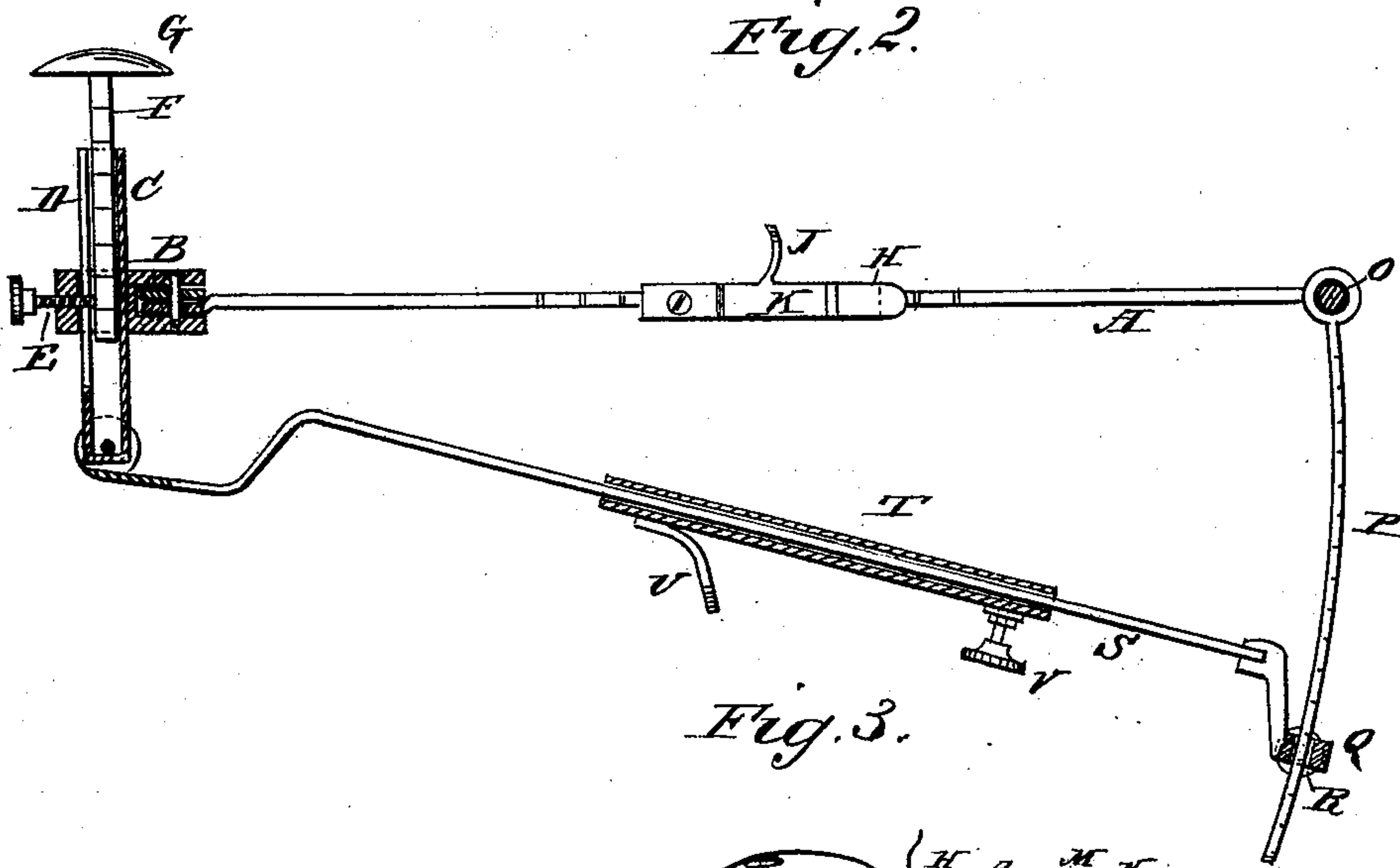
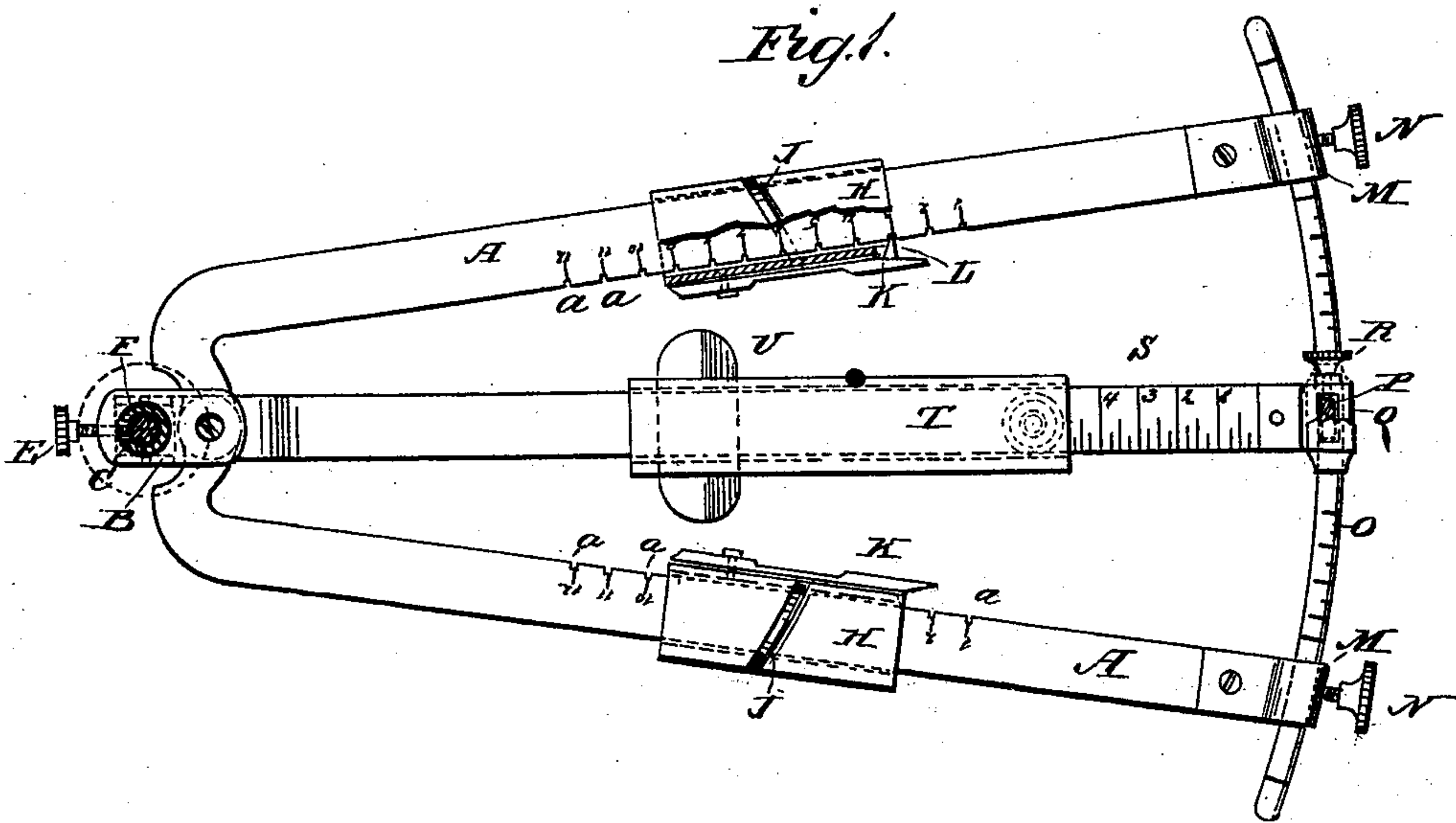


(No Model.)

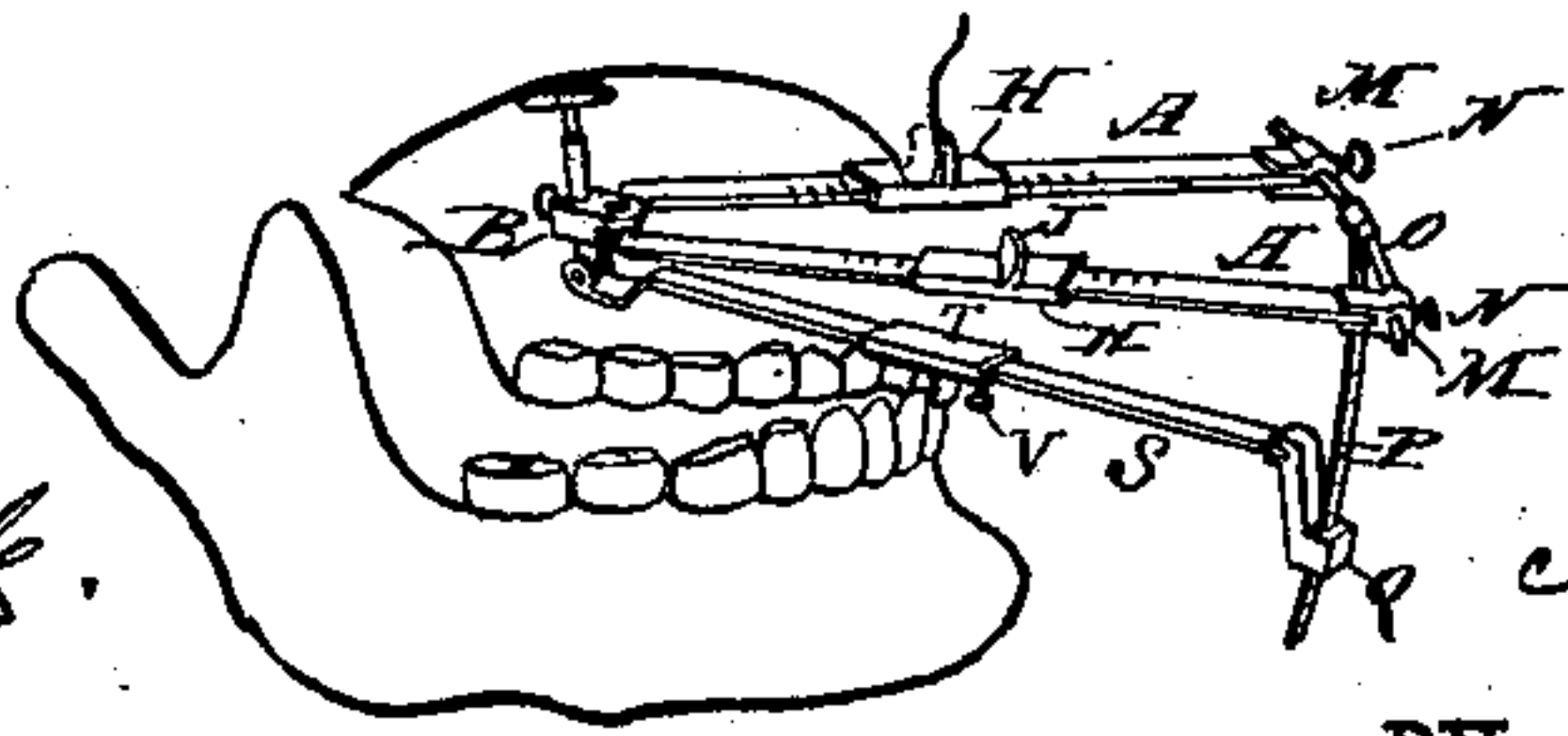
H. L. CRUTTENDEN.  
Dental Articulator.

No. 243,517.

Patented June 28, 1881.



*Fig. 3.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

HENRY L. CRUTTENDEN, OF NORTHFIELD, MINNESOTA.

## DENTAL ARTICULATOR.

SPECIFICATION forming part of Letters Patent No. 243,517, dated June 28, 1881.

Application filed April 30, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY LOUIS CRUTTENDEN, of Northfield, in the county of Rice and State of Minnesota, have invented a new and Improved Instrument for Ascertaining the Articulation of the Jaws, of which the following is a full, clear, and exact description.

The object of my invention is to facilitate ascertaining the exact articulation of the jaws, for enabling exact and accurate setting and fitting of sets of artificial teeth.

The invention consists of an instrument which I term "dental articulation insurer," and which is formed of two flat graduated bars provided with sliding sleeves, with an upward projection and locking-springs, which bars are pivoted to a block through which a graduated tube passes containing a sliding graduated rod with a cap at its upper end, and having a flat graduated bar, provided with a sliding sleeve, furnished with a downward projection, and a binding-screw pivoted to its lower end, which bar has a slotted clip with a binding-screw at its end, through which slotted clip a curved graduated bar passes, that is swiveled or articulated on a graduated segmental rod passing through eyes or perforated clips provided with binding-screws at the ends of the above-mentioned graduated bars pivoted to the block.

In the accompanying drawings, Figure 1 is a plan view of my improved dental articulator, or instrument for ascertaining the articulation of the jaws, parts being shown in section. Fig. 2 is a longitudinal sectional elevation of the same. Fig. 3 is a perspective view of the same, showing the manner in which it is applied.

The flat graduated bars A A are provided with notches *a*, corresponding to the graduations in one edge, and are pivoted between the jaws of a plate or block, B, provided with an aperture, through which a graduated tube, C, passes, provided on the rear side with a longitudinal slot, D, through which the point of the binding-screw E of the block B passes. A graduated rod, F, with a cap, G, at the upper end, fits in this slotted tube C, and can be locked in any desired position by means of the binding-screw E. A sleeve, H, provided with an upward projection, J, is

loosely mounted on each bar A, to slide thereon, and this sliding sleeve has a spring, K, attached thereto, provided with a tooth, L, at the loose end, this tooth snapping into the notches *a* of the bar A. An eyelet, M, or apertured clip, provided with a binding-screw, N, is attached to the outer end of each bar A, and through these perforated clips M a graduated segmental rod, O, passes, which is held in any desired position by the binding-screws N. To the middle of this rod O a graduated curved bar, P, is swiveled, pivoted, or articulated in any other suitable manner. This bar P passes through a slotted clip, Q, provided with a binding-screw, R, and attached to the front end of a graduated bar, S, pivoted to the lower end of the slotted tube C, this bar S being bent upward, near its joint, so that it will be in the same plane with the bars A A when the instrument is folded. A sleeve, T, provided with a downward projection, U, and a binding-screw, V, is loosely mounted on the bar S, to slide thereon.

The operation is as follows: The instrument is placed in the mouth of the patient in such a manner that the cap G rests against the center of the palate or roof of the mouth. The slides H H are then so adjusted as to rest against the gum at the front part of the mouth, and are locked in position by the springs K K, the teeth L of which catch in the notches *a a*. The bars A A have been previously adjusted on the rod O, and are locked in position by the binding-screws N N. The mouth being open, it can easily be seen if the jaws are in the proper position. If this is the case, the slide T is so adjusted that its projection U will strike against the lower jaw, and it is then locked in position by the binding-screw V, as shown in Fig. 3. The instrument is then removed. The articulation of the patient's jaw is obtained by placing a piece of soft wax or a similar composition in the patient's mouth, upon which piece of wax the patient bites, so as to obtain an exact imprint of both jaws. The models of the jaws are then made of plaster-of-paris, and these plaster models are placed in the wax imprints of the jaws. These are placed in an instrument called an "articulator," and the wax is then removed from the models, and we have a fac-



simile or model of the jaws. My instrument is then placed between the models of the jaw or plaster casts in the same manner as applied in the patient's mouth, the parts of which instrument are in the same position as when taken from the patient's mouth. If the measurements agree, the articulation of the patient's jaws has been correct; but if the cast of the lower jaw extends beyond the projection U of the slide T, or does not fit inside of it, the patient has protruded the lower jaw too far. The cast or model of the lower jaw is moved back to correspond with the projection U of the slide T. The dentist can then proceed to make the teeth and be sure of the true relation of the jaws to each other, and the teeth can be accurately fitted, adjusted, and ground, and the set will fit accurately in the patient's mouth, and will require no adjustment or alteration.

If the above-described instrument is to be used often, the measurements of the patient's jaws can be recorded, and the instrument can be set accordingly when the models are to be fitted. The dentist is thus enabled to select, arrange, and antagonize the teeth by a positive method, and all uncertainties, misfits, and failures are avoided.

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

1. In a dental articulator, the combination of the cap G, the slides H H, the pivoted bars A, having the notches *a*, the springs K K, having teeth L, the rod O, and the screws N, as and for the purpose set forth.

2. In a dental articulator, the combination, with the graduated bar S, of the slide T, having projection U, adjustable, as and for the purpose specified.

3. In a dental articulator, the combination, with the graduated bars A, pivoted to the block B, of the graduated tube C, the graduated rod F, provided with a cap, G, the graduated pivoted bar S, the graduated curved bar P, the graduated segmental rod O, and the slides or gages H and T, substantially as herein shown and described, and for the purpose set forth.

4. In a dental articulator, the combination, with the graduated rod A, provided with notches *a a* on one edge, of the slide H, provided with a projection, J, and the toothed spring K, substantially as herein shown and described, and for the purpose specified.

5. In a dental articulator, the combination, with the pivoted bars A A, of the perforated clips M, of the graduated rod O, and the binding-screws N N, substantially as herein shown and described, and for the purpose of adjusting and locking the bars A A in various positions, as set forth.

6. In a dental articulator, the combination, with the pivoted bars A A, of the pivoted bar S, the segmental rod O, and the bent bar P, substantially as herein shown and described, for the purpose set forth.

HENRY LOUIS CRUTTENDEN.

Witnesses:

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A. L. SMITH.