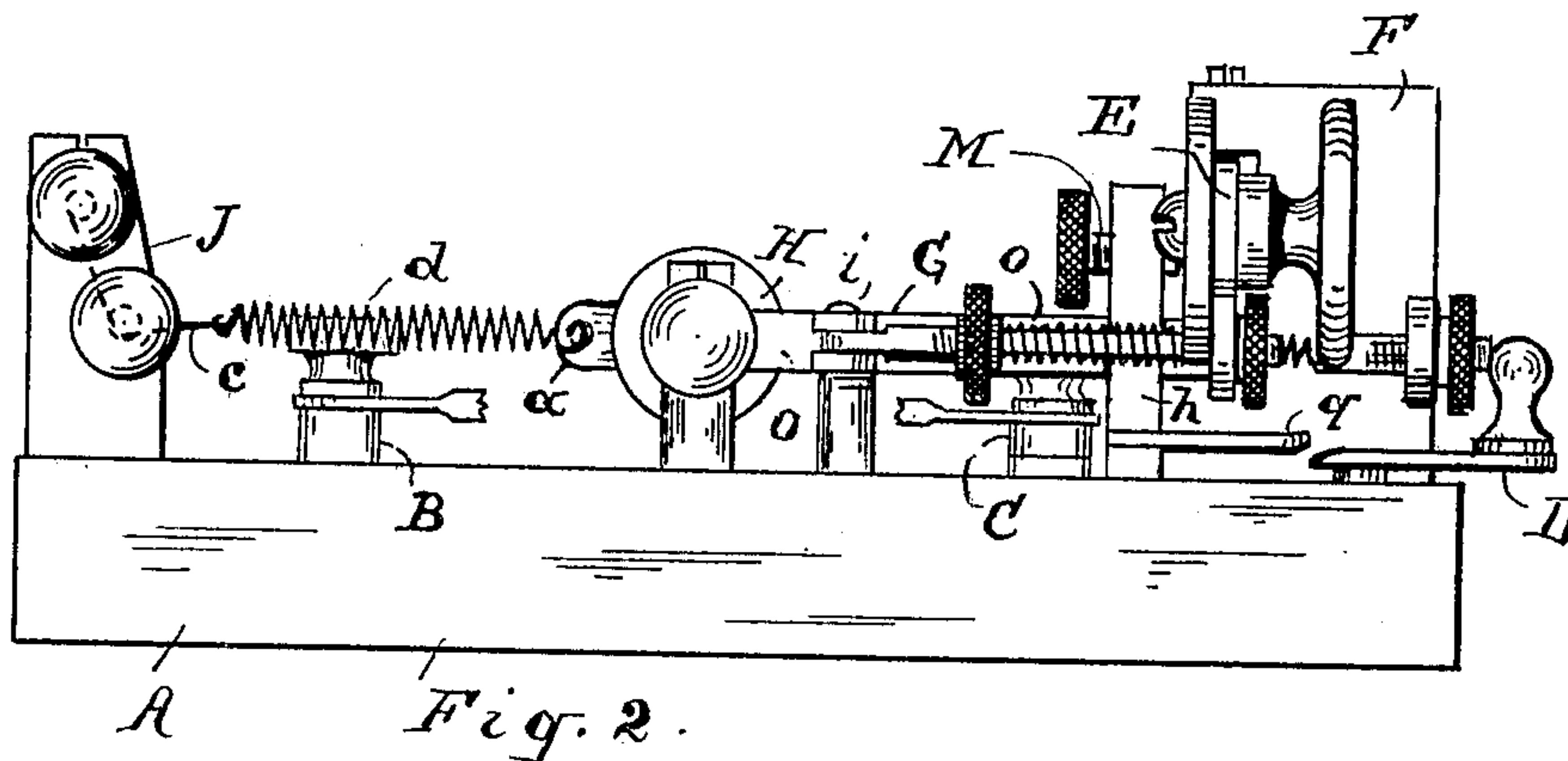
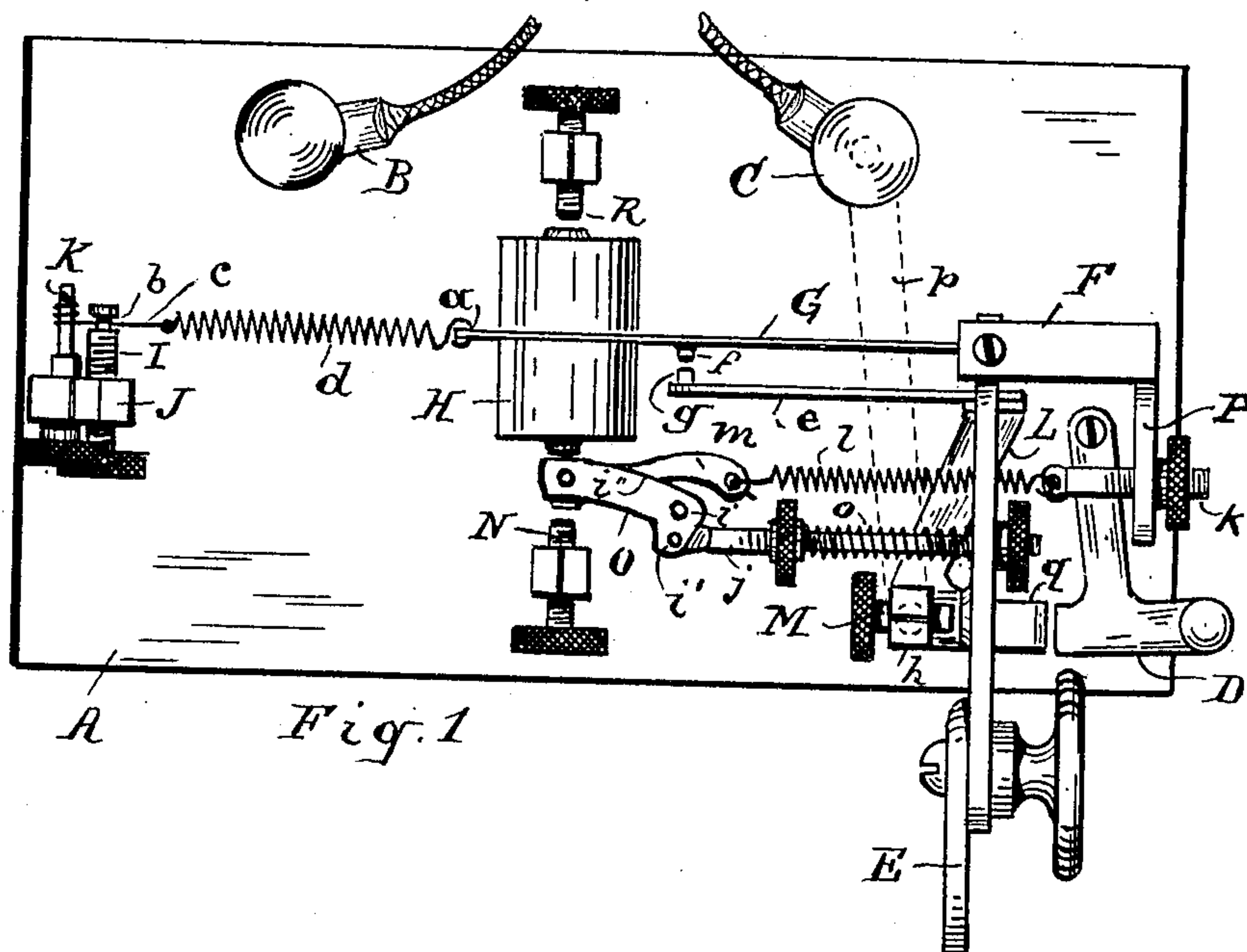


P. DINGER.
TELEGRAPHIC TRANSMITTER.
APPLICATION FILED JULY 25, 1907.

920,034.

Patented Apr. 27, 1909.



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TELEGRAPHIC TRANSMITTER.

REISSUED

No. 920,034.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PAUL DINGER, a citizen of the United States, and resident of Cleveland, in the county of Cuyahoga, State of Ohio, (with post-office address at No. 3617 Revere Court,) have invented certain new and useful Improvements in Telegraphic Transmitters, of which the following is a specification.

My invention relates to improvements in telegraphic instruments technically known as "transmitters" and the objects of my improvement are first, to provide means for speed regulation which may be adjusted while the instrument is in use, second to enable also the regulation of the weight of "dots" while the instrument is used and third to provide means, which intensify the dot contact and also enable the use of the instrument with the least possible fatigue on the part of the operator.

A further object is to construct and arrange the coöperative parts or members of this instrument in a neat, compact and simple manner and to provide for all necessary or desirable adjustments thereof.

I attain these objects in an instrument constructed and equipped substantially as illustrated in the accompanying drawings in which—

Figure 1 represents a plan view of said instrument and Fig. 2 is a front side view of same.

Like letters of reference denote like parts in the drawings and specification.

In Fig. 1 A indicates the base upon which all the parts hereinafter mentioned are mounted. B and C designate the binding posts for the circuit wire, of which the former is the grounded one and the latter the insulated one. D indicates the circuit breaker lever. E designates the main lever or key, which is pivotally mounted upon the bracket F. G denotes the main vibrator which is also connected to the bracket F. A weight H has fixed connection with said vibrator and may also be termed the hammer. Distant from the terminal *a* of the vibrator is located a post J.

A screw I and spindle K are carried by said post one above the other. The terminal of the screw is grooved as at *b* and to the terminal of the spindle is attached a flexible member *c* which connects with the resilient member *d*. The member *c* consists preferably of

a cord or string, while the member *d* is a spring which is attached to the terminal *a* of the vibrator.

L denotes an insulated bracket to which is attached the contact carrier spring *e*; *f* and *g* are contact points, which are respectively attached to the vibrator G and spring *e*, see Fig. 1.

In the post *h* is mounted the contact screw M, whereby dashes can be transmitted upon pushing the lever E against said member M.

Between the weight H and stop N is arranged a bell crank lever O having its pivotal support at *i*. A rod *j* connects the short arm *i'* with a depending portion of key E; also to the long arm *i''* is attached a means for exerting a forced contact toward the weight. Said means comprise the support or arm P, the screw rod *k* the spring *l*, and link *m*; the latter may be omitted upon connecting the spring *l* direct to the lever O.

Stop N above mentioned limits the extent of movement of the vibrator in one direction and stop R exerts opposition in the other direction.

By the application of the spring controlled bell crank lever O the operator is enabled to withhold the said member away from the hammer H simply by a mere touch upon the lever or key E, since the spring *l* offers diminished resistance the more its line of force approaches the pivot *i* of said lever. By means of the rod *j* the lever O can be drawn away from the vibrator and by means of the link *m* and accessories the long arm of the lever O strikes and bears against the vibrator weight or hammer with increasing force the more the lever tilts toward the hammer, the rebounding effect is therefore also enhanced and the contact points *f* and *g* effect distinct and sharp "dots" when such are intended to be made upon releasing the key E at intervals as the tenor of the message may require.

For the production of "dashes" the key must be pushed toward the contact M since the springs *l* and *o* are so adjusted as to normally hold the key E distant from contact M.

The posts C and *h* are di-electric with the base but between themselves they are arranged in circuit by means of the bar *p* underneath the base (see dotted lines in Fig. 1).

The bracket L is di-electric with the base but held fixed thereto by means of the post *h*, an arm *q* of said bracket extends toward the circuit breaker D.

The speed and gravity of dots can be adjusted by means of the spindle K and screw I. Upon winding the cord *c* around said spindle I the spring *d* can be strained to effect the activity of the vibrator and by means of the screw I which has a groove connection with said cord the distance between the contact points *f* and *g* can be regulated as to gravity of the dots produced by said contacts. In fact all parts as seen from the drawings are rendered adjustable so as to enable a proper coöperation of connected parts intended to produce functions as above mentioned.

What I claim and desire to secure by Letters Patent is:

1. In a telegraphic transmitter the combination with the main vibrator of a fixed weight, a speed and contact adjusting device and bell crank lever connected with the key under spring tension in such manner as to impart accelerated force toward said vibrator for the purpose of producing sharp distinct dots.

2. In a telegraph transmitter, the combination of a vibrator, a key lever, means under the control of the key lever for imparting to the vibrator the energy required to initiate its vibration and for preventing it from vibrating, means for pulling with a variable and yielding force upon said vibrator in substantially the direction of its length.

3. In a telegraph transmitter, the combination of a vibrator, a key lever, means under the control of the key lever to move and hold the vibrator in a constrained position to one side of its natural position, a contractile coiled spring arranged with its axis in substantial alinement with the vibrator, which spring is attached at one end to the vibrator, and means pulling upon the other end of the spring, substantially in the line of its axis.

4. In a telegraph transmitter, the combination of a vibrator, a key lever, means un-

der the control of the key lever to move and hold the vibrator in a constrained position to one side of its natural position, a contractile coiled spring arranged with its axis in substantial alinement with the vibrator, which spring is attached at one end to the vibrator, means pulling upon the other end of the spring, substantially in the line of its axis, and means whereby the tension of said spring may be varied by varying the force of said pull.

5. In a telegraph transmitter, the combination of a vibrator, a key lever, means under the control of the key lever to move and hold the vibrator in a constrained position to one side of its natural position, a contractile coiled spring arranged with its axis in substantial alinement with the vibrator, which spring is attached at one end to the vibrator, means pulling upon the other end of the spring substantially in the line of its axis, and means whereby the direction of the pull on said spring may be slightly changed.

6. In a telegraph transmitter, the combination of a vibrator in the form of a spring bar fixed at one end, a coil spring secured by one of its ends to the free end of the vibrator, a flexible cord secured to the other end of said spring, and means for taking in and paying out said cord.

7. In a telegraph transmitter, the combination of a vibrator in the form of a spring bar fixed at one end, a coil spring secured by one of its ends to the free end of the vibrator, a flexible cord secured to the other end of said spring, means for taking in and paying out said cord, a grooved device over which said cord passes between its ends, and means for moving said grooved device transversely of said cord.

PAUL DINGER.

Witnesses:

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