

No. 770,541.

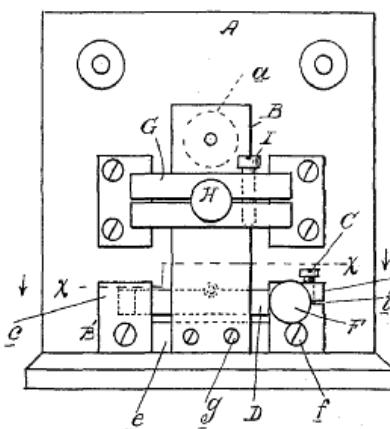
PATENTED SEPT. 20, 1904.

J. B. SCHUG.
CONTACT BREAKER.

APPLICATION FILED MAY 31, 1994.

NO MODEL.

Fig. 1.



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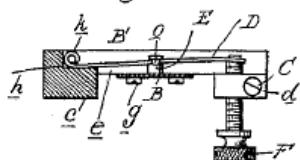
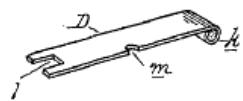


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN B. SCHUG, OF DETROIT, MICHIGAN.

CONTACT-BREAKER.

SPECIFICATION forming part of Letters Patent No. 770,541, dated September 20, 1904.

Application filed May 31, 1904. Serial No. 210,512. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. SCHUG, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Contact-Breakers, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to a contact-breaker especially designed for use in connection with induction-coils; and it consists in its novel construction and in the peculiar arrangement and combination of its parts, whereby the vibrator-spring may be accurately adjusted to vary its amplitude of vibration as desired and readily detached and replaced without the necessity of readjustment.

In the drawings illustrating my invention, Figure 1 is an end view of an induction-coil box, showing the contact-breaker applied. Fig. 2 is a view in side elevation of the contact-breaker. Fig. 3 is a section on line *x-x* of Fig. 1 looking in the direction of the arrows, and Fig. 4 is a detached perspective view of the operating-bar for the spring.

The reference-letter A represents the induction-coil box.

B is the usual vibrator-spring of the contact-breaker, carrying the armature *a* and the platinum point *b*.

B' represents a support for the spring, consisting in this particular case of a casting composed of two post-sections *c* and *d* and an intermediate section *e* offset from the posts to form a space therebetween. The support is secured to the end of the coil-box by suitable screws *f*, while the vibrator-spring is detachably secured at its lower end to the intermediate portion *e* of the support by similar screws *g*. The section *e* of the support is recessed on its inner face, as at *h*, while the post *d* is slotted transversely, as at *i*, and is further provided with the threaded orifice *j* to receive the locking-screw *C*.

D represents a rigid operating-bar for the vibrator-spring, having one end curled, as at *k*, and its opposite end slotted, as at *l*. The upper edge of the bar midway of its ends is notched at *m* for a purpose hereinafter set

forth. The bar is located between the two posts of the support, with the curled end fulcrumed within the recess *h* of the section *e*, and a detachable connection is formed between the bar and the vibrator-spring by means of a stud *E*. This stud is rigidly attached to the spring, as plainly indicated in Fig. 3, and is provided with a reduced section or neck *o*, which fits within the notch *m* in the bar *D*.

F represents an adjusting-screw extending through and beyond the threaded aperture *j* in the support and having a swivel connection with the end of the slotted bar *D*.

Above the support B' and attached to the end of the coil-box in any suitable manner is a slotted yoke *G*, through which extends an adjusting-screw *H*, provided with the usual contact-point adapted to contact with the platinum point upon the vibrator-spring, previously described.

I represents a locking-screw extending within the slotted yoke, as shown in Fig. 1, and adapted to clamp the yoke upon the screw to retain the latter in its different positions of adjustment. The locking-screw *C* performs the same function as the locking-screw *I*, serving to clamp the slotted member of the support B' upon the adjusting-screw *F*.

The operation of the parts will be obvious. After the adjusting-screw *H* is properly set the tension of the vibrator-spring is varied for the purpose of regulating its amplitude of vibration by means of the screw *F*. As this latter screw is moved inwardly or outwardly it carries with it the operating-bar, which acts directly upon the vibrator-spring.

It will be apparent from the construction of the device that a perfect adjustment may be obtained by proper manipulation of the adjusting-screws and that when the adjustment is once effected it may be maintained by means of the locks. It is to be further noted that by employing an operating-bar of the character described and a detachable connection between the bar and the vibrator-spring the latter may be detached from the other parts of the contact-breaker and replaced without the necessity of readjustment. This is advantageous, as after an adjustment is once ef-

fected it requires considerable time and trouble to readjust the parts to produce the desired results.

What I claim as my invention is—

- 5 1. In a contact-breaker, the combination with a support, of a vibrator-spring detachably connected thereto, a screw-support at one side of the spring, an adjusting-screw engaging the support, a transverse member having a detachable operative connection with the spring, and a swivel connection with the adjusting-screw, and means for locking said screw in any position of adjustment.
- 10 2. In a contact-breaker, the combination with a suitable support, of a vibrator-spring detachably connected thereto, a slotted member at one side of the spring having a threaded opening extending therethrough, an adjusting-screw within and projecting beyond the opening, a transverse bar having a detachable connection with the vibrator-spring, and a swivel connection with the projecting portion of the adjusting-screw, and a locking-screw engaging the slotted member.
- 15 3. In a contact-breaker, the combination with a support, of a vibrator-spring detachably connected at its lower end to the support, a slotted member at one side of the support having a threaded opening extending therethrough, an adjusting-screw within and projecting beyond said opening, a rigid trans-
- 20 30 verse bar fulcrumed at one end on the spring-support, swiveled at its opposite end to the
- projecting portion of the adjusting-screw, and having its upper edge notched intermediate 35 of its ends, a stud upon the vibrator-spring having a reduced portion engaging the notch in the bar, and a locking-screw engaging the slotted member.
4. In a contact-breaker, the combination 40 with a support consisting of a casting composed of two post members and an intermediate section offset from the post members as described, one of the post members being slotted and provided with a threaded opening and 45 the other recessed, of a vibrator-spring fitted between the posts and secured at its lower end to the intermediate section, a notched rigid bar extending between the post-sections, one end thereof engaging the post-recess and the opposite end being slotted, a stud upon the spring having a reduced section engaging the notch in the bar, an adjusting-screw fitting the opening in the slotted post and having a reduced portion at its end engaging the slotted end of the rigid bar, and a locking-screw for the slotted post to clamp the adjusting-screw in its different positions of adjustment.

In testimony whereof I affix my signature in 60 presence of two witnesses.

JOHN B. SCHUG.

Witnesses:

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H. C. SMITH.