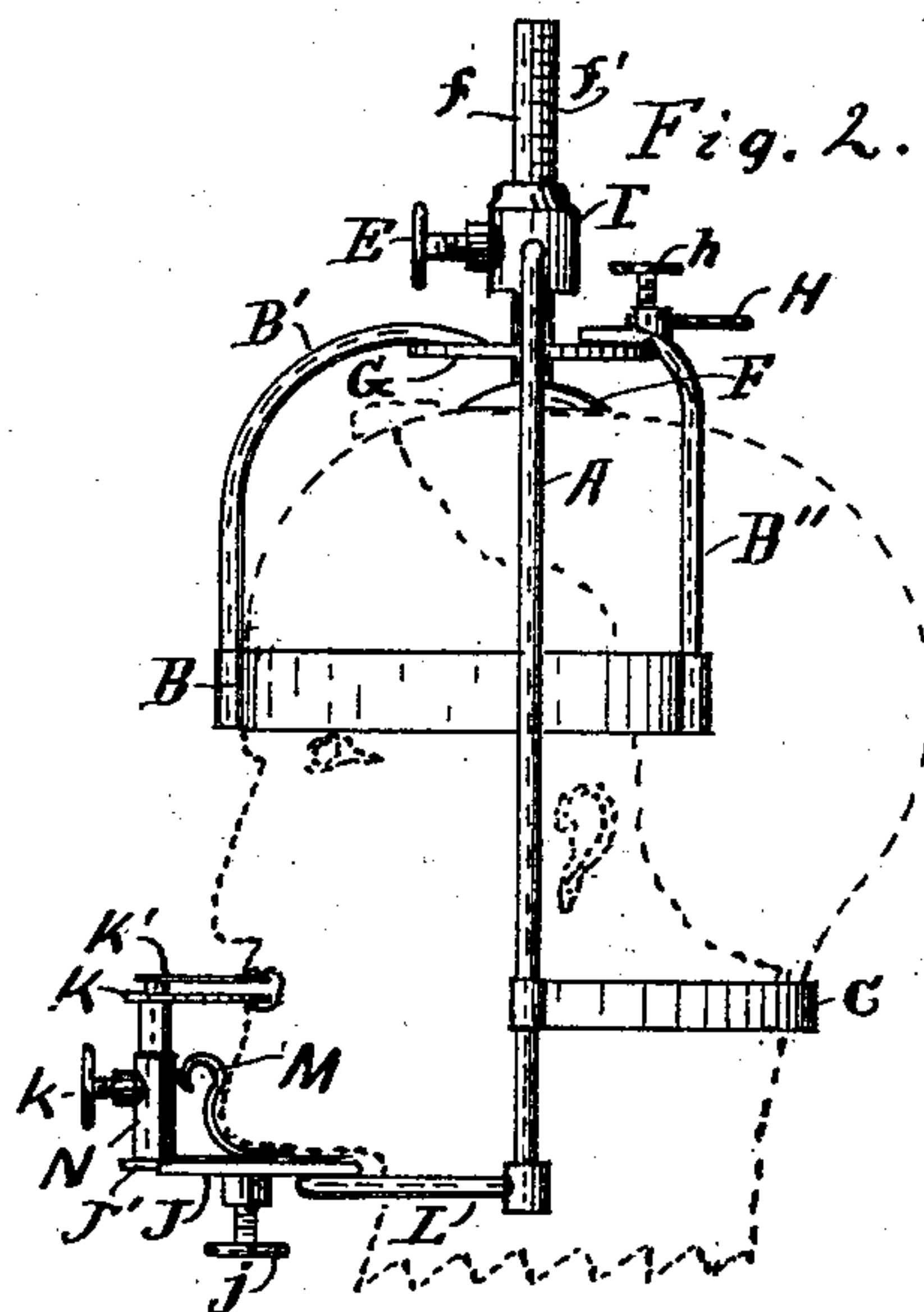
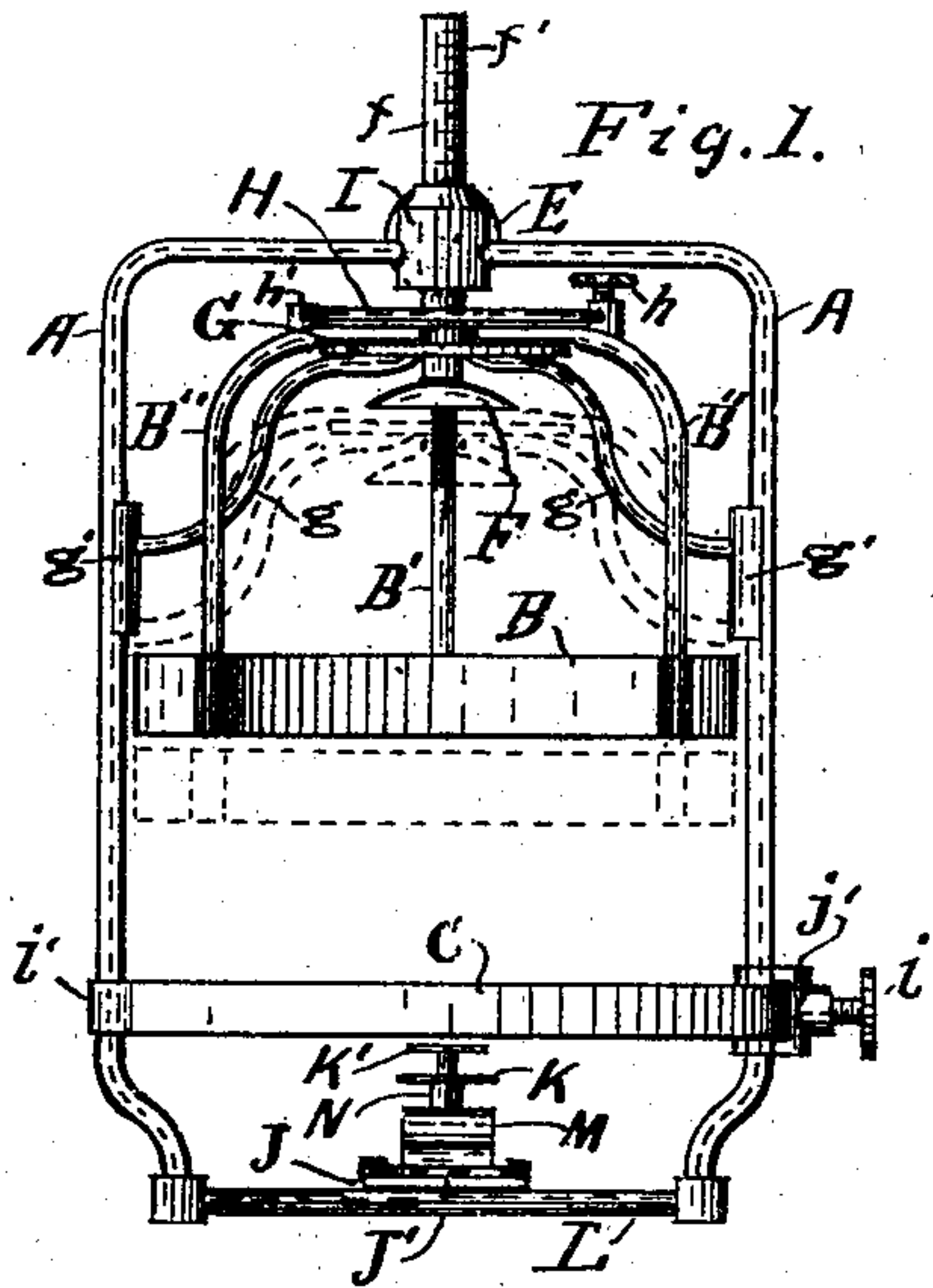
Patented Sept. 23, 1902.

C. R. VANDERPOOL.

DENTAL GAGE.

(Application filed Mar. 4, 1902.)

(No Model.)



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## DENTAL GAGE.

SPECIFICATION forming part of Letters Patent No. 709,834, dated September 23, 1902.

Application filed March 4, 1902. Serial No. 96,707. (No model.)

*To all whom it may concern:*

Be it known that I, CLARENCE R. VANDERPOOL, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Dental Gages, of which the following is a specification.

My invention relates to improvements in gages for adjusting artificial teeth to the natural position of the mouth; and its objects are, first, to carefully measure the length of the face and head with the natural teeth in place; second, to provide an accurate measurement of projecting and receding chins and to secure their natural position when the artificial teeth are inserted, and, third, to provide a gage wherewith the exact distance between the gums when the natural teeth are in place may be ascertained and recorded to be adjusted when the artificial teeth are being inserted. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a back elevation of my gage. Fig. 2 is a side elevation of the same adjusted to a human head. Fig. 3 is a top plan of the same, and Fig. 4 is a detached elevation of the chin and mouth gage.

Similar letters refer to similar parts throughout the several views.

A A represent the supporting-arms of the gage, which are attached at their upper ends to the head I, through which the stem *f* passes and is secured by means of the thumb-screw E, so that it may be raised and lowered at pleasure. At the lower end of this stem is secured a plate G, and from this plate two arms *g g* diverge toward the supports A and terminate in slides *g' g'*, arranged to slide freely upon the supports for adjusting the gage to the longitudinal measurement of the head, the chin-support L being rigidly secured to the ends of the support and so secured as to strengthen the support and at the same time act as a support for the chin and mouth gages. I also attach to said plate G a rigid arm or support B', the other end of which is secured to the longitudinal center of the spring B, the free ends of said spring being supported by the adjustable supports B'' B'', as follows: The upper ends of these supports are pivotally connected to the arms D

at *d'*, which said arms are pivoted to the plate G at *d*, so that the supports B'' may be adjusted both forward and backward and laterally for the purpose of adjusting the spring B to the proper position of the head or, rather, of the forehead. These supports are secured to place, when once adjusted, by means of the segmental wire H, which is pivoted to one of said supports, as at *h'*, and slidingly secured to the other of said supports and secured by the thumb-screw *h*, so that the supports may be adjusted to and secured in the desired position. The spring B is designed to pass around the forehead for the purpose of holding the gage to the proper and desired adjustment at this point.

The chin-gage M is supported upon the slide J', which in turn is slidingly supported in the ways J and arranged to be held in position by the thumb-screw *j*.

N represents a cylindrical standard secured to the slides J' and designed to receive and support the standard *k*, that supports the gage K. This standard is also cylindrical for the reception and support of the standard *k'*, which supports the mouth-gage K', the two last-named standards being secured in the standard N by the thumb-screw *k''*, so that the gages may be adjusted to exactly measure the distance between the gums when the natural teeth were in position, so that the artificial teeth may be made the exact proper length to meet and hold the mouth in its exact normal position before the natural teeth were drawn. The ways J are secured to the support L, as indicated in Figs. 2 and 4.

The band or spring C is designed to pass around the back of the neck to indicate the exact position of the supports A when the chin-gage M has been properly adjusted. This spring is pivotally secured to one standard and slidingly secured to the other, as indicated at *j'*, and secured to the desired position by the thumb-screw *i*.

At the end of the stem *f* I place a plate F, that is designed to rest upon the top of the head when a measurement is being taken.

The practical application of this gage is as follows: Place the gage over and around the head with the plate F resting upon the head. Then loosen the hand-screw E and slide the supports up until the chin piece or gage bears



snugly upon the chin (this presuming the natural teeth are in place and the measurement is being taken preparatory to drawing them for the purpose of inserting an artificial set of teeth) and fasten it to place with the screw E. Adjust the spring B by means of the adjustable arms B' and the screw h. Next adjust the chin-gage so that the point of the chin will rest naturally upon its front and bottom surfaces, as indicated in Fig. 4, and, finally, adjust the spring C so that the chin cannot be thrown forward. By this means the exact measurements of all prominent points, as the forehead, the protruberance of the chin, the length from the top of the head to the bottom of the chin, and the projecting or receding position of the chin may be accurately taken either by means of a scale upon the instrument, as indicated at f', or by the use of a rule, calipers, or compasses, as may be most convenient, and a proper and correct record made thereof in a book kept for the purpose, so that when the patient comes for the adjustment of the artificial teeth the gage may be adjusted to its exact previous measurements and actual accuracy may be attained in fitting the teeth. Now is when the mouth-gages K and K' are found applicable. When the gage proper has been accurately adjusted and placed upon the patient, the mouth is opened until the chin rests in the chin-gage exactly as it did when measurement was taken. The plate K is adjusted to exactly rest upon the lower gum and the plate K' to bear upon the upper gum, when a measurement between the plates will give the exact space that must be filled by the artificial gums or plates and the teeth, so that the teeth can be almost accurately adjusted as to length before placing them into the mouth.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a dental gage, a vertically-adjustable head-plate, a laterally-adjustable spring-band for the forehead, a forwardly and backwardly adjustable chin-gage and a spring for the back of the neck, substantially as and for the purpose set forth.

2. In a dental gage, a supporting-frame, a vertically-adjustable head-plate therein, a permanent arm secured to said plate and to a spring-gage for the forehead, two auxiliary arms secured to said plate by the links D, an adjusting-rod and thumb-screw attached to said arms, a spring-gage for the forehead supported by said arms and made adjustable thereby, and an adjustable chin support and gage, substantially as and for the purpose set forth.

3. In a dental gage, a supporting-frame, an adjustable head-plate, an adjustable gage for the forehead, an adjustable chin-gage and a back support for the neck, with an adjustable mouth-gage composed of two plates upon vertically-adjustable posts supported upon the chin-gage, substantially as shown and described.

4. In combination with a dental gage, a forwardly and backwardly adjustable chin-gage, and a vertically-adjustable two-plated mouth-gage, substantially as and for the purpose set forth.

Signed at Grand Rapids, Michigan, February 26, 1902.

CLARENCE R. VANDERPOOL.

In presence of—

NELLIE CILLEY,  
ITHIEL J. CILLEY.