

Feb. 18, 1930.

F. A. HOYT

1,747,244

COIN COLLECTION APPARATUS

Filed Jan. 26, 1929

2 Sheets-Sheet 1

FIG. 1

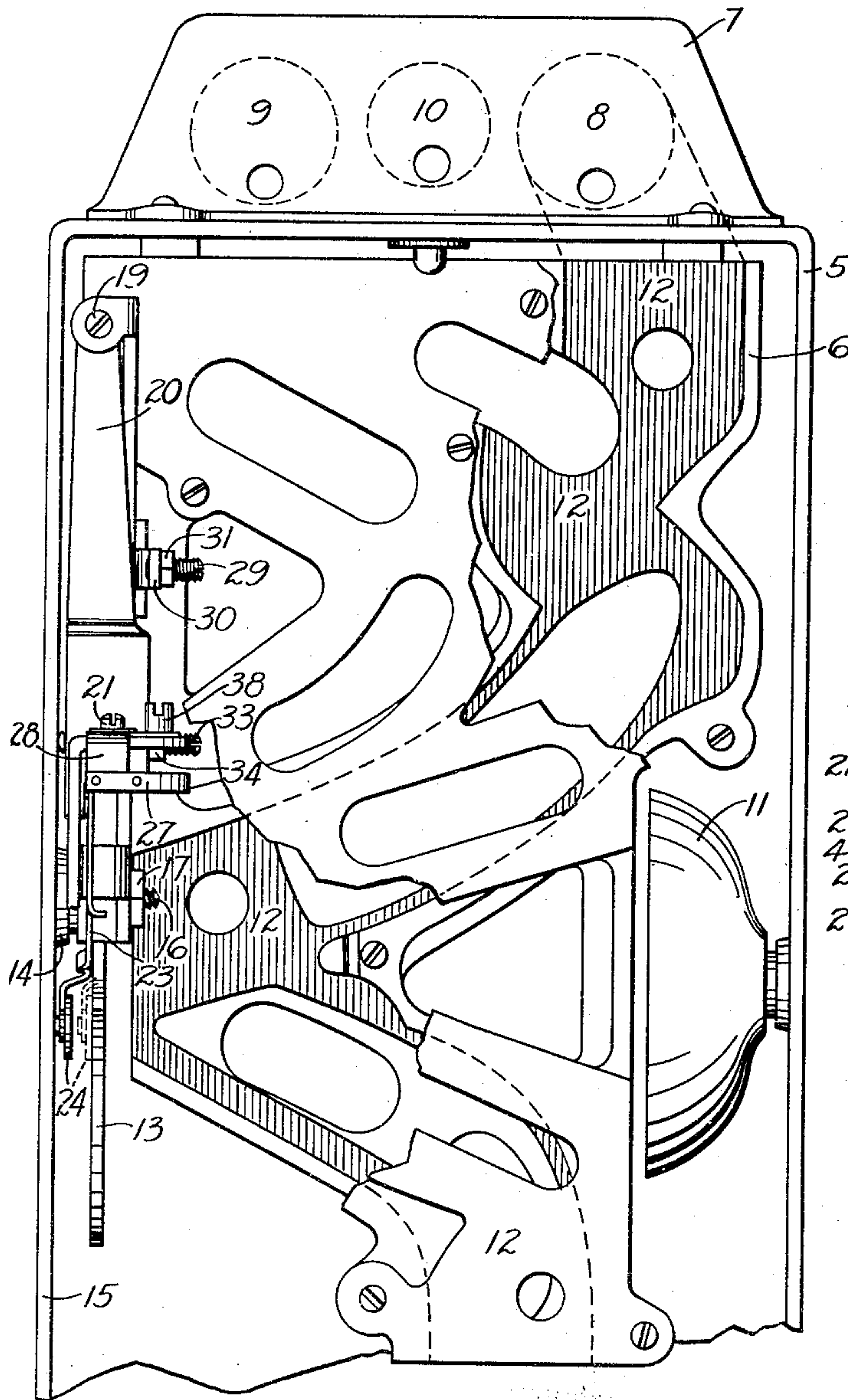
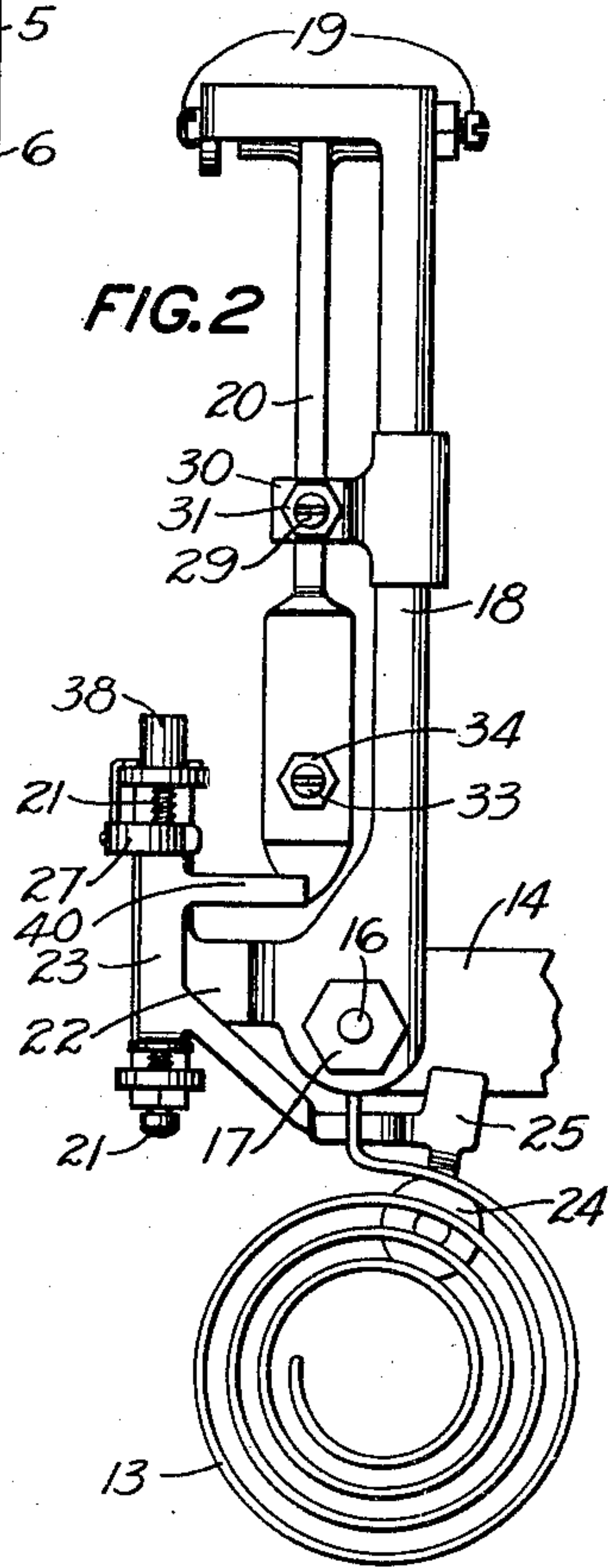


FIG. 2



INVENTOR
F. A. HOYT

BY

Walter C. Kiesel

ATTORNEY

Feb. 18, 1930.

F. A. HOYT

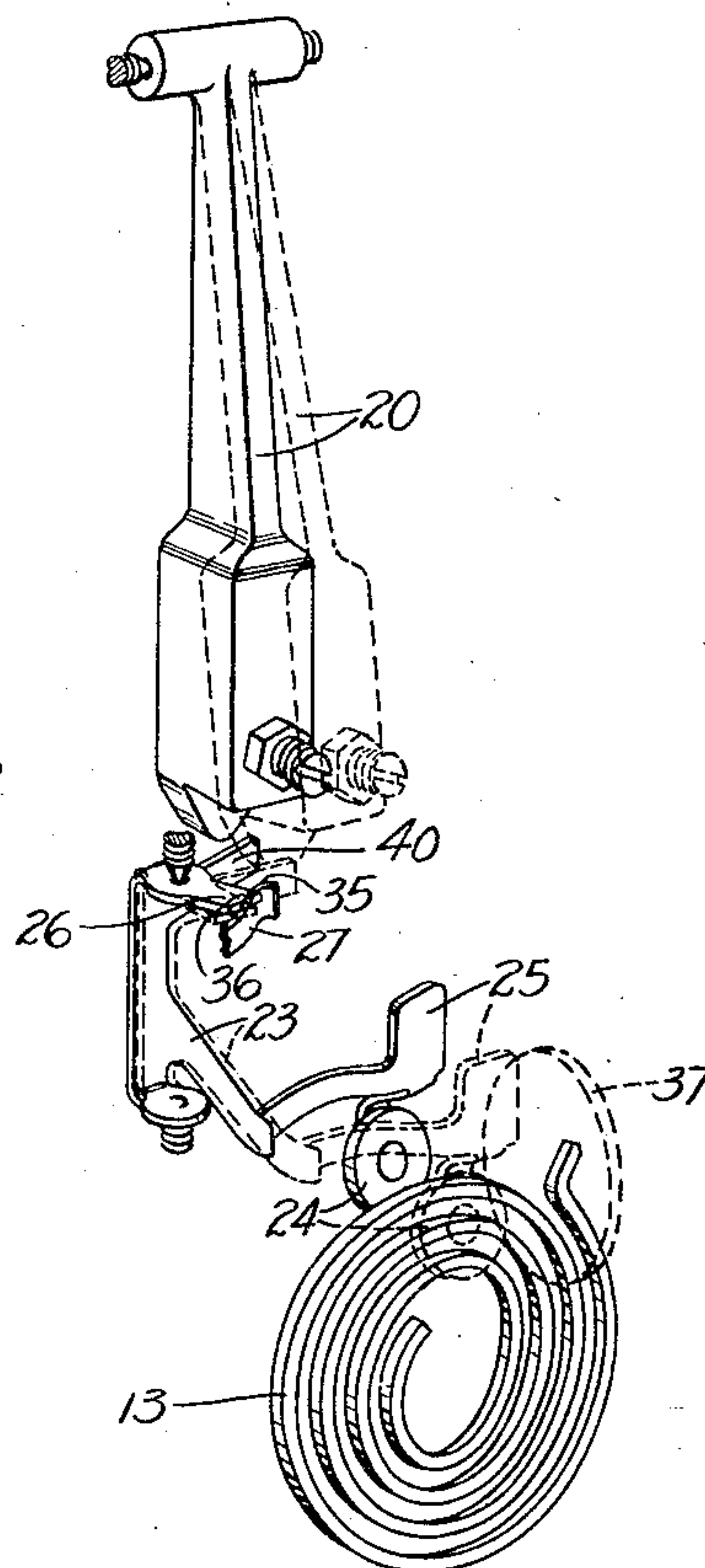
1,747,244

COIN COLLECTION APPARATUS

Filed Jan. 26, 1929

2 Sheets-Sheet 2

FIG. 3



BY

INVENTOR
F. A. HOYT

Walter C. Kiesel
ATTORNEY

UNITED STATES PATENT OFFICE

FREDERICK A. HOYT, OF BLOOMFIELD, NEW JERSEY, ASSIGNOR TO BELL TELEPHONE LABORATORIES, INCORPORATED, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

COIN-COLLECTION APPARATUS

Application filed January 26, 1929. Serial No. 335,251.

This invention relates to coin collection apparatus in which a coin or token is deposited for the use of an instrument.

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 through the instrumentality of a signal, the fact that they have been deposited. This type of apparatus is incorporated in what are known as telephone pay stations.

A common form of signaling apparatus used in connection with telephone pay stations or the like includes a coin chute in which channels are formed and along which the deposited coins travel and are guided to a signal device that is sounded by the impact of the coin. The signal device ordinarily consists of a gong which is attached directly to the inner wall of the housing which contains the telephone apparatus. Attached to the outer wall of the housing is the microphone transmitter through which the signal made by a deposited coin is transmitted to the telephone operator. When a coin is deposited it travels along the coin chute and strikes the signal gong causing it to vibrate. The vibrations of the gong travel through the supporting housing to the transmitter.

The object of this invention is to prevent the fraudulent transmission of a signal to the telephone operator.

In accordance with this invention means is provided for the prevention of the vibrating of the signal gong by blows struck on the outside of the supporting housing. A weighted pendulum member is attached to the inner wall of the housing adjacent the signal gong. A blow on the outside of the housing causes the pendulum member to swing against a lever which carries a felt pad, causing the felt pad to bear against the signal gong thus so damping the gong that its vibrations are restrained. The damping lever is so arranged that a deposited coin moves it away from the signal gong on its travel towards the gong thus permitting the

coin to signal the operator in the ordinary manner.

Referring now to the drawings, Fig. 1 is a back view of a coin collection device embodying this invention, with a portion of the cover of the coin chute removed to show the channel through which a coin travels to actuate one of the signals.

Fig. 2 is a view of the signal adapted to be operated by a coin traveling in the channel shown by Fig. 1 together with a damping device adapted to cooperate with the signal.

Fig. 3 is a perspective view of the signal gong and the apparatus for damping the gong and shows the apparatus in damped and undamped positions.

The metallic housing 5 has mounted therein the coin chute 6. On the upper portion of the housing 5 is the coin gauge 7 in which coin slots 8, 9 and 10 (shown in dotted outline) are provided for the reception of coins of various sizes or denominations. For example, the slot 8 is adapted to gauge and receive a twenty-five cent coin, the slot 9 is adapted to receive a five-cent coin and the slot 10 is adapted to receive a ten-cent coin. The chute 6 has channels formed therein to guide the coins deposited in the coin gauge 7 to operate their proper signals. The five-cent and ten-cent coins deposited in slots 9 and 10 respectively drop through openings (not shown) in the upper portion of the housing 5 and pass through their respective channels (not shown) in the chute 6 to strike the signal gong 11. A twenty-five cent coin deposited in slot 8 passes into the channel 12 in chute 6 and strikes the signal gong 13 after which it continues through the channel 12 and passes from the lower end of the chute 6 into a suitable container (not shown).

The signal gong 13 is secured to an extension 14 from the inner wall 15 of the housing 5 by means of the machine screw 16, one end of which is secured in the extension 14, and the nut 17.

The damping assembly supporting unit 18 is attached to the extension 14 from the housing 5 by the same screw 16 and nut 17 that support the signal gong 13. The unit 18 pivotally supports at its upper end by means of

the screws 19—19 the pendulum member 20. Pivotally supported by means of the screws 21—21 from the extension 22 on the supporting unit 18 is the damping member 23 which at its lower end adjacent the signal gong 13 supports the felt pad 24 and which just above the felt pad 24 has a lever portion 25 which, when the felt pad 24 is in contact with the signal gong 13, is adapted to extend into the path of the coin and be struck by a deposited coin to remove the felt pad 24 from against the signal gong 13. The lower pivot screw 21 and the lower portion of the damping member 23 are not shown in Fig. 1 for the purpose of more clearly illustrating the remainder of the damping assembly.

The damping member 23 has a cam member 26 thereon (shown in Fig. 3) which contacts with the spring 27. The lever portion 40 on the damping member 23 projects into the path of the lower portion of the pendulum member 20. The spring 27 is attached to the spring support 28 by means of the upper pivot screw 21 and the adjusting screw 28 (shown in Figs. 1 and 2). By turning the adjusting screw 38, the spring support 28 may be shifted to vary the point of contact the spring 27 makes with the cam 26.

The degree of travel of the pivoted pendulum member 20 is regulated by the adjusting screw 29 which is screwed into the extension 30 so that its inner end limits the travel of the pendulum member 20. The lock nut 31 locks the screw 29 in the desired position. The adjusting screw 33 screws into a threaded hole in and extends through the pendulum member 20, and its inner end by contacting with the inner wall 15 of the housing 5 limits the travel of the pendulum member 20 towards the inner wall 15 of the housing 5. The lock nut 34 serves to hold the screw 33 in its correct position.

The operation of the device will now be explained and this explanation will be more clearly understood by referring to Fig. 3. Normally the felt pad 24 is held away from the gong 13, as shown by the continuous line portion of Fig. 3, by the cam 26 contacting with the edge 35 of the spring 27. The pendulum member 20 is normally at rest with the inner end of the adjusting screw 33 in contact with the inner wall 15 of the housing 5 (shown by Fig. 1), and is out of contact with the damping member 23. A blow struck on the housing 5 will cause the lower portion of the pendulum member 20 to swing as shown by the dotted outlines against the lever 40 on the pivoted damping member 23 and forces the damping member 23 into the position shown by the dotted outlines with the felt pad 24 against the gong 13. When the damping member 23 is moved by the pendulum member 20 the cam 26 rides over the bent portion of the spring 27 and is held against the edge 36 of the spring 27. With the cam 26

thus held by the spring 27 the felt pad is held clamped against the gong 13 thus effectively damping any vibrations that may have been set up in the gong by the blow on the housing. The felt pad now remains held against the gong due to the cam 26 being held by the spring 27 until the proper coin is deposited in the slot 8, (shown by Fig. 1). Such a coin 37, shown in dotted outline in Fig. 3 prior to striking the gong 13, strikes the lever 25 on the damping member 23 (shown in dotted outline) and forces the damping member 23 with the felt pad 24 to its original normal position, the cam 26 riding over the bent portion of the spring 27 and coming to rest again against the edge 35 of the spring 27. The coin 37 then strikes the gong 13 which being undamped vibrates to give the signal to the operator in the ordinary manner.

What is claimed is:

1. A coin collection apparatus comprising a housing, a coin chute within said housing, a signal to be operated by coins deposited in said chute, means for preventing the operation of said signal through a blow on said housing, and means operated by a deposited coin for rendering said first means ineffective.

2. A coin collection apparatus comprising a housing, a coin chute within said housing, a signal to be vibrated by coins deposited within said chute, means for preventing the vibration of said signal through a blow on said housing, and means operated by a deposited coin for rendering said first means ineffective.

3. A coin collection apparatus comprising a housing, a coin chute within said housing, a signal to be vibrated by coins deposited within said chute, means for damping said signal against vibrations set up through a blow on said housing, and means operated by a deposited coin for removing the damping means from said signal.

4. A coin collection apparatus comprising a housing, a coin chute within said housing, a signal to be vibrated by coins deposited within said chute, a damping member for contacting with said signal, means for holding said damping member against said signal, a blow is struck on said housing, and a lever operated by a deposited coin for removing said damping member from said signal.

5. A coin collection apparatus comprising a housing, a coin chute within said housing, a signal to be vibrated by coins deposited within said chute, a damping member adjacent said signal, and means for causing said damping member to clamp against said signal when a blow is struck on said housing.

6. A coin collection apparatus comprising a housing, a coin chute within said housing, a signal to be vibrated by coins deposited within said chute, a damping member adja-

70

75

80

85

90

95

100

105

110

115

120

125

130

cent said signal and normally out of contact therewith, means actuated when a blow is struck on said housing to cause said damping member to engage and be held against said signal, and a lever operated by a deposited coin for disengaging said damping member from said signal.

7. A coin collection apparatus comprising a housing having therein a coin chute, a signal to be actuated by coins deposited therein, a damping member for said signal, means for causing said damping member to engage said signal when a blow is struck on said housing, means for holding said damping member in its damping position, and means actuated by a deposited coin for disengaging said damping member from said signal.

8. A coin collection apparatus comprising a housing having therein a coin chute, a signal actuated by coins deposited in said chute, a pivoted member, a damping member supported thereon, a pendulum movable when a blow is struck on said housing to cause said damping member to engage said signal, a spring associated with said pivoted member for holding said damping member in its damping position, and means actuated by a deposited coin for disengaging said damping member from said signal.

In witness whereof, I hereunto subscribe my name this 23rd day of January, 1929.

FREDERICK A. HOYT.

35

40

45

50

55

60

65