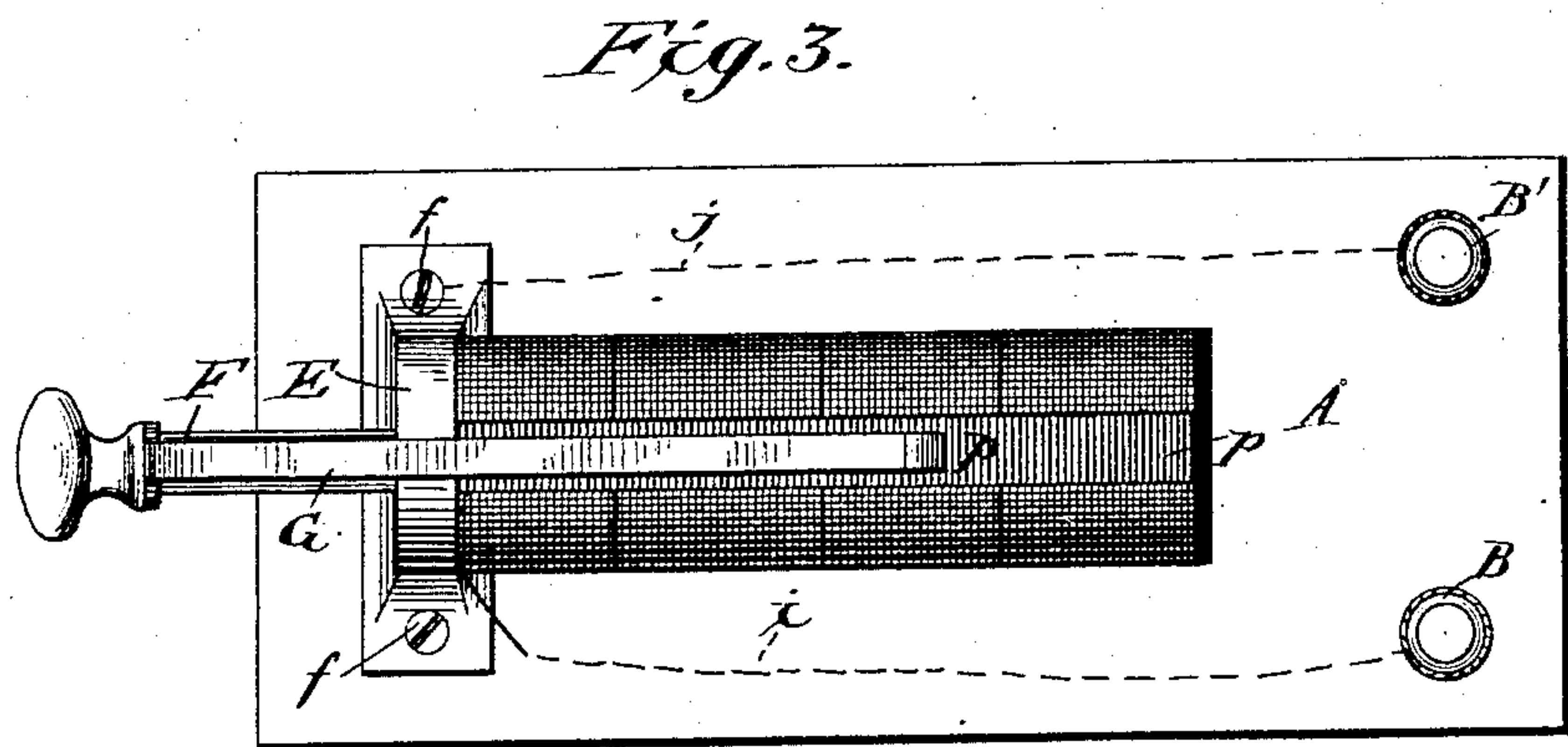
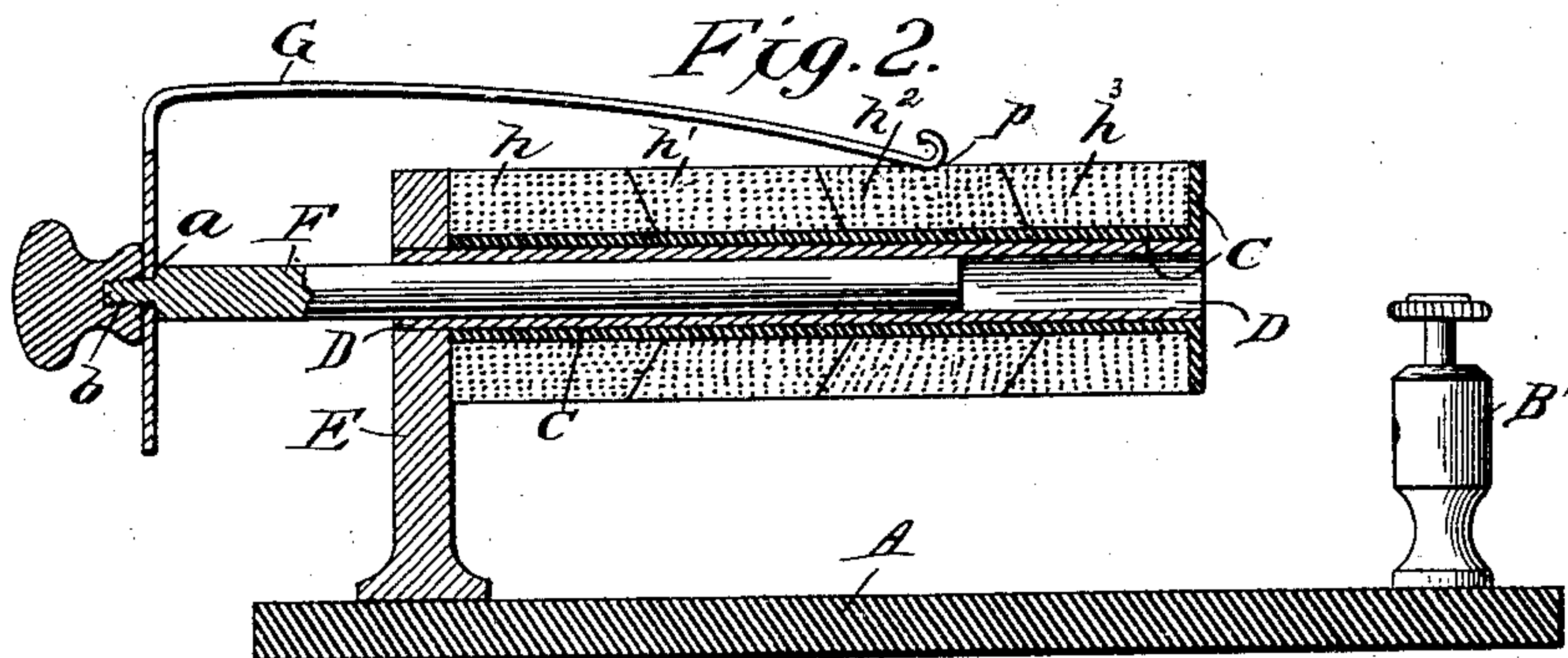
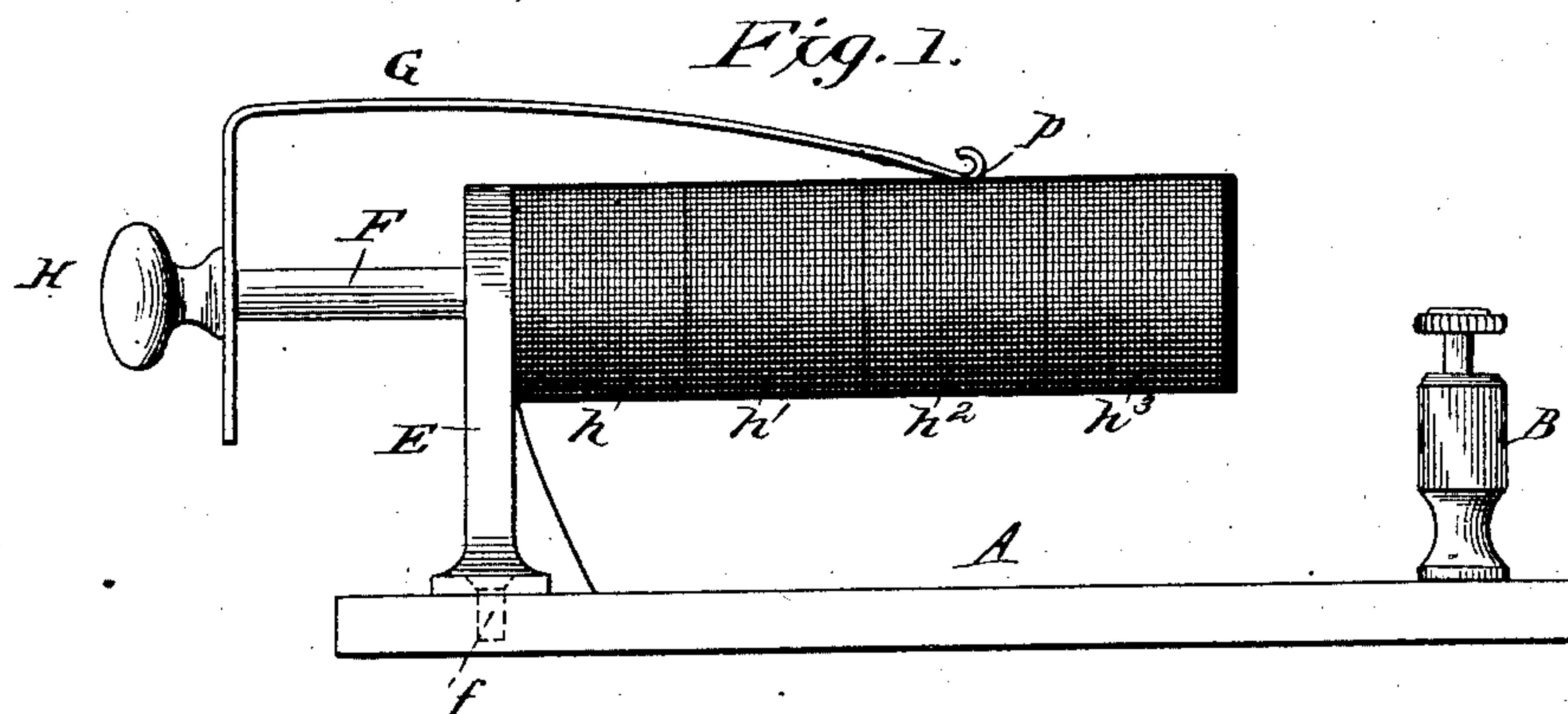


(No Model.)

T. J. PARRISH.
RHEOSTAT.

No. 432,894.

Patented July 22, 1890.



WITNESSES:

M. H. Blondel.
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UNITED STATES PATENT OFFICE.

THOMAS J. PARRISH, OF NEVADA, MISSOURI.

RHEOSTAT.

SPECIFICATION forming part of Letters Patent No. 432,894, dated July 22, 1890.

Application filed February 14, 1890. Serial No. 340,438. (No model.)

To all whom it may concern:

Be it known that I, THOMAS JACKSON PARRISH, of Nevada, in the county of Vernon and State of Missouri, have invented a new and
5 useful Improvement in Regulators for Electric Currents, of which the following is a specification.

The object of my invention is to provide a simple and practical regulator for electric
10 currents; and it consists in the peculiar construction and arrangement of a base-plate, a helical coil having a hollow central chamber, a supporting-bracket for the same, and
15 a slide arranged to move into or out from the coil and provided with an external spring adapted to bear upon different portions of the exterior of the coil to transmit the current through more or less of the coil according to the will of the operator, as hereinafter
20 fully described.

Figure 1 is a side elevation of my regulator. Fig. 2 is a vertical longitudinal section of the same, and Fig. 3 is a plan view.

In the drawings, A represents a base-plate
25 of hard rubber, glass, wood, or other non-conducting substance. Upon one end are erected two binding-posts B B', and at the other end an upright or bracket E, which is firmly connected to the base-plate by screws
30 f. In the top part of the upright E there is a hole in which is firmly seated a horizontal metal tube D, which is supported at one end only by means of the upright. Around this metal tube there is arranged another tube C
35 of hard rubber or other non-conducting material. Around this tube is disposed a helix of fine wire constructed in several sections $h h' h^2 h^3$. This wire is covered with an insulated coating, and in winding the helix the
40 outer layer of one section h is completed before the inner layer of the next section h' is commenced.

F is a slide-rod adapted to move within the tube D, and of equal length therewith.
45 This slide-rod has at one end a shoulder a and screw-threaded stem b , and upon this end of the rod there is secured a bent metal spring G, which is perforated to receive the stem b of rod F, and is clamped between the

shoulder a and a non-conducting handle-
50 knob H, which is screwed onto the stem b . This spring G is bent over the coil and its end bears lightly upon the section of the coil as the rod F is adjusted in or out of the tube. At the points p , where the end of spring G
55 bears upon the sections of the coil, the insulation of the wire is removed, so that the said spring may in its adjustment be in electrical contact with the wire of said sections.

From the binding-post B a concealed wire
60 i leads to the end of the coil next to its supporting-upright, and from the other binding-post B' a concealed wire j leads to the upright E, and is in electrical communication with the rod F and spring G in all their adjust-
65 ments.

The current to be regulated comes in at one binding-post B', and passes thence by wire j to the upright E, and thence by tube D and rod F to the spring G, and from the end of
70 the spring it passes to one of the exposed sections of the wire coil, and thence through the coil to wire i and to binding-post B. For a greater resistance to the current the rod F is pushed in by knob H, and a greater por-
75 tion of the coil is thrown in circuit, and vice versa.

Having thus described my invention, what I claim as new is—

1. The combination, with a non-conducting
80 base, of an upright metal support E, having a metal tube D a coil of wire wound about the same, a metal rod F, arranged to slide within the tube D and having a contact-spring G and knob H, and circuit-wires ar-
85 ranged substantially as shown and described.

2. The wire coil made in sections $h h' h^2$, with the wire extending from the outer layer of one section to the inner layer of the next section, and the wires of the outer layers left
90 bare along the length of the coil, in combination with a sliding contact moving upon the surface of said exposed wires and connections, substantially as shown and de-
95 scribed.

3. The combination, with the hollow wire coil, of the rod F, having shoulder a and screw-stem b , the screw-knob H, and the bent

spring contact G, perforated to receive stem *b*, and clamped between the shoulder *a* and knob H, substantially as shown and described.

4. The combination of the base-plate A,
5 having binding-posts B B', and circuit-wires *i* and *j*, the upright E, having open metal tube D, the non-conducting tube C, with wire

coils *h h' h²*, &c., and the rod F, knob H, and contact-spring G, substantially as shown and described.

THOMAS J. PARRISH.

Witnesses:

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P. B. TURPIN.