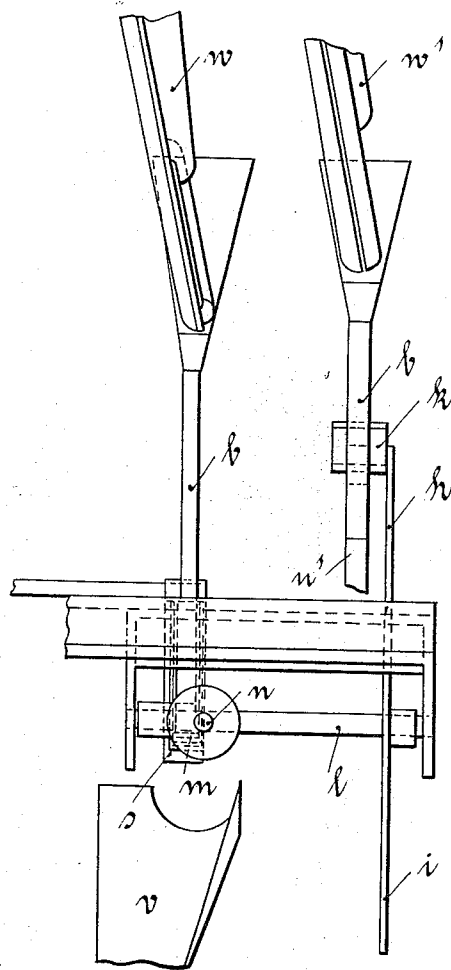


O. OEHRING.
COIN SWITCH FOR VENDING MACHINES.
APPLICATION FILED SEPT. 30, 1909.

943,562.

Patented Dec. 14, 1909.
3 SHEETS—SHEET 3.

FIG. 6.



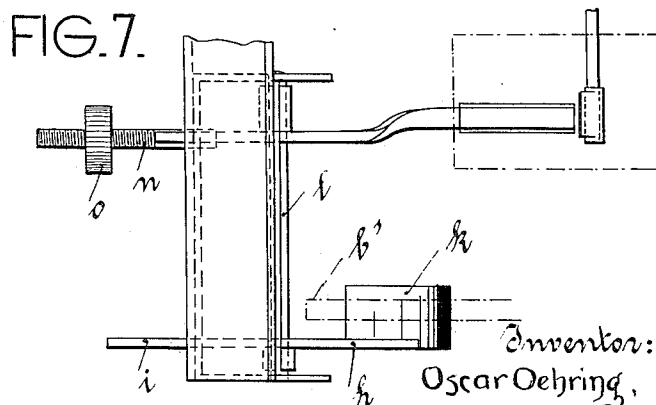
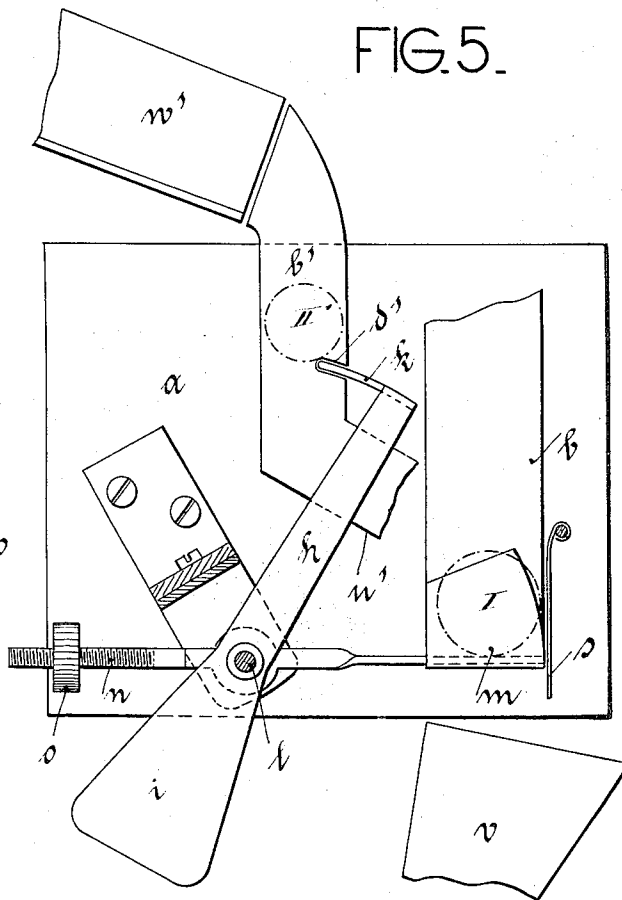
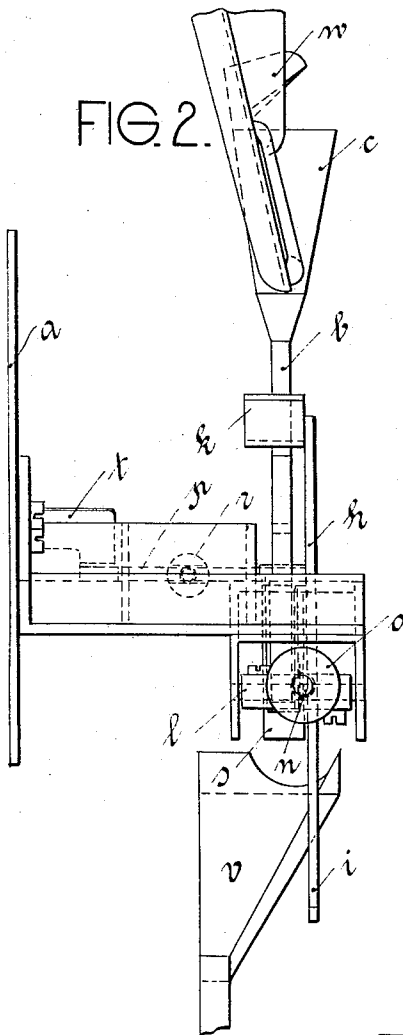
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Horace G. Deitz

Inventor:
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 3 SHEETS—SHEET 2.



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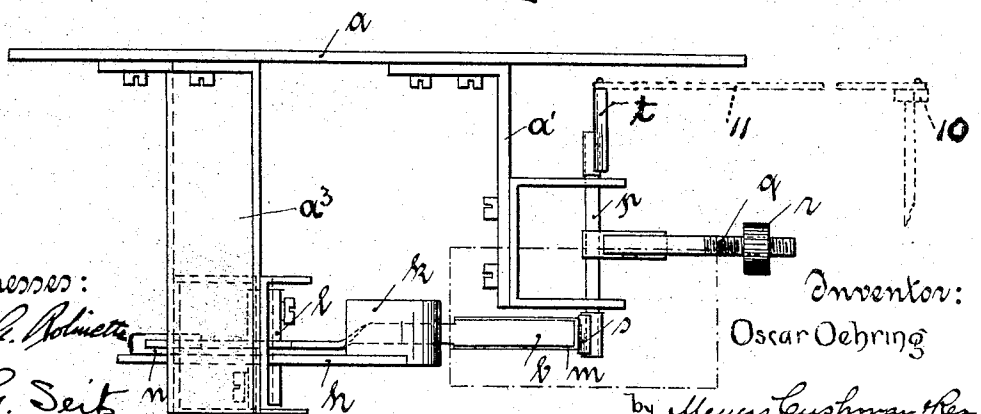
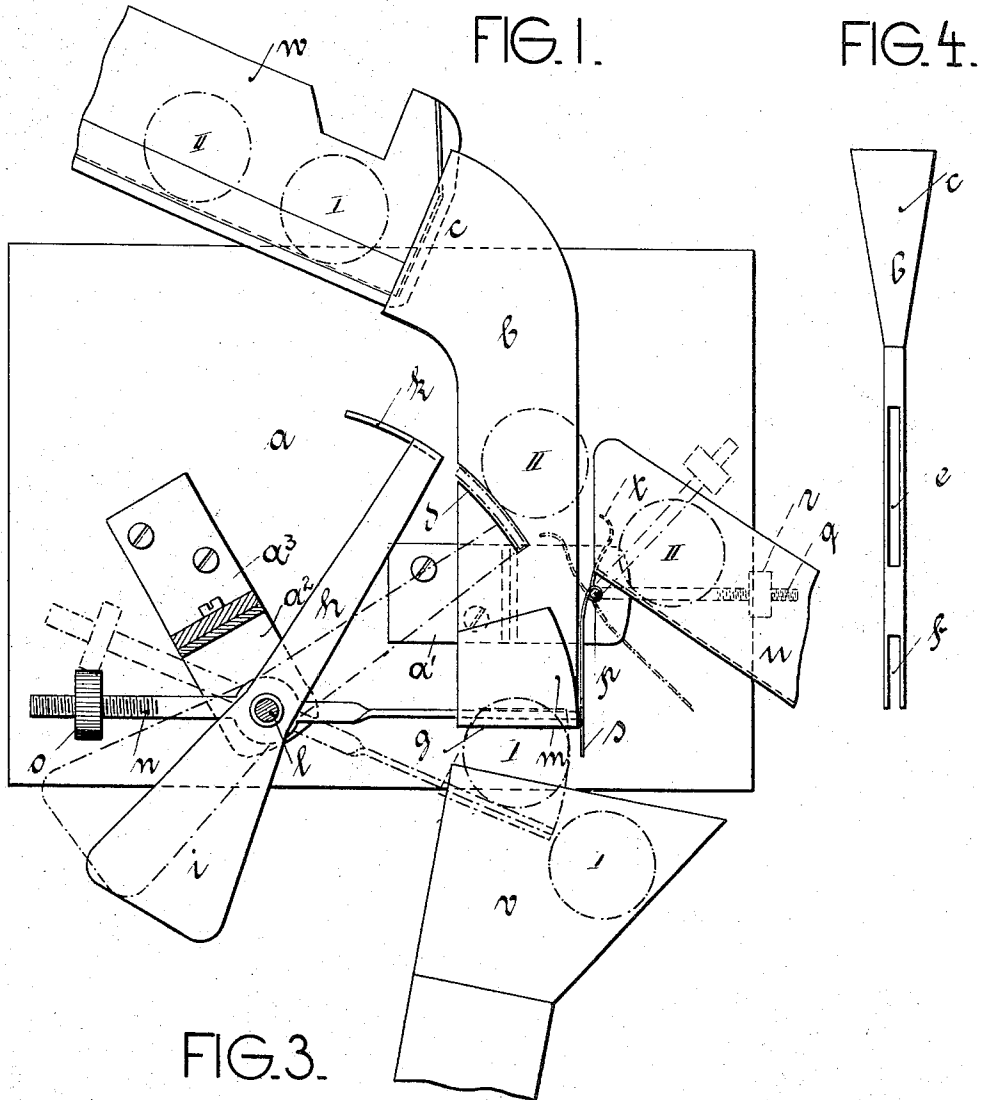
Inventor:
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 by *Allyn Cushman & Co.*
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O. OEHRING.
 COIN SWITCH FOR VENDING MACHINES.
 APPLICATION FILED SEPT. 30, 1909.

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Patented Dec. 14, 1909.

3 SHEETS—SHEET 1.



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UNITED STATES PATENT OFFICE.

OSCAR OEHRING, OF BERLIN, GERMANY, ASSIGNOR TO AMERICAN STAMP AND TICKET VENDING MACHINE COMPANY, OF WASHINGTON, DISTRICT OF COLUMBIA.

COIN-SWITCH FOR VENDING-MACHINES.

943,562.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed September 30, 1909. Serial No. 520,391.

To all whom it may concern:

Be it known that I, OSCAR OEHRING, manager, a subject of the German Emperor, residing at Berlin, Germany, have invented 5 new and useful Improvements in Coin-Switches for Vending-Machines, of which the following is a specification.

This invention relates to improvements in coin or check controlled apparatus, and has 10 particular relation to the means for operating the releasing mechanism of the apparatus upon check insertion.

The class of devices for this purpose to which this invention particularly relates is 15 that in which two or more checks or coins are required to provide for the operation of the apparatus release.

Among the objects of my invention are to be found (1) the provision of means where- 20 by the releasing mechanism becomes operative only upon the insertion of the second of a series of two coins or checks; (2) the provision of means whereby two gates, each operating in connection with the two coins or 25 checks respectively of a series, are mounted upon a single shaft in a manner to segregate the coins or checks upon the manipulation of one gate or closure which acts as a control for the releasing operation; (3) the pro- 30 vision of means whereby two simultaneously operated gates operate to segregate a series of coins or checks, one of the checks serving to release the apparatus, the other check providing movements of the gates.

Further objects are to provide specific 35 structures which will carry out the objects heretofore enumerated.

To these and other ends, the nature of which will be readily understood as the in- 40 vention is hereinafter disclosed, said invention consists in the improved construction and combination of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in 45 the appended claims.

In the accompanying drawings in which similar reference characters indicate similar parts in each of the views, Figure 1 is a front elevation, partly in section, of one form of 50 structure adapted to carry out the objects of the invention. Figs. 2 and 3 are a side elevation and a plan view respectively of the construction shown in Fig. 1. Fig. 4 is a side elevation of the main coin chute shown 55 in Fig. 1. Fig. 5 is a front elevation, partly

in section, of another form by means of which the objects of the invention may be carried out. Figs. 6 and 7 are a side elevation and plan view respectively of so much of Fig. 5 as is necessary to illustrate the different constructions. 60

In each of the forms shown in the drawings, the same general feature of providing a check or coin switching mechanism to segregate the coins or checks of a series to 65 permit them to perform their respective functions in the operation leading to the release of the coin controlled apparatus is provided. In the construction shown in Figs. 1 to 4 inclusive, a single coin chute, referred to herein as the main coin chute, is 70 provided, the segregation of the coins taking place within this chute. In the form shown in Figs. 5, 6 and 7 separate main chutes are provided, one for each series of coins, the 75 switching mechanism, however, being common to both chutes. In each case, as herein-after explained, the operation of the apparatus-release is provided by one check, while the switching or segregating operation is 80 provided by the other check, the operation of the latter being a prerequisite to the placing in release position of the former check.

Referring first to Figs. 1 to 4 of the drawings, *a* designates a base plate secured to the 85 vending machine at the proper point.

b designates a coin chute secured to the frame-work of the machine in suitable manner, and which has its upper end preferably flared outwardly, as at *c*, to receive the coins, 90 the latter, if desired, being delivered thereto by a coin tester *w* of any desired construction. The chute *b* preferably has, at a point below the end of the flared portions *c*, an interior cross sectional area approximating 95 that of the similar area of a coin or check adapted to be passed therethrough, said chute having its lower end open, as indicated in Fig. 4, and having also at least one of its edges formed with a slot *f* extending up- 100 wardly from the bottom plane of the chute a suitable distance. The same edge is also provided with a slot *e* at a point above and spaced from the slotted end *f*, for a purpose presently described. 105

The lower end of the chute is normally closed by means of a weighted lever *n* mounted on a shaft *l* carried by a bracket *a*² secured on a bracket *a*³ carried by the plate 110 *a*, said lever having its forward end *g* pro-

vided with a coin cup *m* which extends around the end of the coin chute on all sides with the exception of that in which the slot *f* is located. The opposite end of said lever is preferably screw-threaded, and mounted on its screw-threaded end is a counter-poise *o* which is adapted to be adjustably moved on the lever to provide the proper effect on the operation of the lever.

Mounted on the shaft *l* is an arm *h* having one end provided with an angular arcuate projection *k*, and having its opposite end provided with counter-weight *i*, said projection *k* being adapted to be moved into and out of a slot *d* formed in the chute *b*, said slot extending inwardly from the rear edge a distance sufficient to permit said projection *k* to intersect the coin path formed by the chute, the projection extending approximately half-way across the coin path, the direction of arcuate length of the projection extending downwardly at an angle to the direction of length of the chute, thereby providing, when the projection is in position within the chute, a surface over which a coin or check will ride toward and through the slot *e* of the chute, the position of the slots *d* and *e* being relatively arranged to provide this result.

At a suitable point where its inlet end will receive a coin or check passed through the slot *e* is mounted an auxiliary chute *u* which leads to the releasing mechanism of the machine, and at a point below the lower end of the chute *b* is located another auxiliary chute *v* which is adapted to receive the coins or checks passed out of the lower end of the chute *b*. The opening left by the slot *f* is normally closed by a flap *s* pivotally mounted on a shaft *p*, and normally retained in closing position by a counter-weight *r* adjustably mounted on the screw threaded end of a rod *q*.

The lever *n* and the arm *h* are mounted on the shaft *l* in such manner that when the coin cup *m* is in its normal position, the projection *k* will be out of the slot *d* as shown in full lines in Fig. 1 of the drawing. When in this position the chute is open for the passage of a coin or check therethrough into the coin cup *m*, this being the normal position of the parts, and thereby enabling the first of two coins or checks to pass into the coin cup. When the coin or check reaches the cup, its weight will overbalance the counter-weights *o* and *i*, causing the lever *n* to rock until the projection *k* reaches the end of the slot *d*, whereupon movement in this direction is completed. During this movement the coin cup *m* has moved downwardly with its coin (indicated in the drawing by I), the latter, owing to the gradually increasing inclination of the bottom of the cup, moving into contact with the flaps *s* and thereby rocking the carrier to place the

projection *k* in operative position, the coin I resting against the flaps *s*. The next coin (indicated as at II) now passes into chute *b* and into contact with the projection *k* from which it passes into the auxiliary chute *u*, and into position to operate a suitable mechanism for tripping the arm *t* carried by shaft *p*, thereby releasing the flaps *s* and permitting coin I to pass to the coin chute *v*, after which the parts are returned to normal position under the action of the counter weights.

Any suitable or preferred mechanism may be employed for tripping the arm *t*. One form in which this tripping operation may be provided is illustrated by dotted lines in Fig. 3 of the drawing, 10 designating a movable member connected to the mechanism of the apparatus in such manner that it becomes operative after the releasing coin has been switched into the chute *u*, said member being connected to the arm *t* by a rod 11, the connection being such that the movement of the member 10 rocks the arm *t* on its pivot in an obvious manner. In this form of construction the coin cup *m* is normally in coin receiving position, while the projection *k* is normally out of coin contacting position, thereby enabling a free passage of the first coin into its operative position, this coin or check in turn placing the projection in coin switching position.

The adjustability of the counter-poise *o* and *r* permits of a variation in the number of coins required to release the mechanism, it being readily understood that if these counter-poise are positioned to prevent the rocking movement of the lever *n* upon the insertion of a single coin, the movement to position the projection *k* will not take place until a sufficient number of coins have been introduced into the coin chute to overbalance the counter-poise *o*, whereupon the succeeding coin will be directed to its apparatus-release position. In other words, the apparatus is released by the last of a series of coins, all of which are required to be present in the apparatus before such release can take place.

In the form of construction shown in Figs. 5, 6 and 7, the general idea above presented is disclosed, the differences being mainly in the fact that two separate main coin paths are provided, and that the projection which controls the admission of the coin to the apparatus-release mechanism is normally in position to intercept the coin when introduced. In this form the chute *b* acts simply as the chute for the coins or checks which operate on the coin cup *m*, a second chute, designated as *b*¹ being provided, and which leads to the apparatus-release mechanism, the chute *b*¹ having the projection receiving slot, indicated as *d*¹,

while the slots *d* and *e* are omitted from the chute *b*. The movements of the lever *n* and arm *h* are similar to those heretofore indicated; the position of the chute *b*¹, however, causing the projection *k* to pass out of an intercepting position upon the movement of the lever *n* instead of into such position as in the structure shown in Figs. 1 to 4. By this construction it will be understood that there is no requirement of a particular selection of chutes in the deposit of coins, since the arm *h* will not operate until the lever *n* is operated, so that there is an essential requirement that all of the necessary coins be in position before the apparatus-release coin or check will become operative. When the necessary coins or checks have been placed in position the discharge of the coins from the chutes will be practically simultaneous.

From this description it will be understood that in each of the forms presented there is a requirement for the use of more than a single check or coin to provide the release of the machine; that but a single coin is used to provide the actual release of the machine, and that there is a requirement that the remaining checks or coins required to complete the operation of the machine are in position before the apparatus-release coin or check may operate. It will also be understood that the present mechanisms are exceedingly simple and efficient in operation, require but few parts, and the principal operating mechanism, consisting of the parts carried by the shaft *l*, have no movements one relative to the other.

The specific construction illustrated in Figs. 5, 6 and 7 is not specifically claimed herein as it forms the subject matter of my companion application filed November 8, 1909, Serial No. 526,744.

The terms "coin" and "check" used herein are to be understood as synonymous, both indicating an article representing a value necessary to complete the preliminary steps in obtaining the commodity being vended. As will be readily understood, the mechanism will operate by the use of either form of token or by the use of both forms, as may be desired.

What is claimed as new is,—

1. In check-controlled apparatus operable only by the insertion of more than a single check, means including a movable element permanently carried by the apparatus and intersecting the path of a selected check for positioning such selected check in operative-release position after the remaining checks to complete the number required have been deposited.

2. In check controlled apparatus operable only by the insertion of more than a single check, means for positioning one of the checks in apparatus-release position after

the remaining checks to complete the number required have been deposited, said means including two pivoted members having a common axis and movements in unison, one of said members determining the movement of the apparatus-release check.

3. In check controlled apparatus operable only by the insertion of more than a single check, means for positioning one of the checks in apparatus-release position after the remaining checks to complete the number required have been deposited, said means including two pivoted members having a common axis and movements in unison, one of said members determining the movement of the apparatus-release check, the other member normally extending into the path of movement of the remaining deposited checks.

4. In check controlled apparatus operable only by the insertion of more than a single check, means for positioning one of the checks in apparatus-release position after the remaining checks to complete the number required have been deposited, said means including two pivoted members having a common axis and movements in unison, one of said members determining the movement of the apparatus-release check, the other member normally extending into the path of movement of the remaining deposited checks, and means carried by the latter member for determining the time of release of the apparatus-release check.

5. In check-controlled apparatus, a main coin chute, a pivoted coin cup normally positioned at the outlet end of said chute, a coin switching member movable into and out of the coin chute, means being provided whereby said member is operated by the movement of the coin cup, and an auxiliary chute adapted to receive a coin when said member is in switching position.

6. In check-controlled apparatus, a main coin chute, a pivoted coin cup normally positioned at the outlet end of said chute, a coin switching member movable into and out of the coin chute, means being provided whereby said member is operated by the movement of the coin cup, and an auxiliary chute adapted to receive a coin when said member is in its switching position, means being provided for retaining the coin cup in position to switch a coin until the switched coin has passed into the auxiliary chute.

7. In check-controlled apparatus, a main coin path, a pivoted coin cup at the end of said path, and a pivoted coin switching member intersecting said coin path, said cup and member being operatively connected to operate in unison, the normal position of the switching member being out of the coin path, the passage of the coin to the cup placing the member in switching position.

8. In check-controlled apparatus, a coin

chute, a coin cup at the outlet end thereof, a coin switching member having an arcuate face positionable within the coin chute, said member and cup having a common axis and
5 movable pivotally in unison to place the projection within the chute upon the passage of a coin into the coin cup.

9. In check-controlled apparatus, a coin chute, a coin cup at the outlet end thereof,
10 a coin switching member having an arcuate face positionable within the coin chute, said member and cup having a common axis and

movable pivotally in unison to place the projection within the chute upon the passage of a coin into the coin cup, and a member 15 operated by the switched coin for releasing the coin in the coin cup.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

OSCAR OEHRING.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.