

No. 862,334.

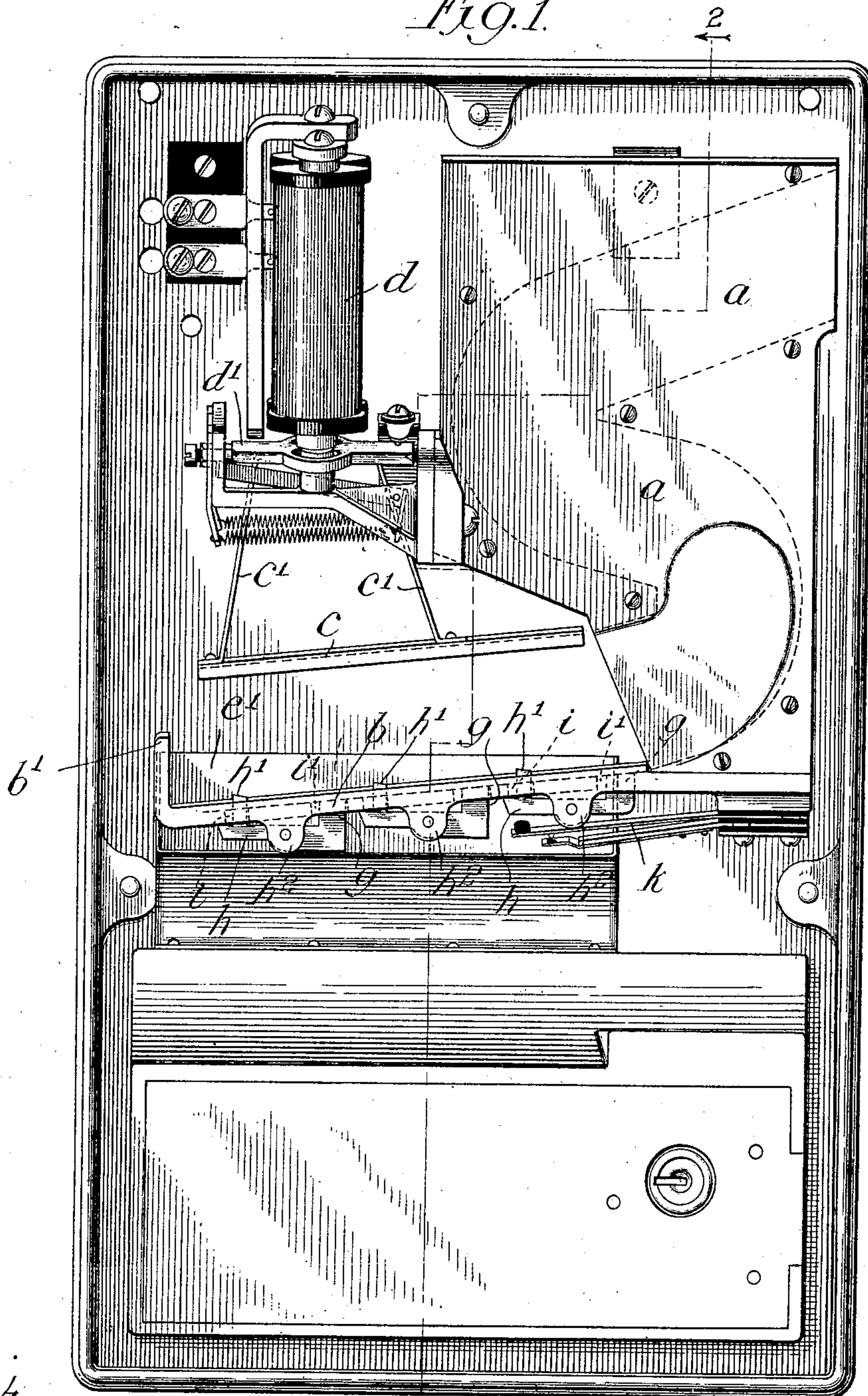
PATENTED AUG. 6, 1907.

H. B. HOLMES & E. B. CRAFT.
COIN COLLECTOR.

APPLICATION FILED FEB. 13, 1906.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
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Fred. C. Dawson

Inventors
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By Rastou & Munet, Attys.

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2 SHEETS—SHEET 2.

Fig. 2

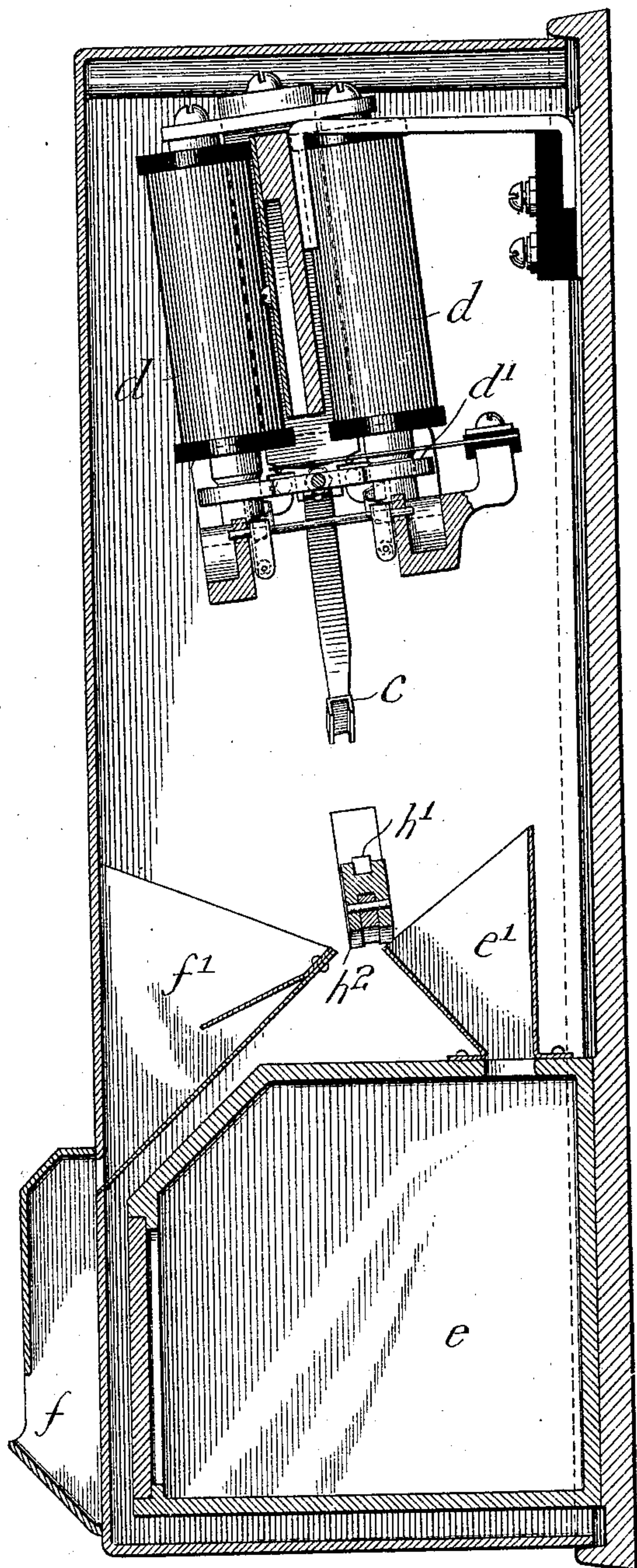
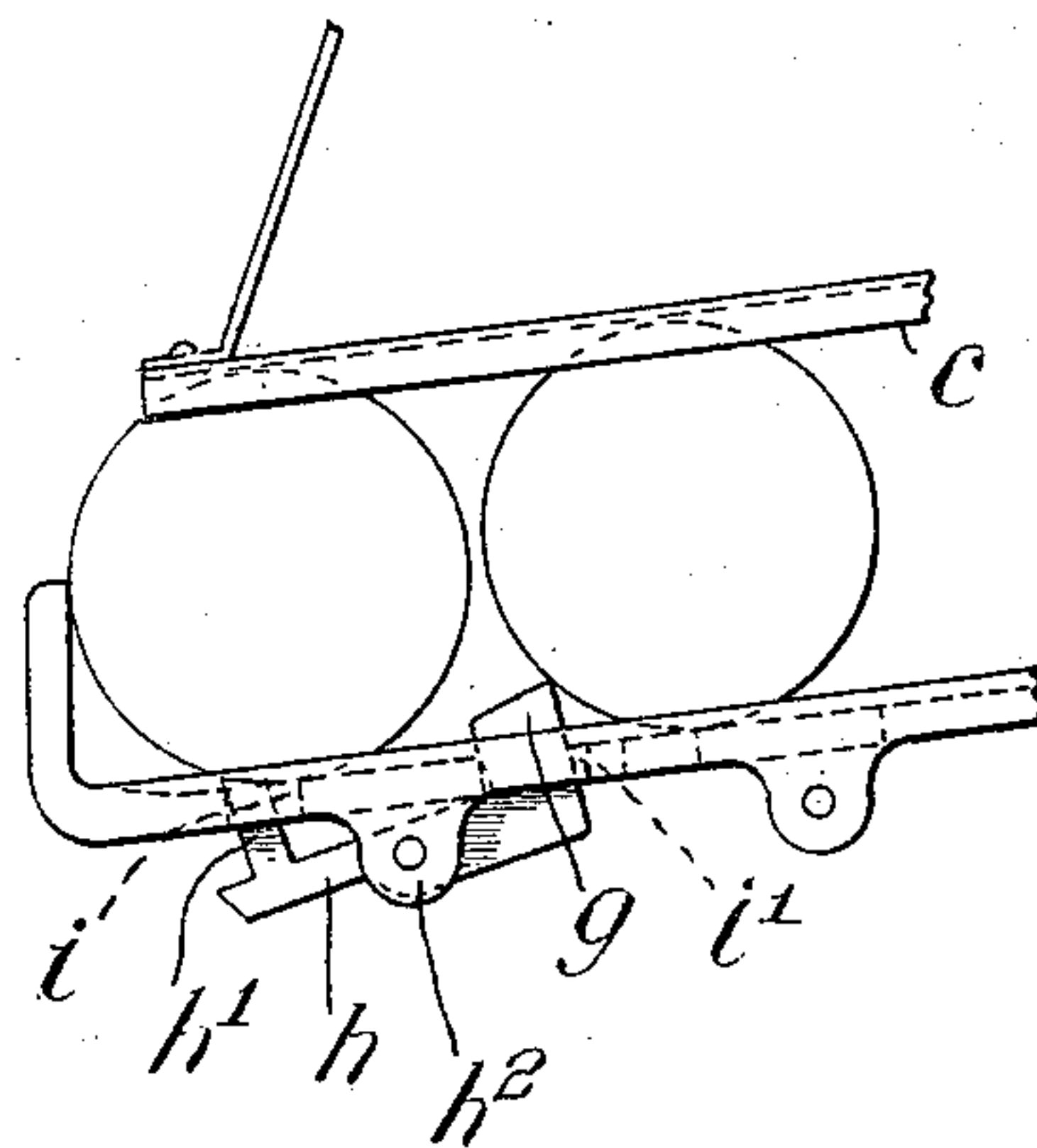


Fig. 3



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UNITED STATES PATENT OFFICE.

HOWARD B. HOLMES, OF PARK RIDGE, AND EDWARD B. CRAFT, OF CHICAGO, ILLINOIS,
ASSIGNORS TO WESTERN ELECTRIC COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

COIN-COLLECTOR.

No. 862,334.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed February 13, 1906. Serial No. 300,934.

To all whom it may concern:

Be it known that we, HOWARD B. HOLMES and EDWARD B. CRAFT, citizens of the United States, residing at Park Ridge and Chicago, respectively, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Coin-Collectors, of which the following is a full, clear, concise, and exact description.

Our invention relates to a toll box for telephone pay stations, and has for its object to provide an improved device capable of use where the deposit of one or more coins is required of a subscriber in order to obtain a desired connection.

Generally speaking, our invention contemplates a toll box comprising a coin chute adapted to deliver a coin upon a guide rail, the top of the coin being held by a grooved arm which is adapted to be operated by electromagnetic mechanism to throw such coin into a cash box or refund tray, as desired, said receptacles being located on opposite sides of the rail, the coin while on said rail operating the usual signal contacts.

Where a plurality of coins of a predetermined size are required from a calling subscriber, the rail and arm are arranged to simultaneously support said coins end to end. One or more of said coins may close contacts when in their resting positions, and said arm when operated is adapted to simultaneously discharge the coins on said rail into either of said receptacles according to its direction of movement.

The rail and arm are arranged to hold coins of a predetermined size, and the coin chute and rail are inclined toward the refund tray, so that coins of less than the predetermined size will be automatically discharged into said refund tray.

We will describe our invention by reference to the accompanying drawings, which illustrate the preferred embodiment thereof, and wherein

Figure 1 is a front elevation of a toll box embodying our invention, with the cover removed; Fig. 2 is a sectional view thereof on line 2—2 of Fig. 1, but with the cover in place; and Fig. 3 is a detail view of the guide rail and discharging arm, showing two coins held thereby.

The same letters of reference designate the same parts wherever shown.

The toll box shown is adapted for use where three coins of a predetermined size are required to be deposited by a calling subscriber in order to obtain a desired connection. The coin chute *a* leads from an opening in the side wall of the box to a guide rail *b*, preferably grooved to prevent the coins from slipping off, and on which the first coin rolls until it strikes a stop *b'* carried at the end of the rail. A grooved discharge arm *c* is adapted to receive the tops of the coins

on said rail, said arm being adapted to be operated by a polarized magnet *d* to throw coins held upon said rail either into a chute *e'* leading to cash box *e* on the rear side of the rail, or into a chute *f'* leading to a refund tray on the outside of the front of the box. The tilting armature *d'* of magnet *d* is connected with said arm *c* by bars *c'* *c'* in order to give the arm the desired transverse movement in either direction. The chute *a* and guide rail *b*, which are of angular cross section, are inclined toward the refund chute and tray, as shown, so that coins of less than the predetermined size will be automatically discharged into the chute leading to the refund tray.

The coins are held on the rail *b* end to end, stops *g* being automatically interposed by said coins between themselves to prevent wedging thereof. A pair of rocking levers *h* are arranged to be operated by the first and second coins placed upon the guide rail, each lever being pivoted to lugs *h²* *h²* upon the under side of the rail, each lever carrying at its front end an actuating dog *h'* normally projecting through a hole *i* in said rail into the path of its operating coin, the other end of said lever carrying a stop *g* which overbalances the arm of the lever carrying the dog *h'* to cause its introduction into the path of the coin, the stop *g* normally lying adjacent a hole *i'* in the rail and adapted when the dog *h'* is operated to rock the arm to pass through said hole *i'* to form a stop for the next succeeding coin. Thus the first coin while in its resting position holds the dog *h'* depressed to interpose the stop *g* behind it, against which the second coin abuts. The second coin will thus be brought to rest directly over its own lever, and will operate its dog *h'* to interpose a stop *g* behind it for the third coin.

The third coin is provided with a similar lever *h*, which, when its front end is depressed by the operation of the dog *h'* carried thereby, may close a pair of signal contacts *k*, while the stop carried by said lever is interposed to prevent a fourth coin improperly inserted from disturbing the other coins and interfering with their proper discharge.

It will be understood, of course, that any one or all of the levers may be provided with contacts *k*, depending upon the circuits with which the device may be employed.

The three coins held upon the rail will be discharged into either the cash box or refund tray by the transverse movement of the arm *c*, according to the direction in which the armature *d'* of the magnet *d* is tilted.

We claim:

1. In a toll box, the combination with a coin chute, of a support arranged to receive a coin from said chute, a supporting arm constructed to engage the top of the coin on said support, coin receptacles on opposite sides of said support, and electromagnetic mechanism for moving said

arm to throw said coin into either one of said receptacles, as desired.

2. In a toll box, the combination with a coin chute, of a grooved guide rail adapted to receive a coin from said chute, a grooved arm adapted to engage the top of the coin on said rail, contacts closed by a coin on said rail, a cash box and a refund tray on opposite sides of said rail, and an electromagnet for operating said arm to throw the coin into either of said receptacles.

3. In a toll box, the combination with a coin chute, of a grooved guide rail adapted to receive a coin from said chute, said rail being provided with a hole leading to the groove in the same; a grooved arm adapted to receive the top of a coin on said rail, a pair of contacts, a contact lever associated with said rail, a dog carried by said lever and projecting through said hole in said rail, said dog being actuated by said coin to operate the lever and actuate said contacts, a refund chute and a depositing chute on opposite sides of said rail, and electromagnetically-actuated mechanism for moving said arm transversely in either direction to throw the coin on the rail into either one of said chutes.

4. In a toll box, the combination with a coin chute, of a guide rail arranged to receive a coin from said chute, a cash box, a refund chute, a discharge arm above said rail, constructed to receive the top of a coin of predetermined size delivered to said rail, and means arranged to move said arm to throw such coin into said cash box or refund chute, said rail being inclined toward said refund chute, a coin of less than said predetermined size being unsupported by said arm and falling over the side of said rail into the chute.

5. In a toll box, the combination with a coin chute, of a guide rail arranged to receive coins from said chute and simultaneously support a plurality thereof end to end, a supporting arm arranged to receive the top of said coins, coin receptacles on opposite sides of said rail, and electromagnetic mechanism for operating said arm to simultaneously throw said coins into either receptacle.

6. In a toll box, the combination with a coin chute, of a rail arranged to receive coins from said chute and simultaneously support a plurality thereof end to end, stops, means whereby the coins on said rail automatically interpose said stops between said coins to prevent wedging thereof, a grooved arm adapted to receive the tops of said coins, coin receptacles on opposite sides of said rail, and electromagnetic mechanism for operating said arm to discharge said coins into either receptacle.

7. In a toll box, the combination with a coin chute, of a guide rail arranged to receive coins from said chute and simultaneously support a plurality thereof end to end, said rail having a hole therein leading to its supporting surface, a grooved arm adapted to receive the tops of said coins, a stop at the end of the rail against which the first coin abuts, a lever associated with the rail for each coin, an actuating dog for operating said lever, said dog projecting through said hole in said rail in position to be operated by said coin in its resting position, a stop for the next succeeding coin, operated by said lever, coin receptacles on opposite sides of said rail, and electromagnetic mechanism for operating said arm to discharge said coins into either receptacle.

8. In a toll box, the combination with a coin chute, of a guide rail arranged to receive coins from said chute and simultaneously support a pair thereof end to end, said rail having a plurality of holes therein leading to its supporting surface, a stop at the end of the rail against which the first coin therein abuts, a rocking lever pivoted to said rail underneath the resting position of the first coin therein, a dog carried at the front end of said lever and projecting through a hole in said rail into the path of the coin, a stop carried by the other end of said lever and normally lying adjacent a hole in said rail, said first coin being adapted to engage said dog and rock the lever to in-

terpose said stop between itself and the next coin, a grooved arm adapted to receive the tops of the coins on said rail, and means for operating said arm to throw said coins into either receptacle.

9. In a toll box, the combination with a coin chute, of a guide rail arranged to receive coins from said chute and simultaneously support a plurality thereof end to end, stops, means whereby the coins on said rail automatically interpose the stops between themselves, contacts operated by one of said coins, a grooved arm adapted to receive the tops of said coins, coin receptacles on opposite sides of said rail, and electromagnetic mechanism for operating said arm to discharge said coin into either receptacle.

10. In a toll box, the combination with a coin chute, of a support arranged to receive a coin from said chute, a supporting arm constructed to engage the top of a coin on said support, a coin receptacle, and means for moving said arm to throw said coin into said receptacle.

11. In a toll box, the combination with a coin chute, of a guide arranged to receive coins from said chute and simultaneously support a plurality thereof end to end, stops, and means whereby said stops are automatically interposed by said coins between themselves.

12. In a toll box, the combination with a coin chute, of a guide arranged to receive coins from said chute and simultaneously support a plurality thereof end to end, stops, means whereby said stops are automatically interposed by said coins between themselves, and contacts operated by one of said coins.

13. In a toll box, the combination with a coin chute, of a rail arranged to receive coins from said chute and simultaneously support a plurality thereof, and stops arranged to maintain said coins apart to prevent wedging.

14. In a toll box, the combination with a coin chute, of a rail arranged to receive coins from said chute and simultaneously support a plurality thereof end to end, stops arranged to be interposed between said coins to prevent wedging thereof, a coin receptacle, an arm arranged to support the tops of said coins, and means for operating said arm to transfer said coins into said receptacle.

15. In a toll box, the combination with a coin chute, of a guide arranged to receive coins from said chute, and simultaneously support a plurality thereof, a lever associated with the rail for each coin, means for operating said lever actuated by said coin in its resting position, and a stop for the next succeeding coin operated by said lever.

16. In a toll box, the combination with a coin chute, of a guide rail arranged to receive coins from said chute and simultaneously support a plurality thereof end to end, a lever associated with the rail for each coin, an actuating dog carried by said lever and operated by said coin in its resting position, and a stop carried by said lever and interposed in the path of the next succeeding coin.

17. In a toll box, the combination with a coin chute, of a guide rail arranged to receive coins from said chute and simultaneously support a plurality thereof end to end, a lever associated with the rail for each coin, an actuating dog for operating said lever, said rail being provided with a hole through which said dog projects in position to be operated by said coin in its resting position, and a stop, said rail being also provided with a hole through which said stop projects into the path of the next succeeding coin.

18. In a coin collector, the combination with a coin chute arranged to receive a number of coins in succession, of stops arranged to arrest coins at different places in the coin chute, and means operated by each coin in its passage for interposing one of said stops behind it.

In witness whereof, we hereunto subscribe our names this 3rd day of February A. D., 1906.

HOWARD B. HOLMES.
EDWARD B. CRAFT.

Witnesses:

RALPH W. INGERSOLL,
ROY T. ALLOWAY.