

C. A. ANDERSON.
 PAY STATION BOX FOR TELEPHONES.
 APPLICATION FILED OCT. 5, 1908.

948,753.

Patented Feb. 8, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

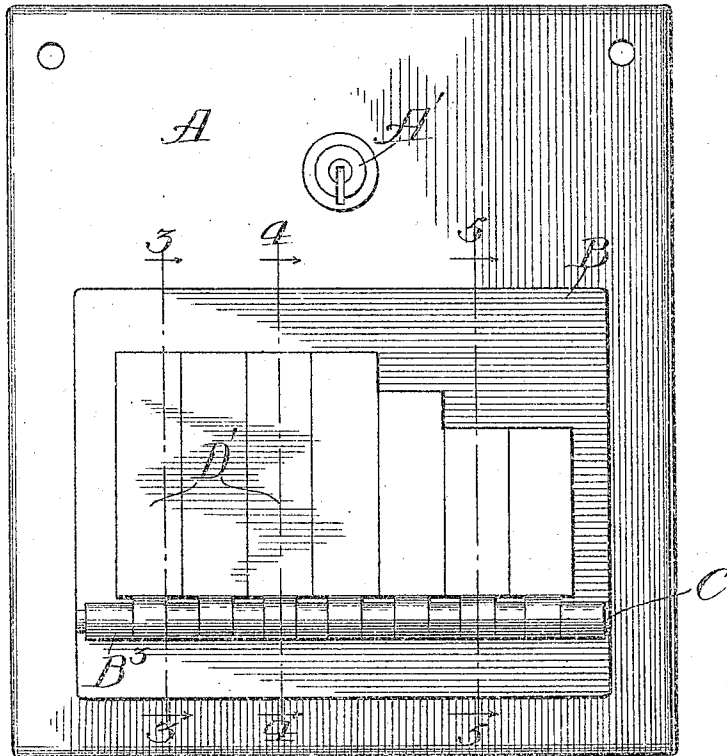
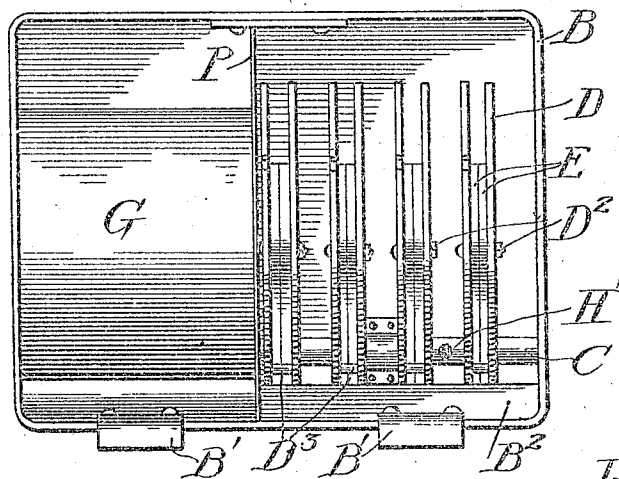


Fig. 2.



Witnesses

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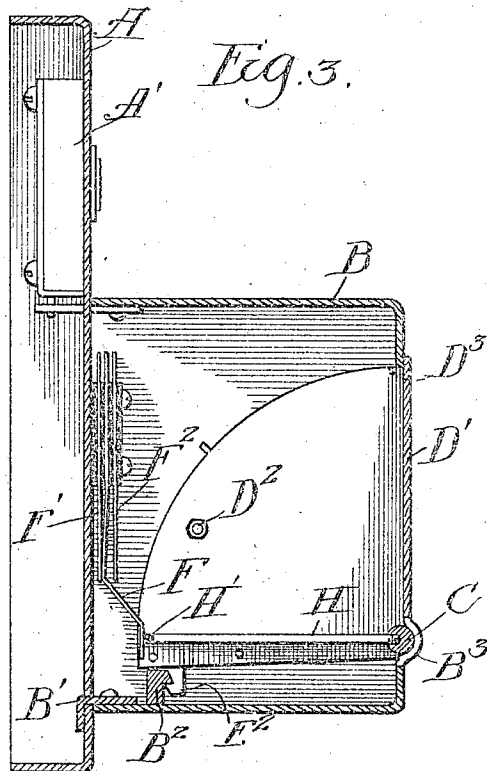


Fig. 3.

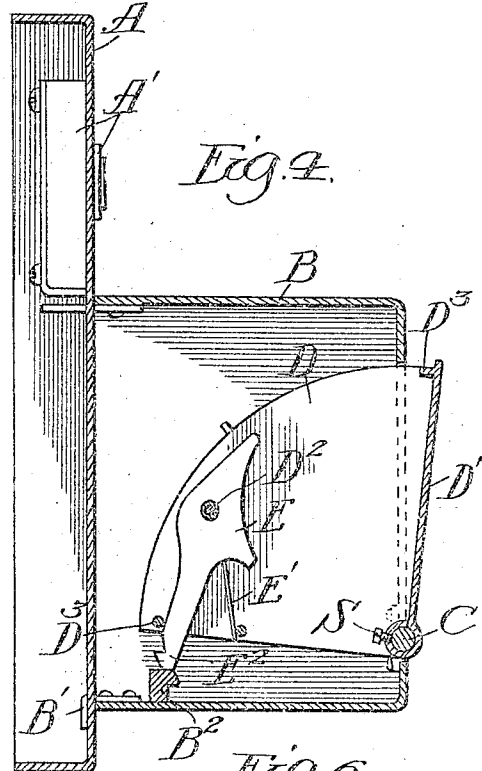


Fig. 4.

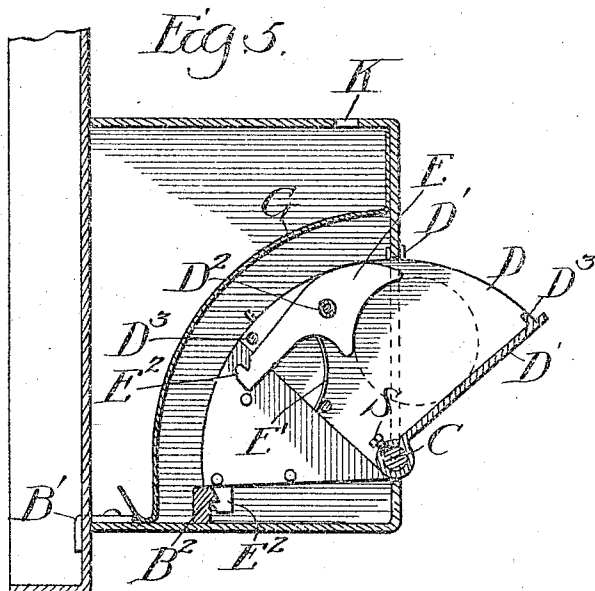


Fig. 5.

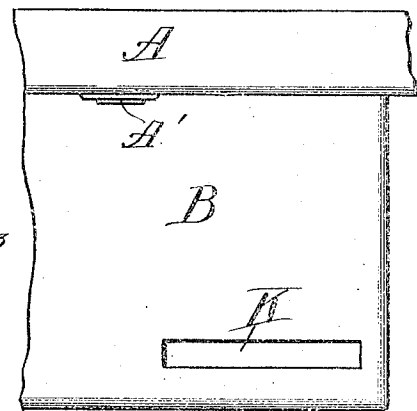


Fig. 6.

Witnesses
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UNITED STATES PATENT OFFICE.

CLARENCE A. ANDERSON, OF SALINA, KANSAS.

PAY-STATION BOX FOR TELEPHONES.

948,753.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed October 5, 1908. Serial No. 456,151.

To all whom it may concern:

Be it known that I, CLARENCE A. ANDERSON, a citizen of the United States of America, and a resident of Salina, county of Saline, and State of Kansas, have invented certain new and useful Improvements in Pay-Station Boxes for Telephones, of which the following is a specification.

My invention relates to pay station boxes for telephones, and has for its object the construction of an improved form of box for receiving prepayment of telephone charge for a period of time.

In the accompanying drawings: Figure 1 is a front elevation of the box; Fig. 2 is a rear elevation with the back plate removed to show the interior; Fig. 3 is a section on line 3—3 of Fig. 1 showing a coin receptacle closed; Fig. 4 is a similar section on lines 4—4 of Fig. 1 showing a coin receptacle not closable when no coin is in it; Fig. 5 is a similar section on lines 5—5 of Fig. 1 showing how a coin in a receptacle makes it possible to close it; and Fig. 6 is a partial plan of the top of the box showing an opening through which the subscriber may deposit money of any kind to meet the next payment due.

In the said drawings A is a back plate which may be secured by screws to the wall or any convenient place, and B is a box secured to said plate by lugs B¹ which pass through suitable openings in the plate A, and by a lock A¹. Fig. 3 shows the bolt of the lock thrown so as to secure the box in place, and Fig. 4 shows the bolt withdrawn so that the box may be removed.

The front lower part of the box B is slightly bulged outward as shown at B³, and inside of this bulge is a shaft C which runs across the entire width of the box. At intervals in the front of the box are cut slots which expose parts of the shaft C, and on the thus exposed portions of the shaft are pivoted or secured a plurality of quadrant-shaped coin receptacles D. The front faces of the receptacles D consist of plates D¹ which are secured to the quadrants D and are long enough and wide enough to completely cover the slots in the box B for said quadrant-shaped receptacles.

Each receptacle D consists of two quadrant-shaped metal plates secured together by the front plate D¹, the quadrant-shaped plates being spaced a sufficient distance apart to admit the easy insertion of a coin,

but less than a distance equal to twice the thickness of the coin to be inserted. The coin is inserted in the upper or curved face of the receptacle D when said receptacle is in the position shown in Fig. 5.

A bolt D² passes through each receptacle D, and pivoted on said bolt, between the plates which form the side walls of said receptacle, are preferably two or more catch levers E, which are controlled jointly by an inserted coin and by springs E¹. When a receptacle is open, that is, when it is moved outward on its pivot C, and there is no coin in the receptacle, the spring E¹ normally holds the catch levers E against a pin D³ in the plates which form said receptacle D. This position is shown in Fig. 4. When a coin is inserted the levers are pushed back as shown in Fig. 5.

The lower end of each lever E is provided with a bevel-faced catch E², and secured in the lower part of the box B is a corresponding bevel-faced catch B². When no coin is in the receptacle D the lower ends E² of the levers E strike on top of the stationary catch B² and the receptacle cannot be closed. When a coin of the proper size is in the receptacle the levers E are pushed over so that the bevels on the lower end come opposite the bevel on the edge of B². In this position the receptacle D may be closed and the catch E² will come under the catch B² as shown in Figs. 3 and 5. When these catches engage each other in this way, the receptacle D cannot be opened from the outside of the box for the removal of the inserted coin. By opening the box, however, and inserting a tool to push the two levers E back so as to release the catch E² the receptacle may be opened and the coin removed.

As far as the operation of the device is concerned, one lever E in each receptacle D is sufficient, but by making two or more such levers in each receptacle the difficulty of operating the device by a wire is greatly increased, in fact, made practically impossible. Thus, by having two levers E in each receptacle, both of which have catches E² and each of which has its own spring E¹, no wire inserted into the receptacle can simultaneously operate both levers E unless the wire is of a diameter greater than half of the space between the quadrant-shaped plates which form the walls of the receptacle D. Any wire as large as this would not permit the receptacle to be closed, and closure of the

receptacle is a prerequisite to the operation of the device as will be hereinafter set forth. As a further guard against the use of a small wire with a heavy end, or a wire fastened to a coin for the purpose of withdrawing the coin after telephonic connections have been made, a part D^3 of the receptacle D passes inside of the box B when the receptacle is closed and acts as a shear to cut off any such wire or a string.

Insulatingly supported on the plate A is a contact spring F located between two other contact springs F^1 and F^2 . These springs are connected to the wires running from the central office to the local station in such a way that when F is in contact with F^1 telephonic connection between the office and the station is possible, but when F engages F^2 such telephonic connection is impossible. The normal tension of F is to hold it in contact with F^2 and away from F^1 .

Secured to the shaft C is an arm H having a piece of insulation H^1 on its end adapted to engage the spring F and force it against the spring F^1 and away from F^2 . This occurs when the shaft C is in a certain fixed position, but when the shaft is moved from that position the spring F is released and engages F^2 . Each receptacle D is provided with a set screw S or other means by which it may be also secured to the shaft. If, with the arm H in the position shown in Fig. 3, a receptacle D be also secured to the shaft C in the position shown in said figure, then if the catches E^2 and B^2 be released so that the receptacle may turn on its pivot, such a movement of the receptacle will cause a corresponding movement of the arm H and the contact F will be released from the contact F^1 . Also, if no coin is in the receptacle, the stoppage of E^2 on top of B^2 , as shown in Fig. 4, will prevent the arm H from moving far enough to close connection between F and F^1 .

The device shown in Fig. 1 is illustrated as being of a capacity for the prepayments of five dollars or less for a stated period, as for one month. The four large receptacles are each for silver dollars as the proper size of coin. The next one is for a half-dollar, and the two at the right are for twenty-five cent pieces. If the prepayment sum is two dollars for one month in advance, two large receptacles may be used, or one large one and the three smaller ones. If the prepayment is five dollars then all receptacles are used, but for sums less than five dollars the arrangement is preferably to use as many of the receptacles as possible in making up the required sum. The reason for using as many receptacles as possible in making up the required payment is to increase the difficulty of operating the device with anything other than the required coins. This will be apparent by a little consideration. In the

previous description, one receptacle was described as being secured to the shaft C in such a way that the two arms E within the receptacle D must be moved by a coin or its equivalent so that the bevel on E^2 can slide down the bevel on B^2 before the arm H can close the connection between F and F^1 . If now a second receptacle be secured to the shaft C in the same way, a coin must be placed in each of the receptacles so that the arms E in both receptacles may be moved to permit the shaft to be moved to a position in which the arm H will close F and F^1 . If three or four receptacles be secured to the shaft then coins must be placed in all that are so secured; otherwise, the one in which no coin is placed will have the end E^2 striking on B^2 , as shown in Fig. 4, and this will prevent the closing of telephonic connections at F^1 . Any receptacle not secured to the shaft may be left in a locked position without affecting the operation of the device as the shaft C may turn freely in the bearing in such receptacle. Inside of the box over the smaller of the receptacles is guard plate G and partition P (Figs. 2 and 5) which provide a separate interior chamber. In the top of the box B over this chamber is a slot K through which money may be placed in the chamber for the next prepayment.

The operation of the device is as follows: Assuming that the subscriber has to pay the flat rate of four dollars per month, three of the large receptacles and the three smaller receptacles are secured firmly to the shaft in the manner described. The remaining large receptacle is left loose on the shaft. With the box B removed from the plate A, the employee who is installing the apparatus pushes back all of the catches E^2 so that they clear the catch B^2 and permit the six receptacles into which coins are to be placed to be opened. For this purpose the employee has a special tool spaced to match the spacing of the receptacles, otherwise he would have extreme difficulty in simultaneously releasing all of the catches E^2 which belong to the receptacles fast to the shaft. The opening of the receptacles secured to the shaft moves the arm H away from the contact spring F and opens the telephonic connection of the station. The box B is then placed on the plate A and locked in position. Either before or after this the station wires are connected in the proper manner to the contact springs and the plate A secured permanently by screws and proper seals to the wall. Before the subscriber can use his telephone he must close these receptacles, and as they are all fast to the shaft he must close all of them at once. To close them he must simultaneously manipulate all of the twelve levers E with their catches E^2 , and the only way of doing that is to insert in the several receptacles the

proper sizes of coins or their equivalents in slugs. At the end of the month the collector either removes the coins from the receptacles and leaves them open, or collects the next month's payment in advance from the subscriber in other money. Ordinarily it will be the latter which will be done as the subscriber cannot use the telephone again until the required coins are in their receptacles, and the particular change may not always be on hand. In cases of this kind the same coins will remain in the receptacles continuously from month to month. In case the subscriber is liable to be away when the collector calls he may push the next month's payment through the slot K into the side chamber. The collector opening the box and finding the money in this chamber simply removes it, leaving the original coins in their receptacles. Upon failing to receive the money in any other way he takes it from the receptacles and leaves them open, the consequence of which, is that telephonic connections to the station are cut off until they are filled again.

A box made in this way has a certain analogy to combination locks in that it has a combination of devices which must be simultaneously operated by a plurality of coins to permit the telephonic connections of the station to be established, and requires a suitable instrument or key to release these combination devices so that the coins may be removed. The coins, which serve as the key for permitting the telephonic connections to be closed, are inserted from the outside by the subscriber. The key or instrument for releasing the combination is inserted from the inside after the box has been opened by an ordinary key in the ordinary manner. The coins are therefore doubly locked against unauthorized removal, the second lock being a special one requiring a special key to release the combination.

What I claim is:

1. In a pay station box, a plurality of receptacles each adapted to receive a coin of a specific size when the receptacle is open, devices connected with each receptacle for preventing the closure of the receptacle, said devices each being operated by a coin of the proper size to permit such closure, a circuit closing device arranged to be operated upon the closure of said receptacles, and interconnections for the receptacles so arranged that no one of said receptacles can be closed until coins of the proper size are placed in all receptacles so interconnected.

2. In a pay station box, a receptacle adapted to receive a coin of a specific size when said receptacle is open, devices normally acting to prevent a closure of the receptacle but movable by a coin placed within the receptacle so as to permit the closure thereof, locking devices for prevent-

ing the reopening from the exterior of the box of the receptacle when once closed, and an electrical connection arranged to be closed when the receptacle is closed and open when the receptacle is open.

3. The combination with a station box, of a coin receptacle arranged to be opened and closed, an electrical connection operated by the movement of the receptacle and arranged to be open or closed to correspond with the open or closed condition of the receptacle, and devices normally acting to prevent the receptacle from being closed when open and from being opened when closed, said devices being so arranged that a coin of the proper size placed in the receptacle when open will permit its closure but will not permit its reopening.

4. In a pay station box, a coin receptacle arranged to be opened and closed, an electrical connection, the open or closed condition of which is determined by the open or closed condition of the receptacle, a device normally acting to prevent an open receptacle from being closed, said device being moved by a coin of the proper size to permit such closure when the coin is in the receptacle, and means for locking the receptacle when closed.

5. In a pay station box, a receptacle arranged to be opened and closed and adapted to receive a coin when in an open condition, a device for preventing the closure of the receptacle but operated upon by a coin of the proper size when in said receptacle to permit such closure, means by which upon closing the receptacle communication between the interior of the receptacle and the exterior of the box is cut off before the receptacle is completely closed, and automatic means for locking the receptacle in a closed condition.

6. In a pay station box, a coin receptacle arranged to be opened and closed, and a plurality of devices each independently operable to prevent the closure of the receptacle, but all arranged to be simultaneously moved by a coin within the receptacle so as to permit such closure.

7. In a pay station box, a coin receptacle arranged to be opened and closed, a plurality of devices each independently operable to prevent the closure of the receptacle, but all simultaneously movable by a coin within the receptacle to permit such closure, and automatically operating means for locking the receptacle when closed.

8. In a pay station box, a plurality of coin receptacles arranged to be opened and closed, devices associated with each receptacle for preventing its closure, the devices of each receptacle being independently operable by a coin of proper size therein to permit the closure of the receptacle containing such coin, and an open contact closing de-

vice connected to all of said receptacles so as to be operable to close a contact only when all of said receptacles are closed.

9. In a box of the character described, a circuit closing device, a plurality of coin receptacles each of which may be independently connected to said circuit closing device so that so many as are connected thereto move therewith while so many as are not connected therewith are independent thereof, and independent coin operated devices associated with each receptacle for preventing its closure until a coin of the proper size is placed therein.

10. In a pay station box arranged to be set for the prepayment of any required sum by means of two or more coins, a circuit closing device, a plurality of receptacles each arranged to receive a coin of specific size when open and each independently connectible to said circuit closing device so as to move therewith, and an independent coin operated device associated with each receptacle and so arranged as to prevent the closure of the receptacle until the proper coin is placed therein.

11. In a pay station box arranged to be set for the prepayment of any required sum by the means of two or more coins, a plurality of receptacles, one for each of the coins required, a circuit closing device, and automatically operating means by which the circuit closing device is maintained in an open condition until the coins representing the sum for which the box is set are all placed in the proper receptacles.

12. In a pay station box arranged to be set for the prepayment of any required sum by means of two or more coins, a plurality of receptacles, one for each of the coins required, a circuit closing device, automatically operating means by which the circuit closing device is kept open until the required coins are placed in the proper receptacles, and automatically operating means for preventing the removal of the coins from the outside of the box after the contact closing device has been closed.

13. In a prepayment station box, a plurality of pivoted coin receptacles provided with devices by which they may be secured so that they can move upon their pivots only simultaneously, an electrical connection

closed by the closure of the receptacles so secured, and independent stopping devices for each receptacle for normally preventing the closure of the receptacle with which it is associated, said stopping devices being movable out of normal stopping by coins resting within the receptacles.

14. In a station box, a contact closing device, a plurality of receptacles arranged to be opened and closed and to control the contact closing device, each receptacle being adapted to receive a coin of specific size, means for preventing the closure of the receptacles until the proper coins are placed therein, and locking devices for holding the receptacles in closed position.

15. In a station box, a plurality of coin receptacles, a contact closing device controlled by the closure of the receptacles, stops for preventing the closure of the receptacles until the proper coins are placed therein, and locking devices for holding the receptacles in a closed position.

16. In a station box, a plurality of coin receptacles connected together so as to be opened and closed simultaneously, coins being insertible in and removable from said receptacles only when open, stopping devices for preventing the closure of any one receptacle until the proper coins are in all of them, independent locking devices for each of said receptacles for holding it in closed position, and means by which said locking devices are released only by a simultaneous manipulation of all of them.

17. A shaft, a series of coin receptacles secured to the shaft, contact devices, an arm secured to said shaft and arranged to close said contact devices when the shaft is turned so as to close said receptacles, independent coin operated devices in each receptacle, each such device independently operating to prevent the closure of its receptacle until the proper coin is placed therein, and catches for holding the receptacles in a fixed position when closed.

Signed at McPherson, Kans., this 30th day of September, 1908.

CLARENCE A. ANDERSON.

Witnesses:

C. E. CARLSON,
M. W. CARLSON.