

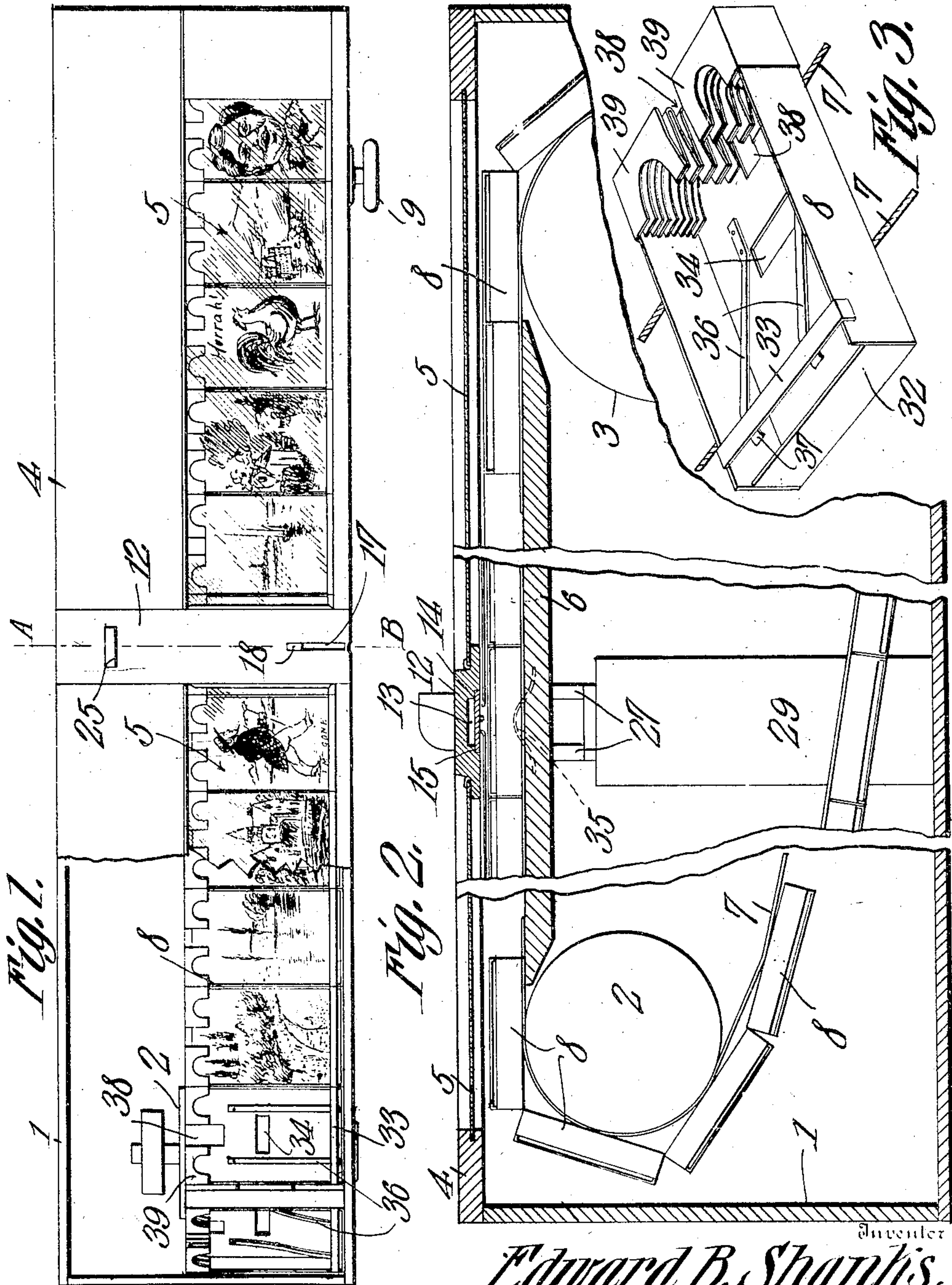
E. B. SHANKS.  
VENDING MACHINE.

APPLICATION FILED JUNE 8, 1908.

Patented June 22, 1909.

2 SHEETS—SHEET 1.

925,662.



Witnesses

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By

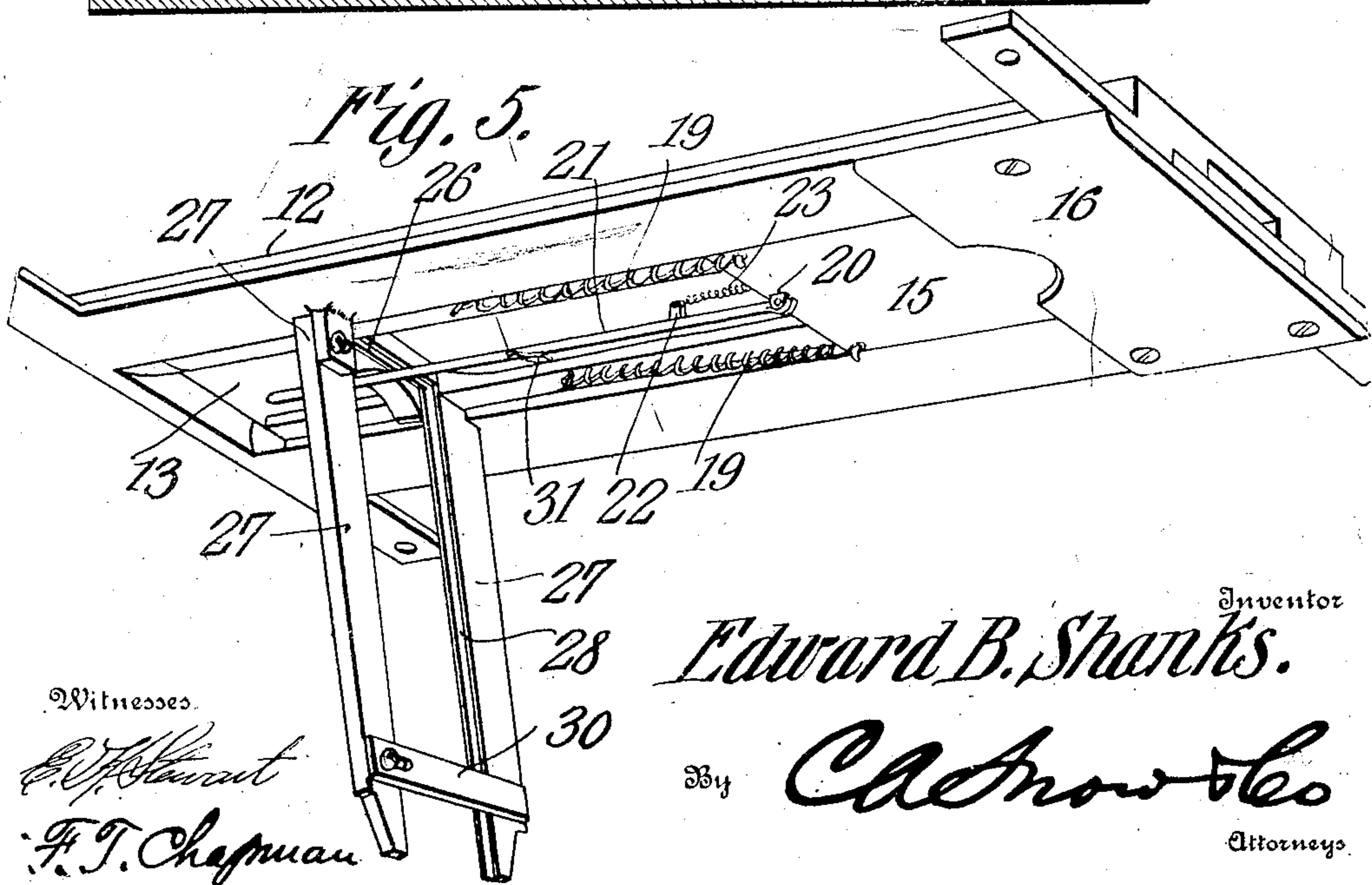
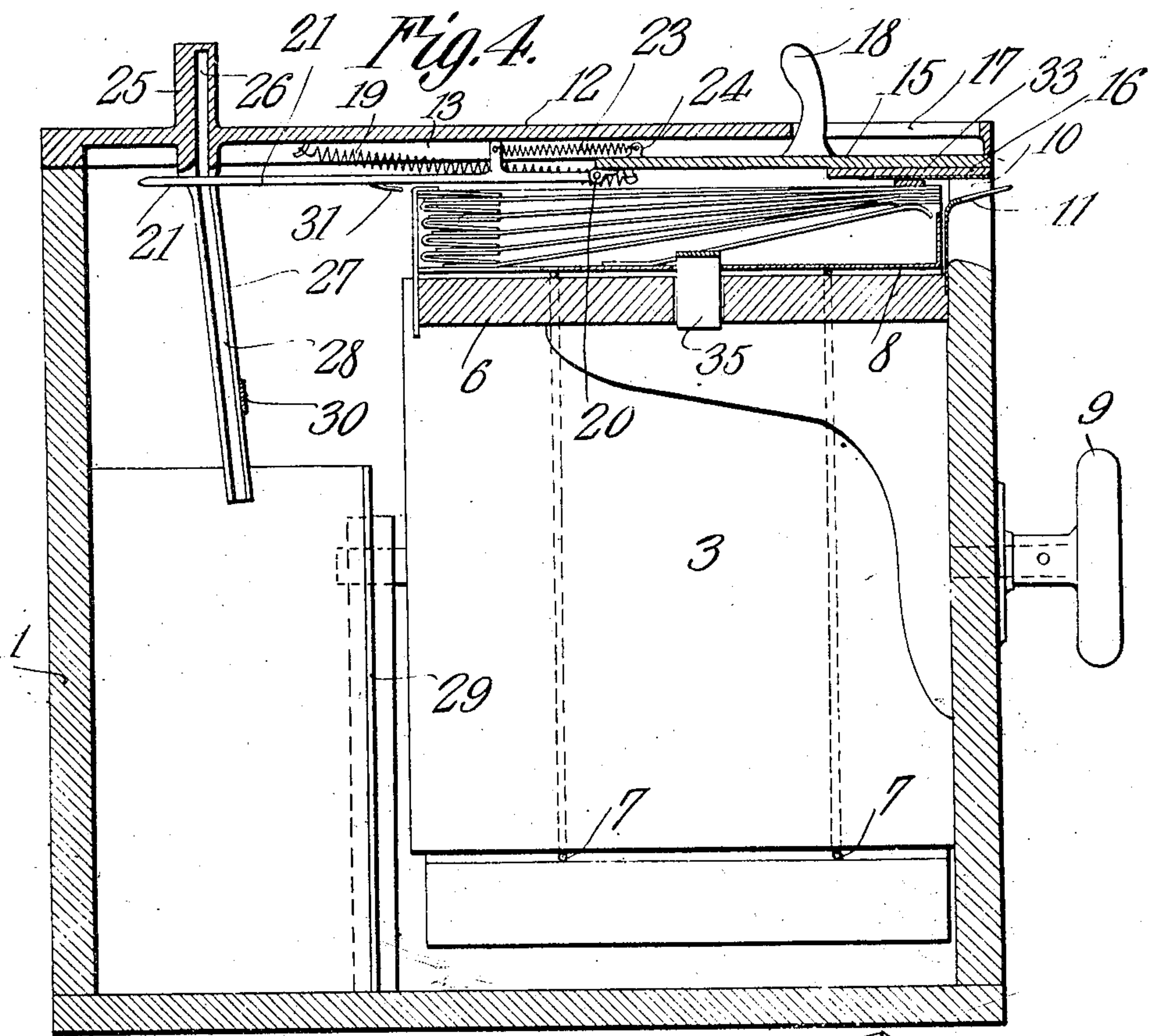
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# UNITED STATES PATENT OFFICE.

EDWARD B. SHANKS, OF SPRINGWOOD, VIRGINIA.

## VENDING-MACHINE.

No. 925,662.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed June 3, 1908. Serial No. 437,411.

*To all whom it may concern:*

Be it known that I, EDWARD B. SHANKS, a citizen of the United States, residing at Springwood, in the county of Botetourt and State of Virginia, have invented a new and useful Vending-Machine, of which the following is a specification.

This invention has reference to improvements in vending machines, being designed more particularly for the vending of souvenir postal cards, although adapted to the vending of other articles than postal cards.

The object of the present invention is to provide means for the display of a number of the postal cards at one time, so that the purchaser may readily examine the display and make a choice without the necessity of moving the machine.

The invention comprises means for the support of a series of postal cards or several cards arranged in series with means for moving any one of the cards, or groups of cards, opposite a discharge opening, when on the insertion of a suitable coin or token, an ejecting apparatus is placed into operative relation to the postal card opposite the discharge opening, so that the card may then be readily made accessible to the purchaser.

The invention also contemplates means whereby the postal cards may be delivered either one at a time, or in multiples, without necessitating any change in the structure of the machine.

The invention will be best understood from a consideration of the following detailed description, taken in connection with the accompanying drawings forming a part of this specification, in which drawings—

Figure 1 is a plan view of the machine with parts broken away. Fig. 2 is a longitudinal section on a larger scale than shown in Fig. 1, and with parts broken away. Fig. 3 is a perspective view of one of the card trays. Fig. 4 is a cross section on the line A—B of Fig. 1, but on a larger scale. Fig. 5 is a perspective viewed from the under side of the ejecting mechanism.

In the drawings, the vending machine is shown as an elongated rectangular structure, so that many postal cards may be displayed in the same plane, but it will be understood that it will constitute no departure from the present invention to make the structure square or cylindrical, or polygonal.

Referring to the drawings, there is shown a

casing 1, which, in the particular form shown in the drawings, is an elongated box of substantially square cross section. Near one end of the box interior thereto there is journaled a roller 2, and near the other end of the box interior thereto there is journaled a roller 3, with the upper edges of the rollers a short distance below the top 4 of the case, and in the same longitudinal plane. The top 4 is provided with transparent or glass partitions 5, through which the contents of the box may be readily viewed.

Extending between the rollers 2 and 3 is a shelf or plane support 6. Extending around the rollers are two endless strands 7—7, spaced apart, and carrying in close relation a continuous series of boxes or receptacles 8, the said receptacles being made fast to the strands 7 in any suitable manner, and the strands being preferably formed of some flexible material of sufficient strength so that the said strands and receptacles constitute an endless carrier. In order to actuate the carrier one journal of the roller 3 is continued through the side of the box and there carries a manipulating handle 9 in the form of a knob in the particular construction shown, so that the operator or purchaser may rotate the knob in either direction and thereby cause the receptacles 8 to pass in view. The series of receptacles may be freely actuated at any time by the purchaser, so that the entire series of receptacles may be caused to traverse the field of view, and the purchaser be thereby enabled to inspect all of the postal cards visible in the boxes or receptacles 8, and thus be enabled to make a choice.

At a suitable point in one side of the casing 1 near the upper edge thereof is a discharge opening 10, protected by a metal guard 11, so that the discharge throat of the opening 10 is only sufficient to permit the passage of a postal card, or a limited number of postal cards stacked. Coincident with the discharge opening 10 there is a cross piece 12 extending from the front to the back of the box, and rigidly secured thereto. This cross piece 12 serves as a support for the ejecting mechanism of the structure. On the under side of the cross piece 12 is formed a longitudinal channel 13, provided with shoulders 14 for the reception of a sliding plate 15 capable of moving longitudinally in the channel 13 against the shoulders 14. This plate 15 is held against the shoulders 14



by a cross member 16 at the delivery end of the cross piece 12. Above the plate 15 there is formed in the cross piece 12 a longitudinal slot 17 through which there extends a thumb piece 18, rising from the upper face of the plate 15, so that the operator may grasp the thumb or finger piece 18 and actuate the plate 15 in a direction longitudinal of the cross piece 12. The plate 15 is only of sufficient length to permit it to have a limited longitudinal movement with relation to the cross piece 12, this movement being limited by the length of the slot 17. At the inner end of the plate 15 there are two springs 19 connected at the ends remote from the plate 15 to suitable points on the under side of the cross piece 12, the tendency of these springs 19 being to maintain the plate 15 with the finger piece 18 in engagement with the end of the slot 17 remote from the delivery opening in the casing.

Formed on the under side of the rear end of the plate 15 are ears 20 between which is pivoted a rod 21 extending rearwardly to near the rear end of cross piece 12. On this rod at a suitable distance from the pivot end, there is formed a stud 22, to which latter there is connected a light helical spring 23, the other end of which is made fast to an eye 24 on the upper face of the plate 15 near the rear end thereof. This spring 23 is of sufficient strength to maintain the rod 21 in an elevated position under normal conditions.

Near the rear end of the cross piece 12 there is formed a guide-way 25, extending above the upper face of the cross piece 12, and entered laterally by a channel 26, which channel passes through the cross piece 12 at a point about mid-way of its width and opens into the interior of the machine. Carried by the cross piece 12 on the under side, and on each side of the channel 26 where it passes through the cross piece 12, are guide strips 27 having their contacting faces formed with guide channels 28 extending from the channel 26 downward to the lower ends of the guide strips 27, which latter terminate at a point in operative relation to a suitable receptacle 29 within the casing 1. The rod 21 has its rear end extending between the guide strips 27. When a coin of suitable denomination is inserted in the channel 26, in a direction parallel with the upper face of the cross piece 12, it will roll laterally until opposite the downward extension of the channel 26 and will then gravitate into the grooves 28 in the guide strips 27 and ultimately fall into the receptacle 29. Near the lower end of the guide strips 27 these two strips are joined by a connecting member 30. The length of the rod 21 is such that when moved about its pivot support 20 against the action of the spring 23, its free end will ultimately be forced downward until stopped by the connecting piece 30. On the under side of

the rod 21 at a point between its pivot end and the guide strips 27, there is formed a lip 31.

Referring now to the boxes or receptacles 8, these are shown as generally rectangular in shape, and in the particular instance under consideration are of a size adapted to receive one or more postal cards. One end 32 of each box 8 is of less height than the side members of the box, and extending between the two side members of the box at a point adjacent to the reduced end 32, is a bar 33 acting as a stop bar, as will presently appear. In the bottom of the box, there is formed a slot 34, somewhat elongated in the direction of the travel of the box, and on the shelf 6 directly beneath the cross piece 12, there is a bow spring 35 adapted to enter the slot 34, but yielding to the travel of the box 8 in either direction. As will presently appear, this bow spring 35 operates as a locating stop for yieldingly arresting the travel of each box 8 at a point directly beneath the cross piece 12. Fast on the bottom of the box is a pair of spaced leaf springs 36, the free ends of which are curved downward as indicated at 37, and these free ends are located near the end 32 of the box and beneath the cross piece 33. The other end of the box is formed on the bottom with a longitudinal recess 38 extending into the bottom of the box from the end remote from the end 32 for a suitable distance mid-way between the two sides of the box, and at this recessed end of the box on each side of the recess is a stack of elastic clips 39, secured at one end to the side members of the box. These clips are generally U-shaped, and are doubled on themselves with the ends toward the reduced end of the box spread apart, so that the stack of clips at their inner ends are in contact, and at their outer ends where they are doubled on themselves are out of contact or separated. This structure permits the introduction of one or more postal cards at the end of the box 8 carrying the clips 39, these postal cards being forced through the clips into the box until their other ends are engaged by the spring 38 and forced up against the cross bar 33. Each box is adapted to hold a stack of postal cards either introduced individually between the several clips, or introduced in pairs, or in greater numbers between the clips.

Now, let it be assumed that in each box 8 there are a number of postal cards, say one introduced into each space between the clips 39, with the other ends at the reduced end 32 of the box. In the particular structure shown, a large number of postal cards are visible at one time and the purchaser is enabled to examine these cards at will, and by manipulating the knob 9 may bring other cards in view until the entire series of cards which can be brought into view have been examined. When the choice is made, the



particular box containing the chosen card is brought beneath the cross bar 12, and will automatically stop at the proper point because of the entrance of the spring 35 into the slot 34, although this spring does not interfere with the continuous movement of the entire series of boxes at the will of the purchaser, since the spring 35 is an indicative stop and not a positive stop. The chosen card having been brought beneath the cross bar 12 a coin of suitable denomination is introduced into the coin conduit and engages and depresses the rod 21 until the downward movement of the rod is arrested by the engagement of the rod with the uppermost postal card in the particular box 8. Now, the operator grasps the finger piece 18 and pulls the plate or slide 15 toward the front of the casing. The coin on depressing the rod 21 has brought the lip 31 into operative relation to the uppermost card and on the forward movement of the plate 15, this card is moved out through the delivery opening 10 for a sufficient distance to be within reach of the purchaser. When the plate 15 is drawn forward, the rear end of the rod 21 is also moved to an extent sufficient to bring it in front of the coin guides 27, and the coin is thereby allowed to escape and gravitate into the receptacle 29. As soon as the coin escapes, a spring 23 returns the rod 21 to its uppermost position, and it is no longer in operative relation to a postal card.

Let it be assumed that there are several post cards in a box 8, and that the uppermost one has been removed from the machine, and that the purchaser desires to obtain the second or third, or which ever it is that is in view. On the insertion of the proper coin, the rod 21 is again depressed against the action of the spring 23, and the downward movement continues until the rod is arrested by engagement with the rear end of the visible postal card. In this case a depression of the rod 21 is greater than in the first assumed case, but the lip 31 is nevertheless in operative relation to the rear end of the visible postal card and such postal card is forced out of the delivery opening 10 as before on the forward movement of the delivery slide plate 15. The springs 36 always maintain the corresponding ends of the postal card up against the cross bar 33 and in this position the uppermost postal card is always above the upper edge of the corresponding end 32 of the box 8. The other ends of the postal cards are spaced apart in conformity with the spacing of the clips 39.

If it be desired to set the machine for the delivery of more than one postal card for a coin of the proper size, then two or more postal cards are introduced between contiguous clips 39, so that the lip 31 will en-

gage the corresponding edges of the group of cards and deliver all of them simultaneously. In this manner the machine is adapted to deliver one article, or more than one article at one operation on the introduction of a coin of proper value.

If it be attempted to operate the machine by a coin other than the one for which the machine is set, the coin will fall off the rod 21, or the coin cannot be introduced into the coin conduit 26. If, for instance, the machine be set to operate on the introduction of a five cent piece or "nickel", the coin conduit 26 will be of such size as to not admit a coin of larger size, but, of course, it will admit coins of smaller size. The spring 23, however, is so adjusted that while it will yield to the weight of a five cent piece, and may also yield to the weight of a smaller coin, but not being held by the guides 27, because the coin is too narrow, it will fall off the rod 21 and the machine will not be operated when the slide plate 15 is pulled forward. One of the guides 27 may be made adjustable to and from the other as indicated, so that the said guides may be adjusted very accurately to a coin.

In the foregoing description the boxes 8 are described as being carried by strands 7. It is apparent, of course, that a belt may be substituted for the strands.

What is claimed is:—

1. In a machine for vending postal cards, an endless band, a series of receptacles on said band open on one face and having a delivery opening at one end, a casing inclosing the band and receptacles and provided with a transparent portion exposing a plurality of the receptacles to view at a time, and a delivery mechanism coacting with any one of the receptacles and located intermediate of the length of the transparent portion of the casing.

2. In a machine for vending postal cards, an endless band free to move in either direction at all times at the will of an operator, a series of receptacles on said band open on one face and having a delivery opening at one end, a casing inclosing the band and receptacles and provided with a transparent portion exposing a plurality of the receptacles to view at a time, a delivery mechanism coacting with any one of the receptacles and located intermediate of the length of the transparent portion of the casing, and means for positioning any chosen one of the receptacles in operative relation to the delivery mechanism.

3. In a vending machine, a casing having a transparent portion, an endless band within the casing having a run past the transparent portion of the casing, a support for the said run of the belt for maintaining the belt in close relation to the transparent portion of the casing, receptacles on the belt for the articles to be vended, and delivery means in-



intermediate of the transparent portion of the casing and coacting with any chosen one of the receptacles.

4. In a vending machine, a casing having a transparent portion, an endless band within the casing having a run past the transparent portion of the casing, receptacles on the belt having means for holding articles in superposed relation with the outermost ones only visible, and a delivery mechanism coacting with any chosen one of the receptacles on the belt and having means for delivering the outermost or visible article in the chosen receptacle when the latter is moved into operative relation to the vending mechanism.

5. In a vending machine, a casing having a transparent portion, an endless band within the casing, having a run past the transparent portion of the casing, a support for the said run of the belt for maintaining the belt in close relation to the transparent portion of the casing, receptacles on the belt each having means for holding articles in superposed relation with the outermost one only visible, and a delivery mechanism intermediate of the transparent portion of the casing and provided with means coacting with any chosen one of the receptacles to discharge the outermost article in said receptacle.

6. In a vending machine, a series of receptacles, for the articles to be vended, comprising each a box or holder, elastic means in the box or receptacle near one end thereof for urging the articles to be vended in one direction with reference to the box or holder, and means at the other end of the box or holder for holding the articles to be vended separated one from the other.

7. In a vending machine, a box or receptacle for holding either one or a number of the articles to be vended, said box or holder having means at one end for holding the corresponding ends of the articles separated one from the other, and means at the other end for maintaining the corresponding ends of the articles in close contact.

8. In a vending machine for vending postal cards and similar articles, a box or holder arranged to receive the cards at one end and deliver them at the other, spacing clips at the receiving end of the box, and springs and co-acting stop strip at the delivery end of the box.

9. In a vending machine for vending postal cards and similar articles, a box or receptacle

having the delivery end of less height than the sides, a stop strip connecting the sides adjacent to the delivery end, springs in coöperative relation to the said stop strip for forcing the corresponding ends of the cards against said stop strip, and elastic clips at the other end of the box, said clips being arranged to receive individual or groups of cards between them.

10. In a vending machine, a series of boxes or receptacles for receiving postal cards and like articles, each box being provided at one end with two series of spacing clips, one series of clips being in spaced relation to the other series of clips, means at the end of the box remote from the spacing clips for urging the corresponding ends of the cards together, and means for engaging the uppermost card or group of cards in the box to force the same from said box through the delivery end thereof.

11. In a vending machine for postal cards or similar articles, a box or receptacle for the cards, means in said box for holding one end of the cards in spaced relation, a sliding member, and a spring held member carried by said sliding member and yieldable to a predetermined weight, said spring held member co-acting with the card to engage the same to the exclusion of all cards more remote from the spring held member.

12. In a vending machine for vending postal cards and similar articles, a box or receptacle for the cards having means for compacting a series of cards near one end of the box and for separating the cards at the other end of the box, a sliding member arranged for coöperative relation to the box, and a spring held member carried by the sliding member and provided with means for engaging the adjacent card in the box, said spring held means being yieldable to move into engagement with the topmost card in the box on the application of a predetermined weight, and to be held by said card against engagement with any of the other spaced cards in the box.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EDWARD B. SHANKS.

Witnesses:

CHARLIE O'CONNER,  
J. Z. SCHULTZ.