

Aug. 31, 1937.

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2,091,556

COIN CHUTE FOR COIN COLLECTORS

Original Filed June 16, 1936

FIG. 2

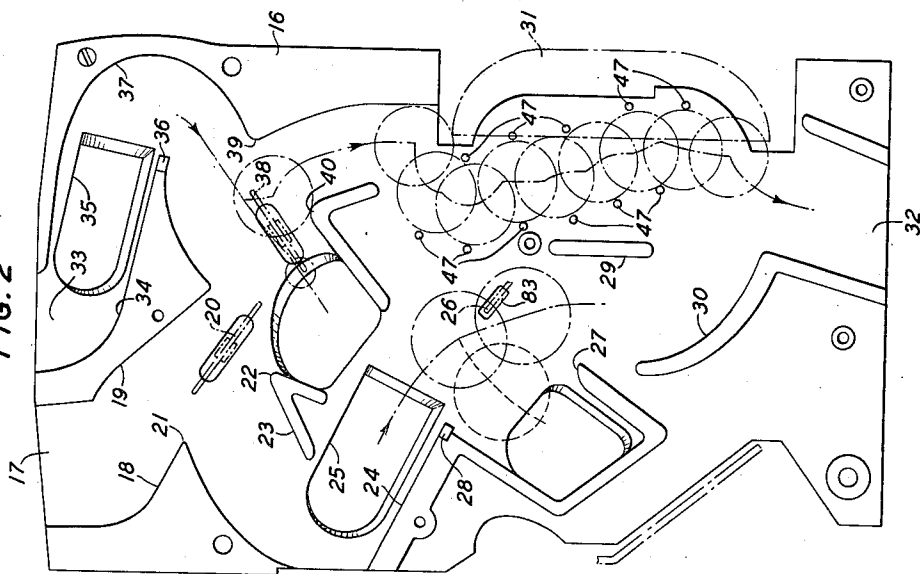


FIG. 1

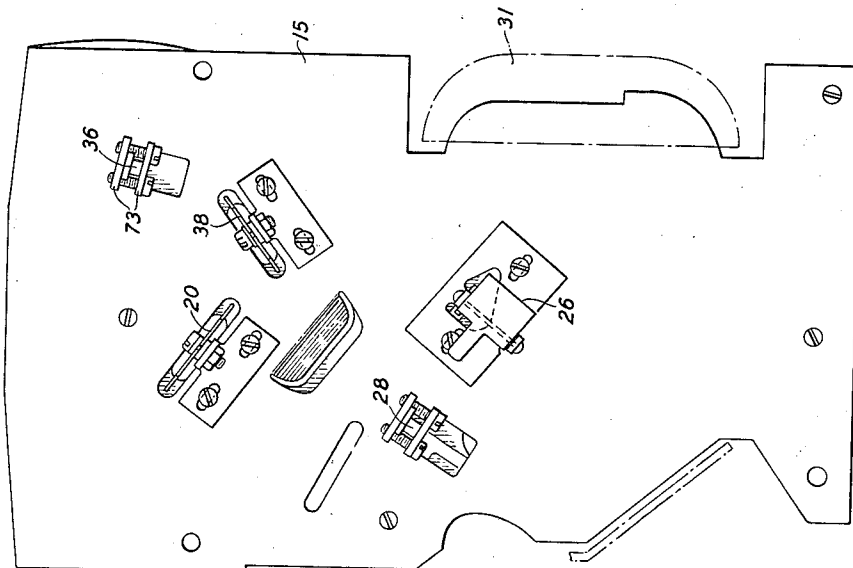
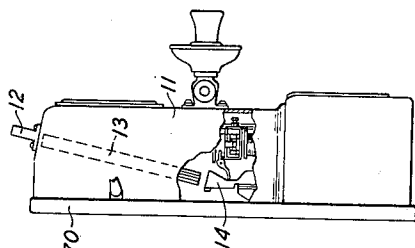


FIG. 3



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2,091,556

COIN CHUTE FOR COIN COLLECTORS

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Original application June 16, 1936, Serial No. 85,448. Divided and this application October 10, 1936, Serial No. 104,973

2 Claims. (Cl. 194—96)

This invention relates to coin chutes, particularly to those intended for use in coin operated apparatus such as telephone coin collectors.

An object of this invention is to slow up the speed of coin travel in a coin chute in order to provide the proper time interval between successive operations by the same coin.

The primary object of this invention is concerned with the problem of obtaining the proper time interval between two successive control operations of the same coin traversing a coin channel while still utilizing a relatively short length of coin channel between the two control points. This feature of the invention is of particular importance in telephone coin collector coin chutes where it is desired to have a coin strike both the upper and lower portions of a gong or bell. It is necessary to insure that there is a substantial time interval between the two successive strikings of the bell in order that the central office may properly interpret the double signal. In accordance with this invention the coin channel which guides the coin from the upper edge to the lower edge of the bell is defined by two rows of spaced pins or posts connecting the two plates forming the front and rear walls of the chute. The arrangement of the pins is such as to cause the coin under the action of gravity to bounce back and forth in a zigzag fashion from one row to the other and, therefore, introduce a considerable delay in the time of coin travel as compared with a smooth coin channel of the same length.

This application constitutes a division of my patent application Serial No. 85,448, filed June 16, 1936, on Coin chutes for coin collectors.

Referring to the drawing:

Fig. 1 is a rear view of a coin chute assembly;

Fig. 2 is a rear view of the center plate of the coin chute embodying this invention; and

Fig. 3 illustrates the general manner of mounting a coin chute in a telephone coin collector.

The coin collector coin chute illustrated in the attached drawing is, in general, of the conventional type in that it comprises front, center and rear plates suitably fastened together with a quarter runway between the front and center plates, and nickel and dime runways between the rear and center plates conforming in general construction to the type of coin chute disclosed in the O. F. Forsberg United States Patent 1,043,219, issued November 5, 1912. The manner in which the coin chute is mounted in a laterally inclined position within a telephone coin collector 11 is shown in Fig. 3. The coin gauge 12 on top of the collector 11 has separate openings for receiving

nickels, dimes and quarters and individual runways for these coins are provided in the coin chute 13 in order that the coins may be tested in certain particulars before dropping into a coin hopper 14.

Fig. 1 shows the rear view of a coin chute assembly. The rear cover plate 15 of Fig. 1 has been removed in Fig. 2 to show the nickel and dime runways formed in the rear side of the center plate 16. Referring more particularly to Fig. 2 the coin entrance for nickels is at the point 17 whereupon the genuine coin follows a longitudinally inclined passage between walls 18 and 19 until the coin strikes an arm of a washer rejector 20 which prevents the coin from continuing further in the same direction and causes the coin to drop through an opening in the bottom wall between the points 21 and 22 whereupon it is guided in the reverse direction by bottom wall 23. After reaching the lower end of bottom wall 23 the coin drops onto the bottom wall 24 and passes alongside the under-diameter reject opening 25 of the usual type. The coin after rolling off the lower end of wall 24 strikes a pivoted arm 26 which normally projects into the runway for deflecting lightweight coins into a discharge opening located between projection 27 and the pole 28 of a magnet forming the termination of wall 24. However, a genuine coin has sufficient momentum to knock arm 26 outside the runway and continue to the right of projection 27 down a passage between walls 29 and 30 to strike the lower edge of gong 31 and then down through outlet opening 32 into the coin hopper 14 of Fig. 3.

The entrance for a dime is at the point 33 and the deposited dime rolls along bottom wall 34 past a suitable under-diameter reject opening 35. The lower end of wall 34 comprises a pole 36 of a straight bar magnet for deflecting magnetic coins. The direction of travel of the dime is reversed by curved wall 37 and the dime then encounters an arm of a star wheel washer rejector 38 which stops the dime from continuing on in the same direction, and allows the coin to drop through an opening in the bottom wall of the runway between the points 39 and 40 whereupon the coin strikes the upper edge of the bell 31. After striking the bell the dime continues down a channel between two rows of pins 41. Adjacent pins in each row are spaced apart a distance substantially less than the coin diameter to prevent a coin from leaving the channel. The two rows of pins are spaced relatively close together to prevent a coin from dropping freely down the channel between the rows and the pins in the two rows are staggered.

Since the channel defined by pins positioned in this staggered manner is tortuous it follows that the coin bounces back and forth in a zigzag course between the pins until it strikes the lower edge of the bell and drops out through the exit opening 32 into the coin hopper 14 of Fig. 3. This irregular course of the dime considerably increases the time for the dime to travel from the upper edge to the lower edge of bell 31 and, therefore, insures that the two successive strikings of the bell will be correctly heard by the remote operator. These pins 47 may be of any suitable metal or may comprise metallic pins surrounded by bushings of rubber or other resilient material to further delay the passage of the coin through the channel.

The washer rejector 20 for the nickel runway and the washer rejector 38 for the dime runway are described and claimed in the copending application Serial No. 85,448, filed June 16, 1936. The lightweight slug rejector 26 located in the nickel runway is described and claimed in my copending application Serial No. 104,972, filed October 10, 1936.

It is to be understood that the tortuous path disclosed in Fig. 2 for the dime runway may be

employed, if desired, in runways for other standard coins.

What is claimed is:

1. In a coin operated mechanism, a signaling device comprising a bell, a coin channel having an opening to permit a deposited coin to strike the upper edge of said bell and having a second opening farther down the channel to permit the deposited coin to strike the lower edge of said bell, said channel between said opening comprising front and rear side walls, two rows of spaced pins between said walls defining the path of coin travel, the said pins being so located that a substantial part of the coin path between said openings is within said bell, said rows being spaced relatively close together while still permitting a standard coin to pass between said rows, the distance between adjacent pins in the same row being substantially less than the diameter of a standard coin, said rows being steeply inclined and defining a tortuous channel.

2. A coin operated mechanism in accordance with claim 1 in which said pins comprise resilient material at the points of coin impact.

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