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COIN COLLECTOR APPARATUS

2,041,888

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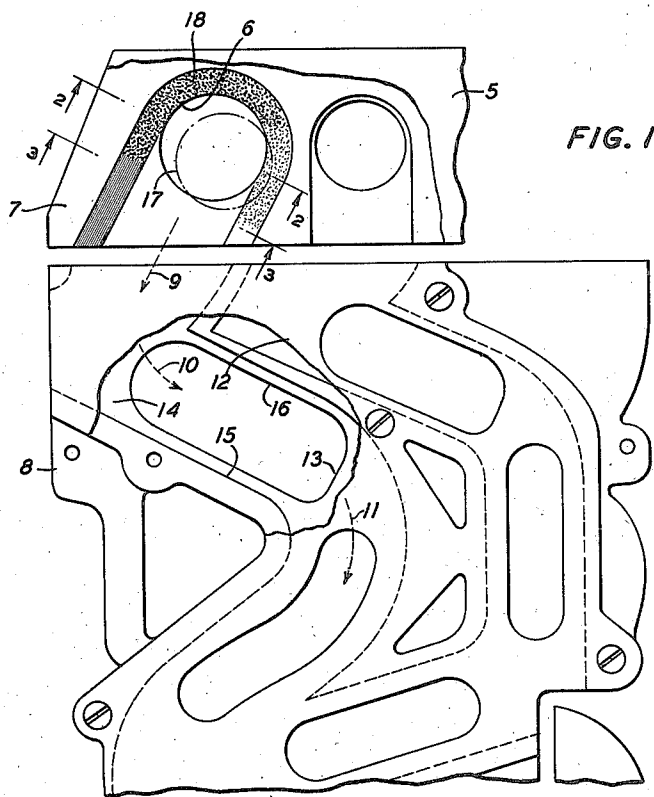


FIG. 1

FIG. 2

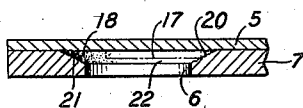


FIG. 3

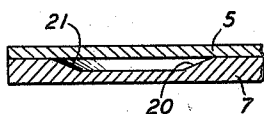
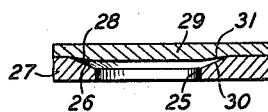


FIG. 4



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COIN COLLECTOR APPARATUS

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3 Claims. (Cl. 194—97)

This invention relates to coin chutes particularly coin gauges such as used in coin operated machines for receiving deposited coins.

In coin operated machines such as telephone coin collectors it is customary to provide a coin gauge having one or more openings into which a coin may be inserted, each entrance leading to a coin channel for testing the size of the coin before the coin is finally deposited in a cash compartment. Unscrupulous persons occasionally attempt to give a non-standard coin such initial linear or rotational velocity that the coin will traverse the testing region of the coin channel without being rejected as non-standard.

An object of the present invention is to provide a coin entrance gauge which will serve to prevent the depositor from manipulating the coin in such a fashion as to cause the coin to be accepted even though non-standard.

The above mentioned fraudulent practice is occasionally encountered in telephone coin collectors of the type disclosed in O. F. Forsberg U. S. Patent 1,043,219, issued November 5, 1912, wherein the upper part of the housing has a coin entrance gauge from which a deposited coin by gravity follows a laterally and longitudinally inclined coin channel having a side wall opening for rejecting under-diameter coins. Thus, a person could place a penny in the five-cent coin gauge and while holding the penny in the gauge against one side wall of the coin gauge opening impart a spinning motion to the coin in the hope that the centrifugal force imparted to the coin will prevent it from tipping and falling out while passing the reject opening for under-diameter coins.

In accordance with this invention this method of "beating" is overcome by providing in each side wall of the coin gauge a tapered groove in which the penny or other under-diameter coin will wedge when the spinning force is applied, thereby reducing the maximum rotational velocity which could be imparted to the coin to a very low or negligible value. The tapered groove, however, does not interfere in any way with the deposit or passage of a legitimate coin.

Referring to the drawing,

Fig. 1 shows a fragmentary front view of a coin gauge and coin chute of a coin collector;

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

Fig. 3 is a sectional view along the line 3—3 of Fig. 1; and

Fig. 4 is a sectional view of an alternative form of the invention.

For purposes of illustration, this invention will be described in connection with the type of coin gauge and coin chute for a telephone coin collector disclosed in the O. F. Forsberg U. S. Patent No. 1,043,219, issued November 5, 1912. The cover 5 of the coin gauge has been partially removed to disclose an opening 6 on the opposite side through which a five-cent piece may be deposited to allow the coin to drop through a slot between front wall 7 and cover 5, to follow a coin channel through the gauge and through coin chute 8, along a path indicated by arrows 9, 10, and 11, to strike a gong (not shown) and be subsequently collected or refunded, depending upon whether the desired telephone connection is obtained. The chute 8 is usually laterally inclined and the cover 12 is shown broken away to disclose an elongated opening 13 in the lower wall 14 through which coins of a diameter smaller than a five-cent piece will be ejected from the chute before the signal gong has been reached. The line 15 indicates the ledge on which the coin rides, opening 13 being designed so that its upper rail 16 will support a five-cent piece but will not support a coin of smaller diameter and will allow such a coin to fall through the opening 13.

Fraudulent attempts are occasionally made to have a penny successfully pass reject opening 13 by imparting a spinning motion to the coin to try to reach the condition that the centrifugal force imparted to the coin will prevent the penny from tilting and falling out while passing the reject opening. In attempting such practice, the penny is inserted in the opening 6 in the coin gauge and the spinning motion is imparted to the coin while pressing one edge of the penny against a side wall of the slot, the penny being held in a position such as shown by the dotted circle 17 of Fig. 1.

Heretofore, the side walls of the slot beginning at the coin opening 6 and extending downwardly towards chute 8 have been at right angles to the front and rear walls of the slot, thereby affording a satisfactory ledge against which the penny could be pressed to get the desired leverage for the spinning motion.

In accordance with this invention, the side walls of the coin slot in the coin gauge are tapered so that any attempt to press the penny against an end wall of the slot will cause the edge of the penny to become wedged in the tapered portion of the slot. With the coin wedged in such a manner, it will be practically impossible to spin the penny, and hence, it will be impossible to impart sufficient centrifugal force to the

penny to defeat its rejection when passing opening 13. However, this tapered arrangement of the side walls of the slot in the coin gauge will not interfere with the functioning of the gauge for a coin inserted in opening 6 in the normal manner.

The new construction of the coin gauge slot will be better understood by reference to the sectional views shown in Figs. 2 and 3. Fig. 2 shows the coin opening 6 in plate 7 opposite the cover plate 5. The side walls 20 and 21 of the coin slot 22 are not at right angles to the inside face of cover 5 but are angularly disposed to provide a slot of gradually decreasing width beginning at or near the edge of coin opening 6 until the width of the slot is considerably less than the thickness of a penny. This is illustrated by the penny 17 in Fig. 2 which is shown pressed into the tapered portion of the slot defined by wall 21. The tapered walls 20, 21 should extend at least a short distance below coin opening 6 as shown in the sectional view of Fig. 3. In the form shown in Fig. 1, the tapered section extends the full length of the coin slot in the coin gauge beginning above coin opening 6. By examining Fig. 2, it will be apparent that it will be extremely difficult to impart any substantial spinning motion to the penny because of the penny becoming wedged in the above-described manner.

If desired, the tapered side walls 20, 21 as well as the opposed portions of plate 5 may be ridged, knurled or otherwise roughened as shown at the points 18 to provide additional friction, effective particularly against the face of the coin when the coin is forced against the back plate 5.

In Figs. 1 to 3, it is assumed that the tapered coin passage in the coin gauge is due entirely to the sloping side walls of plate 7, but if desired, both the front and rear walls may be sloped to provide a V-shaped slot region on either side of a coin slot of constant width. Thus, in Fig. 4, the tapered slot portion on one side of coin opening 25 is due to sloping wall 26 of plate 27 and sloping wall 28 of plate 29, while the tapered slot portion on the other side of the coin opening is due to sloping wall 30 of plate 27 and sloping wall 31 of plate 29.

It is, of course, to be understood that this invention may possess other embodiments coming within the scope of the appended claims.

What is claimed is:

1. In a coin collector, a coin channel defined by a front wall, a back wall and opposed side walls, said front wall having an opening therein to permit a standard coin to be inserted in said channel, one of said side walls adjacent said opening being angularly disposed with respect to one of the other walls to form a tapered slot which the edge of the coin will engage when thrust in a direction substantially at right angles to its normal path of travel in the channel, and thereby cause a binding effect which will prevent the coin from being started along said channel with a spinning movement when the coin is thrust towards said slot.

2. In a coin collector, a coin channel having a front wall and a back wall, said front wall having an opening to permit a standard coin to be inserted in said channel, and means in said channel immediately adjacent said opening forming a tapered slot which the edge of the coin will engage when thrust in a direction substantially at right angles to its normal path of travel in the channel.

3. In a coin collector housing, a coin channel defined by a front wall, a rear wall and opposed rigid side walls, said front wall having a circular opening therein slightly greater in diameter than the diameter of a standard coin to permit a standard coin to be inserted into said channel, said opening being accessible from outside said housing, said channel defining a coin path which is substantially vertical for a certain distance below said opening and which is subsequently laterally and longitudinally inclined, said laterally and longitudinally inclined portion having an opening for rejecting under-diameter coins, said side walls immediately adjacent said first opening being angularly disposed with respect to said front wall to form a tapered slot which the edge of the coin will engage when thrust in a direction substantially at right angles to its normal path of travel in the channel.

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