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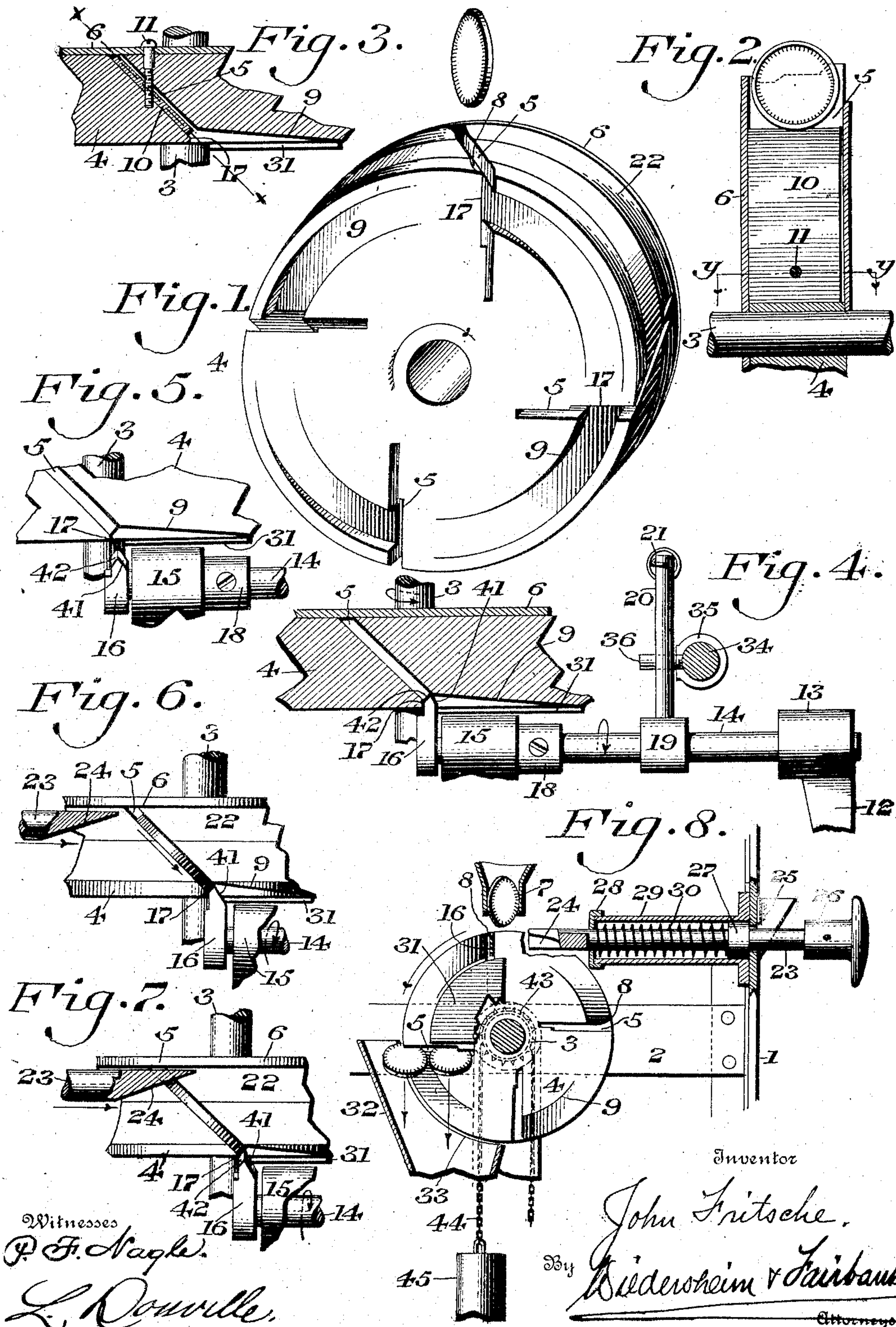
PATENTED AUG. 27, 1907.

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COIN WHEEL FOR VENDING MACHINES.

APPLICATION FILED JULY 27, 1906.

2 SHEETS—SHEET 1.



Witnesses
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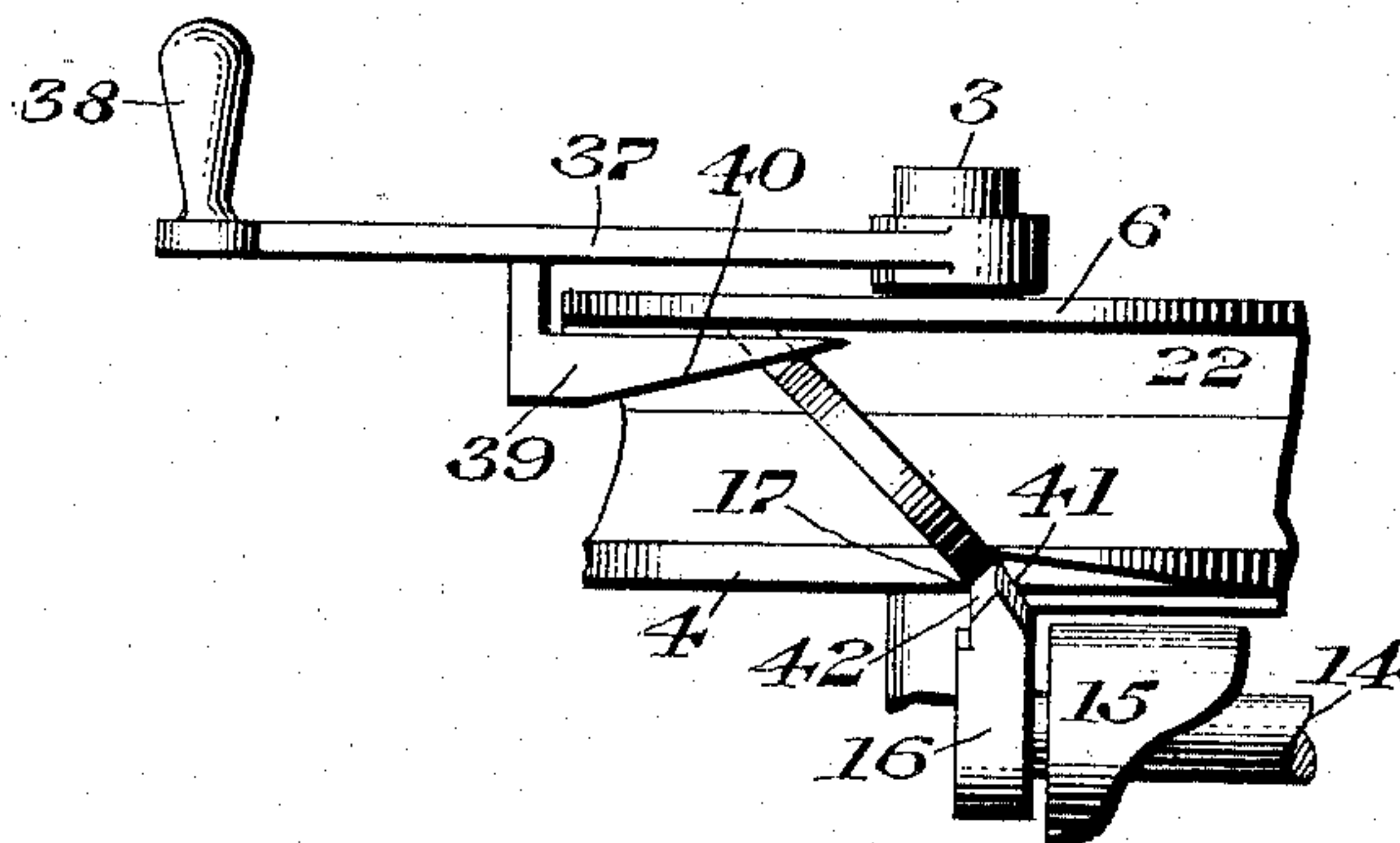
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2 SHEETS—SHEET 2.

Fig. 9.



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UNITED STATES PATENT OFFICE.

JOHN FRITSCHÉ, OF PHILADELPHIA, PENNSYLVANIA.

COIN-WHEEL FOR VENDING-MACHINES.

No. 864,527.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed July 27, 1906. Serial No. 328,024.

To all whom it may concern:

Be it known that I, JOHN FRITSCHÉ, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Coin-Wheel for Vending-Machines, of which the following is a specification.

In a contemporaneously pending application filed March 3rd, 1906, Serial No. 304,041, I have described and claimed a novel construction of a vending machine in which an article is delivered to a position accessible to the purchaser.

My present invention, consists broadly of a novel construction of a coin wheel which is especially adapted to be employed in conjunction with a construction such as is shown and described in said pending application, although it is to be understood that it may be employed to advantage in conjunction with any known or conventional type of vending machine and may be employed for the vending of any desired article.

My invention further consists of a novel construction of a coin wheel having angularly inclined slots or grooves therein adapted to retain one or more coins and novel means for adjusting the depth of said slots according to the number of coins employed.

It further consists of a novel construction of a guard which prevents a coin or coins from passing out of the coin slots.

It further consists of a novel construction of stop mechanism which is adapted to be actuated by a coin.

It further consists of a novel construction of actuating lever by means of which a coin is caused to release the stop mechanism from the coin wheel.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

The various instrumentalities of which my invention consists may be variously arranged and organized but for the purpose of illustrating my invention, I have preferred to show one form of a coin wheel and actuating mechanism therefor, which I have found in practice to give satisfactory and reliable results, although it is to be understood that my present invention is not limited to this specific arrangement and organization of instrumentalities.

Figure 1 represents a perspective view, on an enlarged scale, of a coin wheel embodying my invention, the same being shown in detached position. Fig. 2 represents a section on line $x-x$ Fig. 3, showing the manner in which the inclined slot in the coin wheel is adapted to receive and be operated by a suitable coin. Fig. 3 represents a section on line $y-y$ Fig. 2. Fig. 4 represents a sectional view of a portion of the coin wheel showing the stop mechanism therefor in operative position with respect thereto. Fig. 5 represents a sectional view of a portion of the coin wheel but showing the stop therefor as being out of engagement with said wheel.

Fig. 6 represents a plan view of a portion of the coin wheel showing the stop therefor and a portion of the actuating means for the said stop. Fig. 7 represents a plan view similar to Fig. 6 but showing the actuating lever as causing the coin to actuate the stop. Fig. 8 represents a sectional elevation of a portion of a machine embodying my invention showing the coin slots and the manner in which the coins pass to and from the coin wheel. Fig. 9 represents a plan view similar to Fig. 7 but showing a modified form of actuating lever.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates the frame of the machine having cross bars or arms 2 in which is journaled a shaft 3 on which the coin wheel 4 is mounted. The coin wheel 4 is provided with angularly inclined slots 5, the depth of which vary according to the number of coins which it is desired to employ in operating the machine. The wheel 4 has a disk 6 secured to one side thereof in any suitable manner, whereby the coins which are fed to the coin wheel through the coin guide 7 may be passed from the coin wheel on one side only thereof. The upper edges of these coin slots may be slightly beveled if desired, as seen at 8, in order that the coins will the more readily enter therein. The side opposite the disk 6 is provided with inclined grooves 9, which terminate at the angularly inclined slots 5. In the present instance, I have shown these slots 5 as being adapted to receive and be actuated by two coins, although the number of coins which it is necessary to employ to actuate the machine may be varied as desired by varying the depth of the angularly inclined slot 5 of the coin wheel 4. This is accomplished by inserting in the slots 5 plates 10 of any desired size and in the present instance, I have shown in Fig. 2 a plate of such dimension that the coin wheel is adapted to be actuated by a single coin. I have shown a screw 11 engaging the disk 6 and the coin wheel 4 and passing through the plate 10 for fastening said plate in position, although it will be apparent that other means for securing the plates in their respective slots may be employed and still be within the scope of my invention. In order to prevent the lower or under coin escaping from its slot, I employ a stationary guard which is carried by any suitable fixed portion of the frame. It will be apparent that by varying the depth of the groove and by the employment of plates 10 of different lengths, the coin wheel may be readily adapted to be actuated by either one, two, three or more coins, according to the requirements and conditions of the case.

12 designates a standard, as indicated in Fig. 4, said standard being suitably carried by the frame work of the machine and having at its upper end

journals 13 in which is mounted a shaft 14, said shaft being also mounted in a journal 15 suitably carried by the frame-work of the machine.

16 designates a pawl fixed on the shaft 14 and adapted to travel in the inclined groove or radial recess 9 of the coin wheel and engage a shoulder 17 formed by the slot 5 and said recess 9, as best seen in Fig. 4. The shaft 14 is held in suitable relation with respect to its bearing by means of a set collar 18 secured thereon in proximity to the bearing or journal 15.

19 designates a collar or block fixedly mounted on the shaft 14 and having an outwardly extending rod or arm 20 to which is secured a spring 21, the other end of said spring being secured to a suitable fixed point on the frame-work of the machine, whereby the pawl 16 fixed on the shaft 14 normally tends to engage the shoulder 17 of the coin wheel and closes the upper portion of the recess 5 in said wheel and thus prevents the coins passing therefrom.

20 The outer periphery of the coin wheel 4 is annularly recessed or grooved, as seen at 22, in order that the actuating lever 23 may travel therein without engaging the coin wheel and thus the distance between the end of the coin guide 7 and the coin wheel is decreased and the coin guide may be located nearer to the periphery of the coin wheel than would otherwise be the case if said annular recess or groove were omitted, as is evident. The actuating rod or lever 23 is provided with a cam face 24, whereby the same is adapted to coact with the coin, as clearly indicated in Figs. 6 and 7. The actuating lever 23 passes through an aperture 25 in the front plate of the casing and is provided with an actuating handle 26 which is secured thereto in any suitable manner.

27 designates a set collar or shoulder carried by the rod 23 between which and the removable cap or closure 28 and the casing 29 is interposed a spring 30, it being noted that the casing 29, within which the rod 23 is movably mounted, is provided with suitable flanges, whereby the same may be secured to the front plate of the frame in any suitable manner. In order to prevent the coins escaping from the slot 5 in which they are seated, I employ a stationary guard 31 which is carried by a fixed portion of the frame in any suitable manner. The dimensions of this guard will vary according to the number of slots employed and the size of the coin wheel, as is apparent.

As seen in Fig. 8, I provide a coin chute 32, the upper end of said chute, in the present instance, being shown as funnel-shaped and cut away near its upper end, as seen at 33, in order to partly surround the coin wheel so that the coins escaping from one of the recesses 5 will fall therein and descend therethrough into a suitable coin receptacle or receiver.

34 designates a rod movably mounted and having preferably adjustably secured thereon a collar 35 having extending therefrom an arm 36 which is adapted to engage the arm 20, whereby when the rod 34 is raised the shaft 14 will be rocked and the pawl 16 will be moved out of engagement with the shoulder 17 on the coin wheel.

In Fig. 9 I have shown a modified form of actuating lever which has a radial movement instead of a horizontal movement, it being apparent that in the broad scope of my invention it is immaterial in what manner

the actuating lever coacts with the coin to actuate the stop mechanism of the coin wheel. In this embodiment, I mount on the shaft 3 a lever arm 37 provided with a suitable actuating handle 38, said arm 37 having secured thereto in any suitable manner or integral therewith, an arm or projection 39 provided with a beveled or cam face 40 which coacts with the coin to actuate the stop mechanism.

It is to be noted that the pawl 16 is provided with reversely inclined cam faces 41 and 42, the face 42 being adapted to close the upper portion of the coin slot 5 with which it registers.

43 designates a ratchet wheel mounted on the shaft 3. 44 designates a sprocket chain passing around the ratchet wheel 43 and provided with a suitable weight 45, whereby the shaft 3 always tends to rotate in the direction indicated by the arrow in Fig. 8, it being understood that the sprocket chain is provided with any suitable or desired type of carrying members.

The operation of the coin wheel is as follows:—The coin entering the machine passes through the coin chute or guide 7, the lower end of which is so shaped that the coin will be guided into one of the angularly inclined slots 5 of the coin wheel 4, the first coin dropping therein being prevented from escaping therefrom by reason of its contact with the guard 31. The second coin enters the machine in a similar manner and is directed by the guide 7 into the same angularly inclined slot in which the other coin has been deposited, said second coin resting above the first coin and the outer periphery thereof engaging the stop pawl 16, which is normally held in engagement with the shoulder 17 by means of the spring 21. The intending purchaser now manually presses against the handle 26 thus causing the actuating rod or lever 23 to move forwardly and the cam face 24 will engage the outer periphery of the coin, as most clearly indicated in Fig. 7, and cause said coin to press the stop pawl 16 out of engagement with the shoulder 17 and since there is always a tension tending to rotate the shaft 3 as soon as the pawl 16 is disengaged from the coin wheel, said shaft turns and as the coin wheel is fixed thereon said wheel will rotate in unison with the shaft until the stop pawl 16 engages another shoulder 17 on the coin wheel. The coins in the angularly inclined slots 5 will be carried around with the wheel and as said coin containing slots pass beyond or below the guard 31, the coins contained therein will fall into the chute 32 and descend into the coin receiver provided therefor. As soon as the operator releases the pressure from the handle 26 the spring 29 coacting between the shoulder 27 and the cap 28 causes the actuating lever 23 to be withdrawn and returned to its normal position. The shaft 3 normally tends to rotate in the direction of the arrow seen in Fig. 1, this being accomplished by any suitable means, such as weights carried by the shaft, as is clearly described in my copending application hereinabove referred to.

In the embodiment shown in Fig. 9, I have dispensed with a lever such as 23 having a horizontal movement and employ in lieu thereof a lever 37 mounted on the shaft 3 and having a radial movement. In this embodiment it is not necessary to employ separate means for rotating the shaft 3, since it will be apparent that after the coin has moved the pawl 16 out of engagement with the shoulder 17, said coin will be prevented from

escaping from the machine owing to the employment of the guard 31 and that any further movement of the lever 37 will cause the upper coin to be locked against the guard 31, so that on the further movement of the lever 37 the coin wheel will move in unison therewith until the coins move out of engagement with the guard 31. The pawl 16 as soon as it is disengaged from the shoulder 17 engages the side of the coin wheel and owing to the provision of the slots or grooves 9 the pawl 16 will positively engage the next shoulder 17 of the coin wheel.

I have deemed it unnecessary in the present instance to show in the drawings the complete frame or casing of the machine, since this may be constructed of any desired material and the contour or form thereof would vary in accordance with the machine in conjunction with which it is employed. In so far as I am aware, I am the first in the art to employ a coin wheel in which provision is made, whereby said coin wheel may be readily and quickly adapted to be actuated by one or more coins and my claims to these features are to be interpreted with corresponding scope.

It will be apparent that whenever it is desired to remove the stop mechanism for the coin wheel so that the latter may freely rotate, this may be accomplished by raising the rod or arm 34 which will cause the arm 36 to engage the arm 20 which is operatively connected with the shaft 14, thus causing said shaft 14 to rock and the pawl 16 to be moved out of engagement with the shoulder 17 of the coin wheel.

It will thus be apparent that in my present construction the stop mechanism is actuated by causing a coin to be moved thereagainst and that the wheel may be adapted to receive a coin of any desired size or dimension. Owing to the location of the coin guide 7 the different coins are accurately guided into the desired slot of the coin wheel and since the upper end of the angularly inclined slots in the coin wheel are preferably beveled there is no liability of the coins being deflected from the proper slot in said coin wheel.

It will be further apparent that the number of angularly inclined slots, such as 5, which are employed, will depend entirely upon the conditions and requirements of the case.

It will now be apparent from the foregoing that I have produced a novel and useful construction of a coin wheel which embodies the features of advantage enumerated as desirable in the statement of invention and the above description and which may be employed in conjunction with any known or conventional type of vending machine, and while I have in the present instance illustrated and described the preferred embodiments thereof, it is to be understood that they are susceptible of modification in various particulars without departing from the spirit and scope of the invention or sacrificing any of its advantages.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a coin controlled vending machine, a coin wheel having angularly inclined slots in the periphery thereof adapted to receive one or more coins, means for preventing the lower coins from escaping from said slots, a stop mechanism co-acting with said coin wheel, and means co-acting with the upper coin to actuate said stop mechanism.

2. In a coin controlled vending machine, a coin wheel having angularly inclined slots in the periphery thereof adapted to retain one or more coins, means for prevent-

ing the lower coins from escaping from said slots, a stop mechanism engaging said coin wheel adapted to close the coin containing slot, and means for moving the upper coin against said stop to release the same from said coin wheel.

3. In a coin controlled vending machine, a coin wheel having angularly inclined slots therein extending through a side thereof, a plate removably secured in said slots adapting the same to receive one or more coins, means for preventing the lower coins escaping from their slot, a stop mechanism adapted to close the upper end of said slot, and means co-acting with a coin for effecting the release of said stop from said coin wheel.

4. In a coin controlled vending machine, a coin wheel having angularly inclined slots therein adapted to receive one or more coins and extending through a side thereof, the side of said coin wheel contiguous said slots having a plurality of grooves therein each terminating at one of said angularly inclined slots, means for preventing the lower coins escaping from their slot, a stop mechanism, a pawl carried thereby adapted to engage said grooves and engaging one of the walls of said slots, and means for causing a coin to release said pawl to permit the rotation of said coin wheel.

5. In a coin controlled vending machine, a coin wheel having angularly inclined slots therein extending through one side thereof, and adapted to receive one or more coins, a stop mechanism adapted to co-act with said coin wheel, and means for causing a coin to release said stop mechanism to permit the rotation of said coin wheel.

6. In a coin controlled vending machine, a coin wheel having angularly inclined slots in the periphery thereof adapted to receive one or more coins, a stationary guard for preventing the escape of the under coins from their slots, a shaft rotatably mounted in proximity to said coin wheel, a pawl thereon adapted to engage said coin wheel, yielding means for causing such engagement, and means for causing a coin to disengage said pawl from said wheel.

7. In a coin controlled vending machine, a rotatable coin wheel having angularly inclined slots therein extending through one side thereof and adapted to receive one or more coins, a stationary guard for preventing the escape of the under coins from their slot, a stop mechanism adapted to close a portion of a coin containing slot, the periphery of said coin wheel having an annular groove therein, and means movable in said groove adapted to move a coin against said stop mechanism to effect the release thereof from said coin wheel.

8. In a coin controlled vending machine, a coin wheel rotatably mounted and having angularly inclined slots extending through one side thereof adapted to retain one or more coins, a stationary guard for preventing the escape of the under coins, a stop mechanism adapted to close a portion of a coin containing slot, and a plunger adapted to move a coin against said stop to effect the release thereof from said coin wheel.

9. In a coin controlled vending machine, a coin wheel rotatably mounted and having angularly inclined slots extending through one side thereof adapted to retain one or more coins, means for preventing the under coins from escaping from their slot, a stop mechanism adapted to co-act with said coin wheel to prevent its rotation, and a plunger having a cam face thereon adapted to co-act with a coin to release said stop mechanism and permit rotation of said coin wheel.

10. In a coin controlled vending machine, a coin wheel rotatably mounted and having angularly inclined slots extending through one side thereof adapted to retain one or more coins, a stationary guard for preventing the escape of coins from their slot, a stop mechanism adapted to close a portion of a coin containing slot, means for causing a coin to release said stop mechanism, yielding means for causing the engagement of said stop mechanism with said wheel, and a coin chute into which the coins in a slot discharge on the rotation of said coin wheel.

11. In a coin controlled vending machine, a coin wheel, rotatably mounted and having angularly inclined slots extending through one side thereof adapted to receive one or more coins, a stationary guard for preventing the escape

of coins from a slot, a stop mechanism engaging said wheel and closing a portion of a coin containing slot, yielding means for causing said stop mechanism to engage said coin wheel, a spring actuated plunger adapted to
5 cause a coin to release said stop mechanism, and a coin chute into which the coins in a slot are discharged on the rotation of said wheel.

12. In a coin controlled vending machine, a coin wheel rotatably mounted and having angularly-inclined slots extending through one side thereof adapted to receive one or
10 more coins, a stationary guard for preventing the escape of coins from a slot, a stop mechanism engaging said wheel and closing a portion of a coin containing slot, yielding means for causing said stop mechanism to engage said
15 coin wheel, a plunger adapted to cause a coin to release said stop mechanism, a coin chute into which the coins of a slot are discharged on the rotation of said wheel, and means for conducting the coins to one of said slots.

13. In a coin controlled vending machine, a stationary support, a shaft journaled therein, a coin wheel mounted
20 on said shaft and having angularly inclined slots extending through one side thereof to receive one or more coins, a shaft rotatably mounted, a second shaft journaled in said support, a pawl carried thereby adapted to engage
25 one of said slots, an arm extending from said second shaft, a spring secured to said arm and to said support for causing said pawl to engage a slot in said wheel, a stationary guard for preventing the escape of a coin from said slot, means for moving a coin in said slot to release said pawl
30 and a coin chute into which the coins discharge from said slots.

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