(No Model.) 4 Sheets—Sheet 1.

R. ALEXANDER-KATZ.

AUTOMATIC APPARATUS FOR THE SALE OF NEWSPAPERS, &c.

No. 378,945. Patented Mar. 6, 1888.

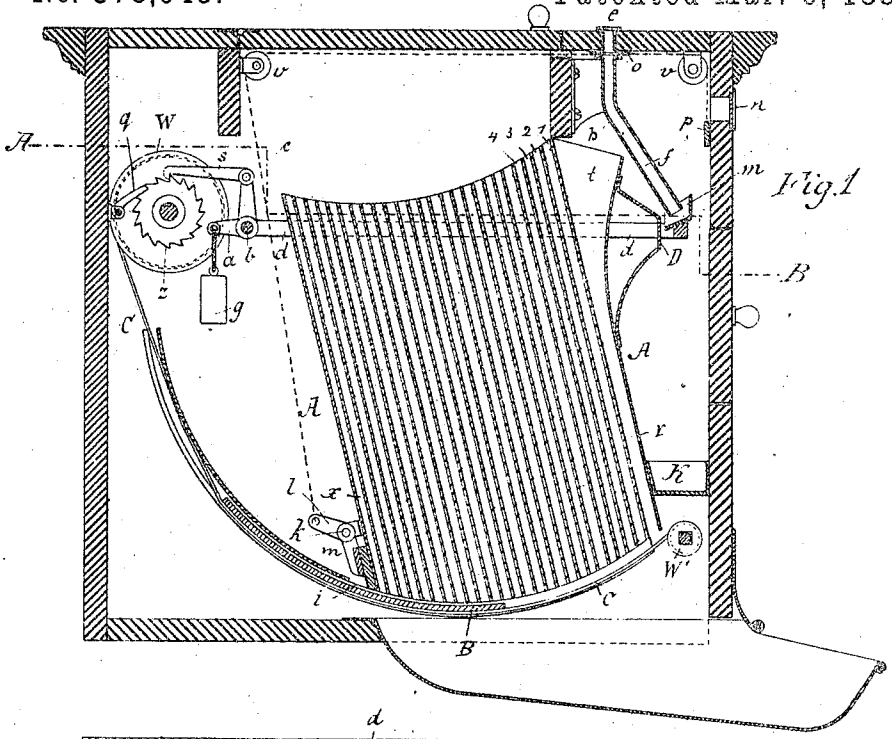


Fig. 1

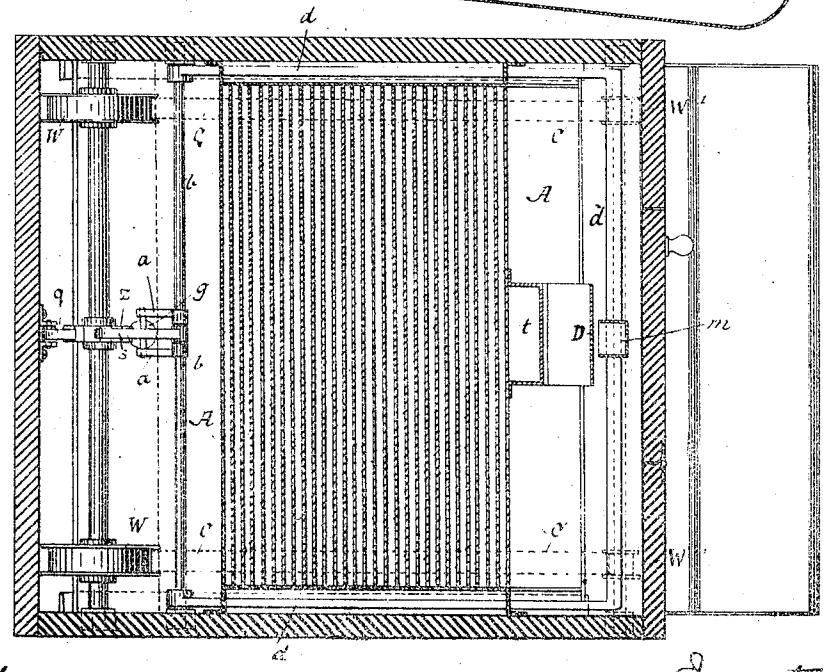


Fig. 2

Witnesses.
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R. ALEXANDER-KATZ.

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Fig. 3.

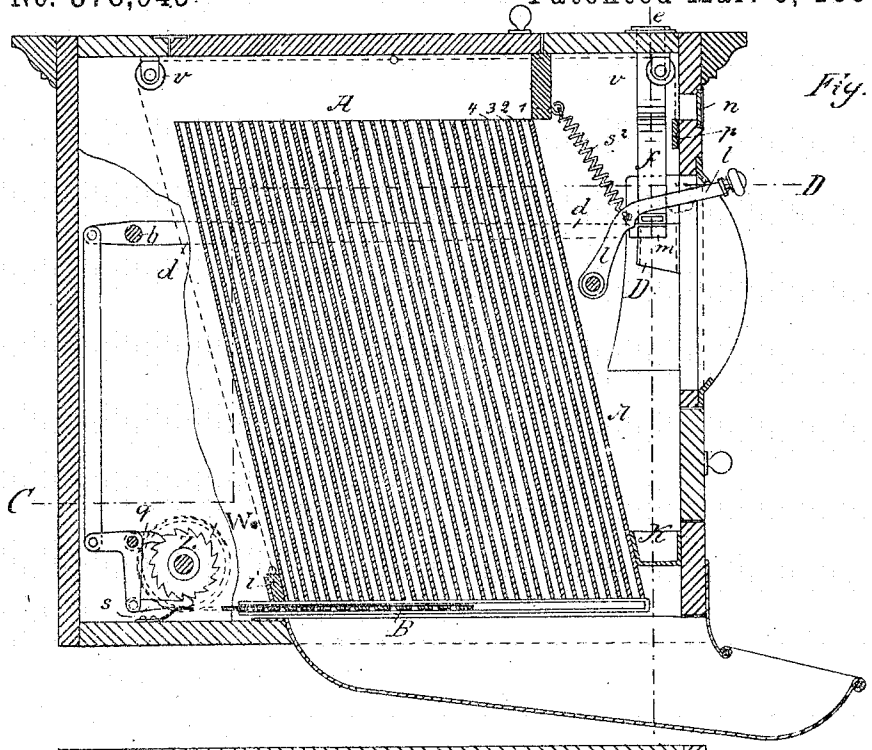
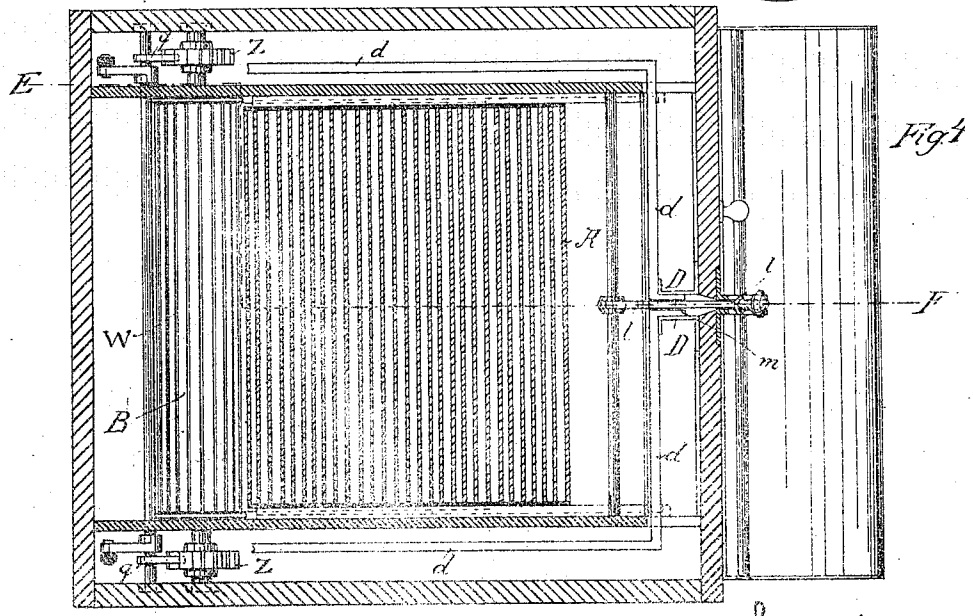


Fig 4



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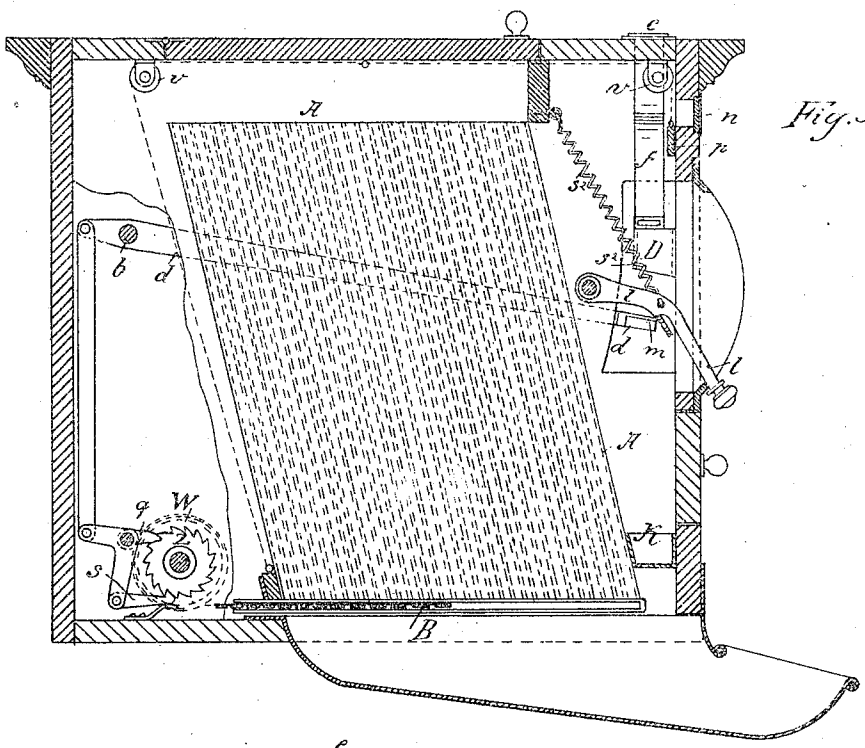


Fig. 5.

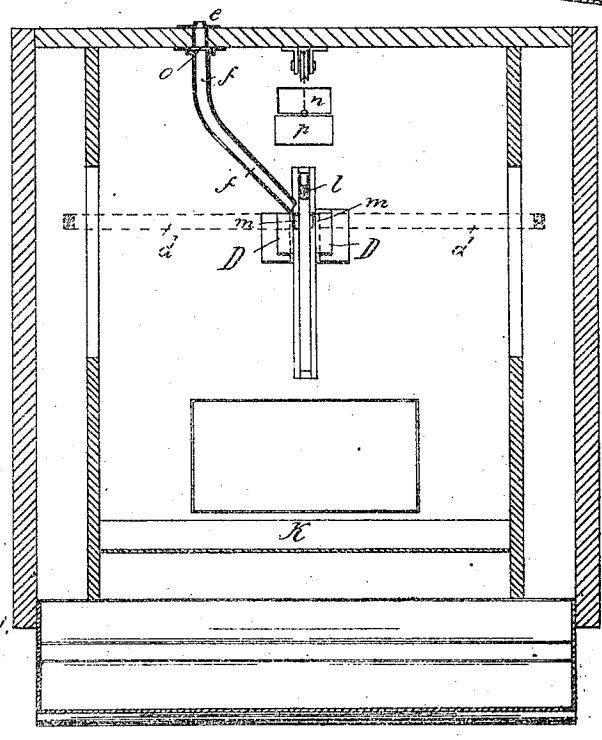


Fig. 6.

Witnesses.
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(No Model.) 4 Sheets—Sheet 4.

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AUTOMATIC APPARATUS FOR THE SALE OF NEWSPAPERS, &c.

No. 378,945. Patented Mar. 6, 1888.

Fig. 7

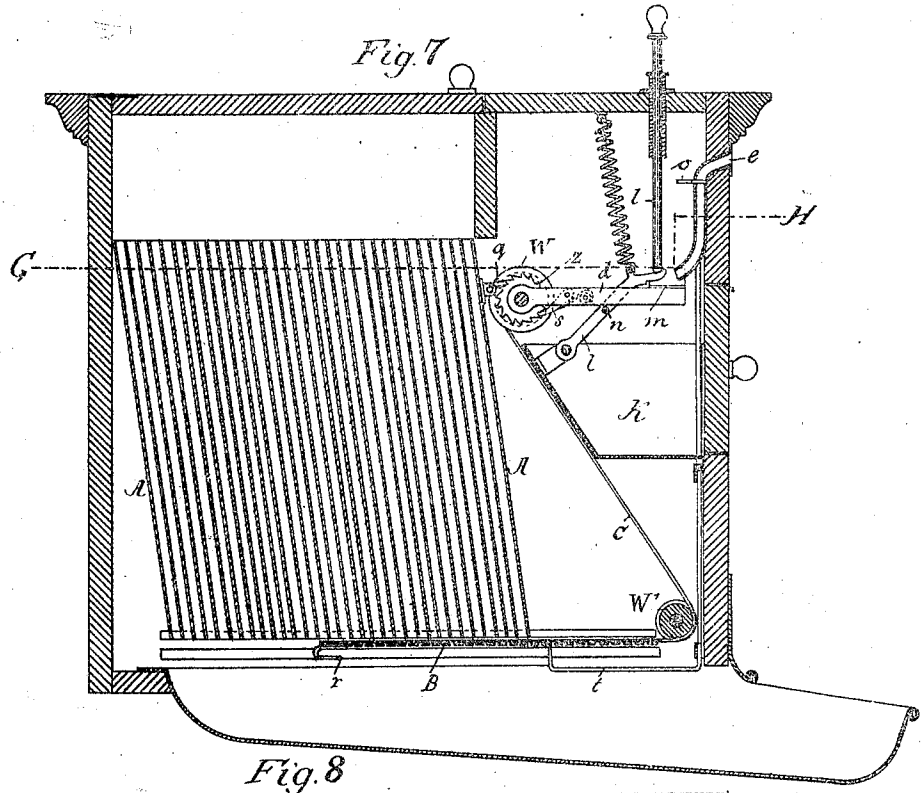
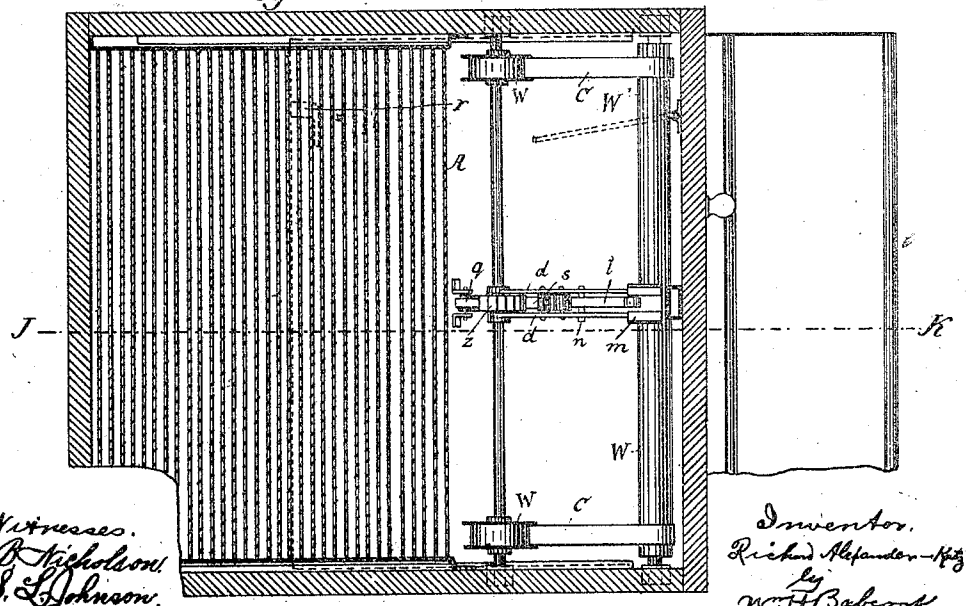


Fig. 8



Witnesses.
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UNITED STATES PATENT OFFICE.

RICHARD ALEXANDER-KATZ, OF BERLIN, GERMANY.

AUTOMATIC APPARATUS FOR THE SALE OF NEWSPAPERS, &c.

SPECIFICATION forming part of Letters Patent No. 378,945, dated March 6, 1888.

Application filed June 29, 1887. Serial No. 242,857. (No model.)

To all whom it may concern:

Be it known that I, RICHARD ALEXANDER-KATZ, a citizen of the Kingdom of Prussia, Empire of Germany, residing at Berlin, in the Kingdom of Prussia, have invented certain new and useful Improvements in Automatic Delivery-Boxes for Newspapers, Pamphlets, and Similar Articles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in an apparatus for the automatic sale of newspapers or other articles, having a series of upright compartments, a movable bottom for said compartments, a shaft and cord for moving said bottom, and a lever, pawl-and-ratchet wheel for turning said shaft with a step-by-step motion, each step of such motion uncovering the lower end of one of the compartments, in order that the newspaper or other article contained therein may fall by its own gravity through the aforesaid bottom into the hands of the purchaser.

The principle of the present improvements is that a large number of newspapers, pamphlets, cards, or similar flat or other objects of large size are contained in a box divided into narrow compartments, the walls of which form vertical or inclined sliding surfaces, the whole being provided with a common displaceable bottom. Each time that a certain coin is placed in the slit the movable bottom is withdrawn or slid from under one of the said compartments and allows its contents to slide down and be delivered to the purchaser. For light objects the weight of the coin may suffice to move the bottom, while in case of heavier articles its moved by hand by means of a knob disengaged by the dropping in of the coin. The bottom is either of one piece, in which case it is preferably curved in the shape of a segment of a cylinder, or it is composed of strips of wood or sheet metal, or of steel band or web.

Coin of insufficient value is refused by the apparatus in the known manner.

Referring to the accompanying drawings, Figure 1 is a vertical section; Fig. 2, a horizontal section of the apparatus. Figs. 3 and 4 represent similar views of a modification. Figs. 5 and 6 represent similar views of another modification. Figs. 7 and 8 represent similar views of a third modification.

A is the slightly-inclined box with the compartments 1 2 3 4. These compartments may be either vertical or inclined at any angle which will allow them to be sufficiently upright for the newspapers to drop through readily by their own weight and without assistance when the bottom is withdrawn. The bottom B is guided in lateral grooves and pulled forth by degrees by one or more bands, C, passing over the roller W. On the shaft of the latter is situated a ratchet-wheel, *z*, on the teeth of which lies loosely a pawl, *s*, movable about the point *c'*. Upon the shaft *l* is pivoted the balance-lever *a b d*, from the shorter arm of which is suspended the piece *g*, while the longer arm, which is in the form of a frame surrounding the box A, carries at its other end the coin-receiver *m*, into which the coin placed in the slit *e* is introduced through the guide-channel *f*. Coins of insufficient value fall through the groove *h* into the funnel *t*, and pass out through the channel *r*. The coin-catch *m* is provided with an inclined bottom, and open behind. The coin is prevented from rolling off by the wall D until it has pressed the lever so far down that the coin can roll past D into the cash-box. The released lever rises then again to its previous position by the action of the counterpoise *g*.

On the descent of the lever *d* the lever-arm *b c'*, fastened thereto, is turned, the course of the point *c'* being equivalent to the breadth of each partition of the box A, the pawl *s* revolves the ratchet-wheel *z*, and thereby the roller W, for one tooth's breadth. The teeth of the toothed wheel are of such a size that the roller at each such turning rolls up the band so far as to pull the bottom B of the box A from under one compartment and allow the contents of the same to fall out. When the lever *d* after being discharged rises again, the pawl *s* returns and catches behind the next tooth of the toothed wheel, a second pawl, *g*, preventing the toothed wheel from receding. At the last compartment, *x*, of the box A is a particular receptacle with a recess, in which moves the lower part, *m*, of the angle-lever *l*

k m, which turns about the pivot *k*. To *l* is secured a cord which passes over pulleys *v v* and carries a plate, *p*, with the inscription "empty."

When filling the apparatus, a heavy piece, *i*, of wood or metal is introduced into the receptacle, which piece presses the lever *m* outward.

As soon as the bottom of the box A is drawn away from the last compartment, *x*, the piece *i*, suspended from a band or chain, falls out at the same time with the last object through a special groove of the bottom *o*, the lever *l* descends by its weight and draws the closing-plate O over the slit, and the plate with the inscription "empty" before the window *n*.

Fig. 3 shows a modified apparatus adapted for the heaviest newspapers and smallest coin, but requiring, besides the dropping in of the coin, pressure on a knob. The bottom of the box of the apparatus is composed of strips of wood or sheet metal covered with any suitable web, or of such strips fastened with bands of web or steel, or of a web fastened to steel bands or the like. This bottom is capable of coiling around the roller W, which is provided on both sides with the toothed wheels *z*. The balance-lever *b d* is provided in front with a slot-recess in which moves the rod *l*, held in upward position by a spiral or other spring, *s'*, and having a guide-slit in the wall of the box. The coin-channel is so arranged that the wrong coin is refused in the known manner, while the proper coin, when introduced, lays itself crosswise over the slit of the lever *b d*. When the knob-lever is pressed down without a coin being previously introduced, the lever descends through the slot. If, however, the proper coin is introduced, it lies in front of said slot and enables the lever to depress the balance-arm *d* and thereby draw back the bottom of the box from one compartment, as in the first case. A projection of the rod *l* advances the coin so as to cause it to fall when released at once into the cash-box. Subsequently the balance-lever *b d* and the rod *l* are returned to their previous position by the spring *s'*. In this modification the coin-slit is closed after sale of the last article by the cord, which is directly fastened to the heavy piece *i*, which falls down through a recess at the bottom when the box is empty, at the same time the plate with the inscription "empty" being placed before the window.

In the modification shown by Figs. 5 and 6 the bottom is arranged as in the aforementioned modification, but opens toward the front side of the apparatus. The roller W, round which the bands B, operating the bottom C, are rolled, is situated in front, the tooth-wheel *z*, the balance *b d*, and the rod *l* being in the middle. The coin enters at *m* between the slit lever *b d* and the arm *l* is advanced by the latter when pressed down by the knob, and falls into the cash-box. The pawl *s*, pressed by means of a spring onto the toothed wheel, turns while descending the toothed wheel for one tooth. When the lever rises, the lever *b d* is raised, along with the rod *l*, by means of the pin *n*, while the pawl *q* prevents the roller from receding. The bottom B passes over the roller W and is drawn by means of the bands C. As soon as the box is empty, the hook *r*, fastened to the bottom B, presses on the lever *t*, which turns, by means of a connecting-wire, the plate *p* with the inscription "empty" before the window, and simultaneously closes the coin-slit *e*.

Having now particularly described and ascertained the nature of this invention and in what manner the same is to be performed, I declare that what I claim is—

1. In apparatus for the automatic sale of newspapers or other articles, a series of upright compartments, a movable bottom for said compartments, a shaft and cord for moving said bottom, a lever, pawl, and ratchet-wheel for turning said shaft with a step-by-step motion, each step of such motion uncovering the lower end of one of the compartments in order that the newspaper or other article contained therein may fall by its own gravity, substantially as set forth.

2. A series of upright compartments, a movable bottom therefor, and a shaft and cord for moving the latter, in combination with a ratchet-wheel, pawl, and lever for operating said bottom by a step-by-step motion, and a coin-receiver arranged in relation to said lever in order that the fall of each coin into said receiver shall determine the operation of said lever and pawl on said ratchet, and the consequent uncovering of the lever end of one compartment through which the newspaper contained therein falls by its own weight, substantially as set forth.

3. The channel *f* and the coin-receiver *m*, in combination with the lever *d*, on one end of which said coin-receiver rests, the pawl *s*, carried by said lever, the ratchet-wheel *z*, engaged by said pawl, a shaft and pulleys turning with said ratchet, a series of upright compartments for holding newspapers or other articles, a movable bottom for said compartments, and cords extending from said bottom to said pulley in order that the fall of each coin into the coin-receptacle may cause the lower end of one of the compartments to be uncovered and the newspaper or other article contained therein to drop through, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

RICHARD ALEXANDER KATZ.

Witnesses:
B. ROI,
K. BEILKE.