

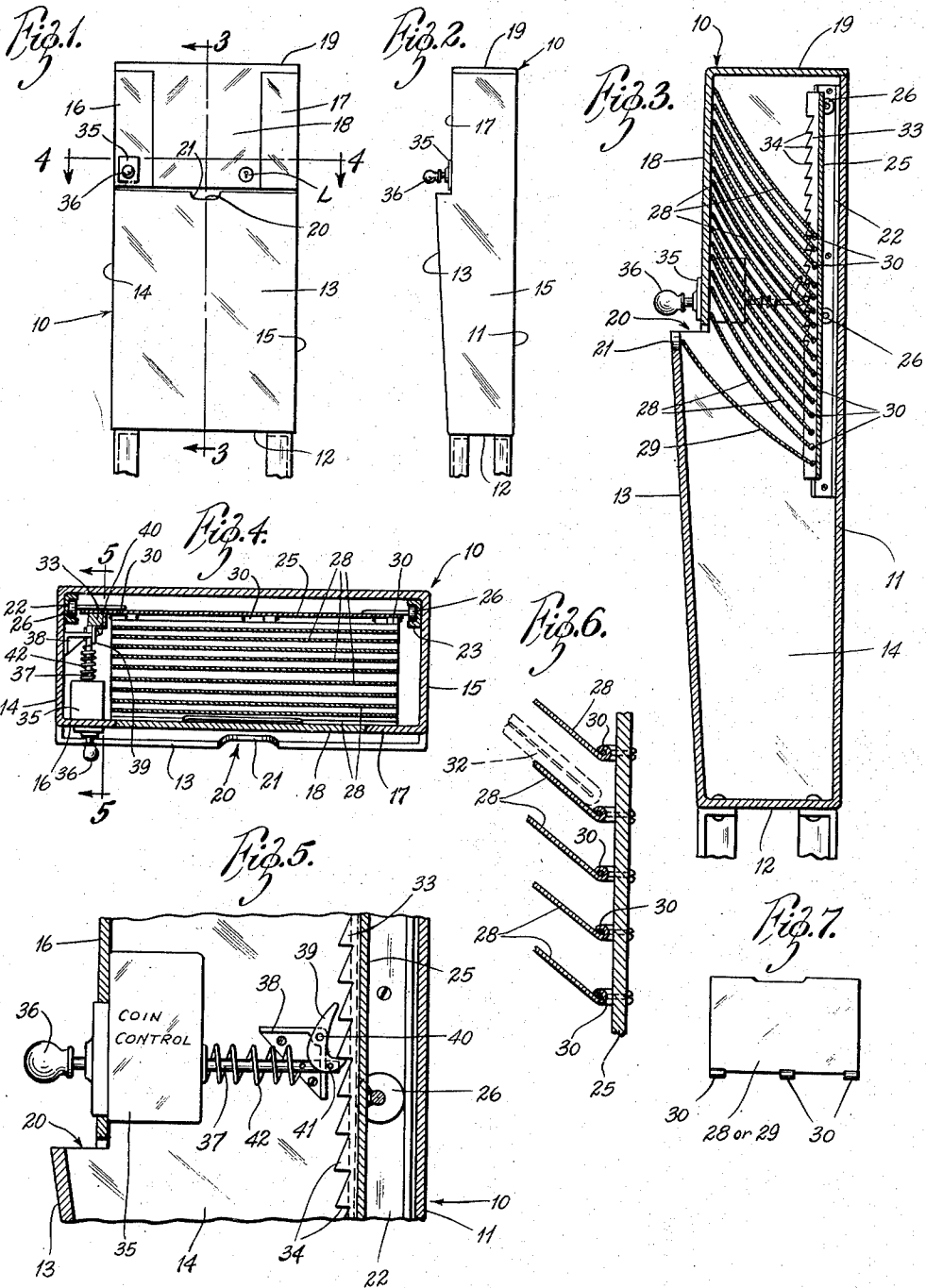
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DISPENSER FOR PAPERS AND THE LIKE

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## DISPENSER FOR PAPERS AND THE LIKE

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2 Claims. (Cl. 312-94)

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The present invention relates to a dispenser for papers, and the like. It is particularly adapted to dispensing newspapers or magazines, although it will be understood that it is capable of more general use.

It is an object of the invention to provide a dispenser that permits the delivery of a single item, such as a newspaper or a magazine, at a time, and which will prevent the delivery of more than one and will prevent access to additional items when one is delivered.

A further object of the invention is to provide a convenient filling or charging means by which a plurality of items to be dispensed may be inserted in the cabinet for dispensing thereby one at a time.

A further object is to provide a dispenser that receives items in a close, compact arrangement between separators, and automatically parts the separators to render the items between them accessible, one by one.

A particular object is to provide a charging means that may be conveniently charged at some source of distribution of the items, and then conveyed and supplied to the dispenser as a unit with the items to be dispensed therein.

Other objects and advantages will appear from the description to follow.

In the drawings:

Fig. 1 is a front view of the dispenser;

Fig. 2 is a side view;

Fig. 3 is a vertical section on the line 3-3 of Fig. 1;

Fig. 4 is a horizontal section on the line 4-4 of Fig. 1;

Fig. 5 is an enlarged vertical section, taken on the line 5-5 of Fig. 4, and partly broken away;

Fig. 6 is an enlarged sectional view of the attachment of the separator devices; and

Fig. 7 is a plan view of one of the separator devices.

As will appear from the description to follow, certain of the proportions are exaggerated for clarity of description.

The dispenser includes a casing, generally designated at 10. The casing may be made of any suitable material. It is here shown as having a back wall 11, a bottom wall 12, and a sloping lower front wall 13 that terminates at a substantial distance below the upper part of the dispenser. It has side walls 14 and 15, these side walls having sloping fronts at their lower parts, so that they interfit with the lower front panel 13, and having their upper front edges con-

tinued around to form portions 16 and 17 of the upper front wall.

Above the sloping part of the side and front panels, there is a removable panel 18 that fits down the front between the panels 16 and 17, and has a continuation forming a top panel 19. This panel is designed to be locked into place, as by a lock L, and held by any suitable means to form a closure with the rest of the casing. It will be seen that the upper front portion formed by the panels 16, 17 and 18 has a lower edge providing the upper edge of an outlet or discharge opening 20. The upper edge of the panel 13 forms the lower edge of the opening 20, and has a finger groove 21. The size of the slot 20 and of the finger groove is slightly exaggerated here for clarity of drawings.

The discharge opening 20 is at a location dividing the casing into a supply section that, generally speaking, is above the opening, and a receiving section in the bottom. The edge wall of the panel is preferably forward relatively to the edge wall forming the top of the opening 20. Obviously, a weather shield of proper kind may be disposed above the opening if desired.

The side walls support two vertical rails 22 and 23 that are in the form of channel sections as shown in Fig. 4. These rails preferably extend from the top to the bottom of the casing or container 10. These rails receive the item cartridge or holder that has a back plate or main support 25 upon which four rollers 26 are mounted to track within the rails 22 and 23 and guide the plate 25 vertically within the container. The plate 25 has a plurality of separator sheets or plates 28 thereon, the bottom one being designated at 29 to aid in the description. These separator members are of the shape shown in Fig. 7 with hinge ears 30 on their back edges, so that they may be swiveled onto the plate 25. They are preferably made of aluminum or synthetic board. As shown in Fig. 3, the separators 28 are of such a size that they cannot swing beyond an angle less than 90° from the plane of the plate 25, because of engagement with the inner surface of the upper front wall, which constitutes a limiting means to maintain them in such relationship. The plates or separators 28 are separated by adequate distance for the insertion between them of a magazine or newspaper, as indicated in dotted lines in Fig. 6 at 32.

The plate 25 has a ratchet bar 33 attached vertically to it along one edge. This bar has a plurality of teeth 34 that have the same size as the distance between adjacent separators 28.

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The casing supports a ratchet release which preferably has a coin control lock 35 of conventional type, and an operating handle 36 that may be moved when the coin release is actuated. The handle 36 is connected to a rod 37 that reciprocates in a bracket 38 mounted on the side wall 14. A ratchet dog 39 of the escapement type is likewise pivoted at 40 to the bracket 38 and pivoted at 41 to the operating rod 37. A coil spring 42 normally urges the rod 37 to the back of the container.

#### Operation

The cartridge comprising the plate 25 and attached parts is separated from the casing by the removal of the cover 18. It is expected that there will be a plurality of such cartridges so that they may be loaded all at one time at some central station. In fact, they may be loaded from the presses, if desired.

In loading the cartridge, one item to be dispensed is disposed between each two adjacent separators 28. A plurality of such items may be so located if it is desired to dispense more than one at a time. Ordinarily, the size of the spacers will be approximately that of newspapers. These spacers are made of stiff material.

The loaded cartridges are then transported to the various dispensing containers. The cover 18 of a casing is removed, and the old empty cartridge is withdrawn by sliding it upwardly on the rails. In withdrawing former separators, the opening of the vertical panel 18 will enable the operator to hold the empty separators back so that they do not hang up in being removed.

When an old cartridge is thus withdrawn, the new cartridge may be inserted in its place. In inserting it, the separators are held upwardly, until they engage the front edge panels 16 and 17, and cannot fall down and permit the escape of the items to be dispensed. When the rack engages the ratchet dog, the cartridge will be properly positioned. The cover 18 is then inserted in place and locked.

When the cartridge is initially placed in position, the ratchet bar will be in position so that its lowermost tooth hooks over the lower prong of the ratchet dog 39. It will be held there as this dog is immovable because the spring 42 is forcing it counterclockwise in Figs. 3 and 6. In this position, the lowermost separator 29 will be in the position of the next to bottom separator shown in Fig. 3, and there will be no separator below the opening 20.

When it is desired to dispense one item, a coin is deposited into the coin control 35 releasing the handle 36 so that it may be pulled outwardly. When it is pulled outwardly, it withdraws the lower end of the dog 39 from the notch, whereupon gravity causes the cartridge to descend. Pulling out the lower end of the dog forces the upper prong of the dog 39 so that it engages a descending tooth and limits the downward movement to the space of one single tooth. Upon subsequent release of the knob, the cartridge will settle downwardly with the lower end of the dog engaging the tooth above the bottom one.

When the cartridge is thus caused to descend one notch, the lowermost spacer or separator 29 will fall off of the lower edge of the front panel, so that it engages on or just below the upper edge of the wall 13, as is indicated in Fig. 3, this edge representing a stop means for the separator. This action swings the lower separator with respect to the next upper one, opening the space between them, and makes it possible to insert

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the fingers through the opening 21 and withdraw the newspaper or other item being dispensed.

It will be impossible to get additional items out of the machine because the separator 28 is too stiff to be bent and renders the item above it inaccessible. Also, preferably, the opening 20 is barely large enough for the withdrawal of the magazine or newspaper, and the finger opening 21 is only large enough for the insertion of fingers. It is particularly desirable that these spaces be not large enough to permit an arm or even hand to be inserted into the casing.

As the several items are successively dispensed, the separators will drop down into the lower compartment. When the machine is completely exhausted of items, all of the separators will be in the lower compartment. From this, they may be conveniently withdrawn upon the removal of the cover 16.

It will be seen that a dispenser has been provided which accomplishes the objectives set forth at the outset of this specification and in the description thereof. It particularly provides a dispenser having a cartridge that is compact for transportation, when loaded, and which automatically opens its sections successively for dispensing the items. It operates preferably through the medium of gravity, with a compounded descending action, but it will be understood that force means may be used in place or in aid of gravity, at the sacrifice of simplicity and convenience.

#### What is claimed is:

1. In a dispenser for papers and flat items, a casing having a supply section with a front wall terminating at the near edge of a discharge opening, a holder for items to be dispensed, said holder having a support spaced from said front wall, and a plurality of plate-like separators swingably attached to the support in a closely arranged series to provide a plurality of flat interspaces to receive the items, the separators extending across to the front wall and having a dimension greater than the distance from the support to said wall, whereby they are confined thereby, the holder having means to prevent escape of the items out its back, means supporting the support for movement of the separators successively along said wall and across said opening, the casing providing an opposite edge for the opening against which each separator may swing and separate its forward edge from that of the separator next above to render its item accessible through the opening, said opposite edge of the opening being displaced forwardly from the support a greater distance than the near edge of the opening.

2. In a dispenser of the kind described, a casing, a holder for items to be dispensed, the holder comprising a vertically movable means disposed in spaced relation to a wall of the casing, a plurality of plate-like separators hingedly mounted adjacent their back edges on the vertically movable means, to provide interspaces for the reception of items to be dispensed, the holder having means to limit movement of items in said spaces backwardly out of the holder, means between the holder and the casing to guide the holder for vertical movement in the casing, means to move the holder downwardly in steps equal to the distance between successive separators, means in the casing to form a support for the forward parts of the separators and to hold them in predetermined acute angular relation to the vertical with their forward parts above their

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back edges, an opening for withdrawal of items from the casing, said support for the forward parts of the separators terminating adjacent the opening so that the forward part of each separator may swing down at the opening for dispensing its item, the opening comprising a slot in the casing wall with the lower edge forwardly of the upper edge, the slot being too narrow to receive a hand seeking to obtain an item in an interspace above the slot.

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