June 11, 1929. C. H. WHEELER 1,717,079

COIN COLLECTION APPARATUS

Filed June 8, 1927 2 Sheets-Sheet 1

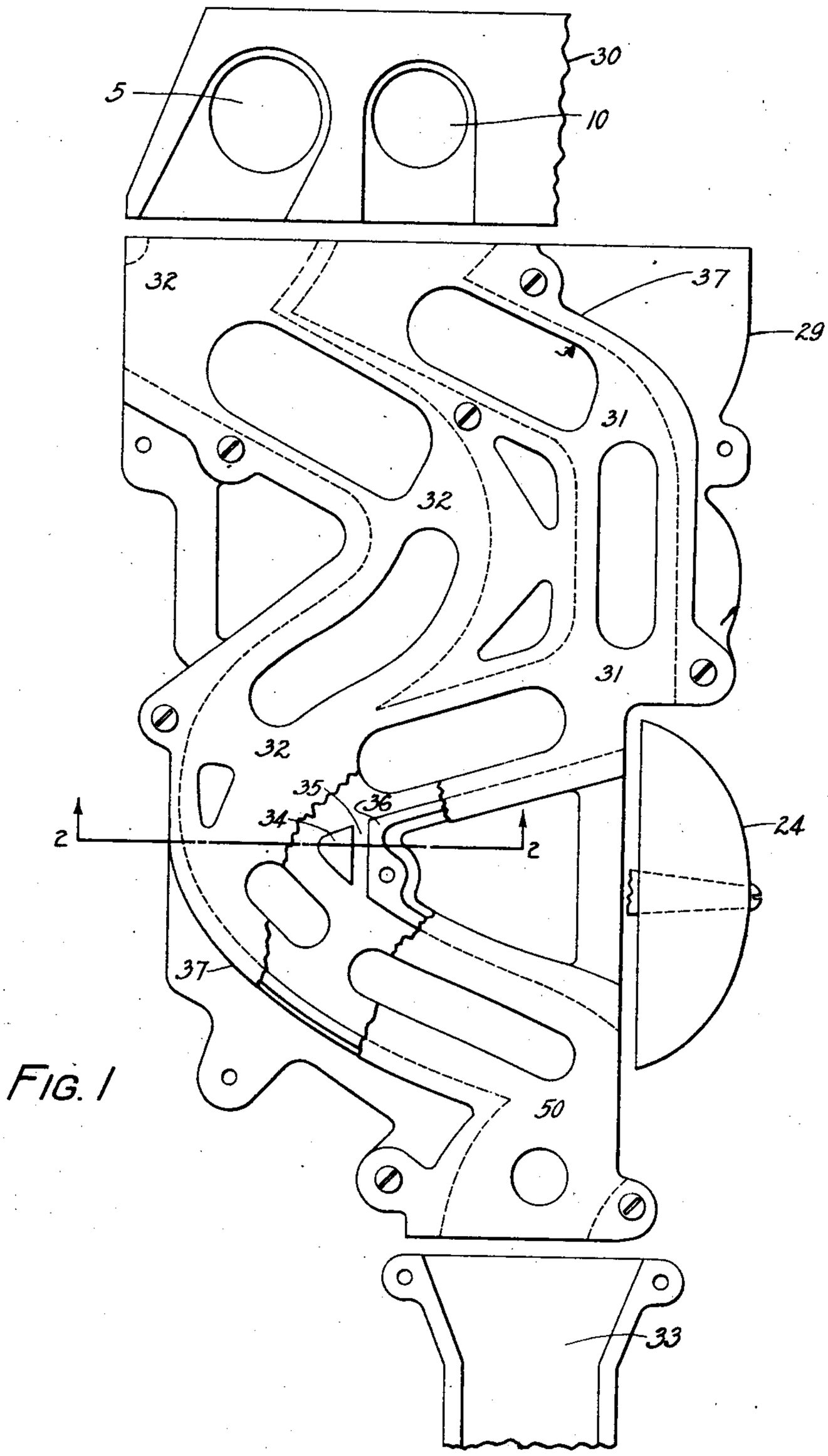

FIG. 1

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FIG. 2

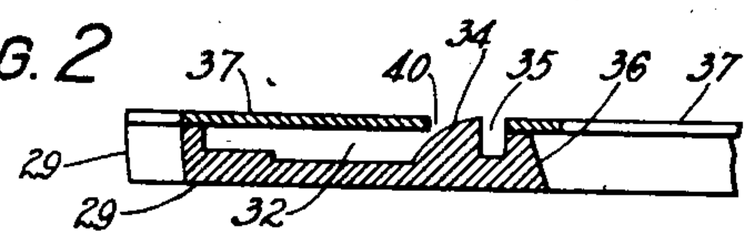


FIG. 3

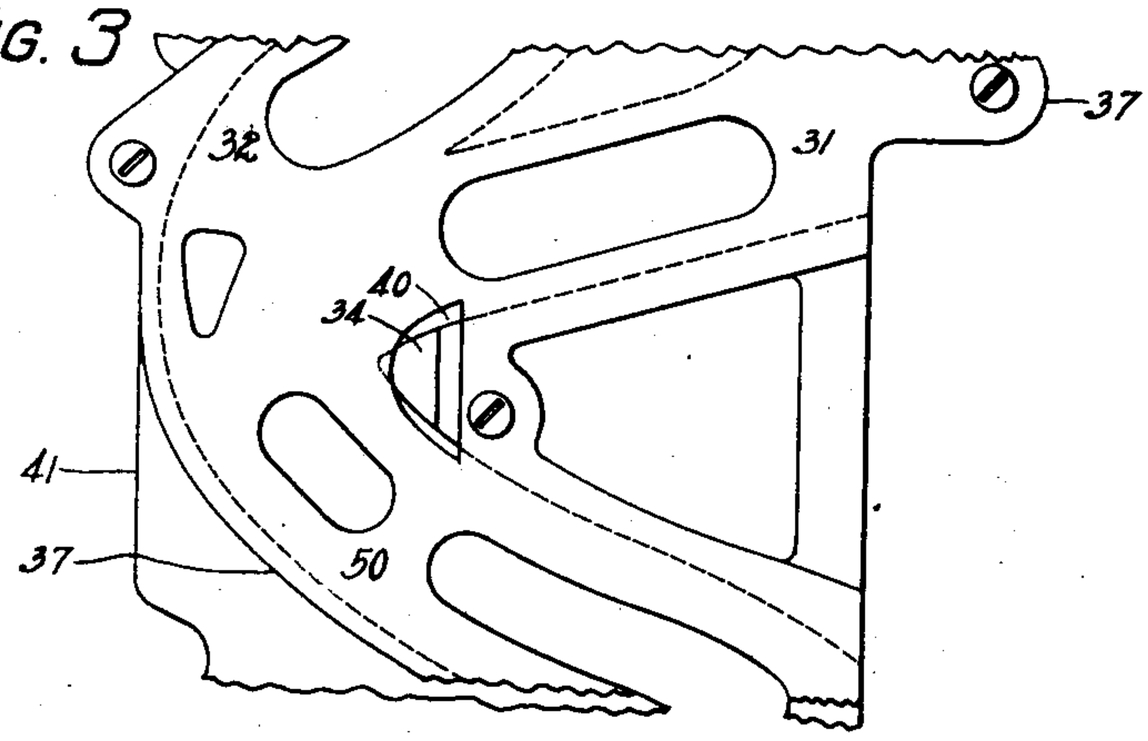
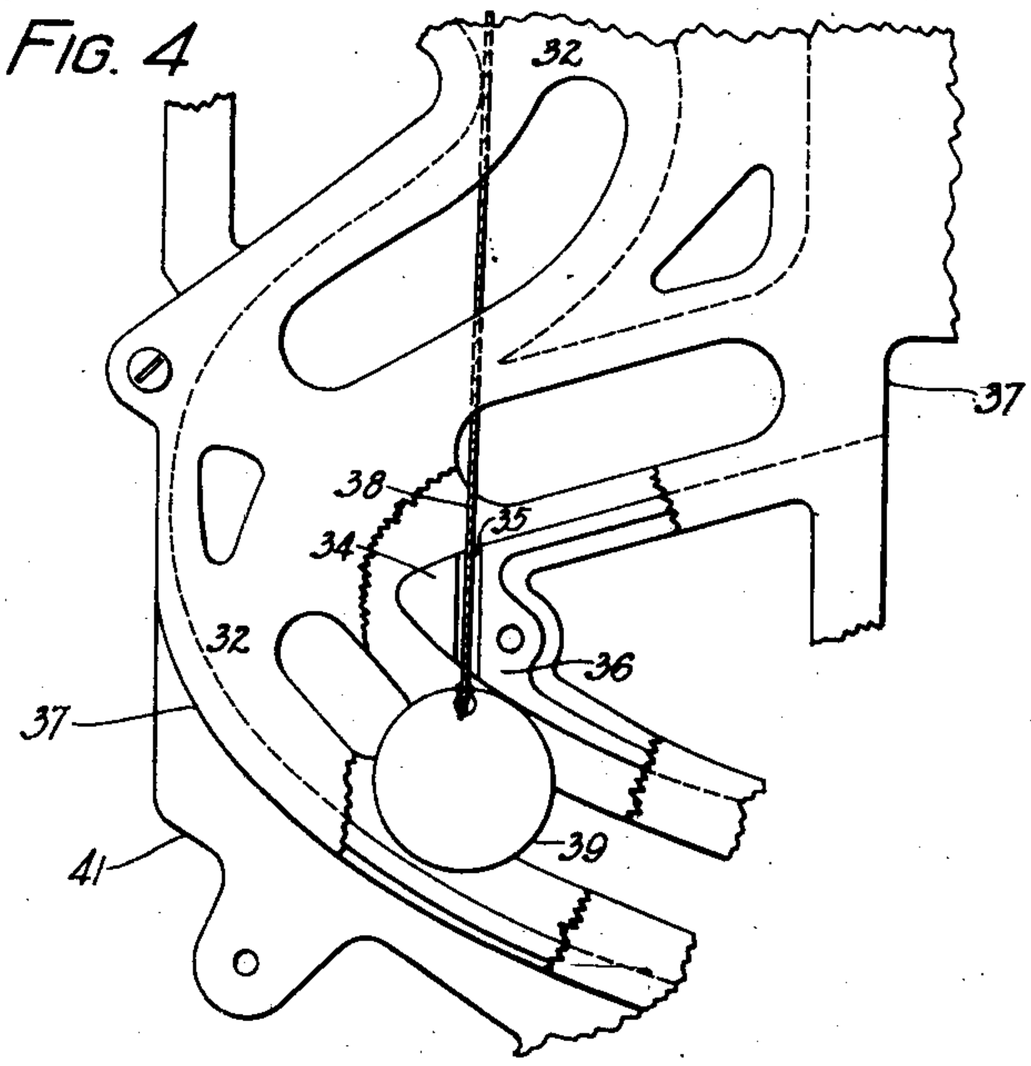


FIG. 4



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UNITED STATES PATENT OFFICE.

CLYDE H. WHEELER, OF MIDLAND PARK BOROUGH, NEW JERSEY, ASSIGNOR TO BELL TELEPHONE LABORATORIES, INCORPORATED, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

COIN-COLLECTION APPARATUS.

Application filed June 8, 1927. Serial No. 197,379.

This invention relates to coin collection apparatus in which a coin is deposited for the use of an instrument or for the purchase of services or supplies from a vending device.

More particularly the invention relates to telephone toll apparatus such as that described in Patent No. 1,043,219 to O. F. Forsberg, patented November 5, 1912, where one or more coins are deposited for the use of a telephone instrument, the deposited coins indicating to a telephone operator the fact that they have been deposited. This type of apparatus is incorporated in what are known as telephone pay stations.

The object of the invention is to prevent fraudulent operation of coin collecting apparatus.

A common form of signaling apparatus used in connection with telephone pay stations or the like includes a coin chute in which slots are formed and along which the deposited coins travel and are guided to signal devices that are sounded or operated by the impact of the coin, or otherwise.

This invention provides an improved trap in a coin chute which will prevent the withdrawal of a coin by means of a string attached thereto after it has passed far enough through the chute to operate the signal.

Referring now to the drawings,

Fig. 1 shows a front view of the coin chute, a coin gauge for receiving coins of two different sizes, a signaling device and a portion of a hopper or coin receptacle,

Fig. 2 is a sectional view along the line 2—2 of Fig. 1 looking in the direction of the arrows,

Fig. 3 shows a front view of the trap with the cover of the coin chute in place,

Fig. 4 is a view of the trap showing how a coin with a string attached is prevented from being withdrawn.

The location and method of use of the coin chute and its cooperating apparatus are readily understood to those acquainted with the art and for the purpose of clearness in the description and illustration of the invention only such apparatus is shown as is necessary for a clear conception of the invention.

Referring now to the drawings, the coin chute, shown in Fig. 1 comprises a member 29 having two channels or slots 32 and 31 at one end which merge into a common channel 50 at the other end, and a cover 37. Above the coin chute 29 is a coin gauge 30. Coin slots 5 and 10 are provided therein into which coins of various sizes or denominations may be deposited. 24 is a gong used for signaling purposes. A portion of a hopper for receiving deposited coins is shown at 33. A portion of the cover 37 of the coin chute is shown cut away to present a view of parts of the trap.

Fig. 2 shows a sectional view of the trap which comprises in conjunction with the cover 37, a sloped beveled projection 34, a groove or auxiliary slot 35 and a shoulder 36. An opening 40 is provided in the cover 37 into which a portion of projection 34 extends, said opening being sufficient to permit a string or thread to slip between the cover 37 and the projection 34 over into the groove 35. The projection 34 is preferably integral with the channeled member 29, although it need not necessarily be so, and it slopes from the bottom of the channel 32 up to a height greater than the depth of the channel. Near its highest point projection 34 forms one of the walls of the groove 35, the cover 37 cooperating with the shoulder 36 to form the other wall of the groove.

The invention is not limited to the specific embodiment shown herein but it may assume other forms as well. For example, the cover 37 may be made thicker than shown with the portion just above projection 34 hollowed to allow the projection to extend to the required height.

In Fig. 3 the cover 37 is shown in position over portions of the trap. The slots 31, 32 and 50 are shown by dotted lines as in Fig. 1.

It will now be explained how the trap functions. Suppose for example that a coin attached to a string is inserted in coin slot 5 of Fig. 1. The coin by force of gravity will travel along slot 32 past the projection 34, into slot 50 and will strike the lower portion of the gong 24 thus giving a signal to the operator that a coin has been deposited. Up to the time that the coin has struck the gong 24 the attached string has followed the coin along through the channel 32. After the signal has been given and the purpose for which it has been inserted fulfilled, suppose that the person who inserted the coin attempts to withdraw it. Since the coin is at this time at or near the lower portion of

channel 32 and almost has or perhaps has entered the upper portion of trapper 33 it is obvious that when an attempt is made to pull back the string, it will be forced against the projection 34 and as the string is pulled taut it will slide up projection 34 and into groove 35. Referring now to Fig. 4, upon further withdrawal of the string 38 which is now in groove 35, the coin 39 is caught against the lower portion of shoulder 36 and projection 34. Due to the fact that projection 34 has a height greater than the depth of the channel 32 and that the walls of the slot 35 are straight as shown by Fig. 2, it is not possible by alternately slackening and tugging the string to throw the string out of the slot and back into the channel. If the projection 34 had a height equal to or less than the depth of the channel 32 it would be possible by slackening and tugging the string to throw it out of the slot into the channel and then to withdraw the coin.

While, for the purpose of illustration, the trap has been shown at the point where slots 31 and 32 merge into slot 50, it will be understood that one or more of such traps may be placed at other portions of each of the slots 31 and 32.

Although the word "string" has been used in the description and claims it will be understood that this invention is not to be limited to the prevention of withdrawal of coins by a string only, but that it will prevent the fraudulent operation by means of strings, cords, wires, threads or the like.

While there is shown and described herein a certain form of the invention by way of illustration, it is understood that it is not limited or confined to the precise details of construction herein described and delineated as modifications and variations may be made within the scope of the claims without departing from the spirit of the invention.

What is claimed is:

1. In a coin collecting device, the combination of a slot into which coins are placed, a signaling device projecting into said slot and adapted to be operated by a coin in its passage over said slot, and a trap to prevent the recovery of the coin, said trap comprising an auxiliary slot adjacent the coin slot, and a projection separating the coin slot and the auxiliary slot, the height of the projection being greater than the depth of the coin slot.

2. In a coin collecting device, the combination of a coin slot comprising a channeled member over which deposited coins travel and a cover therefor, a signaling device adapted to be operated by a coin in its travel over the slot, and a trap for preventing the retraction of coins comprising a groove in said channeled member adjacent said coin slot, an opening in said cover and a projection on said channeled member between said slot and said groove, said projection extending up into the opening in said cover.

3. A coin chute for collecting coins comprising a curved coin channel through which a deposited coin travels, having a slotted opening adjacent thereto for confining a string attached to a deposited coin and having a sloped projection for guiding said string into said opening, said projection forming a portion of a wall of said channel and having a height greater than the depth of said channel.

4. A coin chute for collecting coins comprising a curved coin channel through which a deposited coin travels, having a slotted opening therein for confining a string attached to a deposited coin and a sloped projection for guiding said string into said opening, said projection forming a portion of a wall of said channel and extending from the inner wall of said channel to a height greater than the depth of said channel and forming one wall of said opening.

5. A coin chute for collecting coins comprising a plurality of curved coin channels through which deposited coins travel, said channels combining at their lower portions to form one channel, a slot opening into said one channel for confining a string attached to a deposited coin and a sloped projection located at the junction point of said channels for guiding said string into said slot, said projection having a height greater than the depth of said one channel.

6. A trap in a coin chute comprising a curved channel through which a coin travels to operate a signal, comprising a sloped projection and a slot, said projection having a height greater than the depth of said channel, whereby if a string is attached to said coin for the purpose of withdrawing it after the signal has been operated, said string, on an attempt to withdraw said coin, is forced into said slot and said coin is caught by said trap.

7. In combination, a coin chute for collecting coins, comprising a curved channel through which a deposited coin travels to operate a device and a trap for preventing the withdrawal of a coin by an attached string after the operation of said device, said trap comprising a sloped shoulder and a slot, said shoulder having a height greater than the depth of said channel and being sloped on one side to cause said string to slip from said channel to said slot on an attempt to withdraw said coin and forming a vertical wall of said slot on the other side to prevent said string from being thrown from said slot back into said channel.

In witness whereof, I hereunto subscribe my name this 7th day of June A. D., 1927.

CLYDE H. WHEELER.