

J. A. COX & J. H. KIDWELL.
TELEGRAPH TRANSMITTER.
APPLICATION FILED SEPT. 27, 1910.

1,019,883.

Patented Mar. 12, 1912.

Fig. 1.

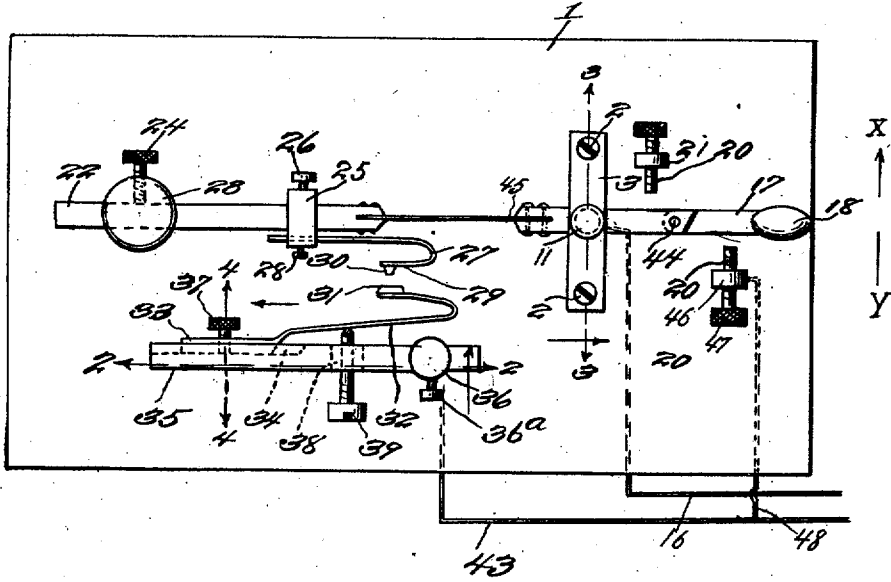


Fig. 2.

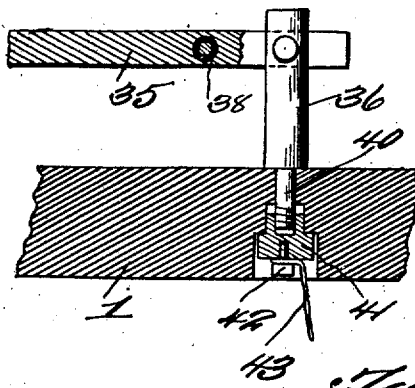


Fig. 3.

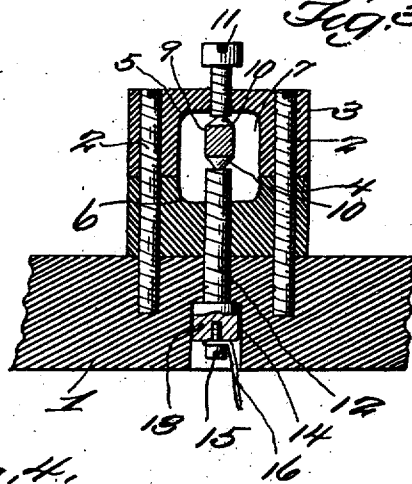
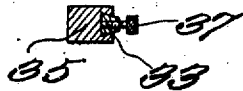


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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TELEGRAPH-TRANSMITTER.

1,019,883.

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To all whom it may concern:

Be it known that we, JOHN A. COX and JEREMIAH H. KIDWELL, citizens of the United States, residing at Parkersburg, in the county of Wood, State of West Virginia, have invented a new and useful Telegraph-Transmitter, of which the following is a specification.

It is the object of this invention to provide a telegraph transmitter so constituted that when the same is operated to produce a dot, there will be no buzzing sound attendant upon the production of the dot, the effect known as a "split-dot" being avoided.

Another object of the invention is to provide means for adjusting the base-carried contact point, with respect to the contact point of the key lever.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings,—Figure 1 is a top plan; Fig. 2 is a section upon the line 2—2 of Fig. 1; and Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a section on line 4—4 of Fig. 1.

In carrying out the invention there is provided, as a primary and fundamental element, a base 1, ordinarily fashioned from insulating material. Mounted upon the base 1, relatively near to one end thereof, is a lower block 4, upon which is superposed an upper block 3, the blocks 4 and 3 being united with each other, and with the base 1, by means of screws 2 or other securing elements adapted to a like end. The lower face of the upper block 3 is recessed, as shown at 5, the upper face of the lower block being similarly recessed, as shown at 6, thus defining an opening 7 through the blocks.

The key lever is a composite structure, comprising spaced bars 22 and 45, connected by a spring strip 8, the key lever including a movable end 17, pivoted as shown at 44, to the portion 45 of the key lever, the end 17 of the key lever being knuckled against the bar 45, so that the movable end 17 may be swung in the direction of the arrow Y, the

movable end, however when swung in the direction of the arrow X, being held in alinement with the bar 45 of the key lever. At its extremity, the movable end 17 of the key lever carries a finger-piece 18, ordinarily fashioned from insulating material.

The key lever, constructed as above described, is inserted through the opening 7 in the blocks 4 and 3, the key lever being held in place for movement in a plane parallel to the base 1 by means of screws 11 and 12, the screw 11 passing downwardly through the block 3, the screw 12 passing upwardly through the base 1 and through the block 4, both screws engaging the conical ends 10 of a bearing 9, formed upon the portion 45 of the key lever. The base 1 is recessed, as shown at 14, to receive the head 13 of the screw 12.

Slidably mounted upon the portion 22 of the key lever, is a weight 23, held in adjusted positions by means of a set screw 24. Slidably mounted upon the portion 22 of the key lever, between the weight 23 and the spring 8, is a collar 25, held in place by a set screw 26. One arm of a U-shaped spring 27 is slidable in the collar 25, for movement parallel to the portion 22 of the key lever, the spring 27 being held in place by a set screw 28, inserted into one side of the collar 25. The free end 29 of the spring 27 carries upon its outer face a contact, ordinarily of platinum. This contact 30 is adapted to engage a contact 31 carried by a U-shaped spring 32, the cross sectional area of the contact 30 being relatively small, compared with the cross sectional area of the contact 31, whereby the relative positions of the springs 27 and 32 may be adjusted, without causing the contact 30 to protrude beyond the periphery of the contact 31. That end of the spring 32 which is remote from the contact 31, is provided with an enlargement 33 slidably mounted in, and conforming to, an undercut recess 34 in an arm 35, the spring 32 and the arm 35, therefore, being dove-tailed together for sliding movement. A set screw 37 is threaded into the enlargement 33 of the spring, the inner extremity of the set screw bearing against the arm 35 at the base of the recess 34, the construction, obviously, being such that the set screw constitutes a means for preventing relative movement between the spring 32 and the arm 35.

The arm 35 is supported in a post 36, a set screw 36^a, threaded into the post, constituting a means for preventing the arm 35 from moving in the post, the post being rigidly secured upon the base 1. In its intermediate portion, the arm 35 carries an insulating bushing 38, into which is threaded a set screw 39, adapted to bear against the spring 32.

Mounted upon the base 1, to one side of the bar 45 of the key lever, is a post 21, into which is inserted a screw 20, adapted to engage with a block of insulating material 19, applied to the adjacent side of the portion 45 of the key lever. Mounted in the base 1, upon the opposite side of the key lever, is a dash post 46, into which is threaded an adjusting screw 47.

The transmitter as, above described is connected with a battery as follows. Referring particularly to Fig. 2, it will be noted that the post 36 is provided with a reduced shank 40, extended downwardly into the base 1, the shank 40 of the post carrying a nut 41, into which is threaded a binding screw 42, carrying one end of a conductor 43. Into the nut 13, a binding post 15 is threaded, the binding post carrying a conductor 16. The dash post 46 carries one end of a conductor 48, united with the conductor 43.

The operation of the device is as follows. When it is desired to transmit a dot, the finger piece 18 of the key lever is moved in the direction of the arrow X, tilting the key lever until the contact 30 is brought into bearing against the contact 31. The circuit, under such circumstances is as follows. The current, traversing the conductor, 16, will pass into the member 45 of the key lever, thence into the spring portion 8 of the key lever, thence into the bar 22 of the key lever, into the collar 25, and to the spring 27, the current passing by way of the contacts 30 and 31 into the spring 32, thence into the arm 35, and by means of the post 36 and the nut 41, into the conductor 43, the circuit obviously being broken when, as shown in Fig. 1, the lever is tilted in the direction of the arrow Y until the contacts 30 and 31 are separated. In order to transmit a dash, the movable end 17 of the key lever is thrown in the direction of the arrow Y, until the end 17 bears against the adjusting screw 47 in the dash post 46. Under such circumstances, the circuit will be as follows. From the conductor 16, the current will pass into the portion 45 of the key lever, thence into the movable end 17 of the key lever, to the adjusting screw 47, to the dash post 46, and thence by way of the conductor 48, to the conductor 43. By moving the set screw 37, the spring 32 may be adjusted upon the arm 35, longitudinally of the same, the

spring 27 being adjustable in the collar 25, longitudinally of the key lever, by manipulating the set screw 28. The relative positions of the contacts 30 and 31 may thus be adjusted, and both contacts may likewise be moved, at once, longitudinally of the key lever. The tension of the spring 32 may be adjusted by means of the screw 39, and by means of this same screw, the space normally existing between the contacts 30 and 31, may be altered. After the screw 39 has been once manipulated, to space the contact points 30 and 31 properly, the spring 32 may be removed and be replaced again, without changing the space between the contact points. The screw 20 which is mounted in the post 21, serves as a means for limiting the tilting movement of the key lever, when the same is operated in the direction of the arrow X to form a dot. The screw 47 may be adjusted in the dash post 46, so as to limit the movement of the end 17 of the key lever, when the said end is manipulated to transmit a dash.

By reason of the fact that the elements 32 and 27, are resilient structures, when the key lever is tilted to send a dot, there will be no buzzing sound caused by the contact of the elements 30 and 31, these elements being pressed firmly together by the springs 32 and 27, a split-dot being therefore, an impossibility.

The invention having been set forth, what is claimed as new and useful is:

1. A transmitter including a key-lever having a contact point, a stationary member provided with a laterally extending arm, having an under cut recess, a spring conforming to and slidably seated in said recess the spring being provided with a contact point to coöperate with the first named contact point, and means extended through the spring to engage the bottom of the recess to hold the spring in adjusted positions.

2. A transmitter including a key-lever having a contact point, a stationary element and a spring one of which is dove-tailed into the other for sliding movement the spring being provided with a contact point to coöperate with the first named contact point, means extended through the spring to engage the bottom of the recess to hold the spring in adjusted positions, said stationary element having an adjusting member extending through it to engage said spring, to alter the position of the contact point of the spring, said member constituting means whereby the yielding action of the spring may be regulated.

3. A transmitter including a rigid arm and a spring dove-tailed together for sliding movement, in one of which there is an adjustable element to engage the other; a key-lever provided with a contact; a contact upon the spring, adapted to engage the

first named contact; and adjustable means in the arm, engaging the spring to alter the space between the contacts.

4. A device of the class described comprising a movable key member and a fixed supporting element; cooperating, contact-bearing springs slidably mounted upon the key member and upon the supporting element; an adjusting device in the supporting element, disposed at an acute angle to the spring which said element carries and bearing upon said spring, the adjusting de-

vice being movable transversely of said spring, and said spring being movable in opposite directions, transversely of the adjusting device. 15

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

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JEREMIAH H. KIDWELL.

Witnesses:

H. B. DODGE,

A. WILLIAMS.