

No. 737,464.

PATENTED AUG. 25, 1903.

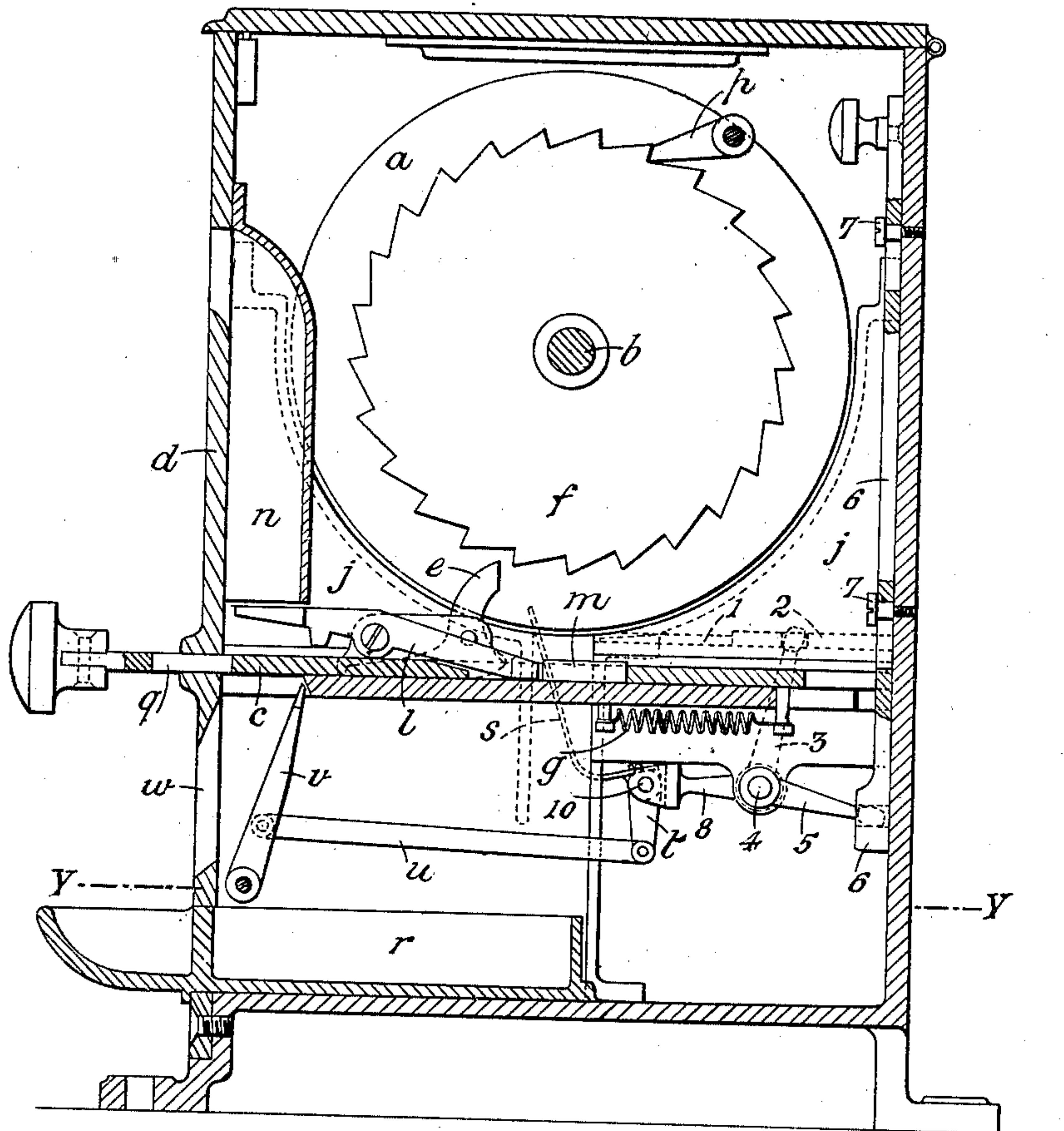
J. W. PEARSON.
COIN FREED VENDING MACHINE.

APPLICATION FILED JUNE 7, 1902.

NO MODEL.

4 SHEETS—SHEET 1.

Fig. 1.



Witnesses:

W. B. Keefe
J. R. Emery

Inventor

James W. Pearson

By

James L. Norrie

Atty.

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4 SHEETS—SHEET 2.

Fig. 2.

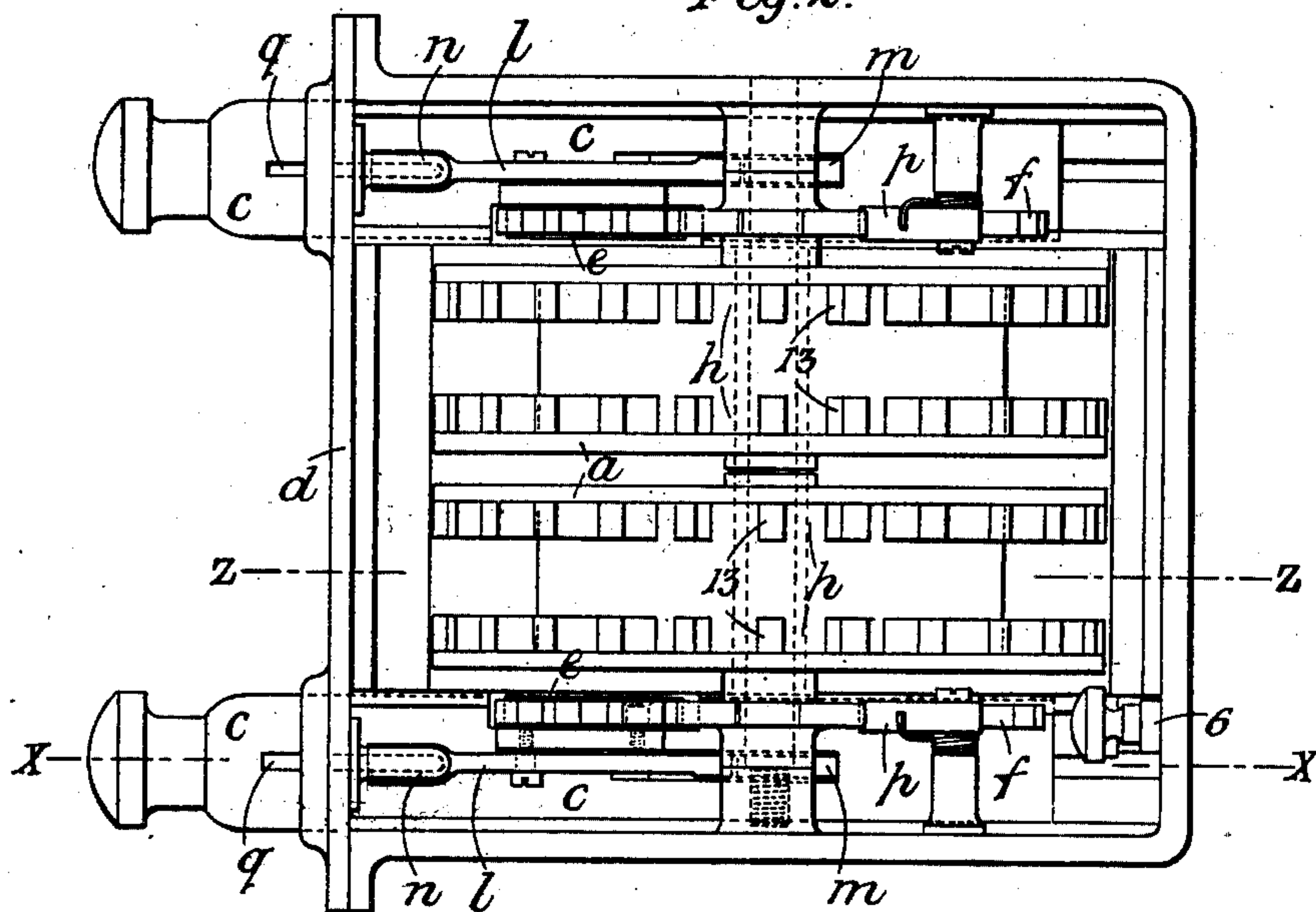
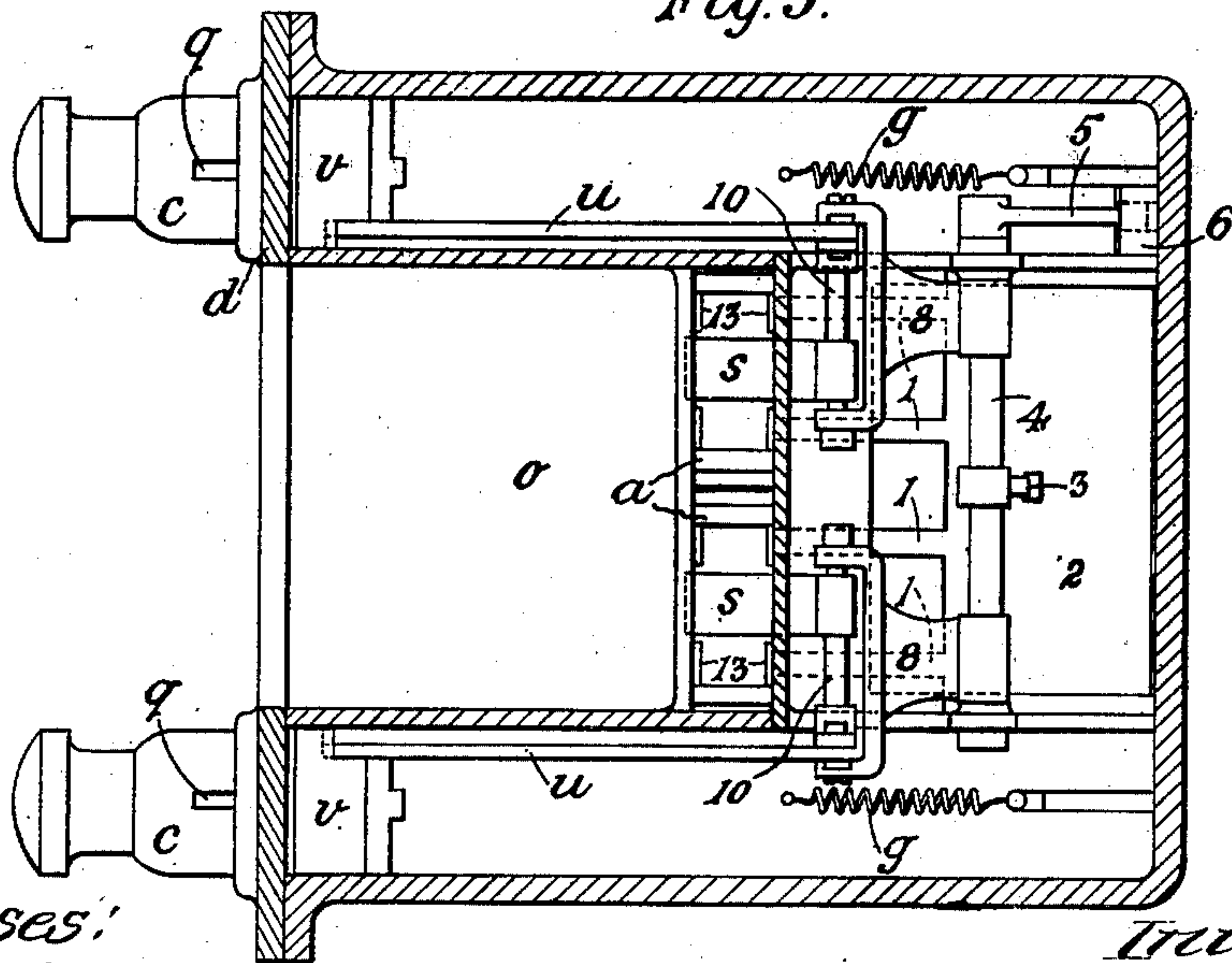


Fig. 3.



Witnesses:

~~J. B. Keefe~~
J. R. Elnay.

Truvertor

James W. Pearson

5

James L. Norrie

Atti.

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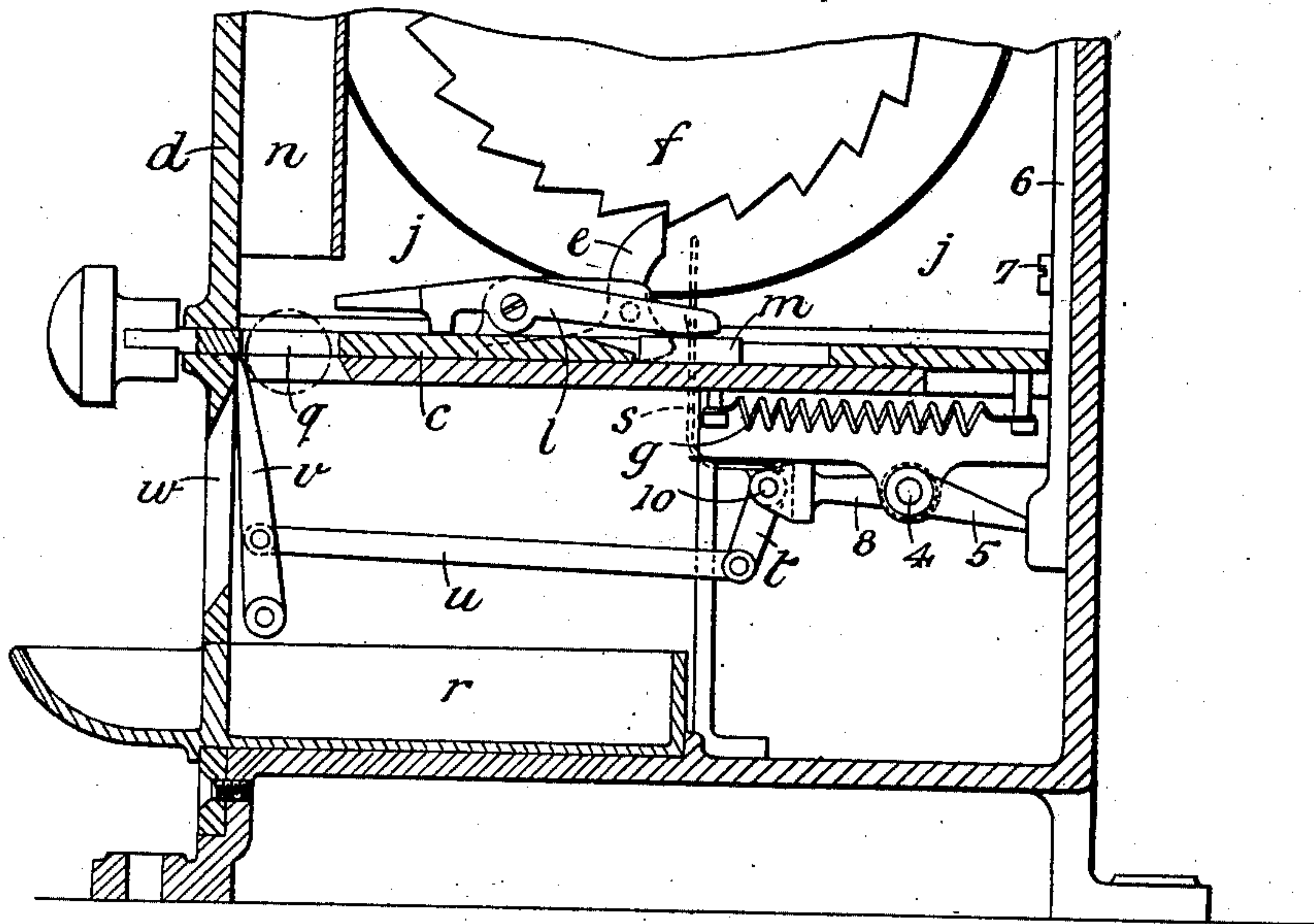
J. W. PEARSON.
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APPLICATION FILED JUNE 7, 1902.

NO MODEL.

4 SHEETS—SHEET 3.

Fig. 4.



Witnesses:

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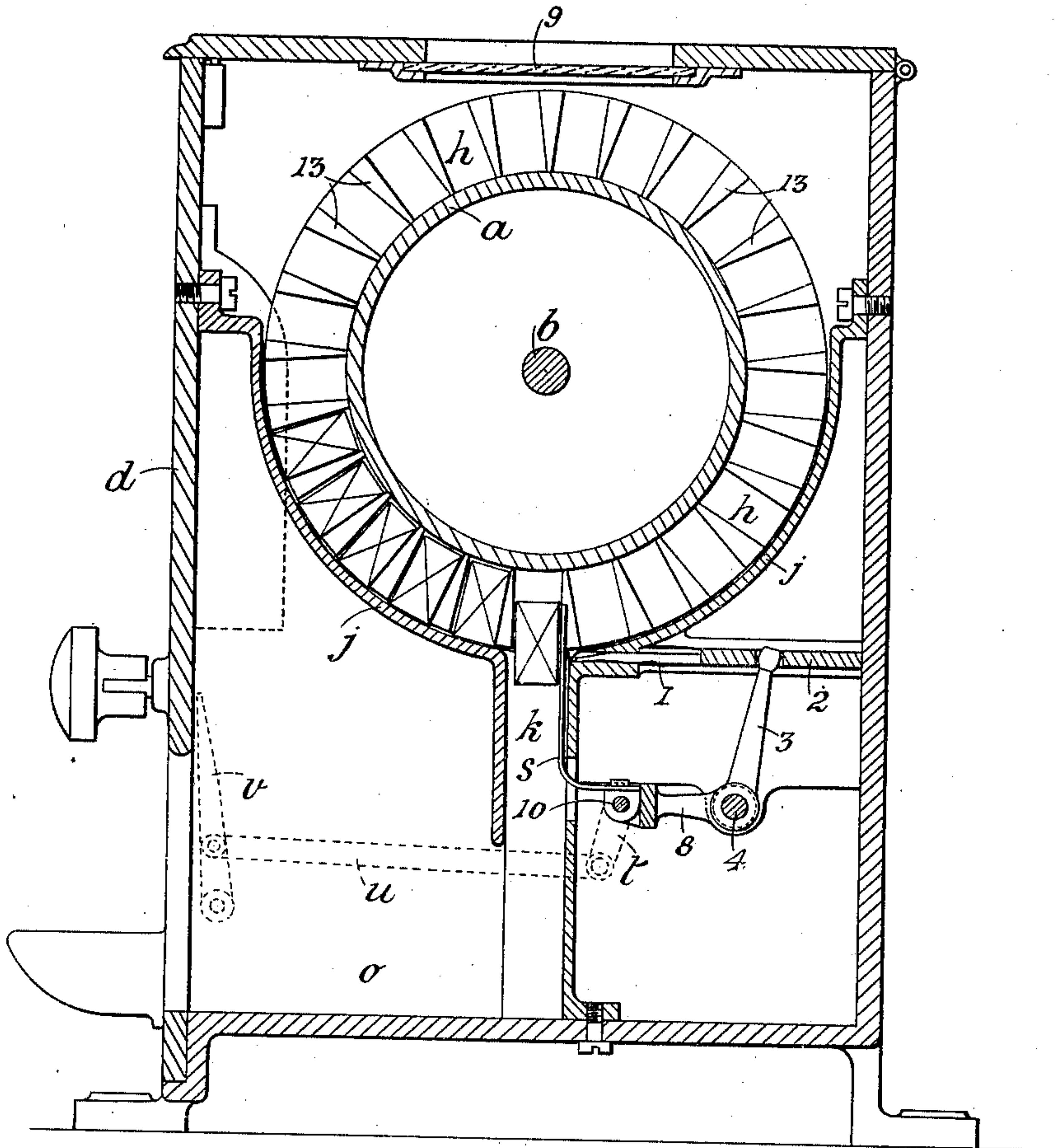
J. W. PEARSON.
COIN FREED VENDING MACHINE.

APPLICATION FILED JUNE 7, 1902.

NO MODEL.

4 SHEETS—SHEET 4.

Fig. 5.



Witnesses:

J. B. Kuyper
F. R. Erney

Inventor
James W. Pearson
By
James L. Norris
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UNITED STATES PATENT OFFICE.

JAMES WM. PEARSON, OF HORNSEA, ENGLAND.

COIN-FREED VENDING-MACHINE:

SPECIFICATION forming part of Letters Patent No. 737,464, dated August 25, 1903.

Application filed June 7, 1902. Serial No. 110,674. (No model.)

To all whom it may concern:

Be it known that I, JAMES WM. PEARSON, a subject of the King of Great Britain, residing at Hornsea, in the county of York, England, have invented certain new and useful Improvements in Coin-Freed Vending Apparatus, of which the following is a specification.

This invention relates to coin-freed vending apparatus, and is designed to simplify the construction and to increase the compactness and efficiency of such apparatus.

My improved apparatus is of the kind or class in which there is a carrier-wheel having compartments to receive the articles to be sold and arranged in combination with a screen having a discharge-aperture through which the articles successively fall when the carrier-wheel is rotated.

An important feature of my said invention relates to the means employed for rotating the carrier-wheel, said means being unlocked by the coin, so that the same can then be operated.

Another feature of my invention relates to the provision of novel means for returning the coin inserted in the machine should there be an empty compartment in the carrier-wheel next adjacent to the delivery-aperture on that side of the wheel which is approaching said aperture.

A further feature of my invention relates to the provision of novel means for closing the delivery-aperture while the carrier-wheel is being filled.

My said invention also comprises other features of novelty, as hereinafter described.

Referring to the accompanying drawings, which illustrate a machine or apparatus constructed according to my invention and having two carrier-wheels inclosed in a single case, Figure 1 is a section on the line X X, Fig. 2. Fig. 2 is a plan of the apparatus with the lid removed. Fig. 3 is a section taken on the line Y Y, Fig. 1, looking upward. Fig. 4 is a view similar to Fig. 1, but showing the slide pushed in and illustrating only a part of the apparatus. Fig. 5 is a central section taken on the line Z Z, Fig. 2.

Like characters of reference denote corresponding parts in the several figures.

a a are the carrier-wheels mounted to rotate on an axle *b*. Each carrier-wheel is op-

erated by its appropriate slide *c*, which projects through the front of the casing *d* and is furnished with a pivoted gravity or spring pawl or catch *e*, adapted to engage with a ratchet-wheel *f*, secured in any suitable manner to the carrier-wheel. As the slide *c* is pushed in the pawl *e* operates to turn the carrier-wheel. On the slide being released it is returned by a spring *g*, the pawl *e* sliding over the teeth of the wheel *f*. The slide shown is operative on being pushed in; but it is obvious that the action may be reversed and the slide be made operative on being drawn out. The inward movement of the slide *c* may be limited either by the handle or the inner end of the slide meeting the casing, so that the carrier-wheel is prevented from being turned too far by a jerking movement of the slide.

Each carrier-wheel is furnished with a number of compartments or pockets *h*, arranged around its periphery, for the reception of the articles to be vended. Said articles are kept in place on the lower side of the wheel by shields *j j*, which are shaped to the curvature of the wheel. Beneath the center of each carrier-wheel is a discharge-aperture *k*, through which the articles in the wheel are discharged as the pockets come successively over said aperture.

The means for locking the slide to prevent its operation except when a coin is introduced comprises a lever or trigger *l*, pivoted to the slide, the tail end of said lever or trigger being adapted to abut against a fixed projection or stop *m* on the frame. When a coin of the correct weight is introduced into the machine through the chute *n*, it falls on the trigger *l* and tilts the same about its pivot, thus raising its tail end above the stop *m*, whereupon the slide is free to be pushed in, and on being so pushed in the carrier-wheel is turned and a fresh pocket brought over the discharge-aperture, whereupon the article in said pocket, as illustrated in Fig. 5, falls out into the open space *o* of the frame, whence it can be removed by the purchaser. The carrier-wheel is prevented from turning backward by a pawl *p*. When the slide is pushed in, a slot *q* therein is brought under the coin, and the latter then falls through said slot into the money-drawer *r*. Any known or

suitable device may be employed in the coin-chute to prevent fraudulent tampering with the machine.

In order to return the coin to the customer when there is no article in the pocket or compartment next to be brought over the delivery-passage, I provide as follows—that is to say, *s* is a lever or arm pivoted at 10 and connected by an arm *t* and link *u* to a deflector *v*, which is pivoted to the frame in a suitable position beneath the opening *q* in the slide *c*. The lever or arm *s* projects upward into the path of the articles as the latter are brought around successively by the carrier-wheel, and when an article is present in the compartment next to be emptied said article in the rotation of the wheel presses against the arm *s* and moves it from the position indicated in Fig. 1 to the position indicated in Figs. 4 and 5, thereby moving the deflector *v* from the position shown in Fig. 1 to that shown in Figs. 4 and 5. In this position of the deflector the coin on passing through the slot *q* falls into the money-drawer, and on the discharge of the articles to be vended through the delivery-orifice the arm *s* returns under the action of gravity to its normal position, as indicated in Fig. 1. Should, however, there be no article in the compartment of the carrier-wheel next to be brought over the discharge-orifice *k*, the arm *s* will not be moved during the rotation of the carrier-wheel, and consequently the deflector *v* will remain in the position indicated in Fig. 1 and will operate to deflect the coin and cause it to pass out of the machine again through an opening *w*. To allow room for the working of the arm *s*, the partitions 13 between the compartments of the wheel do not extend across the whole width of the wheel, but only extend partially across, as indicated in Fig. 2.

To facilitate the operation of filling the carrier-wheel, I provide for closing the discharge-aperture *k* during the filling. This I effect by means of a finger or fingers 1, connected to a slide 2, which can be operated, for example, through an arm 3, engaging with said slide and secured to a spindle 4. On said spindle is fixed another arm 5, which engages with a slider 6, which is shown conveniently guided by guide-pins 7 7. Normally the fingers 1 are withdrawn into the inoperative position, the weight of the slider being sufficient to do this. When the attendant desires to fill the wheel, he raises the slider 6, thereby pushing the fingers 1 across the discharge-aperture and preventing the articles from falling out. It will be observed that the arm *s* is pivoted on an arm 8, fixed on the spindle 4, which carries the arms 3 and 5. By this construction it follows that when the slider 6 is raised to project the fingers 1 across the discharge-aperture *k* the arm *s* is simultaneously drawn down out of the path of the articles in the carrier-wheel.

In the drawings I have shown a casing containing two carrier-wheels; but it is obvious

that I may arrange any desired number of such wheels in one casing on a common axle, and a number of these series may be arranged one above another or in any other suitable manner while still retaining the feature that if one machine goes wrong it does not interfere with the others. Moreover, the axle *b* can be readily removed to allow of a damaged carrier-wheel being taken out. The casing may be furnished with a glass window, as shown, for example, at 9, Fig. 5, so that the goods on sale may be seen, and the interior may be illuminated at night-time with artificial light, as an ordinary shop is lighted up, thus making it very attractive.

My improved machine will deliver articles even when not truly upright, since the articles are brought to the delivery-aperture by mechanical means, and it is therefore suitable for use on shipboard, for example. It is, moreover, very compact and can therefore be used in railway-carriages, restaurants, and omnibuses, for example, or in any other place not usually available for automatic vending-machines.

What I claim is—

1. The combination of a carrier-wheel or conveyer having a plurality of compartments or pockets therein, each of said compartments or pockets being partially cut away, a screen adjacent to said wheel having a delivery-aperture therethrough, coin-controlled means for operating said conveyer, a coin-returning passage, a coin-receptacle, a movable deflector comprising a pivoted lever adjacent to said coin-returning passage, and a lever projecting through said delivery-aperture into the cut-away portions of said pockets and adapted when one of said pockets is empty to fall by its own weight and operate said deflector to deflect a coin into said coin-returning passage and to be operated when said pockets are full to actuate said deflector and cause it to deflect coins into said coin-receptacle.

2. The combination of a carrier-wheel or conveyer having a plurality of pockets or compartments therein, each of said pockets or compartments being partly cut away; a screen adjacent to said wheel, having a delivery-aperture therethrough; coin-controlled means for operating said conveyer; a coin-returning passage; a movable deflector adjacent to said coin-returning passage; a spindle having a plurality of arms thereon; a lever pivoted to one of the arms on said spindle projecting through said delivery-aperture into the cut-away portions of said pockets, said lever being in connection with said movable deflector; a slide adjacent to said delivery-aperture, said slide being in connection with one of the arms on said spindle, and a slider in engagement with one of the arms on said spindle, for the purpose specified.

3. In a coin-vending apparatus, the combination of a carrier-wheel having pockets or compartments around its periphery formed by transverse partitions, said partitions being

partly cut away, a screen partly surrounding said wheel and having a delivery-aperture below said wheel, a coin-introducing passage, a slide for operating said wheel arranged across the end of said coin-introducing passage, and having a longitudinal slot therein, said longitudinal slot being adapted to register with said coin-introducing passage when said slide is pushed in, a trigger pivoted on the upper part of said slide and having one end projecting into said coin-introducing passage, a coin-returning passage, a money-drawer, a lever extending through said delivery-aperture, the end of said lever being adjacent to the cut-away portions of the partitions on said wheel, means operated by said lever for deflecting a coin into said coin-returning passage when the compartment of said wheel which is over said delivery-aperture is empty, and means for closing the aperture in said screen and simultaneously withdrawing said lever out of the path of travel of said wheel.

4. In a coin-freed vending apparatus having an opening in the casing for the ejection of the coin, the combination of a carrier-wheel having pockets or compartments around its periphery, said pockets being formed by transverse partitions which are partially cut away, means controlled by a coin for rotating said wheel, a screen having a delivery-aperture beneath said wheel, means for closing said aperture while the wheel is being filled said means comprising fingers which pass across the aperture and a slider for operating them, an arm actuated by said slider, another arm pivoted to the last-named arm and extending into the path of the cut-away partitions of said carrier-wheel, a deflector linked to and actuated by said pivoted arm, a money-drawer, and means for releasing the coin when the carrier-wheel is actuated, whereby when there is an article in the pocket of the carrier-wheel next to be brought over the delivery-aperture the coin is deflected into the money-drawer, and when said pocket is empty the coin is passed out through the opening in the casing, and when the slider is operated to close the delivery-aperture, the pivoted arm aforesaid is withdrawn out of the path of the articles in the wheel, substantially as described.

5. The combination of a carrier-wheel or conveyer, a plurality of partitions forming pockets or compartments therein, said partitions being of such dimensions that parts of the articles to be delivered will extend beyond the same, a screen arranged adjacent to said conveyer and having a delivery-aperture therethrough, coin-released mechanism for operating said conveyer, a coin-returning passage, a coin-receptacle, a movable deflector adjacent to said coin-returning passage, a pivoted lever extending through the delivery-aperture in said screen into the path of the part beyond said partitions of an article

over said discharge-aperture, connecting mechanism between said deflector and said lever, and means for yieldingly holding said deflector in a position to deflect into said coin-returning passage a coin which has released the operating mechanism of said conveyer, substantially as described.

6. The combination of a carrier-wheel or conveyer, a plurality of partitions forming pockets or compartments therein, said partitions being of such dimensions that parts of the articles to be delivered will extend beyond the same, a screen arranged adjacent to said conveyer and having a delivery-aperture there-through, coin-released mechanism for operating said conveyer, a coin-returning passage, a coin-receptacle, a movable deflector adjacent to said coin-returning passage, a pivoted lever extending into the path of the part beyond said partitions of an article over said discharge-aperture, connecting mechanism between said deflector and said lever, means for yieldingly holding said deflector in a position to deflect into said coin-returning passage a coin which has released the operating mechanism of said conveyer, a slide controlling the discharge-aperture in said screen, and a two-armed lever having one arm connected to the pivotal axis of the lever arranged in the path of said articles, and having its other arm connected with said slide, substantially as described.

7. The combination of a carrier-wheel or conveyer, a plurality of partitions forming pockets or compartments therein, said partitions being of such dimensions that parts of the articles to be delivered will extend beyond the same, a screen arranged adjacent to said conveyer and having a delivery-aperture therethrough, coin-released mechanism for operating said conveyer, a coin-returning passage, a coin-receptacle, a movable deflector adjacent to said coin-returning passage, a pivoted lever extending through the delivery-aperture in said screen into the path of the part beyond said partitions of an article over said discharge-aperture, connecting mechanism between said deflector and said lever, means for yieldingly holding said deflector in a position to deflect into said coin-returning passage a coin which has released the operating mechanism of said conveyer, and means for moving said lever out of the path of said articles, substantially as described.

8. The combination of a carrier-wheel or conveyer, a plurality of partitions forming pockets or compartments therein, said partitions being of such dimensions that parts of the articles to be delivered will extend beyond the same, a screen arranged adjacent to said conveyer and having a delivery-aperture therethrough, coin-released mechanism for operating said conveyer, a coin-returning passage, a coin-receptacle, a movable deflector adjacent to said coin-returning passage, a pivoted lever extending through the delivery-ap-

erture in said screen into the path of the part
beyond said partitions of an article over said
discharge-aperture, connecting mechanism
between said deflector and said lever, means
5 for yieldingly holding said deflector in a po-
sition to deflect into said coin-returning pas-
sage a coin which has released the operating
mechanism of said conveyer, means for mov-
ing said lever out of the path of said articles,

and means for closing said discharge-aper- 10
ture, substantially as described.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

JAMES WM. PEARSON.

Witnesses:

GEORGE HARRISON,

HERBERT A. BEESTON.