July 21, 1936. S. T. CURRAN 2,048,539

TELEPHONE COIN COLLECTOR

Filed Aug. 31, 1935

FIG. 1

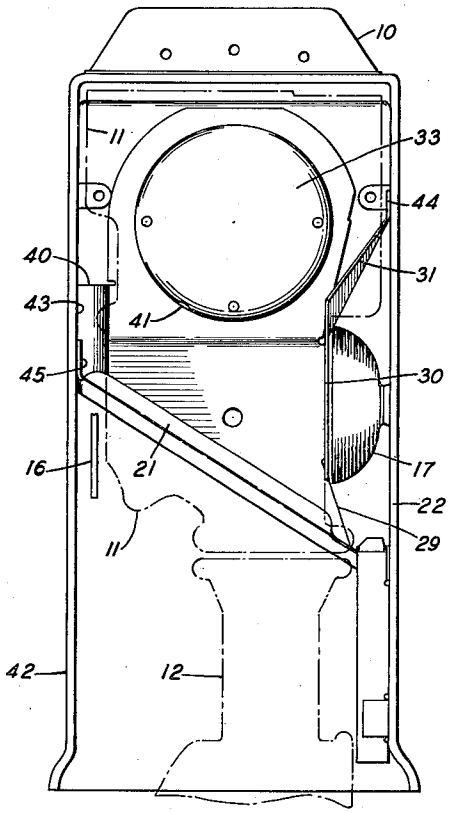


FIG. 2

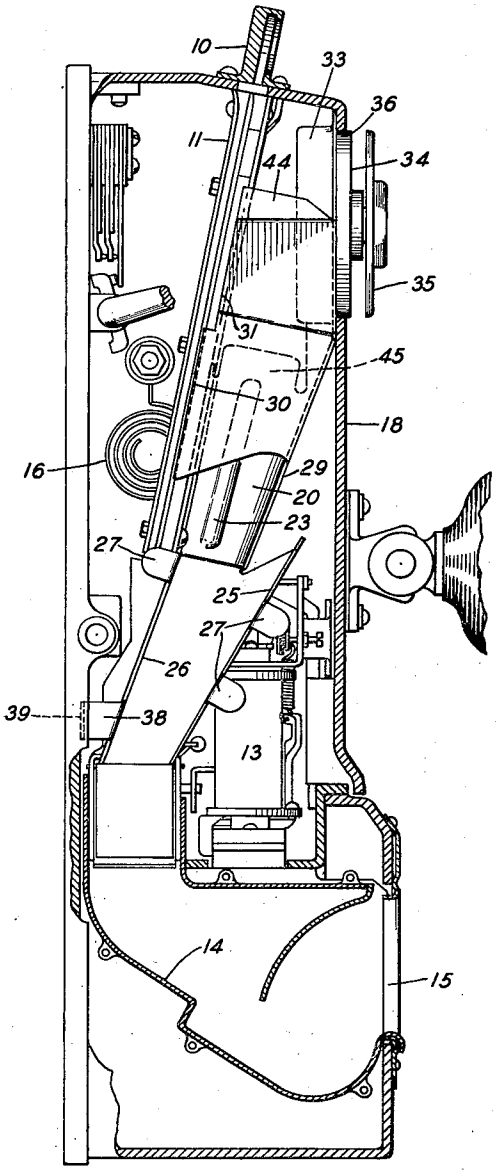
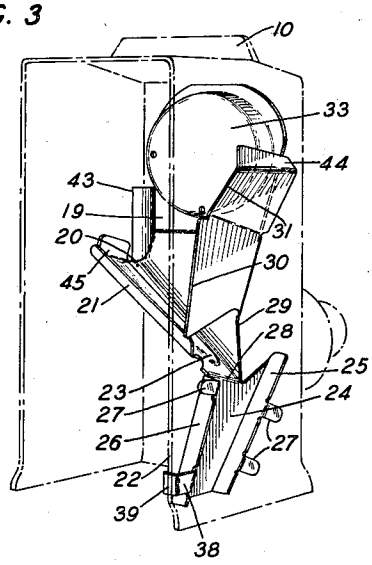


FIG. 3



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TELEPHONE COIN COLLECTOR

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4 Claims. (Cl. 194—97)

This invention relates to telephone coin collectors and has for its primary object to provide a simpler and more economical construction of certain parts of the apparatus.

In the usual type of telephone coin collector as disclosed, for example, in the U. S. patent to O. F. Forsberg 1,043,219, the upper housing is provided with a laterally inclined coin chute having a plurality of coin channels adapted to be traversed by standard coins of different sizes for striking gongs or bells mounted within the housing. The lower side wall of each channel is usually provided with an under-diameter reject opening for discharging from the coin channel coins or slugs of less than standard diameter. It is desirable that such non-standard coins be returned immediately to the person who deposited them and one aspect of this invention is concerned with an improved type of return chute for non-standard coins arranged to receive all non-standard coins discharged from the coin chute and to minimize the possibility of a non-standard coin getting stuck in the return chute while still preventing any coin discharged from said coin chute from striking the gongs or other signaling devices. The invention is concerned with that part of the non-standard coin return chute located within the upper housing as the portion of the return chute in the lower housing may be substantially of the same type as disclosed in the above-mentioned Forsberg patent. Another aspect of the invention is concerned with the provision of a cup-shaped recess registering with an aperture in the front wall of the housing for receiving the dial customarily used in machine switching substation equipment.

In its preferred embodiment the invention comprises a single metal sheet formed to a definite configuration and arranged to be mounted between the main coin chute and the front wall of the upper housing. The sheet comprises a longitudinally and laterally inclined chute section for receiving non-standard coins discharged from the main chute and for directing such coins towards a side wall of the upper housing. Joining the longitudinally inclined chute portion is another section of the sheet forming a substantially vertical coin channel comprising a side wall with end walls contacting with the adjacent side wall of the coin collector housing. This vertical section may serve to direct the coins into the standard refund chute in the lower housing which has a refund opening in the front wall thereof as in the standard collector. The bend in the metal which marks the junction of the bottom wall of the longitudinally inclined chute section and the side wall of the vertical section is preferably sharply defined with the axis of this bend sloping downwardly towards the front wall of the upper housing for a purpose hereinafter described.

The aforesaid metal sheet also has an extension acting as a gong guard to prevent any rejected coin from striking the signal device located at one edge of the main coin chute. The upper portion of the said metal sheet may be provided with a cup-shaped recess adapted to register with an opening in the front wall of the housing to provide a holder for a telephone dial signaling device.

Referring to the drawing,

Fig. 1 is a rear view of the upper housing of a telephone coin collector;

Fig. 2 is a side view partly in section of the coin collector of Fig. 1; and

Fig. 3 is a schematic view of the upper housing of Fig. 1 similar thereto except viewed from a different angle.

The telephone coin collector disclosed in the drawing is of the same general type as that disclosed in the O. F. Forsberg U. S. Patent 1,043,219, issued November 5, 1912, to which reference may be made for a more detailed description of its manner of operation. A legitimate coin deposited in an opening in a coin gauge 10 falls through a multi-coin chute 11 striking either gong 16 or bell 17 and comes temporarily to rest upon a pivoted coin trap in a coin hopper 12 from which under the control of a relay 13 the coin may be deposited into a cash box in the lower housing or may be discharged into a refund chute 14 leading to an external refund opening 15. In the event that a non-standard coin such as an under-diameter coin, for example, is deposited in gauge 10 the usual coin chute 11 has means for ejecting such coins before they have reached the signaling elements 16, 17 and it is desirable that such non-standard coins be returned to the user of the instrument by means of refund opening 15. As in the standard coin collector the main coin chute 11 is laterally inclined so that the ejected coins will drop between the coin chute and the front wall 18 of the upper housing.

The character of the refund chute in the upper housing for directing the ejected coins into the refund chute 14 in the lower housing is shown in all figures of the drawing, but particularly Fig. 3.

The refund chute along with other parts of the collector to be described later is preferably constructed from a single sheet of metal formed to the desired configuration. This metal sheet which will be given the general reference character 19 has a laterally and longitudinally inclined chute portion 20 located beneath the coin ejecting openings in the main coin chute 11 and has an upturned edge 21 in substantial contact with the adjacent channel plate of the main chute 11. This chute portion 20 is longitudinally inclined to direct all ejected coins and slugs towards said wall 22 of the housing. Since the majority of the ejected coins will slide down chute portion 20 it is preferable to have an embossed ridge 23 on the upper surface thereof to reduce the area of coin contact with incline 20. Slide 20 terminates in a substantially vertical chute portion comprising a rear wall 24 with side walls 25, 26 fastened to the inner face of housing side wall 22 by means of suitable tabs 27 which may be welded to the collector housing. The outlet of chute portion 24 directs the non-standard coins into the upper part of refund chute 14 in the lower housing to return such coins to the person who deposited them.

Since it is preferable that the distance between the vertical chute wall 24 and the housing wall 22 be less than the diameter of the usual ejected coins it is desirable to have the bend 28 in the metal sheet 19 joining the chute sections 20, 24 define a line which slopes downwardly towards the front wall 18 of the housing. Hence, any coin which happens to roll on its edge down incline 20 will not stick when its forward edge strikes the housing side wall 22 but will start spinning along the inclined edge 28 until the coin strikes the upturned wall 29 of the chute whereupon the coin will be turned so as to freely enter the vertical chute portion 24.

Integral with the vertical wall 29 of the refund chute is a gong guard comprising a substantially vertical portion 30 and an upper angular portion 31 for preventing any coin rejected by chute 11 from striking the signal bell 17.

The upper portion of metal sheet 19 has formed therein a cup-shaped recess 33 registering with an aperture 36 in the front wall of the collector housing to serve as a housing for the calling dial 34 controlled by the finger plate 35.

If desired, one of the tabs 38 for fastening chute portion 24 in position may comprise an angular projection or lug 39 for use in coupling the upper and lower housings together in the well-known manner.

It will also be generally preferable to provide another vertical extension 40 of the formed metal sheet 19 to act as a support for the dial cord (not shown) which passes through aperture 41 in the side wall of cup 33 over the top edge of extension 40 and then downwardly between extension 40 and the housing side wall 42 to the lower part of the collector. This extension 40 holds the dial cord away from the return chute 20 and prevents rejected coins from lodging between the cord and the chute. This extension 40 also acts as a shield to prevent fraudulent operation of relay 13 by a wire inserted through the dial cord hole 41 when no dial is assembled on the coin collector. Shield 40 is somewhat rounded when viewed in a section taken in a horizontal plane with its vertical edge 43 in substantial contact with the housing side wall 42.

It will be seen that the single metal sheet 19 has one portion serving as a dial cup, other portions 20, 24 serving as a refund chute, and another portion 30 serving as a gong guard. It will be apparent that the chute 19 may be formed into the configuration shown in the drawings by any well-known methods and then welded to the inside of the upper housing 18 at appropriate points. For example, it may be welded to the housing front wall 18 around the flattened edge of the dial cup 33, with tabs 27, 28 and 44 welded to the housing side wall 22 and tab 45 welded to housing side wall 42.

What is claimed is:

1. In a telephone coin collector housing, a main coin channel comprising means for discharging non-standard coins therefrom, a signal device within said housing adapted to be struck by standard coins traversing said channel and a sheet of metal supported within said housing, one portion of said sheet providing a shield to prevent coins discharged from said channel from striking said device, a second portion of said sheet providing a longitudinally inclined chute section for said discharged coins, and a third portion of said sheet joining the lower end of said second portion providing a substantially vertical refund chute section for said discharged coins, the bend in said sheet joining the bottom wall of said longitudinally inclined section and a side wall of said vertical section being sharply defined, the axis of said bend sloping downwardly away from said main channel.

2. In a telephone coin collector housing, a main coin channel having means for discharging non-standard coins therefrom, a signaling device mounted within said housing adapted to be struck by standard coins traversing said channel, said housing having an aperture in the front wall thereof and a single sheet of metal having one portion formed to provide at least a partial closure for said aperture, said sheet having another portion formed into a longitudinally inclined chute section for receiving said discharged non-standard coins, said sheet having another portion shielding said device from said discharged coins.

3. In a telephone coin collector housing, a main coin channel having means for discharging non-standard coins therefrom, a signaling device mounted within said housing adapted to be struck by standard coins traversing said channel, said housing having an aperture in the front wall thereof and a single sheet of metal having one portion formed to provide at least a partial closure for said aperture, said sheet having another portion formed into a longitudinally inclined chute section for receiving said discharged non-standard coins, said sheet having another portion formed into a substantially vertical chute section joined to said longitudinally inclined section, said sheet having another portion shielding said device from said discharged coins.

4. In a telephone coin collector, an upper housing comprising parallel side walls and a front wall, a main coin channel in said housing comprising means for discharging non-standard coins therefrom, a signaling device mounted adjacent one side wall of said housing and adapted to be struck by standard coins traversing said channel, said housing having an aperture in said front wall, and a single sheet of metal having one portion formed to provide at least a partial closure for said aperture, said sheet having a

second portion formed to provide a laterally and longitudinally inclined coin chute section for coins discharged from said coin channel, said chute section having a bottom wall of a width greater than the maximum diameter of any discharged coin, said bottom wall sloping downwardly away from said main channel, a ridge on the coin receiving face of said bottom wall extending longitudinally of said bottom wall, a third portion of said sheet extending below said second portion forming with a portion of a side wall of said housing a substantially vertical chute section for said discharged coins, a fourth portion of said sheet shielding said device from said discharged coins, the lower edge of said shield portion forming with said bottom wall a coin opening of increasing size in a direction away from said main channel.

STANLEY T. CURRAN.