Feb. 15, 1938. G. L. CHERRY ET AL 2,108,651

COIN CHUTE

Filed Aug. 14, 1936

FIG. 1

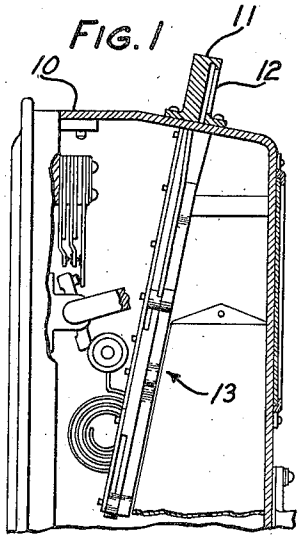


FIG. 2

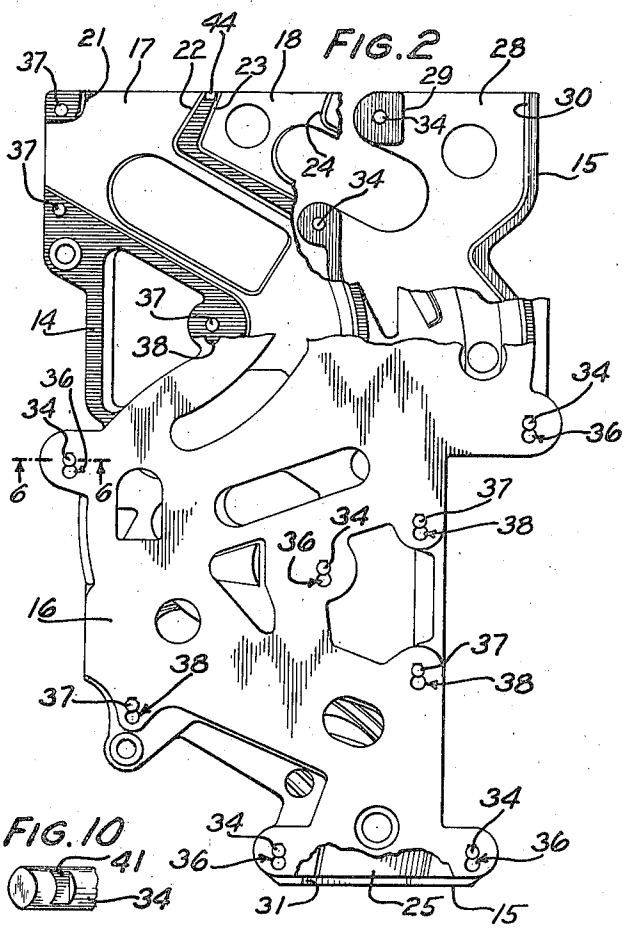


FIG. 3

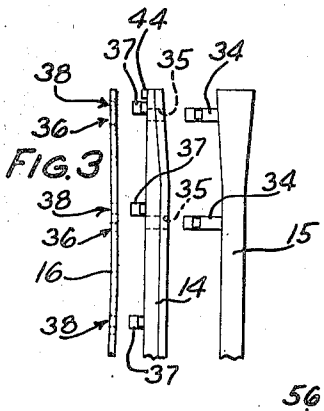


FIG. 10

FIG. 6

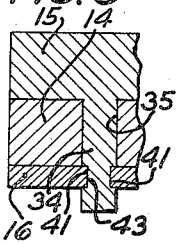


FIG. 7

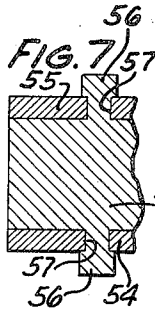


FIG. 4

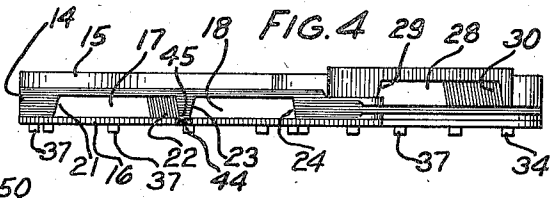


FIG. 5

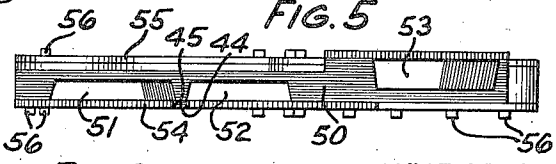


FIG. 8

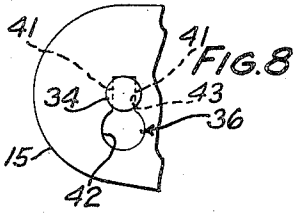
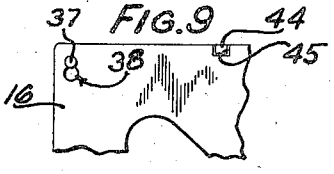


FIG. 9



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COIN CHUTE

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Application August 14, 1936, Serial No. 95,994

5 Claims. (Cl. 232—44)

This invention relates to coin chutes and more particularly to multi-channel coin chutes for coin collectors such as those employed at telephone pay stations.

A usual type of telephone coin collector is disclosed, for example, in the U. S. patent to O. F. Forsberg, 1,043,219, issued November 5, 1912, and comprises an upper housing upon which is mounted what is commonly called a coin gauge having a plurality of openings for receiving coins of different denominations. Associated with the coin gauge is a coin chute having a plurality of coin channels communicating at their upper ends with the openings in the coin gauge, the channels guiding the coins into a cash compartment or a refund tray, depending upon whether the desired services are secured. A coin chute of this type has heretofore been constructed from a plurality of die cast parts and a single cover plate punched from sheet lead abutting an outer side of one of the die cast parts, or from a single die cast part having the coin channels formed on opposite sides thereof and two punched steel cover plates, one at each side of the single die casting for retaining the coins in the channels, the several parts of each construction being retained in assembled relation by a plurality of screw and nut assemblies or screws.

Objects of this invention are to reduce the cost of manufacture and simplify the assembly and dismantlement of such multi-channel coin chutes.

In accordance with the above objects one embodiment of this invention contemplates a telephone coin collector coin chute wherein the several abutting parts thereof are formed with key-hole slots and slotted or shouldered lugs, the key-hole slots in one part interlocking with the shouldered lugs projecting from the adjacent part to firmly hold the several parts in predetermined assembled relation.

This invention will be better understood by reference to the following detailed description taken in connection with the accompanying drawing, in which

Fig. 1 is a fragmentary side view, partly in section, of a portion of a telephone coin collector of a type capable of employing a multi-channel coin chute embodying the features of this invention and comprising two die cast parts and a single cover plate;

Fig. 2 is an enlarged elevational side view of a coin chute of the type shown in Fig. 1 with the two foremost abutting parts partly broken away to show the coin guiding channels;

Fig. 3 illustrates fragmentary end views on a reduced scale of the several coin chute parts of Fig. 2 before being assembled;

Fig. 4 is a plan view of the coin chute of Fig. 2;

Fig. 5 is a plan view of a modified form of coin chute embodying the features of this invention and comprising a single die cast part and two cover plates;

Fig. 6 is an enlarged vertical detail section taken on the line 6—6 of Fig. 2;

Fig. 7 is a detail section similar to that of Fig. 6 of the modified form of coin chute of Fig. 5;

Fig. 8 is an elevational side view of Fig. 6;

Fig. 9 is a fragmentary elevational view of the upper left hand corner of the coin chute of Fig. 2 with the cover plate locked in position, and

Fig. 10 is a perspective view of the preferred form of lug.

Referring now to the drawing, and particularly to Fig. 1 wherein a coin chute embodying the invention is shown applied to a telephone coin collector, illustrated fragmentarily, of the general type disclosed in the herein mentioned Forsberg patent, the numeral 10 indicates an upper housing for the coin collector having on its upper wall a usual coin gauge 11. The coin gauge has a plurality of openings, one of which is shown at 12, through which coins of different denominations may be deposited for passage through channels, one corresponding to each of the gauge openings 12, provided in a laterally inclined multi-part coin chute indicated in general at 13, the channels communicating at their upper ends with the openings 12 of the coin gauge 11. The coin channels guide the coins deposited into the openings 12 to mechanism (not shown) which eventually discharges the coin either into a cash compartment or a refund tray, depending upon whether the desired services are secured. The present invention is concerned with the construction of the multi-part coin chute 13 and particularly to the means provided for firmly holding the several parts thereof in predetermined assembled relation, which is shown more clearly in the figures subsequent to Fig. 1. For a more detailed description of the telephone coin collector and its manner of operation reference may be had to the above mentioned Forsberg patent.

Referring particularly to Figs. 2, 3 and 4 there is illustrated a coin chute comprising two die cast parts 14 and 15 cast in a well known manner from a suitable molten zinc alloy or other die casting metal and a single cover plate 16 punched from flat sheet steel or other suitable material abutting an outer side of the part 14. Formed in the part 14 are open coin channels 17 and

18 (Figs. 2 and 4) which start at the upper end of the chute and which are defined by end walls 21 and 22 and 23 and 24, respectively. The channels 17 and 18 are intended for the reception of five and ten cent coins, respectively, the coin following along a path provided by the channels to a point (not shown) whereupon they follow a common path to an exit 25 at the lower end of the chute 13. Formed in the part 15 is a coin channel 28 at the upper end of the chute which is defined by end walls 29 and 30 intended for the reception of twenty-five cent coins, the coin following along a path provided by the channel to an exit 31 at the lower end of the chute 13.

In addition to the open coin guiding channels 17, 18 and 28 formed in the die cast parts 14 and 15 during its casting there is also cast a plurality of openings, slots, and guide surfaces of various shapes, all for a definite purpose in the operation of the telephone coin collector of which the multi-channel coin chute 13 is a part or for saving weight, but further reference thereto is not believed necessary to a complete understanding of this invention.

In order to simplify the assembly of the die cast parts 14 and 15 and the steel cover plate 16 into a complete coin chute 13 and also provide for quick dismantlement thereof in case of repairs improved means is provided for firmly securing the parts together in predetermined relation.

The part 15 during the casting operation has formed integral therewith a plurality of pins or lugs 34 which project from the forward side thereof (Fig. 2) and are of a length sufficient to extend through circular apertures 35 (Fig. 6) formed in the part 14 during the casting thereof and also through slots 36 (Fig. 8) produced in the cover plate 16 during the forming thereof. The part 14 has also cast integral therewith a plurality of pins or lugs 37 which project from the forward side thereof (Fig. 2) and are similar to the lugs 34 of the part 14 except that they have a length sufficient to extend only through slots 38 formed in the cover plate 16 and similar to the first mentioned slots 36.

The pins or lugs 34 and 37, referring particularly to Figs. 6, 8 and 10, are circular in cross section for the greater part of their length and adjacent their outer ends they are formed with diametrically opposite vertical slots 41 which provide a reduced cross section along the length of the lug for a distance substantially equal to the thickness of the cover plate 16. The diameter of the lugs 34 is such that they fit snugly in the apertures 35 in the part 14. The slots 36 and 38 in the cover plate 16 are of the key-hole type, as clearly shown in Fig. 8, being formed with a lower generally circular portion 42 of slightly larger diameter than the lugs 34 and 37 and an upper narrow portion 43 formed with parallel vertical side faces having a spacing corresponding to the thickness of the lugs 34 and 37 at the points thereof where the oppositely disposed slots 41 are formed. The key-hole slots 36 and 38 in the cover plate 16 have an interlocking relation with the slotted portions of the lugs 34 and 37, respectively, when the parts are assembled.

To assemble the coin chute parts 14, 15 and 16, it is merely necessary to first place the parts 14 and 15 in their relative positions, the slotted lugs 34 of the part 15 being entered in the apertures 35 of the part 14 with their outer slotted ends projecting from the forward side of the part 14 and in alinement with the outer slotted ends of the lugs 37 of the latter part. The cover plate 16 is then moved into abutting relation with the forward face of the part 14, the lugs 34 and 37 being entered in the circular portions 42 of the key-hole slots 36 and 38 in the cover. Thereafter the cover plate is moved downwardly so that the upper narrow portions 43 of the key-hole slots move into interlocking engagement with the slots 41 or shouldered portions of the lugs 34 and 37. This movement is continued until a forwardly extending lug 44 cast on the upper end of the part 14 (Figs. 2 and 8) and riding on the inner surface of the cover plate moves into a slot 45 punched in the upper edge face of the cover plate whereupon the coin chute parts 14 and 15 and cover plate 16 are firmly locked together. To make the locking tighter and more positive the cover plate 16 may be formed slightly concave, as indicated in Fig. 3, so that the parts when assembled together will be held under tension.

In order to dismantle the coin chute a screw driver blade or other suitable instrument is inserted in the cover plate slot 45 and the cover plate sprung away from the part 14 until the lug 44 thereon is disengaged from the slot 45 whereupon the cover plate is free to be moved upwardly to a position where it may be removed from the slotted lugs 34 and 37, following which the parts 14 and 15 may be separated.

A modified form of coin chute embodying the features of the invention is illustrated in Figs. 5 and 7, wherein a single die cast part 50 is provided which has coin channels 51, 52 and 53 corresponding to the coin channels 17, 18 and 28, respectively, of the previously described type of coin chute 13, formed on opposite sides thereof, and two punched steel cover plates 54 and 55 one at each side of the part 50 for retaining the coins in the channels. Projecting from opposite sides of the part 50 (Fig. 7) and integral therewith are a plurality of lugs 56 slotted similarly to the previously described lugs 34 and 37. The cover plates 54 and 55 are each formed with a plurality of key-hole slots 57 similar to the key-hole slots 36 previously described, the slots 57 interlocking with the lugs 56 to hold the part 50 and the covers in predetermined assembled relation. The mounting and removal of the cover plates 54 and 55 upon or from the part 50 of the coin chute illustrated in Figs. 5 and 7 is similar to that of the other type of coin chute previously described.

From the above description it will be apparent that the invention provides for economy in the construction of multi-channel coin chutes for coin collectors comprising a plurality of parts by the complete elimination of the usual plurality of screw and nut assemblies or screws used heretofore in retaining the parts of such coin chutes in assembled relation. Furthermore, the assembly of the several parts is greatly simplified and when repairs are necessary to the coin chute the parts may be readily and quickly dismantled.

It is obvious, of course, that the invention is not limited to the specific embodiment or application thereof herein illustrated and described, except insofar as is defined by the appended claims.

What is claimed is:

1. A multi-channel coin chute for telephones, comprising a plurality of members having open coin channels formed in corresponding sides thereof, the opposite side of one member serving as a cover for the channel in the other member for retaining coins in the channel, a cover for

said one member for retaining coins in the channels thereof, a plurality of elements having shouldered outer end portions carried by said members, the elements on one member extending through alined apertures formed in the other member, said cover having a plurality of key-hole slots, one corresponding to each element for interlocking with the shouldered portions of said elements to hold the members and cover in predetermined assembled relation, and a projection on said one member arranged to engage in a slot formed in said cover when said members and cover are interlocked for locking the members and cover together.

2. A multi-channel coin chute for telephones, comprising a plurality of members having open coin channels formed in corresponding sides thereof, the opposite side of one member serving as a cover for the channel in the other member for retaining coins in the channel, a cover for said one member for retaining coins in the channels thereof, a plurality of elements having shouldered outer end portions carried by said members, the elements on one member extending through alined apertures formed in the other member, said cover having a plurality of elongated slots, one corresponding to each element for interlocking with the shouldered portions of said elements to hold the members and cover in predetermined assembled relation, and a projection on said one member arranged to engage in a slot formed in said cover when said members and cover are interlocked for locking the members and cover together, said cover being formed slightly concave for holding the interlocked members and cover together under tension.

3. A multi-channel coin chute for telephones, comprising a member having open coin channels formed in one side thereof, a cover member for retaining coins in said channels, a plurality of elements carried by one of said members, each having a shouldered end portion, the other of said members having elongated slots interlocking with said shouldered elements to hold said members in predetermined assembled relation, and a projection on one of said members arranged to engage in a slot formed in the other of said members when said members are interlocked for locking the members together.

4. A multi-channel coin chute for telephones, comprising a member having open coin channels formed in one side thereof, a cover member for retaining coins in said channels, and a plurality of elements carried by one of said members, each having a shouldered end portion, the other of said members having elongated slots interlocking with said shouldered elements to hold said members in predetermined assembled relation, said cover member being formed slightly concave for holding the interlocked members together under tension.

5. A multi-channel coin chute for telephones, comprising a member having open coin channels formed in one side thereof, a cover member for retaining coins in said channels, a plurality of elements carried by one of said members, each having a shouldered end portion, the other of said members having elongated slots interlocking with said shouldered elements to hold said members in predetermined assembled relation, and a projection on one of said members arranged to engage in a slot formed in the other of said members when said members are interlocked for locking the members together, said cover member being formed slightly concave for holding the interlocked members together under tension.

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