

G. S. PERRY.
TELEGRAPH KEY.

APPLICATION FILED JAN. 28, 1909.

935,164.

Patented Sept. 28, 1909.

3 SHEETS—SHEET 1.

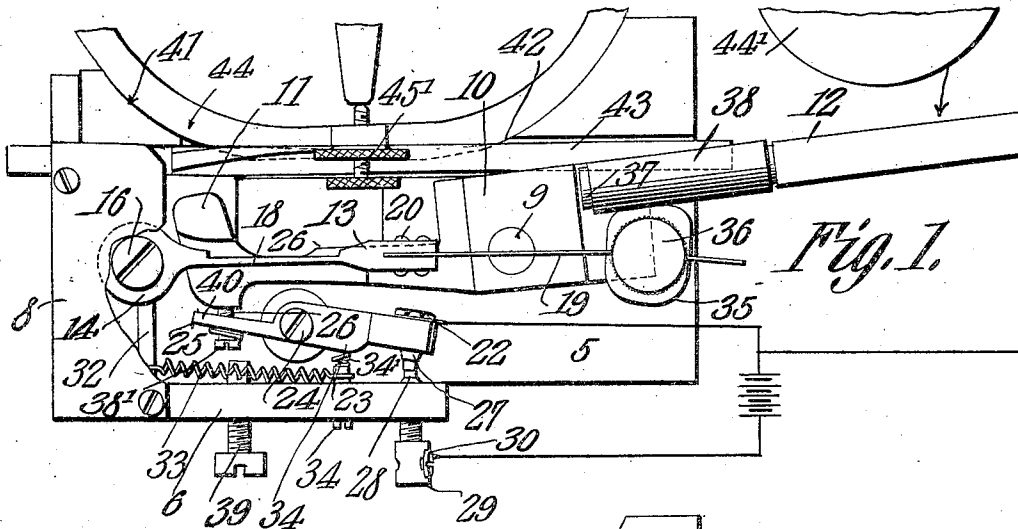


Fig. 1.

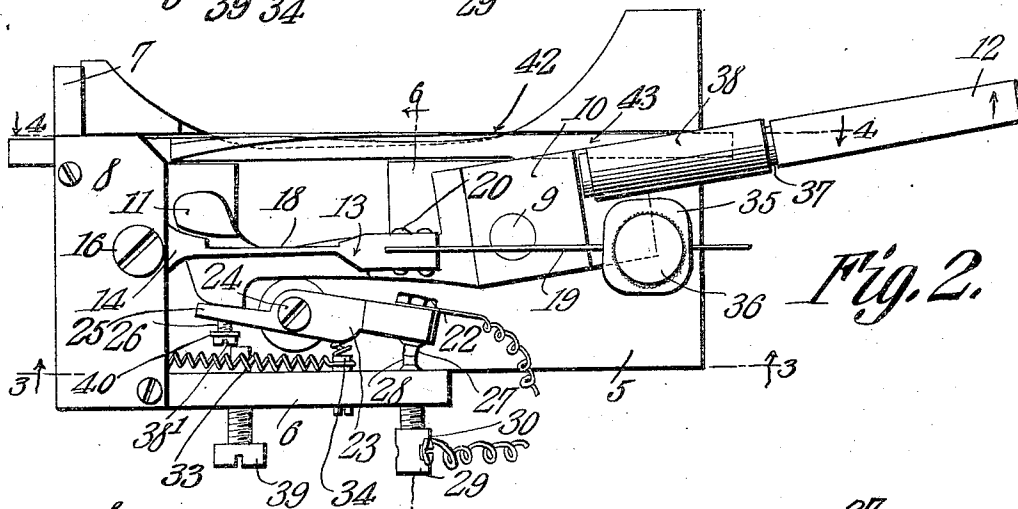


Fig. 2.

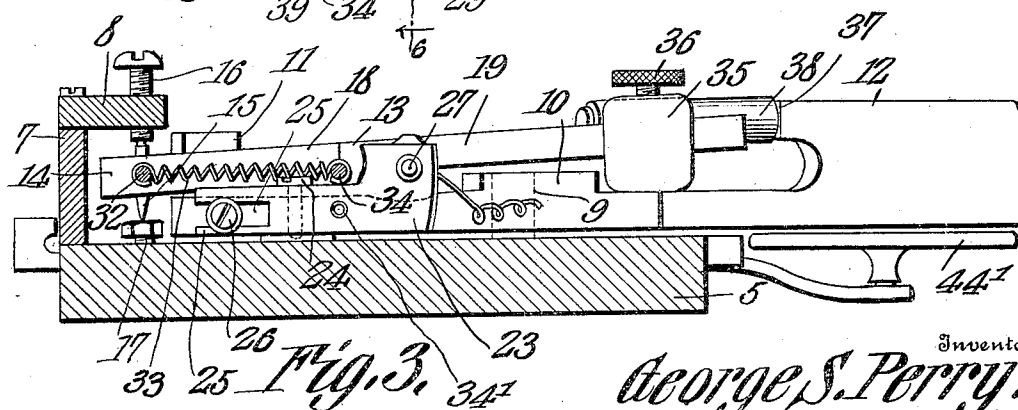


Fig. 3.

Inventor

George S. Perry.

Witnesses

E. J. Stewart
L. J. McKee

By

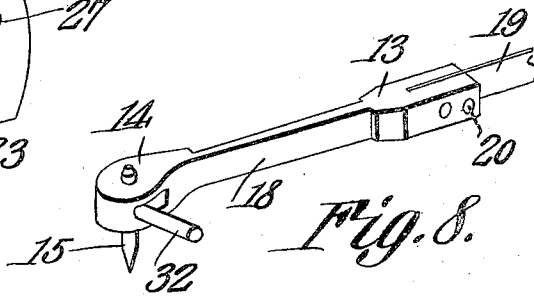
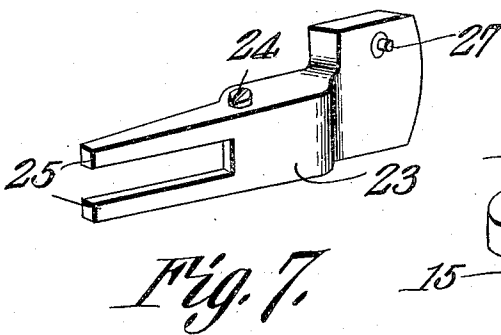
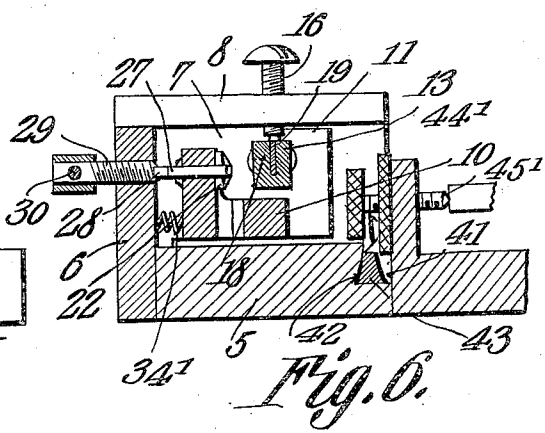
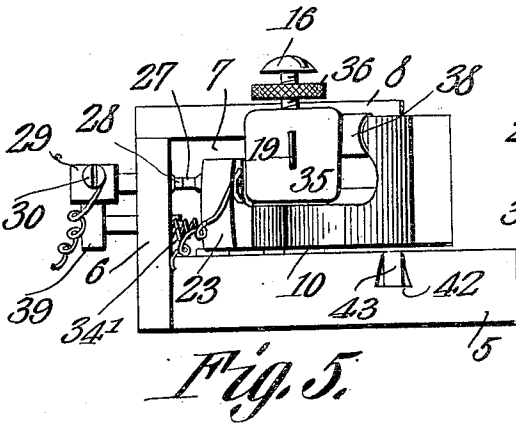
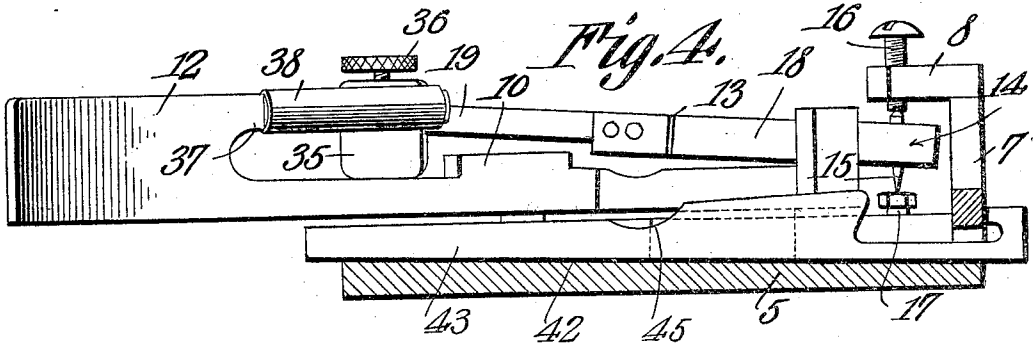
C. A. Snow & Co.
Attorneys

G. S. PERRY.
TELEGRAPH KEY.
APPLICATION FILED JAN. 28, 1909.

935,164.

Patented Sept. 28, 1909.

3 SHEETS—SHEET 2.



Witnesses

E. H. Stewart
J. M. McKee

Inventor
George S. Perry.

By *C. A. Snow & Co.*
Attorneys

G. S. PERRY.
TELEGRAPH KEY.
APPLICATION FILED JAN. 28, 1909.

935,164.

Patented Sept. 28, 1909.
3 SHEETS—SHEET 3.

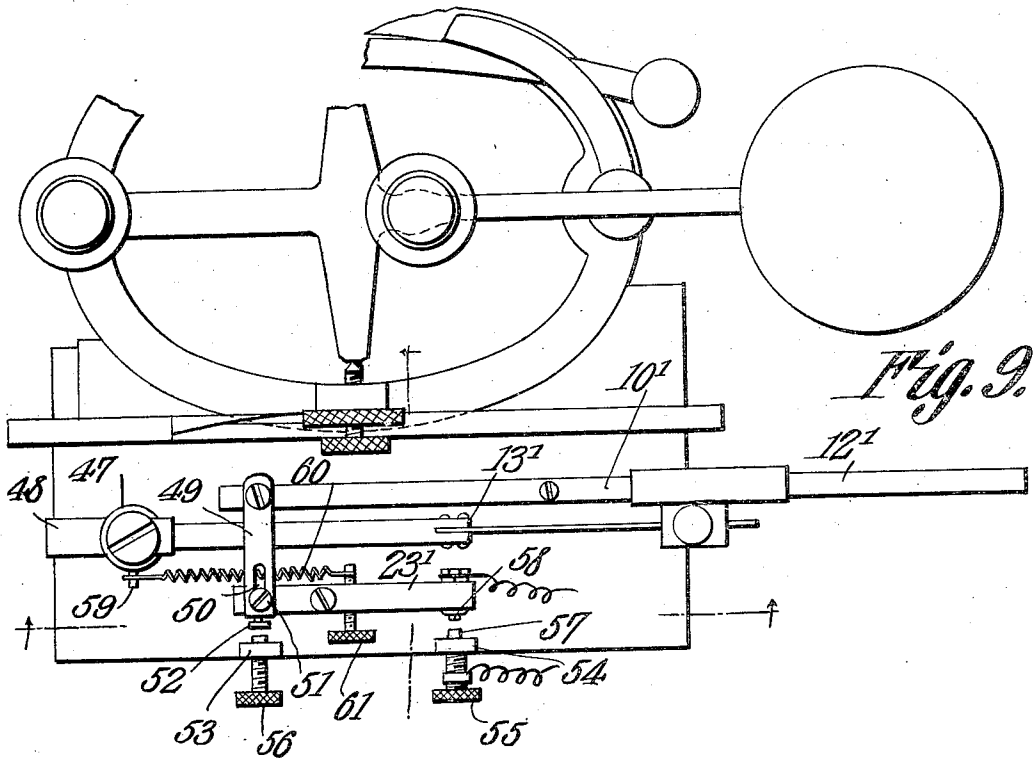


Fig. 9.

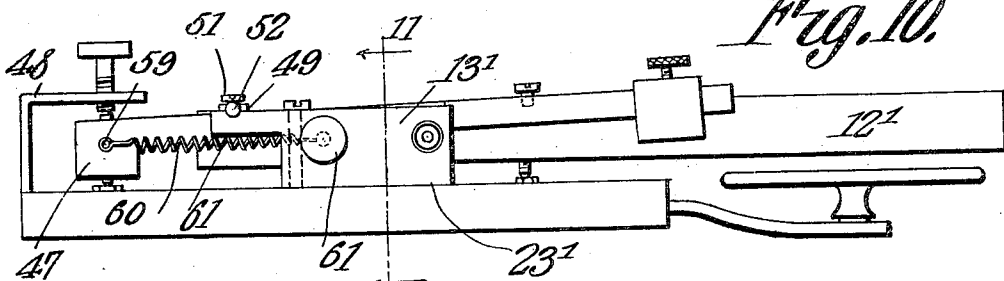


Fig. 10.

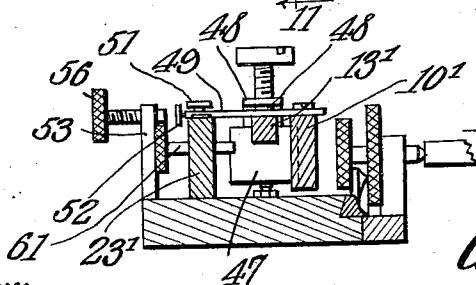


Fig. 11.

Witnesses

E. J. Hurst
L. P. Hicks

Inventor
George S. Perry.
By *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE STAMPER PERRY, OF BRANFORD, FLORIDA.

TELEGRAPH-KEY.

935,164.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed January 28, 1909. Serial No. 474,674.

To all whom it may concern:

Be it known that I, GEORGE STAMPER PERRY, a citizen of the United States, residing at Branford, in the county of Suwanee and State of Florida, have invented a new and useful Telegraph-Key, of which the following is a specification.

This invention relates to telegraph transmitters and more particularly to an attachment for relieving the operator of the strain incident to transmitting messages under the well known Morse system.

The object of the invention is to permit the sounding of a letter comprising a plurality of dots with a single movement of the operating lever, thereby to expedite the transmission of messages and at the same time relieve the operator of the strain due to the necessity of imparting a plurality of strokes to the operating key to produce such letter.

A further object is to provide an instrument capable of sounding either dots or dashes, and which may be used, either in connection with or independent of the usual form of telegraph key.

A further object is to provide an instrument of the character described, the construction and operation of which is such as to permit a solid contact between the platinum pointer, and which may be adjusted to make either light or heavy dots or dashes.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification:—Figure 1 is a plan view of a telegraph transmitter constructed in accordance with my invention showing the position of the parts when making a dash. Fig. 2 is a similar view showing the position of the parts when making a dot. Fig. 3 is a longitudinal sectional view taken on the line 3—3 of Fig. 2. Fig. 4 is a similar view taken on the line 4—4 of Fig. 2. Fig. 5 is an end elevation. Fig. 6 is a transverse sectional view taken on the line 6—6 of Fig. 2. Fig. 7 is a perspective view of the oscillating contact member detached.

Fig. 8 is a similar view of a portion of the vibrator. Fig. 9 is a top plan view illustrating a modified form of the invention. Fig. 10 is a side elevation of Fig. 9. Fig. 11 is a transverse sectional view taken on the line 11—11 of Fig. 10.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The telegraph transmitter forming the subject matter of the present invention comprises a base plate 5 to which is secured a relatively short side wall 6 and an end wall 7, said walls being connected by a top plate, indicated at 8.

Pivotaly mounted on a stud 9 extending vertically from the base is a key lever 10, one end of which is provided with a vertical extension 11, while the other end thereof projects longitudinally beyond the pivot 9 to form a finger piece 12.

Extending longitudinally of the base above the operating lever 10 is a vibrator 13 having its inner end formed with an enlarged head 14, which latter is pierced by a pivot pin 15, the terminals of which are conical in shape and engage correspondingly shaped sockets formed in adjusting screws 16 and 17 carried by the cap-piece 8 and base 5, respectively, as best shown in Fig. 3 of the drawings. This vibrating lever 13 is preferably formed in two sections, the main section 18 of which is formed of relatively stiff material having a slight spring action and the auxiliary section 19 formed of relatively thin material, so as to permit the latter to readily vibrate.

Extending transversely through the sections 18 and 19 of the vibrating lever, at the juncture of said sections, are one or more rivets or similar fastening devices 20 which serve to hold the sections rigidly in longitudinal alinement with each other.

An oscillating lever 23 is pivotaly mounted on the platform at 24 and is provided at one end with a bifurcated terminal 25 which receives an adjusting screw 26 extending laterally from the inner end of the main operating lever 10.

The contact 22 of the oscillating lever is provided with a platinum point 27 for engagement with a similar platinum point 28 carried by an adjusting screw 29 threaded in the side wall 6, one terminal of the circuit being connected with the clamping nut of

the contact 22 and the other terminal thereof connected with a binding screw 30 on the member 29.

Extending laterally from the head 14 of the vibrating lever is a pin 32 to the free end of which is connected one end of a coiled spring 33, the opposite end of which is connected with a pin or stud 34, said spring serving to return the vibrating lever to normal position after the platinum points 27 and 28 contact with each other to make a dot. A coiled spring 34' is also preferably interposed between the wall 6 and the oscillating lever 25 for returning the latter to normal position after each operation of the finger-piece. Thus it will be seen that by moving the finger-piece 12 laterally in the direction indicated by the arrow shown on the finger-piece in Fig. 2 of the drawings the extension 11 of said lever will engage the section 18 of the vibrator and force the latter against the contact 22 of the oscillating lever 23 thus tilting said lever and causing the platinum point 27 of the oscillating lever to close the circuit through the platinum point 28 of the adjusting screw 29 and sound a dot.

The vibration of the lever 13 will cause the contacts 27 and 28 to intermittently open and close the circuit, the number of dots produced at each movement of the finger-piece 12 being in proportion to the number of vibrations of the lever 13.

Slidably mounted on the section 19 of the vibrator is a weight 35 which governs the vibration thereof so that by moving the weight longitudinally of the section 19 and clamping the same in adjusted position by tightening the screw 36 the number of dots sounded at each movement of the lever 12 may be governed at will.

The inner end of the finger piece 12 is provided with an over-hanging cylindrical arm 37 on which is loosely mounted a sleeve or collar 38, which latter serves to stop vibration of the weight 35 after the hand of the operator has been removed from the finger piece 12.

By moving the finger piece 12 in the direction, indicated by the arrow in Fig. 1 of the drawings, the extension 11 will be disengaged from the vibrating lever and the oscillating lever 23 actuated to produce dashes.

The screw 26 is provided with an enlarged head 38' which bears against a stop screw 39 threaded in the wall 6, there being a washer 40 interposed between the head 38' and the adjacent side of the oscillating lever to assist in preventing the head 38' from passing through the bifurcated portion of said lever.

By arranging the several parts in the manner described, a firm solid contact between the platinum points 27 and 28 is assured, the line up or adjustment of the main lever 12 and vibrating lever as well as the length

of stroke of said levers being obtained by manipulating the screws 26 and 39 and either light or heavy dots or dashes by adjusting the screw 29. Thus it will be seen that by moving the finger piece 12 in one direction, the instrument may be utilized for sounding dots, while by moving the finger-piece in the opposite direction the vibrating lever is rendered inactive, while the oscillating lever 23 is actuated to permit the sounding of dashes.

Attention is here called to the fact that the resiliency of the main section 18 of the vibrator is just sufficient to allow opening and closing of the circuit by the vibration of the weight on the section 19 of said lever.

If desired, the attachment may be used in connection with an ordinary telegraph key and for this purpose one side of the base 5 is formed with a segmental recess 41 intersected by a longitudinally disposed groove 42, preferably dovetailed in cross section, and in which is mounted for sliding movement a wedge shaped key 43.

When the device is used in connection with a telegraph key the frame of the key, indicated at 44 in Fig. 1 of the drawings, is positioned at the segmental recess 41 with the finger-piece 44' thereof adjacent the finger-piece 12 and in convenient position for manipulation by the operator, the operator first operating the finger-piece 12 of the present attachment to sound the dots in the Morse alphabet and then operating the finger-piece 44' of the ordinary telegraph instrument to produce the dashes. As before stated, however, the attachment is complete in itself, and may be used for sounding both dots and dashes.

The attachment is clamped in position on an ordinary telegraph key by moving the locking key 43 longitudinally within the slot 42 until the recess or depression 43 of said locking key passes beneath the adjacent pivot screw 45' of said telegraph key, as best shown in Figs. 1 and 6 of the drawing and in which position the attachment will be locked against accidental displacement without the employment of screws, clamps and similar fastening devices.

The device is very sensitive and the parts thereof may be adjusted to produce sounds corresponding to light or heavy dots or dashes, while the weight 35 may be adjusted to produce any desired number of vibrations and thus permit the sounding of any number of dots at one operation of the finger-piece.

Special stress is laid upon the fact that by means of the oscillating lever 23 and platinum points 27 and 28 a firm solid contact is insured at each movement of the main operating lever, while by manipulating the adjusting screws 26, 29 and 39 not only may the throw or stroke of the main and vibrating lever be regulated at will but the con-

tacts adjusted to make either light or heavy dots or dashes.

In Figs. 9 to 11 of the drawings there is illustrated a modified form of the invention in which the side and end walls of the supporting base are dispensed with, the head 47 of the vibrating lever 13' being pivotally mounted in an over-hanging bracket 48 secured to one end of the supporting base. In this form of the device the key lever 10' is made relatively thin and of substantially the same cross sectional diameter throughout its entire length, one end of said key lever being provided with a finger-piece 12' similar in construction to the finger-piece shown in Fig. 1 of the drawings, while the opposite end thereof of the key lever is connected through the medium of a link or plate 49 with the oscillating lever 23'.

The upper longitudinal edge of the connecting plate or link is formed with a longitudinally disposed slot 50 for the reception of a clamping screw 51, which latter is threaded in the adjacent end of the oscillating lever 23', the movement of the oscillating lever 23' being regulated by a screw 52 threaded in the angular extension of the plate 49 and engaging the shank of the screw 51, as best shown in Fig. 11 of the drawings.

Suitable lugs or brackets 53 and 54 are secured to the supporting base at one longitudinal edge thereof and provided with threaded openings for the reception of correspondingly threaded screws 55 and 56, one of which is provided with a contact 57 for engagement with the contact 58 of the oscillating lever 23', while the other screw 56 by engagement with the screw 52 forms an auxiliary stop for said oscillating lever.

Extending laterally from the head of the key lever 13' is a pin or lug 59 to which is secured one end of a coiled spring 60, the opposite end of which is attached to a cord or other flexible medium, which latter is secured to a screw 61 threaded in the oscillating lever 23'. The spring 60 serves to return the vibrating lever, key lever and oscillating lever to normal position after the finger-piece 12' has been actuated to make either dots or dashes. The lower face of the oscillating lever 23' is preferably cut away, as indicated at 61 so as not to interfere with the action of the spring 60 when said lever is oscillated.

As the construction and operation of the device shown in Fig. 9 is otherwise similar in construction to that shown in Fig. 1 of the drawings, further explanation of the same is deemed unnecessary.

Having thus described the invention what is claimed is:—

1. A telegraph transmitter including an energizing circuit, a vibrator, an oscillating member, a key lever operatively connected

with the oscillating member, and means for actuating the oscillating member to close the circuit and sound dots when the key lever is moved in one direction and for actuating said oscillating lever to sound dashes when the key lever is moved in the opposite direction.

2. A telegraph transmitter including an energizing circuit, a key lever, a vibrator actuated by said lever, and an oscillating member disposed in the path of movement of the vibrator and arranged to intermittently close the circuit.

3. A telegraph transmitter including an energizing circuit, a key lever, a vibrator actuated by said lever, an oscillating member disposed in the path of movement of the vibrator and adapted to intermittently close the circuit, and means for regulating the throw of the oscillating member.

4. A telegraph transmitter including an energizing circuit, a key lever, a vibrator actuated by said lever, an oscillating member adapted to intermittently close the circuit when the key lever is moved in one direction, and means for rendering the vibrator inactive when the lever is moved in the opposite direction.

5. A telegraph transmitter including an energizing circuit, a key lever, a vibrator actuated by said lever, an oscillating member, a pair of contacts, one of which is carried by the oscillating member and the other by a fixed support, means for moving the vibrator in engagement with the oscillating member to intermittently close the circuit when the key lever is moved in one direction, and means for rendering the vibrator inactive when the key lever is moved in the opposite direction.

6. A telegraph transmitter including an energizing circuit, a key lever, a vibrator actuated by said lever, an oscillating member, a pair of contacts, one of which is carried by the oscillating member and the other by a fixed support, means for adjusting said contacts relatively to each other, and means for oscillating the key lever to intermittently make and break the circuit when said lever is moved in one direction, and means for rendering the vibratory member inactive when the key lever is moved in another direction.

7. A telegraph transmitter including an energizing circuit, a pivoted key lever having an extension at one end thereof, a vibrating lever normally bearing against said extension and actuated by the key lever, an oscillating member, a pair of contacts, one of which is carried by the oscillating member and the other by a fixed support, said extension being adapted to engage and actuate the vibrating lever to intermittently open and close the circuit through the oscillating member when the key lever is moved

in one direction, the vibrator being inactive when the key lever is moved in the opposite direction.

8. A telegraph transmitter including an energizing circuit, a pivoted key lever, a vibrator disposed above the operating lever, an oscillating lever having a contact, a stationary contact, one end of the circuit being connected to the contact on the oscillating lever and the other terminal thereof to the stationary contact, and a weight slidably mounted on one end of the vibrator.

9. A telegraph transmitter including a pivoted key lever having one end thereof provided with an extension and the opposite end formed with an overhanging stop, a vibrating lever pivotally mounted above the stationary lever and having a weight slidably mounted thereon and adapted to bear against the stop, an oscillating lever actuated by the vibrating lever to intermittently close the circuit when the key lever is moved in one direction, and means for rendering the vibrator inactive when the key lever is moved in the opposite direction.

10. A telegraph transmitter including an energizing circuit, a pivoted key lever, a vibrator actuated by the key lever, an oscillating member having one end thereof bifurcated and its opposite end provided with a contact for engagement with the vibrating lever, a pin extending through the bifurcated end of the oscillating lever for engagement with the adjacent end of the key lever, an adjusting member arranged to contact with said pin, a platinum point secured to the other end of the oscillating member and operatively connected with one terminal of the circuit, and a relatively stationary platinum point co-acting with the platinum point on the oscillating lever and connected with the other terminal of the circuit.

11. A telegraph transmitter including a pivoted key lever, a vibrating lever arranged above and actuated by the key lever, said vibrating lever being formed in two sections, one of which is made of relatively stiff material and the other of thin flexible material, a weight slidably mounted on the flexible section of the vibrator, a stop carried by the key lever for engagement with the weight, an oscillating member actuated by the vibrator and having a contact for connection with one terminal of an energized circuit, a second contact secured to a fixed support for connection with the other terminal of said circuit, means for regulating the throw of the oscillating lever, and means for adjusting contacts toward each other.

12. A telegraph transmitter including a pivoted key lever having a vertical extension, a vibrator bearing against said extension, an arm extending laterally from the pivoted end of the vibrator, an oscillating lever arranged to contact with the vibrating lever, a spring having one end thereof secured to the pin and its opposite end to a fixed support, and a pair of contacts, one of which is secured to the oscillating lever and the other to said support and forming the terminals of an energized circuit.

13. A telegraph transmitter including a support, a key lever pivoted at a point intermediate its ends on said support and having one end thereof bifurcated and provided with a vertical extension and its opposite end formed with an overhanging arm, a sleeve loosely mounted on said arm, a vibrator pivotally mounted on the support and bearing against said extension, a weight slidably mounted on the vibrator and adapted to engage the sleeve for limiting the vibratory movement of said lever, an oscillating lever arranged to contact with the vibrating lever, a pair of contacts, one of which is secured to the oscillating lever and the other to said support and forming the terminals of an energized circuit, a spring connecting the pivoted end of the vibrator with the support, means for adjusting the throw of the oscillating lever, and means for moving the contacts to and from each other.

14. The combination with a telegraph key, of a support, a transmitter mounted on said support and including an energized circuit, a vibrator, a key lever, an oscillating member actuated by the key lever for intermittently closing the circuit, and means mounted on the support for connecting the telegraph key to said support.

15. The combination with a telegraph key, of a support, a transmitter mounted on the support and including an electrical circuit, a vibrator, a key lever, and an oscillating member actuated by the key lever for intermittently closing the circuit, and a wedge shaped member slidably mounted on the support and adapted to extend beneath the telegraph key for clamping the transmitter in engagement therewith.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GEORGE STAMPER PERRY.

Witnesses:

ROBERT E. KEMP,
E. D. DEDGE.