

F. PEARCE.
MUNICIPAL SIGNALING BOX.

No. 424,431.

Patented Mar. 25, 1890.

Fig. 2.

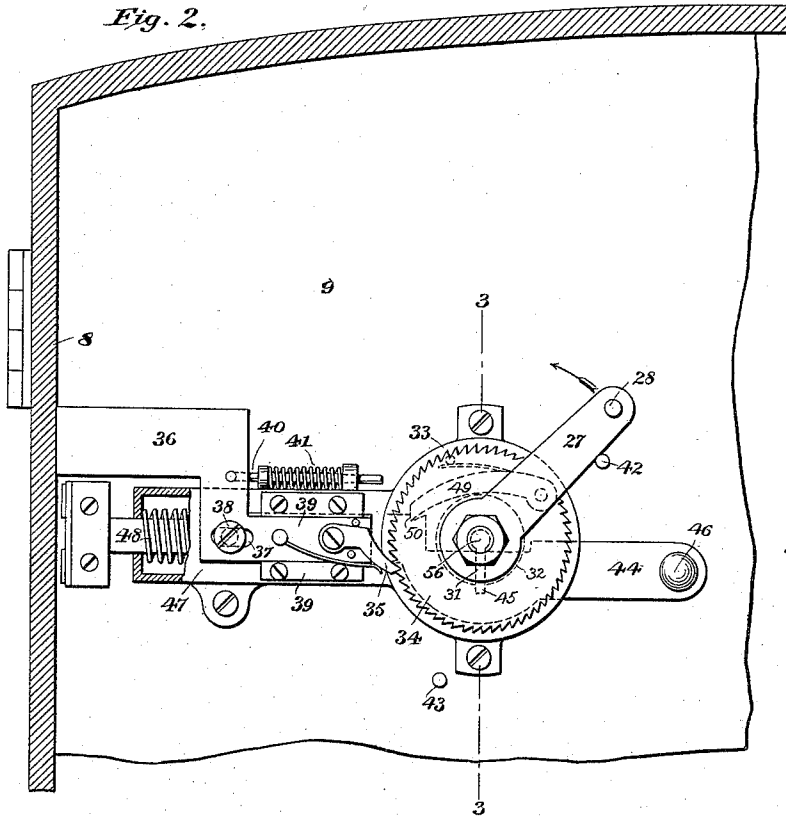


Fig. 3.

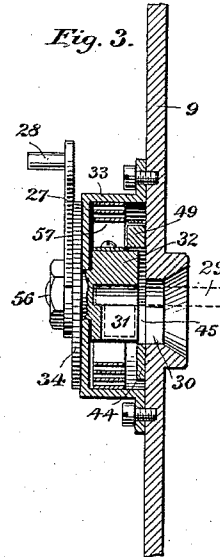
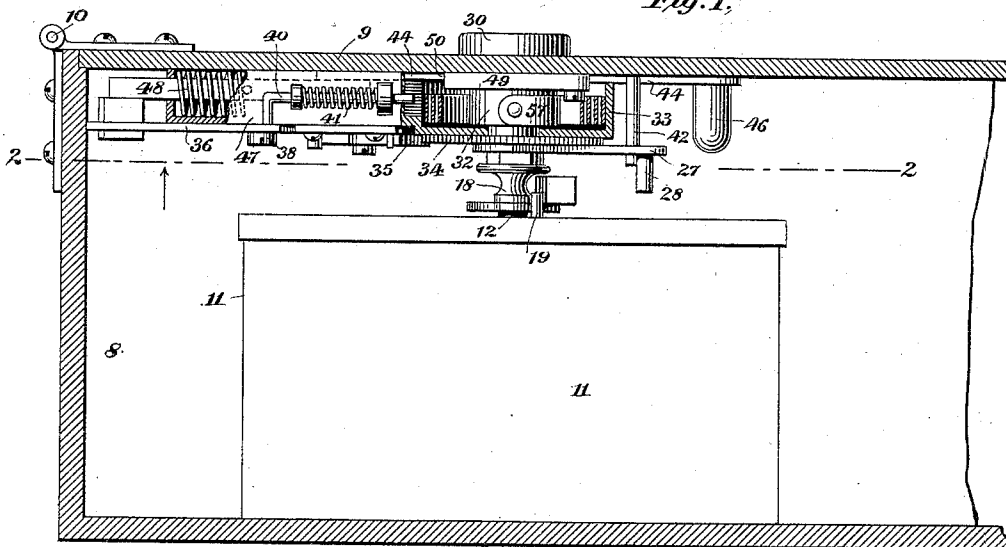


Fig. 1.



Witnesses
Geo. W. Breech.
Edward Thorpe.

Inventor
F. Pearce.
By his Attorneys
Fowler & Fowler.

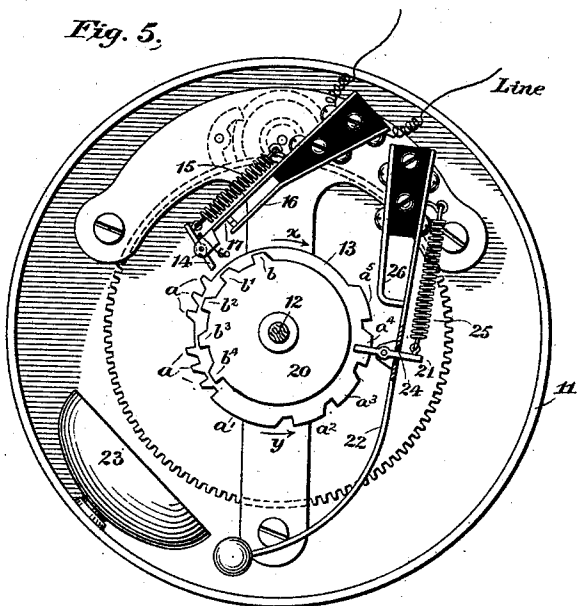
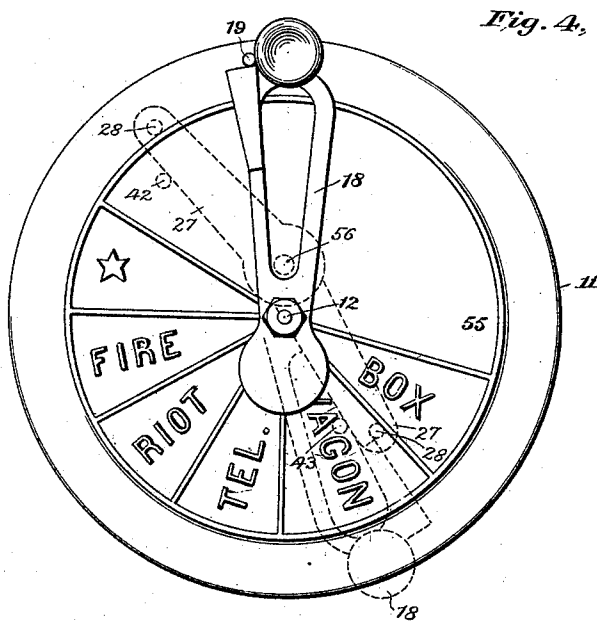
(No Model.)

2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

FREDERICK PEARCE, OF NEW YORK, N. Y., ASSIGNOR TO THE GAMEWELL
FIRE-ALARM TELEGRAPH COMPANY, OF NEW YORK.

MUNICIPAL SIGNALING-BOX.

SPECIFICATION forming part of Letters Patent No. 424,431, dated March 25, 1890.

Application filed April 10, 1889. Serial No. 306,673. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK PEARCE, a citizen of the United States, residing at New York, county and State of New York, have
5 invented certain new and useful Improvements in Municipal Signaling-Boxes, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and
10 use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to electrical signaling apparatus, and has particular reference to a
15 signal box or transmitter having an annunciator or indicator so arranged in connection therewith as to inform the operator of the box, prior to the transmission of the signal, of the exact signal he is operating the box to
20 subsequently transmit, thereby not requiring visual inspection of the box-dial in setting the box for a certain signal, and to novel means for permitting the sending of a single special or citizen's call by use of a citizen's
25 key while the box is closed, so as not to give public access to the multiple transmitter located therein; and, further, the invention has reference to novel means for trapping and releasing the citizen's key when used, and to
30 means for restoring to normal position, by operation of the box-door, parts of the mechanism brought into operation by action of said key.

The invention also has reference to certain
35 novel and peculiar constructions and combinations of the various parts of the apparatus, all as hereinafter fully described, and then pointed out in the claims.

In order that my invention may be fully
40 understood, I have illustrated in the accompanying drawings and will proceed to describe the best form thereof so far devised by me, with the knowledge, however, that such form may be variously modified without
45 making a substantial departure from the spirit of the invention.

In the said drawings, Figure 1 is a horizontal sectional view of part of a police or municipal signaling-box embodying my improve-
50 ments, the section being taken above the transmitter 11 and the auxiliary attachment

on the box-door, which attachment is shown as partly in horizontal section. This view shows clearly the co-operative relation of the attachment and the multiple transmitter 11.
55 Fig. 2 is a vertical section of part of the box, taken on a plane indicated by line 2 2, Fig. 1, and looking in the direction of the arrow adjacent such section-line and shows the auxiliary attachment mounted on the box-door.
60 Fig. 3 is a sectional view of the box-door and the auxiliary attachment, the section being taken on line 3 3, Fig. 2. Fig. 4 is a detached front view of the multiple transmitter of the box, with the auxiliary lever shown dotted in
65 both limits of its movement to show its relation to the starting-lever of the transmitter. Fig. 5 is a front interior view of the transmitter shown in Fig. 4, with the front plate and starting-lever thereof removed, and shows how
70 the annunciator is combined with the transmitter.

I have designated similar parts of the drawings by like letters and numerals of reference.

Referring to the drawings, 8 designates
75 the usual framing of a municipal signaling-box, the front of which is provided with a door 9, hinged at side 10 and swinging outwardly. This door is provided with the usual lock, (not shown,) the key of which, called the
80 "master-key," is generally carried by a police-officer or person of authority who it is intended shall have exclusive access to the multiple transmitter 11 locked in the box, so
85 that only such authorized person can have full control of the transmitter to send in to the central station any one of its many different calls. As will of course be understood, these boxes are generally arranged at
90 local points or sub-stations in electrical communication with a main office or headquarters, the design being that an officer can make a duty report from such sub-station to central, or send a call therefrom for a patrol-wagon, telephone-connection, &c., and that a citizen
95 can send in but a single call for police or patrol-wagon.

One object of my present invention is to so construct a call device or transmitter that the local operator thereof may know otherwise
100 than by viewing the call-labels of the box-dial and in advance of the transmission of the sig-

nal just what signal-characters of the transmitter his manipulation introduces into action. I have herewith shown one means—a mechanical one—of accomplishing this object.

5 The ordinary multiple call device or transmitter 11 comprises the usual parts of a break-wheel shaft 12, which is usually provided with a suitable spring for returning the shaft to normal position when partly revolved.

10 Upon shaft 12 is mounted fast the break-wheel 13, having the teeth or members $a a a' a^2 a^3 a^4 a^5$, forming a signaling-surface, which effects the transmission of several different signals according to how many of the signal-characters are brought into action. In the

15 forward or signal-setting movement (per arrow x) of the transmitter the signal-teeth $a a'$, &c., are forced under the pivoted arm 14, which yields against the action of its connected spring 15 when tripped in this direction. As the break-wheel returns, (per arrow y), the signal-teeth thereof again strike arm 14, which when tripped in this direction is immovable or non-yielding because of the

20 stop 60, so that contact 16 is moved out of connection with 17 in an obvious manner. Thus in the backward or signal-transmitting movement of the transmitter each tooth or element thereof will operate arm 14 and open the

25 main circuit by causing contact 16 to break connection with contact 17, both of which contacts normally complete the main circuit. The co-operation of arm 14 with the break-wheel is wholly mechanical, the signals being transmitted by the breaking and making of the circuit over contacts 16 and 17, as described. In the construction shown the signal-teeth $a a'$ are made according to the usual custom to

30 represent the box-number, while the succeeding teeth $a' a^2 a^3 a^4 a^5$ respectively represent the different calls of "wagon," "telephone," "riot," and "fire," as more fully hereinafter described. The dial 55 of the call device is divided off and labeled with the different calls, in the order just stated, beginning with the

35 call "box" and running around to the left. The starting-lever 18, secured upon the outer end of shaft 12 to the outside of the box, may be turned over the dial 55 in the direction of

40 the movement of the hands of a clock to any one of the several calls. Normally the starting-lever 18 stands vertically, and is prevented from being moved from such position to the left by the stop 19. The parts just described

45 are old, and in the use of them, in order to set the transmitter to a certain call, the starting-lever is turned by hand around to the desired label, which has to be sighted, and is then released. This forward movement of the

50 lever sets up the signal or call designated by the label at which the lever is released, and at the same time winds up the motor-spring of shaft 12, so that upon being released the lever and transmitter run back to normal position, the latter effecting the transmission of

55 the signal so set up in an evident manner.

In combination with this transmitter or mul-

multiple call I employ an annunciator or indicating device consisting in a toothed wheel or disk 20, mounted on and turning with the shaft 12, and having trip-teeth $b b' b^2 b^3 b^4$, arranged in predetermined relation to the signaling-characters of the break-wheel 13, and engaging in the movements of the wheel back and forth the trip 21, pivoted upon the bell-tap 22, which plays on the annunciator-bell 23. In the forward movement of the tripping-disk its teeth strike the trip 21, which does not then yield, because of its taking against shoulder or stop 24 on the bell-tap 22. Thus each tooth of the disk 20 in its forward movement will force outwardly the bell-tap, which, being resilient, will snap inwardly and ring the bell 23. In the return movement of the disk the teeth again strike the trip 21, which now yields, so as not to record such action on the bell. The spring 25 serves to restore the trip to the position shown after each tooth has passed thereunder. The annunciator-disk 20 has its trip-teeth arranged in such relation to the signaling-teeth of the transmitter 13 that when in the forward or signal-setting movement of the transmitter teeth $a a a'$ have passed under arm 14 and the latter rests on tooth a' tooth b of the disk will have passed under the trip 21 and sounded the bell once. When, in addition to teeth $a a a'$, the teeth $a' a^2 a^3 a^4 a^5$ have in turn been passed under arm 14, trip-teeth $b' b^2 b^3 b^4$, respectively, will have been moved under the trip 21 and caused the annunciator to give a signal for each tooth. The signal-teeth $a a'$, &c., and the trip-teeth $b b'$, &c., are arranged in such a relation to each other and to the trip-fingers 14 and 21 that when the teeth $a a'$ have all passed under the trip 14 in the signal-setting movement of the device, and such trip rests on signal-tooth a' , the trip-tooth b will have passed by the trip-finger 21, thereby operating the annunciator. Similarly, when the trip-finger 14 is on the high part of tooth a^2 , the trip-teeth $b b'$ will have both passed the trip-finger 21 and operated the annunciator accordingly. Similarly, in the operation of the signal-teeth a^3, a^4 , and a^5 , in conjunction with the trip-finger 14, so that when the transmitting-wheel has been turned forward sufficiently far to allow the trip 14 to rest upon the crown of tooth a^5 , which is the position of the parts when the last signal herewith shown is set, the teeth $b b' b^2 b^3 b^4$ will have all passed under the trip 21. In setting up the signal the transmitter is inoperative, and the annunciator is in action, while when the set-up signal is to be transmitted the reverse is the condition. Thus in setting up any signal the annunciator will inform the operator of each signaling-character he introduces in action in manipulating the box, so that the annunciator may be used as a means for directing the operator in setting up a signal. It becomes, therefore, unnecessary to inspect the dial of the box in sending in a call, as the

box can be set by ear. This permits of the box being operated in the dark with as much certainty as in the light. I designate herein the teeth $a\ a'\ a^2\ a^3\ a^4\ a^5$ as the actuating devices for the transmitter, and the teeth $b\ b'\ b^2\ b^3\ b^4$ as the actuating devices for the annunciator; but it will be understood that the claims containing the actuating devices as elements will not be limited to the specific devices which have been shown and described. It will be seen, furthermore, that these actuating devices are correspondingly arranged, the annunciator-operating mechanism being actuated during the setting of a signal, so that prior to the transmission of a set signal the operator may know by the annunciator what signal the box is set for. This feature of audibly announcing to the operator the signals as they are set up by him may be used readily with any of the call apparatus now in use, so that the operator may know what signal the box is set for previous to its transmission. I do not limit myself to mechanical means for effecting the object here sought, since obviously a local circuit may be easily placed under control of the trip-disk. If preferred, the trip-teeth may be of exactly the same number as the signal-teeth of the transmitter; but for the sake of convenience I have shown one trip-tooth b as the equivalent of the set a , comprising six signal-teeth for giving the number of the box. In this way when the box-number is sent in the local annunciator will give but one sound. For the call of "wagon" the annunciator will accordingly give two rings, three for "telephone," four for "riot," and so on, so that the operator will know by ear when he has set the call he desires and prior to the transmission thereof.

To permit a single call, the one designated "wagon," to be transmitted by use of a citizen's key without opening the door of the box, so as to keep the transmitter 11 inaccessible to those not having a master-key, I provide the following means: Upon the inner face of the box-door 9, and at a point eccentric to the axis of rotation of the starting-lever 18 when the door is closed, (see Fig. 4,) I pivot an auxiliary starting-lever 27, provided with a stud 28, which, when the door is closed, will engage the starting-lever 18 as the lever 27 is swung around in the direction of the arrow in Fig. 2. The respective centers about which the levers 18 and 27 turn are so related that when the auxiliary lever 27 has advanced the lever 18 to the call labeled "wagon," and thereby set up for transmission such signal, the lever 27 is compelled to disengage itself from 18, since the latter has then moved out of its reach, as will be clearly understood from the dotted-in parts in Fig. 4. When thus disengaged at the lowest point shown in said figure, the lever 18 will run back to vertical position while the signal for "wagon" is being transmitted. This auxiliary lever 27 is placed under control of a citizen's key 29, (shown dot-

ted-in in Fig. 3,) and by which the said lever is turned by entering the key in the hole 30 and introducing it in the key-chamber 31, formed in the revolving block 32, which has its stem or reduced portion 56 mounted through a central eye in the shell 33, secured rigidly to the door 9. The key-hole 30 is of an ordinary shape, being of sufficient size to easily admit the shank and bit of the key 29, so that after the key has been inserted through the key-hole and entered fully into the key-chamber 31 in the rotating block 32, and such block has been turned so that the key-chamber 31 is out of register with the key-hole, the entered key will be trapped and held against removal until the block is turned back into normal position. In this way the citizen's key may be automatically trapped by the block 32. The lever 27 is secured to the stem of the block 32, so that the two move together in response to the action of the key 29 when turned in the direction of the arrow in Fig. 2. The block 32 is surrounded by a coil-spring 57, one end of which is secured to the block, while the other end is made fast to a suitable stationary point. These parts are housed by the shell 33, and as the block is turned (per arrow) by the key the spring is made tense, so that the tendency of the block is to fly back into normal position, in which position its key-chamber 31 registers with the key-hole 30, as shown in the drawings. As the block is turned by the key, it is held at each step of its advancement by the ratchet-wheel 34, fixed upon the stem 56 of the block and lying to the outside of the shell 33. This ratchet is engaged by a spring-pawl 35, mounted on the sliding support 36, which is provided with a slot 37, working over a pin 38. The slide 36 moves on ways 39, and is engaged by a rod 40, mounted in a bracket and pressed by a spring 41, which tends to force the sliding support 36 out toward the hinge side of the door. The outer end of this sliding pawl-support 36 is to be engaged by a stationary part when the door is shut. In the present construction it is shown as taking directly against the door-jamb or the side of the box. When the box-door is closed, the support is forced inwardly, as shown, throwing pawl 35 in engagement with its ratchet 34, so that when the lever 27 is swung around from the upper dotted-in position in Fig. 4 to the lower one by means of the citizen's key, as described, the pawl 35 will hold it in such position until the door is opened by a master-key, whereupon the slide 36 will be shot outwardly by spring 41, leaving the ratchet 34 free, so that the spring 57 will restore the parts to normal position. The lever 27 thus remains in the position it is placed in by the citizen's key until the opening of the box-door by the master-key automatically releases it. The range of movement of the lever 27 is limited by the two stops 42 and 43.

In order to trap and hold the citizen's key, as is customary when it has been used to

send its certain assigned call, I mount the trap-bar 44 upon the inner face of the door 9, so that the notch 45 formed therein may register with the key-hole 30 when the bar is in normal position. One end of the trap-bar is provided with a handle 46, while its other end slides in a suitable bearing in the casing 47, which is extended laterally from the circular shell 33, and, like the shell, forms a dust-proof cover for the contained parts. This casing 47 also serves as a stand to elevate above the face of the door the several parts before described, and which comprise the ways 39, pin 38, and brackets of the rod 40, that are mounted thereon. The trap-bar is provided with a spring 48 for drawing it in the direction away from the hinge side of the door, and a spring-pawl 49 is arranged to engage a shoulder 50 on the bar to hold it against the action of the spring. This pawl is located within the range of the bit of the citizen's key 29, which projects slightly beyond the face or circumference of the block 32, so that as the key is turned it will strike and elevate pawl 49, thereby freeing trap-bar 44, which is then shot by its spring to the right and closes over the hole 30 and traps the key 29 therein. The bit of the key of course enters beyond the trap-bar and lies to its inner face when placed properly in the block 32, as shown in Fig. 3. The citizen's key cannot, therefore, be released from the door until the same has been opened by a master-key and the trap-bar withdrawn by hand, whereupon the pawl 49 catches and holds the bar in normal position and its notch 45 registers with the key-hole 30, as shown.

This auxiliary attachment for operating a multiple transmitter to send one specified signal may be readily applied to the boxes now in use. The attachment is of course wholly independent of the annunciator before described, though in the construction shown when the attachment is thrown into operation the annunciator will respond by giving two sounds on its bell, indicating the setting up for transmission the "wagon" call, which is the only call that can be sent by the citizen's key. Of course the invention contemplates the use of any suitable character of annunciator or indicator.

If preferred, the trip-tooth *b* may be omitted, so that when the starting-lever is set at or passed over the call "box" the annunciator will not be operated. In this case one tap of the annunciator-bell would indicate the "wagon" call.

Having thus described my improvements in municipal signaling apparatus, what I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of an electrical transmitter for sending signals from a sub to a main station and an annunciator and operating mechanism, the transmitter and annunciator operating mechanism being provided

with correspondingly-arranged actuating devices.

2. In a multiple call-box, the combination, with a rocking transmitter wheel or cylinder for transmitting multiple signals, of an annunciator and a tripping device controlled by the transmitter-wheel for tripping and actuating the annunciator during the setting of a signal, whereby each signaling element of the transmitter called into action may be recorded by the annunciator in advance of the transmission of the signal.

3. In a multiple call-box, the combination, with a rocking transmitter wheel or cylinder for transmitting multiple signals, of an audible annunciator and a wheel provided with tripping means and moving with the transmitter, such tripping means actuating the annunciator in accordance with the signaling characters of the transmitter in the signal-setting movement of the same and prior to the transmission of the signal, substantially as and for the purpose set forth.

4. In a multiple call-box, the combination, with a rocking transmitter wheel or cylinder for sending multiple signals, of a wheel provided with trip-teeth and controlled by the transmitter, and an annunciator-bell having a tap operated by the said trip-teeth in advance of the transmission of the signal, so that in setting up a signal the bell may announce each signaling-character set up for subsequent signaling action, whereby the box may be set for any signal by means of the annunciator as a guide, substantially as and for the purpose set forth.

5. In a multiple call-box, in combination, a rocking transmitter wheel or cylinder for transmitting multiple calls, such as the box-number and a set of special calls, a wheel provided with trip-teeth arranged in certain relation to the box-number and special-call characters of the transmitter and moving with the transmitter, a bell-annunciator having a bell-tap provided with a trip device yielding in one direction, but not in the other, the said trip-teeth engaging the trip in the forward or signal-setting movement of the transmitter and operating the trip to sound the bell for each trip-tooth, substantially as and for the purpose set forth.

6. In combination, a multiple signal transmitter or call device having an index starting-lever or pull-arm for setting and starting the same, a box housing said transmitter and having a door controlled by a master-key, a swinging auxiliary starting-lever adapted to engage and set the starting-lever of the transmitter at a certain specified call, and means accessible by a key from the outside of the box when closed for moving the auxiliary lever to send the specified call, so that such call may be made without opening the box, for the purpose set forth.

7. In combination, a multiple signal transmitter or call device having a swinging in-

dex starting-lever or pull-arm for setting and
 starting the transmitter to send any one of
 the multiple signals, a box housing the trans-
 mitter and having a door controlled by a mas-
 5 ter-key, so that the transmitter is fully ac-
 cessible only to one having such master-key,
 a swinging auxiliary starting-lever pivoted
 upon the door eccentrically to the said start-
 ing-lever of the transmitter and adapted to
 10 engage therewith and turn it through a pre-
 scribed range of movement, so as to set it at
 a certain specified call and then to disengage
 it, and a removable citizen's key for control-
 ling said auxiliary lever, substantially as and
 15 for the purpose set forth.

8. In combination, a multiple signal device
 or transmitter having a swinging starting-le-
 ver for setting the transmitter to send any
 one of several calls, a box housing the trans-
 20 mitter and having a door controlled by a mas-
 ter-key, a swinging auxiliary starting-lever
 spring-actuated and mounted on the box-door,
 and adapted to engage and swing the start-
 ing-lever of the transmitter a prescribed dis-
 25 tance to send a certain call, a removable citi-
 zen's key for controlling said auxiliary lever,
 and a catch for holding the said auxiliary lever
 in the position to which it is moved by op-
 eration of the citizen's key until the box-door
 30 is opened and then automatically releasing
 the lever, whereupon it may return to nor-
 mal position upon the opening of the door,
 for the purpose set forth.

9. In combination, a multiple transmitter
 35 having a swinging starting-lever, a box hous-
 ing said transmitter and provided with a door
 controlled by a master-key, a swinging aux-
 iliary starting-lever provided with a spring
 and mounted on the box-door and appro-
 40 priate to engage with the lever of the trans-
 mitter and swing it a prescribed distance to
 send a certain signal, a removable citizen's
 key controlling said auxiliary lever, a ratchet-
 wheel turning with the auxiliary lever, and
 45 a spring-pawl mounted on a spring-actuated
 sliding support and adapted to be thrown in
 and out of engagement with the ratchet-wheel
 controlling the auxiliary lever, said sliding
 support adapted to engage a fixed part of the
 50 box when the box-door is closed, so as to hold
 the pawl in engagement with its ratchet, and
 then to withdraw the pawl from the ratchet
 upon opening of the door, whereby the aux-
 iliary lever may spring back to normal posi-
 55 tion, for the purpose set forth.

10. In combination, a multiple transmitter
 having a swinging starting-lever, a box hous-
 ing said transmitter and having a door con-
 trolled by a master-key, a spring-acted aux-
 60 iary starting-lever secured to a rotatable block
 mounted on the door, said auxiliary lever
 adapted to engage with and set the starting-
 lever of the transmitter to a certain call, a
 key-hole formed in the door, and a key-cham-
 65 ber formed in the block and adapted to register
 with the key-hole when the auxiliary lever is
 in normal position, a removable citizen's key

for inserting in the key-hole and chamber of
 the block and turning the auxiliary lever to
 set the certain call, means for holding the
 said block in the position to which it is ad-
 70 vanced by the key while the door is closed,
 and means for restoring the block to normal
 position by the opening of the door, the block
 serving to retain the key in the door while
 75 closed, substantially as and for the purpose
 set forth.

11. In an auxiliary attachment for a multi-
 ple signaling-box for operating a citizen's call,
 the combination of a spring-acted rotary block
 80 mounted on the box-door and formed with a
 key-chamber, a removable citizen's key for
 controlling the block, and a key-hole formed
 in the door for the key, the chamber of the
 block registering with the said key-hole when
 85 the block is in normal position, an auxiliary
 lever secured to and turning with the block
 and having a prescribed range of movement,
 a ratchet for controlling the block and lever,
 and a pawl for engaging the ratchet to hold
 90 the block against the action of its spring, the
 pawl being automatically thrown into engage-
 ment with the ratchet upon closing the door,
 and thrown out of engagement therewith upon
 opening the door, substantially as and for the
 95 purpose set forth.

12. The combination of an electrical trans-
 mitter for sending signals from a sub to a
 main station, a multiple signal-dial and an
 index member therefor, said dial and mem-
 100 ber relatively movable, an annunciator, and
 operating mechanism, the transmitter and
 annunciator operating mechanism being pro-
 vided with correspondingly-arranged actu-
 ating devices.

13. The combination, with a box having
 105 a door formed with an auxiliary key-hole for
 a removable citizen's key, of a spring-acted
 trap-bar mounted on the inside of the door
 and formed with a key-notch normally regis-
 110 tering with the key-hole, the bar normally
 under spring-tension, and a pawl for holding
 it in such normal position, said pawl being
 engaged and actuated by the citizen's key in
 operating the attachment, whereby upon ma-
 115 nipulating the key to operate the attachment
 the trap-bar may be shot across the key-hole
 and trap the key and hold it so trapped un-
 til the door is opened and the bar withdrawn,
 substantially as and for the purpose set forth.

14. In combination, a rocking multiple
 transmitter or break-wheel, such as 13, pro-
 vided with signaling-characters, such as *a a*
 120 *a'*, &c., an annunciator, and a trip device, such
 as 20, controlled by and moving in concert
 with the transmitter and provided with the
 tripping means, such as *b b'*, &c., for operat-
 ing the annunciator in advance of the trans-
 mission of the set signal, substantially as and
 for the purpose set forth.

15. In combination, the rocking tripping-
 disk 20, provided with a tripping-surface, such
 as *b b'*, &c., and a bell 23, having a tap 22, pro-
 130 vided with a trip 21, yielding to the passage

of the tripping elements *b b'*, &c., in the return movement thereof, but not in the forward movement, substantially as and for the purpose set forth.

- 5 16. The combination, with a multiple transmitter 11, having a swinging index starting-lever 18, for setting any one of several calls, and mounted in a box provided with a door 9, controlled by a master-key, of a swinging
10 auxiliary starting-lever 27, appropriate to engage and move the starting-lever 18 of the transmitter a prescribed distance to set a certain call, and a removable citizen's key 29, for controlling the lever 27, substantially as and
15 for the purpose set forth.

17. The combination, with the swinging auxiliary starting-lever 27, mounted on the door 9, for moving the starting-lever of the transmitter a prescribed distance, and a re-
20 movable citizen's key 29, for controlling the lever 27, of the ratchet 34, moving with the lever 27, and a spring-pawl 35, engaging and disengaging the ratchet and mounted on the spring-acted sliding support 36, which engages
25 a stationary point when the door is closed and holds the lever 27 in the position to which it may be advanced by key 29, and is adapted to withdraw the pawl upon the opening of the door, for the purpose set forth.

- 30 18. The combination, with the multiple transmitter 11, provided with the swinging starting-lever 18 and mounted in a box hav-

ing a door 9, controlled by a master-key, of a rotatable block 32, mounted on the box-door and provided with a key-chamber 31, registering with the key-hole 30 when the block
35 is in normal position, the auxiliary lever 27, secured to and turning with the block, a spring for restoring the block and lever to normal position when moved and released, a
40 key 29, for moving the block 32, and means for holding the block in the position to which it may be advanced by such key when the door is closed and automatically releasing it
45 when the door is opened, substantially as and for the purpose set forth.

19. The combination, with the door 9, provided with a key-hole 30 and a key 29 for inserting in said hole, of a spring-acted trap-
50 bar 44, formed with key-notch 45, registering with key-hole 30 when the bar is in normal position, and a pawl 49, engaging and holding the bar normally and within range of the key 29
55 when turned to be engaged and moved out of engagement with the bar by the key, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand and affixed my seal, this 9th day of April, 1889, in the presence of two subscribing witnesses.

FREDERICK PEARCE. [L. S.]

Witnesses:

PAUL F. C. TUCKER,
WILLIS FOWLER.