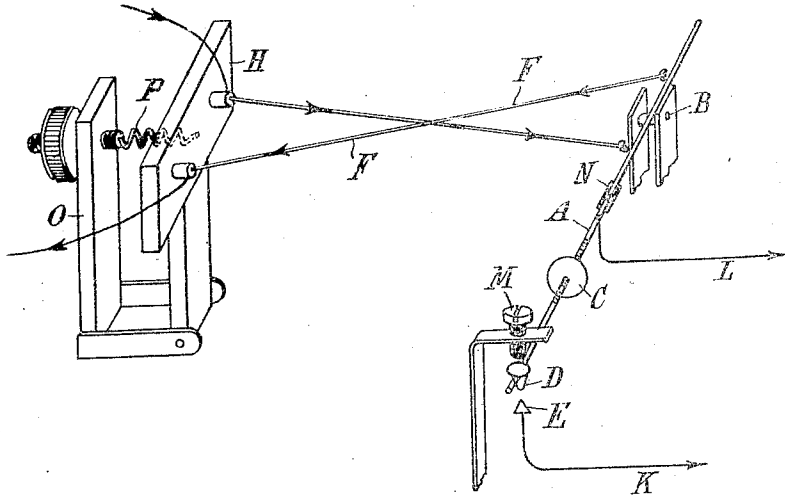


H. A. EWEN.
RELAY.
APPLICATION FILED OCT. 19, 1916.

1,329,756.

Patented Feb. 3, 1920.



Harry Alexander Ewen, Inventor
by Sheffield & Butts attys

UNITED STATES PATENT OFFICE.

HARRY ALEXANDER EWEN, OF LONDON, ENGLAND, ASSIGNOR, BY MESNE ASSIGNMENTS, TO RADIO CORPORATION OF AMERICA, A CORPORATION OF DELAWARE.

RELAY.

1,329,756.

Specification of Letters Patent.

Patented Feb. 3, 1920.

Application filed October 19, 1916. Serial No. 126,521.

To all whom it may concern:

Be it known that I, HARRY ALEXANDER EWEN, a subject of the King of Great Britain, residing at Marconi House, Strand, London, England, have invented new and useful Improvements in Relays, of which the following is a specification.

The object of this invention is to provide a relay depending for its action upon the extension of a filament, or filaments due to the heating produced by the passage of an electric current.

My invention is illustrated by the accompanying drawing. The figure shows a relay actuated by a pair of filaments.

A is an arm mounted on a fixed pivot B so that the only movement of which it is capable is rotation in one plane about this pivot. Upon it is adjustably mounted a mass C the weight of which tends to keep a contact D upon a terminal E. To the arm is connected the ends of a pair of conducting filaments F, the other ends of which are connected to a pivoted frame H. The filaments are so adjusted that normally, that is, when no current is flowing through it, their tension holds the arm up so that the contact D is separated from the terminal E, but when an electric current flows through the filament and heats it it expands and allows the contact D to come into contact with the terminal E and thus complete an electric circuit between wires K, L connected to the terminal E and to the arm respectively. M is an adjustable stop limiting the upward movement of the contact D. N is a sleeve

insulating the part of the arm connected to the filament from the part carrying the contact D.

The pair of filaments F cross and almost touch, this being the position of greatest sensitiveness. In other words, the frame H has been turned relatively to the arm through an angle of from 150° to 180° from the position in which the two filaments are parallel. The frame H is hinged to a support O toward which the frame is drawn for purposes of adjustment by a nut I and a spring P.

What I claim is:

1. In a device of the class described in combination, a pivoted arm fixed against motion other than rotation, a pair of filaments attached to and tending to turn said arm about its pivot, and means whereby the tension of said filaments may be adjusted, said means comprising a hinged frame to which said filaments are connected.

2. In a device of the class described in combination, a pivoted arm fixed against motion other than rotation, a pair of filaments whose one ends are connected to said arm, a frame to which the other ends of said filaments are connected; said frame being hinged on an axis at one side of and substantially parallel to the line joining the points of connection of said filaments with said frame, a fixed support, a spring connected to said support and said frame for tensioning said filaments, and means for adjusting the tension of said spring.

HARRY ALEXANDER EWEN.