

P. COOKE.

COIN CONTROLLED LOCK FOR TELEPHONES.

No. 497,907.

Patented May 23, 1893.

Fig. 1.

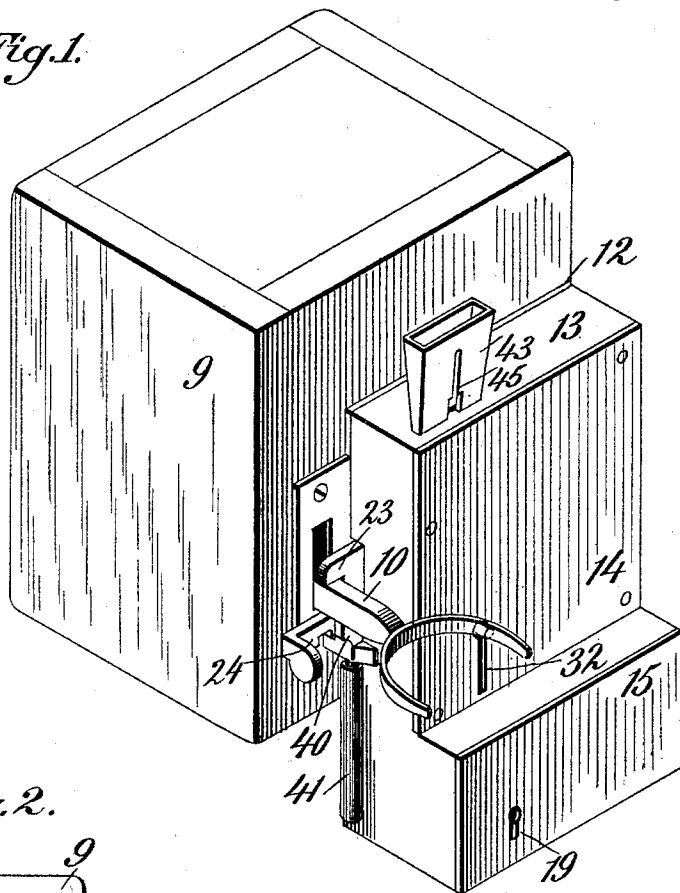
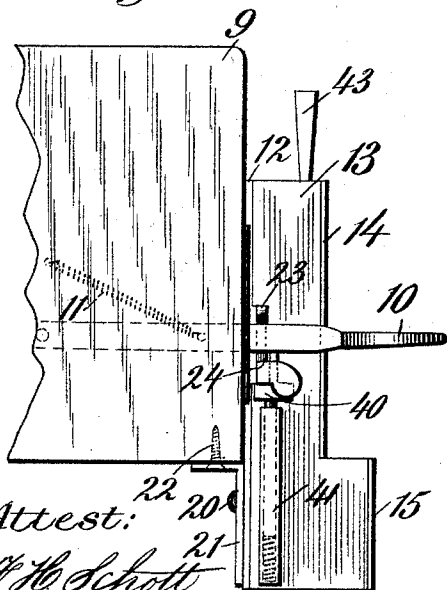
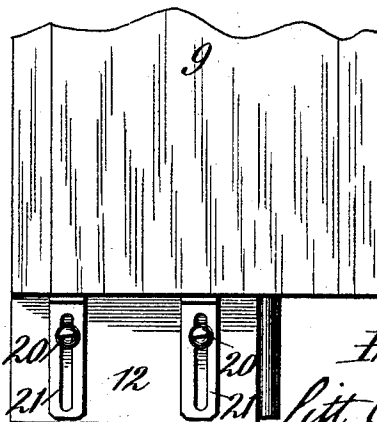


Fig. 2.



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Fig. 3.



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Fig. 4.

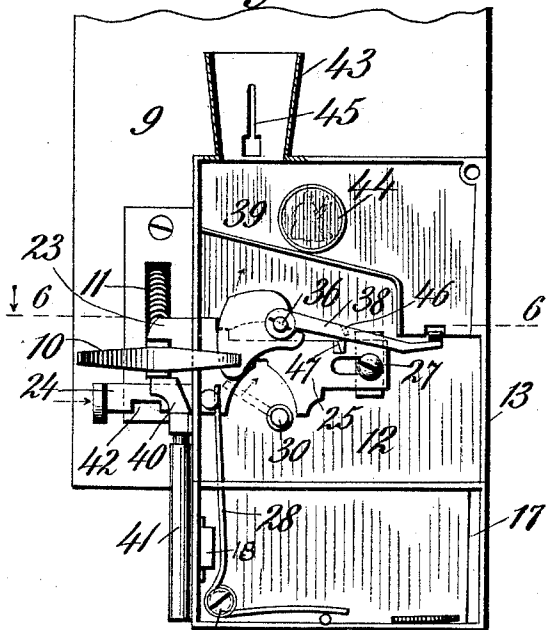


Fig. 5.

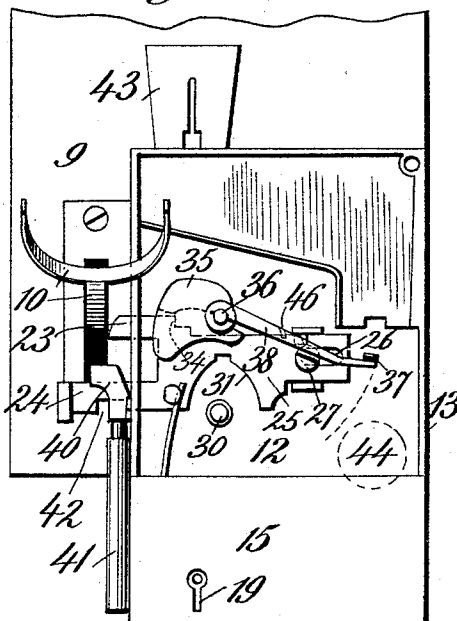


Fig. 6.

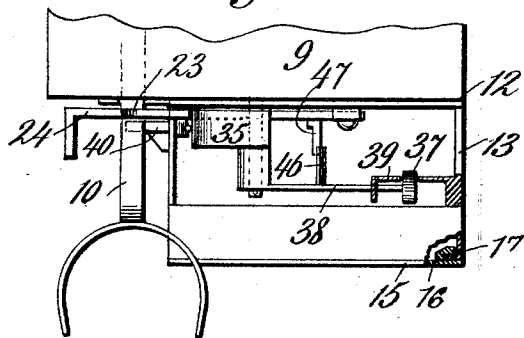


Fig. 7.

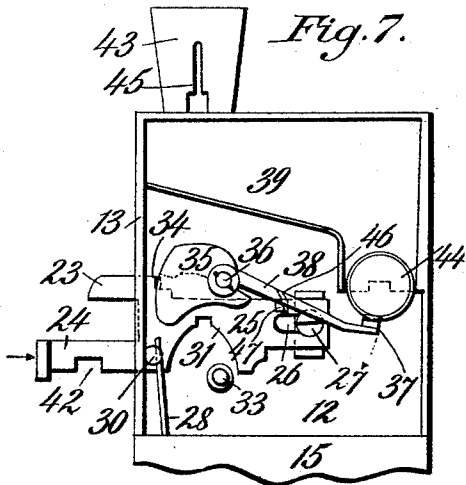
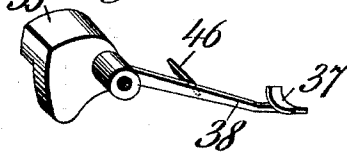


Fig. 8.



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UNITED STATES PATENT OFFICE.

PITT COOKE, OF WASHINGTON, DISTRICT OF COLUMBIA.

COIN-CONTROLLED LOCK FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 497,907, dated May 23, 1893.

Application filed December 24, 1892. Serial No. 456,255. (No model.)

To all whom it may concern:

Be it known that I, PITT COOKE, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Coin-Controlled Locks for Telephones; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in coin-controlled locks for telephone switches, and is designed to provide an attachment for telephone transmitters whereby the automatic switch from which the hand phone is suspended is normally locked in the position thereby preventing the instrument from being used for the transmission or reception of messages except on the release of the locking devices, either by a key in the possession of the subscriber or by a coin inserted as a toll in the controlling apparatus.

In the accompanying drawings, Figure 1 represents, in perspective, the preferred embodiment of my invention, and illustrates its mode of attachment to a telephone transmitter, the switch being in the locked position and the telephone circuit broken. Fig. 2 represents a partial side elevation thereof. Fig. 3 represents a partial rear elevation. Fig. 4 represents a front view, with the proximate side of the inclosing casing of the attachment removed. Fig. 5 represents a like view, but with the switch in the unlocked position, closing the telephone circuit. Fig. 6 represents a section on the line 6—6 of Fig. 4. Fig. 7 represents a view of the same general character as Figs. 4 and 5, illustrating the initial movement of release imparted to the locking devices by the toll coin; and Fig. 8 represents, in perspective, a detail of construction.

Similar numerals of reference indicate similar parts throughout the several views.

Referring to the drawings, 9 indicates the usual telephone transmitter, having the customary automatic switch 10 adapted to be held in the lowered position shown in Fig. 1 by the weight of the hand phone acting against the tension of the spring 11, the speech transmitting and receiving circuits being open or broken in this adjustment, and being

closed when the switch is in the adjustment shown in Fig. 5, all as usual in telephonic apparatus and as will be readily understood by those skilled in the art.

The object of the invention is to normally lock the switch in this "open" adjustment, in such manner that the subscriber or other person or company entitled to the use of the telephone may receive a toll whenever the instrument is used by an outsider, these tolls being in each instance a coin of a uniform denomination, to be inserted in the controlling apparatus at the time of use, supplying the means for releasing the same, and being thereupon dropped into a closed collecting receptacle for subsequent removal.

The operative parts or locking mechanism for the switch lever are conveniently mounted within and upon a casing, which may conveniently consist of a back plate 12, main body portion 13, removable front closing plate 14, and removable till plate 15, having a vertical projection or strip 16 on its inner surface adapted to slip behind a similar strip 17 on the edge of the casing and having a lock of any suitable kind whose bolt is adapted to engage behind the keeper 18 and which is operated by a key inserted at the key hole 19.

At the rear of the casing set screws 20 serve to adjustably connect the slotted brackets 21 thereto, each of said brackets being attached to the under side of the transmitter by wood-screws 22. In this manner, the supporting brackets may be at once attached to the transmitter by means of the wood screws, and the casing may then be adjusted to the desired height required by the particular instrument, by first loosening the set screws and subsequently tightening them up when the right adjustment is secured.

The switch lever 10 is adapted to be secured or locked in its lower position by engaging within the fork made by the arms 23, 24, of a slide 25, said slide passing at its forward bend through the casing 13, as shown, and having at its rear end a slot 26 moving upon the pin 27. A spring 28 secured within the casing at 29 bears against a stud 30 upon the slide and normally tends to project the slide to the limit of its outward throw. The slide is provided with a key-engaging notch 31, whereby a suitable key, inserted through the key

hole 32 and over the key stud 33, may be employed to retract the slide, against the action of the spring 28.

When the slide is in its forward position, as indicated in Figs. 1, 2, 4 and 6 its fork arms 23, 24 straddle the switch lever, and the slide is prevented from being pushed back, from the outside of the casing by reason of the fact that it is provided with a shoulder 34 with which a gravity pawl 35 engages, so as to block the backward movement of the slide. This pawl 35 is mounted upon a rock pin 36 and is overbalanced at its forward end so as to normally gravitate forward. It is likewise provided with a rearward extension or monkey tail 38 which terminates at its extreme end in a dishd cross-piece 37, located immediately below the coin-chute 39.

In order to release and retract the slide, a key is inserted in the key hole 32 and is turned in the manner indicated by dotted lines in Fig. 4. The forward end of the gravity pawl is thereby raised in such manner as to clear the shoulder 34, and consequently permitting the key to retract the bolt to the extent indicated in Fig. 5. The switch lever is thereby released and on the removal of the hand the phone flies upward so as to close the telephone circuit in the usual manner. At the same time, a plunger 40, spring-seated within a small sleeve-casing 41, is released and forced upward by the spring therein and engages within a notch 42 in the slide, thus automatically retaining it in the retracted position. The holder of the key may therefore at any time release the locked switch when he desires to use the telephone. After he has finished using it, he may hang the phone upon the switch lever in the usual way, thereby causing the lever to descend until it meets the plunger 40, and forcing said plunger downward until its projection drops out of engagement with the notch 42. The slide 25 is thus released and thrown forward by the spring 28 so as to again engage the switch lever 10 between the forked arms 23, 24, and the gravity pawl 35 rocks forward and falls behind the shoulder 34, thereby again locking the slide against retracting, and preventing the telephone from being used until the slide is again released. Instead of being released by the key, however, as described, the slide may be released by dropping a suitable coin in the coin-chute 39, the coin serving as a toll for the use of the instrument. To this end, the casing is provided with a narrow hopper or chimney 43 whose entrance opening into the casing is just sufficient to admit the required coin as 44 into the coin chute. Should a coin of larger diameter be inserted, it will not pass through into the coin chute but will lodge in the chimney 43 and may be readily extracted by prying it upward by means of a knife or some other pointed instrument inserted through a slot or slots 45 made through the wall of the chimney.

It will be noted that the coin on entering

the coin chute rolls edgewise down the incline thereof. By reason of this fact the casing may be made correspondingly narrow and the inclination of the chute may itself be but slight, thereby decreasing the height necessary for the casing, in comparison to what would be required were the coin to slide face downward upon the chute. On reaching the bottom of the chute, the coin strikes and rests upon the cross piece 37 upon the arm 38 and rocks the said arm downward until its motion is arrested by the inclined lug 46 of the arm coming in contact with a corresponding inclined lug or projection 47 of the slide 25 which thereupon sustains the arm temporarily against further depression. This location of parts is illustrated more fully in Fig. 7, and on reference to said figure, it will be observed that the pawl 35 has been rocked backward sufficiently to release the shoulder 34 of the slide 25. Consequently by pressing upon the outer end of the arm 24, as indicated by the arrow, the slide 25 may now be readily forced back, whereupon the switch lever 10 will be released and when the hand phone is removed will fly upward, and the slide will be retained in the retracted position, as before, by the engagement of the rising plunger 40 with the notch 42. In the meantime the retraction of the slide 25 has removed the supporting lug 46 from beneath the corresponding lug 47 of the arm 38, in consequence of which the arm descends still farther, as indicated in Fig. 5, finally dropping the coin into the till compartment, and then, relieved of the weight of the coin, being returned to the position shown in full lines in Fig. 5. The subsequent re-locking of the switch-lever is effected automatically, as before described, when the hand phone is placed within the outer fork of the switch lever so as to carry said lever downwardly.

While I have shown and described herein the preferred form in which my invention is to be embodied, I do not wish to be understood as limiting myself to the details of construction shown, but contemplate the employment of such equivalents therefor as fairly fall within the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim is—

1. A telephone box having its switch lever provided with a coin-controlled lock, the bolt of said lock sliding transversely across the path of upward movement of the switch lever and being thereby adapted to block said upward movement when the lever is in the lowered or open position, a back-stop pawl for preventing the retraction of the bolt, said pawl having a tripping arm, and a coin chute for dropping a coin upon said arm to trip the pawl; substantially as described.

2. A telephone box having its switch lever provided with a coin-controlled lock, the bolt of said lock sliding transversely across the path of upward movement of the switch lever

and being thereby adapted to block said upward movement when the lever is in the lowered or open position, a back stop pawl for preventing the retraction of the bolt, said pawl having a tripping arm located in the path of descent of the coin, and corresponding projections on the arm and bolt to limit temporarily the downward movement of the arm, whereby after the pawl is tripped it may be retained in the tripped position until the bolt is slid back; substantially as described.

3. A telephone box having its switch lever provided with a coin-controlled lock having a slide bolt the bolt being forked at its forward end and straddling the switch lever and having a notch in one of the fork arms, and a catch registering and engaging with the notch when the bolt is retracted; substantially as described.

4. A telephone box having its switch lever provided with a coin-controlled lock, the bolt of said lock being forked at its forward end so as to engage the lever within the fork and the lower arm of the fork being notched, and a spring seated catch adapted to engage with said notch when the bolt is in the retracted position said catch being in the path of movement of the descending lever so as to be thrown out of engagement with the notch when the lever descends; substantially as described.

5. A coin-controlled lock having its bolt or slide provided with a coin-operated back-stop pawl, a portion of said pawl being located in the path of movement of the lock key, whereby the movement of the key will first trip the pawl and then retract the bolt; substantially as described.

6. In a coin-controlled lock, the combination with the switch lever, of a bolt or slide

adapted to move transversely across the path of upward movement of the lever, a back stop pawl for the same, said back stop pawl being provided with a rearwardly extending arm or monkey-tail, and a coin-chute for depositing a coin upon the end of said arm to trip the pawl; substantially as described.

7. In a coin-controlled lock, the combination with the switch lever, of a bolt or slide, adapted to move transversely across the path of upward movement of the lever, a back stop pawl for the same, said back stop pawl being provided with a rearwardly extending arm or monkey tail, and a coin-chute for depositing a coin upon the end of said arm to trip the pawl and co-operating lugs or projections upon the arm and slide to temporarily limit the descent of the arm; substantially as described.

8. A coin-controlled lock having a bolt or slide forked at its forward end one of the arms of the fork being notched, a spring seated catch adapted to engage with said notch, a back stop pawl for preventing retraction of the bolt or slide, said pawl being provided with a monkey tail, and a coin-chute for depositing a coin upon said monkey tail; substantially as described.

9. The combination with a coin-controlled lock of an inclosing case therefor, said case being provided with a coin admission chimney having its wall slotted exterior to the case, whereby a coin wedged in said chimney may be readily removed; substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

PITT COOKE.

Witnesses:

JOHN C. PENNIE,

J. A. GOLDSBOROUGH.