April 20, 1926. 1,581,186

A. J. H. ELVERSON

ELECTRIC CONTACT BREAKER

Filed August 11, 1922

Fig. 1.

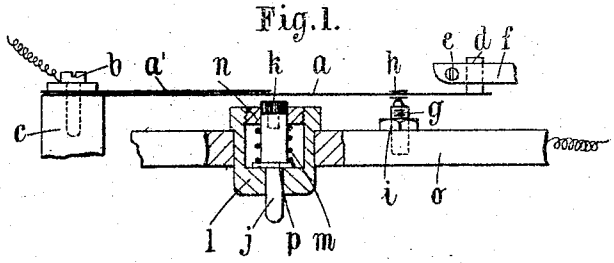
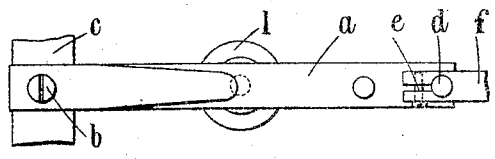


Fig. 2.



INVENTOR

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ATTORNEYS

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UNITED STATES PATENT OFFICE.

ARTHUR JOHN HAWES ELVERSON, OF LONDON, ENGLAND, ASSIGNOR TO HERBERT KENNEDY & COMPANY LIMITED, OF WESTMINSTER, LONDON, ENGLAND.

ELECTRIC CONTACT BREAKER.

Application filed August 11, 1922. Serial No. 581,251.

To all whom it may concern:

Be it known that I, ARTHUR JOHN HAWES ELVERSON, a British subject, residing at The Lynch, Clifton Road, Wimbledon, London, S. W., England, have invented certain new and useful Improvements in Electric Contact Breakers, of which the following is a specification.

This invention relates to electric contact breakers.

An object of the invention is to provide an improved electric contact breaker of the flat spring type which is so damped as to enable it successfully to operate at high speeds.

A further object is to provide an improved construction wherein a spring is supported or anchored at two points near the ends thereof and the operating member and contact are arranged at points intermediate the points of support, thus enabling the contact breaker to be operated at high speeds without setting up troublesome vibrations.

The invention consists in the improved contact breaker comprising the arrangement and combination of parts hereinafter described and claimed.

Referring to the drawings:—

Fig. 1 represents an elevation, partly in section of the contact breaker and

Fig. 2 represents a plan view thereof.

The flat spring *a* is anchored or supported at one end by a screw *b* against an insulated support *c* and is engaged at the other end by a damper *d* taking the form of a plug of insulating material which is adjustably secured by a screw *e* in the split end of a support *f*.

The spring normally contacts with a screw *g* which is adjustably secured by means of a nut *i* in a bar *o*, a platinum contact *h* being secured by riveting or other suitable means to the spring *a*.

Contact is broken by an operating member comprising an insulated stud *k* mounted by a plunger *j* operated periodically, usually at high speed, by a cam or like mechanism.

The stud is normally held out of contact with the flat spring *a* by means of a helical spring *m* housed in a socket *l* mounted on the bar *o*, the helical spring bearing at one end against a shoulder *p* on the plunger *j* and at the other against a screwed ring *n*.

The contact-breaking spring *a* is preferably of phosphor bronze and is provided with a second leaf a^1 extending from the end secured to the support *c* to the point of contact of the operating member.

The arrangement described allows the contact-breaking spring to be very light and by suitable positioning of the operating member and contact point the movement of the spring at the contact point can be made smaller or larger than that at the operating point.

I claim:

1. Electric contact breaking apparatus comprising the combination of a flat spring, means to anchor one end of said spring, an abutment pressing upon the free end of said spring, a fixed contact, a second contact upon said spring normally engaging said fixed contact, a plunger operable to press said flat spring away from said fixed contact, said contacts being disposed between the said plunger and the said free end of said spring.

2. Electric contact breaking mechanism comprising the combination of a flat spring means to anchor one end of said spring, an abutment pressing upon the free end of said spring, a fixed contact, a second contact upon said spring normally engaging said fixed contact, a plunger operable to press said flat spring away from said fixed contact, said contacts being disposed between the said plunger and the said free end of said spring, and a second flat spring anchored at the anchorage of said first spring, pressing on said first spring upon the side remote from said plunger and terminating adjacent said plunger.

3. Electric contact breaking mechanism comprising the combination of a flat spring, means to anchor one end of said spring, an abutment pressing upon the free end of said spring, a fixed contact, a second contact upon said spring normally engaging said fixed contact, a plunger operable to press said flat spring away from said fixed contact, said contacts being disposed between the said plunger and the said free end of said spring,

and a spring normally holding said plunger away from said flat spring.

4. Electric contact breaking apparatus comprising the combination of a flat spring, means to anchor one end of said spring, an abutment pressing upon the free end of said spring, a fixed contact, a second contact upon said spring normally engaging said fixed contact, a plunger operable to press said flat spring away from said fixed contact, said contacts being disposed between the said plunger and the said free end of said spring, and means to adjust the said abutment relatively to said spring.

In testimony whereof I affix my signature.

ARTHUR JOHN HAWES ELVERSON.