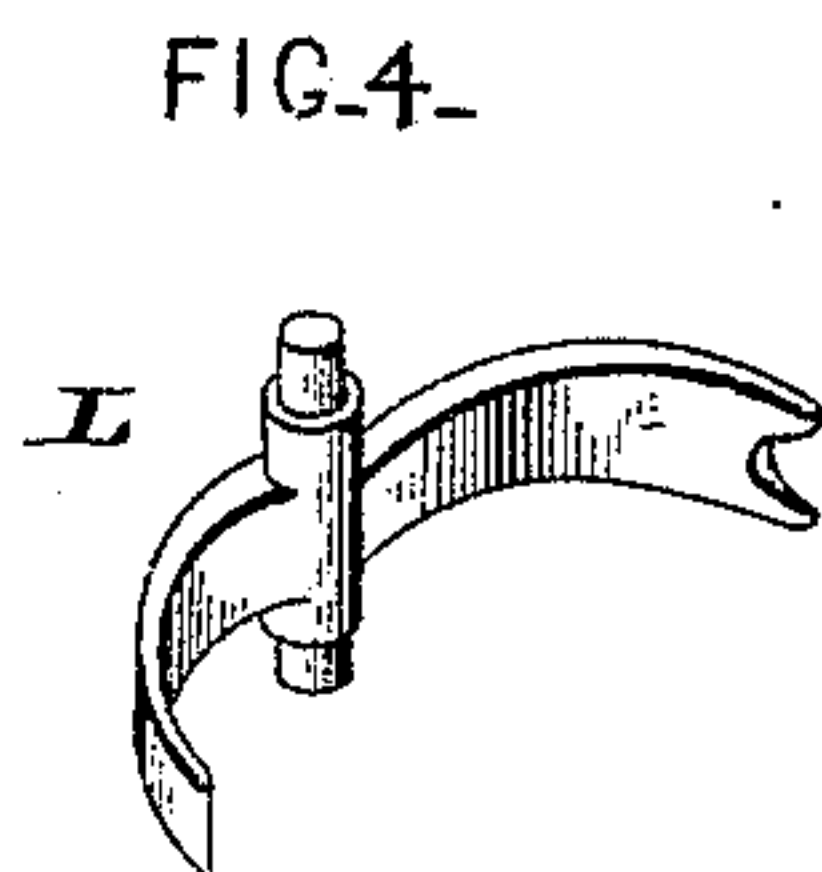
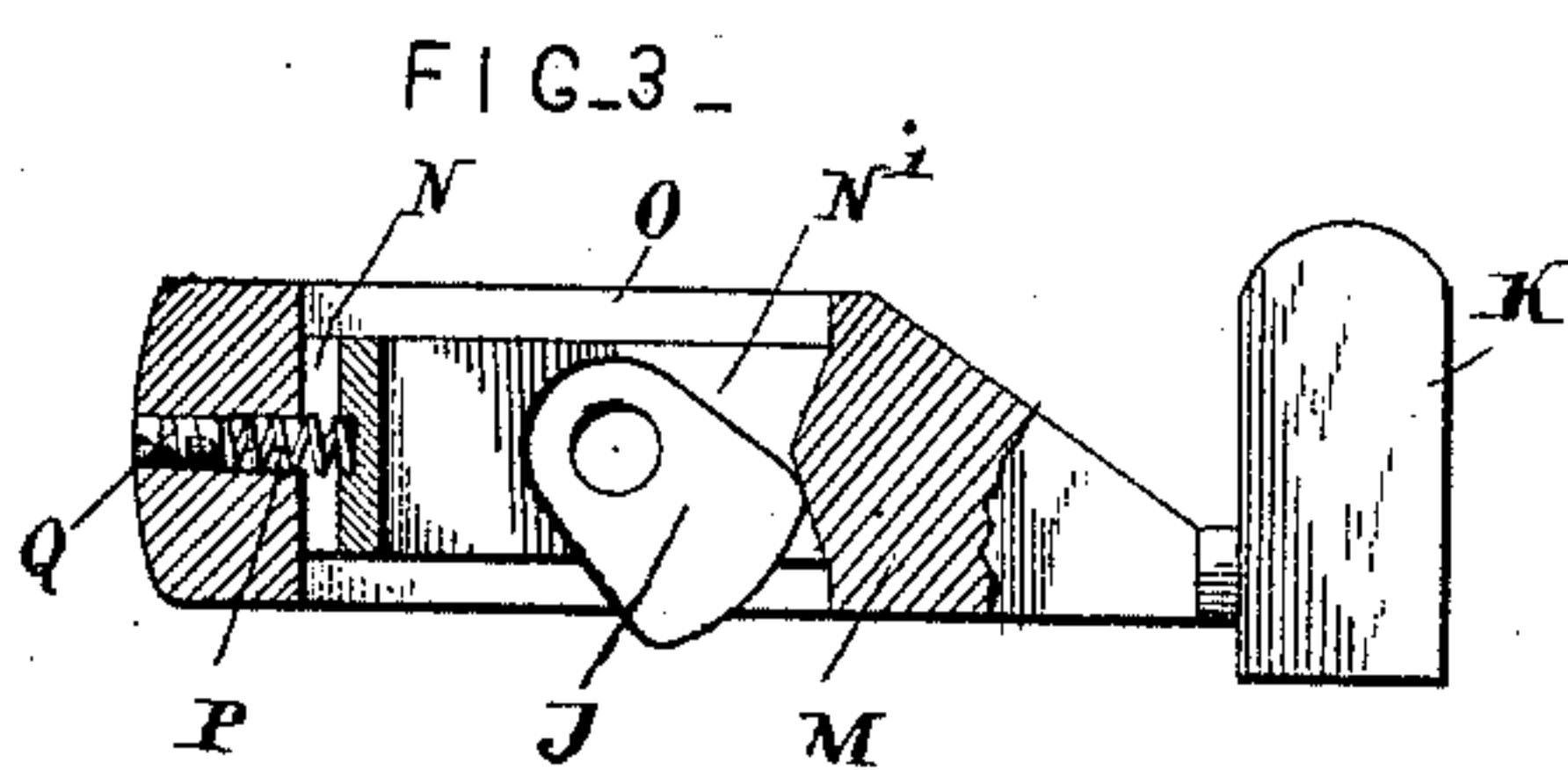
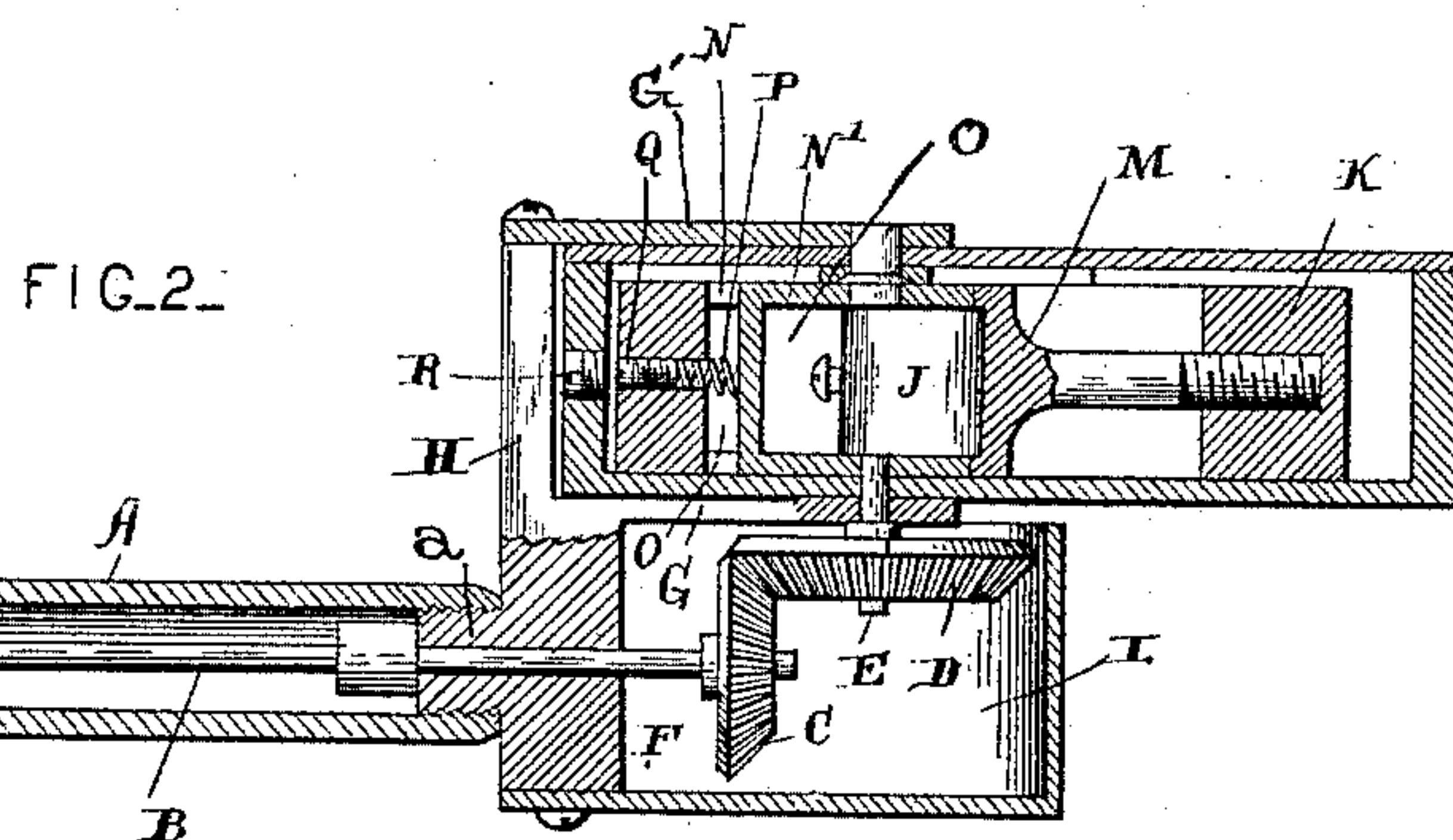
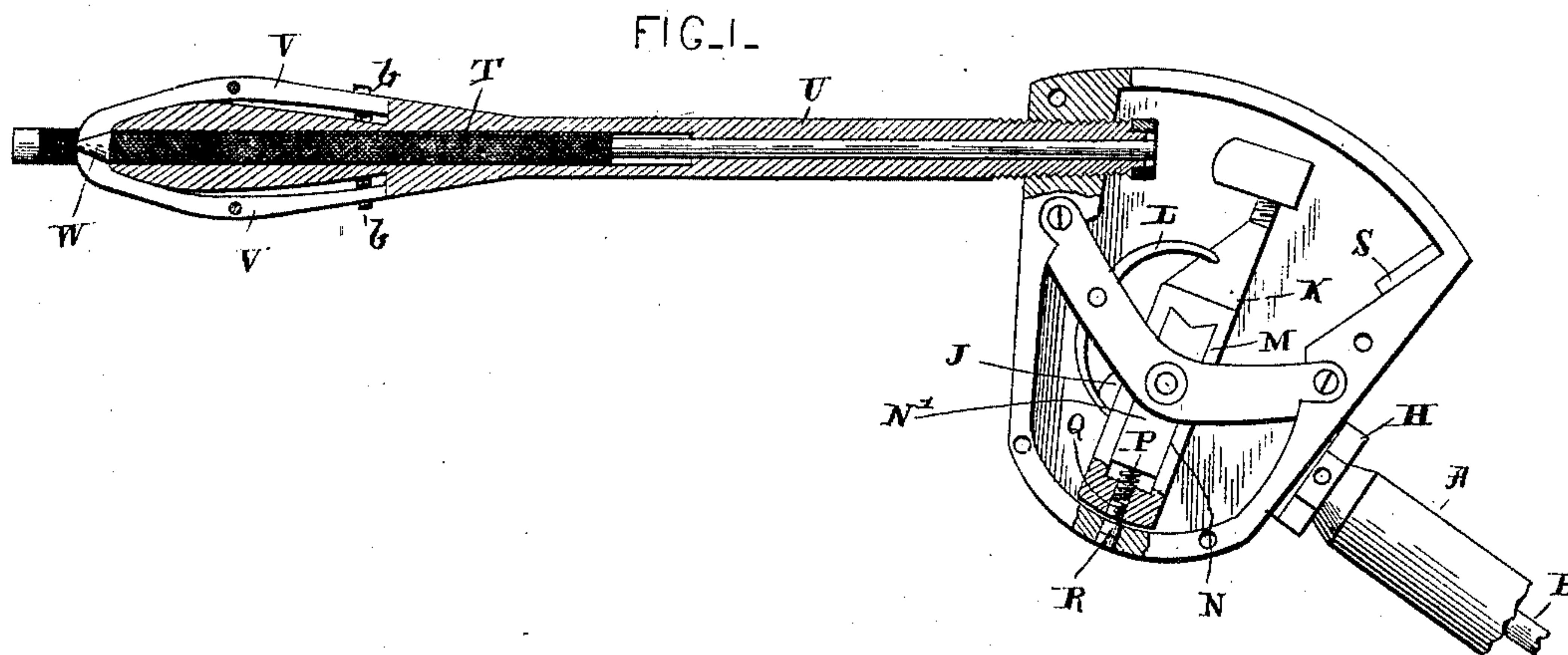


(No Model.)

H. C. HINCHMAN.
DENTAL Mallet.

No. 462,133.

Patented Oct. 27, 1891.



WITNESSES_

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UNITED STATES PATENT OFFICE.

HENRY CARLISLE HINCHMAN, OF JOHNSTOWN, PENNSYLVANIA.

DENTAL MALLET.

SPECIFICATION forming part of Letters Patent No. 462,133, dated October 27, 1891.

Application filed May 11, 1891. Serial No. 392,331. (No model.)

To all whom it may concern:

Be it known that I, HENRY CARLISLE HINCHMAN, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Dental Mallets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in engine-mallets for dentists; and it consists in the combination, arrangement, and construction of parts, which will be fully described hereinafter, and particularly referred to in the claims.

The object of my invention is to provide a machine which can be held in the hand and by means of which a direct positive blow can be given to the plugger-point and the mallet then thrown back to position, the force of the blow being regulated by the adjustment of the hand-piece.

Figure 1 is a side elevation of a mechanism embodying my invention, the casing being cut away so as to show the different parts. Fig. 2 is a sectional view taken at right angles to Fig. 1. Figs. 3 and 4 are detail views.

A represents the attachment which extends from the dental engine and through which the spindle B passes, and which spindle has a pinion C upon its outer end to engage with the beveled wheel D upon the main shaft E. The gearings are inclosed in a casing I, which is secured to a supporting-base F, which base has the extension H and the two extensions G and G', which have their ends journaled upon the shaft E, as shown.

Fastened rigidly to the shaft E by means of a set-screw is a cam J, which is made to revolve with the shaft for the purpose of operating the mallet K and the lever L. Placed loosely upon the shaft E and swinging and moving back and forth thereon is a yoke M, to which the mallet-head K is fastened. This yoke has two openings made through it at right angles to each other, the one N being made to receive a perforated sliding block or bearing N' to allow the yoke to play back and forth in relation to the shaft E, and the other one O to allow the cam J to move

through for the purpose of operating the mallet. In the opposite end of the yoke from the mallet is made an opening, and in this opening is placed a spiral spring P, which is regulated by means of a set-screw Q. The inner end of this spring bears against the block or bearing N' and keeps the block or bearing pressed forward in its opening in the yoke, so that the cam will strike the end of the yoke each time it revolves and cause the mallet to strike against the plugger-point and the inner end of the hand-piece. Through the end of the mallet-inclosing case is made a suitable screw-cap R to enable the operator to regulate the set-screw at will, and thus regulate the tension of the spring. For the purpose of returning the mallet-head to position against the cushion S in the top of the mallet-casing a lever L is pivoted within the said casing, the lower end of which lies in the path of the revolution of the cam and is struck thereby and turned upon its pivotal point. The upper end of the said lever engages the upper end of the mallet and throws it back against the cushion S after it has delivered a blow to the plugger, as will be readily understood. A portion of one revolution of the cam is used to operate the mallet for the purpose of giving a direct blow to the plugger-point, and then the cam strikes the curved lever for the purpose of moving the mallet back to position, so as to be given another blow. The inner end of the plugger-point extends inside of the mallet-casing in line with the curved path of the mallet K and is placed inside of the hollow hand-piece U, which is screw-threaded at its inner end where it screws into the casing, so as to render it adjustable and thus regulate the force of the blow which is to be given by the mallet K. If but an easy blow is desired, the hand-piece is screwed up into the casing, so that the mallet has but a short stroke; but if a heavy stroke is needed the hand-piece is unscrewed to any desired distance, thus giving the mallet a longer sweep. The head or inner end of the hand-piece will be protected by means of a leather washer or cover secured to the inner end thereof, so as to protect the hand-piece from injury and to somewhat soften the blow. The hand-piece U is made tubular, and in its lower end, upon opposite sides, are formed two slots, in which

the short pivoted levers V are placed and which have their outer ends shaped as shown for the purpose of catching in a groove that is made in the plugger-point. The upper 5 ends of these levers are connected by a semi-circular spring b, which keeps their outer ends pressed closely together. When the plugger-point T is struck, it is forced outward a slight distance, and then, owing to the 10 pressure of the outer ends of the levers V in the groove W in the side of the plugger-point, the point is forced back into position. When it is desired to remove this plugger-point, it is only necessary to press against the 15 inner ends of the levers V with one hand and draw the plugger-point out with the other.

By means of the construction here shown it will be seen that all of the operating parts are inclosed, so as to protect them from dust 20 and dirt and to prevent them from injuring the person using the mallet, that the plugger-point can be quickly removed and another substituted in its place, and that a direct blow can be given to the plugger-point.

25 Having thus described my invention, I claim—

1. In a dental tool, a revolving shaft carrying a cam, a mallet having a yoke which has

a lateral movement in relation to the shaft and an opening in which the cam revolves, 30 and a means for holding the said yoke in the path traveled by the cam, the parts combined substantially as described.

2. In a dental tool, a revolving shaft carrying a cam, a block journaled upon the shaft, 35 a mallet having a yoke which slides upon the said block and an opening in which the cam revolves, and a spring between the said block and the yoke for normally holding the latter in the path traveled by the cam, the parts 40 combined substantially as set forth.

3. In a dental tool, a revolving shaft carrying a cam, a mallet mounted to have a lateral movement upon the shaft and an opening in 45 which the cam revolves for the purpose described, and a pivoted lever in the path traveled by the cam, which returns the mallet back to position after a blow has been delivered, the parts combined substantially as de- 50 scribed.

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

HENRY CARLISLE HINCHMAN.

Witnesses:

U. G. BARNES,

ULYSSES BITTNER,