(No Model.)

H. C. ROOT.

AUTOMATIC TOLL BOX FOR TELEPHONE PAY STATIONS.

No. 553,361. Patented Jan. 21, 1896.

FIG. 1.

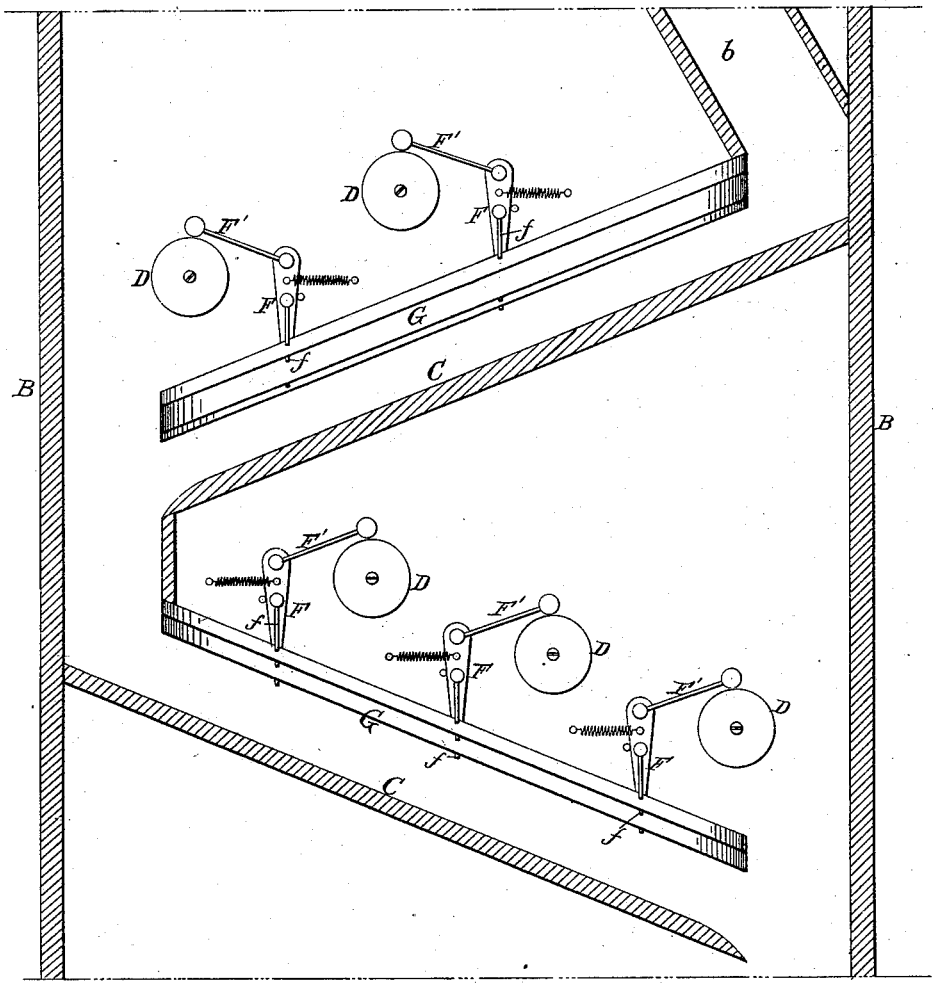
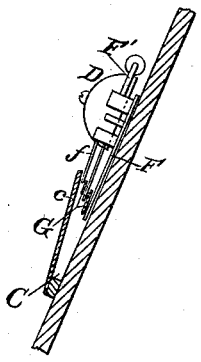


FIG. 2.



WITNESSES:
George Baumann
Edith J. Griswold

INVENTOR
Howard C. Root.
BY
Howson and Howson
his ATTORNEYS.

UNITED STATES PATENT OFFICE.

HOWARD C. ROOT, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO LOUIS H. AYRES, OF PHILADELPHIA, PENNSYLVANIA.

AUTOMATIC TOLL-BOX FOR TELEPHONE PAY-STATIONS.

SPECIFICATION forming part of Letters Patent No. 553,361, dated January 21, 1896.

Application filed March 22, 1894. Serial No. 504,681. (No model.)

To all whom it may concern:

Be it known that I, HOWARD C. ROOT, a citizen of the United States, and a resident of Brooklyn, Kings county, New York, have invented Improvements in Automatic Toll-Boxes for Telephone Pay-Stations, of which the following is a specification.

My invention relates to that class of automatic toll-boxes for telephone pay-stations in which audible signals automatically produced at the pay-stations by the toll-coins introduced are transmitted to the operator at the exchange through the medium of the telephonic transmitting-instrument at the pay-station.

The object of my invention is to so construct such an apparatus that all the different sizes of coins to be used for tolls may be introduced by the customer at one and the same slot, and that they will nevertheless automatically produce different signals, and this without the employment of electrical appliances within the toll-box.

In carrying out my present invention I prefer to make use of some of the features of my toll system for which I obtained Letters Patent No. 440,118, dated November 4, 1890, as hereinafter described, and as illustrated in the accompanying drawings.

In the drawings, Figure 1 is a vertical section through the toll-box. Fig. 2 is a vertical section through a part of the back board and showing one of the pivoted fingers hereinafter referred to.

As in the device of my above-mentioned patent, the toll-box has a single slot for the introduction of the coins, and a single inclined chute down which the coins may pass, and as a part of the mechanical signal-producing means I prefer to use a number of movable fingers having points arranged at different distances from the bottom of the said chute, so that different sizes of toll-coins passing through the one chute will strike a different number of fingers and so cause the transmission of different signals to the operator at the exchange.

In the drawings the toll-box B is provided with a slot *b* for the introduction of the toll-coins or other disk-like tokens, which for convenience may be referred to simply as "coins." Below this slot is the upper end of the chute or runway C, which in the present instance is illustrated as made in two sections of reversed inclines, but may be made up of a single continuous incline or any convenient number of sections arranged in any convenient way. The two sections are shown by way of example. To keep the coins on the runway as they pass down, a guard *c* is used, as shown in Fig. 2. This guard is omitted in Fig. 1 for clearer illustration of the other parts. Over this inclined chute I arrange a series of mechanical signal-producing devices with the parts of such devices to be struck by the different toll-coins arranged at different distances from the bottom of the chute, so that different-sized coins will strike or automatically operate a different number of signals in passing through this one chute.

As already explained I prefer to use as the parts to be struck by the coins pivoted fingers F substantially similar to those shown and described in my above-mentioned patent, but instead of constructing these fingers to control the making or breaking of an electric circuit I use them to mechanically operate audible signals. For this purpose each pivoted finger F is provided with a hammer F′ adapted to strike a bell, gong or other sound-producing device D.

As described in my above-mentioned patent, I prefer to combine with the fingers F guards G which are arranged over different contact-fingers at different heights from the bottom of the inclined chute, so that some of the larger coins will run over these guards, and thereby be prevented from coming into contact with the fingers intended to be struck by the smaller coins. I make some of these contact-fingers composite—that is, with two or three legs or points *f* lying under and over guards of different heights.

In the case illustrated five signal-producing devices are shown, and the box may be taken as adapted for use of five different coins, such as a five-cent piece, a ten-cent piece, a twenty-five-cent piece, a fifty-cent piece and a dollar. Each finger F is in the construction shown composite and has three points or legs *f*. The first finger has its legs

adapted to be struck by the ten-cent piece, the five-cent piece and the dollar. The second has points to be struck by the five-cent piece, the fifty-cent piece and the dollar. The third, fourth and fifth fingers have each three points, of which the lower one is adapted to be struck by a twenty-five-cent piece, the next by the fifty-cent piece and the uppermost by the dollar. With this arrangement a ten-cent piece passing through the chute will give one signal, a five-cent piece two signals, a twenty-five-cent piece three signals, and a fifty-cent piece four signals, while the dollar will cause all five signals to be struck.

Where the finger F is made composite, the legs or points *f*, instead of being arranged parallel with each other, are preferably inclined, as shown in Fig. 2, so that each of the several legs will be in the same plane with that coin which is to strike it as it runs through the chute.

I claim as my invention—

1. An automatic toll box for telephone pay stations, having a single slot and an inclined chute for the introduction and passage of various sizes of toll coins and a series of mechanical signal-producing devices combined with said chute and within the box, whereby the different sizes of toll coins in passing through the chute will operate different numbers of the signals, substantially as described.

2. An automatic toll box for telephone pay stations having an inclined chute and a series of pivoted fingers having points, adapted to be struck by the passing coins at different heights from the bottom of the chute, each pivoted finger carrying a hammer, and sound-producing devices within the box to be struck by the several hammers, substantially as described.

3. An automatic toll box for telephone pay stations having a chute for the passage of the coins and guards at different heights from the bottom of the chute and a composite finger having legs at different heights from the bottom of the chute, said legs being inclined with reference to each other, whereby each of the several legs will be in the same plane with that coin which is to strike, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HOWARD C. ROOT.

Witnesses:
EDITH J. GRISWOLD,
HUBERT HOWSON.