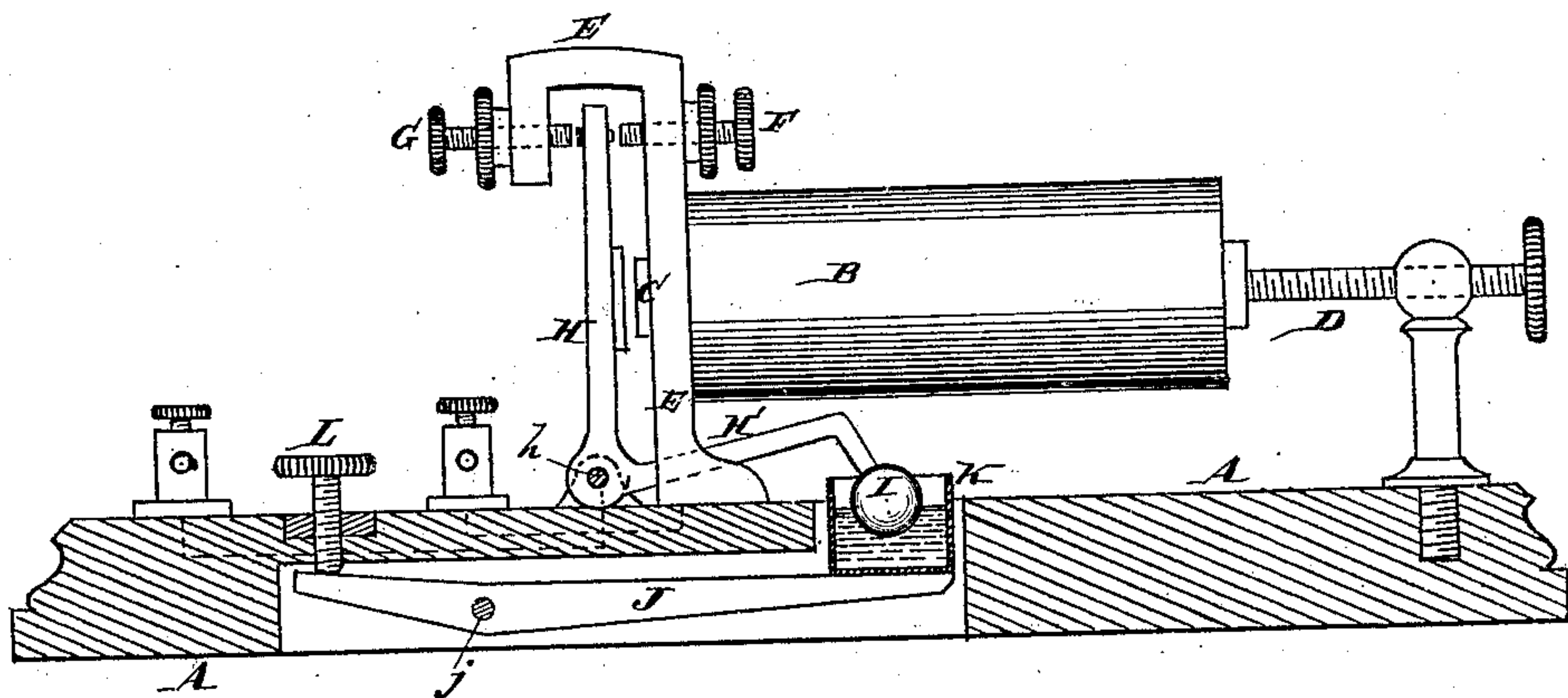


(No Model.)

E. A. SCHOETTEL.
TELEGRAPHIC RELAY.

No. 248,112.

Patented Oct. 11, 1881.



Attests
J. Mator.
Marin

Inventor
Edward A. Schoettel
By his atty-
J. M. Mator

UNITED STATES PATENT OFFICE.

EDWARD A. SCHOETTEL, OF BROOKLYN, NEW YORK.

TELEGRAPHIC RELAY.

SPECIFICATION forming part of Letters Patent No. 248,112, dated October 11, 1881.

Application filed July 9, 1881. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. SCHOETTEL, of the city of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Telegraphic Relays, of which the following is a specification.

My invention relates to telegraphic relays; and it consists in means to adjust the armature of the relay, whereby it may be made to resist with greater or less force the attraction by the core, to adjust the relay for any strength of line-current, said means consisting in providing the armature with an arm, to the end of which is secured an air-vessel which floats in an adjustable tank of liquid, all of which is more fully set forth in the following specification and shown in the accompanying drawing, which forms part thereof.

The object of this invention is to provide means to adjust said relay and at the same time dispense with all springs.

In the drawing is shown a longitudinal section of a relay embodying in it my invention.

A is the bed-plate of the relay. B are the electro-magnets. C are the usual cores of said magnets. D is an adjusting-screw, of any desired pattern. E is the standard, which is secured to the bed-plate and carries the contact-points and their adjusting-screws F and G, as is usual in relays.

The armature H is pivoted at *h*, and is provided with an arm, H', to the end of which is secured an air-vessel or float, I.

In place of a hollow globe, as shown, a float of cork or wood, or their equivalent, may be used. Located under said float is a tank or vessel, K, containing any liquid, as glycerine or mercury. This tank K is secured to the end of a lever, J, pivoted at *j* to the bed-plate of the relay.

The adjusting-screw L passes through the bed-plate, and the end rests against the short end of the lever J.

The operation is as follows: The electro-magnets being properly adjusted by the screw D, the resistance offered to the attraction of the armature H is regulated by the set-screw L. By screwing this adjusting-screw L down the tank K is raised, and tends also to raise the float I of the armature; but as this is prevented by the screw G, the liquid is forced up around the globe I to a greater extent, thereby increasing the resistance to the vibration of the armature, and vice versa.

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

1. In a telegraphic relay, a pivoted armature and horizontal helices or electro-magnets, in combination with means to adjust the resistance of the armature to vibration, consisting of a pivoted float secured to said armature and a tank containing a liquid, in which the said float is partly submerged, a screw or equivalent means located on the top of the bed-plate to adjust said float and tank to or from each other without lifting the relay, and connecting mechanism by which any movement to the screw is imparted to the tank, as and for the purpose specified.

2. In a telegraphic relay, the armature pivoted to the bed-plate and provided with an arm furnished with a float on its end, in combination with a tank containing a liquid and adapted to support said float, a lever adapted to raise or lower said tank, and an adjusting-screw to adjust the lever, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

EDWARD A. SCHOETTEL.

Witnesses:

JOHN M. STEARNS,

J. MILTON STEARNS, Jr.