June 26, 1951 B. L. BYRD, JR 2,558,170

COIN-CONTROLLED GAME COUNTER

Filed March 17, 1948 3 Sheets-Sheet 1

Fig. 1

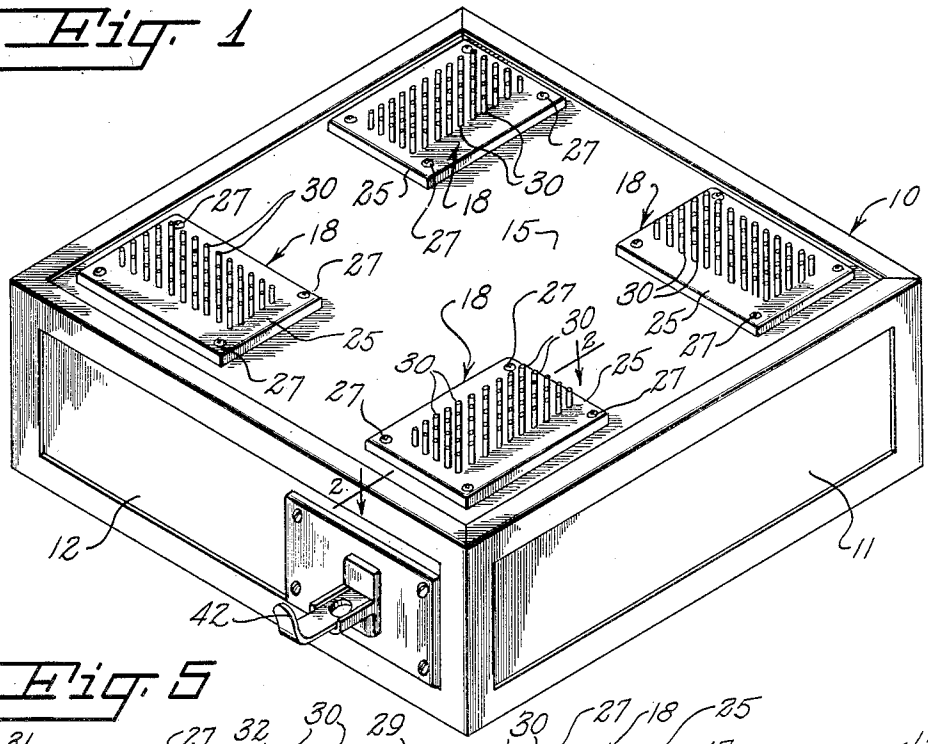

Fig. 5

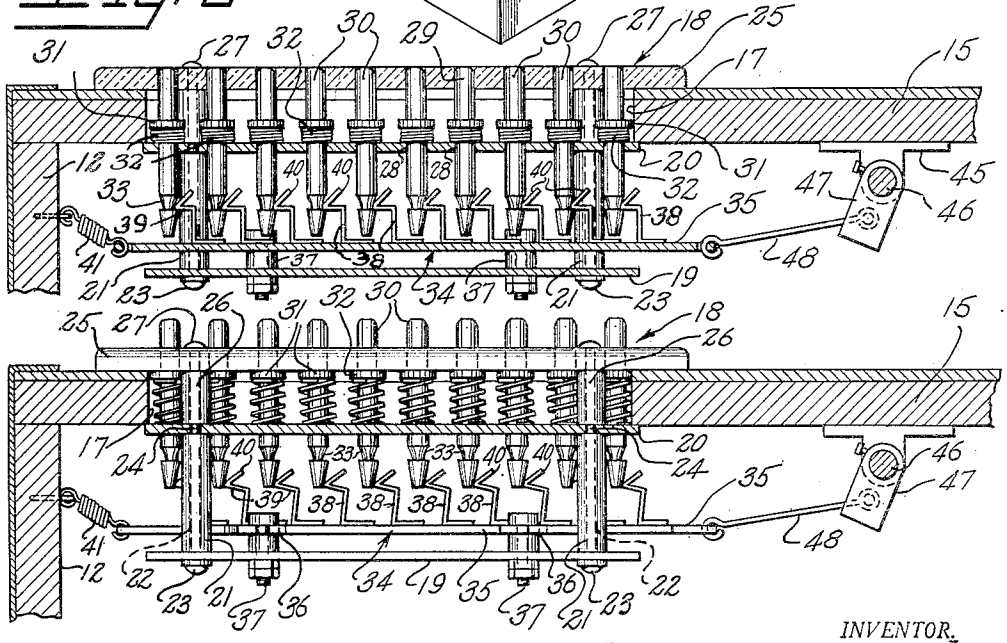

Fig. 6

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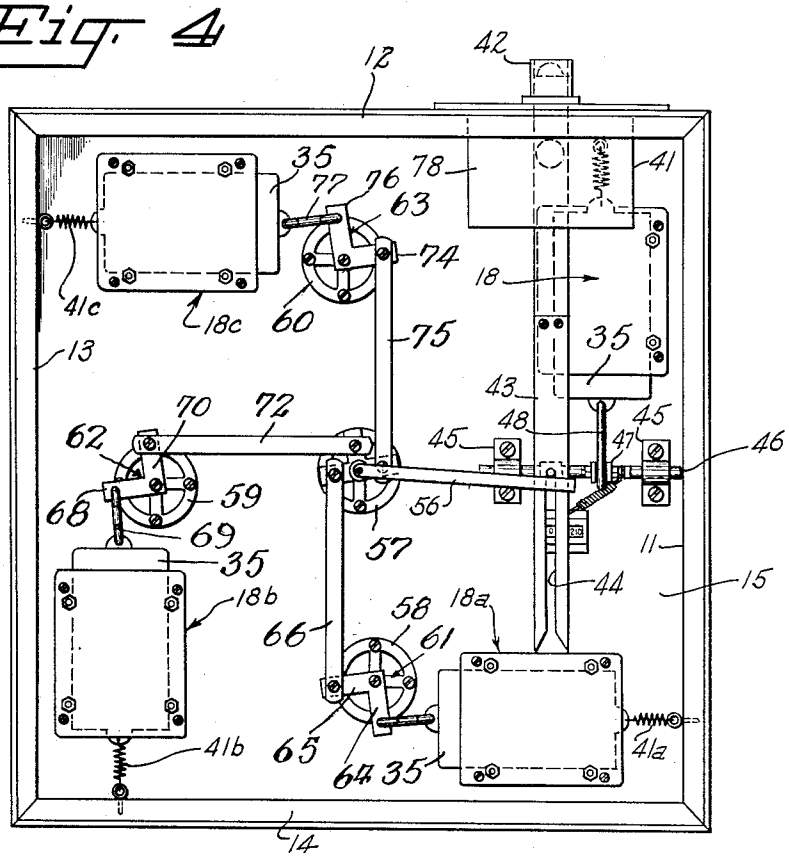
June 26, 1951 B. L. BYRD, JR 2,558,170

COIN-CONTROLLED GAME COUNTER

Filed March 17, 1948 3 Sheets-Sheet 2

Fig. 4



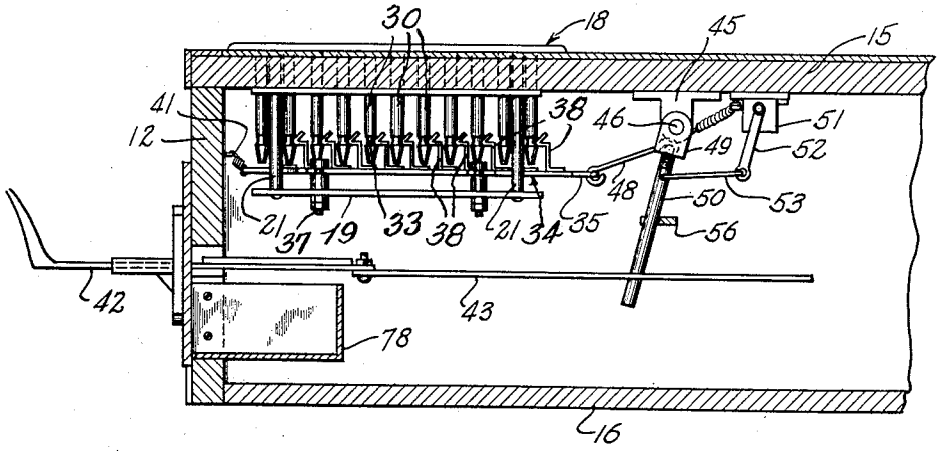


Fig. 2

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June 26, 1951 B. L. BYRD, JR 2,558,170

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Filed March 17, 1948 3 Sheets-Sheet 3

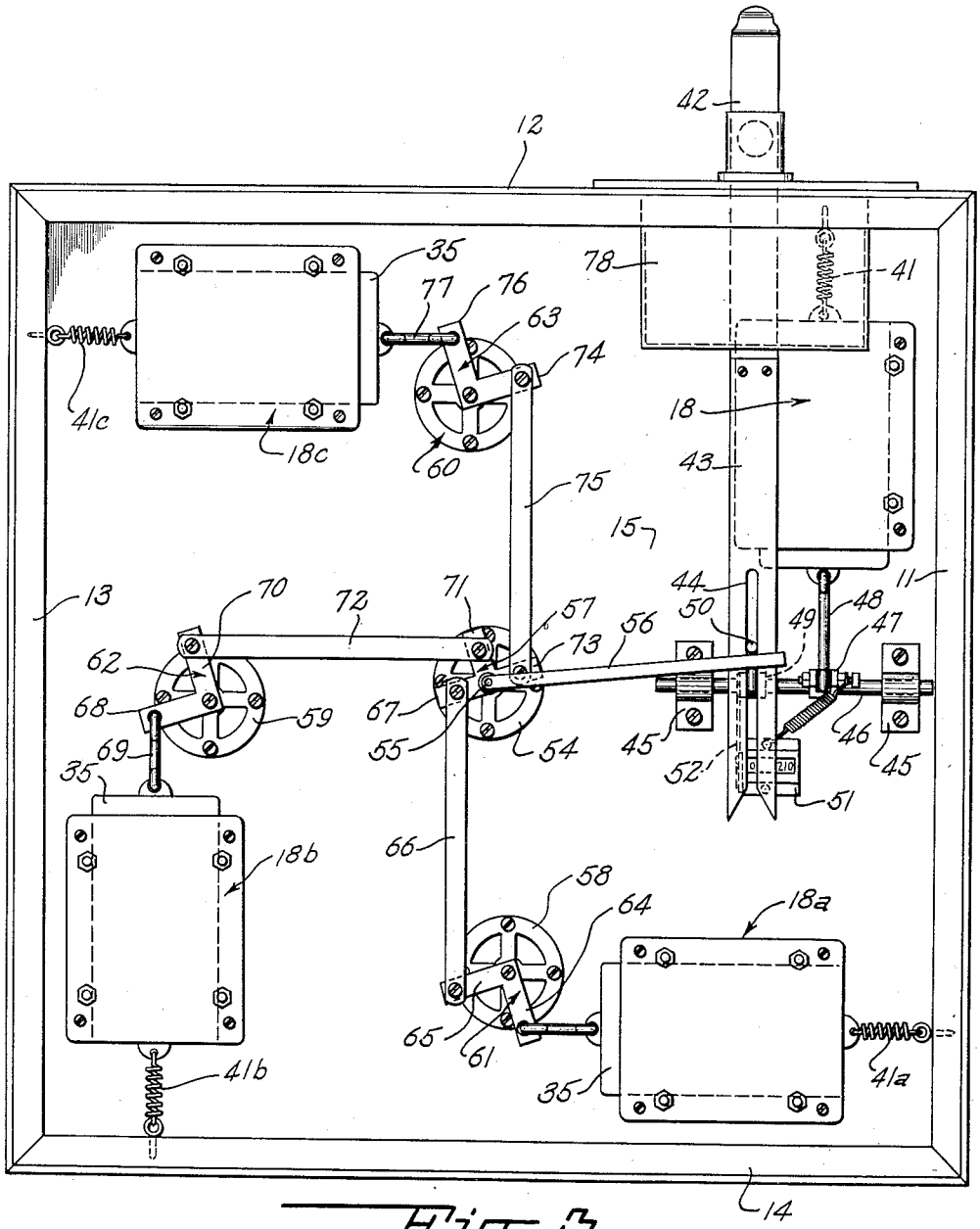

Fig. 3

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UNITED STATES PATENT OFFICE

2,558,170

COIN-CONTROLLED GAME COUNTER

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Application March 17, 1948, Serial No. 15,355

3 Claims. (Cl. 194—1)

1

This invention relates to game counters and it consists in the constructions, arrangements and combinations herein described and claimed.

My invention relates to a game counter particularly adapted to use in keeping of the scores in the game of dominoes, although not limited thereto, and it is the cardinal object of the invention to provide a construction wherein mechanism is provided for securing prepayment of the charges for the use of table or board upon which a game is being played.

More specifically, it is an object of the invention to provide a game counter wherein a plurality of pins are employed in keeping count of scores in a game, said pins normally being held beneath the surface of the game board and releasable to a raised or operative position only upon actuation of a coin controlled mechanism.

It is a still further object of the invention to provide a game counter wherein a plurality of game counting units are employed, all of said units being controlled through a single coin controlled mechanism.

Additional objects, advantages and features of invention will be apparent from the following description considered in conjunction with the accompanying drawings, wherein

Figure 1 is a perspective view of the game counter constructed in accordance with the invention.

Figure 2 is an enlarged sectional view taken on the line 2—2 of Figure 1.

Figure 3 is an enlarged plan view with the bottom closure plate removed and illustrating the position and operating means for the several units.

Figure 4 is a similar view illustrating the position of the parts after actuation of the coin-controlled mechanism.

Figure 5 is an enlarged sectional view illustrating the mechanism for maintaining the counter pins in their depressed position, and

Figure 6 is a similar view showing the counter pins in released position.

Attention is now invited to Figure 1 of the drawings, wherein there is illustrated a game counter generally indicated by the reference character 10 and as shown consists of a substantially square housing composed of side walls 11, 12, 13 and 14, a top wall 15 and a bottom closure wall 16.

As best seen in Figures 5 and 6, the top wall 15 is formed with openings 17, an opening being formed in respective corners of the housing and within each opening there is mounted a counter

2

unit as indicated at 18, 18—*a*, 18—*b* and 18—*c*. The units are identical in construction except for the operating mechanism of unit 18, and a description of one unit will suffice for a clear understanding of the apparatus.

The counter unit comprises two mounting plates 19 and 20 held in horizontal spaced relation by means of spaced studs 21 positioned vertically of the unit, each stud being provided with a threaded bore 22. The plate 19 is formed with openings in registry with the threaded bores 22 for reception of respective bolts 23 for securing the plate to the lower end of the studs. The plate 20 is also formed with openings as at 24 in alinement with the threaded bores 22 of the studs and between the plate 20 and a top plate 25 sleeves 26 are interposed, alined with the openings 24 and the threaded bores 22 of the studs. The top plate 25 is of such dimensions as to close the opening 17 of the top wall 15 and the plate 20 is of such size as to overlap said opening on the underside of the top wall. The top plate 25 is further provided with openings in alinement with respective sleeves 26 and when the bolts 27 are passed through said openings and the sleeves 26 and engaged in the threaded bores 22 of the studs 21, the plates 20 and 25 will be drawn snugly against the top wall 15 with the plate 19 firmly suspended from the studs 21.

The counter units in the present instance are constructed for keeping the scores of respective players in the game of dominoes, and to effect the proper scoring, each unit has five rows of counter pins, ten pins to each row, as clearly shown in Figure 1. As a score is made by a player, the proper number of pins are depressed to register the count, by reason of the fact that the pins are retained in their depressed position until the end of the game and subsequently released, as will be explained.

The plate 20 and the top plate 25 are each formed with the required number of registered openings 28 and 29, for reciprocably mounting counter pins 30. Each pin is identical in construction and is provided with an annular shoulder 31 normally engaging the underside of the panel plate 25. A helical spring 32 is engaged about the pin, interposed between the shoulder 31 and the plate 20, thus urging the pin to its raised or projected position above the panel plate 25. The lower end of the pin is formed with a circumscribing kerf 33 which is cooperable with a detent for maintaining the pin in a depressed position, as will now be described.

Upon the plate 19 there is slidably mounted a

detent 34 consisting of a plate 35 formed with slots 36 for receiving supports 37 suitably anchored to the plate 19 therebeneath. Upon the plate 35 there are suitable mounted pin gripping members 38. The members 38 are formed from spring steel bent adjacent the upper ends to provide an offset portion 39, the free end 40 of the member 38 being inclined rearwardly to overlie the offset portion. Preferably the lower end of the pins 30 are tapered so as to obtain a smooth sliding action upon the free end 40 of the members 38, prior to engagement of the offset portions with the kerfs 32 of the pins. It will be understood, of course, that there will be one pin gripping member 38 for each counter pin.

A helical spring 41 has one end secured to the wall 12 of the housing, the other end being connected to the adjacent end of the plate 35, the spring thus pulling the plate into proper position so as to effect engagement between the pins and gripping members 38, when the former are depressed.

In the wall 12 of the housing there is mounted a conventional coin receiving slide 42 and upon an inspection of Figures 3 and 4, it will be seen that the slide has fixed thereto an extension 43 the end of which is slotted as at 44, the slot extending longitudinally of the extension. In the present instance, we will consider the unit 18 as the master unit since the coin controlled slide 42 effects operation of this unit initially.

At a suitable point in advance of the unit 18, and secured to the underside of the top wall 15 there are a pair of bearings 45 oscillatably supporting a shaft 46. A crank 47 is fixed to the shaft 46 positioned in the longitudinal axis of the unit 18, and in order to effect a sliding movement of the detent 34, the adjacent end of the plate 35 is connected to the crank 47 by means of a link 48. A lug 49 (see Fig. 2) is keyed or otherwise secured to the shaft 46 and has fixed therein a rod 50, of a length and so located as to occupy a position within the slot 44 of the coin slide.

A coin register generally indicated at 51 (Figure 2) is mounted upon the underside of the top wall 15 actuated through levers 52 and 53, the latter being connected to the rod 50.

Reference is now made to Figure 3 of the drawings, and it is to be noted that the unit 18—*a* is located adjacent the wall 12 of the housing; the unit 18—*b* adjacent the wall 13 and the unit 18—*c* extends parallel to the wall 12. Unit 18—*a* includes a spring 41—*a*, unit 18—*b* a spring 41—*b*, and the unit 18—*c* a spring 41—*c*, these springs corresponding to the spring 41 of unit 18 and function to retract the respective detents of the units.

Centrally disposed upon the underside of the top wall 15, a bearing plate 54 is secured, the bearing oscillatably mounting a shaft 55. A lever 56 is rigidly connected to the shaft, the free end of which extends across the extension 43 of the coin slide in advance of and in engagement with the rod 50.

Upon the shaft 55 there is also fixed a three armed crank 57 for actuating units 18—*b* and 18—*c*, as will be now described. A bearing plate 58 is mounted adjacent the unit 18—*a*; a bearing plate 59 is provided for the unit 18—*b* and a similar plate 60 is mounted adjacent the unit 18—*c*. The bearings 58, 59 and 60 oscillatably mount respective bell crank levers 61, 62 and 63. An arm 64 of the lever 61 is connected to the plate 35 of unit 18—*a*. The other arm 65 being pivotally connected to a link 66, which in turn is connected to an arm 67 of the crank 57. The plate 35 of unit 18—*b* is connected to lever 68 of the crank 62 by a link 69. The arm 70 of crank 62 is connected to the arm 71 of the crank 57 by a link 72. The last arm 73 of a crank 57 is connected to arm 74 of a crank 63 by a link 75. Arm 76 of crank 63 is connected to plate 35 of unit 18—*c* by means of a link 77.

As is customary in coin controlled devices, a receptacle 78 is provided for collection of the coins, and since the construction of the coin slide and the manner of forming connection by means of a coin is well understood by those versed in the art, no detailed showing is made thereof.

The operation of the counter will be substantially as follows, assuming that the counter pins 30 are in their depressed positions as shown in Figures 2 and 5. The various elements of the device would be in the positions shown in Figure 3. Upon insertion of a coin in the coin slot and inward movement of the slide, the extension 43 would move inwardly until the inner end of the slot 44 would engage the rod 50, rocking the shaft 46 in a direction to draw upon the detent plate 35 so that the members 40 will disengage the kerfs 33 of the pins 30. At the same time that the shaft 46 is rocked, the lever 56 is engaged by the rod 50 imparting oscillation to the shaft 55 and the crank 57. Inasmuch as the units 18—*a*, 18—*b* and 18—*c* are interconnected with the crank 57, the detent plates of each of the units will be drawn outwardly for simultaneous release of the pins 30; the springs 32 associated with the pins urging the latter to their projected positions as shown in Figures 1 and 6. Upon release of the coin slide, the springs 41, 41—*a* and 41—*b*, and 41—*c* of the units would retract their respective detent plates to the position shown in Figure 6.

As the players score their points of the game, they will exert a down pressure upon a number of pins depending upon the count of the score, each depressed pin having a fixed value, thus apprising the players of their exact scores. It will be noted that as the pins are depressed, the tapered ends of the pins slidingly contact the inclined portions of the pin gripping members 38 until the offset portions 39 seat in the kerfs 33. The scoring continues until the game is concluded with the pins in depressed position, in readiness for the insertion of an additional coin and release of the pins for the next game.

While I have specifically shown and described a preferred form of the device, this is by way of illustration only, and I consider as my own all such modifications in construction as fairly fall within the scope of the appended claims.

I claim:

1. In a coin controlled game counter, a closed housing, the top wall thereof having a plurality of openings formed therein, a counter unit for each opening, each counter unit comprising an upper and lower mounting plate secured together in spaced horizontal relation, the upper plate being disposed beneath and extending beyond the opening in the top wall, a panel plate above said opening and extending therebeyond, bolt means for securing said upper plate and said panel plate together about said opening, said upper plate and said panel plate having a plurality of aligned openings, a pin member reciprocably mounted in said aligned openings, each pin having an annular shoulder inwardly of its upper end, a helical

spring on each pin interposed between said annular shoulder and said uppermost mounting plate tending to project the pins above the panel plate, each pin further having a kerf inwardly of its lower end, a slidable detent carried by the lowermost mounting plate, said slidable detent comprising a spring tensioned finger for each of said pins, each finger having an offset portion adapted to engage a respective kerf of said pins, spring means for holding said sliding detent in a position with the fingers and kerfs in engaged positions; one of said counter units having a bearing mounted upon the underside of said top wall of the housing in advance of the sliding detent thereof, a shaft journalled in said bearing and having a crank, a link connected between the crank and the adjacent end of the slidable detent, a rod fixed to said shaft, a coin controlled mechanism for said last named counter unit including a coin slide, said slide having a slot in the forward end thereof and receiving the rod therein, said shaft being rocked when the inner terminal end of the slot engages said rod under inward movement of the coin slide, and means for operatively interconnecting the sliding detent means of the remaining units, including a lever in the path of movement of said rod.

2. The structure of claim 1 in which the pins are formed with a tapered end and said spring fingers include a rearwardly inclined free end overlying the offset portion.

3. In a coin controlled game counter, a closed housing, the top wall thereof having a plurality of openings formed therein, a counter unit mounted in each opening, each counter unit comprising an upper and lower mounting plate secured together in spaced horizontal relation beneath said top wall, each unit having a panel plate above the top wall, bolt means for securing said upper plate and said panel plate together, said upper plate and said panel plate having a plurality of aligned openings, a pin member reciprocably mounted in said aligned openings, each pin having an annular shoulder inwardly of its upper end and disposed beneath the panel plate, a helical spring on each pin interposed

between said annular shoulder and said uppermost mounting plate tending to project the pins above the panel plate, each pin further having a kerf inwardly of its lower end, a slidable detent carried by the lowermost mounting plate, said slidable detent comprising a spring-tensioned finger for each of said pins, each finger having an offset portion adapted to engage a respective kerf of said pins, spring means for holding said sliding detent in a position with the fingers and kerfs in engaged positions; one of said counter units having a bearing mounted upon the underside of said top wall of the housing in advance of the sliding detent thereof, a shaft journalled in said bearing and having a crank, a link connected between the crank and the adjacent end of the slidable detent, a rod fixed to said shaft, a coin-controlled mechanism for said last named counter unit, including a coin slide, said slide having a slot in the forward end thereof and receiving the rod therein, said shaft being rocked when the inner terminal end of the slot engages said rod under inward movement of the coin slide, and means for operatively interconnecting the sliding detent means of the remaining units, including a lever in the path of movement of said rod.

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