

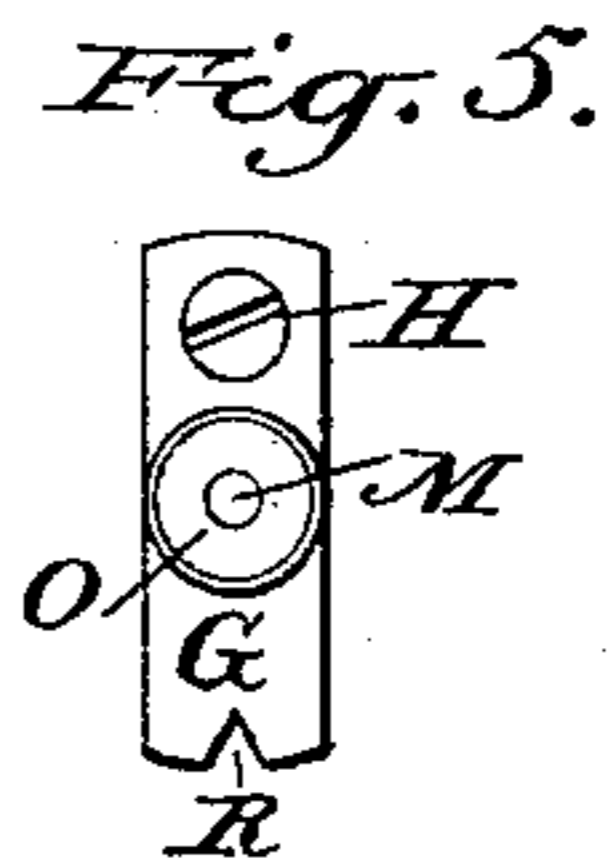
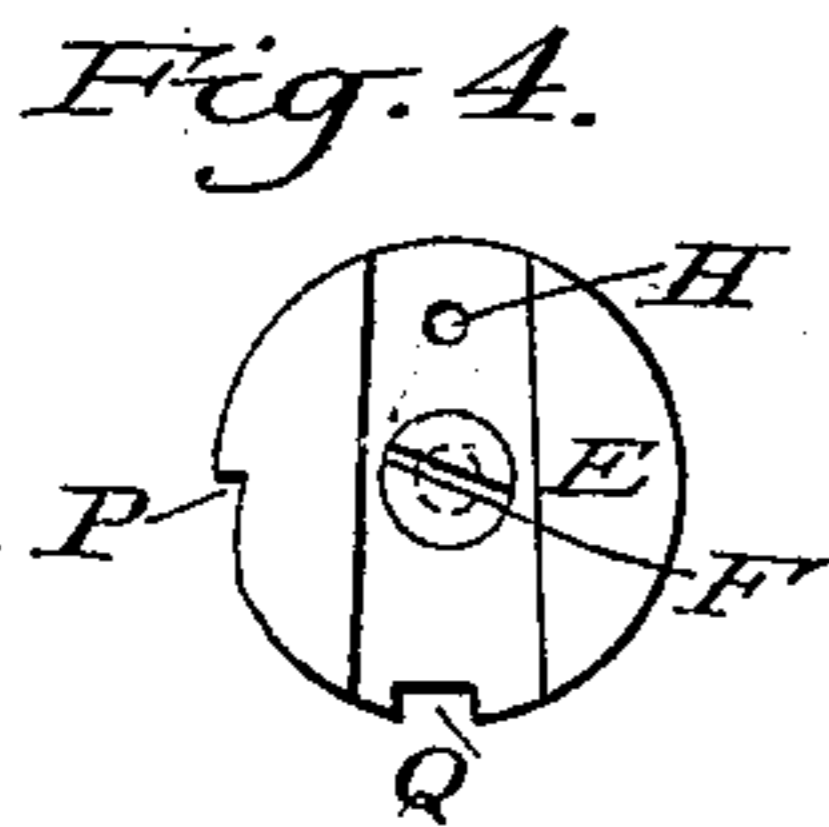
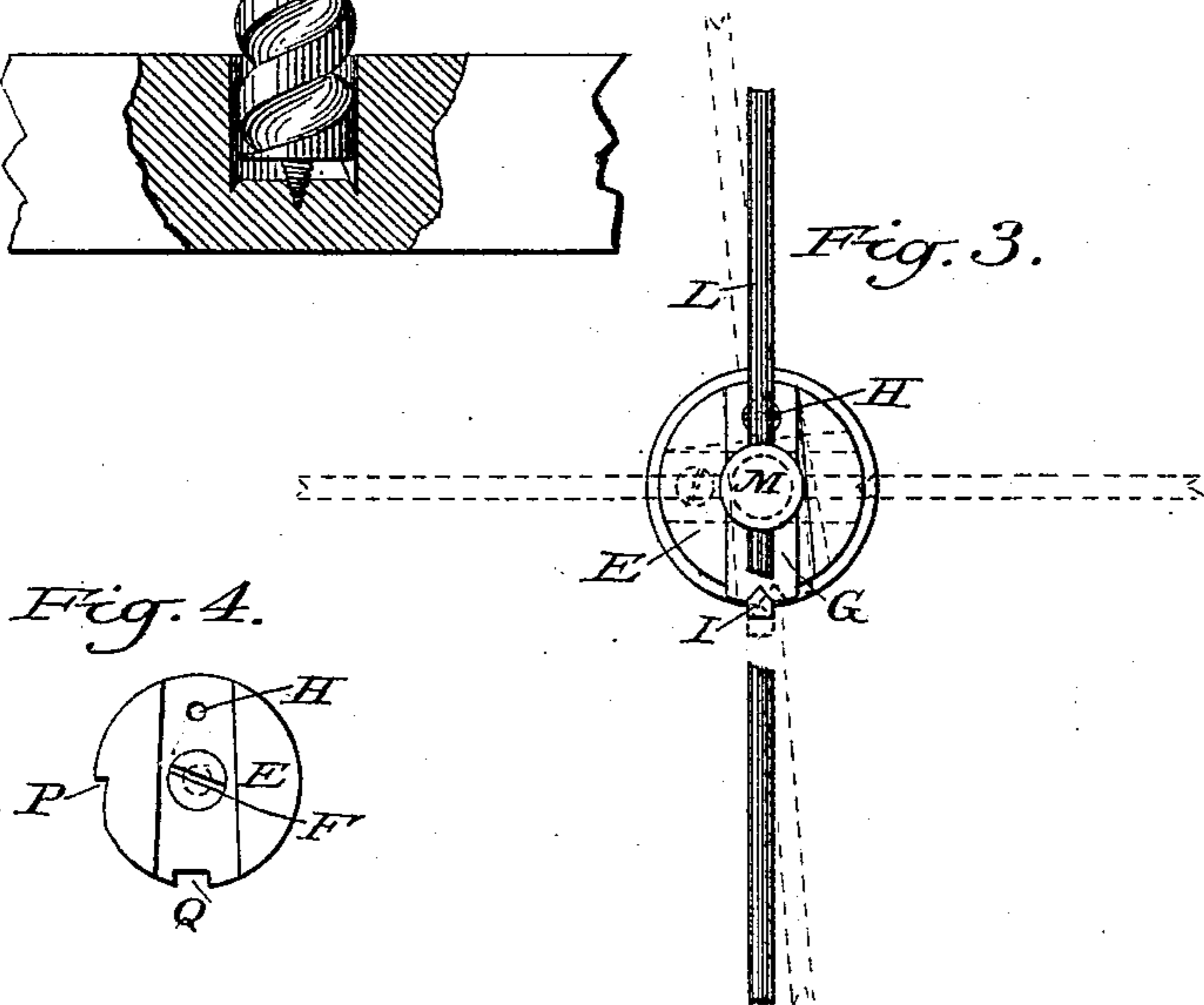
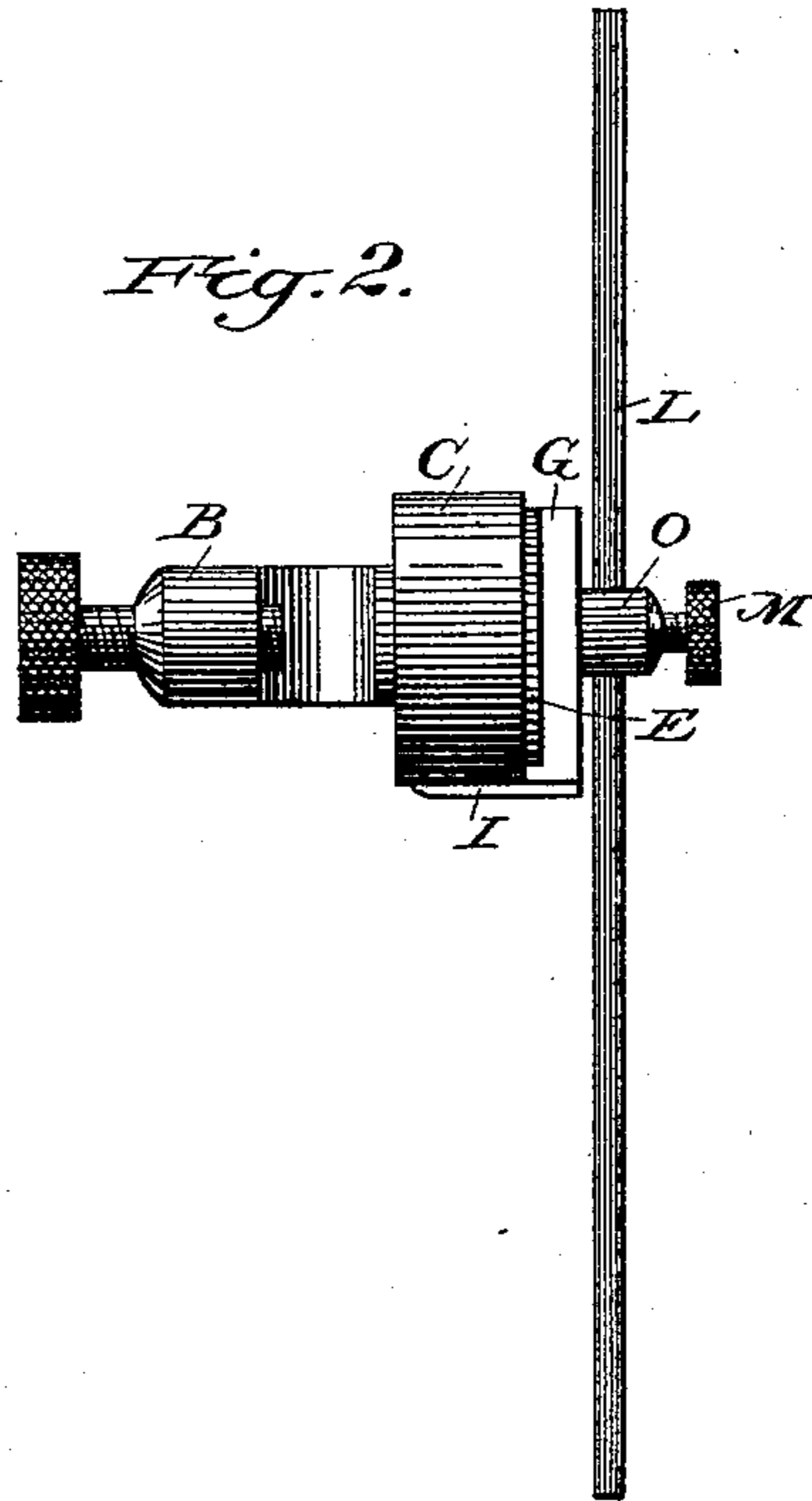
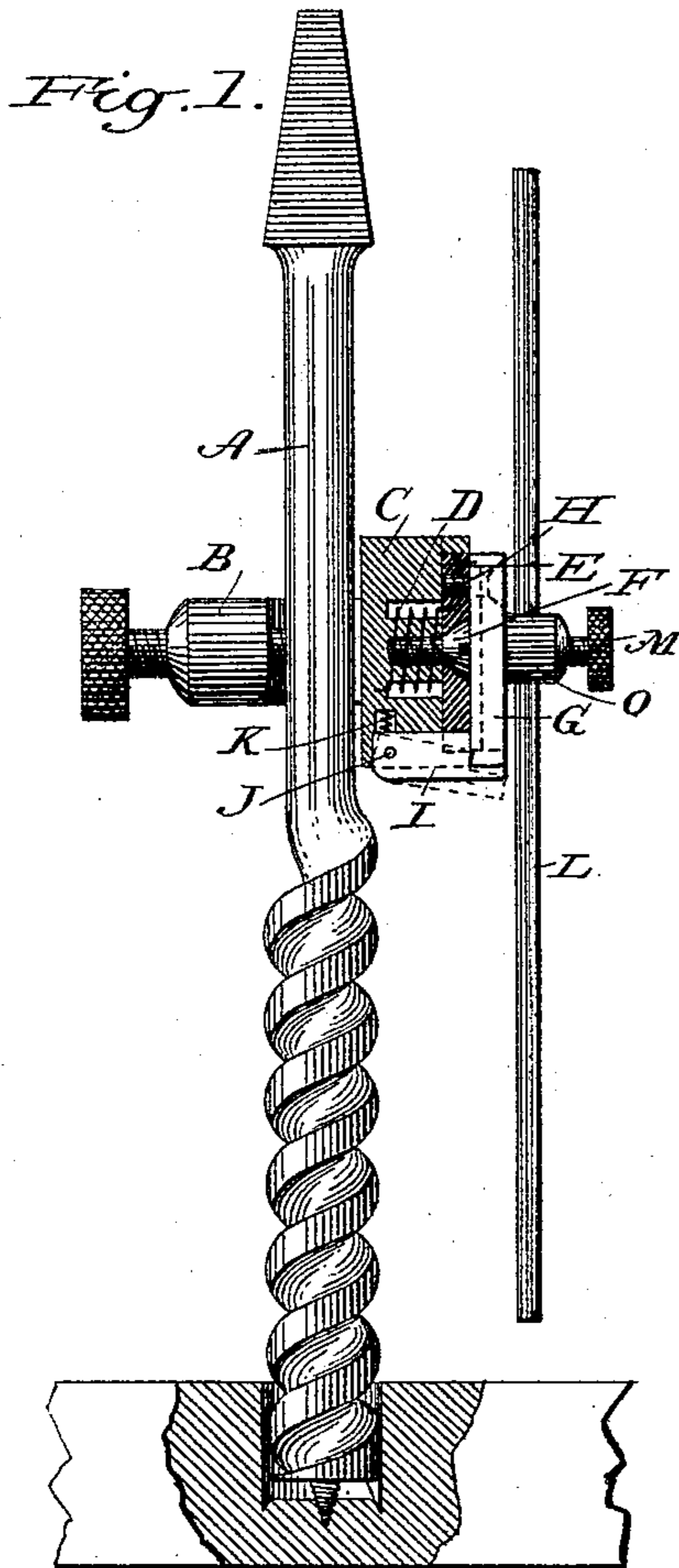
(No Model.)

J. E. WINDLE.

BIT GAGE.

No. 390,936.

Patented Oct. 9, 1888.



Witnesses:

C. F. Lawrence.
Wm. Worth.

Inventor:

John E. Windle.

UNITED STATES PATENT OFFICE.

JOHN E. WINDLE, OF WORCESTER, ASSIGNOR TO NATHAN J. SMITH, OF
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BIT-GAGE.

SPECIFICATION forming part of Letters Patent No. 390,936, dated October 9, 1888.

Application filed April 10, 1882. Serial No. 57,930. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. WINDLE, of Worcester, in the county of Worcester, State of Massachusetts, have invented certain new and valuable Improvements in Bit-Gages; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

This invention has for its object the attachment to a boring-bit of an adjustable gage which will indicate when the proper depth of hole has been bored, as will be hereinafter explained.

In the annexed drawings, Figure 1 represents a sectional view of my bit-gage; Fig. 2, a side view. Figs. 3, 4, and 5 are detail views of the same.

A designates a boring-bit. B designates a clamp, which is secured to the bit by means of a set-screw. On one end of the clamp is a projection, C, which is recessed to receive and has inserted therein and secured thereto a spiral spring, D, and disk E. The said projection C has a slot milled in its lower side to receive and has inserted therein a locking lever or bar, I, through which passes a pin, J, which secures it in place and upon which it oscillates, said lever or bar having a spring, K, bearing against and under one end. The disk E is secured in place by the screw F, on which it turns. The spring D has its ends bent at an angle in opposite directions, one end of which is inserted in the projection C, and the other end being inserted in the disk E, said spring working in a winding direction.

The disk E has a recess milled in its surface, and has inserted therein and fastened thereto by a screw, H, a cam, G. Said cam has a projection, O, cast upon its surface at or near its center, through which passes a rod, L, which may be moved upward or downward, and is fastened in place by a screw, M.

The disk E has recesses Q and P milled in its periphery.

The cam G has a V-shaped recess milled in

the lower end, as represented at R, Fig. 5. One end of the locking lever or bar I is made V-shaped to fit in the recess R in the cam G, and next to the V-shaped end the bar is made square to fit in the recess in the disk E, (represented at Q, Fig. 4.)

Having ascertained the depth of hole to be bored, the rod L is adjusted accordingly by moving it upward or downward, as the case may require, and is fastened in place by the screw M, and is then placed in a position parallel with the boring-bit, thereby bringing the recess Q in the disk E and recess R in the cam G in proper position for receiving the corresponding parts of the locking lever or bar I, which is forced into the said recesses by the spring K, which secures the disk E and cam G in their proper position, bringing the rod L in parallel with the boring-bit, as shown in the drawings at Fig. 1, which is now in readiness for use. The work of boring now proceeds. When the boring-bit has gained sufficient depth to bring the end of the rod L in contact with the material being bored, said rod is forced backward by the friction it receives from being brought in contact with said material being bored, thereby pressing the V-shaped part of the cam G against the corresponding end of the locking lever or bar I, forcing it outward, thereby disengaging said locking lever or bar I from the disk E, which allows the spiral spring D to turn the said disk E around until the said locking lever or bar I engages with the recess P in the said disk E, as shown in the drawings at Fig. 3, which places the rod L in a position angular to that during the operation of boring, which indicates that the required depth has been gained, and, the rod being thrown back in such a position, it will not mark or otherwise injure the material being operated upon, which would be the case were it retained rigidly in position, as shown, during the operation of boring. The operation is now repeated, and the work proceeds as before.

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

The clamp B, having at one end the pro-

jection C, in combination with the disk E,
connected to said projection, the spring D
within such projection and connected thereto
and to the disk E, the lever I, hinged to the
5 projection C, cam G, connected to the disk E,
and the rod L, secured to the cam G, the cam
and disk having the notches, as set forth.

In testimony that I claim the above I have
hereunto subscribed my name in the presence
of two witnesses.

JOHN E. WINDLE.

Witnesses:

C. F. LAWRENCE,
WM. WORTH.