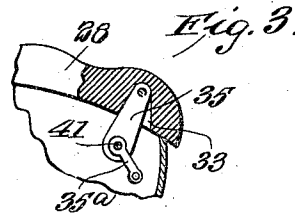
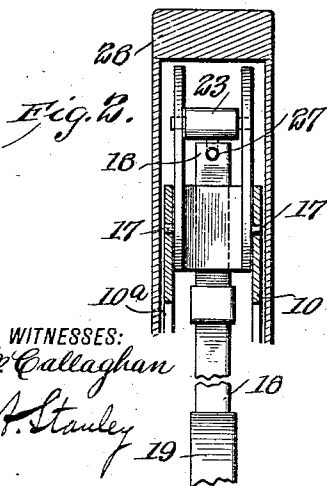
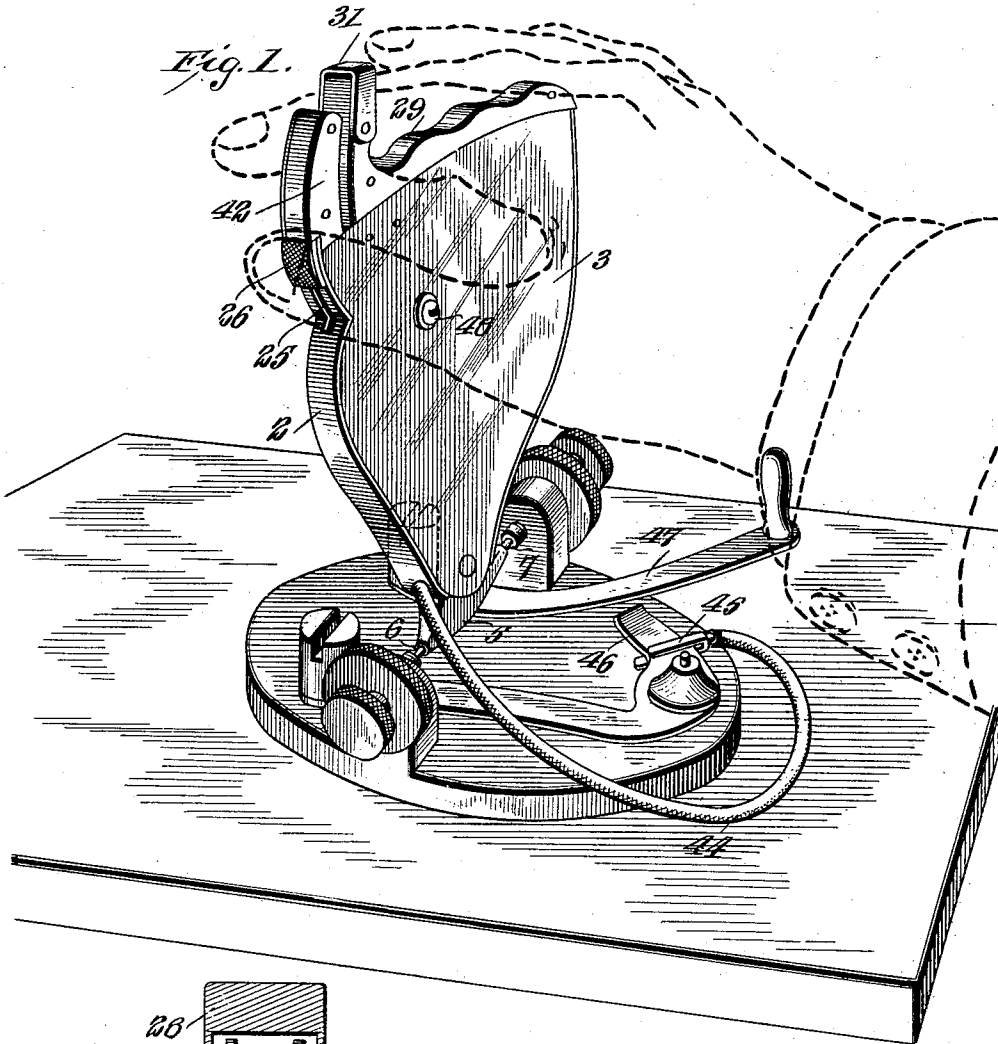


J. R. JONES.
TELEGRAPH SENDING MACHINE
APPLICATION FILED FEB. 9, 1910.

977,452

Patented Dec. 6, 1910.
2 SHEETS—SHEET 1.



WITNESSES:
E. P. Callaghan
L. A. Stanley

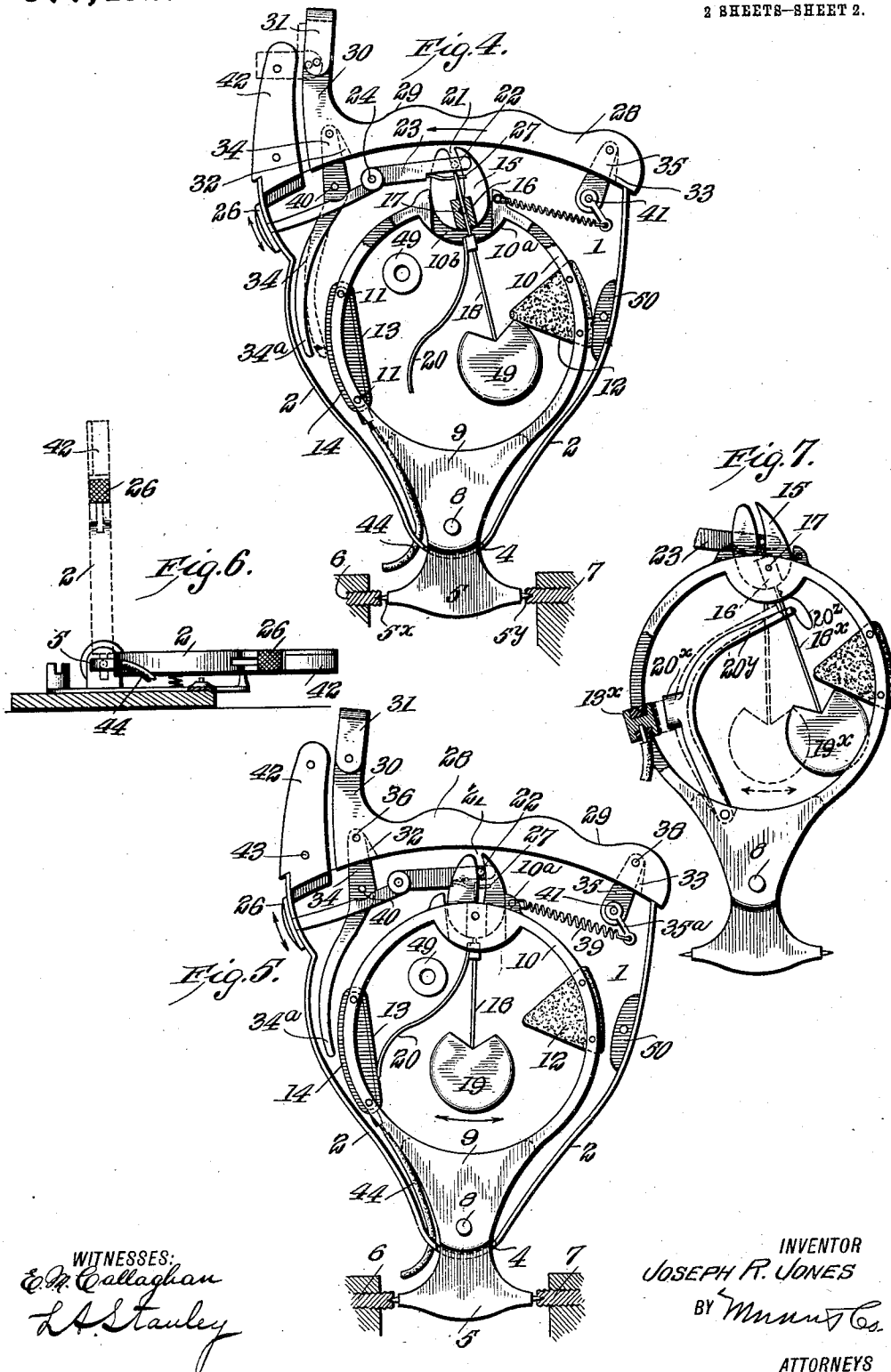
INVENTOR
JOSEPH R. JONES
BY Munn & Co.
ATTORNEYS

J. R. JONES.
TELEGRAPH SENDING MACHINE.
APPLICATION FILED FEB. 9, 1910.

977,452.

Patented Dec. 6, 1910.

2 SHEETS—SHEET 2.



WITNESSES:
E. J. Callaghan
L. A. Stanley

INVENTOR
JOSEPH R. JONES
BY *Wm. H. Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSEPH RUSSELL JONES, OF PORT ARTHUR, ONTARIO, CANADA.

TELEGRAPH SENDING-MACHINE.

977,452.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed February 9, 1910. Serial No. 542,953.

To all whom it may concern:

Be it known that I, JOSEPH RUSSELL JONES, a citizen of the United States, and a resident of Port Arthur, in the Province of Ontario and Dominion of Canada, have made certain new and useful Improvements in Telegraph Sending-Machines, of which the following is a specification.

My invention relates to a portable transmitting instrument for telegraph lines and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide a device of the so-called automatic type which is of very light weight, of compact construction, which may be carried in the pocket, and which may be inserted in place of the lever of an ordinary telegraph key by simply removing the latter from its pivotal supports.

A further object of my invention is to provide an automatic sending device which will serve not only as an automatic sender, but also as a hand-rest and which is operated by two movements, one for sending dots and the other for sending dashes.

A further object of my invention is to provide an automatic sender in which the makes and breaks are positive in their action and in which the contacts separate at each break a greater distance than in the ordinary form, thereby rendering the device available for sending messages over a long line and through repeaters where an instrument of less positive action could not be used.

A further object of my invention is to provide a device having an oscillating member for sending dots whose rate of vibration may be varied by a single movement of the thumb or finger.

A further object of my invention is to provide a sender which is particularly adapted for the wireless service.

Other objects and advantages will appear in the following specification and the novel features of the device will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings forming part of this specification in which similar reference characters denote like parts in the several views, and in which—

Figure 1 is a perspective view showing one embodiment of my invention. Fig. 2, is an

enlarged detail section of a portion of the device. Fig. 3 is a detail view showing the construction of one of the hand rest casing supports. Fig. 4 is a side view of the device with the cover removed showing the device in normal position. Fig. 5 is a view similar to Fig. 4 showing the device in operating position for sending dots. Fig. 6 is a view showing a modified form, and Fig. 7 is a side view of a further modification to be used in the wireless service.

Referring now particularly to Figs. 4 and 5, it will be seen that I have provided a main heart-shaped casing consisting of the side plates 1, the edge strip 2 and the side plate or cover 3, see Fig. 1. These members may be of any suitable material. The bottom of the casing thus formed is provided with an opening 4 through which the supporting member 5 extends. The latter is provided with the cone-shaped pivot members 5^x and 5^y adapted to enter the conical recesses in the set screws 6 and 7 of an ordinary telegraph key, when the main sending lever has been removed. The casing is pivotally secured to the member 5 by means of a pin 8 which passes through the casing from side to side. This member 5 has an integral extension which comprises an enlarged base portion 9 and an integral ring 10 consisting of two annular members secured together by means of pins 11. These pins 11 also serve for retaining a stop member 12 which is preferably of rubber and a contact 13 which is insulated from the ring 10 by means of insulating material 14 on each side thereof. The upper end of the ring 10 is solid as shown at 10^a and is provided with a slot 10^b in which is pivotally mounted a cam member 15. This cam member is provided with an integral lug 16 which is adapted to oscillate on a pivot 17. This lug is slotted to receive the stem or spring 18 of a pendulum 19. The stem 18 has secured to it a curved spring contact member 20. The cam 15 is provided with a slot 21 adapted to receive a pin 22 on an arm 23 which is pivoted at 24 to the casing and whose outer end extends through a slot 25, (see Fig. 1,) in the casing 2, and terminates in a thumb piece 26. The arm 23 is provided with a hook-like member 27 which passes through the upper end of the stem or spring 18. The lever just described is for the purpose of regulating the vibration of the pendulum.

The top part of the device consists of a hand or finger-rest 28 having recesses 29 for the reception of the fingers. One end of the hand-rest is provided with an extension 30 to which is secured a locking loop 31. The hand-rest is recessed on its under side at 32 and 33 to receive the levers 34 and 35 respectively, which are pivotally connected to the hand-rest at 36 and 38 respectively. The lower end of the lever 34 is extended to form a contact 34^a which is adapted to engage the contact 13. The lever 35 has secured to it an extension 35^a which is connected by means of a spring 39 to the portion 10^a of the ring 10. The lever 34 is pivoted to the casing at 40, while the lever 35 is pivoted to the casing at 41.

A thumb-piece 42 is secured to the casing by means of the pins 43. A lead wire 44 enters the casing at the bottom and is suitably insulated from the member 9. This wire is connected with the contact 13 which as stated before, is insulated from the rest of the device. The opposite end of this wire is provided with a spring fork 45 arranged to engage the spring contact 46 which is ordinarily used for short circuiting the device when the lever 47 is closed, see Fig. 1. The side 3 constitutes a cover for the casing and is secured by means of the screw 48 which passes through the circular lug 49 on the side member 1.

From the foregoing description of the various parts of the device the operation thereof may be readily understood.

In using this device it is only necessary to remove the main lever of an ordinary telegraph key from its pivotal bearings. The member 5 is then inserted in these bearings and the screws are tightened so as to prevent pivotal movement. In Fig. 1, I have shown the device as being in an upright position. The hand is now placed on the instrument in the manner indicated in the figure with the thumb next to the thumb-piece 42 and the fingers in their respective depressions 29, the forefinger being next to the extension 30. With the device as set up in Figs. 4 and 5, it will be apparent that a movement of the hand-rest to the right will cause a movement of the casing to the right, since both levers 34 and 35 will be engaged by the abutting portions of the hand-rest. The members 5, 9 and 10 are held rigidly, but the casing will oscillate on the pivot 8. In doing so, the arm 23 will push the cam member 15 into the position shown in Fig. 5, thereby bringing the contact 20 into engagement with the contact 13. This movement will cause the heavy pendulum 19 to swing back and forth and at each movement the contact 20 will cause a make and break. Ordinarily there will be no more than six makes and breaks required to send the requisite number of dots. The number of dots,

of course, is gaged by the sounder to which the instrument is connected, and as soon as the requisite number has been sent the apparatus is returned to its normal position, either by a movement of the hand or by releasing the instrument, when the spring 39 will bring it back to the normal position.

The sending of a dash may be accomplished in two ways, one by moving the casing to the left. In this case after a slight ineffective movement the levers 34 and 35 will be engaged by the abutting edges of the recesses 32 and 33, the end 34^a of the lever 34 will be forced into the dotted line position shown in Fig. 4 into engagement with the contact 13, while the lever 35 will cause a tightening of the spring 39 so that when the pressure is relieved the parts will resume their normal positions. The pressing of the two members 30 and 42 will also cause the lever 34^a to engage the contact 13, since in this case as well as the other, the lever 34 will be engaged and will be swung on its pivots so as to bring the end 34^a into engagement with the contact 13.

It will thus be seen that I provide a device which may be readily inserted in an ordinary telegraph key and which will automatically send dots by a single movement of the hand. The casing serves as a rest for the whole hand, and relieves the fatigue occasioned by the constant use of the fingers. The apparatus may be even used by a person without a hand. Thus an operator may rest his wrist on the member 29 and by a lateral movement to the right or left he may send messages accurately.

By moving the thumb-piece 26 upwardly, the hook 27 bearing the stem or spring 18 of the pendulum 19 is moved downwardly and hence the stem is moved with it. This tends to cause a slower vibration of the pendulum. A movement in the opposite direction will, of course, increase the rate of vibration. The member 26 will remain in any position in which it is placed by the frictional engagement with the casing. The loop 31 at the top of the extension 30 may be thrown down over the member 42 thereby bringing the contact 34^a into engagement with the contact 13 and short circuiting the device.

The device may be short circuited in the ordinary manner by means of the lever 47 as shown in Fig. 1. In order to prevent a jar when the parts return to normal position I provide the buffer 12 against which the pendulum may rest. The insulating stop 50 is designed to contact with the buffer 12 in the manner shown in Fig. 4.

The apparatus may be used either in the upright position as in Fig. 1, or in the lower position as shown in Fig. 6. In this case the dots or dashes may be sent by grasping the members 30 and 42 with the thumb and forefinger and moving them laterally in the

manner described. In Fig. 7, I have shown a modification which is applicable to a wireless telegraph outfit. In this case the contact 13^x is arranged to be engaged by the extension 20^x of a pivoted arm 20^y through which the stem or spring 18^x of the pendulum 19^x extends. A flexible wire 20^z extends from the end of the arm 20^y and effects an electrical connection with the frame portion 10^a, so that as the stem 18^x slides through the opening in the arm 20^y the electrical circuit is maintained. This arrangement serves to provide a contact of sufficient surface to accommodate the larger current. The movement of the arm 20^y is not as great as that of the spring 20, but is entirely sufficient for breaking the current. The other parts of the apparatus are the same as that set forth in the foregoing description.

The apparatus thus described is very light as compared with similar devices, weighing but a few ounces as against two or three pounds. It may be carried in the pocket and fitted to the ordinary instrument and therefore does not have to be provided with a base.

I claim:

1. The combination with the pivotal supporting screws of an ordinary telegraph key, of a casing adapted to be held by said screws, and means within said casing for sending dots and dashes by a movement of the casing.

2. The combination with the pivotal supporting screws of an ordinary telegraph key, of a casing adapted to be held by said screws and means within said casing for sending dots and dashes by lateral movement of the casing.

3. The combination with pivotal supporting screws of an ordinary telegraph key, of a frame adapted to be held rigidly by said screws, a casing surrounding said frame and pivotally secured thereto and means within said casing for sending dots by a single movement of the casing in one direction

and for sending a dash by a single movement in the other direction.

4. In an automatic telegraph sender, a casing adapted to constitute a hand-rest and having conical supporting members adapted to enter the conical bearings of an ordinary telegraph lever, means for sending dots by a movement of the casing in one direction and for sending dashes by a movement of the casing in the opposite direction.

5. In an automatic telegraph sender, a casing adapted to constitute a hand-rest and having conical supporting members adapted to enter the conical bearings of an ordinary telegraph lever, a stationary contact a pendulum within said casing, a spring contact secured thereto, means adapted to be moved in one direction for causing the vibration of the pendulum and consequent engagement and disengagement of the spring contact with the stationary contact for sending dots, and a pivoted lever arranged to be actuated by a movement by said means in the opposite direction to be brought into engagement with said stationary contact for sending dashes.

6. A portable pocket automatic sending device for telegraph instruments comprising a frame adapted to be supported between the pivotal screws of the lever of a common telegraph key, a stationary contact carried by said frame, a casing surrounding said frame, and pivotally secured thereto, a pendulum suspended upon said frame and provided with a movable contact adapted to engage said stationary contact and a hand-rest pivotally mounted upon said casing and adapted when moved in one direction to set the pendulum in motion for sending dots, and when moved in the other to effect a single closure for sending a dash.

JOSEPH RUSSELL JONES.

Witnesses:

L. A. STANLEY,
 SOLON C. KEMON.