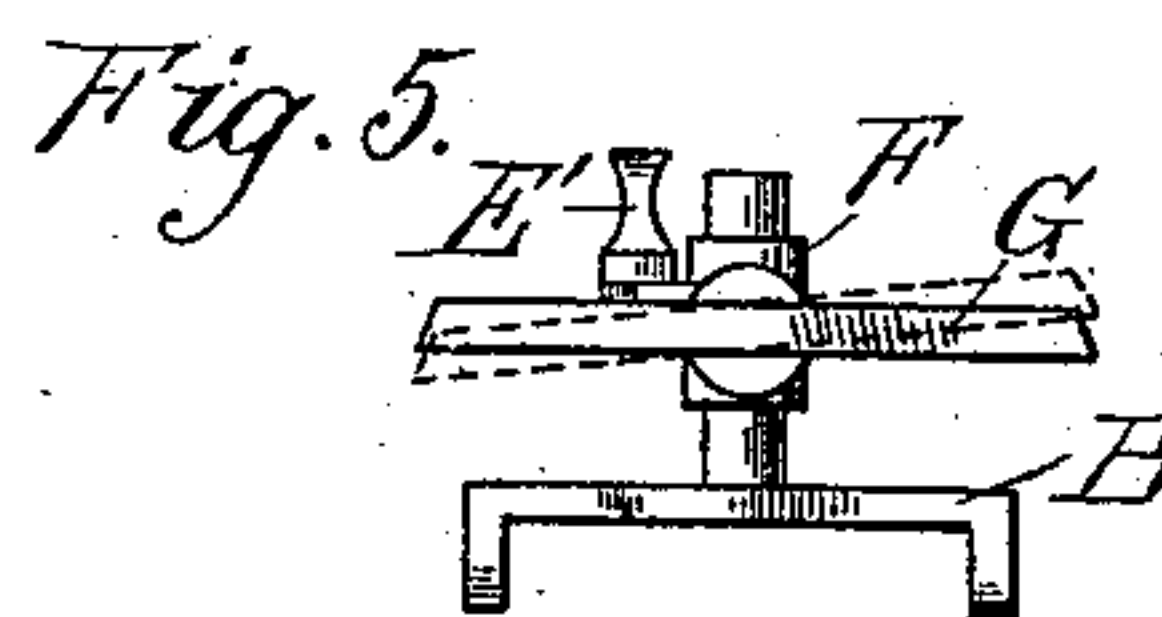
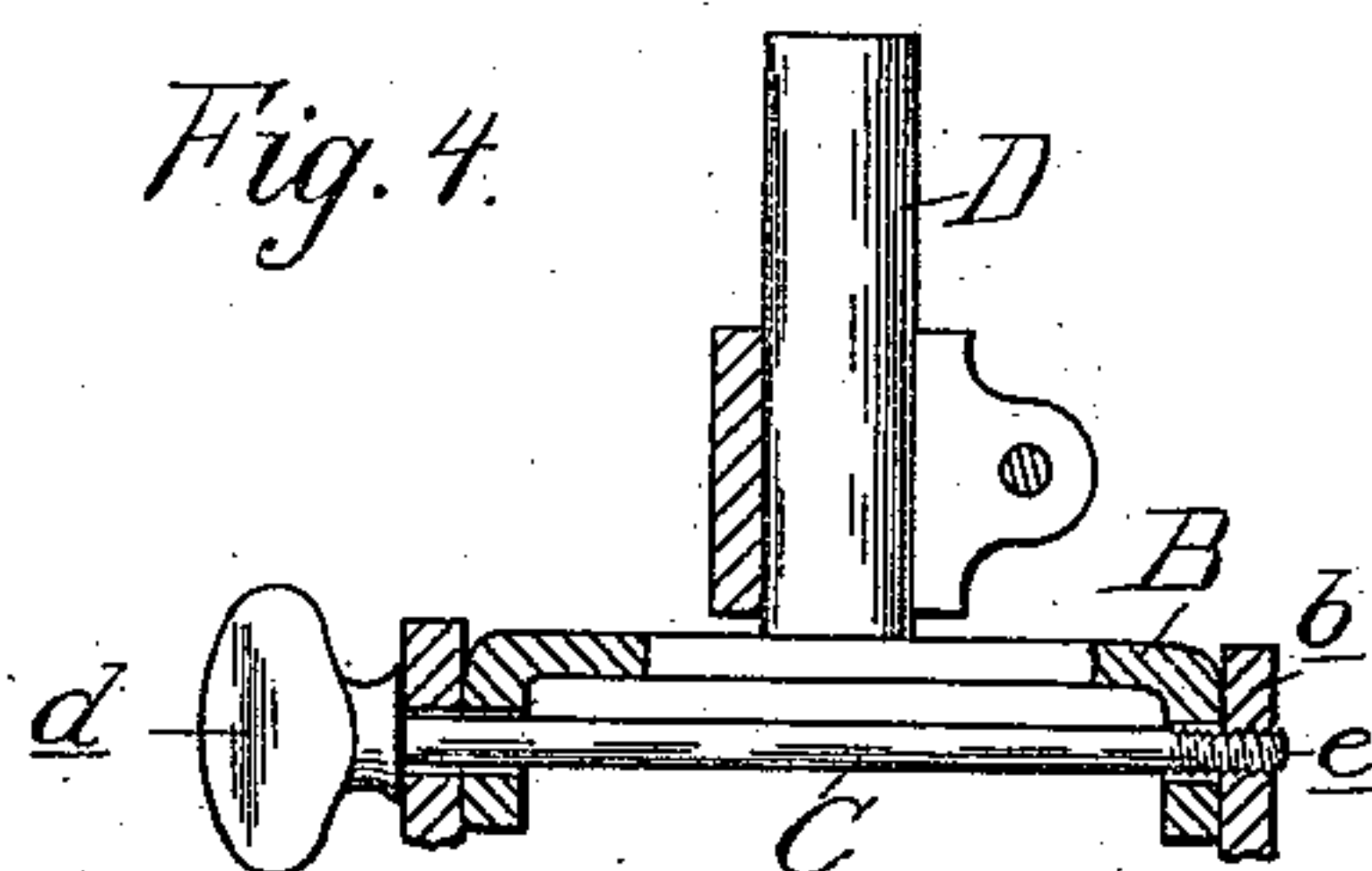
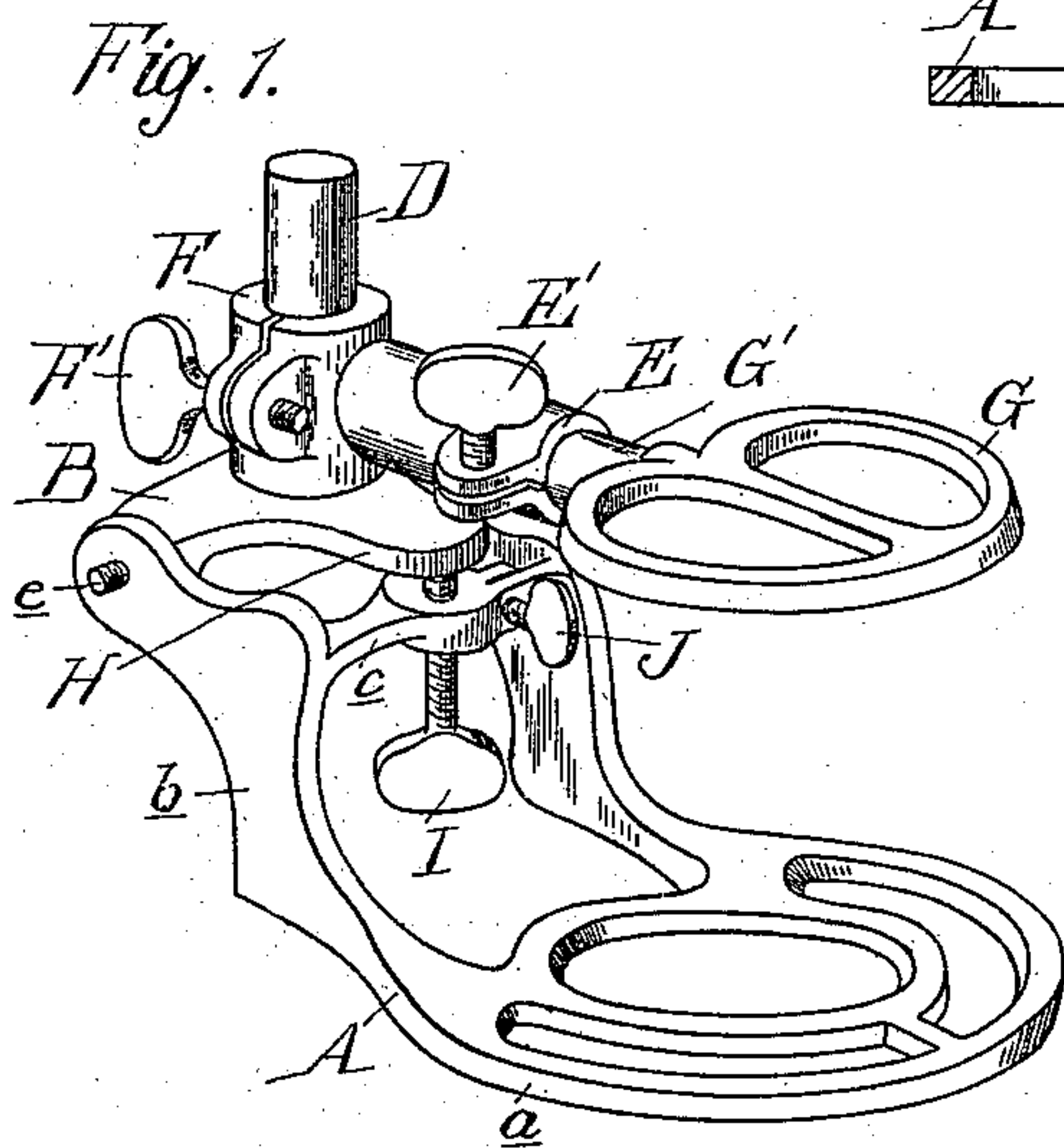
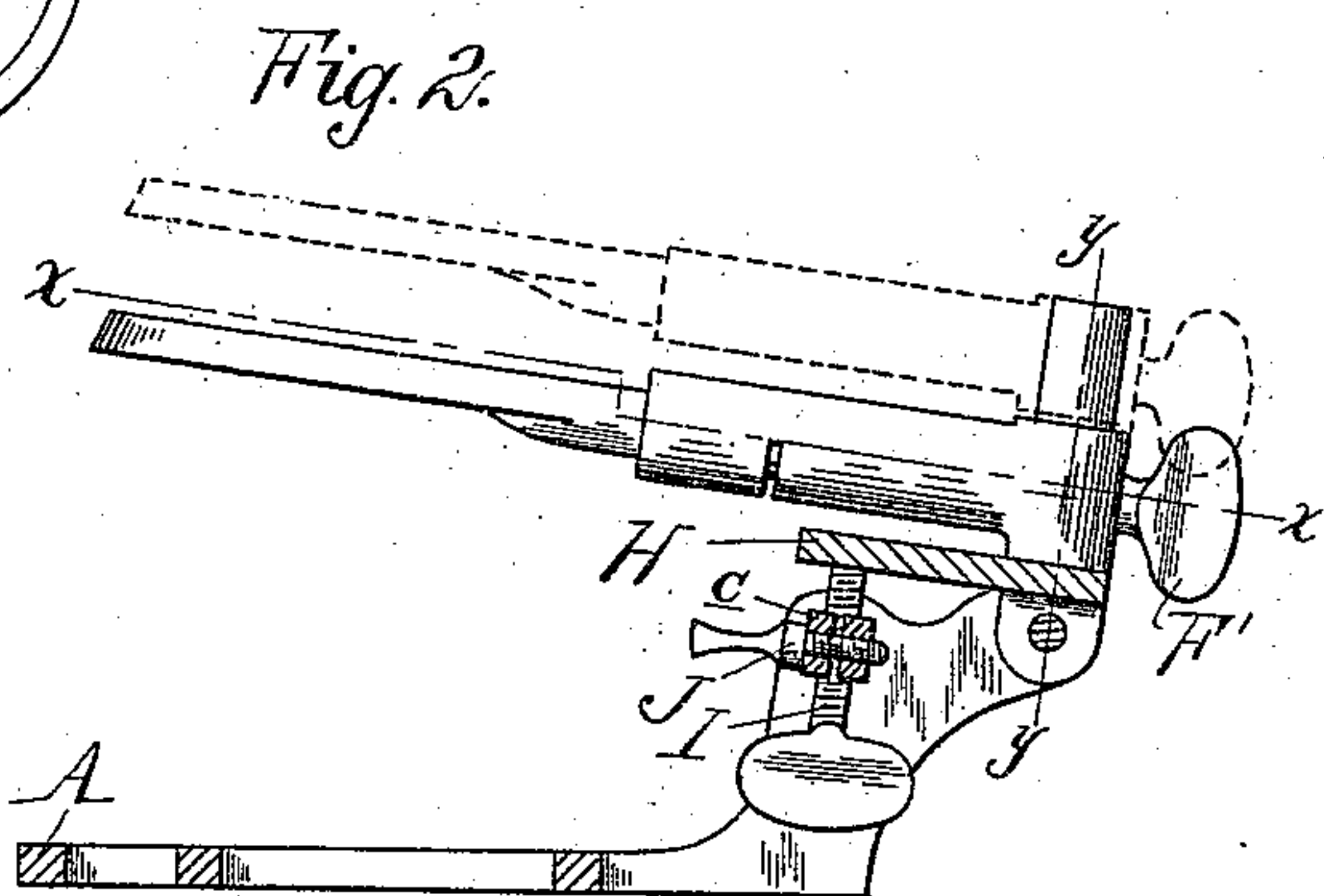
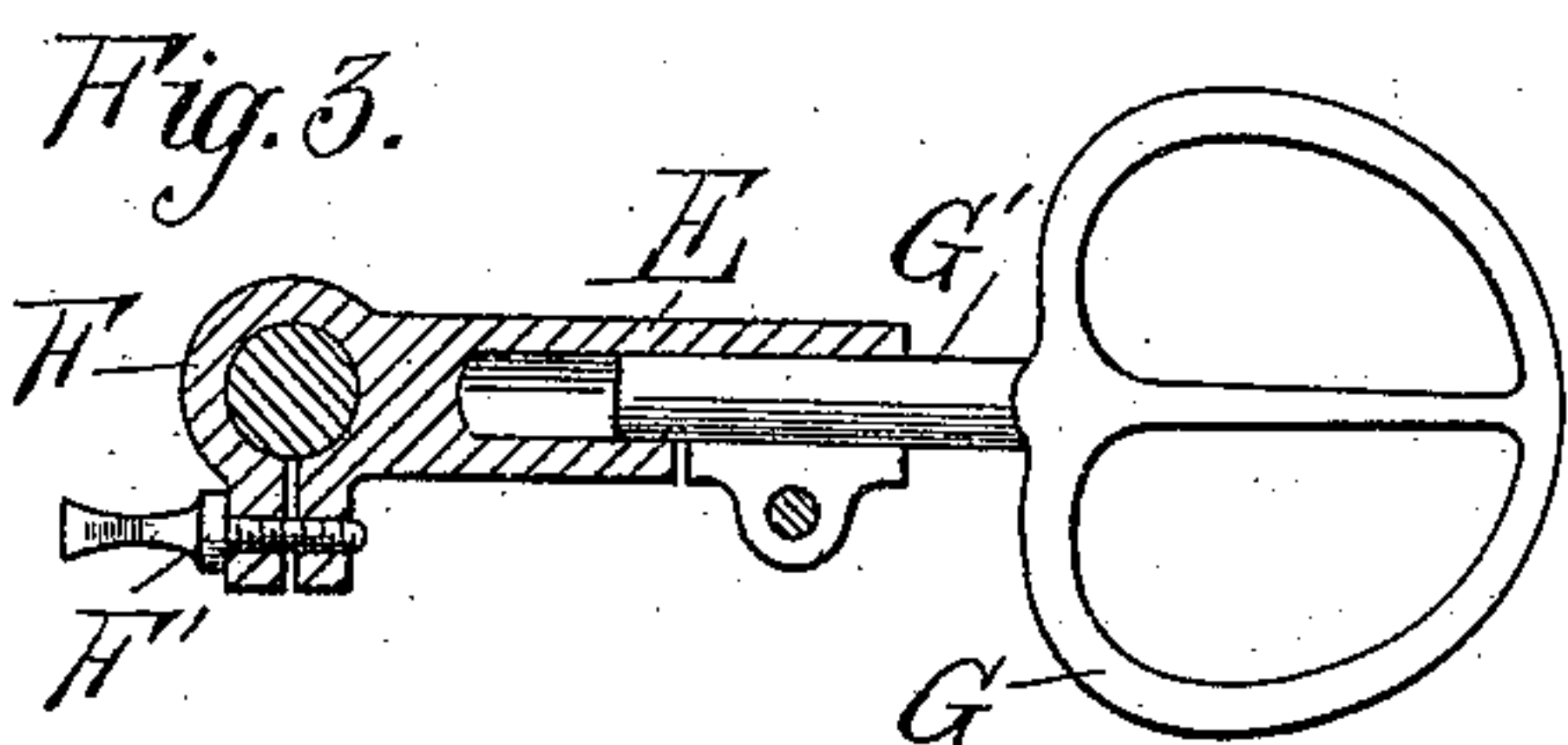


(No Model.)

J. H. DOWNIE.
DENTAL ARTICULATOR.

No. 547,599.

Patented Oct. 8, 1895.



Witnesses:

U. F. Bantel
M. A. Sopher

Inventor:

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UNITED STATES PATENT OFFICE.

JAMES H. DOWNIE, OF DETROIT, MICHIGAN.

DENTAL ARTICULATOR.

SPECIFICATION forming part of Letters Patent No. 547,599, dated October 8, 1895.

Application filed December 18, 1894. Serial No. 532,180. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. DOWNIE, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Articulators, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention consists in the peculiar construction, arrangement, and combination of parts, whereby the articulator may be quickly and accurately adjusted to bring the teeth into the same relative position which they would assume in the mouth of the patient, and, further, whereby the free movement of the jaws may be retarded to any desired degree.

Figure 1 is a perspective view of my articulator. Fig. 2 is a sectional side elevation thereof. Fig. 3 is a horizontal section on line *x x*, Fig. 2. Fig. 4 is a cross-section on line *y y*, Fig. 2, and Fig. 5 is a front elevation of the upper jaw-plate.

A is the lower jaw member, comprising the lower jaw-plate *a*, the upwardly and rearwardly extending arms *b*, and the cross-bar *c*.

B is a head or yoke pivotally secured between the upper ends of the arms *b* by means of the bolt C. This bolt is preferably provided with the winged head *d* and has at its other end a threaded portion *e*, adapted to engage with a corresponding screw-threaded aperture in one of the arms *b*.

D is an upwardly-projecting post on the yoke B.

E is an arm vertically and rotatorily adjustably secured to the post D by means of the split sleeve F and clamping-screw F' at one end of said arm. The other end of the arm is provided with a split socket E, having a clamping-screw E'.

G is the upper jaw-plate, having a shank G', adapted to be rotatorily and longitudinally adjustably secured in the socket E.

The yoke B, post D, arm E, shank G', and plate G together comprise the upper jaw member, which is hinged to the lower member A, the bolt C forming both a pivot and a clamping-screw, by which the friction between the two members may be increased or diminished to any desired degree.

H is an arm projecting laterally from the yoke B and extending over the cross-bar *c*.

I is a screw passing through a screw-thread-

ed aperture in the cross-bar *c* and forming an adjustable stop for the arm H. The cross-bar *c* is preferably split and provided with a clamping-screw J, adapted to lock the screw I in its adjusted position.

In practice the device is used in the ordinary manner. The upper jaw-plate, being capable of a longitudinal, lateral, and rotary adjustment, may be set in such relation to the lower plate as to exactly correspond to the jaws of the patient. The plates may be set parallel or at any desired vertical angle to each other by adjusting the stop I up or down, and the distance between the plates may be varied without changing the angle at which they are set by adjusting the sleeve F up or down on the post D.

The necessary friction between the jaws to produce the desired retarding of movement is secured by adjusting the screw-bolt C. The rotary adjustment of the upper plate is also useful for certain kinds of work in which a lateral inclination of the plate is desirable.

What I claim as my invention is—

1. In a denture articulator, the combination with the lower jaw member having the upwardly and rearwardly extending parallel arms, a cross bar connecting the arms intermediate their ends and a vertically disposed adjusting screw on the cross bar, of a yoke member having a projection extending over the screw, a pivotal connection between the yoke and the upper rear ends of the arms, a vertically disposed cylindrical post on the upper face of the yoke, a sleeve on the post having a horizontal tubular extension, means for clamping the sleeve on the post, the upper jaw member having a cylindrical extension projecting into the tubular extension of the sleeve, and means for clamping the cylindrical extension in adjusted positions, substantially as described.

2. In a denture articulator the combination with the lower jaw member having the rearwardly extending arms *b* of the upper jaw member adapted to fit between said arms, and the screw threaded pivot bolt C adapted to form a friction clamp for said members.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES H. DOWNIE.

Witnesses:

JAMES WHITTEMORE,
O. F. BARTHEL.