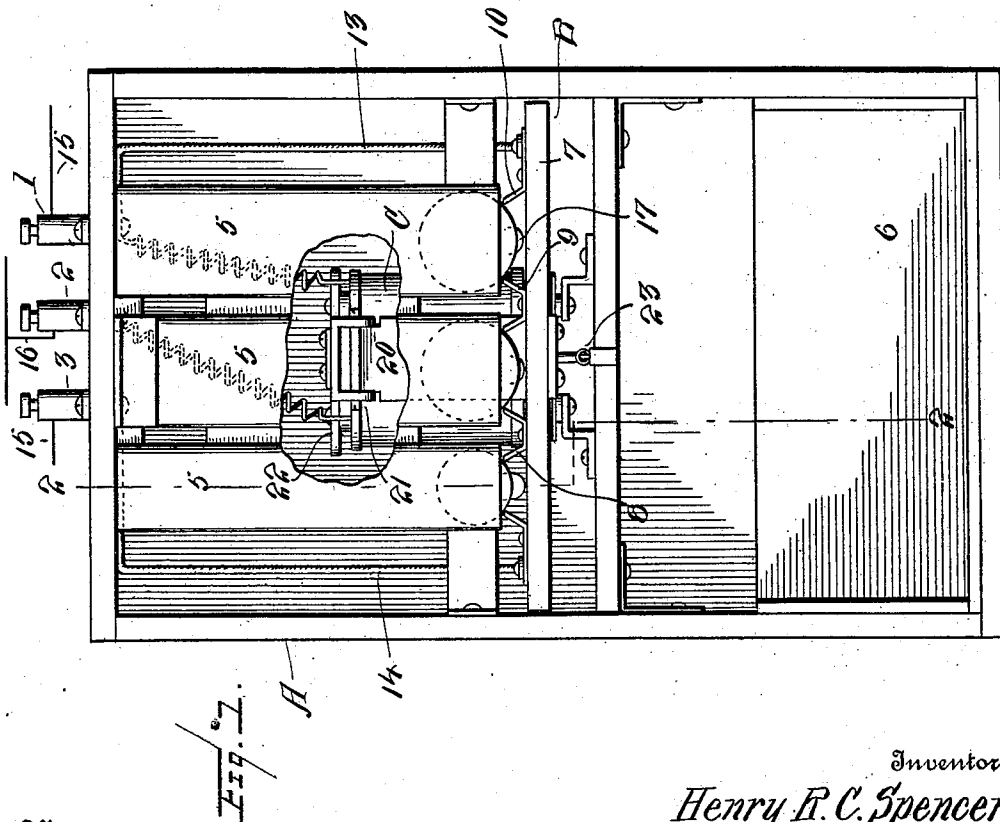
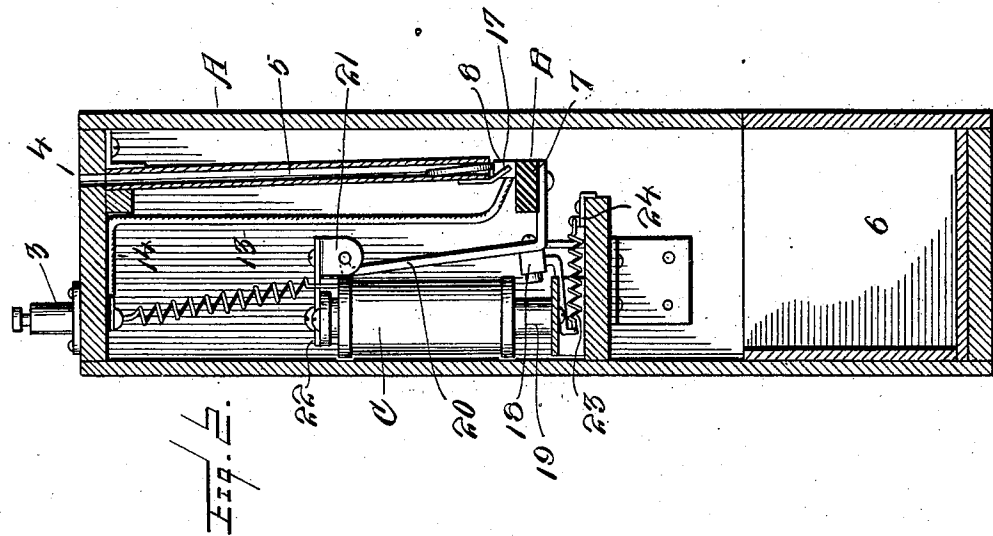


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 TELEPHONE RENT COLLECTING DEVICE.
 APPLICATION FILED JUNE 21, 1910.

980,690.

Patented Jan. 3, 1911.

2 SHEETS—SHEET 1.



Witness
 E. R. Ruffert
 Attorney

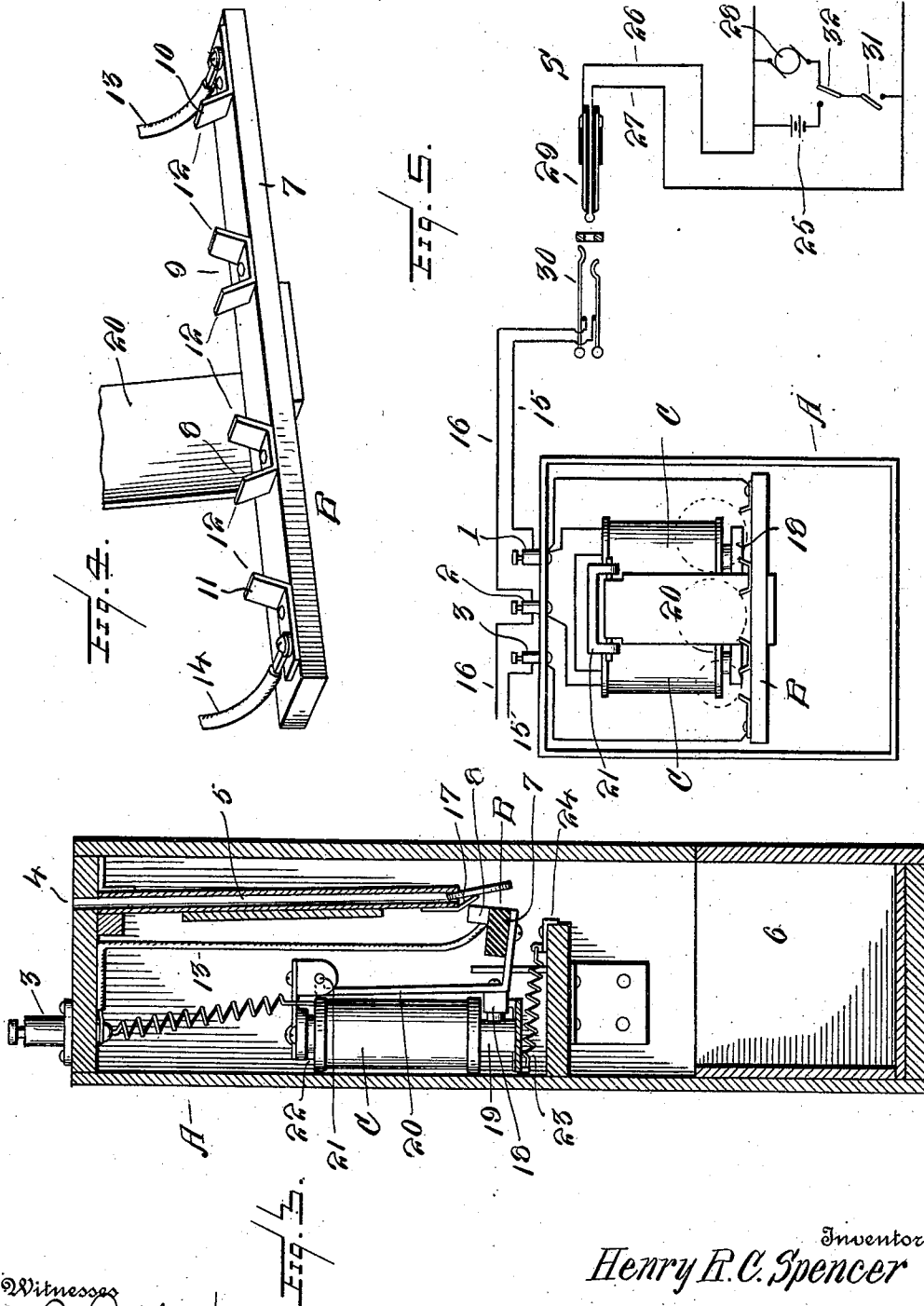
Inventor
 Henry R. C. Spencer
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UNITED STATES PATENT OFFICE.

HENRY R. C. SPENCER, OF GRANVILLE, NEW YORK.

TELEPHONE-RENT-COLLECTING DEVICE.

980,690.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Application filed June 21, 1910. Serial No. 568,139.

To all whom it may concern:

Be it known that I, HENRY R. C. SPENCER, a citizen of the United States, residing at Granville, in the county of Washington and State of New York, have invented new and useful Improvements in Telephone-Rent-Collecting Devices, of which the following is a specification.

This invention relates to telephone attachments whereby the subscribers are required at the end of each rent period to deposit into the attachments the predetermined rent charge in order to cut the telephones into service until the rent periods have expired, when the exchange operator again automatically cuts the telephones out of use to make it necessary for the subscribers to deposit the rent charge for the ensuing month.

The invention has for one of its objects to improve and simplify the construction and operation of apparatus of this character so as to be reliable and efficient in use, comparatively simple and inexpensive to manufacture, and capable of being attached to any ordinary telephone system.

Another object of the invention is the provision of means for holding the necessary coins that aggregate the rent charge for a given period in such a manner that the circuit will be completed through the coins to render the subscriber's telephone serviceable, and by novel means, the coins can be simultaneously discharged by means under the control of the central exchange operator so as to open the circuit at the end of a rent period.

With these objects in view and others, as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawing, which illustrates one embodiment of the invention, Figure 1 is a front elevation of the attachment, the door or front of the casing being removed. Fig. 2 is a vertical section on line 2-2, Fig. 1. Fig. 3 is a similar view showing the coins released to open-circuit the telephone. Fig. 4 is a perspective view of the coin holder. Fig. 5 is a diagrammatic view showing the circuit connections.

Similar reference characters are employed to designate corresponding parts throughout the views.

Referring to the drawing, A designates the casing of the device which may be a structure separate from the telephone set or it may be a part thereof, and on this casing are binding posts 1, 2 and 3, for connecting the prepayment rental attachment in the subscriber's telephone circuit. In the top of the box are coin slots 4, and extending downwardly from each slot is a coin chute 5 that terminates about midway of the casing, and under the coin chutes is a money drawer or other receptacle 6 which can be removed at stated intervals by the collector for the telephone company. These coin slots 4 are proportioned to receive coins of certain denominations and any other coins deposited in the slots will fail to close the circuit. In the present instance, the coin chutes are made to receive a rent charge of a dollar and a quarter, two of the chutes being of proper size to receive a half dollar each and the third a quarter dollar. Obviously, if the rent charge is a dollar and a half, three half dollar chutes, or two half and two quarter dollar chutes, or one dollar and one half dollar chutes, may be employed. It will thus be seen that various combinations of chutes may be used, according to the rent to be charged. At the bottom of the chutes is a coin holder B which serves to retain the coins during the continuation of a rent period and cause the coins to form part of the ringing and talking circuits of the telephone. This holder consists of a movable bar 7 of insulation that extends horizontally under all the lower open ends of the chutes, and on the top of this bar are V-shaped spring contacts 8 and 9 that are disposed between the chutes. At the ends of the bar are spring contacts 10 and 11 which extend under the outer chutes. By this arrangement of contacts, there will be two metal seats 12 under each chute, and the coins will normally rest on these seats, while the major portion of each coin will be disposed in its respective chute. In other words, the coins merely rest on the holder B, of which the spring contacts form parts. The outermost contacts 10 and 11 are connected by wires 13 and 14, respectively, with the binding posts 1 and 3 at a point inside the box, and these binding posts are connected with one side 15 of the telephone circuit extending from the central exchange to the subscriber's telephone set. The other line 16 of the telephone circuit is connected

with the central binding post 2 for the purpose later to be described. At the lower end of each chute and supported thereon is an inclined deflecting finger 17 which causes the coins to drop off the holder more readily when the latter is moved. The current, when the telephone is in use, passes in series through the coins and springs that form the coin seats, and unless all the coins necessary to constitute a rent charge are deposited, the circuit will not be completed.

The holder is under the control of the central exchange operator so that at the end of a rent period, she can actuate the holder so as to permit the coins to drop into the coin box and thereby open-circuit the telephone until the subscriber deposits the coins to pay for the use of the phone for the next month or rent period. For this purpose, an electro-magnet C is mounted in the casing behind the coin chutes and the coils of this electro-magnet are connected with the binding posts 1 and 2 at a point within the box, so that the electro-magnets will be shunted across the telephone circuit. The armature 18 is mounted in coöperative relation with the pole pieces 19 at the bottom of the electro-magnet and serves to draw the holder rearwardly from under the coin chutes. The holder B is mounted on a bracket 20 which is fulcrumed at 21 on the upper end of the frame 22 of the electro-magnet, and the armature is rigidly secured to this bracket or swinging arm 20 at a point behind the coin holder B. The armature moves in opposition to a spring 23 that has one end connected with the armature and the other end anchored at 24 upon a suitable part of the casing, the said spring also serving to hold the money holder under the coin chutes, or in closed-circuit position. This money holder constitutes, in practice, a circuit breaker, because as soon as it is attracted by the electro-magnet, the coins are forced off the contacts and the circuit is thereby broken.

At the central exchange station S, Fig. 5, is provided a source of continuous current such as a battery 25 that is connected with the two sides of wires 26 and 27 of the cord circuit, and also connected with these two sides of the cord circuit is a source of alternating current 28 which is used for ringing purposes. The plug 29 of the cord circuit is inserted in the subscriber's jack 30 in the switchboard, and it is merely necessary to press the ringing key 31 when a subscriber is to be called up. When the end of the rent period has arrived, the operator will switch into the circuit the battery 25 by a switch 32 and current will now flow, when the ringing key is pressed, from the central exchange station through the wire 15, electro-magnet C, and line wire 16. This continuous current will cause the elec-

tro-magnet to be energized so that it will attract its armature and cause the coins to drop off the holder B and thus cut the subscriber's telephone out of use. The alternating current for ringing will not have any effect on the electro-magnet in the prepayment attachment, so that the circuit through the coins will be kept closed throughout the rent period.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described the invention, what I claim is:—

1. A rent prepayment device for telephones comprising a plurality of coin chutes, a holder arranged in coöperative relation with the chutes for connecting the coins constituting a rent charge in series with the telephone circuit, means for moving the holder from under the chutes to cause the coins to drop off the holder and open-circuit the telephone.
2. A rent prepayment attachment for telephones comprising a plurality of coin chutes, a holder mounted under the chutes for retaining coins in the lower ends of the latter, said holder including contacts arranged in pairs to engage the coins and close the telephone through the latter, fingers depending from the lower ends of the chutes for forcing the coins off the holder when the latter is moved, and means under the control of the central exchange operator to actuate the holder to deposit the coins and open the telephone circuit.
3. A rent prepayment attachment for telephones comprising a coin chute, a laterally and bodily movable insulating holder disposed under the chute and including spaced contacts on which a coin rests while partially protruding from the lower end of the chute, means for connecting the contacts with one line of a telephone circuit, electrical means for moving the holder to drop the coin and open the telephone circuit, and means for energizing the said actuating means by current from the central exchange station.
4. A rent prepayment telephone attachment comprising a plurality of coin chutes open at their lower ends, a bar of insulation extending normally under the chutes, a pair of spaced contacts under each chute, the con-

tacts under the adjacent chutes being electrically connected, means for connecting the outermost contacts with one side of the telephone circuit to cause the circuit to be completed through the coins resting on the contacts, and an electro-magnet connected across the telephone circuit and operatively connected with the said bar to actuate the same for dropping the coins and opening the telephone circuit.

5. A rent prepayment telephone attachment comprising a plurality of coin chutes open at their ends, a bar of insulation extending normally under the chutes, a pair of spaced contacts under each chute, the contacts under the adjacent chutes being electrically connected, means for connecting the outermost contacts with one side of the telephone circuit to cause the circuit to be completed through the coins resting on the contacts, an electro-magnet connected across the telephone circuit and operatively connected with the said bar to actuate the same for dropping the coins and opening the telephone circuit, and depending fingers on the lower ends of the chutes for dislodging the coins from the contacts when the bar is actuated.

6. A rent prepayment attachment for telephones comprising coin chutes, a coin holder disposed under the chutes and including means for conducting current successively through the coins and rendering the coins a part of the telephone circuit, an electro-magnet, a swinging arm for supporting the said holder, an armature on the arm, a spring for opposing the movement of the armature and maintaining the holder normally under the

chutes, means for connecting the electro-magnets across the telephone circuit, means for sending a ringing current through the telephone circuit, and independent means for sending a current through the circuit to energize the said electro-magnet.

7. The combination of a telephone circuit, a prepayment attachment connected with one wire of the circuit and including means for completing the circuit through a number of coins arranged in series, and means under the control of the central exchange operator for sending a current through the telephone circuit independently of the telephone for removing the coins from closed-circuit position.

8. A rent prepayment attachment for telephones comprising a plurality of chutes, an insulating bar extending under the chutes and disposed horizontally, V-shaped contacts disposed under the chutes, terminal contacts mounted on the bar to extend under the outermost chutes, the said contacts co-operating to form under each chute a pair of spaced coin seats, means for connecting the terminal contacts with one side of a telephone circuit whereby the circuit is completed through the coins in series, and electrical means under the control of the exchange operator to remove the coins from the contacts.

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

HENRY R. C. SPENCER.

Witnesses:

SILAS E. EVERT,
M. W. HICKS.