

[54] MAP VENDING MACHINE

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[51] Int. Cl. **B65h 7/04**

[58] Field of Search 221/20, 36, 37, 39, 41, 221/213, 259

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[57]

ABSTRACT

A vending machine for flat, folded paper maps comprising, a box-like housing with a horizontal interior plate, vertical open-ended chutes with front and rear walls, slidably receiving vertical stacks of maps and arranged in the housing above the plate, means pivotally connecting the rear walls to the plate, means yieldingly urging the front walls downwardly toward the plate, said front walls having lower portions cooperating with the plate to define forwardly convergent recesses at the lower ends of the chutes, resilient keepers depending into said recesses and releasably engaging the forward edges of the lowermost maps, discharge slots in the housing spaced forward of the lower ends of the chutes, ejector slides slidably engaged on the plate at the bottoms of the chutes, gripping means on the slides to grip the lowermost maps upon forward shifting of the slides to urge the maps forwardly into and through the recesses and thence through the slots, whereby the fronts of the chutes are elevated and the keepers are released from engagement with the lowermost maps, and manually operable drive means to selectively intermittently shift the slides.

11 Claims, 13 Drawing Figures

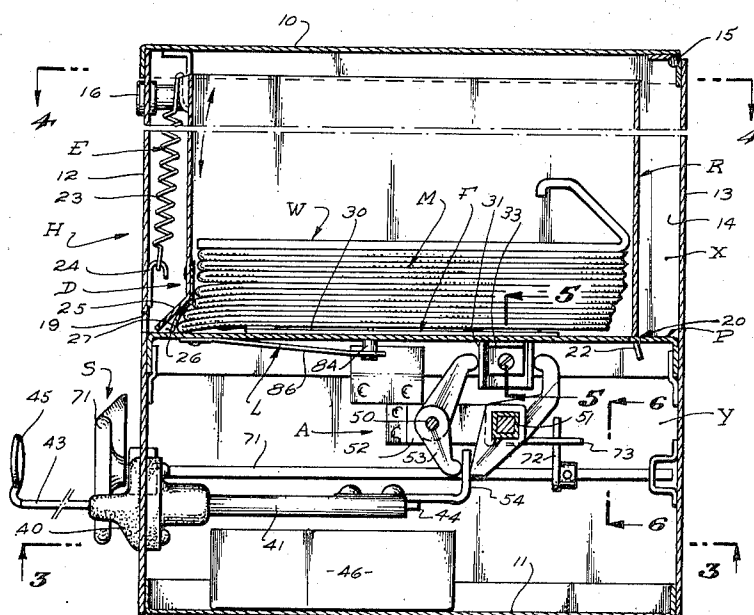


Fig. 1.

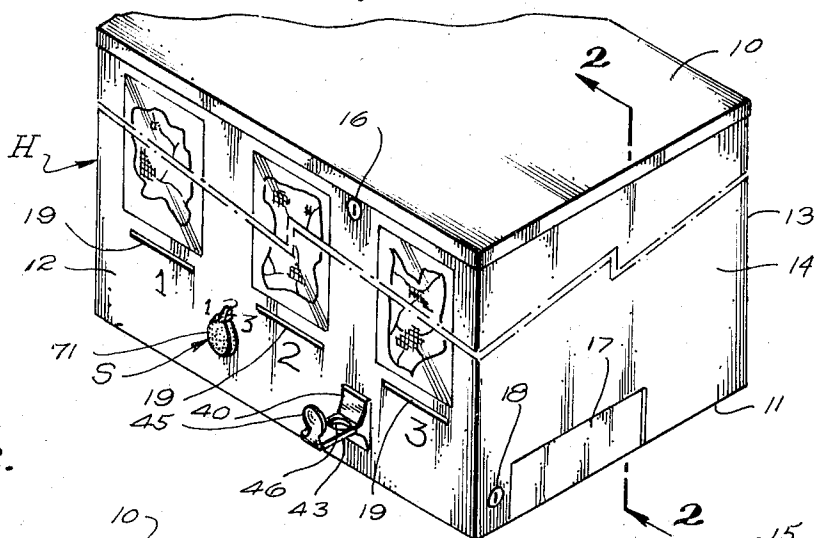


Fig. 2.

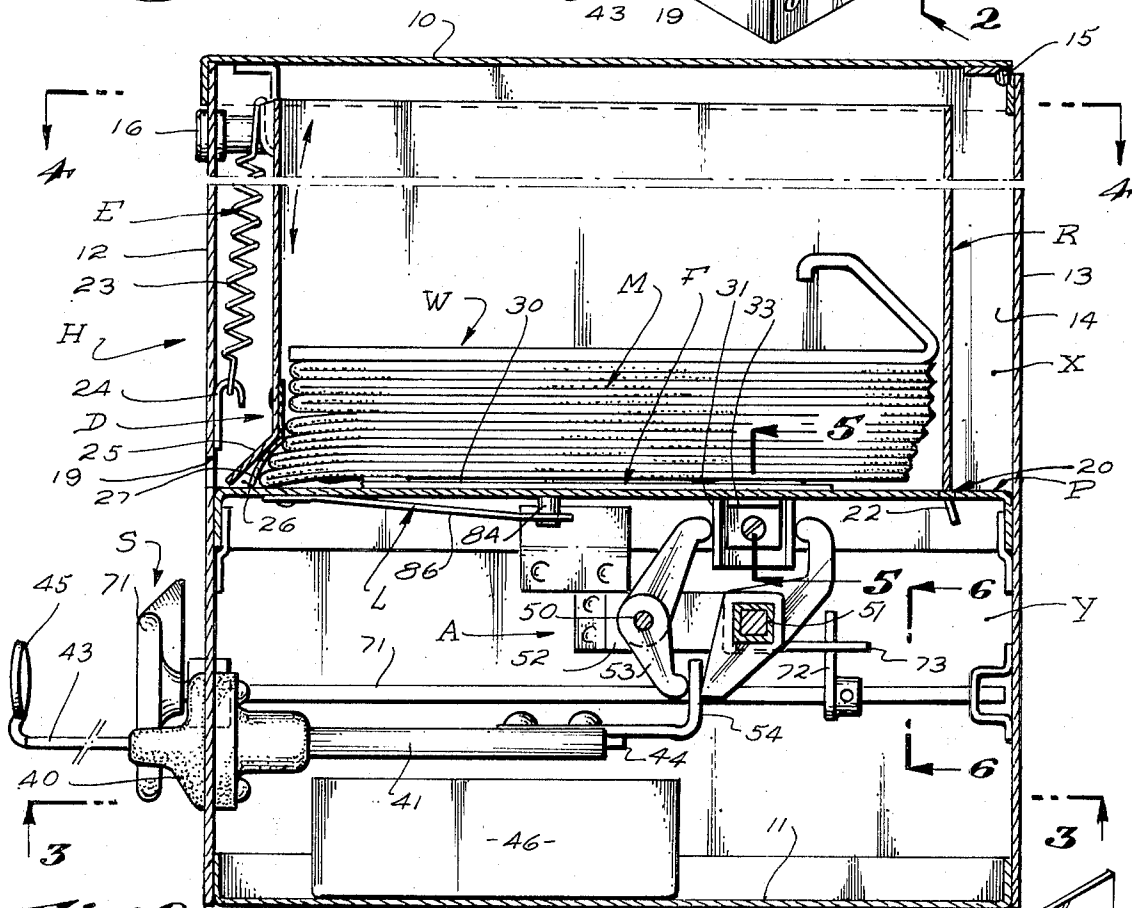


Fig. 9.

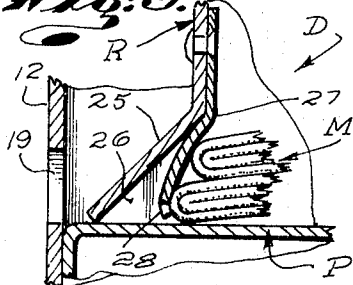


Fig. 10.

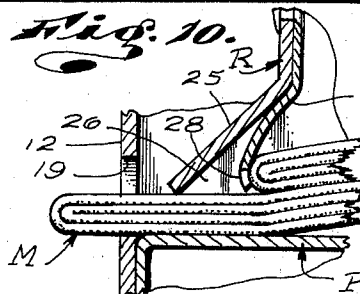
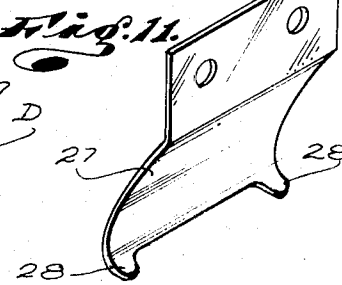
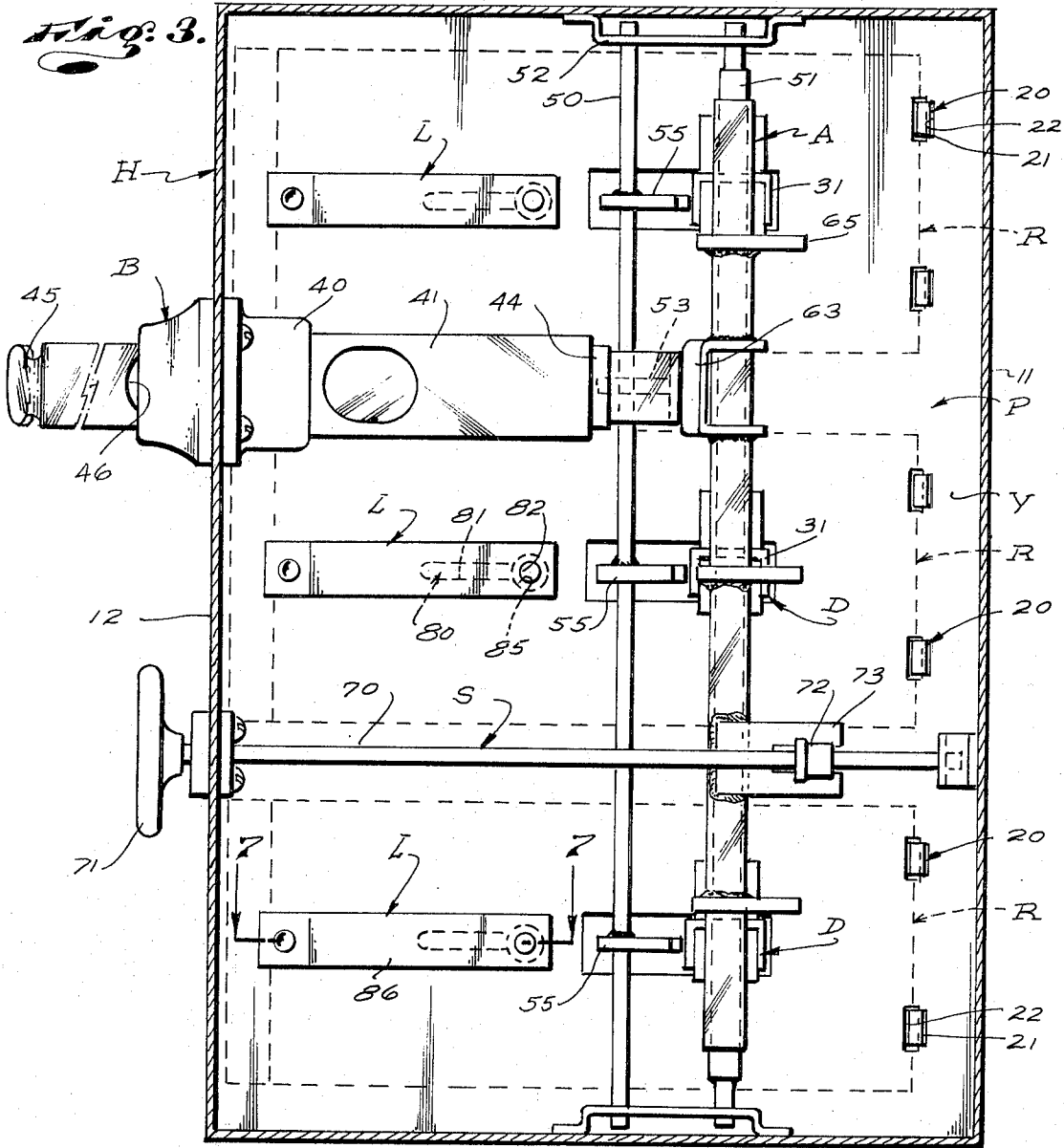
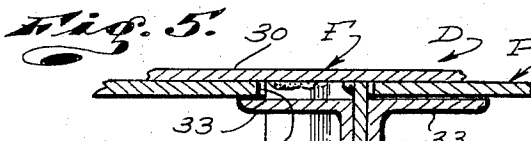
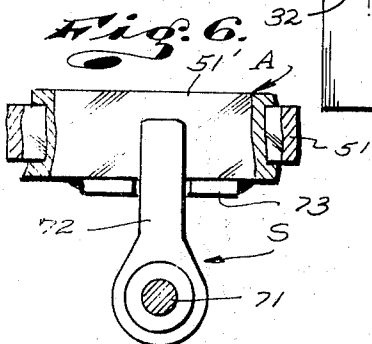
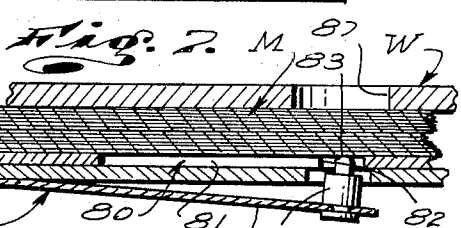
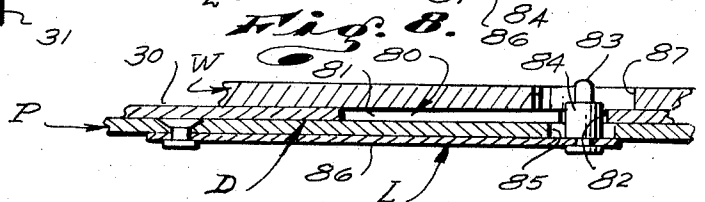
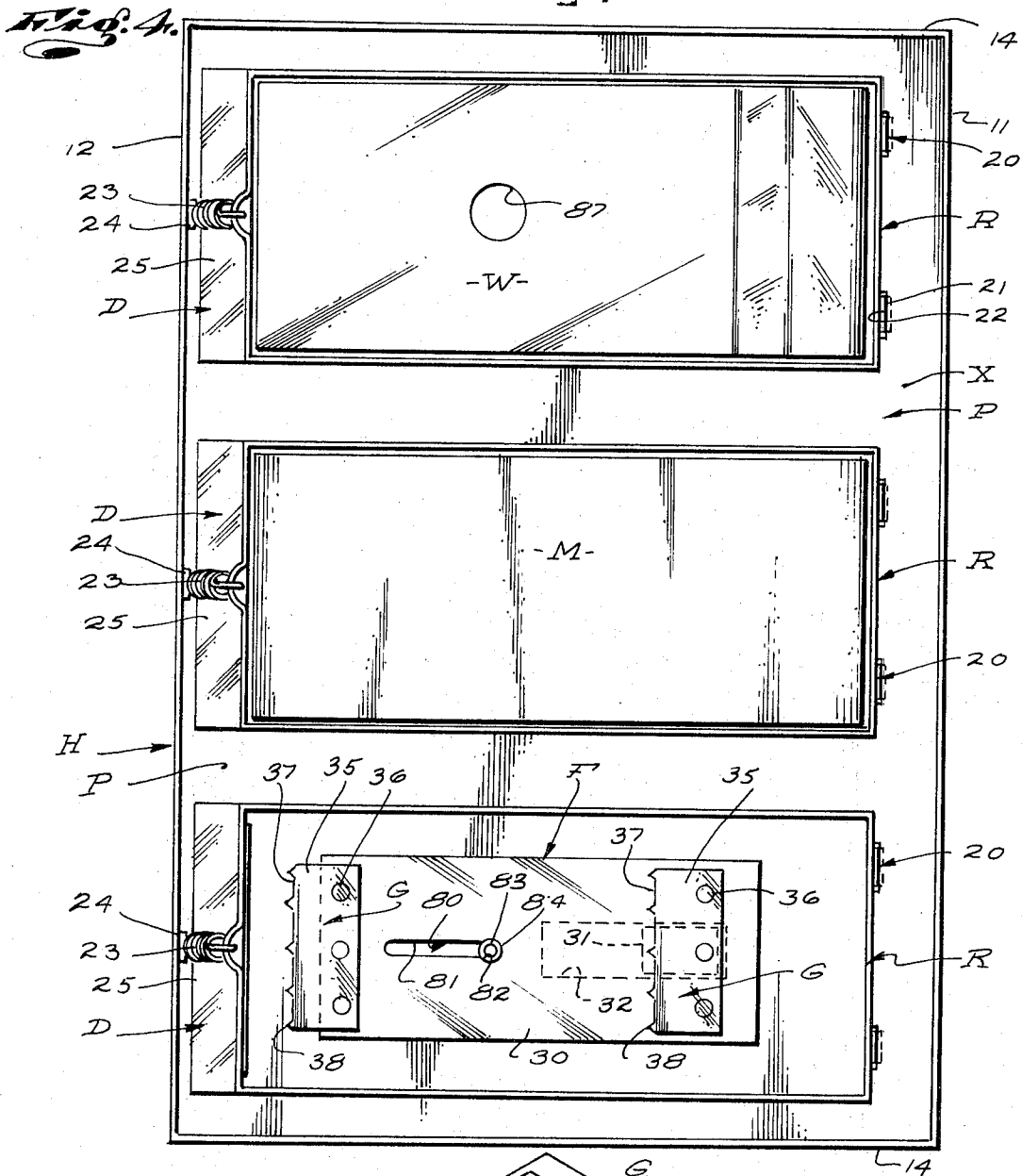
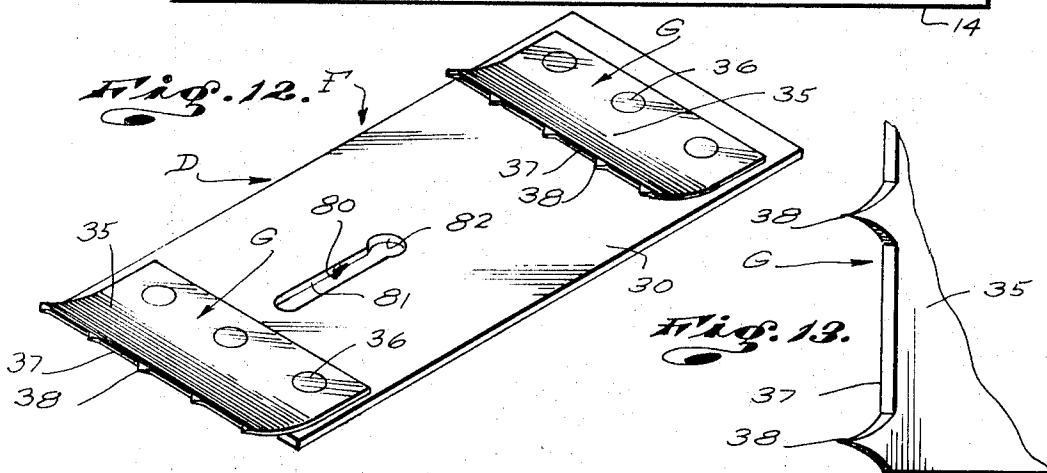


Fig. 11.







MAP VENDING MACHINE

This invention has to do with an improved vending machine and is particularly concerned with a machine for dispensing folded paper road maps.

In the following disclosure, while we will restrict use of the instant machine for the dispensing of road maps, it is to be understood and will be apparent that the instant machine is such that it can be satisfactorily employed to vend and dispense many other flat, stockable, vendable items, such as packaged records, clothing items, such as plastic rain coats, candy and the like.

For many years it has been common practice for oil companies to provide free road maps for their customers. The road maps thus provided are made available and distributed by the retail outlets or service stations of the companies. Such maps cover a limited area and, as a general rule, are limited to one county or some larger and appropriate geographical area where land development has not advanced to any great extent and population density is low.

The general plan or scheme of distribution and dispensing of such maps has been as follows: Each service station maintains a supply of maps of the county or that limited and defined geographical area in which it is situated and maintains a supply of maps of the adjoining or adjacent counties or areas, whereby the customer and traveler can be provided with an appropriate map of the immediate area and a map of the next or adjacent area into which his travels will take him. As a general rule, the ordinary service station need only maintain a supply of three different maps in accordance with the above scheme of distribution to supply the needs of the overwhelming majority of its customers. In these situations where three such maps are not sufficient to meet demands, a supply of six maps is generally more than adequate.

In the past several years, the cost of road maps has increased substantially and the demand for such maps has also increased at a substantial rate. Further, as a result of the tendency of some of the public to indiscriminately and wastefully take readily available free road maps at service stations, many service stations have discontinued providing such maps while others keep a limited supply, under lock and key, for selective distribution to their regular customers.

It has been found that the practice of service stations selling road maps which are considered by the general public to be free is an extremely poor practice and carries much ill will. It is far better practice to simply not have such maps available than to sell them in a hand to hand bargain or exchange.

As a result of the above, there is a great and present need for coin operated road map vending machines, which machines can be located at service stations and thereby make suitable road maps available to the motoring public in a manner wherein service station personnel need not be burdened or directly confronted with the task of distributing, stocking and selling such maps.

The ordinary road maps of the character referred to above and here concerned with is printed on a single sheet of paper and, as a general rule, when opened and laid out, measures approximately 2 feet by 3 feet and when folded, measures about 4 inches by 9 inches. When folded it may be from 25 to 35 layers thick and is such that the exposed surfaces of its outermost layers

are sections or panels on the base sheet upon which advertising and other appropriate data and information, not constituting a part of the map per se, is printed and displayed.

Finally, the ordinary map, when folded, as above described, has a clean, uninterrupted or unbroken lead edge extending across one of its ends (normal to the major dimension or longitudinal axis of the map) and, established by a fold at and between the adjacent ends of the above noted outer exposed surfaces or advertising panels of the map.

Maps of the character referred to above are ordinarily and most satisfactorily packaged, stored and handled for distribution in vertical stacks and are such that they do not lend themselves to being satisfactorily dispensed, one at a time, by the product handling means commonly provided in conventional vending machines. The principal difficulty associated with conveying and dispensing means for products or maps such as here concerned with is the tendency for the paper (layers) to catch, fold, tear and otherwise be caught and mutilated by mechanical devices brought into contact therewith and to foul and jam such devices.

The prior art has provided vending machines which are or could be adjusted and made serviceable to effectively dispense road maps and the like, but as a general rule, such machines are quite complicated and costly to make, service and maintain and require that the products handled and dispensed thereby be individually and carefully deposited in the machines in some special, inconvenient and time consuming manner.

It is an object and feature of the instant invention to provide a machine for vending folded paper road maps and the like which is extremely simple, effective and dependable in operation and a machine which is extremely economical to make, service and maintain.

Another object and feature of the instant invention is to provide a machine of the character referred to which is adapted to receive supplies of stacked maps and which is effective to selectively remove and dispense maps, one at a time, from said stacks of maps.

Yet another object and feature of this invention is to provide a machine of the character referred to having a novel receiving means to hold and releasably retain a stacked supply of maps and related advancing means which serves to releasably engage and advance one map of said stacked supply from engagement with the receiving means and dispense it from the machine.

It is another object of the present invention to provide novel locking means to releasably lock and render the advancing means inoperable when the supply of maps related thereto is exhausted.

Finally, it is an object and feature of the present invention to provide novel drive means for selectively driving and advancing means related to a plurality of separate supply of maps, which drive means is related to a coin release actuator accessible at the exterior of the machine.

The foregoing and other objects and features of the present invention will be apparent and fully understood from the following detailed description of a typical preferred form and carrying out of the invention throughout which description reference is made to the accompanying drawings, in which:

FIG. 1 is an isometric view of a machine embodying the instant invention;

FIG. 2 is a sectional view taken substantially as indicated by line 2—2 on FIG. 1;

FIG. 3 is a view taken as indicated by line 3—3 on FIG. 2;

FIG. 4 is a view taken as indicated by line 4—4 on FIG. 2;

FIG. 5 is an enlarged detailed view taken as indicated by line 5—5 on FIG. 2;

FIG. 6 is an enlarged view taken as indicated by line 6—6 on FIG. 2;

FIG. 7 is an enlarged sectional view taken as indicated by line 7—7 on FIG. 3;

FIG. 8 is a view similar to FIG. 7 showing parts in another position;

FIG. 9 is an enlarged view of a portion of the structure shown in FIG. 2;

FIG. 10 is a view similar to FIG. 9 showing parts in another position;

FIG. 11 is an isometric view of a spring element shown in FIGS. 9 and 10;

FIG. 12 is an enlarged isometric view of a portion of the structure shown in FIG. 4; and

FIG. 13 is an enlarged view of a portion of a spring element in the structure shown in FIG. 12.

The map vending machine that we provide and which is illustrated in the accompanying drawings includes a box-like case or housing H, a plurality of separate map dispensing means D within the cabinet, a drive means A for the dispensing means D and including manually operable selector means S to selectively engage the means A with the means D and a coin release actuator B operatively connected with the means A. The machine further includes locking means L to lock the means D when and as the supply of maps M related thereto is exhausted.

The housing H is a box-like structure with flat top, bottom, front, rear and side walls 10, 11, 12, 13 and 14, respectively. Within the housing H and spaced between the upper and lower limits thereof is a horizontal partition-like plate P defining upper and lower chambers or compartments X and Y.

The top wall 10 is in the nature of a cover hinged to the rear wall 13 as at 15 and releasably locked to the front wall 12 as by means of a suitable key operated lock 16.

The hinged top wall 10 provides for easy and convenient access to the chamber X.

In addition to the foregoing, the housing H is shown provided with a hinged access door 17 under control of a key lock 18, in one end wall 14 to provide access to the lower chamber Y.

The shape and details of construction of the housing H can be varied widely without effecting the novelty and spirit of the instant invention.

The dispensing means D that we provide are arranged in the upper chamber X. Each means D is adapted to receive and hold a stack of maps M and each is operable to dispense its related maps, one at a time, through a related slotlike discharge opening 19 in the front wall 12 of the housing. In the case illustrated, the machine is provided with three dispensing means D.

Each dispensing means D includes an elongate, vertical map receiver or chute R with open, upper and lower ends and corresponding generally, but slightly greater in horizontal cross-section with the maps M to freely receive and accommodate a stack of maps, as clearly illustrated in FIGS. 2 and 4 of the drawings. The lower

open end of the chute R rests on the top of the plate P. The rear edge of the chute is pivoted to the plate as at 20. The pivot means 20 is extremely simple and includes spaced downwardly projecting tabs 21 on the chute and slots 22 in the plate and in which the tabs are freely engaged.

The forward end of the chute R of each means D is normally yieldingly urged and held down by spring means E which means is shown as including a substantially vertical tension spring 23 with its upper end engaged over the upper forward edge of the chute R and its lower end engaged with an anchor hook 24 fixed to the inside of the front wall 12 of the housing H.

The lower forward portion of each chute R is provided with and includes a forwardly and downwardly inclined, transversely extending lip-like portion 25 cooperating with the adjacent portion of the plate R to define a forwardly and downwardly convergent, transversely extending map feeding recess 26 and into which maps at the bottom of the stack of maps are advanced during operation of the device. Arranged within the recess 26 is a downwardly, forwardly curved, transversely extending keeper spring 27 with laterally spaced downwardly and rearwardly turned map edge engaging fingers or tabs 28. The lower edge of the keeper spring is spaced rearward of the front of the recess 26 and forward of the front wall of the chute R, with its lower edge portion and fingers 28 engaged about the forward leading edge of the lowermost map M, as shown in FIGS. 2 and 9 of the drawings.

The keeper spring is adapted to be flexed forwardly and upwardly by the lowermost map M when that map is forcibly urged forwardly whereby the spring disengages that map and returns downwardly and rearwardly to engage the next above map (see FIG. 10 of the drawings) to hold or keep that map and prevent it from being dragged forwardly with the said lowermost map, as a result of friction therebetween.

When the lowermost map M is urged forwardly in the manner set forth above and engages the inclined lip 25 of the chute R (with the biased spring 27 therebetween), the noted map lifts or elevates the front end of the chute, against the resistance of the spring means 23, at which time or during which action the keeper spring 27 disengages the noted map and moves into engagement with said next map.

When the chute R is elevated in the above manner, the lowermost, forwardly moving map, is free to shift forwardly from within the Chute R, through its related discharge opening 19 in the front wall 12 of the housing H, as clearly illustrated in FIG. 10 of the drawings.

It is to be noted that the lowermost map need only be advanced forwardly through the opening 19 of the housing a sufficient distance to allow for convenient manual engagement of the map and so that the purchaser can easily grip and then tow the map completely free from the machine.

The dispensing means D that we provide next includes ejector means F adapted to engage and urge the lowermost map M forwardly in and relative to the chute R in the manner set forth above. The ejector means F for each dispensing means D is shown as including a flat, elongate, horizontal plate-like slide 30 slidably supported on the top surface of the plate P of the housing H and arranged centrally at the bottom of the chute R with its longitudinal axis extending fore and aft.

The slide 30 is provided with an elongate, downwardly projecting drive post 31 on its bottom surface, which post projects through an elongate guide slot 32 in the plate P and terminates in the lower chamber Y of the housing H below the plate P. The slot extends fore and aft, as shown in FIG. 4 of the drawings.

The slide 30 is maintained down in sliding engagement with the plate P and is held in vertical displacement by suitable retaining means. In the case illustrated, the retaining means consists of a pair of angle brackets 33 screw fastened to the drive post 31, below the plate P and having retaining flanges projecting laterally from opposite sides of the post and slidably engaging the bottom surface of the plate P at opposite sides of the slot 32 therein. The post 31, in the case illustrated, is established of a short length of channel stock fixed to the plate P as by welding and one of the brackets 33 is engaged and seated within the channel, as shown in FIG. 5 of the drawings.

The means F next includes map gripping means G on the slide 30 which means is adapted to establish driving engagement between the slide and the lowermost map M upon forward shifting of said slide and to establish free sliding engagement with a map upon rearward shifting of the slide.

The gripping means G includes longitudinally spaced, front and rear, transversely extending, normally forwardly and upwardly turned springs 35 fixed to the top surface of the slide 30 as by flush rivets 36. The springs 35 have straight transversely extending upper forward edges 37 with longitudinally spaced normally forwardly and upwardly projecting teeth 38. The teeth 38 are exceedingly small, fine and sharp and are such that they will, upon forward shifting of the slide 30, bite into the opposing bottom surface of the map M adjacent thereto and establish forward driving engagement between the slide and the map. The teeth are sufficiently small and fine that they will not, under normal circumstances and conditions, pierce through, puncture and/or tear the layer of paper they engage, but rather, simply bite into and engage with the surface of the paper. A sufficient number of teeth are provided to assure the desired and necessary driving engagement between the slide and the map to effect ejection of the map from the means D.

The springs 33 of the gripping means G are very thin and light and are such that they are normally biased to occur in a substantially horizontal plane by the supply of maps which rest upon them and on the slide 30.

Finally, the means D includes an advancing weight W in the form of a metal plate engaged in the chute R on top of the stack of maps M to advance and hold the stack down in engagement with the ejector means F. The weight is in the form of a flat, metal plate and is provided with an upwardly and rearwardly turned front portion to add weight to the front of the plate, which has been found to be desirable and to provide a manually engageable grip to facilitate removal of the weight, as when a fresh supply of maps is to be entered into the chute R from the upper open end thereof.

The drive means A that we provided is related to and between the coin release actuator B and the dispensing means D. The means A is adapted to mechanically couple or link the actuator B with the ejector slide 30 of the means D whereby manual actuating of the actuator B effects forward and then rearward shifting of the

ejector plates 30 and dispensing of maps, as noted above.

The actuator B is a standard coin release actuator and includes, generally, a mounting means 40 fixed in the front wall 12 of the housing H, a carriage 41 and an elongate, axially shiftable actuating bar 42 with a forward end portion 43 projecting forwardly from the means 40 and the housing H and a rear portion 44 rearward of the means 40 at the front wall of the housing. The forward portion of the bar 43 has a manually engageable tab 45 and a coin receiving aperture 46. Suitable coin releasable latching means (not shown) is provided in and between the carriage 41 and the bar 42 and is such that only when a coin is arranged in the aperture 46 can the bar be manually urged axially rearwardly from a normal, locked, forward position.

The actuator B can be one of numerous, commercially available coin release actuator of the general character referred to above and can vary widely in details of construction without affecting the present invention or departing from the spirit thereof.

The actuator B is arranged in the lower portion of the front wall 12 of the housing with its rear portion in the lower compartment Y.

A coin box 46 is arranged in the chamber Y below the actuator B to receive coins advanced therethrough.

The box 46 is accessible through the access opening in the housing normally closed by the door 17.

The means A includes a pair of elongate, laterally extending parallel shafts 50 and 51 in the chamber Y. The shafts are arranged on a horizontal plane below the lower ends of the drive posts 31 of the several means D and above the horizontal plane of the actuator B. The shaft 50 normally occurs forward of the posts 31 and the shaft 51 occurs below said posts when said posts are in their normal rearmost position. The ends of the shafts 50 and 51 are rotatably supported by suitable brackets or bearing supports 52 at the opposite side walls 14 of the housing H.

The shaft 50 has a driving lever arm 53 fixed thereto and depending therefrom, which lever arm establishes driving bearing engagement with the front or forwardly disposed surface of a vertically projecting drive plate 54 fixed to the rear portion of the bar 44 of the actuator B (see FIG. 2 of the drawings). The shaft 50 is next provided with longitudinally spaced substantially upwardly projecting drive lever arms 55, the upper ends of which establish driving bearing engagement on the front or forwardly disposed sides of the drive posts 31.

With the means A thus far described, it will be apparent that when the bar 44 of the actuator B is moved to its forward position, as shown throughout the drawings, the drive plate 54, lever arm 53, shaft 50 and lever arms 55 are effective and operate to urge the drive post 31 and their related ejector means slides 30 rearwardly in the means D and to their normal position.

When the bar 44 is urged rearwardly, the upper ends of the lever arms 55 are free to move forwardly permitting the drive posts 31 to move forwardly, freely.

The shaft 51 of the means A is provided with and carries a driving arm 63 which depends therefrom and establishes driving bearing engagement with the rear or rearwardly disposed surface of the drive plate 54 on the bar 44 of the actuator B. The shaft 51 is next provided with longitudinally spaced substantially upwardly projecting drive arms 65, the upper ends of which are

adapted to establish driving engagement with the rear or rearwardly disposed sides of the drive posts 31.

With the last, above noted portion of the means A, it will be apparent that when the bar 44 of the actuator B is urged and moved rearwardly, the drive plate 54, arm 64, shaft 51 and arms 65 are effective and operate to urge the posts 31 and the slides 30 of the means D forwardly and to thereby eject and dispense the maps.

Incorporated with and forming a part of the means A is the selector means S. The selector means functions and is operable to selectively move the several arms 65 laterally into and out of driving position or alignment with their related posts 31 so that only one map, from one of the means D, is ejected or dispensed each time the actuator B is operated.

The means S is shown as including the shaft 51, a selector shaft or rod 70 at right angle to the shaft 51 and extending from below the shaft 51 through the front wall 12 of the housing H, manually engageable operating knob 71 on the forward end of the rod, a substantially upwardly projecting operating arm 72 on the rear portion of the rod 70 and a rearwardly projecting yoke 73 on the shaft 51 and embracing the upper end of the arm 72.

The shaft 51 is a sectional shaft having a polygonal core and an axially shiftable sleeve 51' with a polygonal bore in and through which the core is slidably engaged and on which the yoke 73, arm 63 and arms 65 are fixed. The arms 65 are spaced longitudinally of the shaft 51 so that only one arm 65 is aligned with one post 31 of one of the means D when the axially shiftable sleeve portion 51' of that shaft is in one of its several, selective, axial positions. In the case illustrated (see FIGS. 1 and 3 of the drawings), the means S is such that the knob 71 is rotatable to three positions, whereby the levers 65 of the means A for each of the three dispensing means D can be selectively moved into operative alignment with the drive posts 31 thereof.

It will be apparent that upon rotation of the rod 70 and pivoting of the arm 72, the yoke 73 and shaft sleeve 51' are effectively shifted axially.

It is to be noted that upon axial shifting of the shaft sleeve 51', the arm 63 is moved axially therewith. Accordingly, the arm 63 is of sufficient axial extent that upon shifting of the shaft sleeve 51' to and from its several positions, it is not moved from operative relationship with the bar 54 carried by the actuated drive plate 44.

The locking means L that we provide is operable to lock and effectively prevent operation of each of the means D when the supply of maps in each of the means D is exhausted.

The means L related to each means D includes a key-hole slot 80 in the slide 30 with its minor, narrow, leg portion or slot portion 81 extending forwardly from its large diameter primary port or opening 82. The means S next includes an elongate, vertical, vertically shiftable lock member with an upper pin portion 83 of minor diameter and a lower base portion 84 of major diameter. The pin portion is greater in vertical extent than the thickness of the slide 30 and is less in diameter than the lateral extent of the leg portion or slot 81 of the key-hole slot. The base portion is greater in diameter than the lateral extent of the slot and is greater in vertical extent than the combined thickness of the plate P and slide 30. The lock member projects upwardly through an opening 85 in plate P and is carried by a spring 86

fixed to the bottom of the plate P. The spring 86 normally yieldingly urges the member upwardly.

The pin 83 normally projects through the slot 80 and engages the bottom of the lowermost map M, which map holds the member down against the resistance of the spring 86. The slide 39 is, under such conditions, free to slide axially. When the last map is dispensed, the stop member is free to move upwardly, whereupon the base portion 84 engages in the opening 82 thereby effectively locking the slide and preventing axial shifting thereof.

The weight W of the means D is provided with a large port 87 in alignment with the lock member to freely accommodate that member when the supply of maps is exhausted and so that the weight will not interfere with operation of the locking means.

With the locking means L set forth above, it will be apparent that when the supply of maps is exhausted from a means D, the machine, when set to dispense a map from that means, is effectively locked and such that the purchaser will not be unjustly deprived of his money, should he seek to operate the machine.

Having described only one typical preferred form and embodiment of our invention, we do not wish to be limited to the details herein set forth, but wish to reserve to ourselves any modifications and/or variations which may appear to those skilled in the art to which the instant invention pertains and which fall within the scope of the following claims:

Having described our invention, we claim:

1. A machine for vending folded paper items comprising, an elongate vertical box-like housing with front, rear and side walls, a top and a bottom, a horizontal plate in the housing defining upper and lower compartments, an elongate vertical open ended chute with front, rear and side walls, slidably receiving a vertical stack of flat paper items and arranged in the housing above the plate, hinge means pivotally connecting the lower end of the rear wall to the plate, spring means normally yieldingly urging the front of the chute downwardly into engagement with the plate, said front wall of the chute having a downwardly and forwardly inclined lower lip portion cooperating with the plate to define a forwardly convergent recess opening rearwardly into the chute, a resilient keeper carried by the front wall of the chute and depending into said recess and releasably engaging a forward edge of the lowermost paper item, an item discharge slot in the front wall of the housing spaced forward of the lower end of the chute, an ejector slide slidably engaged on the top of the plate at the bottom of the chute, gripping means carried by the slide to establish gripping engagement with the bottom surface of the lowermost item upon forward shifting of the slide only, a drive post on the slide projecting through an opening in the plate, and drive means below the plate and engaging the post to shift selectively and intermittently the slide forwardly and rearwardly.

2. A machine as set forth in claim 1 wherein said drive means includes a manually reciprocal coin released actuator at the front wall of the housing, a pivoted drive lever arm engaged with the rear side of the post, a pivoted return lever arm engaged with the front side of the post and driven lever arms related to the drive and return lever arms and engaged by the actuator.

3. A machine as set forth in claim 1 wherein said gripping means includes longitudinally spaced normally forwardly and upwardly extending resilient gripper springs fixed to the slide and defining upper, forward transversely extending edges and longitudinally spaced normally forwardly and upwardly projecting, forwardly convergent teeth on said edges.

4. A machine as set forth in claim 2 wherein said gripping means includes longitudinally spaced normally forwardly and upwardly extending resilient gripper springs fixed to the slide and defining upper, forward transversely extending edges and longitudinally spaced normally forwardly and upwardly projecting, forwardly convergent teeth on said edges.

5. A machine as set forth in claim 1 which further includes lock means to lock the slide in fixed position when the supply of items is exhausted, said locking means including, a vertical lock post receiving opening in the slide and an elongate slot less in lateral extent than the diameter of the opening extending forwardly in the slide from said opening, a port in the plate below the opening when the slide is in its rear position, a vertical lock post engageable through the port and into said opening, a spring normally yieldingly urging the post upwardly into and through said port and opening, and a central pin on and projecting upwardly from the post and through the port and opening and engaged by the lowermost item whereby the post is normally yieldingly held down and out of engagement in the opening, said slot in the slide freely accommodating the pin when the slide is moved.

6. A machine as set forth in claim 5 wherein said drive means includes a manually reciprocal coin released actuator at the front wall of the housing, a pivoted drive lever arm engaged with the rear side of the post, a pivoted return lever arm engaged with the front side of the post and driven lever arms related to the drive and return lever arms and engaged by the actuator.

7. A machine as set forth in claim 5 wherein said gripping means includes longitudinally spaced normally forwardly and upwardly extending resilient gripper springs fixed to the slide and defining upper, forward transversely extending edges and longitudinally spaced normally forwardly and upwardly projecting, forwardly convergent teeth on said edges.

8. A machine as set forth in claim 6 wherein said gripping means includes longitudinally spaced normally forwardly and upwardly extending resilient gripper

springs fixed to the slide and defining upper, forward transversely extending edges and longitudinally spaced normally forwardly and upwardly projecting, forwardly convergent teeth on said edges.

9. A machine as set forth in claim 1 including a plurality of like chutes and slides in lateral spaced relationship in the housing and on the plate, said drive means includes a manually reciprocal coin released actuator at the front end of the housing, a first transversely extending shaft rotatably and axially shiftably supported below the plate, laterally spaced drive lever arms on the first shaft and shiftably laterally into and out of engagement with the rear sides of related drive post, a transversely extending second shaft below the plate, laterally spaced return lever arms and the second shaft and engaging the front sides of related drive posts, driven lever arms on the shafts and engaging the actuator and selector means to shift the first shaft axially to engage selectively the drive lever arms with related drive posts and including an elongate rod rotatably supported in the housing, a manually engageable selector knob on the rod accessible at the exterior of the housing, a selector arm projecting radially from the rod and a yoke on the first shaft and embracing the selector arm.

10. A machine as set forth in claim 9 wherein said gripping means of each slide includes longitudinally spaced normally forwardly and upwardly extending resilient gripper springs fixed to the slide and defining upper, forward transversely extending edges and longitudinally spaced normally forwardly and upwardly projecting, forwardly convergent teeth on said edges.

11. A machine as set forth in claim 10 which further includes lock means related to each slide to lock the slide in fixed position when the supply of items is exhausted, said locking means including, a vertical lock post receiving opening in the slide and an elongate slot less in lateral extent than the diameter of the opening extending forwardly in the slide from said opening, a port in the plate below the opening when the slide is in its rear position, a vertical lock post engageable through the port and into said opening, a spring normally yieldingly urging the post upwardly into and through said port and opening, and a central pin on and projecting upwardly from the post and through the port and opening and engaged by the lowermost item whereby the post is normally yieldingly held down and out of engagement in the opening, said slot in the slide freely accommodating the pin when the slide is moved.

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