B. NEUMANN & P. N. GAMMELGAARD.

CARD VENDING APPARATUS.

APPLICATION FILED OCT. 1, 1907.

919,927.

Patented Apr. 27, 1909.

3 SHEETS—SHEET 1.

Fig. 1.

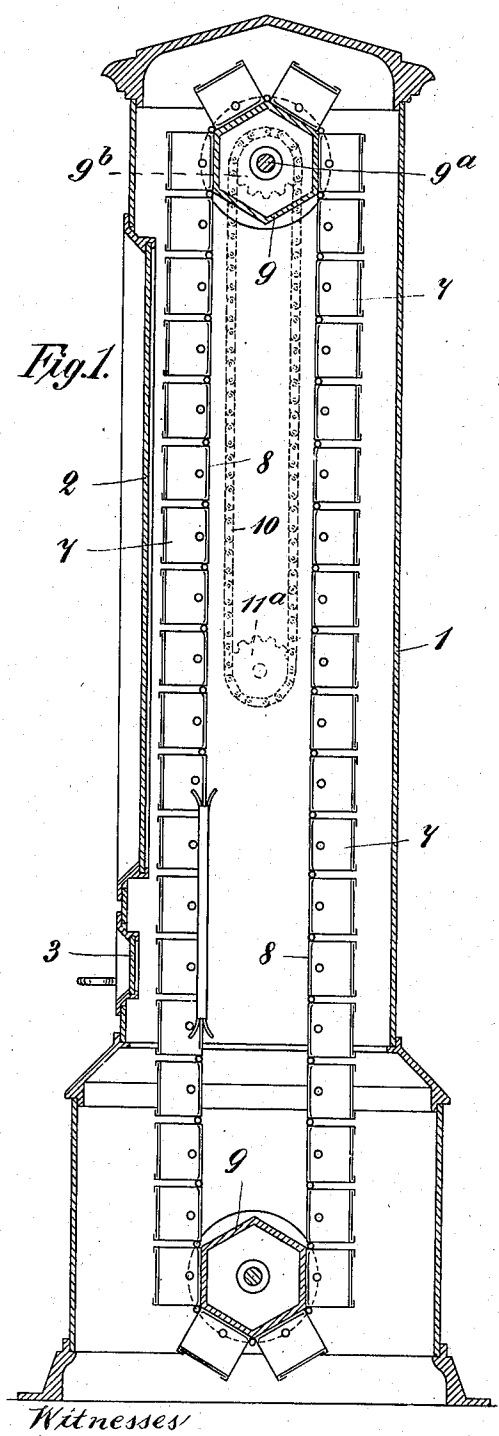
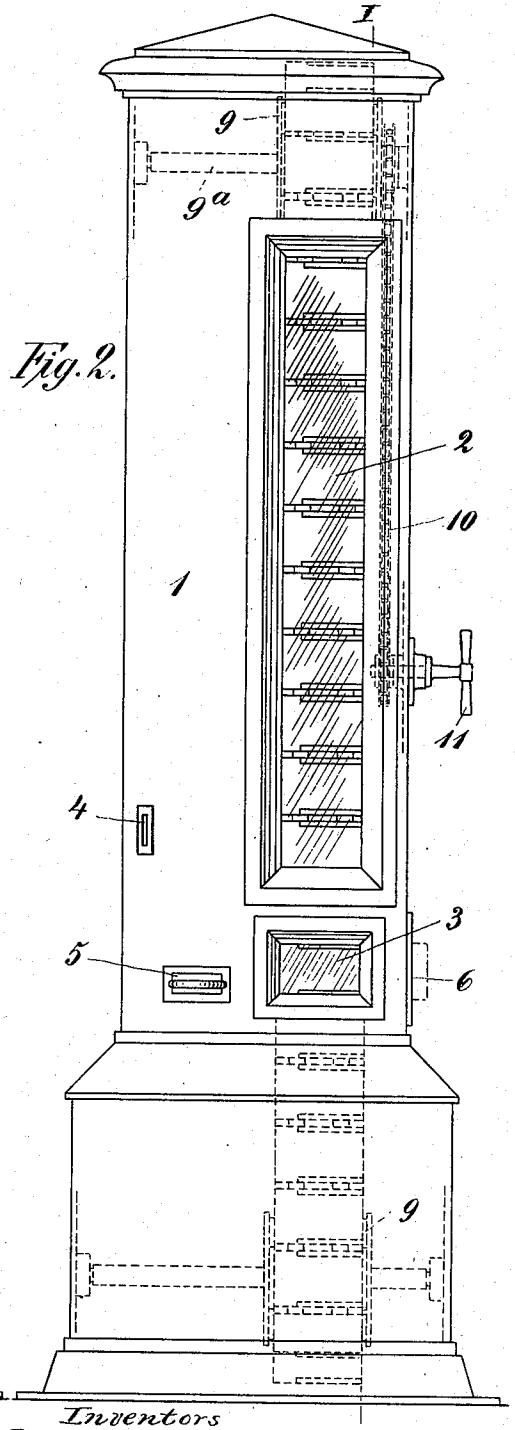


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 3.

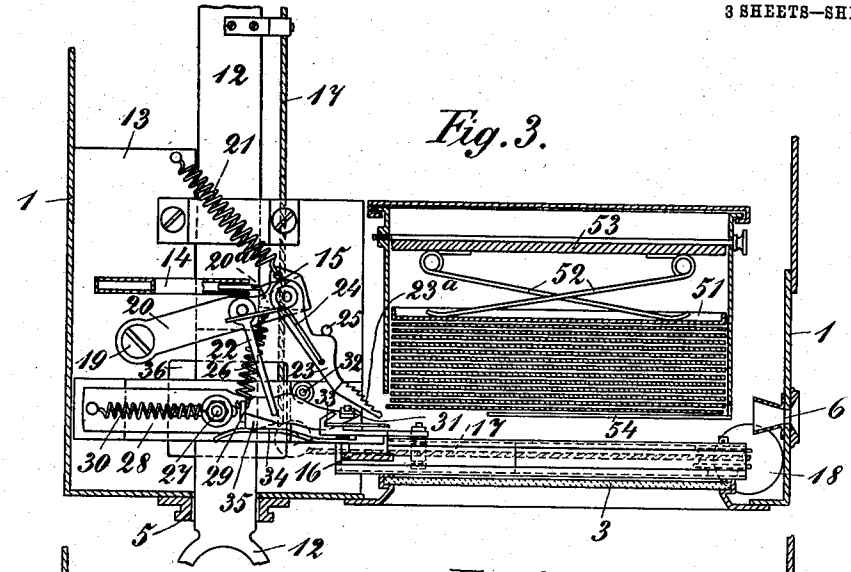


Fig. 4.

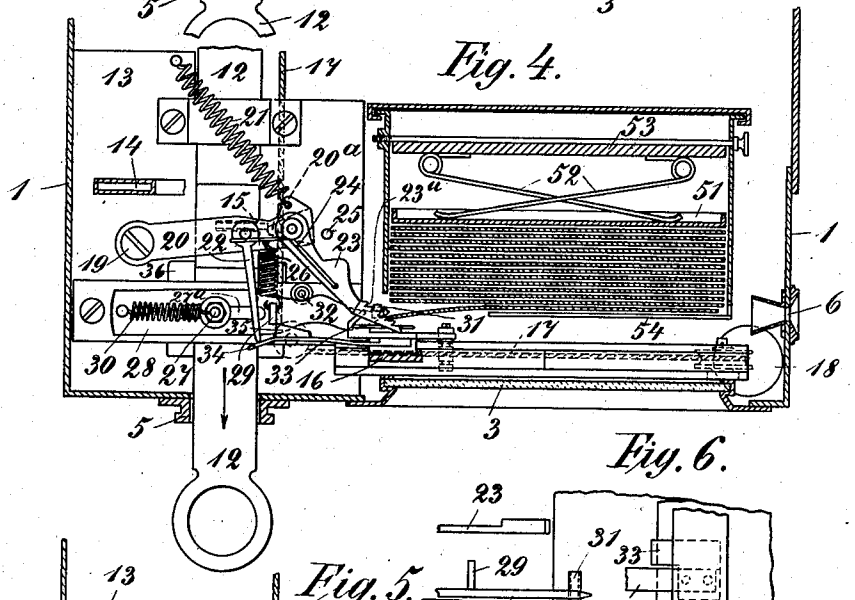


Fig. 6.

Fig. 5.

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3 SHEETS—SHEET 3.

Fig. 7.

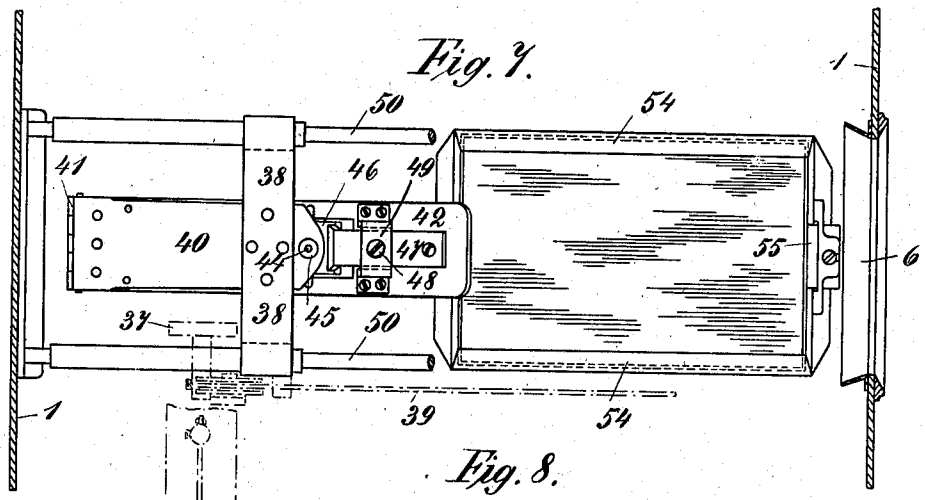


Fig. 8.

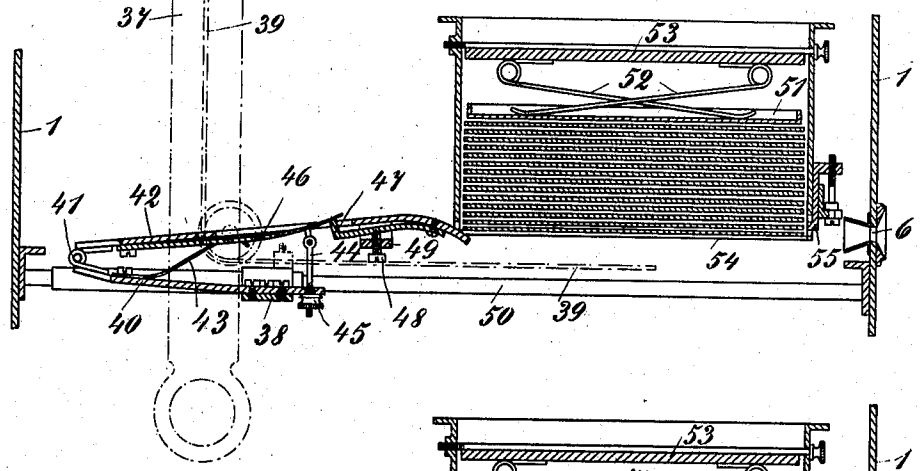
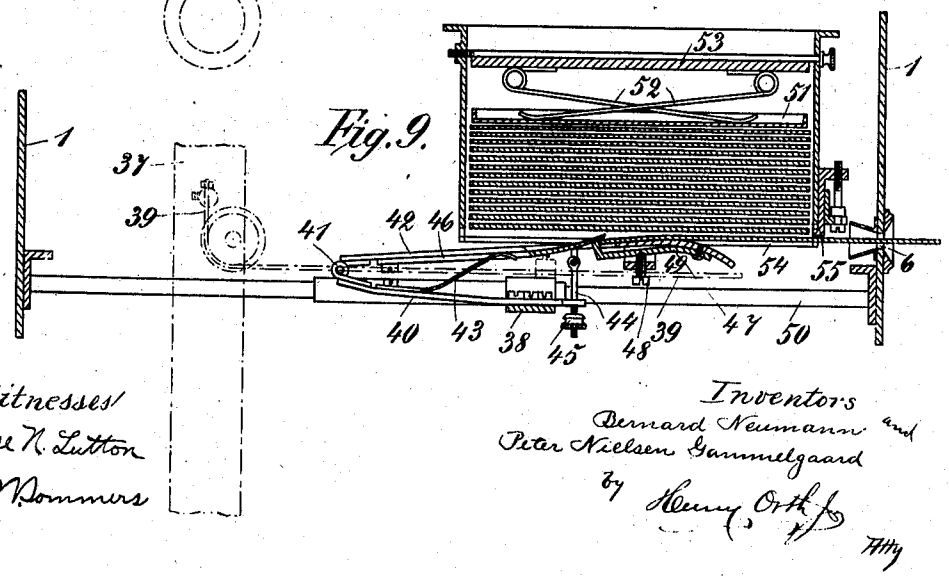


Fig. 9.



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UNITED STATES PATENT OFFICE.

BERNARD NEUMANN AND PETER NIELSEN GAMMELGAARD, OF HAMBURG, GERMANY, ASSIGNORS TO THE FIRM OF J. HEITMANN'S NACHF., OF HAMBURG, GERMANY.

CARD-VENDING APPARATUS.

No. 919,927. Specification of Letters Patent. Patented April 27, 1909.

Application filed October 1, 1907. Serial No. 395,425.

To all whom it may concern:

Be it known that we, BERNARD NEUMANN and PETER NIELSEN GAMMELGAARD, both subjects of the Emperor of Germany, and residents of Hamburg, in Germany, have invented a certain new and useful Card-Vending Apparatus, of which the following is a specification.

This invention relates to a card vending apparatus provided with a mechanism for throwing out a card, when a coin is inserted into the apparatus.

In the drawings similar characters refer to similar parts.

Figure 1 is a longitudinal vertical section of the apparatus on the line 1—1 of Fig. 2. Fig. 2 shows the apparatus in elevation. Figs. 3, 4 and 5 are horizontal sections of the apparatus to an enlarged scale and Fig. 6 shows a detail of the delivery or discharge mechanism. Fig. 7 shows an elevation and Figs. 8 and 9 show in two different positions horizontal sections of a modification of the delivery or discharge mechanism.

The vending-apparatus is arranged in a known manner in a casing 1 having the shape of a column and provided with windows 2 and 3, an opening 4 for the insertion of coins, an opening 5 for allowing the projection of a slide of the delivery mechanism and an opening 6 for the discharge or delivery of the cards. Within the casing there is a pater-noster-work consisting of a series of boxes 7 and an endless chain 8 surrounding two drums 9. The shaft 9^a of one of these drums carries a sprocket wheel 9^b surrounded by a driving chain 10, which is operated by a handle 11 fixed to the shaft of the corresponding second sprocket wheel 11^a and projecting out from the casing 1, as is clearly shown in Figs. 1 and 2.

Referring to the apparatus shown in Figs. 3 to 6 there is a slide-bar 12 projecting outward and movably arranged on a guide-plate 13 near the window 3 below the coin channel 14. The slide-bar 12 has a transverse slot 15, normally below the end of the channel 14, that is to say when the delivery mechanism is not used, as is shown in Fig. 3. Between the pater-noster-work and the window 3, there is a slide 16 connected with the slide-bar 12 by a cord 17, which is attached to both the slide-bar and the slide and guided over pulleys and provided at its ends with weights. One of these weights is not shown in the drawing, but it is attached to that end of the cord which runs next to the slide-bar 12 and it is heavier than the other weight 18, attached to that end of the cord running alongside of the guideway of the slide 16. Above the slide-bar 12 there is a lever 20 rotatably arranged on a pivot 19. The free end of this lever carries a projection 20^a facing the slide-bar 12 and connected to the guide-plate 13 by a spiral-spring 21. The lever 20 moreover has attached to it rigidly an arm 22 and rotatively an arm 23, which latter is at its end provided with a number of teeth 23^a and is acted upon by a spring 24, which has the tendency to press the toothed lever against a pin 25 arranged on the guide-plate 13. At a short distance from the lever 20 and connected with the same by a spring 26 there is a slotted slidable bar 28 arranged on a fixed pin 27 projecting through the slot 27^a of the bar 28, which is provided with a lug 29 and is also connected with the pin by a spring 30. At its front end the bar carries a rubber cushion 31 and a curved edge to bear against a fixed stud 32, when moved in its longitudinal direction. The slide 16 is provided with a hook 33 opposite the pater-noster-work and also with an elastic arm 34 carrying a projection 35, which is adapted to catch behind the lug 29 and to hold the bar 28 in a certain position. Underneath the slide 16 the guide-plate 13 has an opening 36, through which the coins fall down into a lower chamber.

The modification shown in Figs. 7 to 9 is constructed as follows: As is the case with the mode of construction shown in Figs. 3 to 6 a slide-bar 37 and a slide 38 are connected with each other by a cord 39 to the ends of which there are also weights attached, not shown in the drawings. As is known in similar apparatus heretofore used the slide is provided with means to release it from a holding-device, when a coin is inserted into the apparatus. These means and holding-device are not shown in the drawing. The slide 38 is provided with an arm 40, to which a second bent arm 42 is attached by means of a hinge 41 and to which is also fixed a spring 43 bearing with its free end against the second arm 42, thus tending to separate the arms. A bolt 44 is rotatably attached near the end of the arm 42 and projects with its free threaded end through an opening in the other arm 40, and a nut 45 is screwed on the bolt and bears against the outer side of

the arm 40. Thus by turning the nut 45 the distance between the opposite ends of the arms 40 and 42 may be adjusted. The arm 42 also carries a flexible tongue 46 the free end of which projects through an opening of the arm and rests on a spring 47, which is attached to the arm 42 and may be put under tension by a screw 48, which screws into a bridge 49 fixed to the arm 42. The slide 38 is arranged to move on guide-bars 50.

Both modifications described with reference to Figs. 3 to 9 are so constructed that every box 7 of the pater-noster is open toward the windows 2 and 3 of the casing 1 and has inside a pressure plate 51 and springs 52 situated between this pressure plate and the back-plate 53. Each box is provided with ledges 54 on the upper and lower edge of its front opening, which ledges prevent the cards inside of the box from falling out. On the sides of the opening the edges are stepped back behind the ledges 54, so as to allow the front card to be pushed out sidewise. In the modification shown in Figs. 7 to 9 there is a slide 55 arranged on the side-wall of each box 7 opposite to the discharge-opening 6, which slide projects in front of the edge of this side-wall.

The apparatus is especially intended to vend pictorial post-cards and operation of the same is as follows. No matter which mode of the two constructions described above the apparatus has, the purchaser selects a card by inspecting the cards through the windows 2 and 3 and rotating the handle 11 until the selected card appears behind the window 3. Hereupon he inserts the coin of the requisite value into the opening 4. When the apparatus is constructed as is shown in Figs. 3 to 6 the coin falls through the channel 14 and the slot 15 in the plate 13 and engages the projection 20^a on the lever 20. When the slide-bar 12 then is pulled, the coin following the slide-bar rotates the lever 20 from the position shown in Fig. 3 into the position shown in Fig. 4. By this motion of the lever 20 the lever 23 is removed from the pin 25 and rotated by the spring 24 in such a manner, that its toothed end engages the side edge of the first card behind the window 3 and thus bends out this edge a little away from the following card. At the same time or shortly after this bending takes place, the arm 22 presses the projection 35 of the elastic-arm 34 on the slide 16 away from the lug 29 of the bar 28 whereupon the bar 28 is moved toward the pile of cards by its spring and catches behind the card bent out. When the slide bar 12 is pulled out farther the coin slips away from the projection 20^a of the lever 20 and falls through the opening 36 of the plate 13 into a lower chamber or collecting space, while the lever 20 together with the arm 23 and the arm 22 is returned into its normal position by the spring 21, which has a greater power than the spring 26. When the slide-bar 12 is pulled outward, also the slide 16 starts its outward-motion toward the pile of cards by action of the weight 18. The hook 33 hereby catches hold of that edge of the first card previously bent out by the arm 23 and pushes it sidewise, so that the card with its opposite edge is moved outward into the opening 6, so far that the purchaser can grasp the card and pull it out completely. When the slide-bar 12 is released, it is drawn inwardly by the weight, which is heavier than the weight 18 and also the slide 16 returns to its former position. Hereby the projection 35 of the arm 34 engages the lug 29 of the bar 28 and pushes the latter back, putting the spring 30 under tension. During this backward motion the bar 28 also makes a slight oscillating movement on account of its curved edge sliding on the stud 32, against which the bar is pressed by the spring 26. This oscillating movement in combination with the backward longitudinal motion has the effect of giving the end of the bar carrying the rubber-cushion such a movement, that the cushion presses slightly against the face of the next card and draws it back, so that the short side edge of the card projects somewhat beyond the pile as shown in Fig. 3 and allows it to be caught hold of by the arm 23 with certainty, when on the following operation it is moved against this card.

When the slide-bar 12 and the bar 28 have completely returned to their initial-position all parts of the delivery-mechanism are brought to such position that the apparatus is ready to be operated, so as to pay out a new card.

When the apparatus has the modified construction shown in Figs. 7 to 9, the coin inserted into the apparatus effects the release of the slide-bar 37, in any known or desired manner, so that it can be pulled out by hand. This done the slide 38 moves toward the pile of cards. The free bent end of the arm 42 loosens the first card from the pile, whereupon the tongue 46 catches behind the first card and pushes it out through the opening 6 of the apparatus, so that the purchaser may grasp the card and pull it out completely. When the slide-bar 37 is let go all parts of the delivery mechanism are returned into their normal position by a weight hanging on the cord 39.

We claim:

1. A vending mechanism comprising a slide-bar, a slide operatively connected therewith, an arm connected with the slide adapted to displace a card to be dispensed, and a tongue on the arm adapted to engage the edge of the displaced card when said arm is moved in one direction.

2. A vending mechanism comprising a slide-bar, a slide operatively connected there-

with, an arm connected with the slide adapted to displace a card to be dispensed and a tongue on the arm projecting beyond its face and adapted to engage the edge of the displaced card when said arm is moved in one direction.

3. A vending mechanism comprising a slide-bar, a slide operatively connected therewith, a spring arm connected with the slide, means to adjust the spring arm, a tongue on the latter and means to adjust the tongue with relation to the arm.

4. A vending mechanism comprising a slide - bar, a reciprocable slide operatively connected therewith, an arm fixed on the slide, a spring arm on the fixed arm adapted to engage an article to be dispensed when the slide is reciprocated, a tongue on the spring arm projecting beyond the face thereof, and means to adjust the projecting end of the tongue.

5. A vending mechanism comprising a slide - bar, a slide adapted to reciprocate across a carrier, a flexible member connecting the slide-bar and slide, a spring-arm carried by the slide adapted to engage an article in the carrier, means to adjust said arm with relation to the slide, and a tongue on the arm projecting beyond the face thereof adapted to engage an article in the carrier when the slide is moved in one direction.

6. A vending mechanism comprising a slide-bar, guide-bars mounted at right angles to the latter, a slide on the guide-bars, a flexible member connecting the slide-bar and slide, an arm fixed to the latter, a slotted arm hinged to the fixed arm, a spring between the fixed and hinged bars, an adjusting device connecting the bars, a tongue projecting through the slot of the hinged arm and means on the latter to regulate the projection of the tongue, for the purpose set forth.

7. A vending machine comprising a casing having a sight opening in one wall and a dispensing aperture in a wall perpendicular to the first wall, an endless carrier mounted in the casing, a plurality of card supports mounted on the carrier, means to position the supports to register with said opening and aperture; in combination with a slide-bar, a slide operatively connected therewith, an arm connected with the slide adapted to displace a card in the positioned support and a tongue on the arm adapted to engage the edge of the displaced card when said arm is moved in one direction.

8. A vending machine comprising a casing having a slght opening in one wall and a dispensing aperture in a wall perpendicular to the first wall, an endless carrier mounted in the casing, a plurality of card supports mounted on the carrier, means to position the supports to register with said opening and aperture; in combination with a slide-bar, a slide operatively connected therewith, an arm connected with the slide adapted to displace a card in the positioned support when said arm is moved in one direction, and a tongue on the arm adapted to engage the edge of the displaced card when said arm is moved in a direction opposite to its first movement.

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