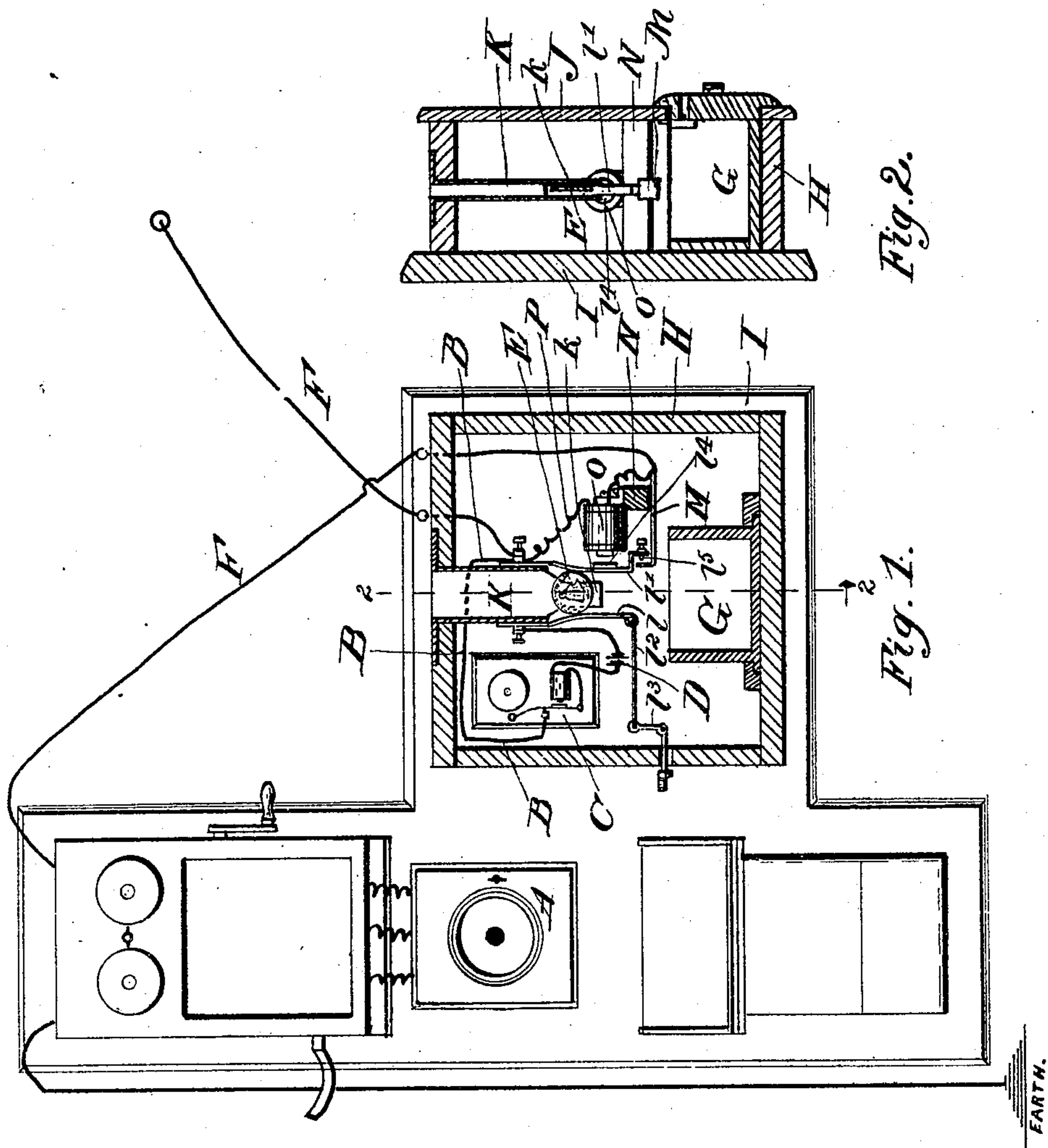


(No Model.)

W. T. GENTRY.
TELEPHONE TOLL STATION INSTRUMENT.

No. 516,433.

Patented Mar. 13, 1894.



Witnesses

E. P. Wood

Horace Keith

Inventor

William T. Gentry
By his Attorneys,
A. Woodman

UNITED STATES PATENT OFFICE.

WILLIAM THOMAS GENTRY, OF ATLANTA, GEORGIA.

TELEPHONE-TOLL-STATION INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 516,433, dated March 13, 1894.

Application filed April 6, 1893. Serial No. 469,300. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM THOMAS GENTRY, a citizen of the United States of America, and a resident of Atlanta, in the county of Fulton and State of Georgia, have made a certain new and useful Telephone-Toll-Station Instrument; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to the instrument or apparatus whereby the payment of the fee for the use of a telephone at a toll-station may be insured, and whereby the user is protected in being sure of obtaining the conversation or use of the telephone for which the said fee is paid, the invention consisting of the several details and combinations thereof hereinafter fully specified, together with their mechanical equivalents.

The accompanying drawings illustrate the device as applied to the wall or base-board of a telephone, Figure 1 being a vertical longitudinal section of the device in position on said base-board, a front elevation of a telephone also being shown in a somewhat rudimentary manner. Fig. 2 is a section on the line 2—2 Fig. 1 showing further the arrangement of parts.

In the figures, like reference marks indicate corresponding parts in both the views.

The complete toll-station consists of a subscriber's telephone-station outfit including the ordinary transmitter A and hand telephone (not shown), with suitable calling apparatus adapted to the system in use in the subscription-system, which may be any of the existing telephone exchange systems, a local circuit B, a buzzer C therein, also a local battery D, and a device whereby the insertion of a coin or token E will automatically cause the current from said battery, passing over said circuit to operate the buzzer, a tripping device operated by an electro-magnet included in the subscriber's line F by which the central-office operator by throwing a battery current over the said wire (line) may release the coin or token from between the buz-

zer circuit terminals, dropping it into the till G, and breaking the local circuit, and a supplementary device enabling the user of the telephone to release the coin by pressing a lever or button located conveniently. Also a device whereby the electro-magnet in the subscriber's line is short circuited as soon as the coin is released, whereby the line is relieved of any unnecessary resistance.

In the construction shown, there is a casing H secured to an extension I of the base-board of the telephone, a front board or cover J being provided, a till G, provided with a lock, being inserted in the bottom of the casing. Projecting downward through an aperture in the top side of the casing is a tube K which is flattened so as to conform to the shape of a coin, said tube extending to substantially the middle of the said casing, and being cut away at its lower edges so as to form the lips k.

Coin holding local circuit terminals are composed of springs l and l', which are constructed as follows and attached to opposite edges of the tube K, projecting such a distance below the lower end of same as is sufficient to cause them to grasp a coin at the proper time in its descent, and should be insulated each from the tube. The spring l is normally stationary, but should be provided with means for withdrawing it in a direction away from the spring l', with it in the present instance supplied by a link l² connecting the lower end of said spring l with the free end of a bell-crank lever l³, which projects its other arm through a slot in the casing whereby it may be depressed by the operator. The function of this device comprising the link and bell-crank lever might be performed in so many equivalent ways that I do not confine myself to any one of the well-known ways, nor to the manner shown and just described. The spring l' is normally stationary and carries thereon an armature l⁴, and contact-point l⁵, the latter operating best on its lower extremity by reason of the movements of the spring at that point affording good clearance from inopportune contact. Binding posts or other means for attachment of wires are connected with the two springs l and l'. A terminal M is so set as to be normally in circuit with the spring l', or, in other words, to be contacted by it when the same is sprung toward the

spring *l*. In the construction shown this terminal *M* is secured to the under side of the cross piece *N* which is fastened to the back of the casing as desired. Secured to the upper side of the cross-piece *N* is an electro-magnet *O* which is so set as to draw upon the armature on the spring *l'* when energized. A battery *D* and a bell or buzzer *C* are suitably set, the latter preferably within the casing. The circuit *B* includes the local battery and the buzzer the springs *l* and *l'* forming terminals thereof, and the circuit being broken between them normally, a coin or token making the same when dropped between said terminals. The circuit *F* is the subscriber's line and includes normally, the spring *l'* and the terminal *M*, a shunt circuit *P* which includes the electro-magnet *O* being branched at the terminals *l* and *M*. The operation of the circuits and included instruments will be understood on a perusal of the description of the operation of the toll-station.

The operation of this device is as follows: The party wishing to use the toll-station, calls up the operator at the central office in the usual manner, giving the number desired and the number of the toll-station. The operator rings up the party called for, gets him and then tells the caller of same, and to put his coin in the slot, which by contacting with and being held between both springs *l* and *l'* closes the local circuit and sounds the bell or buzzer therein, which sound is transmitted to the operator who then drops the coin by sending a battery-current over the wires *F* and *P* energizing the magnet *O* and thus attracting the armature on the spring *l'* and releasing the coin allowing it to drop into the till below.

As the coin falls between the springs *l* and *l'* it separates them as before stated and thus brakes the contact of the spring *l* and the terminal *M*, thus cutting out the short circuit around the magnet *O*. As the coin is released the contact between said spring and terminal is made, and the coils of the electro-magnet are thus thrown out of the talking circuit, by short circuiting. The releasing of the coin from between the springs *l* and *l'* may be accomplished by depressing the outer end of the bell-crank lever *l³* which will bend back the spring *l* having the same effect as were the other spring bent back from the position shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

The combination of a subscriber's telephone outfit, a local circuit including a buzzer, a battery and retractible terminals, a guide-way leading a dropped coin to a position between said terminals and electro-magnet included in the subscriber's circuit acting to draw apart said terminals, and a short circuit around said electro-magnet including a circuit maker-and-breaker operated by connection with the movable one of the said retractible terminals so as to cut out said electro-magnet when the said terminals are separated, substantially as and for the purpose specified.

In testimony whereof I hereunto set my hand in presence of two subscribing witnesses.

WILLIAM THOMAS GENTRY.

Witnesses:

A. P. WOOD,
HORDIE KEITH.