

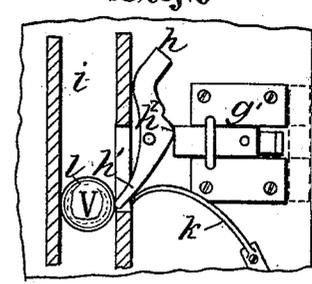
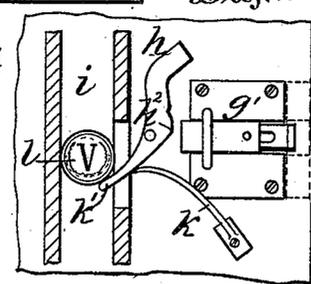
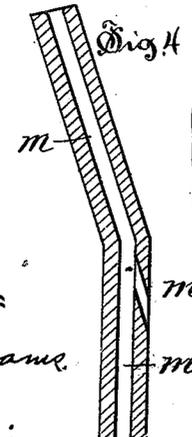
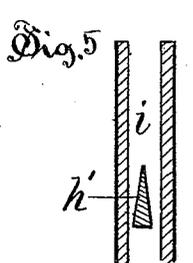
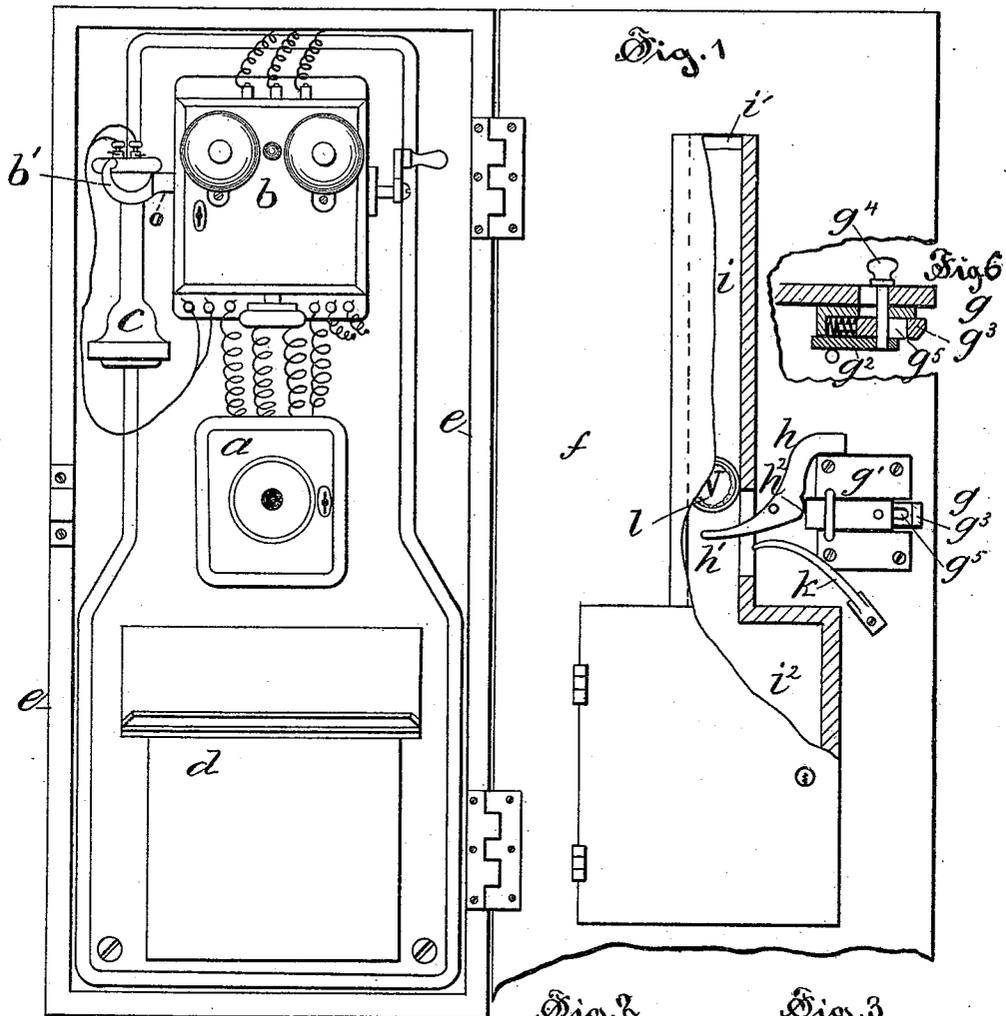
(No Model.)

W. GRAY.

TELEPHONE TOLL APPARATUS.

No. 448,024.

Patented Mar. 10, 1891.



Witnesses:  
 H. R. Williams  
 A. P. Jenkins.

Inventor,  
 William Gray  
 by Simonds & Burdett  
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# UNITED STATES PATENT OFFICE.

WILLIAM GRAY, OF HARTFORD, CONNECTICUT, ASSIGNOR OF ONE-HALF TO CHARLES SOBY, OF SAME PLACE.

## TELEPHONE-TOLL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 448,024, dated March 10, 1891.

Application filed April 5, 1888. Serial No. 269,771. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM GRAY, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Telephone-Toll Apparatus, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

My improvement relates to the apparatus used in communicating between more or less distant points by means of the telephone and connected devices; and the object of my invention is to enable public stations to be established and maintained without requiring the presence at each station of an operator or care-taker, and one that shall compel the payment of an established fee before the telephone can be used.

To this end my invention consists in the several parts of the apparatus and their combination, as more particularly hereinafter described, and pointed out in the claim.

Referring to the drawings, Figure 1 is a front view of a box embodying my invention, the door being shown as opened, and parts cut away to show construction of the lock and its related parts. Fig. 2 is a detail view of the lock and connected part. Fig. 3 is also a detail plan view of the lock, illustrating its method of operation. Fig. 4 is a detail section view through a coin-channel of peculiar construction. Fig. 5 is a detail view in cross-section through the channel and across the arm of the tumbler. Fig. 6 is a detail vertical section of the spring lock or bolt.

In the accompanying drawings, the letter *a* denotes a transmitter that may be of any one of the ordinary forms in common use; *b*, a magneto-bell; *b'*, the hook projecting therefrom; *c*, the telephone hanging on said hook, and *d* the box used to contain the cells of the local battery. These parts are all old and of ordinary and common construction and arrangement; but in order to put my invention into practice in connection therewith I make use of a box *e*, that may be of any convenient material, as of iron, cast to shape, this box being of a proper size and shape to inclose on its exposed sides the parts of the telephone service or apparatus above described. This box *e* is provided with a door *f*, hinged thereto and having on one edge a spring-latch *g*.

There may be several forms of locks or latches employed, but in each case the bolt *g'* of the lock or latch is, when locked, held against a backward movement to unlock it by a tumbler *h*, pivoted to the inner side of the door and having an arm *h'* projecting within the narrow channel *i* and obstructing the movement of an object therethrough. This channel *i* has an opening to the outside of the door, as *i'*, and at the lower end terminates in a cash-box *i''*, that is provided with a suitable lock. Considering five cents as the rate to be charged for the use of the instrument, the slot will be made of a suitable area in cross-section to receive the coin, and in its descent after being introduced such a coin will strike the arm *h'* of the tumbler, force it downward and tilt the other end of the tumbler out of the way, so that the bolt of the lock or latch may be withdrawn. In the form of latch shown the bolt *g'* is made up of a base-piece *g<sup>2</sup>* and the spring-latch *g<sup>3</sup>*, the button *g<sup>4</sup>*, by which the bolt is moved back from the outside of the door, being fast to the base-piece and extending through the slot *g<sup>5</sup>* in the spring-latch. The tumbler is supported on a pivot in the line of the bolt, so that a rounded shoulder *h<sup>2</sup>* is held by gravity normally in the path of movement of the bolt. A tumbler-spring *k* is secured in such position that it is held normally out of contact with the arm *h'* of the tumbler, but in its path of movement, so that after the coin *l* has by its weight tilted the tumbler into the position shown in Fig. 2, the spring holds the tumbler against farther movement and prevents the coin from falling into the receptacle until the bolt has been pushed back, as by means of the button, and has thus turned the tumbler into the position shown in Fig. 3 and allowed the coin to pass and unlock the door.

In order that the device may not be operated by means of a penny or coin of any other dimension than a five-cent piece, the arm *h'* of the tumbler that projects into the channel *i* is made triangular in cross-section, with the edge upward, the space between either side of the arm and the adjacent wall of the channel being enough to allow a thin coin to pass, but to prevent a five-cent piece from passing. The preferred form of channel is that shown in Fig. 4, where the channel *m* has a bend, below

which there is an outlet  $m'$  in line with the upper part of the channel, the bend being so arranged with reference to this outlet that a thin coin will slide directly through the outlet 5  $m'$ , while a five-cent piece will be caused to turn and follow through the part  $m^2$  and be brought into contact with the arm of the tumbler that projects into the channel.

I claim as my invention—

10 The combination of the box  $e$ , a door hinged thereto provided with a coin-slot, a lock having a sliding bolt, and a pivoted tumbler  $h$  to

engage the end of the bolt and hold it locked, and the other end of the tumbler projected into the coin-slot of the door and adapted to 15 be engaged by a passing coin, whereby the tumbler is disengaged from the end of the bolt, substantially as and for the purpose specified.

WILLIAM GRAY.

Witnesses:

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