(No Model.)

B. C. WOLVERTON.

COIN CONTROLLED TELEPHONE APPARATUS.

No. 524,925. Patented Aug. 21, 1894.

Fig. 1.

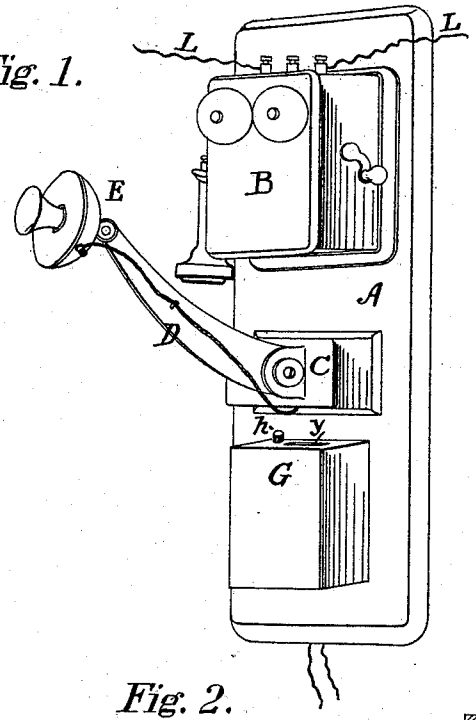


Fig. 3.

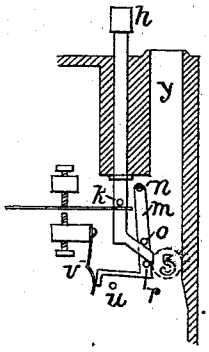


Fig. 2.

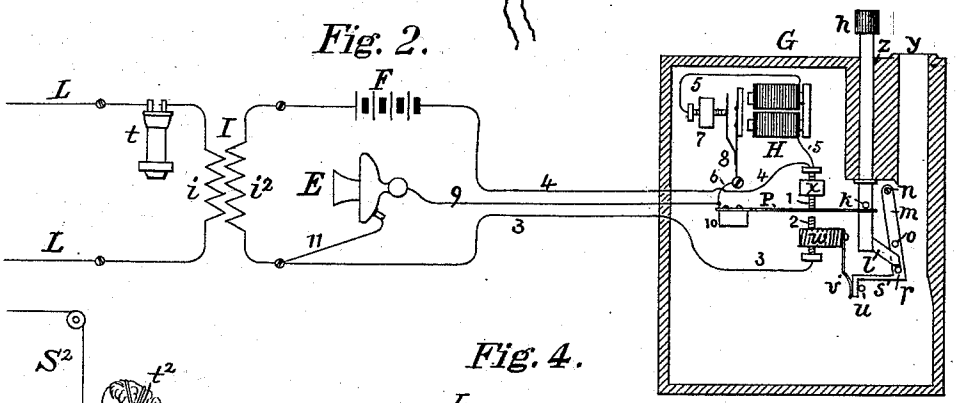
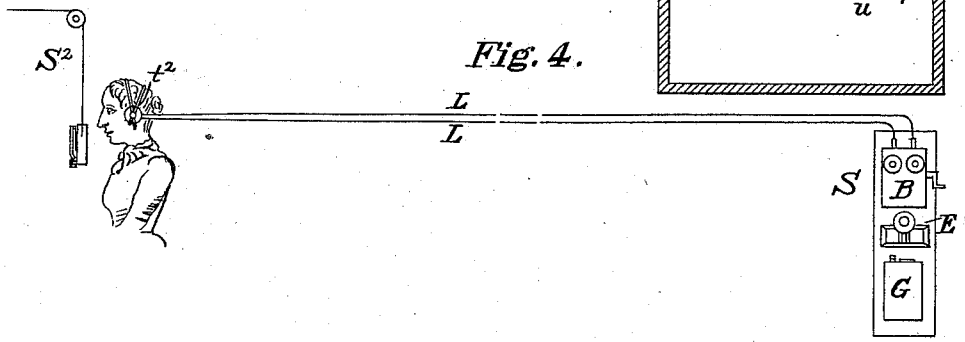


Fig. 4.



Attest.

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UNITED STATES PATENT OFFICE.

BYRON C. WOLVERTON, OF ELMIRA, NEW YORK, ASSIGNOR TO THE NEW YORK AND PENNSYLVANIA TELEPHONE AND TELEGRAPH COMPANY, OF NEW YORK.

COIN-CONTROLLED TELEPHONE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 524,925, dated August 21, 1894.

Application filed May 12, 1894. Serial No. 511,012. (No model.)

To all whom it may concern:

Be it known that I, BYRON C. WOLVERTON, residing at Elmira, in the county of Chemung and State of New York, have invented certain Improvements in Coin-Controlled Telephone Apparatus, of which the following is a specification.

This invention relates to auxiliary apparatus used in connection with telephone substations or public toll stations, where a certain sum of money is required to be deposited in a cash box before the called for connection will be made by the operator at the central station, at which the line conductors of the said stations terminate. In the special form of such apparatus to which my invention belongs, the circuits are so arranged that the person wishing a connection with another substation connected with the same central office, can call up the central station by means of a magneto generator, and ascertain whether the wished for substation can be obtained, and the operator there will proceed to connect the two substations together after the calling person has deposited the required coin into a coin chute, the falling coin producing an audible signal which is heard by the listening operator.

The invention consists of a mechanical locking device provided with means for normally obstructing the coin chute, and an electrical signaling device normally in a shunt or derived circuit of the local or primary telephone circuit, the locking device is arranged to be partially unlocked by the weight of a coin deposited in the coin chute, and to be wholly unlocked by a manual act, which simultaneously therewith operates the signaling device by the opening of the local circuit and permitting its battery current to circulate in the shunt circuit.

The invention also relates to an arrangement of the local circuit by means of which telephone transmitter is placed in a shunt when the coin signaling device is operated, and by means of which it is automatically restored to the local circuit.

To operate the signaling device I employ the same source of electricity which is used for the telephone transmitter, and to prevent the current therefrom from passing through the transmitter I provide means for automatically shunting it when the signal is operated.

In carrying out my invention I provide a coin locking device in which but one token is used, it may be of any denomination, and the coin chute is made of the exact size or nearly so of the diameter and thickness of the coin, so that no other coin will operate to unlock the apparatus,—as a larger coin cannot be inserted, and a smaller one will fall into the cash box without effecting the result, all of which I will now proceed to describe and specifically point out in the claims.

In the drawings Figure 1 is a perspective view of a telephone substation or toll station outfit, in connection with which my invention is shown to be applied. Figs. 2 and 3 are diagrammatic sketches of the circuits, and sections of the box containing the coin controlled apparatus, and Fig. 4 is a diagram showing the listening operator and telephone at a central station with a circuit to a toll station provided with such an outfit as is shown in Fig. 1.

Referring to all of the figures, A is a backboard upon which is secured a magneto generator B to which are connected the line wires L L; a telephone transmitter E, with its movable arm D, and base C, which contains the induction coil I; and below the said base C is placed a box G which contains the mechanism of the coin operating device.

The box G is provided with a coin chute *y* of the exact size of the coin to be used both as to width and thickness, and extends to the bottom of the box which serves as a coin receptable. Adjacent to the chute is a rod *h* arranged to slide up and down in a bearing or support *z*, the upper end of which projects above the top of the box: the lower end of the rod extends into the box and is provided with an inclined extension *l*.

m is a lever pivoted at *n*, the lower end of which projects into and partially obstructs the coin chute *y* and has an extension *s* at nearly right angles thereto which is limited in movement toward the coin chute by the pin *u*. The foot of the extension *l* rests normally upon a pin *r* on the lever *m*; a limit-

ing pin *o* on the said lever is for a purpose to be hereinafter described.

w is a block of insulating material upon which is secured the spring *v* which presses against the foot *s* of lever *m*.

P is a spring secured to the block 10 at one end, its other end extending under the pin *k* on the rod *h*, but not supporting the weight thereof normally; the spring P is in contact with the screw 1 which is supported by the block *x*. The pin 2 is supported by the block *w*, and a wire 3 extends therefrom to the lower side of the primary i^2 of the induction coil I; and a wire 9 extends from the spring P to one terminal of the transmitter E, a wire 11 extending from its other terminal to the lower side of the helix i^2. A wire 4 extends from the screw 1 to the upper side of the helix i^2 and includes therein the battery F; and a wire 5 extends through the helices of the vibrator H and to the back contact 7, the armature and circuit breaker 8 being connected by wire 6 to the spring P. It will be seen that the vibrator or buzzer H is in a shunt of the local battery circuit, as the said circuit is traced as follows: Starting from battery F, wire 4, contact 1, spring P, wire 9, transmitter E, wire 11, helix i^2 to the other pole of battery F.

The operation of the invention is as follows: The person at the station S wishing to be connected to another substation, rings up the central office by means of the generator B, and ascertains that the connection can be obtained, he then drops the required coin, say a five cent "nickel" piece, into the chute *y*, the coin falls upon the lower end of the lever *m* and forces it back, against the pressure of the spring *v*, into the position shown in Fig. 3, when the pin *r* passes from under the point of the extension *l*, the rod *h* drops by gravity, and the pin *o* strikes the upper edge of the extension *l* at the same time its lower edge is wedged against the pin *r*, so that the rod falls no further, and the coin is prevented from dropping into the cash box. The rod is then depressed by the person making the call, and the lever *m* is pulled away from the chute and the coin drops down; at the same time the pin *k* on the rod *h* forces the spring P away from contact 1, and onto contact 2, thus opening the local circuit and bringing the vibrator H into the direct circuit, and also shunting the transmitter E, as will be seen by tracing the circuit, from battery F, wires 4 and 5 and vibrator H, wire 6, spring P, contact 2, wire 3, helix i^2 to the other pole of the battery. Upon releasing the rod *h* the spring P forces the rod upward and the extension *l* resumes its place upon the pin *r*, the spring *v* having forced the lever *m* to its normal position.

Having now described my invention, I claim—

1. In a coin controlled signaling apparatus for telephonic purposes, the combination of an electric signaling device in the telephonic circuit, and a mechanical locking device which can be partly unlocked by a coin, and then be wholly unlocked manually and simultaneously therewith operate the said signaling device.

2. In a coin controlled signaling apparatus for telephonic purposes, the combination of an electric signaling device in the telephonic circuit, and a mechanical locking device which can be partly unlocked by a coin, and then be wholly unlocked manually and simultaneously therewith operate the said signaling device and shunt the telephone transmitter.

3. In a coin controlled signaling apparatus for telephonic purposes, the combination of an electric signaling device in the primary circuit of a telephone line extending between a substation and a central station, and a mechanical locking device which can be partly unlocked by a coin, and then be wholly unlocked manually and simultaneously therewith operate the said signaling device.

4. In a coin controlled signaling apparatus for telephonic purposes, the combination of an electric signaling device in the primary circuit of a telephone line extending between a substation and a central station, and a mechanical locking device which can be partly unlocked by a coin, and then be wholly unlocked manually and simultaneously therewith operate the said signaling device and shunt the telephone transmitter.

5. In a coin controlled signaling apparatus for telephonic purposes, the combination of an electric signaling device in the telephone circuit, a coin chute, and a mechanical locking device normally obstructing the said chute, which can be partly unlocked by a coin, and then be wholly unlocked manually and simultaneously therewith operate the said signaling device.

6. In a coin controlled signaling apparatus for telephonic purposes, the combination of an electric signaling device in a derivation of the primary circuit of a telephone line extending between a substation and a central station, a coin chute, and a mechanical locking device normally obstructing the said chute, which can be partly unlocked by a coin, and then be wholly unlocked manually and simultaneously therewith operate the said signaling device.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 8th day of May, 1894.

BYRON C. WOLVERTON.

Witnesses:
FRANK D. CROSS,
LOUIS M. BREWER.