

(No Model.)

R. G. BROWN.

CONTACT FINGER FOR VIBRATING REEDS.

No. 345,209.

Patented July 6, 1886.

Fig. 1,

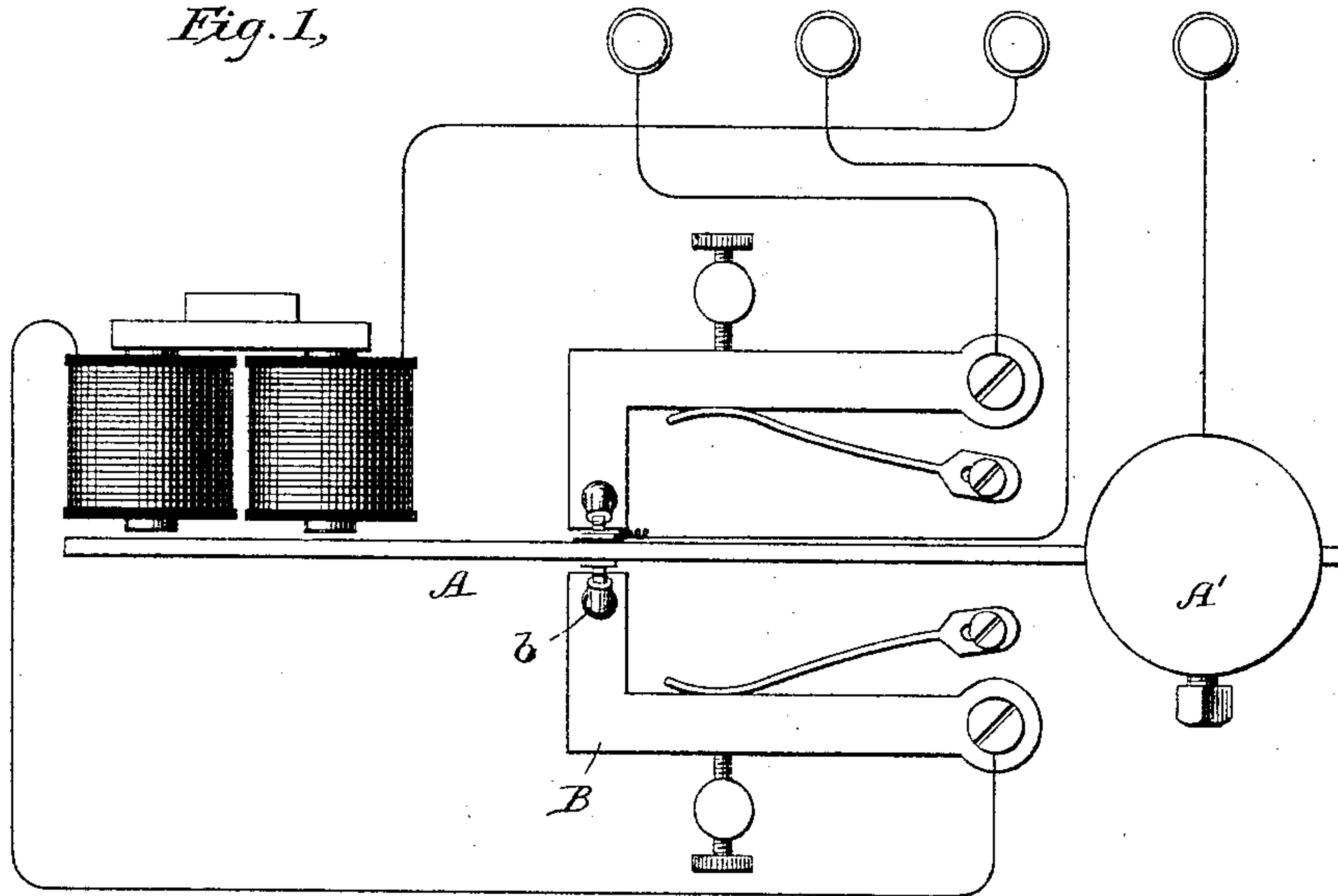
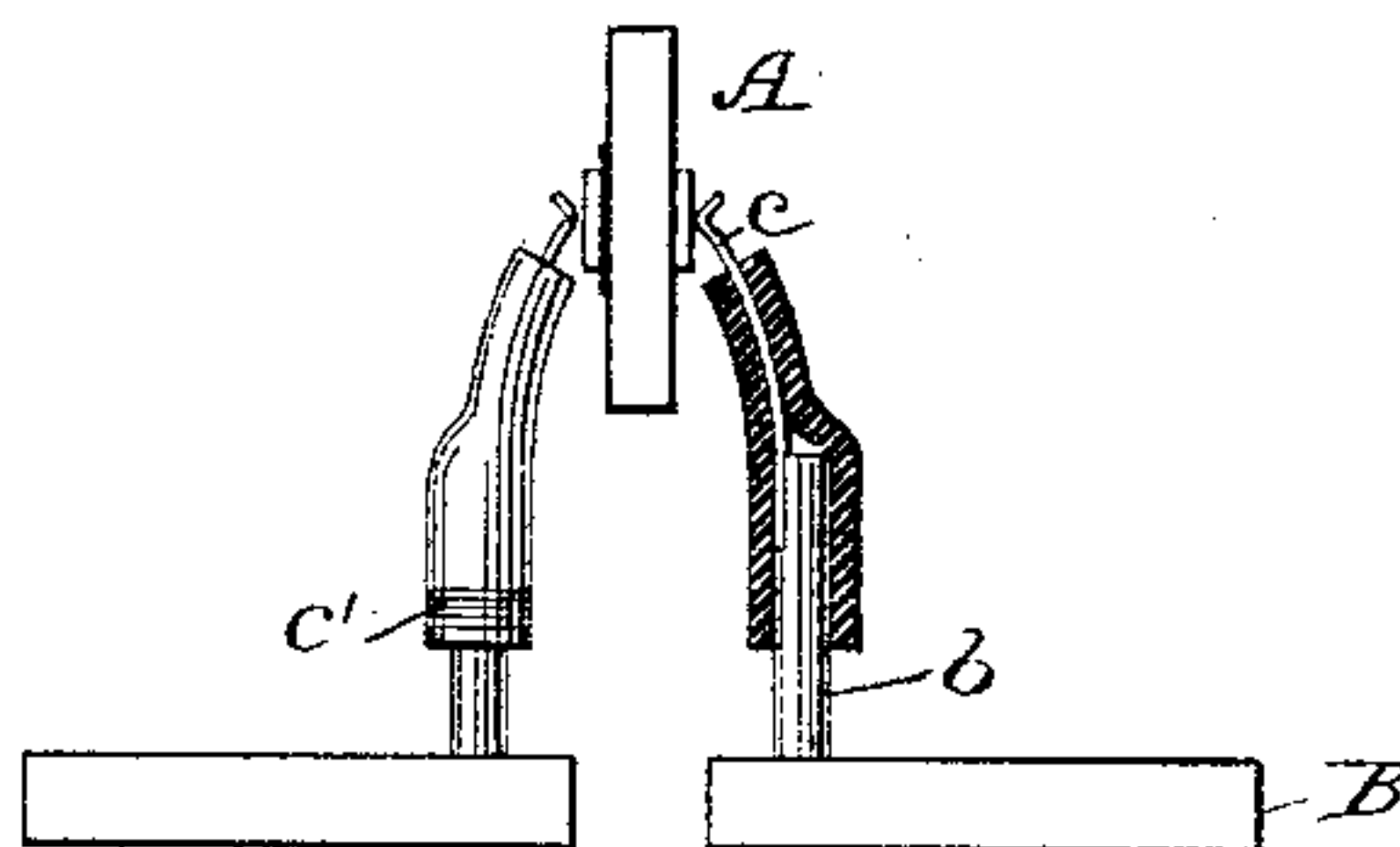


Fig. 2,



Witnesses

Geo. W. Breck.
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By his Attorneys

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UNITED STATES PATENT OFFICE.

ROBERT G. BROWN, OF BROOKLYN, ASSIGNOR TO THE STANDARD MULTIPLEX TELEGRAPH COMPANY, OF NEW YORK, N. Y.

CONTACT-FINGER FOR VIBRATING REEDS.

SPECIFICATION forming part of Letters Patent No. 345,209, dated July 6, 1886.

Application filed March 12, 1886. Serial No. 194,975. (No model.)

To all whom it may concern:

Be it known that I, ROBERT G. BROWN, of Brooklyn, in the State of New York, have invented certain new and useful Improvements in Contact-Fingers for Vibrating Reed, Forks, &c., of which the following is a specification.

In some classes of telegraphy and other electrical apparatus where automatic circuit-breakers are employed, and especially in all such classes of instruments where the accurate vibration of a reed or fork is depended upon for the actuation or control of mechanism, it is desirable that the make and break of the circuit by which the reed or vibrator is actuated should be entirely dependent upon the movement of such vibrator. This, however, has not been the case where ordinary metallic contact-fingers have been employed for effecting the make and break of the circuit, because such contact-fingers have themselves a normal or fundamental rate of vibration, which seldom, if ever, coincides with the rate of the vibrator. There is for this reason a modification of the period or time of make and break, and the vibration of the reed or fork or other vibrator is somewhat modified.

The object of my invention is to provide contact-fingers which will be totally or nearly passive when acted upon by the vibrator. I accomplish this by combining with the yielding contact-finger some elastic material—such, for instance, as rubber.

The manner of applying the rubber to the contact-finger so as practically to deprive it of its characteristic vibratory capacity and muffle or deaden it, so that it responds more or less passively to the movement of the vibrator, may of course be accomplished in many ways.

In the accompanying drawings I have shown what I consider the preferred structure.

Figure 1 is a diagram view of a vibrating reed with its circuit-connections and contacts, and Fig. 2 a detail view showing the construction of the contact-fingers.

A is a vibrating reed mounted in a suitable post, A'. The fingers which make and break

contact with small platinum plates on the sides of the reed are carried by posts *b*, mounted on adjustable arms, B. The contact-finger *c* is preferably surrounded with a sheet of soft rubber or pure gum, which may be applied as shown in the drawings—that is, an opening may be punched with some thin sharp instrument longitudinally through the piece of rubber, and the contact-finger then forced into the aperture; or a piece of rubber tubing may be used, in which the contact-finger fits more or less closely; or a flat piece of rubber can be bent around the finger and wrapped; or the rubber, as before stated, can be applied in any suitable way. In the drawings, which show a solid piece of soft rubber in which the finger is embedded, the end of the rubber is split, so as to envelop the post, and is secured by a wrapping of thread or wire, *c'*.

In the drawings, Fig. 2, the finger *c* is shown as seated in a recess in the side of the post *b*; but such a detail is entirely immaterial. The contact-finger may be suitably enveloped by a piece of rubber or rubber tubing, and may be secured in place on the post merely by the elasticity of the rubber which embraces the post.

Fingers thus constructed are deprived almost entirely of their normal rate of vibration, and respond passively to the action of the reed. I am therefore enabled to obtain a more uniform and accurate vibration than has heretofore been possible.

This invention is especially designed for use in connection with vibrators which control the mechanism of synchronous telegraphs—such, for instance, as those shown in numerous patents to Mr. Patrick B. Delany, but is not limited to such use.

I claim as my invention—

1. The combination, substantially as set forth, of a rapidly-vibrated circuit-interrupter, a yielding contact-finger for making and breaking circuit, and a dampener or muffler applied to the finger, for the purpose described.

2. The combination of a vibrator which automatically makes and breaks its own cir-

cuit, a contact-finger against which the vibrator works, and a dampener or muffler which acts on the contact-finger, substantially as set forth.

- 5 3. The combination of the automatically-actuated vibrator, the yielding contact-finger, and a rubber covering or sheath surrounding it, for the purposes set forth.

In testimony whereof I have hereunto subscribed my name.

ROBERT G. BROWN.

Witnesses:

H. D. MANSON,
WM. W. WIGHT.