April 14, 1936. J. FARBER 2,037,372

TRICOIN REGISTER BANK

Filed April 11, 1935

Fig. 1.

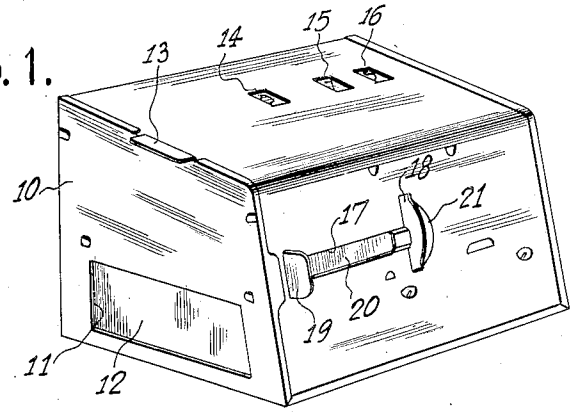


Fig. 8.

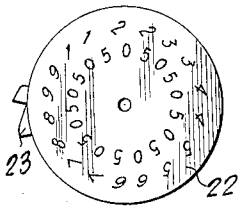


Fig. 2.

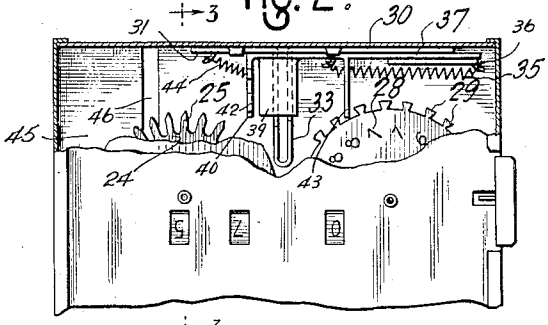


Fig. 3.

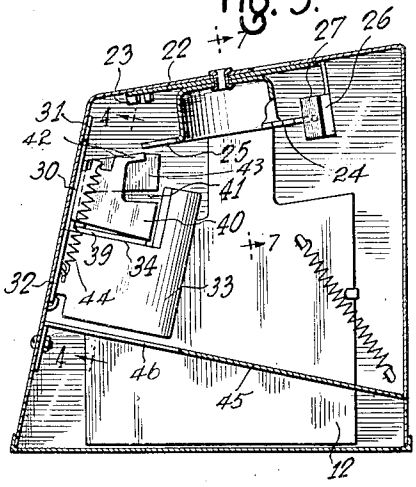


Fig. 4.

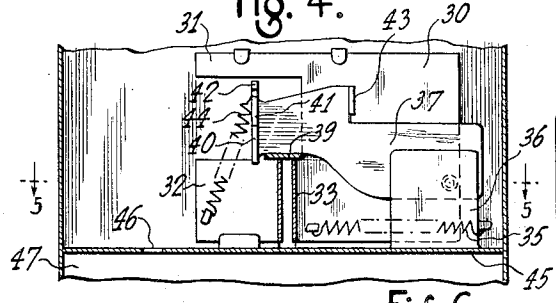


Fig. 5.

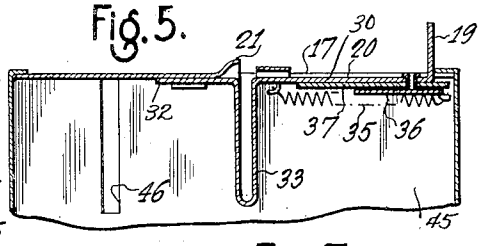


Fig. 6.

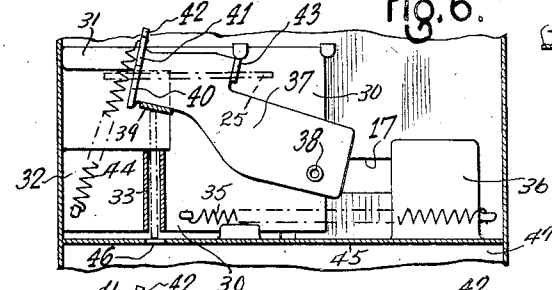


Fig. 7.

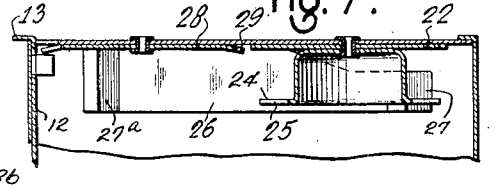


Fig. 9.

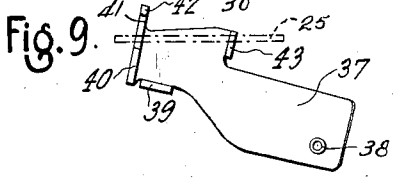
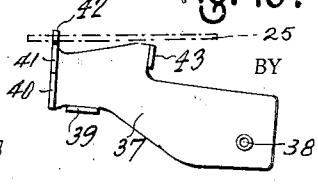


Fig. 10.



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UNITED STATES PATENT OFFICE

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TRICOIN REGISTER BANK

Jacob Farber, New York, N. Y.

Application April 11, 1935, Serial No. 15,765

2 Claims. (Cl. 235—100)

One object of this invention is the provision of a registering bank so constructed that it will receive and selectively register nickels, dimes, and quarters, the construction and operation of the bank being so developed and attained that the method of attaining the said object is simple and accurate.

The above and other objects will become apparent in the description below, in which characters of reference refer to like-named parts in the accompanying drawing.

Referring briefly to the drawing, Fig. 1 is a perspective view of the bank; Fig. 2 is a fragmentary plan view with a portion of the roof removed; Fig. 3 is a cross-section taken on the line 3—3 of Fig. 2; Fig. 4 is a cross-section taken on the line 4—4 of Fig. 3; Fig. 5 is a cross-section taken on the line 5—5 of Fig. 4; Fig. 6 is a view similar to Fig. 4 illustrating the various elements in position after a quarter has been deposited and registered; Fig. 7 is a cross-section taken on the line 7—7 of Fig. 3; Fig. 8 is a plan view of one of the register dials; Fig. 9 is a view similar to a portion of Fig. 6 showing the position of the pawl lever after a nickel has been registered; and Fig. 10 is a view similar to Fig. 9 after a dime has been registered.

Referring in detail to the drawing, the numeral 10 represents the housing of the bank having an opening 11 on one side which is closed by a slide door 12 provided with a handle 13. At the top three slots 14, 15, and 16 are provided to expose the dial numbers which show the amount of money deposited. The front wall of the housing is slotted at 17 and 18, the former to permit sidewise movement of a tongue 19 rigid on an arm 20, and the latter is the coin slot provided with an arched lip 21.

Rotatably mounted on one side of the ceiling is a disk 22 provided at one point of its periphery with a pair of teeth 23. A gear 24 having teeth 25 is rigid with the disk 22. A spring band 26 is attached on its edge to the ceiling and provided at one end with a nose or pawl 27 normally urged against the teeth 25, and at the other end with a similar nose 27a normally urged against the tooth 29 of a disc 28. Adjacent the disk 22 the disk 28 having teeth 29 is rotatably mounted in the ceiling, the teeth 23 of the disk 22 engaging the teeth 29 once during every revolution of the disc 22. The disk 22 is provided on its upper face with the dial number shown in Fig. 8, and the disk 28 is provided with the dial numbers shown fragmentarily in Fig. 2.

A slide arm or member 30 is slidably mounted against the front wall of the housing, being provided with an upper extension 31 and a lower extention 32. The latter is bent to provide a stall 33 which normally lies with its entrance against the coin slot 18. A cut-out shoulder 34 is provided at the front part of the stall 33. A coiled spring 35 normally urges the member 30 to the right (Figure 2), being attached at one end to the member 30 and at the other to an upright wall 36. A rocker arm 37 is pivotally attached at 38 to the member 30, and normally its pivoted end lies adjacent the wall 36. Near the other end of the arm 37 a tongue 39 extends at right angles from the member 37 and normally rests on the shoulder 34 of the stall 33. A relatively long and wide pawl 40 extends from the arm 37 at right angles to this arm and the tongue 39, and above the pawl 40 and spaced therefrom by a slot 41, a second relatively narrow and short pawl 42 extends in the same manner from the arm 37. At a point nearer the pivot 38 a third pawl 43 extends in the same manner from the arm 37, the pawl 43 extending outward from the arm 37 substantially the same distance as the pawl 40. The pawl 42 is of such length that the path of its end in being moved in the plane of gear 24 to intersect the periphery of the gear 24, intersects the same to such a depth that the pawl 42 turns the gear 24 through a distance of two teeth, in thus passing the gear 24. The pawl 40 is of sufficient length (greater than that of the pawl 42) that the same sliding movement of the arm 37 with the pawl 40 in the plane of the gear 24 will cause the gear 24 to rotate through four teeth. The pawl 43 is so positioned intermediate the arm 37 that it can turn the gear 24 through only one tooth whenever it moves in the plane of and strikes this gear. Although it would turn the gear through additional teeth if it could continue its travel, it is prevented from doing so by the extension 32 striking the side wall of the housing, the extension 32 serving as a limit stop from the slide. A spring 44 normally urges the arm 37 down on the left (Figure 4). A wall 45 having a slot 46 therein divides the deposit compartment 47 from the remainder of the housing interior.

The operation of the device is as follows: When a dime is inserted into the slot 18 it enters the stall 33 and in doing so raises the tongue 39 and hence the left-hand end of the arm 37. The latter will thus be raised just a sufficient distance to cause the pawl 42 to rise into the path of the teeth 25 (Figure 10). Then the arm 30 is slid to the right (Fig. 1), to the left (Fig. 6, Fig.

10), to its extreme position where it is stopped by the extension **32** striking the side wall of the housing. In doing so, the pawl **42** will rotate the gear **24** a peripheral distance of two teeth, causing the disk **22** to turn the same angular distance and change the number in the slots **15—16** by adding "10" thereto, as is apparent in Fig. 8. When the slide **30** is in its said extreme position, the stall **33** stands directly over the slot **46**, and the coin drops into the compartment **47**. If, instead of a dime, a nickel is inserted in the slot **18** and the same operation repeated, the arm **37** is raised upon insertion of the nickel to a higher position (Fig. 9). In this position, with a nickel in the stall **33**, the pawl **42** rises above the level of the teeth **25**, so that upon movement of the slide **30** the pawl **42** does not strike the teeth **25**. Instead, the slot **41** (Fig. 9) is raised into the level of the teeth **25**, and as the slide **30** and with it the arm **37**, is slid to the left the pawl **43** turns the gear **24** a distance of one tooth, (since the intermediate position of the pawl **43** lengthwise of the arm **37** permits the pawl **43** to turn the gear **24** through only one tooth before it is stopped by the extension **32** striking the housing wall) thus adding "05" to the total in the slots **15—16**. When a quarter is inserted into the slot **18** and the operation repeated, the arm **37** is raised still higher, into the position shown in Fig. 6. In this position the pawls **40** and **42** are also inclined further to the right (Fig. 6), so that the engagement of the pawl **40**, which is now raised into the path of teeth **25**, turns the latter a distance of four teeth, and in addition the pawl **43**, at the end of the sliding movement, turns the teeth **25** a distance of another tooth, so that "25" is added to the total in the slots **15—16**. When the gear **24** has made a complete revolution, a "1" is added in the slot **14**, since the gear **24** will have rotated the gear **28** through two teeth by engagement once every revolution of the teeth **23** with the gear **28**; thus registering the dollar total.

As the mechanism for locking the door **12** upon insertion of the first coin in the bank, and for opening the same upon the accumulation of a given total sum, forms no part of this invention, the detailed description of the same has been omitted.

Obviously, modifications in form and structure may be made without departing from the spirit and scope of the invention.

I claim:

1. In a register bank adapted to receive coins of various denominations and having a gear mounted therein and a registering dial operated by said gear upon rotation of said gear, said bank having a coin slot for the insertion of coins into the bank, a slide mounted behind said slot and having a stall adapted to receive the inserted coins, a rocker arm pivotally mounted at one end of said slide and having its free end normally resting against one end of said stall, a resilient means for urging said free end against said stall, a wall rigid with the bank lying adjacent the other end of the stall, the inserted coin passing into said slot and pushing the free end of said arm away from said stall, a larger coin pushing said free end a greater distance away from said stall than a smaller coin, pawls on said free end adapted to be selectively pushed into the plane of said gear according to the size of the coin, said pawls lying at substantially right angles to said arm and being of varying lengths, the longer of said pawls when thus pushed into the plane of said gear and upon sliding of said slide and arm toward said gear causing a relatively deep intersection of the path of said longer pawl with the periphery of said gear so as to rotate said gear through a relatively greater arc, the shorter of said pawls similarly causing a relatively shallow intersection with the periphery of said gear to rotate said gear through a relatively shorter arc upon sliding of said slide and arm toward said gear.

2. In a bank adapted to receive coins of varying denominations and having a gear mounted therein and a registering dial operated by said gear upon rotation of said gear, said bank having a coin slot for the insertion of coins into the bank and a rigid wall adjacent one end of said slot, a slide mounted behind said slot and having a rocker arm pivoted at one end thereon, the free end of said arm having a pair of pawls normally lying adjacent the other end of said slot and lying in a plane at right angles to the arm and having a slot therebetween, one of said pawls being of greater length than the other, a third pawl on said arm in a plane parallel with the first-named plane and intermediate the length of said arm, said free end of said arm normally traveling in a path adjacent the plane of said gear upon sliding said slide, means for normally retaining said free end of said arm in said position adjacent said slot, the insertion of a coin of small diameter through said coin slot causing said coin to push said free end of said arm a short distance beyond the end of said coin slot and the shorter of said pawls into the plane of said gear so that subsequent sliding of said slide and arm will cause said shorter pawl to rotate said gear through an arc, the insertion of a coin of next larger diameter through said coin slot causing the latter coin to push said free end of said arm a greater distance beyond the end of said coin slot and the slot between said pawls and also said third pawl into the plane of said gear so that subsequent sliding of said slide and arm will cause said third pawl to rotate said gear through an arc, the second named arc being shorter than the first-named arc, a limit stop to the slide movement of said slide, the intermediate position of said third pawl on said arm causing said third pawl to reach the end of its slide stroke after rotation of said gear through a shorter arc than said first-named arc, the insertion of a coin of still larger diameter through said coin slot causing the latter coin to push said free end of said arm a still greater distance from said coin slot so that upon subsequent sliding of said slide and arm the longer of said pawls will cause said longer pawl to rotate said gear through an arc greater than said first-named arc and at the same time said third pawl will rotate said gear through an additional arc of the same length as said second-named arc.

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