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Song

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(54) **LOCKED PILL BOTTLE WITH TIMED DISPENSE LIMITS**

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CPC ***B65D 83/0409*** (2013.01)
USPC **221/276**; 221/2; 221/15

(58) **Field of Classification Search**
CPC B65D 83/04
USPC 221/2, 15, 276, 267, 268
See application file for complete search history.

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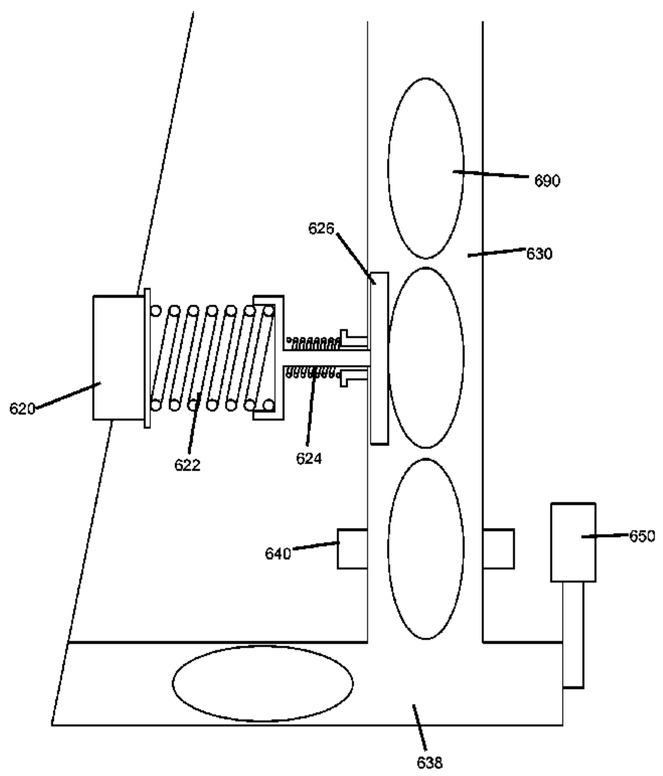
(57) **ABSTRACT**

The disclosed pill bottle allows for timed dispensing of medicine, as programmed by a doctor, pharmacist, or caregiver. The device has a slot for pill entry in any one of the walls, the slot being sealable and lockable. In an unlocked and open condition, the slot is a portal from the outside of the bottle into an inner cavity, the cavity being adapted for pill storage and extending between the slot/opening for pill entry and an exit tube. The exit tube is sized for single-file passage of a plurality of pills. A spring-loaded member is adapted to apply pressure in the exit tube on a single pill of the plurality of pills such that the pressure prevents exit of the single pill and the single pill blocks other pills of the plurality of pills from exiting. A button extends through a wall, such as the side wall, and is configured to release the pressure (defined as changing the static nature of the pill and spring placement) on the single pill, allowing it to fall.

17 Claims, 12 Drawing Sheets



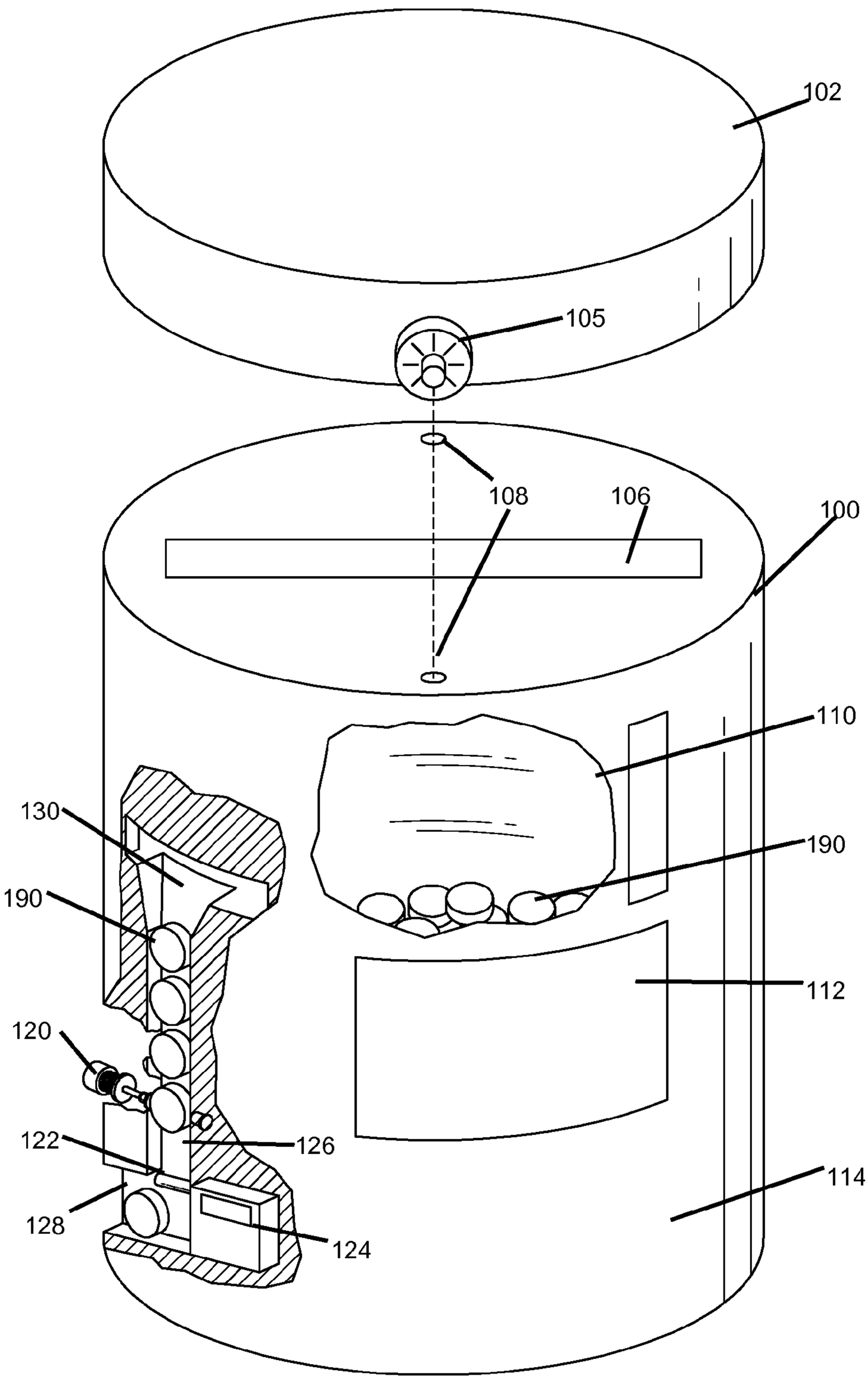


FIG. 1

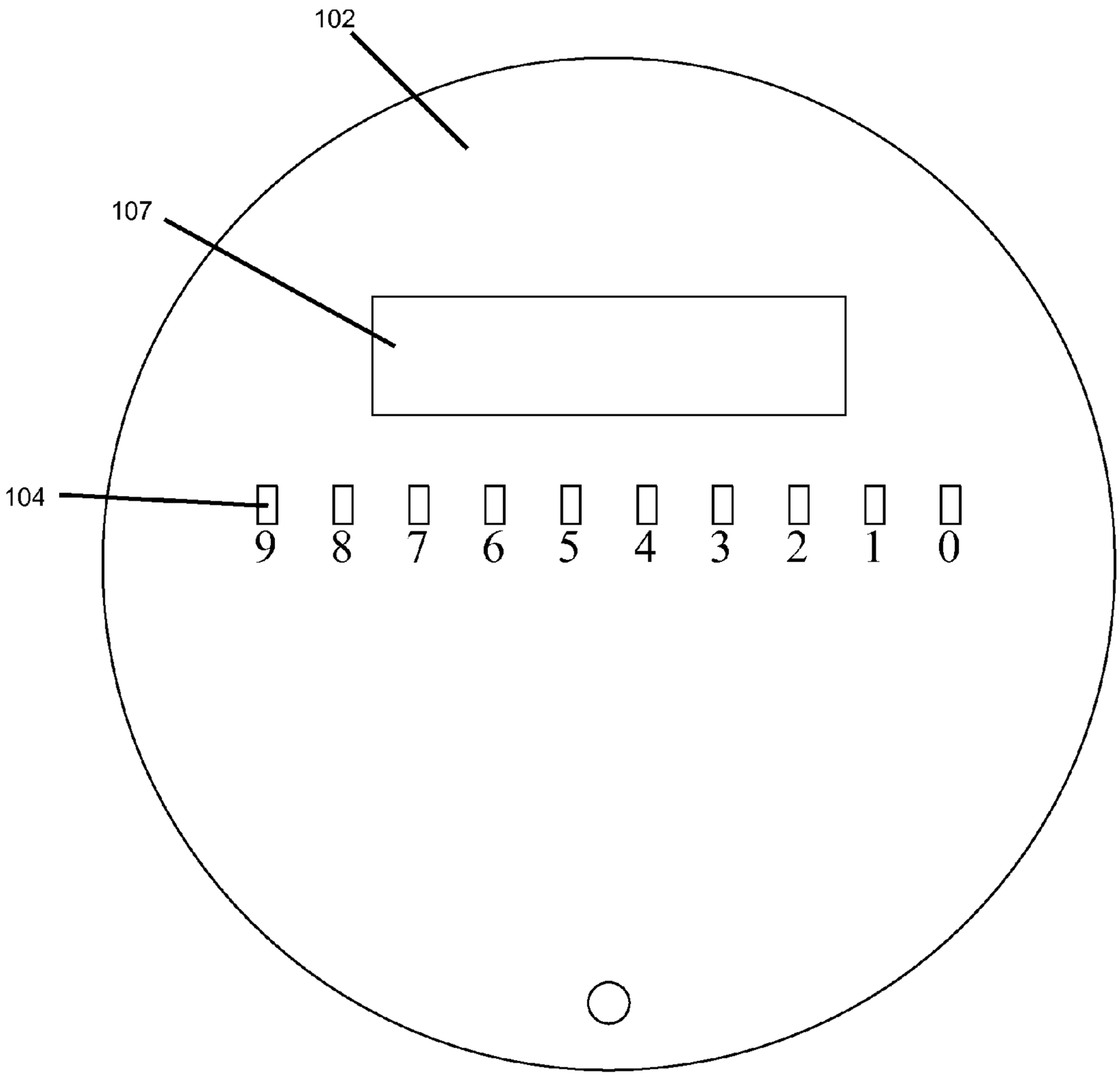


FIG. 2

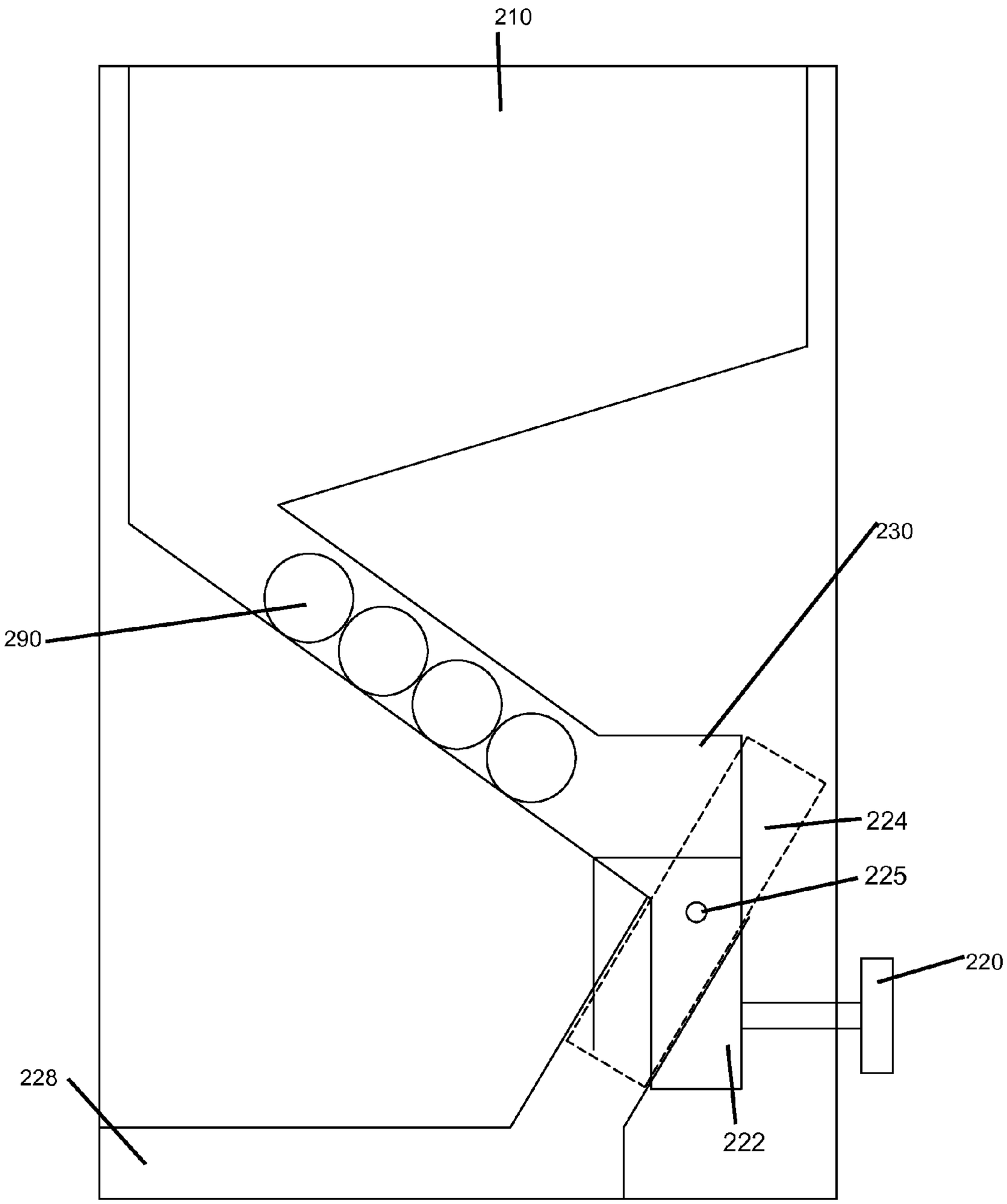


FIG. 3

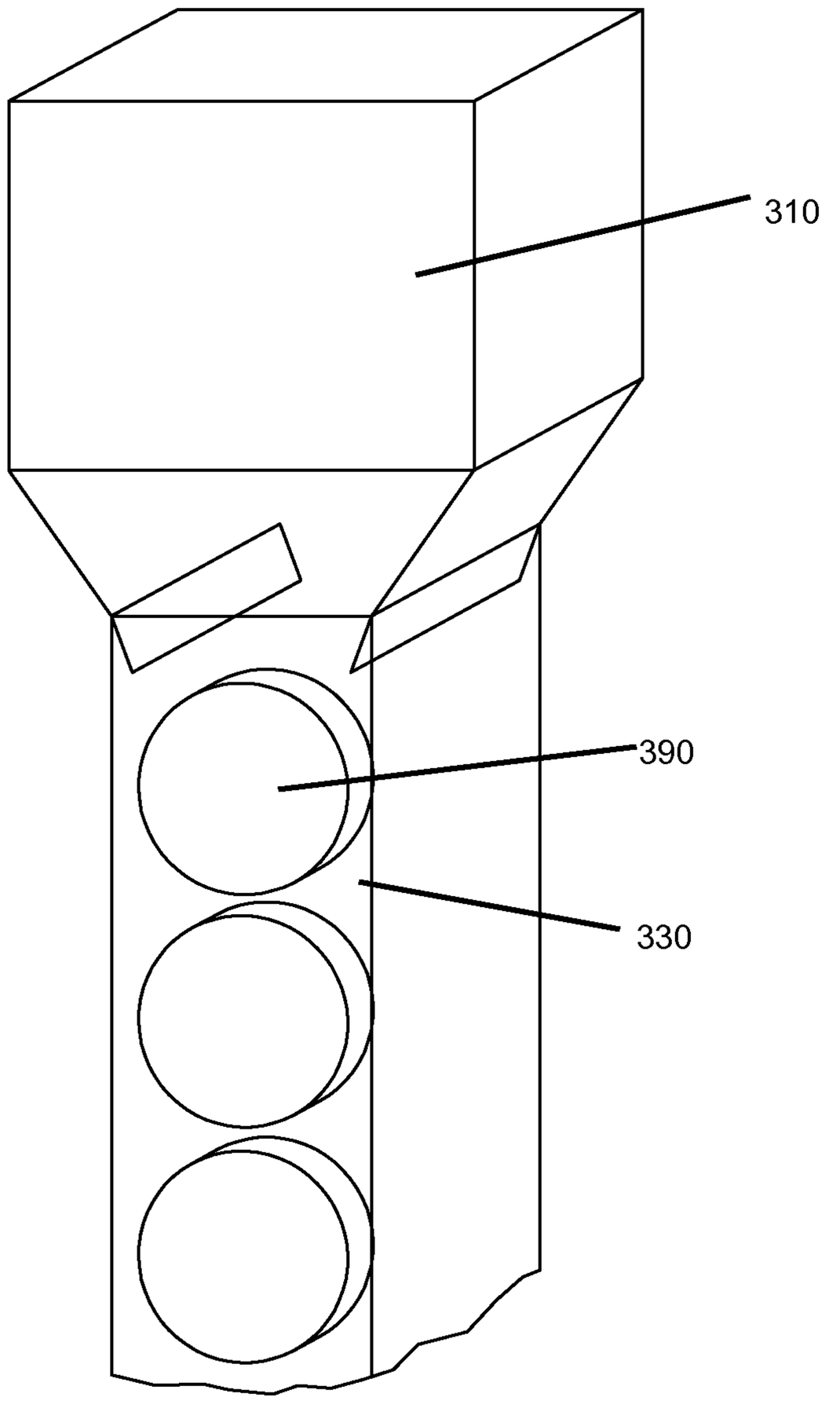


FIG. 4

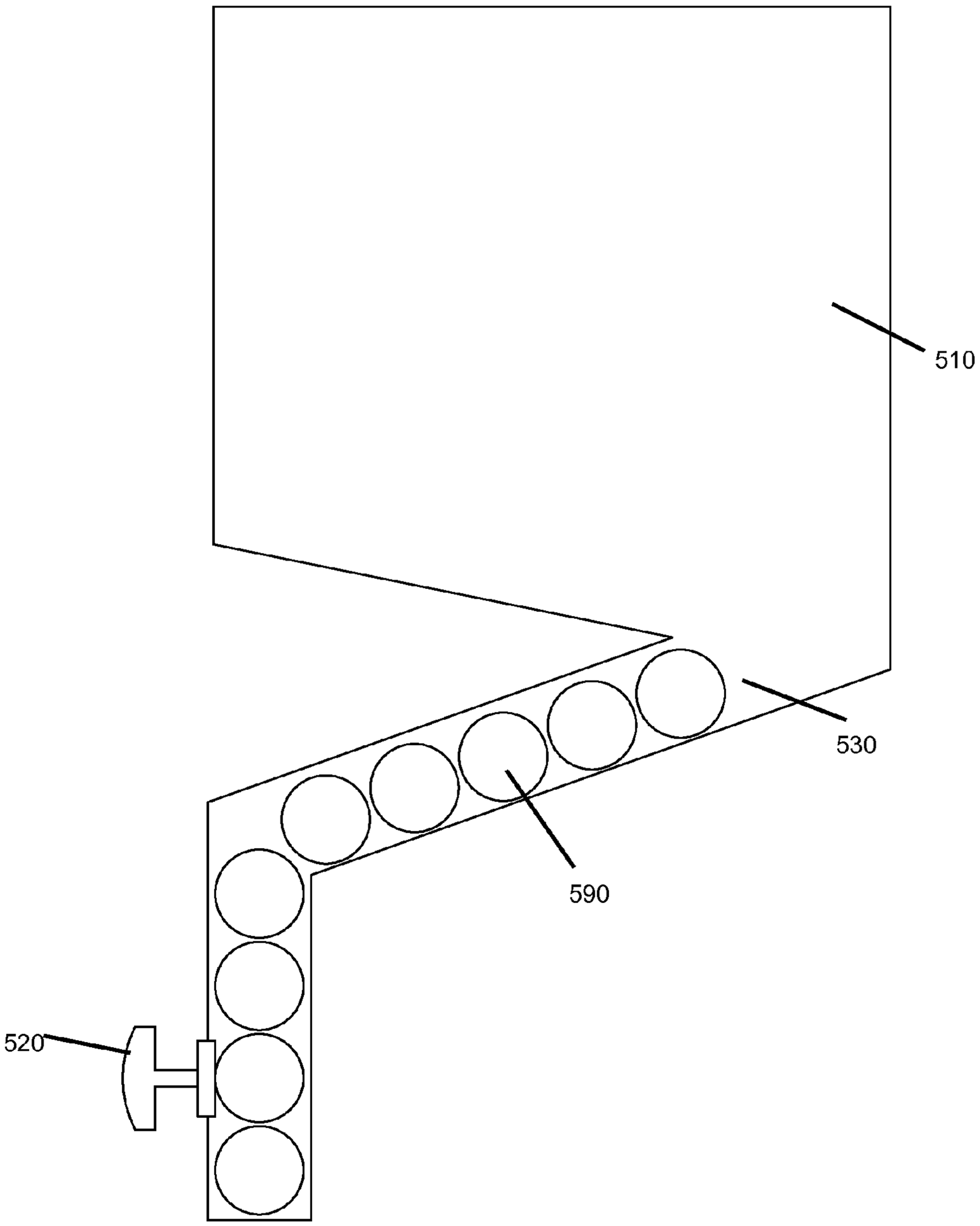


FIG. 5

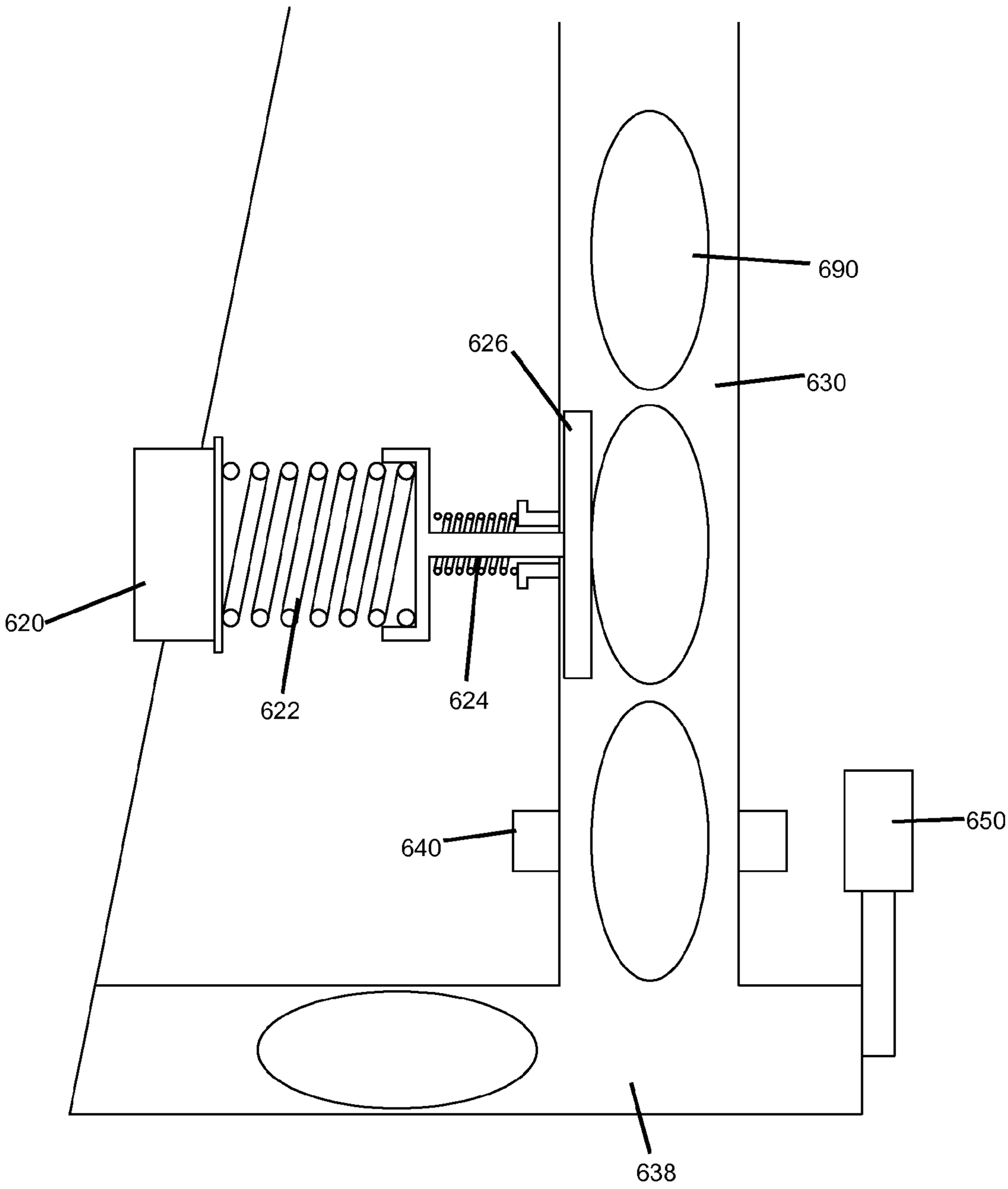


FIG. 6

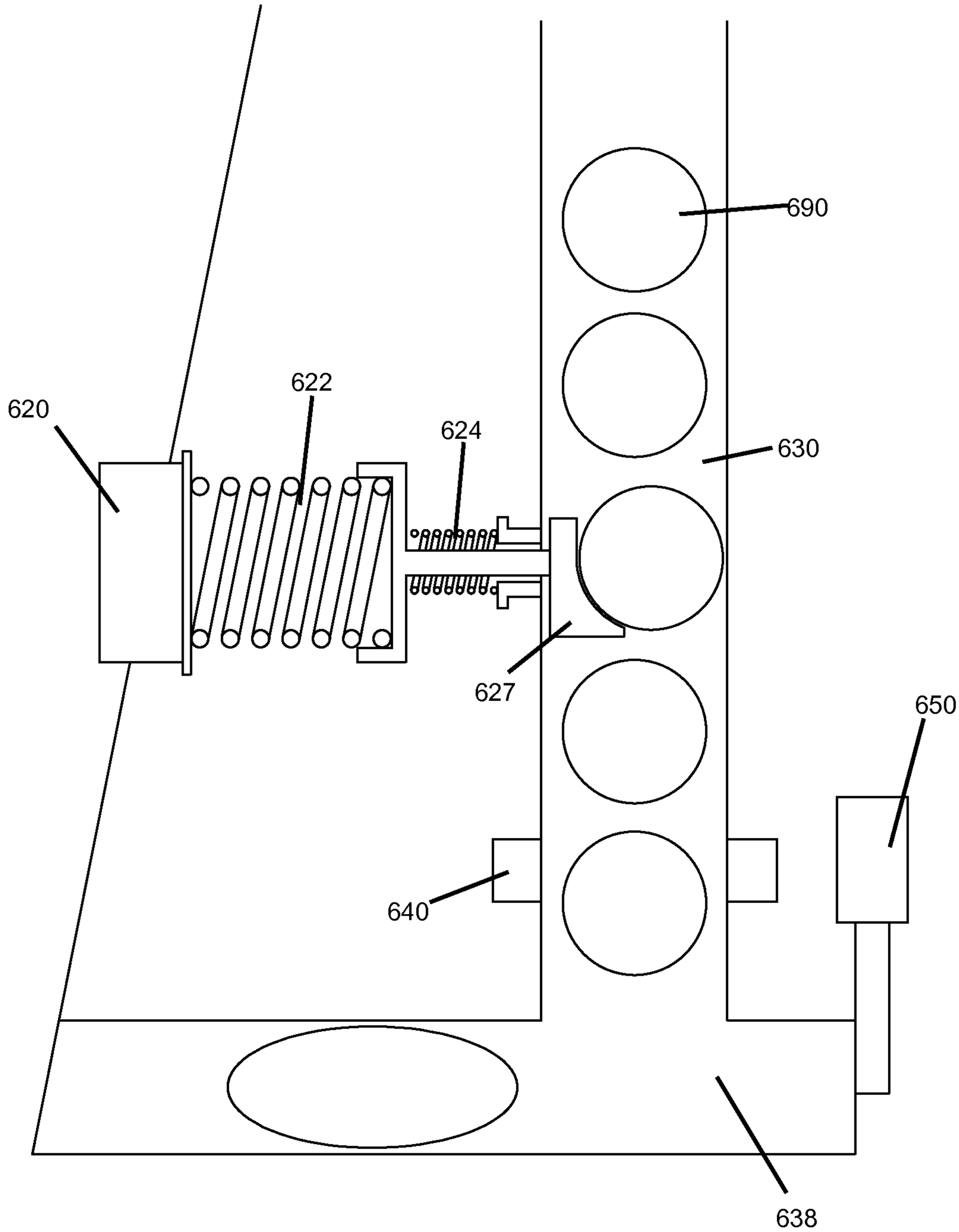


FIG. 7

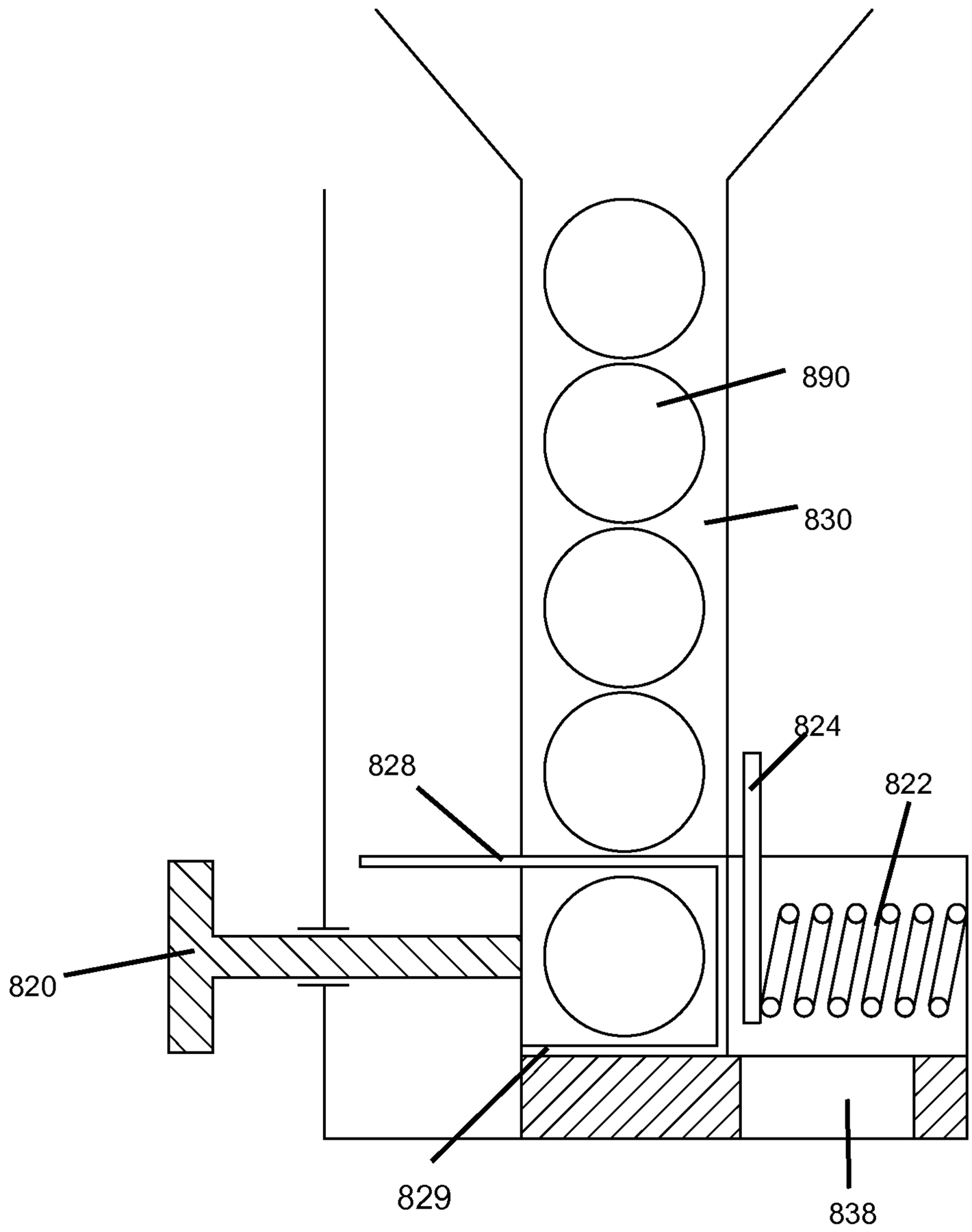


FIG. 8

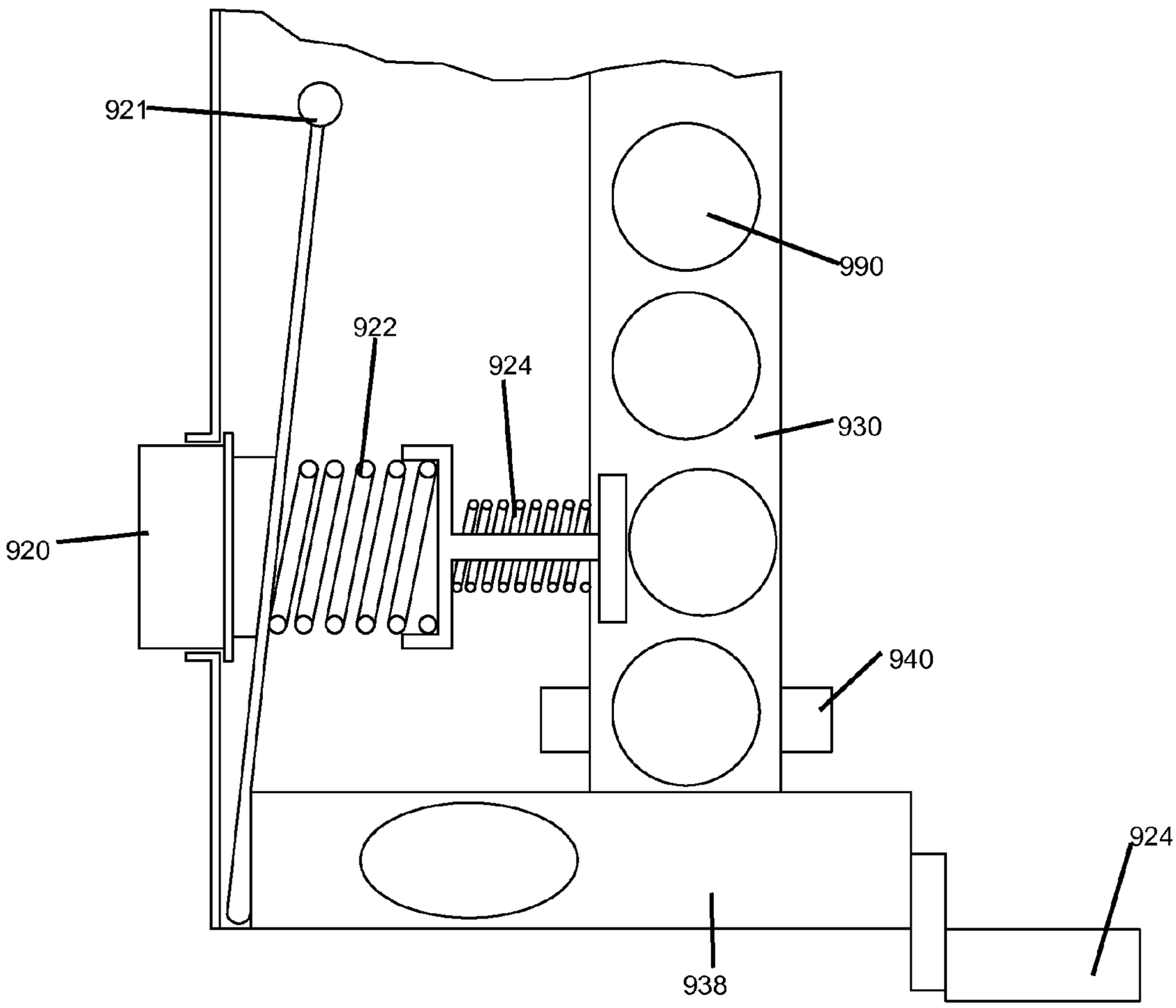


FIG. 9

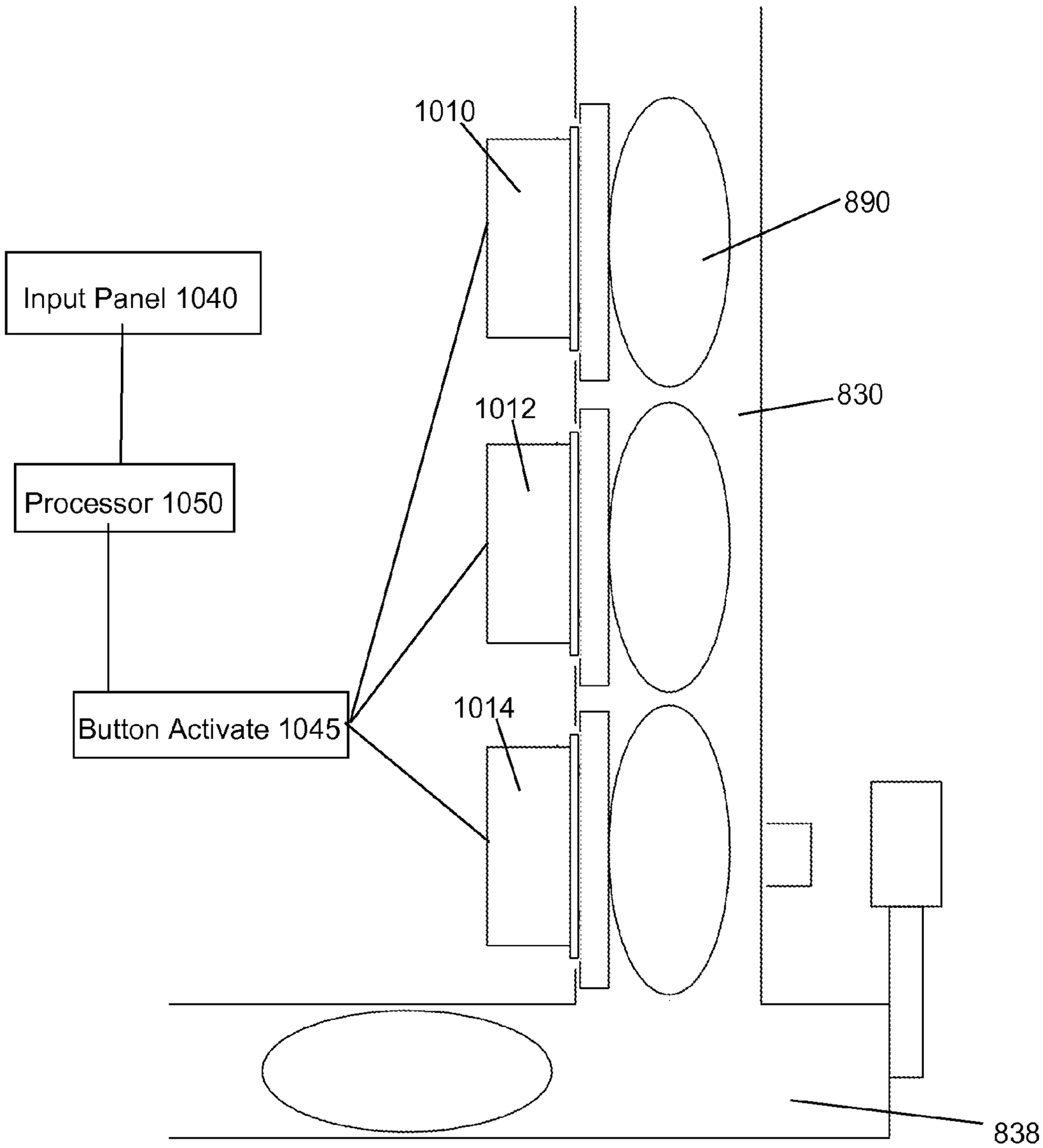

Input Panel 1040
Processor 1050
Button Activate 1045
1010
1012
1014
890
830
838

FIG. 10

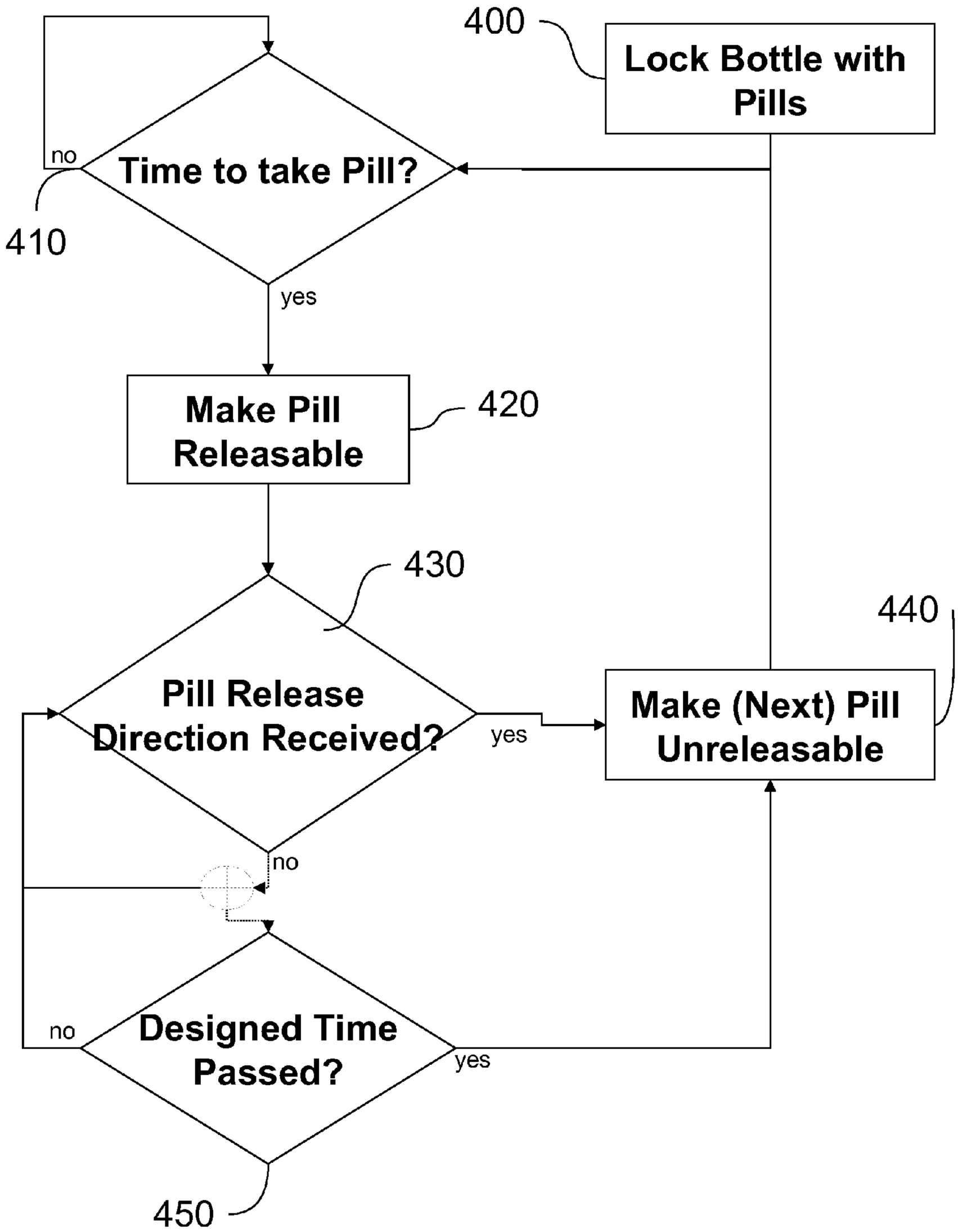

400
Lock Bottle with Pills
Time to take Pill?
no
410
yes
Make Pill Releasable
420
430
Pill Release Direction Received?
yes
440
Make (Next) Pill Unreleasable
no
Designed Time Passed?
no
yes
450

FIG. 11

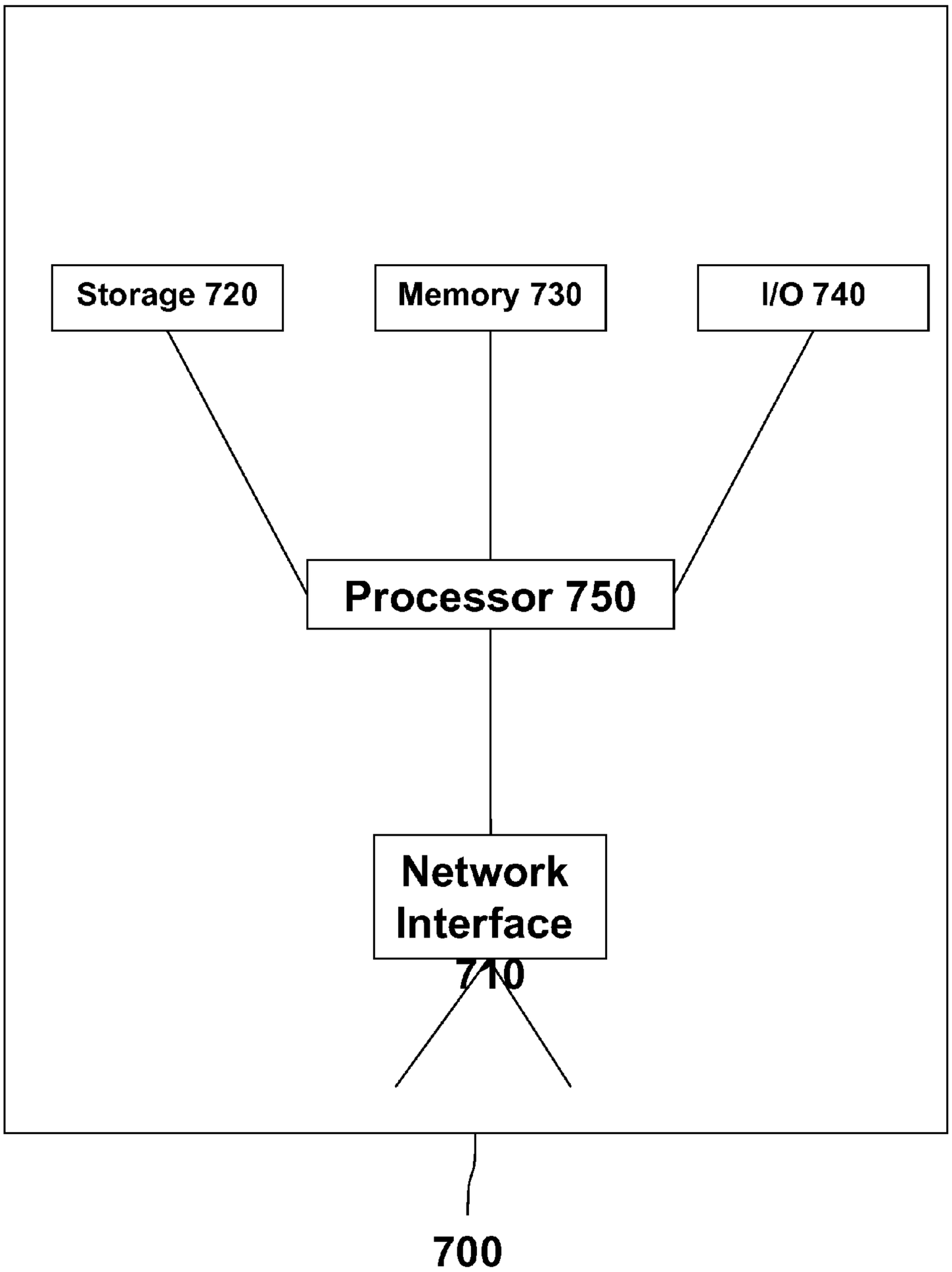

Storage 720
Memory 730
I/O 740
Processor 750
Network Interface 710
700

FIG. 12

LOCKED PILL BOTTLE WITH TIMED DISPENSE LIMITS

FIELD OF THE DISCLOSED TECHNOLOGY

The disclosed technology relates generally to pill bottles and, more specifically, to locked pill bottles with limits on pill dispensing.

BACKGROUND OF THE DISCLOSED TECHNOLOGY

Most people take medicine only for the conditions for which their doctors prescribed them. However, an estimated 20% percent of people in the United States have used prescription drugs for non-medical reasons, according to the National Institute for Health. Prescription drug abuse is a serious and growing problem, often leading to addiction to narcotics, sedatives, and stimulants.

In order to prevent abuse of narcotics, prior art has been developed in the form of lockable pill bottles and time release pill bottles. Lockable pill systems are often prone to tampering, and require very different structures than people are used to using, creating a barrier to entry. One example of a lockable pill device is disclosed in U.S. Pat. No. 6,401,991 to Eannone disclosing a computer-timed and locked medication container. This device has a plurality of compartments, and at an appropriate time, a next compartment is opened, allowing release of medicine.

What is required in the art is a secure method of storing and dispensing pills, that an end-user may use, without being supervised by a third party. Still further, a method of dispensing pills in a way which prevents abuse is needed.

SUMMARY OF THE DISCLOSED TECHNOLOGY

An embodiment of the disclosed technology is a lockable pill bottle for a plurality of pills. While "pill," in the singular is used, it should be understood that a dosage of pills may include a single pill or a plurality of pills. A device used has a bottom wall, side wall, and top wall. The device has a slot for pill entry in any one of the walls, the slot being sealable and lockable. In an unlocked and open condition, the slot is a portal from the outside of the bottle into an inner cavity, the cavity being adapted for pill storage and extending between the slot/opening for pill entry and an exit tube. The exit tube is sized for single-file passage of a plurality of pills. A spring-loaded member is adapted to apply pressure in the exit tube on a single pill of the plurality of pills, such that the pressure prevents exit of the single pill, and the single pill blocks other pills of the plurality of pills from exiting. A button extends through a wall, such as the side wall, and is configured to release the pressure (defined as changing the static nature of the pill and spring placement) on the single pill, allowing it to fall.

A timing device is used in embodiments of the disclosed technology, enabling release of a pill of the plurality of pills only at specified times. The timing device may allow release of a pill by removing a blocking bar from an exit tube, the blocking bar situated below the spring-loaded member, where a bottom of the device is defined as closest to a side where pills exit the exit tube, or the direction in which the bottle must be oriented in order for the pills to exit the exit tube Removing the blocking bar may release a pill of the plurality of pills, this pill being below the spring-loaded member, while the spring-loaded member simultaneously retains another pill in place.

In other embodiments, the timer may cause release of a pill held beneath the pill held by pressure of the spring-loaded member at automatic timed intervals. In such an embodiment, pressing the button may cause a pill to be released from the spring-loaded member if a space in the exit tube below the button and above a blocking bar, blocking passage of a pill in said exit tube, lacks a pill therein. That is, a pill (or pills) is released at automatic intervals, as long as before the next pill is released, the previous one has been taken from the pill bottle by press of the button extending through the side wall of the device.

In yet other embodiments of the lockable pill bottle, during intervals of time, the timer causes the button extending through the wall to be non-functional by preventing its movement, or disengaging the spring-loaded member from the button. This may be accomplished mechanically or by disabling an electric component required to operate the button.

In a variation of any of the above embodiments, the timer enables release of the pill by allowing rotation of a blocking bar. Using the button, the blocking bar becomes positioned in-line with the exit tube, allowing a pill to pass through the blocking bar and exit tube to a release area.

In another embodiment, the spring-loaded member has two springs in-line with each other, a first stronger and more rigid spring closer to the button, and a second weaker and less rigid spring closer to the exit tube. When used in this disclosure, "stronger" and "weaker" is in comparison to the strength of the other described spring and refers to the resistance level when compressing the respective springs from their resting position to 50% compression.

In another embodiment, the spring-loaded member is on an opposite side of a pill housing, compared to the button. That is, in line, there is a button, pill housing, then spring. In this embodiment, the pill housing has an inner space adapted to fit a single pill of the plurality of pills, a top opening adapted to accept a pill into the housing from the exit tube, when—and only when—the housing lacks a pill therein, and a bottom opening adapted to drop a pill into a release area. When the button is pushed in a direction of a wall (through which the button is attached) of the bottle, the spring-loaded member is compressed, and the pill housing moves with the button towards the spring. A flange blocks entry of another pill into the pill housing while the button is being pushed/spring is compressed, and a pill in the housing exits to the release area.

In a method of the disclosed technology, a pill dispenser is configured by placing pills into an opening which opens into a cavity of the pill bottle. The pill bottle has a lower wall, side walls, and top wall. The opening is then closed and locked, and designated time intervals are configured, so that the pill bottle allows dispensing of pills, only at those intervals of time. Dispensing of pills is defined as allowing a pill to exit to a release area where a user may obtain the pill at any time the user wishes, or releasing the pill from the bottle when the user presses a button indicating that a pill should be released. When the pill bottle allows dispensing of pills, at the designated time, a spring-loaded button is depressable to remove pressure on a pill in an exit tube, allowing the pill to drop from the exit tube, the exit tube opening into the cavity and a pill receiving area, the pill receiving area open to an outside of said pill bottle.

Embodiments described with reference to the device of the disclosed technology are equally applicable to methods of use thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** shows a lockable pill bottle with dose-release mechanism of an embodiment of the disclosed technology.

FIG. **2** shows a top view of a lid of a pill bottle of embodiments of the disclosed technology.

FIG. **3** shows a cross-section of a housing of a pill bottle with pills in embodiments of the disclosed technology.

FIG. **4** shows a close-up of an exit tube used in embodiments of the disclosed technology.

FIG. **5** shows an interior path of pills within a pill bottle in an embodiment of the disclosed technology.

FIG. **6** shows a close-up of a mechanical release mechanism for holding and releasing a pill in an exit chamber in an embodiment of the disclosed technology.

FIG. **7** shows an alternate embodiment of a mechanical release used in embodiments of the disclosed technology.

FIG. **8** shows another alternate embodiment of a mechanical release used in embodiments of the disclosed technology.

FIG. **9** shows another alternate embodiment of a mechanical release used in embodiments of the disclosed technology.

FIG. **10** shows another alternate embodiment using a multiple solenoid release in embodiments of the disclosed technology.

FIG. **11** shows a flowchart of a method of timing pill release using the devices shown in FIGS. **1** through **10**, in an embodiment of the disclosed technology.

FIG. **12** shows a high-level block diagram of a device that may be used to carry out the disclosed technology.

DETAILED DESCRIPTION OF EMBODIMENTS OF THE DISCLOSED TECHNOLOGY

The disclosed pill bottle allows for timed dispensing of medicine, as programmed by a doctor, pharmacist, or caregiver. The device has a slot for pill entry in any one of the walls, the slot being sealable and lockable. In an unlocked and open condition, the slot is a portal from the outside of the bottle into an inner cavity, the cavity being adapted for pill storage and extending between the slot/opening for pill entry and an exit tube. The exit tube is sized for single-file passage of a plurality of pills. A spring-loaded member is adapted to apply pressure in the exit tube on a single pill of the plurality of pills, such that the pressure prevents exit of the single pill and the single pill blocks other pills of the plurality of pills from exiting. A button extends through a wall, such as the side wall, and is configured to release the pressure (defined as changing the static nature of the pill and spring placement) on the single pill, allowing it to fall.

Embodiments of the disclosed technology will become clearer in view of the following description of the drawings.

FIG. **1** shows a lockable pill bottle with dose-release mechanism of an embodiment of the disclosed technology. Pills **190** are placed into a container **100** by way of an entry slot **106** or other opening, which opens into a cavity **110**. A lid **102** is then secured onto the bottle **100** by way of a lock **105** which locks the lid **102** onto the bottle **100** with pegs or other projections which lodge in the receptacles **108**. The lid **102** becomes locked onto the bottle **100** by way of the lock **105** and peg receptacles **108**, which may be 1, 2, 3, 4, or 8 receptacles. Any locking mechanism known in the art may be used, including L-shaped pegs rotating into receptacles, pins which expand when extended, and so forth.

On the bottle **100**, there are labels **112**, in embodiments of the disclosed technology, with information about the medication and timing for which it may be taken (how often a gate will open, allowing a pill to be taken). The bottle shown here has a cylindrical housing **114** with a bottom side, side walls, and top side. The cavity **110** lies therein with pills **190** which exit into an exit chamber **130**. The pills **190** exit into this exit chamber by way of gravity and/or tiling the bottle, so that pills in the chamber **110** may exit into the exit chamber **130**.

FIG. **2** shows a top view of a lid of a pill bottle of embodiments of the disclosed technology. Here, the lid **102** has a label **107**, which may be a window into the cavity **107** so the user can see how many pills are left, and buttons and/or indicators **104** indicating the time until the next pill or pills should be taken, to be reset at either regular time intervals, after a pill is taken out, or a combination thereof ensuring that a user cannot overdose on pills.

Referring back to FIG. **1**, and specifically, the exit chute **130** and associated elements connected thereto, the exit chute **130** allows for pills from the larger cavity **110** to exit from the device, after passing through security mechanisms. The pills **190** exit or fit through the chute in single file. They are blocked by pressure against a single pill at button **120**. (This section is shown in greater detail in FIGS. **3** and **6**.) A blocking bar **122** prevents the dropping of a bill into a removal area **128**, which opens to the outside. This blocking bar is mechanically or electrically (such as via a solenoid) controlled by electronics or mechanics in housing **124** into which the bar retracts. The electronics, of course, may be anywhere within the device **100**. As such, when the time comes to drop a pill, it may be dropped by a person using button **120** or automatically; the blocking bar **122** opens, and the pill may exit into the removal area **128**. The combination of the button **120** and blocking bar **122** allows a user to have control, or feel in control, over the dispensing of medication. When the time arrives for taking the next pill (or pills), the blocking bar opens allowing passage of a pill when a button is pressed. In other embodiments, the blocking bar **126** only opens upon pressing of the button **120** when the time has arrived for dispensing of a pill. When the user presses button **120**, it allows a single pill **190** to fall into the space below the pressed pill, just above the blocking bar, and the blocking bar **122** opens in due course, allowing the pill to escape the housing into the removal area **128**, where the device may be tilted to retrieve the pill.

FIG. **3** shows a cross-section of a housing of a pill bottle with pills, in embodiments of the disclosed technology. The pill bottle shown is a variation of the one shown in FIG. **1**; however, the similar elements have been incremented by 100. Thus, the cavity **210** has an exit tube **230** where the pills **290** exit. A button **220** is used to rotate a blocking member **222** about an axle **225**, such that a tube with hollow opening for pills to fit through when the blocking member **222** is in the dotted line space designated as **224** aligned with the exit tube at a position horizontal the button **220**. When in this second position, where the body of the blocking member **222** below the axle **225** is aligned with the exit tube, pills may pass through. Again, the ability to rotate the blocking member **222** may be time controlled. That is, when it is not time to take a pill, the axle **225** or button **220** is locked. When unlocked, after a pill or a number of pills pass through for a dose (detected by a sensor in the blocking bar **222** or another blocking bar above or below the bar **222**), the blocking bar **222** again returns to a closed position where pills **290** cannot pass. In the removal area **228**, pills can be removed.

FIG. **4** shows a closeup of an exit tube used in embodiments of the disclosed technology. A cavity **310** stores a plurality of pills, and the pills exit, single file, into an exit tube **330**.

FIG. **5** shows an interior path of pills within a pill bottle in an embodiment of the disclosed technology. The elements here, again, are analogous to those of FIG. **1**, except the

numbered elements have been incremented by 400. A cavity **510** stores pills within a pill bottle, and the pills exit, via gravity or tilting of the bottle, into an exit tube **530**. A plurality of pills **590** is shown with a button **520** which applies pressure on a pill. Pressing the button **520** towards the pill, due to alignment of springs (see FIG. **6**) releases pressure on a pill, allowing it to drop.

FIG. **6** shows a closeup of a mechanical release mechanism for holding and releasing a pill in an exit chamber, in an embodiment of the disclosed technology. Pills **690**, here shown elongated, fall towards the gravitational bottom of the exit tube **630**, the gravitational bottom being the bottom of the page, as shown. A button **620** is coupled with a larger, stronger (greater resistance) spring **622** which pushes on a smaller, weaker (less resistance) spring **624**. That is, when pushing the button **620** towards the exit tube **630**, pressure from the larger spring **522** causes the smaller spring **624** to compress, releasing the grip from the pushing arm **626** on a pill, allowing it to drop. When the blogging bar **640** is open, such as at the appropriate medicine taking time, a released pill is dropped and detected by detector **650**, thus closing the blocking bar **640** and/or locking the button **620**.

Described in more detail, when the button **620** is first compressed, the smaller spring **624** is initially compressed causing the pill holding button **626** to push against the pill and fix it in place. Then, further pressure on the button **620** causes the larger spring **622** to compress which, in turn, allows the blocking bar **638** to move into position where the hole in the bar is aligned with the opening in the pill chute. This allows any pill below the button **626** to fall out of the chute.

FIG. **7** shows an alternate embodiment of a mechanical release used in embodiments of the disclosed technology. Here, the pushing arm **627** has a curvilinear side abutting a pill. When detracted, such as by pushing the button **620** against spring **622**, the movement triggers an electric current which contracts spring **624**, pulling the pushing arm **627** out of the exit tube **630**, allowing a pill to drop past the blocking bar **640** (when open) and into the release or exit area **638**.

FIG. **8** shows another alternate embodiment of a mechanical release used in embodiments of the disclosed technology. Here, the pills **890** travel downwards through the exit tube **830** past a blocking bar **828**. The blocking bar **828** is part of a housing **829** which has space for a single pill therein. A reverse spring **822** keeps pressure on button **820** and bar **824**. The bar **824** is lifted out of the path between the button **820** and spring **822** when medicine can be taken. When the bar **824** is moved upwards or backwards out of the path, then the button **820** is pushable, such that the entire pill housing **829** is moved out of the column of the exit tube **830** and the pill drops into the exit area **838**. While the button **820** is pushed to the right, and the pill housing is pushed to the right, the blocking bar **828** prevents another pill from dropping from the exit tube **830** into the housing **829**. Once returned to the resting position, as dictated by the spring **822** pushing the housing **829** back into position under the exit tube **830**, another pill drops, through a hole in the blocking bar **828** into the housing **829**. Simultaneously, or after an allowed dosage of medicine is released, the bar **824** drops back into place mechanically or electrically.

FIG. **9** shows another alternate embodiment of a mechanical release used in embodiments of the disclosed technology. Here, the elements shown match those of FIG. **1**, but are incremented by 800 with the addition of an angle bar **921**, which is wedged between a release area **938** and the button/spring **920** and **922**. After exiting through the release area **938**, the pill may be caught or held above a base **924**.

FIG. **10** shows another alternate embodiment using a multiple solenoid release in embodiments of the disclosed technology. Here, there are multiple solenoids **1010**, **1012**, and **1014** which are, for purposes of the disclosure, buttons activated by way of providing electrical current. Each of these buttons **1010**, **1012**, and **1014** is configured to hold or release a pill **890** in the chute **830**. The buttons activated by a button activating device **1045** configured to activate one or more of the buttons, by way of a processor **1050** instructing the button activate device to act. An input panel **1040** may be used to configure when and how the processor **1050** allows the button activation device **1045** to release a pill. Thus, the button activation device **1045** may open solenoids **1010**, **1012**, or **1014** in any configuration in order to release one, two, or three pills at a time, in release any number of pills in quick succession at a time to release the pills. In embodiments, only two buttons **1010** and **1012** are needed, allowing, based on when each solenoid is activating, any number of pills to be released. An advantage to three solenoid switched is that two pills can be released with one instruction/electrical charge, while holding a single pill (here, adjacent to button **1010**) in place.

FIG. **11** shows a flowchart of a method of timing pill release using the devices shown in FIGS. **1** through **10**, in an embodiment of the disclosed technology. In a first step **400**, a pill bottle, such as those shown and described with reference to FIGS. **1** through **10**, is filled with a requisite amount of pills and locked by a pharmacist, doctor, of caregiver. In the course of locking, the bottle is also programmed, such as through a wired or wireless interface with a dedicated bottle programming device or personal computer, or via entry of a programming code using buttons shown in FIG. **2**. The bottle is then ready to dispense medication. Based on the program, it is determined in step **410** if it is time to take a pill. If it is not, the step is repeated until the time to take a pill (or pills) has arrived. Once the time arrives, in step **420** the pill is made releasable, and then, in step **430**, it is determined if a pill-release instruction is received. A direction to release the pills may be in the form of automated release, partially-automated release, or manual release. Automated release causes the pill to drop into a release area at the designated time. Partially-automated release is a mechanical release of an element within the pill bottle, such as dropping the pill into a release area, moving/rotating a blocking bar, or relieving pressure on a pill) allowing the pill to be released if, and only if a user takes a further action. Manual release takes no mechanical action at the time of arrival of the release, unless a user mechanically acts on the device through a button press or other physical action, or equivalent thereof.

Depending on whether the device is designed or configured in a particular instance for automated, partially-automated, or manual release, once a pill release direction is received, then the next pill or next dose of pills is rendered unreleasable in step **440**. This is carried out by moving a blocking bar back into place, locking a mechanical button, or by way of other methods described with reference to the prior figures. If a pill release direction is not received, in step **430** in a manual or semi-manual operating mode, then step **430** is repeated continuously in one embodiment, until the pill is released. However, the pill release may have a designated time limit. In such an embodiment, the clock starts running from the time the pill (or pills) is made releasable in step **420**. This is shown in step **450** where it is determined, after the pill is releasable, if a designated amount of time has passed. If no, then steps **430** and **450** repeat until either the pill is released or the designated amount of time for pill release has passed. Once either of these questions is answered in the affirmative, the pill becomes unreleasable until it is time to take the next pill.

Variations, depending on implementation, allow the time frame for future pill releases to be dependent upon the last pill release time, within upper and lower limits. For example, a person may be allowed to take a pill or dosage of medicine no more than once an hour, or no more than four pills in a six hour period. Thus, a first pill will be releasable (step **420**) at the zero hour mark. A person may take this pill (when a semi-automated or manual mode is being used) at the 15 minute time interval. The next pill becomes releasable (step **420**) at the one hour fifteen minute mark, not the one hour mark. In this manner, using a portable pill bottle, doctors and pharmacists can dose medication without having constant supervision over the patient, thereby allowing the patient to leave, for example, a hospital where such supervision is often used to dose medication, giving a person an ability to take narcotics with much less risk of misuse, or over-dosage, and much more precision than typically afforded for pill dispensing in a hospital setting where nurses must run from patient to patient. This, in effect, gives more control to the patient.

FIG. **12** shows a high-level block diagram of a device that may be used to carry out the disclosed technology. Device **700** comprises a processor **550** that controls the overall operation of the computer by executing the device's program instructions which define such operation. The device's program instructions may be stored in a storage device **720** (e.g., magnetic disk, database) and loaded into memory **730** when execution of the bottle's program instructions is desired. Thus, the device's operation will be defined by the device's program instructions stored in memory **730** and/or storage **520**, and the console will be controlled by processor **750** executing the console's program instructions. A device **700** also includes one or a plurality of input network interfaces for communicating with other devices via a network (e.g., the Internet). The device **700** further includes an electrical input interface. A device **700** also includes one or more output network interfaces **710** for communicating with other devices. Device **700** also includes input/output **740** representing devices which allow for user interaction with a computer (e.g., display, keyboard, mouse, speakers, buttons, etc.). One skilled in the art will recognize that an implementation of an actual device will contain other components as well, and that FIG. **11** is a high level representation of some of the components of such a device for illustrative purposes. It should also be understood by one skilled in the art that the method and devices depicted in FIGS. **1** through **11** may be implemented on a device such as is shown in FIG. **12**.

While the disclosed technology has been taught with specific reference to the above embodiments, a person having ordinary skill in the art will recognize that changes can be made in form and detail without departing from the spirit and the scope of the disclosed technology. The described embodiments are to be considered in all respects only as illustrative and not restrictive. All changes that come within the meaning and range of equivalency of the claims are to be embraced within their scope. Combinations of any of the methods, systems, and devices described hereinabove are also contemplated and within the scope of the invention.

I claim:

1. A lockable pill bottle for a plurality of pills, comprising:

a bottom wall, side wall, and top wall with slot for pill entry in any one of said walls, said slot being sealable and lockable;

an inner cavity adapted for pill storage, extending to said slot for pill entry and an exit tube;

said exit tube sized for single-file passage of said plurality of pills;

a spring-loaded member adapted to apply pressure in said exit tube on a single pill of said plurality of pills, such that said pressure prevents exit of said single pill and said single pill blocks other pills of said plurality of pills from exiting; and

a button extending through said side wall configured to release said pressure on said single pill when pressed

wherein said spring-loaded member comprises two springs in-line with each other, a first stronger and more rigid spring closer to said button, and a second weaker and less rigid spring closer to said exit tube, when comparing the relative strengths of said springs to each other.

2. The lockable pill bottle of claim **1**, further comprising a timing device enabling release of a pill of said plurality of pills only at specified times.

3. The lockable pill bottle of claim **2**, wherein said timing device enables said release of said pill by removing a blocking bar from an exit tube, said blocking bar situated below said spring-loaded member.

4. The lockable pill bottle of claim **3**, wherein said removing of said blocking bar releases a pill of said plurality of pills below said spring-loaded member while said spring-loaded member simultaneously retains another pill of said plurality of pills.

5. The lockable pill bottle of claim **3**, wherein said timer enables said release of said pill by allowing rotation of a blocking bar, using said button, such that said blocking bar becomes positioned in-line with said exit tube, allowing said pill to pass through said blocking bar and said exit tube to a release area.

6. The lockable pill bottle of claim **2**, wherein said timer causes release of a pill held beneath said pill held by said pressure of said spring-loaded member at automatic timed intervals.

7. The lockable pill bottle of claim **6**, wherein pressing said button causes a pill to be released from said spring-loaded member if a space in said exit tube below said button and above a blocking bar, blocking passage of a pill in said exit tube, lacks a pill therein.

8. The lockable pill bottle of claim **2**, wherein, during intervals of time, said timer causes said button to be non-functional.

9. The lockable pill bottle of claim **1**, wherein:

said spring-loaded member is on an opposite side of a pill housing of said button; and

said pill housing comprises an inner space adapted to fit a single pill of said plurality of pills, a top opening adapted to accept a pill into said housing when said housing lacks a pill therein, and a bottom opening adapted to drop a pill into a release area;

such that when said button is pushed in a direction of a said wall of said bottle, said spring-loaded member is compressed, said pill housing moves with said button, a flange blocks entry of a pill of said plurality of pills into said pill housing while said button is being pushed, and a pill in said housing exits to said release area.

10. The device of claim **1**, wherein said button is a solenoid switch.

11. A method of configuring a pill dispenser, comprising the steps of:

placing pills into an opening which opens into a cavity of a pill bottle, said pill bottle having a lower wall, side walls, and top wall;

closing and locking said opening;

configuring designated time intervals when said pill bottle allows dispensing of pills;

wherein, when said pill bottle allows dispensing of pills, a spring-loaded button is depressable to remove pressure on a pill in an exit tube allowing said pill to drop from said exit tube, said exit tube opening into said cavity and a pill receiving area, said pill receiving area open to an outside of said pill bottle, and

wherein at said designated time intervals a blocking bar, blocking exit of a pill from said exit tube, is moved such that said pill falls from said exit tube to said receiving area.

12. The method of claim **11**, wherein said spring-loaded button is made depressable only at said designated time intervals.

13. The method of claim **11**, wherein at said designated time intervals a pill automatically falls from said exit tube to said receiving area while another pill is held by said spring-loaded button.

14. The method of claim **11**, wherein pressing said button causes a pill to be released from said spring-loaded button, if a space in said exit tube below said button and above a blocking bar, blocking passage of a pill in said exit tube, lacks a pill therein.

15. The method of claim **11**, wherein said spring-loaded member is on an opposite side of a pill housing of said button; and

said pill housing comprises an inner space adapted to fit a single pill of said plurality of pills, a top opening adapted to accept a pill into said housing when said housing lacks a pill therein, and a bottom opening adapted to drop a pill into a release area;

such that when said button is pushed in a direction of a said wall of said bottle, said spring-loaded member is compressed, said pill housing moves with said button, a flange blocks entry of a pill of said plurality of pills into said pill housing, while said button is being pushed, and a pill in said housing exits to said release area.

16. The method of claim **11**, wherein said spring-loaded member is adapted to apply pressure in said exit tube on a single pill, such that the pressure prevents exit of said single pill and said single pill blocks other pills held in said exit tube from reaching said release area.

17. A method of configuring a pill dispenser, comprising the steps of:

placing pills into an opening which opens into a cavity of a pill bottle, said pill bottle having a lower wall, side walls, and top wall;

closing and locking said opening;

configuring designated time intervals when said pill bottle allows dispensing of pills;

wherein, when said pill bottle allows dispensing of pills, a spring-loaded button is depressable to remove pressure on a pill in an exit tube allowing said pill to drop from said exit tube, said exit tube opening into said cavity and a pill receiving area, said pill receiving area open to an outside of said pill bottle, and

wherein said spring-loaded member comprises two springs in line with each other, a first stronger and more rigid spring closer to said button, and a second weaker and less rigid spring closer to said exit tube, when comparing the relative strengths of said springs to each other.

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