March 11, 1969 A. M. BROWN 3,432,074

VENDING MACHINE

Filed March 21, 1967 Sheet 1 of 3

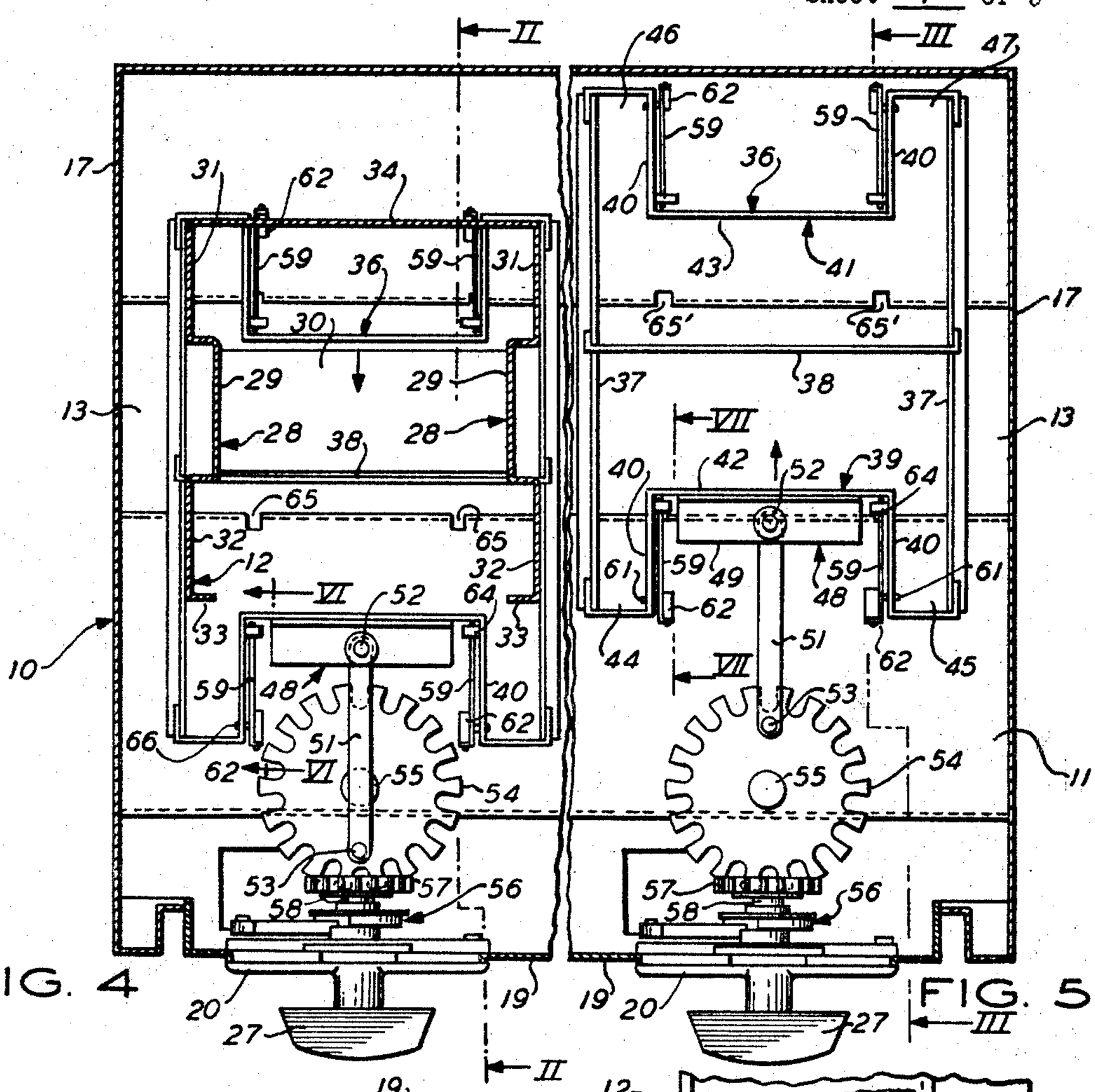
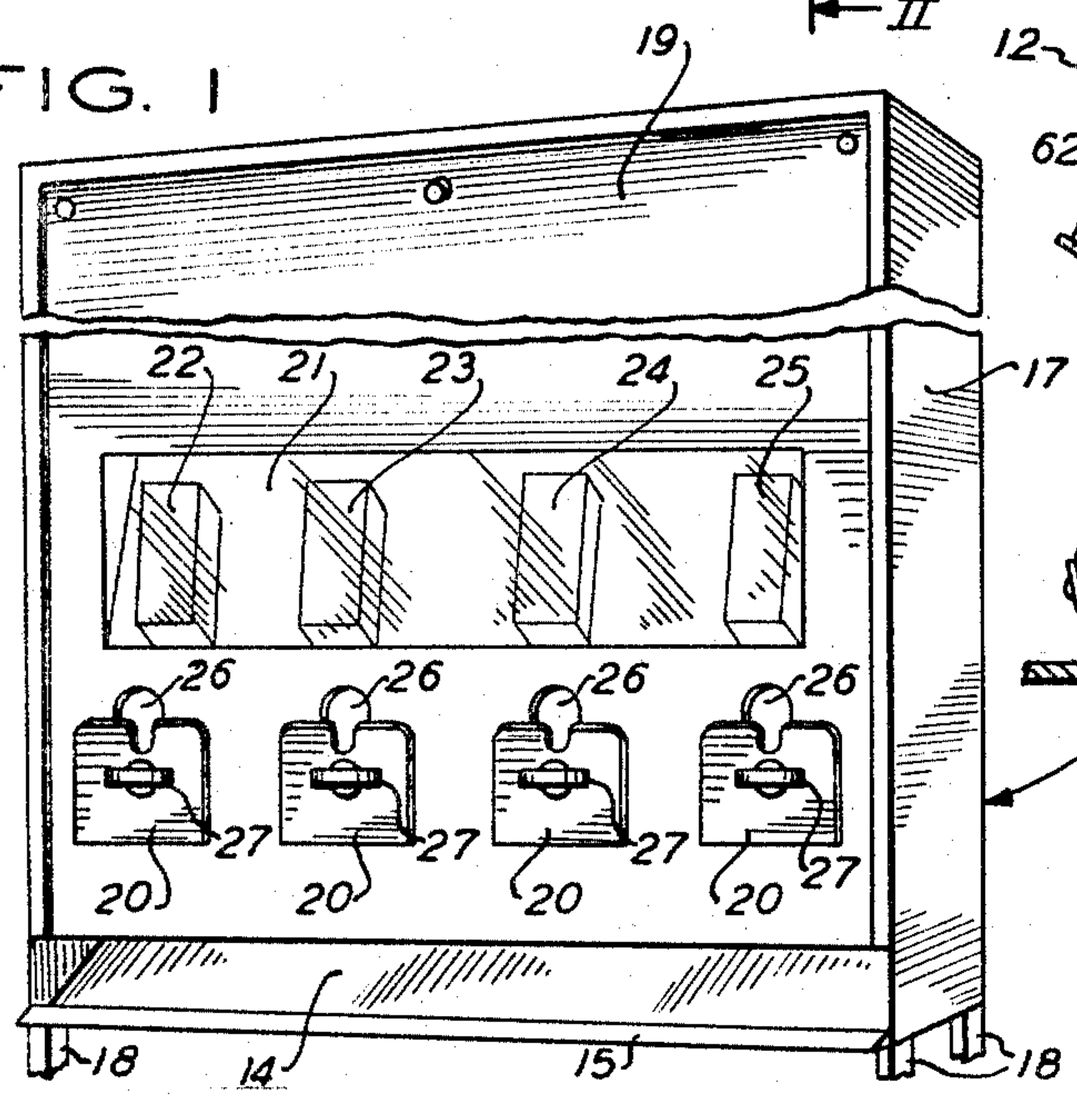


FIG. 4

FIG. 5

FIG. 1



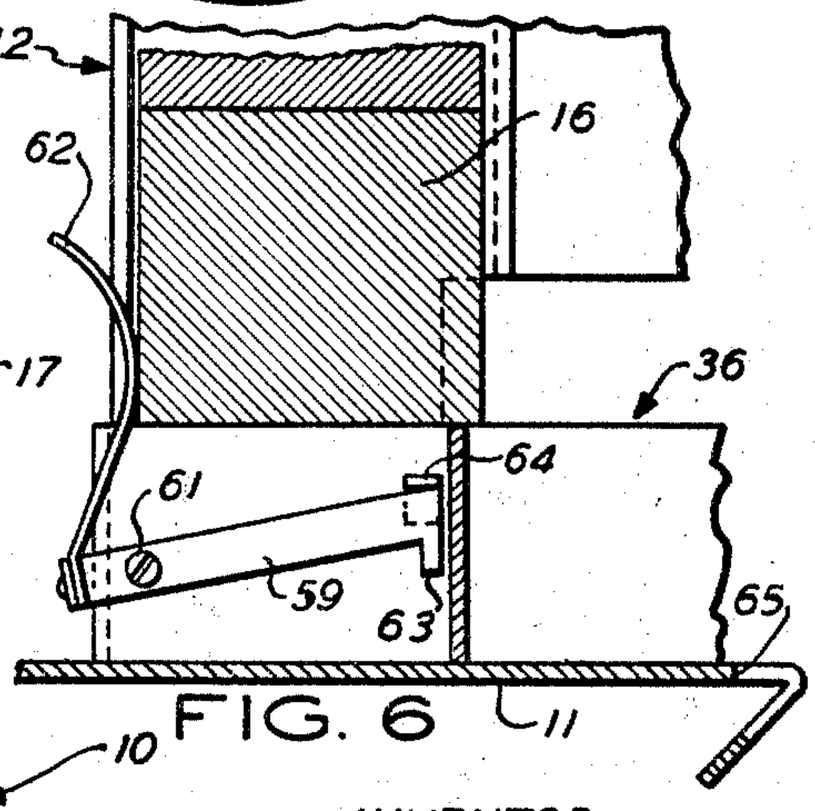


FIG. 6

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FIG. 2

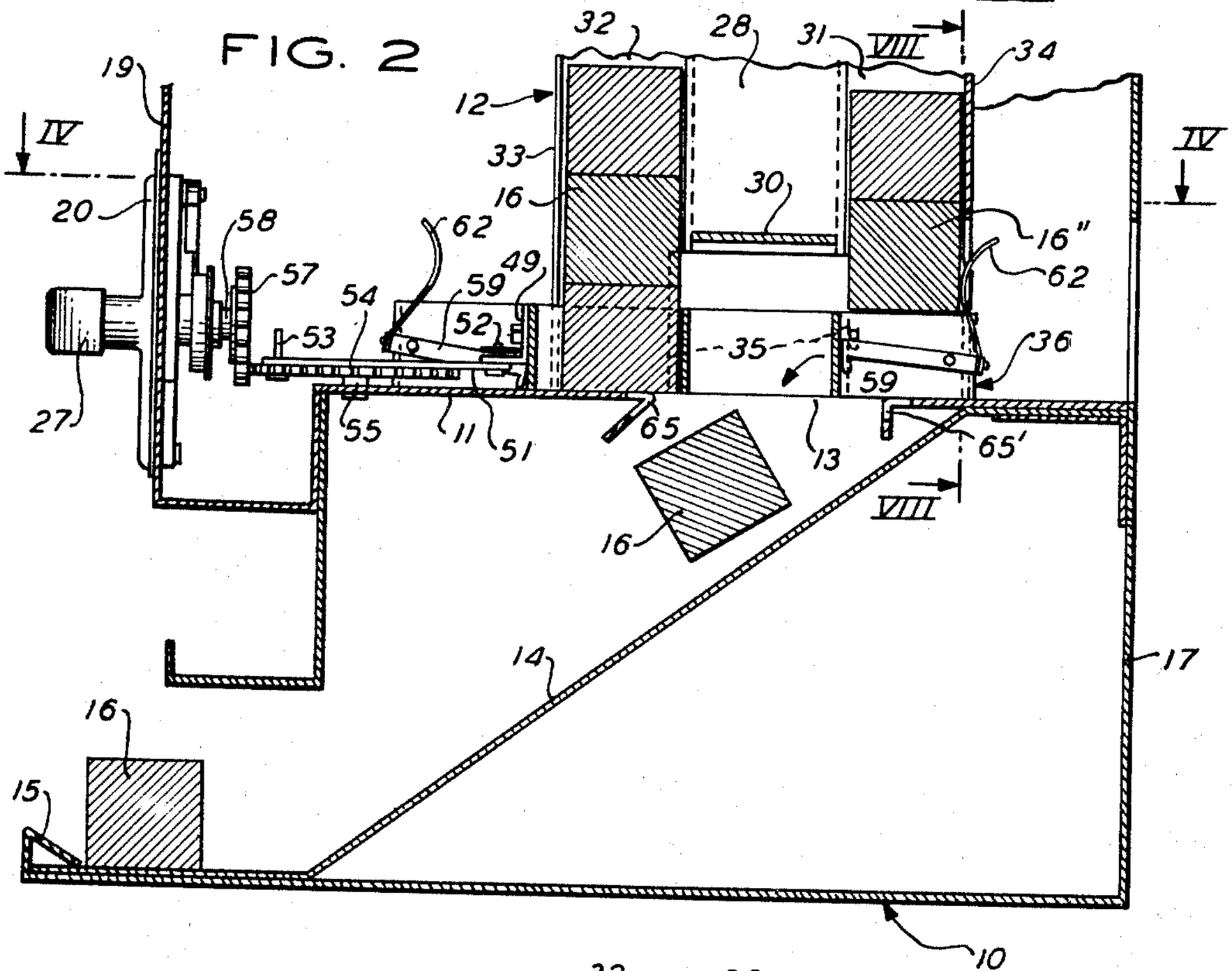
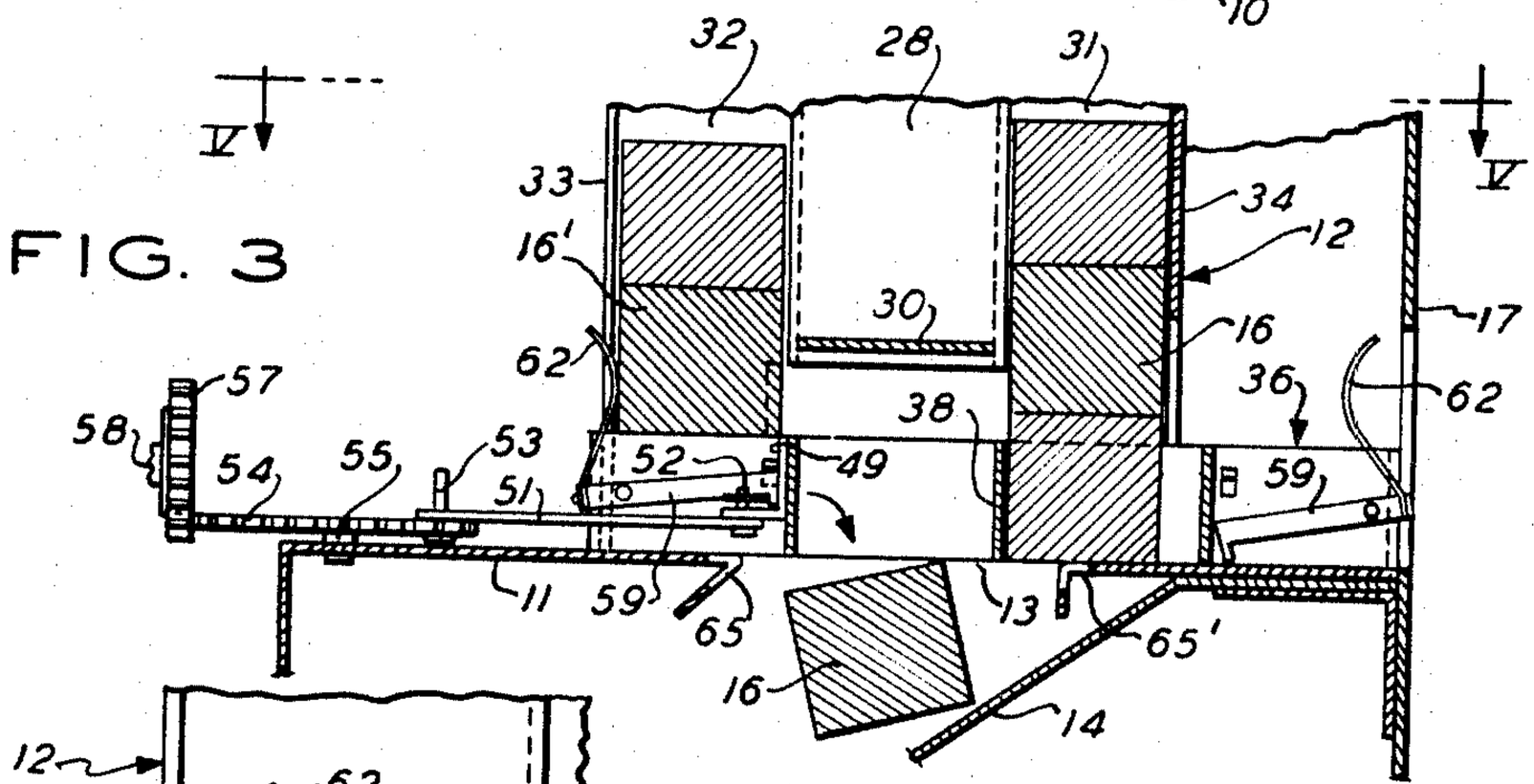


FIG. 3



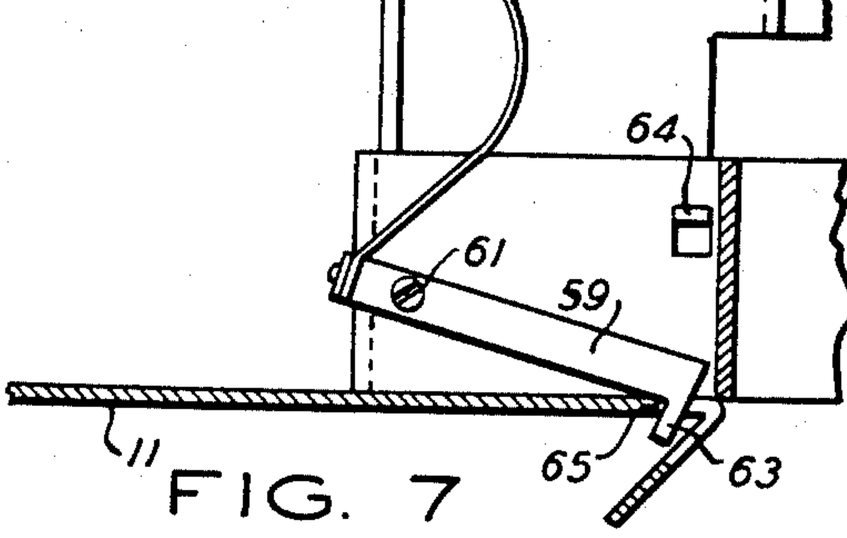
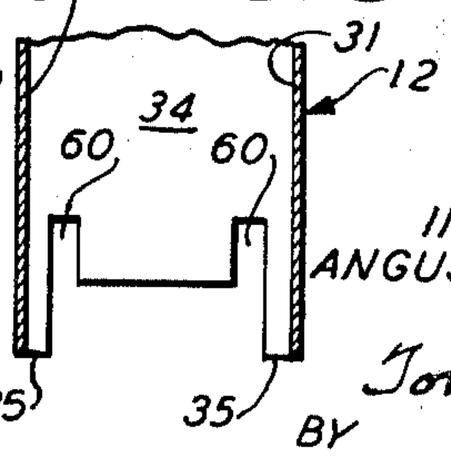


FIG. 7

FIG. 8



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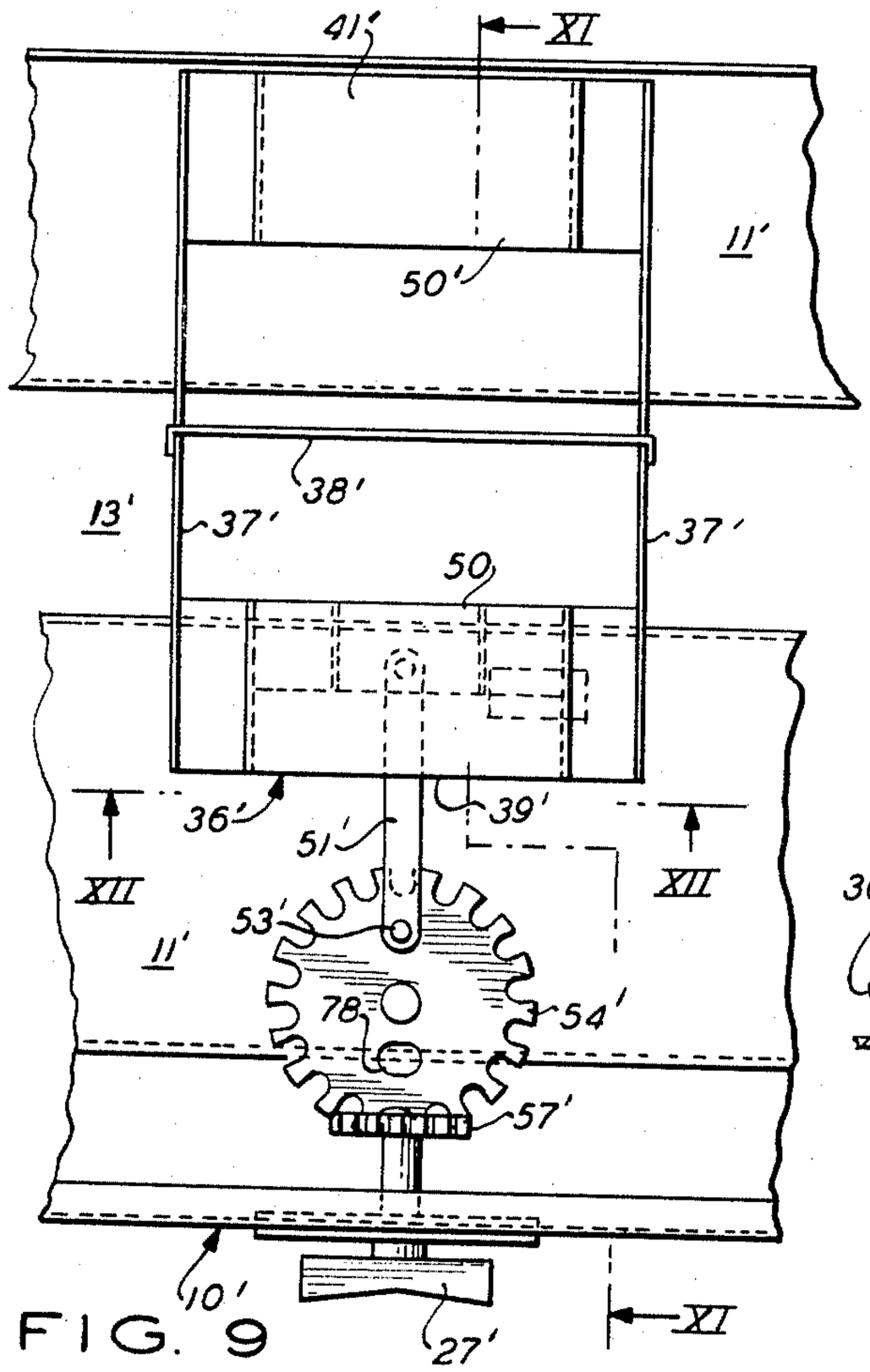

FIG. 9

FIG. 10

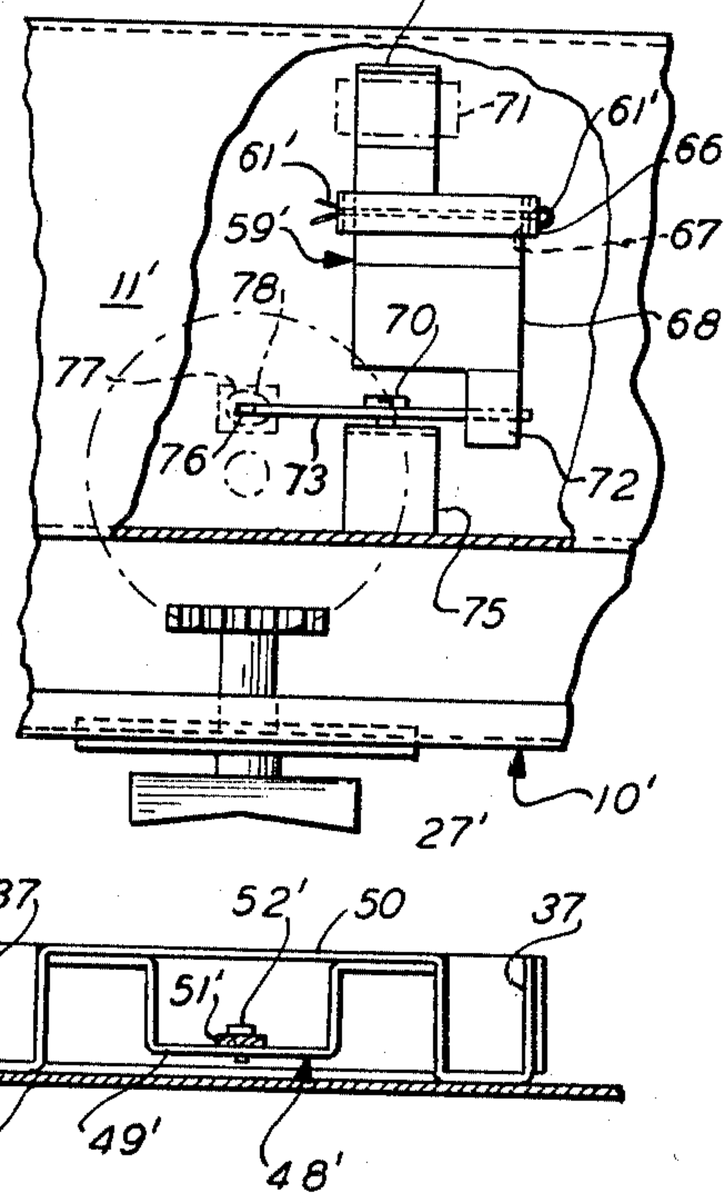

FIG. 12

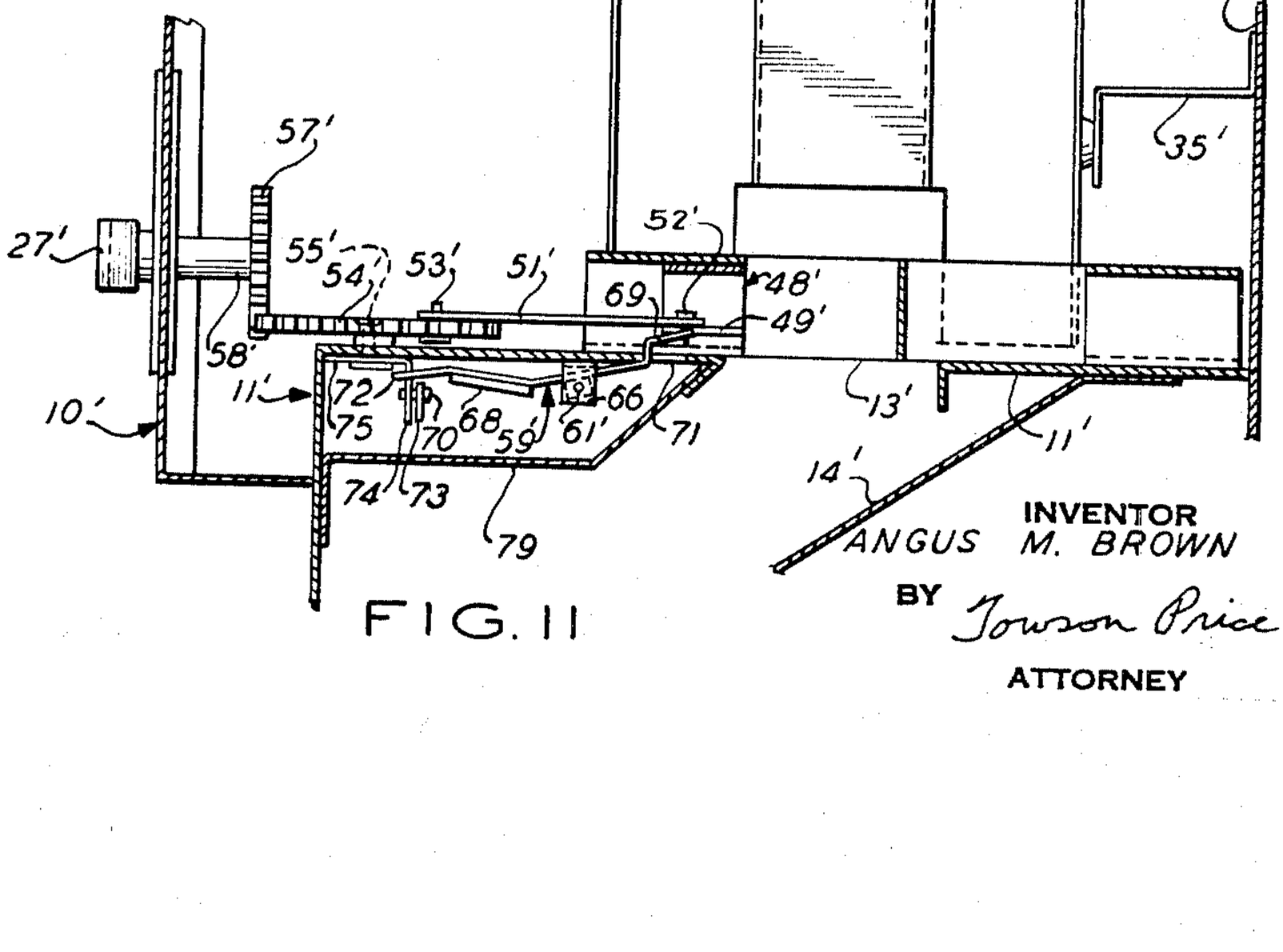

FIG. 11

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United States Patent Office

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3,432,074

VENDING MACHINE

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Continuation-in-part of application Ser. No. 537,550, Mar. 25, 1966. This application Mar. 21, 1967, Ser. No. 632,876

U.S. Cl. 221—117 10 Claims

Int. Cl. G07f *11/04;* B65g *59/06;* G65h *3/24*

ABSTRACT OF THE DISCLOSURE

A vending machine comprising a supporting platform with an aperture for the passage of articles to be dispensed to a delivery chute, a merchandise magazine disposed above said platform, but offset from said aperture, for holding a stack of articles to be dispensed, a carriage slidable over said platform and under such a stack, and mechanism for sliding said carriage to move the lowermost article of the stack to the aperture when it is replaced by the next article thereabove for later dispensing, and "empty lock" means to prevent coin acceptance when there is no article available for being dispensed.

This application is a continuation-in-part of my application, Ser. No. 537,550, filed Mar. 25, 1966, now abandoned and similarly titled.

This invention relates to vending machines and, more particularly, to that class of coin-controlled machines which allow for the dispensing of a selected article or package therefrom upon the insertion of a coin representing the purchase price.

In recent years it has become common practice to dispenses candy bars, chewing gum, other confections, soft drinks, milk, and coffee by means of coin-actuated vending machines. In accordance with my invention, I propose a machine which allows for the coin dispensing of articles of merchandise, examples being boxed candy, bottled drinks, and other relatively small articles while stacked in desirably dual columns or merchandise magazines, when released, upon the acceptance of a suitable coin by the machine, alternately from said columns.

In one embodiment, my machine involves the placing of the articles to be dispensed in a magazine as two stacks spaced one behind the other, and the employment of a carriage movable beneath the magazine which holds the articles in place for, upon release of coin-controlled mechanism, withdrawing the lowermost article from one stack and discharging it downward at a position immediately beneath the space between said stacks, and upon another release of the coin-controlled mechanism, withdrawing the lowermost article from the other stack and discharging it downward at the same position as the first-mentioned article was discharged.

An object of my invention is to provide a vending machine comprising a supporting platform, a merchandise delivery chute therebeneath, wherein said platform has an aperture of width slightly greater than the corresponding dimension of articles to be dispensed and leading to said chute, a merchandise magazine mounted on said platform over the aperture to hold a first stack of articles of merchandise near the back and a second stack of such articles spaced forwardly thereof a distance slightly greater than the corresponding dimension of articles to be dispensed, a carriage, slidable over said platform and under said stacks, being employed for dispensing from first one stack, then the other, the dimension of said carriage from front to rear being greater than the corresponding dimension of the magazine by an amount corresponding

with the front-to-rear dimension of the aperture, mechanism for sliding said carriage being employed to alternately move the lowermost article of the rearward of said stacks forward until it drops through said aperture into said chute and the lowermost article of the forward of said stacks rearward until it drops through said aperture into said chute, and wherein said removed articles are replaced from the articles directly thereabove in said stacks.

Another object of my invention is to provide, in a machine as above described, such a carriage with a front connector portion, a gear or sprocket wheel disposed forwardly of said magazine and pivoted about a vertical axis, a coin-controlled gear or sprocket wheel turnable about a horizontal axis, meshing with the first-mentioned gear or sprocket wheel, and turnable from the front of the machine, and a link with its rear end portion pivoted to said connector portion and its front end portion pivoted to the top face of said first-mentioned gear or sprocket wheel.

A further object of my invention is the provision of such a vending machine, wherein the magazine comprises side walls, intermediate portions of which are formed to define guides for the two stacks of articles, said guides being completed by flanges extending inwardly toward one another at the front and a wall at the rear, and wherein walls thereof have portions cut away at the bottom to allow for movement of said carriage therebeneath.

A still further object of my invention is to provide, in a vending machine as above described, a carriage formed by side, front and rear walls of height smaller than the vertical thickness of the articles to be dispensed, said side walls being straight, and the front and rear walls having intermediate portions offset toward one another distances in accordance with the corresponding dimension of the articles to be dispensed, forming hollow arms in which legs of the magazine are to be alternately fit as the carriage is moved back and forth therebeneath, or as an alternative, in which the forward and rearward portions of the carriage are provided with upwardly-offset portions forming article-supporting shelves.

An additional object of my invention is to provide in a vending machine as above described, an "empty lock" lever which, when there is no article available to be dispensed, either locks over an edge of the supporting platform or in an apertured portion of a supporting platform and one in a coin-controlled gear or sprocket wheel to prevent movement of the mechanism and acceptance of a coin.

These and other objects and advantages will become apparent from the following detailed description when taken with the accompanying drawings. It will be understood that the drawings are for the purpose of illustration and do not define the scope or limits of the invention, reference being had for the latter purpose to the appended claims.

In the drawings, wherein like reference characters denote like parts in the several views:

FIGURE 1 is a fragmentary front perspective view of a vending machine embodying my invention.

FIGURE 2 is a fragmentary vertical sectional view on the line II—II of FIGURE 4, in the direction of the arrows.

FIGURE 3 is a fragmentary vertical sectional view on the line III—III of FIGURE 5, in the direction of the arrows.

FIGURE 4 is a fragmentary horizontal sectional view on the line IV—IV of FIGURE 2, in the direction of the arrows.

FIGURE 5 is a fragmentary horizontal sectional view

on the line V—V of FIGURE 3, in the direction of the arrows.

FIGURE 6 is a fragmentary vertical sectional view, to an enlarged scale, on the line VI—VI of FIGURE 4, in the direction of the arrows.

FIGURE 7 is a fragmentary vertical sectional view to the scale of FIGURE 6 but on the line VII—VII of FIGURE 5, and showing what happens to the empty lock lever when not engaged by an article to be dispensed.

FIGURE 8 is a fragmentary vertical sectional view on the line VIII—VIII of FIGURE 2, in the direction of the arrows, but to a smaller scale.

FIGURE 9 is a fragmentary plan corresponding to FIGURE 5 but showing a modification.

FIGURE 10 is a fragmentary plan corresponding to FIGURE 9, but with parts of the supporting platform of the machine broken away to show the mechanism therebeneath.

FIGURE 11 is a fragmentary vertical sectional view on the line XI—XI of FIGURE 9, in the direction of the arrows.

FIGURE 12 is a fragmentary vertical sectional view on the line XII—XII of FIGURE 9, in the direction of the arrows.

Referring first to the embodiment of my invention illustrated in FIGURES 1 to 8, inclusive, the vending machine **10** has a supporting platform **11**, for one or more merchandise-holding magazines or columns **12**. The platform **11** is apertured at **13** for the reception of articles as dispensed into a discharge chute **14**. The chute **14** is shown as provided with an outer stop member **15**, against which a dispensed article **16** comes to rest so that it may then be withdrawn by a purchaser.

As shown in FIGURE 1, the vending machine **10** may be housed in a cabinet **17** supported on legs **18**, fragmentarily illustrated, and closed at its front by a panel **19** on which are mounted one or more, in this instance four, coin release devices **20**. Above each coin release device is a display panel **21** showing samples **22**, **23**, **24** and **25** of desirably different articles, one of which the purchaser can expect to get by inserting an appropriate coin in a selected receiving slot **26** therebeneath and turning the corresponding actuating handle **27** as far as it will go, or 360°.

There is a generally vertical merchandise magazine or column **12** for each of the actuating handles **27**, but inasmuch as these may be identical, only one and its associated mechanism will be described. The magazine **12**, as shown most clearly in FIGURES 2, 3 and 4, comprises a pair of side walls **28** intermediate portions **29** of which, desirably about as wide as the platform aperture, are connected near their lower ends by a brace **30**, are offset inwardly toward one another to form ribs defining guiding channels or guides **31** and **32** rearwardly and forwardly thereof for two stacks of articles **16**. These guides are completed at the front of the column or magazine **12** by flanges **33** extending toward one another and a wall **34** at the rear. The side walls **28** and rear wall **34** have intermediate portions cut away at the bottom to leave legs **35** of a length corresponding with the height of the associated carriage **36** to allow for movement of said carriage therebetween. The carriage **36** is generally uniform in width from front to rear for the purpose of dispensing articles from first one stack and then the other. It is of a length from front to rear greater than the corresponding dimension of the magazine **12** by an amount corresponding with the width of the aperture **13**.

The structure of the carriage **36** is most clearly shown in FIGURE 5. Its side, front, and rear walls and a cross-brace are all of a height slightly smaller but generally corresponding with the vertical thickness of the articles to be dispensed. The side walls **37** are straight and with their central portions desirably connected by a straight partition or brace **38**. The front and rear walls **39** and **41**, however, have respective intermediate portions **42** and **43** offset toward one another distances corresponding with the corresponding dimension of the articles to be dispensed, leaving hollow arms **44** to **47**, inclusive. These arms are formed by parts of the side walls **37**, short front and rear wall portions and wall portions **40** paralleling the side walls and connecting the short front wall portions to the offset portions **42** and the short rear wall portions to the offset portions **43**. The legs **35** of the magazine are to alternately fit in said hollow arms as the carriage is moved back and forth beneath said magazine.

The inwardly offset portion **42** at the front is provided with connecting means such as a pull bracket **48** secured to the front of the carriage or front face of said offset portion and providing an outstanding flange **49** pivotally connected to a link **51**, as indicated at **52**. The front end of the link **51** is, in turn, pivotally connected to a stud **53** upstanding from the top face of gear or sprocket wheel **54**, pivotally mounted on the platform **11**, as indicated at **55**.

Each coin release mechanism **56**, actuated by a handle **27** when released by a coin, is provided with a gear or sprocket wheel **57**, pivoted about a horizontal axis indicated at **58**, and meshing with the sprocket wheel **54** to provide a gear reduction of 1:2. This means that one complete revolution of the sprocket wheel **57** results in only a half revolution of the sprocket wheel **54**, that is, from the position of FIGURE 4 to that of FIGURE 5, or vice versa.

Each carriage **36** is provided with at least one at front and rear, desirably four "empty lock levers" **59** pivoted one to each of the hollow arms **44** and **45**, as indicated at **61**, and one to each of the hollow arms **46** and **47** on the wall portions **40** thereof. Each lever **59** carries a curved member **62** upstanding therefrom when engaged by an article **16** of the corresponding stack of articles which is immediately above the carriage **36**, as shown most clearly in FIGURE 6. The rear wall **34** of the magazine **12** is notched as indicated at **60** to allow for passage of these curved members **62** of the rear levers **59**. It then thereby holds the lever **59** up so that its depending portion **63** is above the platform **11** and at or near a stop lug **64** formed on the corresponding arm of the carriage. This means that when such an article of merchandise is in place, the machine **10** is operative as the lugs **63** does not interfere with the movement of the carriage **36**.

However, if the supply of articles **16** to be dispensed becomes depleted sufficiently so that there is no article to merchandise engaging the curved portions **62** of the empty lock levers **59**, so that said levers are allowed to drip by gravity to a position corresponding with that of FIGURE 7, then when the carriage reaches the position there shown, the depending portion **63** of each of said levers latches over the inner edge **65**, or the outer edge **65'**, of the platform **11**, as the case may be, and locks the carriage **36** against movement. The carriage would in this case also be ineffective to dispense an article because of the depletion of supply thereof. This locking consequently also prevents acceptance of a coin in the corresponding slot **26** by preventing turning of the appropriate handle **27**.

Referring now to the second embodiment of my invention, it will be noted that the parts thereof which differ from those of the first embodiment are illustrated in FIGURES 9, 10, 11 and 12. However, these figures are supplemented by FIGURE 1 and parts of FIGURES 2, 3 and 4 in order to fully disclose said second embodiment.

In accordance with said second embodiment, there is a vending machine **10'** with a supporting platform **11'**, for one or more merchandise-holding magazines or columns **12'**, apertured at **13'** for the reception of articles as dispensed into a discharge chute **14'** like that designated **14** in FIGURE 2. As shown in FIGURES 1 and 11, the vending machine **10'** may be housed in a cabinet **17'** supported on legs **18**, fragmentarily illustrated, and closed at its

front by a panel **19** on which are mounted one or more, in this instance four, coin release devices **20**.

There is a merchandise magazine or column **12'** for each of the actuating handles **27'**, but inasmuch as these may be identical, only one and its associated mechanism will be described. The magazine **12'**, is designated **12** and shown generally most clearly in FIGURES 2, 3 and 4, as described in connection with the first embodiment. It is here modified as illustrated in FIGURE 11, to be described.

The second embodiment of my invention employs a carriage **36'** of a form especially adapted to support a stack of articles relatively heavy as compared with those designated **16** in the first form. The structure of the carriage **36'** is most clearly shown in FIGURES 9, 11 and 12. Its side walls, a crossbrace and other connecting elements are all of a height slightly smaller but generally corresponding with the vertical thickness of the articles to be dispensed, as in the first embodiment. The side walls **37'** are straight and with their central portions desirably connected by a straight partition or brace **38'**. The front and rear portions **39'** and **41'**, however, are desirably connected at their ends to the bottom edges of the side walls **37'** and have respective intermediate portions offset upwardly to provide shelves **50** at the level of the top edges of the side walls to support stacks of the articles to be dispensed.

The shelf **50** at the front is provided with connecting means here shown as a pull bracket **48'** fastened to the bottom face of said shelf and forming a downwardly spaced plate portion **49'** to which a link **51'** is pivotally connected, as indicated at **52'**. The front end of the link **51'** is, in turn, pivotally connected to a stud **53'** upstanding from the top face of a gear or sprocket wheel **54'** pivotally mounted on a platform **11'**, as indicated at **55'**.

In the present embodiment, the merchandise magazine or column **12'** cannot be supported on legs which ride in corresponding openings in the carriages because there are no such openings in the improved carriages **36'**. Therefore, the magazine **12'** is here supported by suitable means such as brackets **35'**, only one of which is shown in FIGURE 11. These brackets **35'** each may have an upstanding flange secured to the inner face of the rear wall of an enclosing cabinet **17'** and a depending front flange which may be secured to the rear wall of the magazine **12'**. Thus the bottom of the magazine **12'** is held above the platform with enough space allowed for the carriage **36'** to slide therebeneath.

Each coin release mechanism, in the present embodiment, is actuated by a handle **27'**, as in the first embodiment, where the handle is designated **27**, when released by a coin. It is also provided with a gear or sprocket wheel **57'**, pivoted about a horizontal axis indicated at **58'**, and meshing with the sprocket wheel **54'** to provide a gear reduction of 1:2, as previously.

The "empty lock levers" **59'**, one for each lock, in the present embodiment are an improvement over and replacement for those designated **59** in the first embodiment. They are each pivoted as indicated at **61'**, to lugs **66** depending from brackets **67** secured to the underside of the portion of the platform **11'** supporting the sprocket wheels **54'**. Each lever **59'** has a relatively-wide portion from which lugs depend between and respectively adjacent the lugs **66**. Each pivot member, which may be a cotter pin **61'**, passes through registering apertures in a set of associated lugs to effect a desired pivotal connection.

Each lever **59'** has secured to its wide portion an "empty lock" weight **68**, biasing the lever counter-clockwise, as viewed in FIGURE 11, so that its narrowed angular portion **69**, at the left hand rearward corner portion thereof, as viewed in FIGURE 10, protrudes through an aperture **71** in the platform **11'**, with its extreme rear end portion overlying the platform portion defining the rear edge of the aperture. Each lever **59'** also has a narrowed portion **72** protruding from the right hand forward corner part of the wide portion thereof and overlying the right hand end portion of an "empty lock arm" or lever **73**. The arm **73** is fastened intermediate its ends by a pivot member **70** to the depending flange **74** of an angular bracket **75**, the upper flange of which is secured to the lower side of the platform **11'** by suitable means, not shown.

The arm **73**, biased to swing counter-clockwise as viewed from the front, has an upstanding lug **76** at its left end which protrudes through a slot **77** thereabove in the platform **11'** when engaged by the lever **59'** and locks the sprocket wheel **54'** against turning when received in an aperture **78** therein which is displaced from its axis. Normally, an article **16** of the outer stack, which is immediately above the narrowed angular portion **69** engages and holds down this portion, thereby allowing the lug **76** to stay down out of locking engagement with the sprocket wheel **54'**. This mechanism is desirably protected by an "empty lock cover" **79**, such as illustrated in FIGURE 11, secured thereunder by suitable means.

This means that when such an article of merchandise **16** is in place, the machine is operative as the lug **76** does not interfere with the movement of the sprocket wheel **54'**. However, if the supply of articles **16** to be dispensed becomes depleted sufficiently so that there is no article of merchandise engaging the portion **69** of an "empty lock lever" **59'**, whereby said lever is allowed to drop by gravity to the position of FIGURE 11 then, when the sprocket wheel reaches the position opposite that of FIGURE 9, the upstanding lug **76** latches into the locking aperture **78** and locks the wheel **54'** and carriage **36'** against movement. The carriage **36'** would in this case also be ineffective to dispense an article because of the depletion of the supply thereof. This locking consequently also prevents acceptance of a coin in the corresponding slot **26** when no article is available, by preventing turning of the appropriate handle **27'**. Except as specifically described in connection with the second embodiment, the same may correspond with the first embodiment.

From the foregoing it will be seen that a machine embodying my invention may be operated as follows: The columns or magazines **12** or **12'** are supplied with the desired number of articles **16** to be dispensed so that, when each carriage **36** or **36'** is in the innermost position of FIGURES 3, 5, 7, 9 and 11, the "empty lock lever" **59** or **59'** is held from locking engagement in the first embodiment as indicated in FIGURE 6. In the second embodiment, it is the engagement of an article with the portion **69** of the lever **59'** that releases the sprocket wheel **54'**. Each deposit of a suitable coin in the selected slot **26** will then allow turning of the corresponding handle **27** or **27'**, thereby effecting a movement of the sprocket wheel **54** or **54'** from the position of FIGURES 2 and 4 to that of FIGURES 3 and 5 or FIGURE 9, or vice versa.

In moving from the position of FIGURES 2 and 4 to that of FIGURES 3 and 5 or 9 the lowermost article **16** of the front stack which had initially been, or previously dropped, on the platform **11** or **11'** is pushed off said platform through the aperture **13** or **13'** to the chute **14** or **14'** as viewed in FIGURE 3 or FIGURE 11 for discharge to the stop **15**. Said lowermost article is then replaced by the one designated **16'** in FIGURE 3, which then does not rest on the platform **11** or **11'** but rather is supported on the arms **44** and **45** of a carriage **36** or on a shelf **50** of a carriage **36'**.

Upon inserting another coin in the same slot, the carriage **36** or **36'** may be moved from the position of FIGURES 3 and 5 or 9 to that of FIGURES 2 and 4, whereupon the lowermost article **16** of the rear stack, which had initially been, or previously dropped, on the platform **11** or **11'** is pulled forward and discharged through the aperture **13** or **13'** to the chute **14**, or **14'**

as shown in FIGURES 2 and 11. The article designated **16''** in FIGURE 2 immediatelly thereabove does not then drop to the platform **11** or **11'**. It is, rather, supported on the arms **46** and **47** of a carriage **36** or on a shelf **50** of a carriage **36'** until the next movement of said carriage **36** or **36'**. On said next movement this article is allowed to drop to a position forwardly of the intermediate portion **43** or of the rear shelf **50**, between the side walls **37** or **37'** and rearwardly of the partition **38** or **38'** of a carriage, to be discharged when the carriage is again moved forward.

Having now described my invention in detail in accordance with the requirements of the patent statutes, those skilled in this art will have no difficulty in making changes or modifications in the individual parts or their relative assembly in order to meet specific requirements or conditions. Such changes and modifications may be without departing from the scope and spirit of the invention, as set forth in the following claims. It will also be understood that the coin release mechanism may be conventional.

I claim:

1. A vending machine comprising a supporting platform, a merchandise delivery chute therebeneath, said platform having an aperture of front-to-rear dimension slightly greater than the corresponding dimension of articles to be dispensed, leading to said chute, merchandise magazine means mounted above said platform but offset from said aperture for holding stacked articles of merchandise to be dispensed, a carriage generally uniform in width from front to rear, formed by side, front, and rear walls to height nearly corresponding with the vertical thickness of the articles to be dispensed, said side walls being straight, and at least one of the front and rear walls being angular along a distance in accordance with the corresponding dimension of the articles to be dispensed, to support said articles, said carriage being slidable over said platform and under such stacked articles, and mechanism pivotally connected directly to said carriage for sliding it to move the lowermost stacked article until it registers with and drops through said aperture into said chute, said moved article being replaced by another stacked article directly thereabove and which then rests on said carriage until the latter is returned for a repetition of the operation.

2. A vending machine as recited in claim **1**, wherein the carriage has side walls braced by a partition extending therebetween.

3. A vending machine as recited in claim **1**, wherein the magazine means is disposed vertically, the carriage is formed by side and front and rear walls having intermediate portions offset toward one another distances corresponding with the corresponding dimension of the articles to be dispensed, leaving hollow arms the top edges of which initially engage articles to be dispensed and in which legs of the magazine means are to alternately fit as the carriage is moved back and forth therebeneath, and the pivotal connection is to the offset part of the front of the carriage for sliding the same.

4. A vending machine as recited in claim **1**, wherein the magazine means is disposed vertically, said front and rear carriage portions are formed as webs connecting lower edges of said side walls, intermediate parts of said webs being offset upward to about the level of the top edges of said side walls to form supporting shelves for said stacks of articles and the pivotal connection is to the offset part of the front of the carriage for sliding the same.

5. A vending machine as recited in claim **1**, wherein the mechanism for carriage sliding comprises a gear disposed forwardly of said magazine, pivoted about a vertical axis, a coin-controlled gear turnable about a horizontal axis, meshing with the first-mentioned gear and turnable from the front of the machine, and a link with its rear end portion pivoted to said connecting means and its front end portion pivoted to the top face of said first-mentioned gear.

6. A vending machine as recited in claim **1**, wherein the magazine is of the dual type for holding a first stack of articles of merchandise near the back of the machine and a second stack of such articles spaced forwardly thereof a distance slightly greater than the corresponding dimension of articles to be dispensed, the carriage is slidable over the platform and under both of said stacks for dispensing articles from first one stack and then the other, and the mechanism is to alternately move the lowermost article of the rearward of said stacks forward until it drops through said aperture into said chute and the lowermost article of the forward of said stacks rearward until it drops through said aperture into said chute, and said moved articles are replaced by the articles directly thereabove in said stacks.

7. A vending machine as recited in claim **6**, wherein the magazine comprises side walls intermediate portions of which are formed to define guides about as wide as the platform aperture, for the two stacks of articles, and said guides being completed by flanges extending inwardly toward one another at the front and a wall at the rear.

8. A vending machine as recited in claim **1**, wherein empty lock lever means is pivoted on a portion of the carriage and provided with a depending portion to lock over an edge of a portion of said supporting platform portion when not held up by an engaged article.

9. A vending machine comprising a supporting platform, a merchandise delivery chute therebeneath, said platform having an aperture of front-to-rear dimension slightly greater than the corresponding dimension of articles to be dispensed, leading to said chute, merchandise magazine means mounted above said platform but offset from said aperture for holding stacked articles of merchandise to be dispensed, a carriage slidable over said platform and under such stacked articles, and mechanism comprising connecting means at the front of said carriage, a gear disposed forwardly of said magazine means, pivoted about a vertical axis and with an aperture displaced from said axis, an empty lock lever pivoted intermediate its ends beneath said gear and with a lug adjacent one end which may upstand into locking engagement in said gear aperture, and means effecting such engagement when there is no article in place to be dispensed, a coin-controlled gear turnable about a horizontal axis, meshing with the first-mentioned gear and turnable from the front of the machine, and a link with its rear end portion pivoted to said connecting means and its front end portion pivoted to the top face of said first-mentioned gear for sliding said carriage to move the lowermost stacked article until it registers with and drops through said aperture into said chute, said moved article being replaced by another stacked article directly thereabove and which then rests on said carriage until the latter is returned to allow it to drop onto the platform for a repetition of the operation.

10. A vending machine comprising a supporting platform, a merchandise delivery chute therebeneath, said platform having an aperture through which articles are to be dispensed, leading to said chute, merchandise magazine means mounted above said platform for holding stacked articles of merchandise to be dispensed, a carriage slidable over said platform and under such stacked articles, and mechanism for sliding said carriage to move the lowermost stacked article until it registers with and drops through said aperture into said chute, said moved article being replaceable by another stacked article directly thereabove and which then rests on said carriage until the latter is returned for a repetition of the operation, said mechanism comprising connecting means at the front of said carriage, a gear disposed forwardly of said magazine means, pivoted about a vertical axis and with an aperture displaced from said axis, an empty lock lever

pivoted intermediate its ends beneath said gear and with a lug adjacent one end which may upstand into locking engagement in said gear aperture, and means effecting such engagement when there is no article in place to be dispensed.

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