

1,046,096.

Patented Dec. 3, 1912.

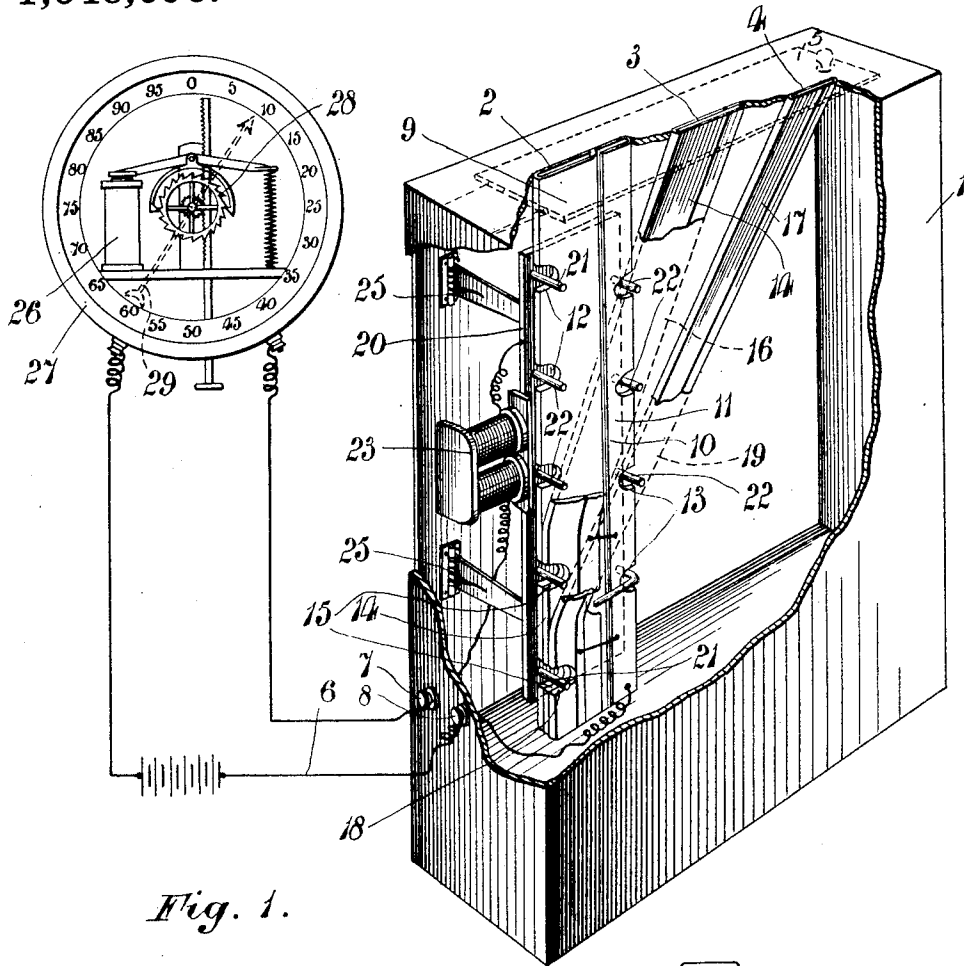


Fig. 1.

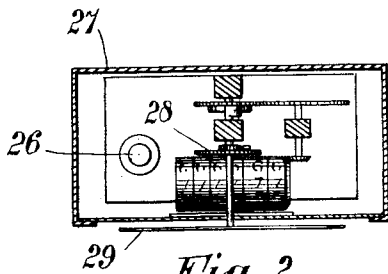


Fig. 2.

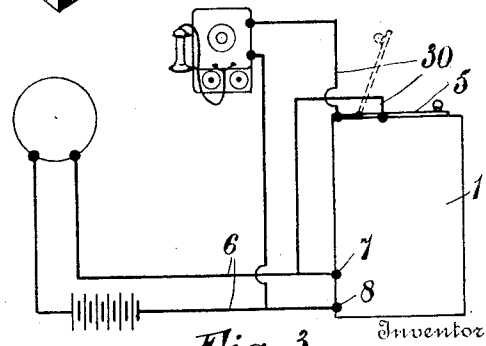


Fig. 3.

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COIN SLOT-MACHINE.

1,046,096.

Specification of Letters Patent.

Patented Dec. 3, 1912.

Application filed February 12, 1912. Serial No. 677,001.

To all whom it may concern:

Be it known that I, JOHN MILTON McCLATCHIE, a subject of the King of Great Britain, and a resident of the town of Huntingdon, in the county of Huntingdon, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Coin Slot-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to improvements in coin slot machines, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially of the novel construction and arrangement of parts whereby coins of different denominations form the electrical connecting pieces and their values are faithfully recorded at a distance.

The objects of the invention are to devise a machine and system of great commercial value to telephone companies and the like, to accurately record the deposit of a coin in the slot box apart from said box and generally to provide a comparatively cheap and efficient device.

In the drawings Figure 1 is a diagrammatical view partly in perspective. Fig. 2 is a cross sectional view of the indicating mechanism. Fig. 3 is a detail showing the connection of the lid of the coin slot box to the telephone.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 is the outer casing of the coin slot box preferably rectangular in form and having through the upper end thereof, the coin slots 2, 3 and 4 of different sizes for different sizes of coins, and while three slots are shown it must be understood that there may be more, if desired, and less if so many are not required.

5 is a lid at the top end shutting down on the upper end side of the casing 1 over the slots 2, 3, and 4 and preferably hinged at its inner edge to said casing, the said lid 5 forming a switch for cutting out the telephone instrument from the main telephone circuit as will be explained more in detail hereinafter.

6 is the main telephone circuit connected with the said coin slot box at the contacts 7 and 8.

9 is a coin chute for the larger coins vertically divided by the insulation 10 and having the part 11 energized through its connection with the contact 8.

12 are slots cut in one of the vertical sides of the chute 9. 13 are slots cut in the other vertical side of the chute 9, said slots 13 are not opposite to the slots 12, but preferably arranged therebetween.

14 is a coin chute for a smaller denomination of coin and arranged alongside the coin chute 9 at the lower portion thereof, and having corresponding slots 15 in said lower portion and sloping away at the upper part 16 thereof, to the coin slot 3. 17 is a coin chute for a still smaller denomination of coin and arranged alongside the coin chutes 9 and 14, adjacent to the lower end thereof, and having corresponding slot 18 and sloping away on its upper part 19 to the coin slot 4.

20 is a contact plate having the vertical rows 21 and 22 of contact pegs, said plate 20 being arranged behind the coin chute 9 and electrically connected with the contact 7 through the electro-magnet 23, said magnet being arranged and supported so as to attract the contact plate 20 on energization.

24 are hinges supporting at their extreme ends the plate 20 and themselves suitably supported by the casing, said hinges being spring-held by the springs 25, and consequently exerting the spring pressure on the plate 20 as opposed to the electrical pull of the magnet 23. The pegs 21 and 22 project through the slots 12 and 13, and consequently through the slots 15 and 18, thereby forming electrical connectors to the plate 20.

It will thus be seen that on dropping say for example a 25¢ piece through the slot 2, the said piece will descend the chute 9, until it reaches the first obstruction in the form of one of the pegs 21 and temporarily be arrested, sufficiently to form a connector between the part 11 and the plate 20. This closes the local circuit tapping the main line telephone circuit and energizes the electro-magnet 23. The electro-magnet 23 exerts an electrical pull on the plate 20 and draws the peg out of the way of the 25¢

piece and lets it drop to the next peg which is one of the row 22.

The electrical connecting properties of the coin are not brought into use in the 25¢ chute by any of the vertical row of pegs 5 22, because the vertical portion 11 is the only part of the said chute which is energized, therefore when the coin drops to a peg 22 by the outward movement of the 10 plate 20, the said plate 20 is cut out and consequently the electro-magnet, whereby the said plate 20 is swung inwardly by the pressure of the springs 25, this lets the coin drop to another peg 21 and the electrical 15 connection is similarly made and plate 20 cut in with like results. The coin continues to drop from peg to peg until it drops from the lower peg into the cash box and at each of the pegs 21, when the electrical 20 connection is made, that fact establishes electrical connection through the main line circuit which includes the solenoid 26 forming part of the indicating mechanism contained within the indicator casing 27.

The indicator and its mechanism are 25 shown in the drawings accompanying this specification, but it is not of much service and will only prove confusing to describe in detail the parts of the mechanism, it being sufficient to say generally that the solenoid spring-held core is operatively connected to the ratchet wheel 28, and as the 30 25¢ piece engages each of the pegs 21 a corresponding movement is imparted to the solenoid 26 with the result that the ratchet wheel 28 is rotated to the extent of one tooth which swings the indicating hand 29, five points representing 5¢ at each operation. The indicating mechanism is also 40 shown with the recording mechanism but a description of this would only be interesting in so far as this is concerned and has nothing to do with the successful operation of this invention.

In the chute 14 the passage is arranged 45 as regards obstructions for a 10¢ piece and the first one of the said obstructions is the uppermost peg of the vertical row 22. The 10¢ piece is arrested between said peg and the energized wall of the chute, thus providing the means of closing the local circuit and bringing the electro-magnet into operation as also the indicating hand 29 which will move to the extent of 5¢. The 55 next obstruction to the 10¢ piece merely gives time for the return of the plate 20 while the lower obstruction is again on the same side as the upper obstruction and forms one of the row of pegs 21. The 60 electrical operation is the same consequently the indicating hand turns to figure 10 or 10¢. The last chute here shown is the 5¢ chute indicated by the numeral 17 and in this length there is only the one peg that is 65 one of the row 22, which effects the electri-

cal connection, while one of the lower pegs arrests the piece sufficiently for the return of the plate 20.

In this invention it will be seen that there is a certainty of the deposit of the 70 coin, which does not exist in the present telephone pay stations, for under the present system the operator relies on the sound of the bell carried over the wire of the main circuit, while in this instance the record of 75 the payment is actually indicated to the operator at the central office and there is no getting away from this at all, furthermore the instrument of the telephone cannot be used while the coin is being deposited 80 for the lid 5 is up and through the electrical connections 30 the instrument is temporarily cut out from the main circuit though by closing the lid the instrument is again in the circuit and at the record of the 85 payment established at the central office, the conversation will be permitted.

There are various other uses to which this invention may be applied, but it will undoubtedly be of greater advantage to tele- 90 phone companies than to others.

What I claim as my invention is:

1. In a coin slot machine, a casing having a coin slot, a chute from said slot, an obstruction in said chute preventing the free 95 descent of a coin therethrough, and means established by the coin within said chute for electrically removing said obstruction in its descent and coincidentally establishing an electric circuit. 100

2. In a coin slot machine, a casing having a coin slot, a chute from said slot, a plurality of coin arresters arranged vertically in said chute, and means established by the coin 105 for electrically moving said arresters to one side to permit the passing of a coin and coincidentally establishing an electric circuit.

3. In a coin slot machine, a casing having a slot, a coin chute extending into said casing from said slot and itself slotted at intervals and electrically engaged on one side, a contact plate having contact pegs extending 110 through said chute slots, and electric means for drawing said plate to one side on the establishing of an electric connection between said chute and said plate. 115

4. In a coin slot machine, a casing having a plurality of coin slots, a plurality of chutes from said slots leading to the lower end of said casing, each of said chutes having one vertical side electrically energized, one of said chutes having slots in each of its vertical edges at intervals throughout its height, the remaining chutes having slots 120 registering with certain of the said chute slots, an electrical contact plate having contact pegs therefrom extending through said slots and flexibly supported, a main line circuit connected with the electrically energized plate of said chutes and an electro-magnet 130

connected with said contact plate and with said main line circuit.

5 5. In a coin slot machine, in combination, a casing having a plurality of coin slots, a plurality of chutes extending downwardly from said coin slots into said casing and adapted to receive different sized coins, the smaller coin chutes sloping away from the larger coin chute intermediately of the height of the latter, said large coin chute 10 having slots through each side edge and said smaller coin chutes having slots in the edge thereof corresponding with some of the aforesaid slots, an electrically energized plate having contact pegs projecting from 15 each side thereof and extending through said chute slots, elongated spring-held hinges secured to the casing and supporting said plate, an electro-magnet suitably supported adjacent to said plate and electrically connected therewith, a main line circuit electrically connected with said electro-magnet and with said chutes and an indicating mechanism electrically operated by its connection with said main line circuit. 25

6. In a coin slot machine, in combination, a casing having a plurality of coin slots, a plurality of chutes from said slots arranged for different sized coins, a plurality of obstructions vertically arranged in the large 30

coin slot, certain of said obstructions extending into the smaller coin slots, an indicating and recording mechanism apart from said slot casing, a main line electric circuit operatively connected with said indicating 35 and recording mechanism, and means for moving said obstructions established by the temporary stoppage of the coin, and coincidentally telegraphing the arrest of said coin to said indicating and recording mechanism. 40

7. The combination with the ordinary telephone circuit, a coin slot casing having a coin slot in the top thereof, a main line electric circuit, a hinged plate secured on the 45 top of said casing, a local circuit from said hinged cover to said main line circuit, adapted, on the raising of said hinged plate, to cut out the telephone instrument from said main line circuit, and means within said 50 casing electrically connected with said main line circuit for sending over said main line circuit impulses corresponding to the value of the coin.

Signed at the city of Montreal, Quebec, 55 Canada this seventh day of February, 1912.

JOHN MILTON McCLATCHIE.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."