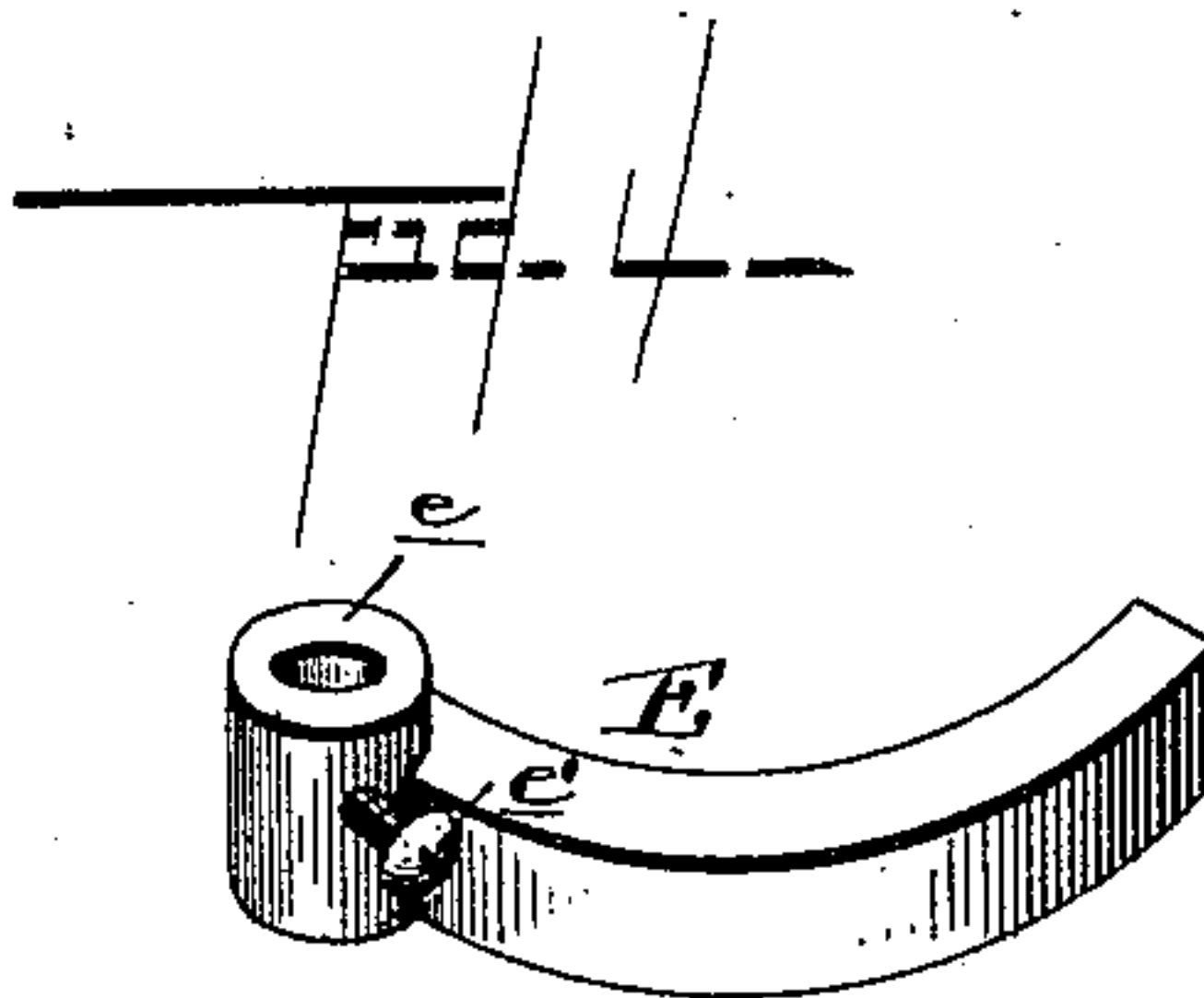
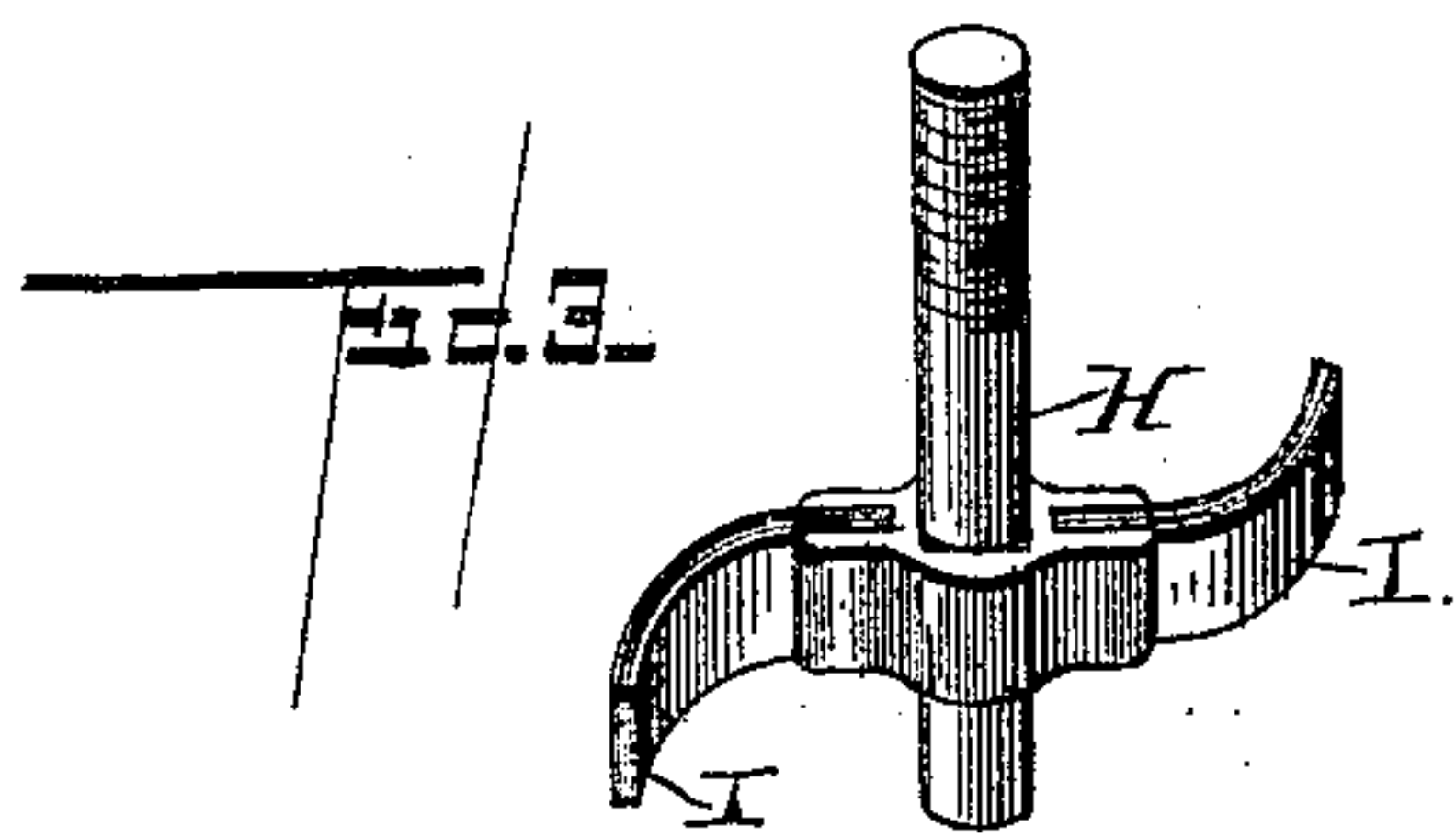
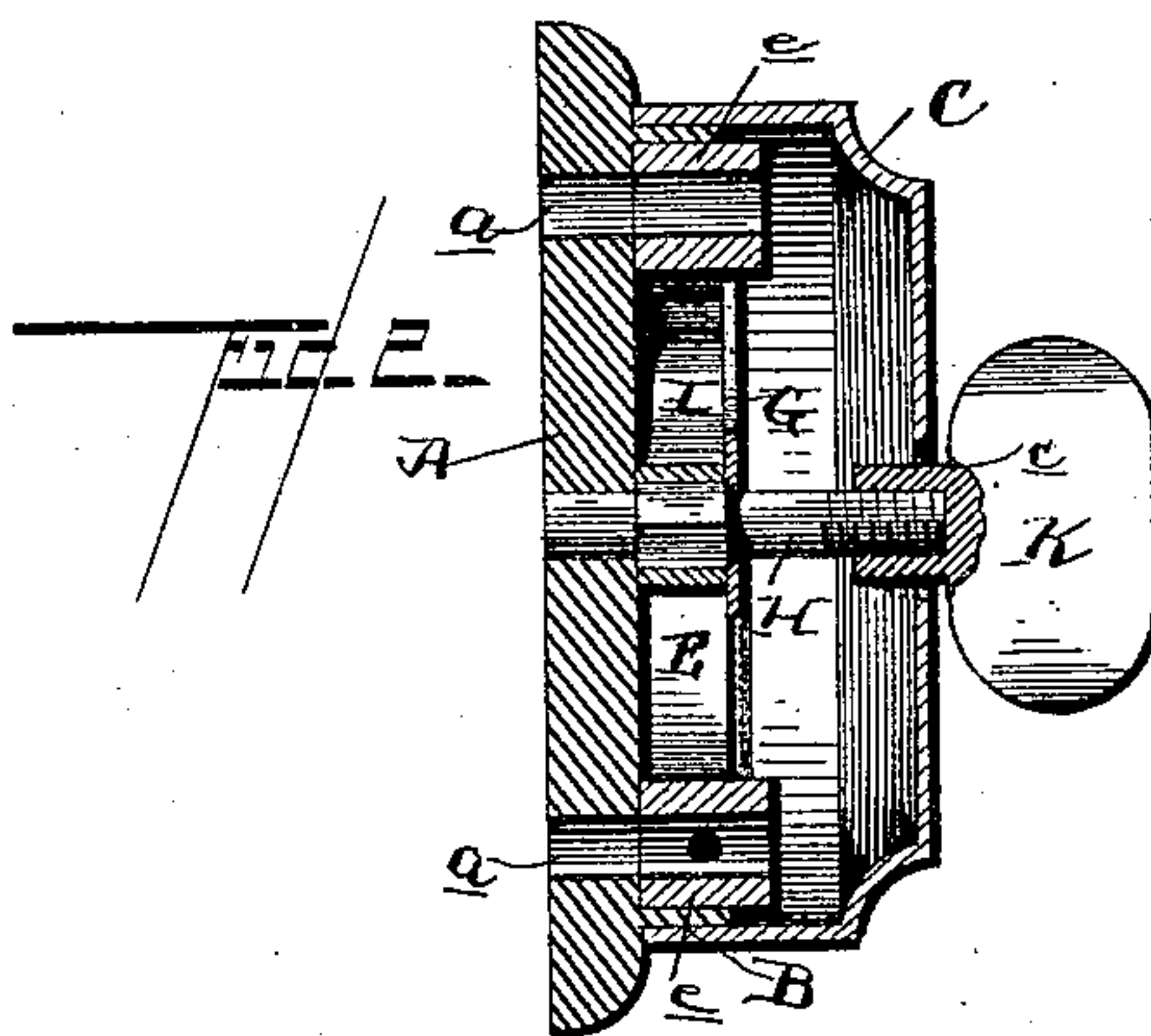
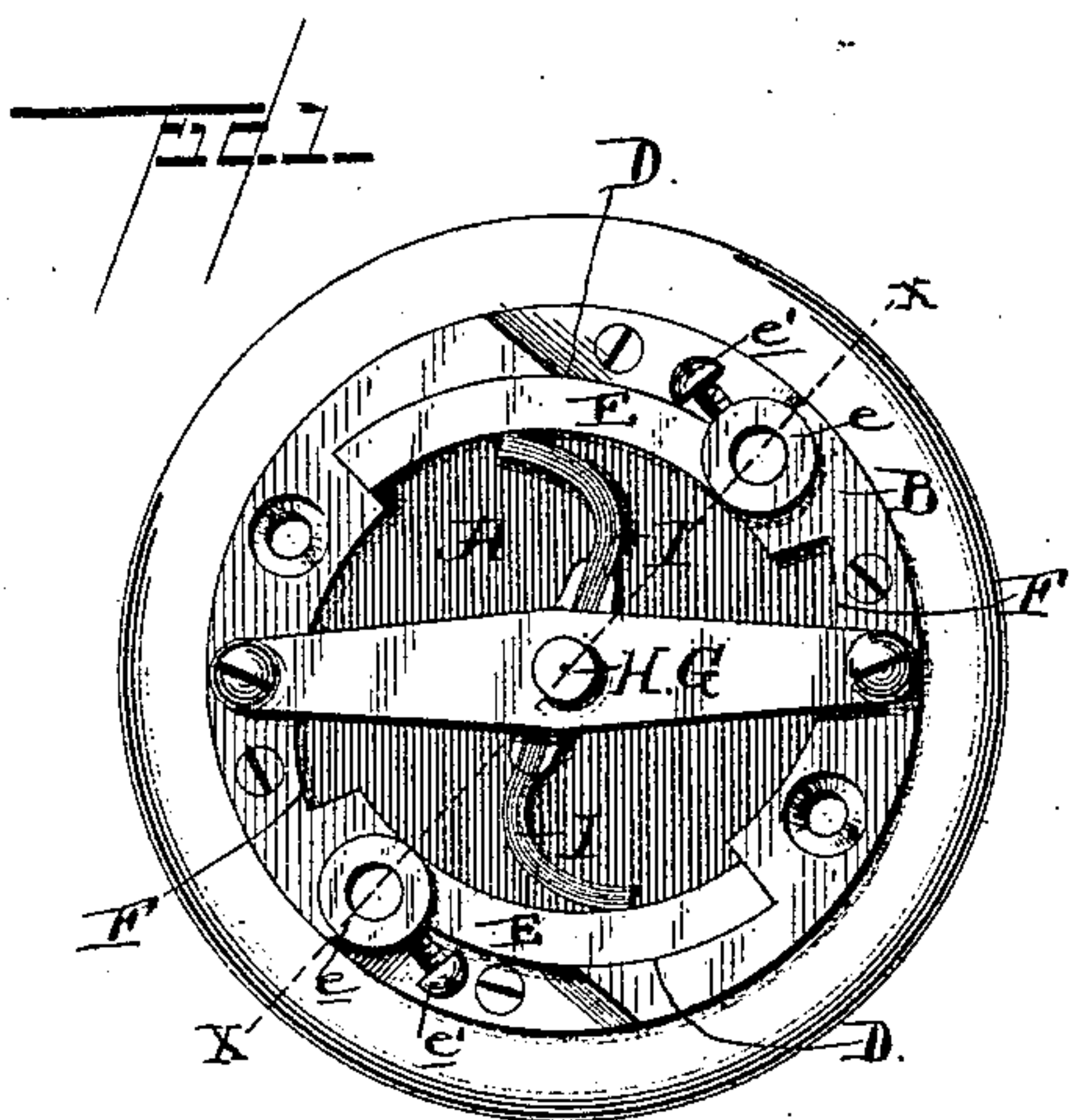


(No Model.)

H. MOORE & O. O. JARRARD.
ELECTRIC SWITCH.

No. 470,790.

Patented Mar. 15, 1892.



Witnesses

J. F. Sutz

D. P. Muthaupt

Inventors

Hugh Moore, and

O. O. Jarrard

C. A. Snow

UNITED STATES PATENT OFFICE.

HUGH MOORE AND OLIVER OTIS JARRARD, OF MAUCH CHUNK,
PENNSYLVANIA.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 470,790, dated March 15, 1892.

Application filed September 4, 1891. Serial No. 404,766. (No model.)

To all whom it may concern:

Be it known that we, HUGH MOORE and OLIVER OTIS JARRARD, citizens of the United States, residing at Mauch Chunk, in the county of Carbon and State of Pennsylvania, have invented a new and useful Electrical Switch, of which the following is a specification.

This invention relates to electrical switches designed to be used with electrical devices for breaking and closing the circuit; and it has for its object to greatly simplify the ordinary electrical switches and at the same time to provide one which will be efficient and durable in its use as a switch.

With these and other objects in view for which such devices are constructed the invention consists of the construction hereinafter more fully described, illustrated in the accompanying drawings, and specifically pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a top plan view of an electrical switch constructed in accordance with our invention, the cover thereof being removed. Fig. 2 is a vertical transverse section of the same on line *x x* of Fig. 1. Fig. 3 is a detail in perspective of the commutator or switch wheel. Fig. 4 is a detail in perspective of one of the curved contact-plates.

Referring to the accompanying drawings, A designates the base-piece of our electrical switch, which is preferably circular in shape and is constructed of porcelain, hard rubber, or other suitable non-conducting material. Projecting up from said base is a continuous circular flange B of the same material as the base portion of the device, and which may either be formed integrally, preferably so, or may be supplementally secured upon said base. Snugly fitting over the outer periphery of said frame is an inclosing cap C, provided with a central perforation *c*, and which is adapted to inclose the various parts of the switch and provide a neat and compact article. The inner periphery of said flange is provided with oppositely-curved recesses D, within which are suitably seated and secured the curved contact-plates E, forming a continuation of the inner periphery of said flange and are substantially the same height there-

with. The said curved contact-plates are provided with the oppositely-perforated ends *e*, within which are designed to work the retaining-screws *e'*, which secure therein the binding-posts or circuit-wires of the electrical device to which the switch is connected, and which, passing up through the perforations *a* in the base, pass into the communicating perforated ends of said contact-plates, to which the same are secured by said binding-screws. The inner periphery of said flange is further provided with the oppositely-notched recesses F, which are alternately disposed with relation to the opposite contact-plates and which are designed to receive the contact-brushes when the circuit is broken in the manner to be described. Transversely secured across the top of said flange is the perforated bar G, through which projects the screw-threaded spindle of the commutator or switch wheel H, the other spindle end of which is journaled in the base of the device, said transverse bar serving to securely hold said commutator within the space inclosed by the circular flange. Securely fastened in opposite sides of the hub of the commutator are the contact plates or brushes I, which are constructed in the ordinary manner, comprising a series of plates secured together at one end, while in the present invention the said plates are secured in the hub of the commutator or switch wheel and are curved in opposite directions to each other, forming, as it were, a recurved contact-brush, which completes the circuit between the opposite contact-plates, when desired, or breaks the same, according as the switch-wheel is manipulated.

To the screw-threaded end or spindle of the commutator or switch wheel, projecting through the perforation *c* in the top of the inclosing cap, is secured an operating thumb-piece K, by means of which, when it is desired to close the circuit, the said commutator or switch wheel is turned, so that the recurved brushes are in contact with said contact-plates and thus closes the circuit, while on the other hand when it is desired to break the circuit the said brushes are turned until they fly back within the alternately oppositely arranged notched recesses, which thoroughly

protect the ends of the contact-brushes from closing the circuit with the plates.

The construction and operation of the herein-described switch are thought to be apparent without further description.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

In an electrical switch, the base having an upwardly-extending flange and perforations therethrough, curved contact-plates having perforated lugs for the reception of the binding-posts or circuit-wires, said plates being seated within the inner periphery on opposite sides of said flange and having the perforated lug thereof registering with said perforations through the base and flange, notched recesses in the inner periphery of said flange and alternately disposed with relation to said plates,

a centrally-perforated bar secured transversely to opposite sides of said flange, and a commutator or switch wheel revolvably mounted upon said base and having its operating-spindle working in the perforations of said bar and its hub beneath said bar, the said hub being provided with the oppositely-curved series of contact brushes or plates secured therein and adapted to travel around the inner periphery of said flange to break and close the circuit, substantially as set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

HUGH MOORE.

OLIVER OTIS JARRARD.

Witnesses:

H. D. HERMANY,

FRANK C. SHARKEY.