May 16, 1961 M. C. WESTPHAL 2,984,326

COIN-OPERATED RACK FOR NEWSPAPERS OR THE LIKE

Filed Feb. 4, 1958 3 Sheets-Sheet 1

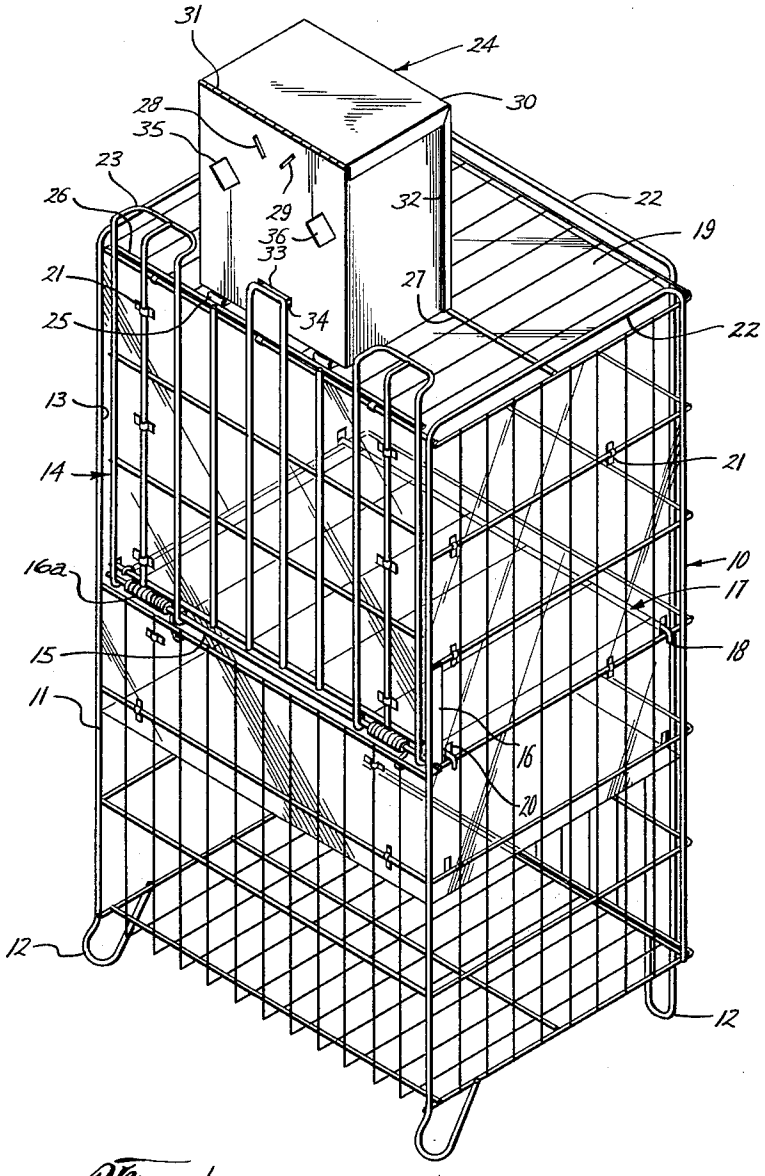

Fig. 1

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Filed Feb. 4, 1958 3 Sheets-Sheet 2

Fig. 2

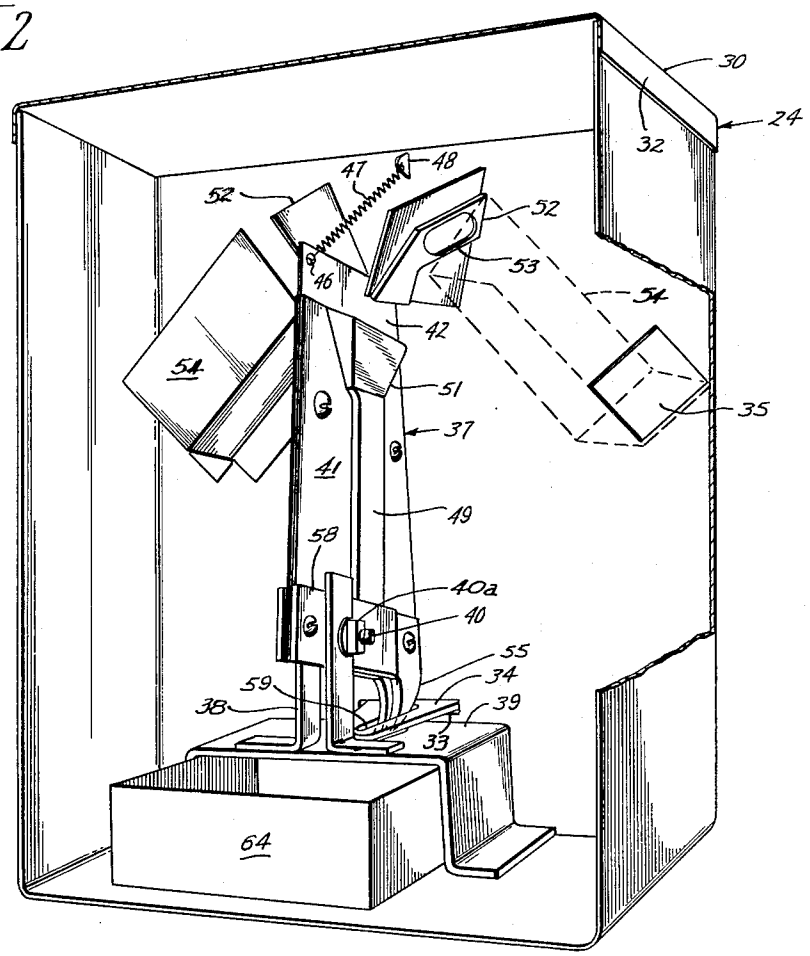
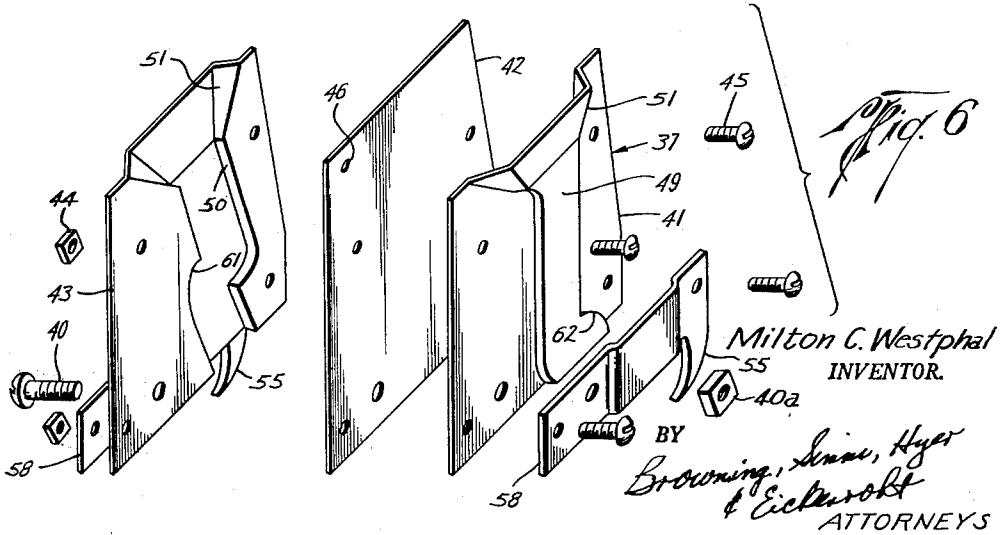


Fig. 6



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COIN-OPERATED RACK FOR NEWSPAPERS OR THE LIKE

Filed Feb. 4, 1958 3 Sheets-Sheet 3

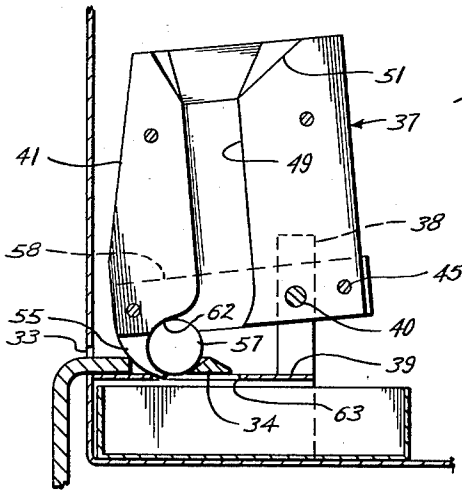

Fig. 3

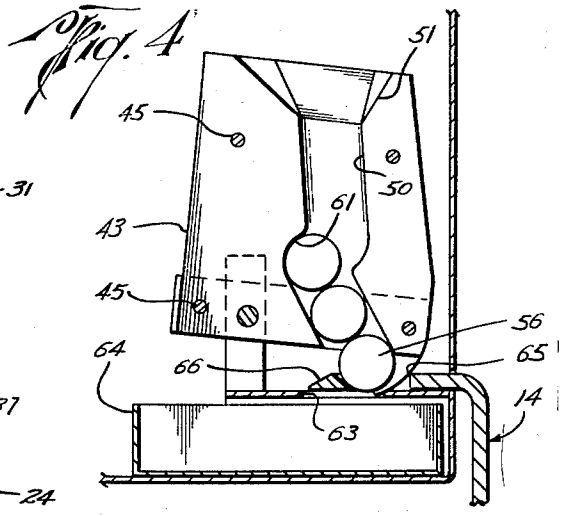

Fig. 4

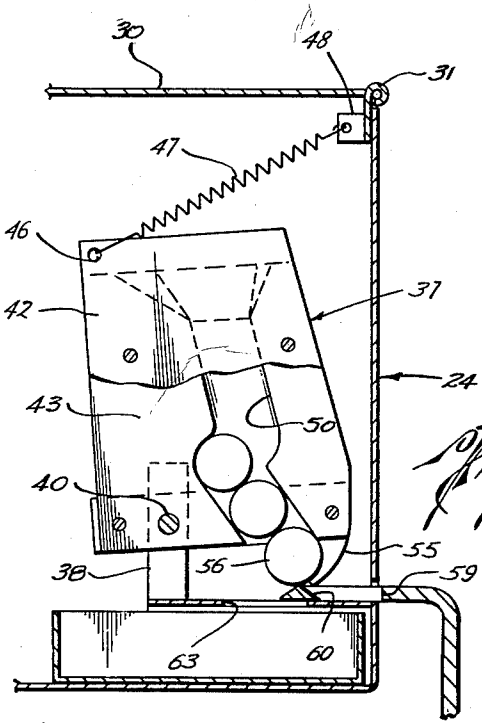

Fig. 5

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COIN-OPERATED RACK FOR NEWSPAPERS OR THE LIKE

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Filed Feb. 4, 1958, Ser. No. 713,130

10 Claims. (Cl. 194—59)

This invention relates broadly to coin-operated racks for newspapers or the like. In one of its aspects, it relates to improvements in that type of rack in which the deposit of coins into a coin box on a cage for containing the newspaper is adapted to release a gate on the cage for swinging into a position permitting access to the newspapers. In another of its aspects, it relates to an improved coin holder for use in the coin box of such a rack.

In a rack of this general type which is presently available to the public, the gate is hingedly mounted on the cage for swinging upwardly into an open position and downwardly into a closed position. The coin box includes a portion on the top of the cage having slots into which the coins are deposited, and another portion at the bottom of the cage having a part cooperable with a part on the lower end of the gate for releasably locking the gate in closed position. Not only does this construction require that the purchaser reach beneath the gate to obtain a newspaper or the like, while at the same time holding the gate up, but it also necessitates a relatively large coin box.

Also, in this rack, the articles are stacked vertically in side-by-side relation within the cage so that the purchaser can see the nature of the articles from only one side of the cage. Still further, the locking parts on the gate and in the coin box are subject to frequent breakage and disrepair as well as being difficult to replace.

An object of this invention is to provide a rack of this general type which overcomes each of the foregoing shortcomings.

Another object is to provide such a rack in which the newspapers or the like are more readily accessible.

Still another object is to provide such a rack in which the newspapers or the like are more easily examined from outside the cage.

A further object is to provide such a rack in which the coin box is relatively small and, more particularly, in which the entire box is disposed on the top of the cage.

A still further object is to provide a rack of this general type in which the locking parts in the coin box and on the gate are easier to replace and less subject to breakage and disrepair than those of the rack previously described.

Yet another object is to provide a coin holder for a coin box which is quickly and easily converted for use with different combinations of coins.

These and other objects are accomplished, in accordance with the present invention, by means of a coin-operated rack comprising an upright cage having a window therein to permit access to newspapers stacked therein, and a gate hingedly mounted on the cage for swinging upwardly to a position closing the window and downwardly to a position opening the window. Thus, the purchaser does not have to reach beneath the gate while obtaining a newspaper or the like. Spring means may be provided for automatically returning the gate to closed position when it is released by the purchaser. This arrangement also enables the entire coin box, including both the coin slot therein and the locking part thereof cooperable with the locking part on the gate, to be disposed on the top of the cage.

The cage includes a shelf on which the newspapers or the like may be stacked one above the other, and the gate and sides and top of the cage are substantially transparent, such that the purchaser is provided with a clear view of the newspapers from practically any angle. Preferably, means are provided for locating the shelf at a plurality of substantially horizontal positions so as to accommodate a desired number of papers.

As in the case of the aforementioned rack, the locking part in the coin box comprises a hook on a coin holder having a coin passageway therein to receive the coins deposited into the coin slot; and the locking part on the gate comprises a catch on a tongue receivable within a slot in the coin box when the gate is closed. In accordance with the present invention, however, the coin holder is mounted within the coin box for swinging between a first position in which the hook is disposed for locking within the catch to prevent withdrawal of the tongue prior to the deposit of a predetermined number and denomination of coins therein and, upon the deposit of said coins and swinging of the gate toward open position, a second position in which the hook is removed from locking position with respect to the catch to permit such withdrawal of the tongue. More particularly, the passageway, hook and catch are formed to support a coin within the passageway in fixed bearing relation between the hook and catch, in the first position of the coin holder and when the predetermined number and denomination of coins are received within the passageway, so that the catch in the tongue will bear against the coin to swing the coin holder toward its second position in moving over the coin and past the hook.

The passageway in the coin holder is bent along an intermediate portion thereof to provide a bearing surface facing the hook and spaced therefrom a distance to closely receive the predetermined number and denomination of coins. This, of course, holds the coin engaged by the hook in the aforementioned fixed bearing relationship between the hook and catch on the gate tongue.

The novel coin holder of the present invention comprises a pair of thin plates releasably connected together in face-to-face relation, with the face of one plate being flat and the other plate having a coin passageway formed in its face adjacent the flat face and opening onto one edge thereof. A hook is provided on the other plate adjacent its edge for engaging about a portion of the periphery of a coin in its passageway. A number of plates having different passageways therein for accommodating different combinations of coins may be provided for interchangeable connection with the one flat plate. Also, the center plate may be flat on both faces such that a third plate may be releasably connected to the face thereof opposite the other plate and provided with a similar passageway therein. In this case, the hook is provided on both plates adjacent the edges thereof for engaging about a portion of the periphery of a coin in either of the passageways. A coin holder so formed may be mounted within the coin box in a manner to receive coins from one of two different coin slots.

In the drawings, wherein like reference characters are used throughout to designate like parts:

Fig. 1 is a perspective view of the front and one side of a rack constructed in accordance with the present invention;

Fig. 2 is a perspective view of the coin box of the rack of Fig. 1 from the back and opposite side thereof, and with said back of the coin box removed and the side thereof broken away in part;

Fig. 3 is a sectional view of the coin holder and gate tongue taken along one side of the center plate and looking toward the inner side of an outer plate of the coin holder, and with a coin received within the passageway of said outer plate in position to permit release of the tongue;

Fig. 4 is also a sectional view of the coin holder and gate tongue, but taken along the other side of the center plate and looking toward the inner side of the other outer plate, and with three coins received within the passageway thereof in position to permit withdrawal of the tongue of the gate;

Fig. 5 is still another sectional view of the coin holder and gate tongue, again looking toward the other outer plate but taken along the side of the center plate adjacent the outer plate shown in Fig. 3 and with said center plate being broken away in part, and with the tongue in the process of being withdrawn from the tongue slot in the coin box; and

Fig. 6 is an exploded view of the coin holder.

Turning now to the above-described drawings, the rack shown in Fig. 1 comprises a cage 10 made of wires 11 spaced apart a distance sufficient to facilitate viewing the interior thereof. The vertical wires at the corners of the cage are bent at their lower ends 12 to permit the cage to be mounted in an upright position, as shown. The wires are discontinued at the upper portion of the front of the cage to provide a window 13 therein. A gate 14, also constructed of spaced apart wires, is hingedly connected to the cage for swinging upwardly to close the window, as shown in Fig. 1, and downwardly to a position opening the window 13, which latter position permits access to the interior of the cage and the newspapers or the like stacked therein.

The hinge for the gate is provided by loops on the lower ends of vertical wires on the gate which are pivotally received about a lateral wire 15 on the cage at the lower edge of the window 13. The opposite ends of wire 15 are held within brackets 16 on opposite sides of the cage, and springs 16*a* surround the wire 15 for acting between the cage and gate to urge the latter toward closed position.

The cage also includes a shelf 17 upon which the newspapers may be stacked one above the other. As shown in Fig. 1, the shelf also comprises a plurality of spaced apart wires, the opposite ends 18 of the outermost lateral wires thereof being bent to hook over laterally extended wires on the opposite ends of the cage. It will be obvious that this construction enables the shelf to be located at any one of several horizontal positions in which the wire ends 18 may be hooked over other laterally extended wires on opposite ends of the cage.

The cage also includes a transparent plastic shield 19 which, as indicated in Fig. 1, covers the top and at least that portion of the front, back and opposite sides of the cage, as well as the gate 14, extending below the shelf 17. Obviously, such a shield protects the newspapers against wind and rain. Although it may, if desired, be colored to filter out certain of the sun's rays, it is at least substantially transparent such that the view of the purchaser is in no way interrupted. The opposite sides of the shield are provided with openings 20 to permit the bent ends 18 of the wires of the shelf 17 to be extended therethrough. The shield is secured to the various parts of the cage by means of clasps 21 of any suitable construction.

The uppermost lateral wires 22 of the sides and back of the cage extend above the top thereof to provide a handle for moving or lifting the cage. The uppermost lateral wire 23 of the gate 14 is similarly extended for the same purpose, as well as to facilitate gripping the gate as it is swung downwardly to open position.

The coin box 24 is fixedly mounted on the top and at the front of the cage by means of runners 25 on the lower sides thereof fixedly secured to the laterally extending wires 26 and 27 on the top of the cage. As can be seen from Fig. 1, the coin box is provided with coin slots 28 and 29 in the front thereof, and includes an inverted L-shaped cover 30 hingedly connected at 31 to the top edge of the front of the box for uncovering the top and rear of the box as it is swung about the hinge. Obviously, this cover may be locked to the remainder of the box by any suitable key-operated mechanism (not shown). The top and side edges of the cover are preferably provided with flanges 32 fittable over the adjacent edges of the sides of the remainder of the box to prevent the entrance of rain into the interior of the box.

The front of the coin box is also provided with a slot 33 therein towards its lower edge for receiving a tongue 34 on the upper edge of the gate 14. The front of the coin box is still further provided with coin return slots 35 and 36, the purpose of which will be apparent from the description to follow.

Turning now to Fig. 2, a coin holder 37 is mounted within the box to receive coins deposited into either of the coin slots 28 and 29. More particularly, a standard 38 is mounted on the top of a housing 39 on the bottom of the coin holder, and the lower edge of the coin holder is received between upstanding arms on the standard. A bolt 40 on the coin holder extends through openings in the arms of the standard to permit the coin holder to be swung from a first tongue locking position, as shown in Fig. 4, to a second tongue releasing position, as shown in Fig. 5.

The three thin plates 41, 42, and 43 of the coin holder 37 are releasably connected together by any suitable means, such as the nuts and bolts 44 and 45, respectively. The upper edge of the center plate 42 extends above the upper edges of the side plates 41 and 43, and is provided with an opening 46 therethrough to receive one end of a coil spring 47. This spring is releasably connected at its opposite end within an opening in a bracket 48 secured to the inside of the front of the coin holder and so arranged as to urge the coin holder to the first position of Fig. 4.

As shown in Fig. 2, one end of the bolt 40 is threaded to receive a nut 40*a*, such that the pin is readily removable from the opening through the coin holder. Also, of course, the spring 47 is releasable at either end so as to release the upper edge of the coin holder from attachment to the coin box. Thus, the coin holder is easily and quickly removable from and disposable in mounted position within the coin box. Furthermore, the spring 47 is not only located out of the way of the moving parts within the coin box, but is also of a common type which is inexpensive to replace.

Passageways 49 and 50 formed in the outer plates 41 and 43, respectively, connect at their lower ends with the lower edges thereof and at their upper ends with pockets 51 flared outwardly and upwardly with respect to the center plate 42. The coin holder is mounted intermediate the coin slots 28 and 29 so that coins deposited therein and directed through passageways formed in angularly disposed deflectors 52 are received within the pockets above passageways 50 and 49, respectively. As shown, the deflectors, which are secured to the front of the coin box in any suitable fashion, are provided with slots 53 in the sides of the passageways thereof of such width and tilted at such an angle as to discharge coins of a size smaller than desired into guideways 54 (one of which is shown in broken lines). As shown, these guideways are also secured to the front of the coin box in any suitable fashion and extend downwardly from beneath the slots 53 to convey the rejected coins to a location adjacent coin return slots 35 and 36 in the front of the coin box. Obviously, other coin-reject apparatus may be used, if desired.

Turning now particularly to Figs. 3 to 5, the coin holder 37 is provided with a hook 55 at its lower edge to

engage about a portion of the periphery of the lowermost coin received within either the passageway **50** or the passageway **49**, such as the coins **56** and **57**, respectively. More particularly, and as best shown in Fig. 6, the hook **55** is composed of hooked parts on each of straps **58** connected along the lower outer edges of plates **41** and **43** by nuts and bolts **44** and **45**.

The portion of the tongue **34** of the gate received within the coin box is provided with a slot **59** therein to form a catch **60** on its inner end with which the hook **55** is adapted to lock in the first position of the coin holder (see Figs. 3 and 4) to prevent withdrawal of the tongue and thus opening the gate. As shown, the catch engages another portion of the periphery of the coins **56** and **57** so that they are supported between the hook and catch. More particularly, the bearing surface **61** provided by the bend in the passageway **50** of the plate **43** as well as the bearing surface **62** provided by the bend in the passageway **49** of the plate **41** are so spaced from the hook **55** as to closely receive a predetermined number and denomination of coins therebetween. Thus, for example, the bearing surface **62** is so spaced from the hook **55** as to closely receive a single coin **57**, while the bearing surface **61** is spaced therefrom to closely receive three coins. In either case, however, the close fit of the coins between the bearing surfaces and hook maintains the lowermost coin in fixed bearing relation between the catch **60** and the hook **55** such that the hook **55** is rendered ineffective to engage with the catch **60**. As a consequence, swinging of the gate **14** toward its open position will cause catch **60** to bear against the lowermost coin and thereby swing the coin holder into the second position of Fig. 5, such that the hook **55** is removed from the slot to permit the catch to be moved therepast and the gate tongue to be withdrawn from the slot **33**.

The hook and each of the passageways are so arranged as to release the coins received within the passageway when the catch **60** moves past the lowermost coin, as shown in Fig. 5, while withdrawing the tongue from the slot. The housing **39** is also provided with a slot **63** therein beneath the lower ends of the passageways **49** and **50** so that the released coins will fall therethrough into a drawer **64** slidably received within the housing **39**. Obviously, upon swinging of the cover **30** of the coin box upwardly to a position opening the back of the box, as illustrated in Fig. 2, the drawer **64** may be removed for emptying the drawer and then replaced within the housing **39** beneath the slot **63**.

As shown in each of Figs. 3 and 4, the back side of the hook **55** is engageable with the outer end **65** of the slot **59** in the gate tongue to locate it in its first locking position. Obviously, when the tongue is withdrawn from the slot **33**, the coin holder will be urged by the spring **47** to a position still further toward the front side of the coin box. However, the inner end **66** of the tongue and the back side of the hook are so formed that as the gate tongue is inserted into the slot, it will engage the hook to swing the coin holder toward its second position. As the inner end **66** of the gate tongue is moved past the hook **55**, the coin holder will again be free to swing back to its first position in which the hook is disposed within the slot **59** for locking with the catch **60** and its outer side engages the end **65** of such slot.

The two coin slots and connecting passageways permit a purchaser to obtain a newspaper or the like by the deposit of either of two coin combinations. Thus, the coin slot **29** connecting with the passageway **49**, which is adapted to receive a single coin between its bearing surface **62** and the hook **55**, may be marked for usage in the purchase of daily newspapers. The coin slot **28** connecting with the passageway **50**, which is adapted to receive three coins beneath its bearing surface and hook, may be marked for the purchase of Sunday papers.

Obviously, if a coin smaller than the predetermined denomination is deposited within either of the coin slots,

it will be rejected by the mechanism above described into the slots **35** and **36**. Thus, for example, with either passageway formed to receive nickels, pennies deposited in the coin slot therefor will be rejected. Furthermore, the deposit of any number less than that predetermined in the passageway **50** will not hold the lowermost coin **56** in fixed bearing relation between the catch and hook. Thus, for example, if only two coins of the desired denomination were so deposited, the movement of the gate in an opening direction would cause the catch **60** on the gate tongue to force the lowermost coin **56** upwardly within the passageway **50**. As a consequence, the coin holder **37** would not be swung out of its first position, and the catch **60** would engage with the hook **55** to prevent withdrawal of the gate tongue from the slot **33**.

Of course, upon the deposit of the predetermined number and denomination of coins, the purchaser need only pull the gate downwardly to open position in order to remove one of the newspapers or the like from within the cage. As the purchaser releases the gate, it is automatically returned to closed position by the springs **16***a*. Furthermore, upon entering of the tongue slot **33**, the gate tongue **34** will automatically move its catch **60** into position for locking engagement with the hook **55** of the coin holder until a predetermined number and denomination of coins are again deposited within the coin box.

From the foregoing it will be seen that this invention is one well adapted to attain all of the ends and objects hereinabove set forth, together with other advantages which are obvious and which are inherent to the apparatus.

It will be understood that certain features and subcombinations are of utility and may be employed without reference to other features and subcombinations. This is contemplated by and is within the scope of the claims.

As many possible embodiments may be made of the invention without departing from the scope thereof, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

The invention having been described, what is claimed is:

1. A coin-operated rack for newspapers or the like, comprising a cage having a window therein to permit access to newspapers stacked therein, a coin box on the cage having a coin slot therein, a gate hingedly mounted on the cage for swinging between positions opening and closing the window, a tongue on the gate, a slot in the coin box to receive the tongue when the gate is closed, a coin holder having a coin passageway therein to receive coins deposited into the coin slot and a hook to engage about a portion of the periphery of one of said coins, a catch on the tongue, means pivotally mounting said coin holder within the box for swinging between a first position in which the hook thereon is disposed for locking with the catch to prevent withdrawal of the tongue from the tongue slot and a second position in which said hook is removed from the disposal for locking with the catch to permit withdrawal of said tongue, said passageway, hook and catch being arranged in the first position of the coin holder to support said coin in fixed bearing relation between the hook and catch when a predetermined number and denomination of said coins are received within the passageway, whereby said catch may be moved past the hook during withdrawal of the tongue, and then release said coins from the passageway.

2. A coin-operated rack of the character defined in claim 1, including spring means normally urging said coin holder to its first position.

3. A coin-operated rack of the character defined in claim 2, wherein said coin holder engages the tongue to locate said coin holder in its first position.

4. A coin-operated rack of the character defined in claim 2, wherein said coin holder is engaged by the inner end of the tongue and swung about its pivotal mounting as the tongue is inserted into said slot.

5. A coin-operated rack of the character defined in claim 1, wherein an intermediate portion of the coin passageway is bent to provide a bearing surface facing the hook and spaced therefrom a distance to closely receive said predetermined number and denomination of coins therebetween.

6. A coin-operated rack for newspapers or the like, comprising a cage having a window therein to permit access to newspapers stacked therein, a coin box on the cage having a coin slot therein, a gate hingedly mounted on the box for swinging between positions opening and closing the window, a coin holder having a passageway therein to receive coins deposited in the slot, means mounting the coin holder within the box for movement between first and second positions, a locking part on the coin holder, a tongue on the gate disposable within the coin box beneath the coin holder when the gate is closed and having a locking part for locking engagement with the locking part on the coin holder in the first position of the holder to prevent swinging of the gate to its opened position prior to the deposit of a predetermined number and denomination of coins within the coin slot, and means providing a bearing surface in the passageway for holding one of said coins between the tongue and coin holder in the closed position of the gate so that the coin forces the coin holder from its first to its second position to release the tongue locking part from locking engagement with the coin holder locking part upon opening movement of the gate.

7. A coin-operated rack of the character defined in claim 6, wherein said tongue has a cam surface thereon engageable with the coin holder, upon swinging of the gate to closed position, for moving the coin holder from its first to its second position and thereby disposing the tongue locking part in position for locking engagement with the locking part on the coin holder upon return movement of the coin holder to its first position.

8. A coin-operated rack of the character defined in claim 6, wherein said means includes a bend in the passageway.

9. A coin operated rack of the character defined in claim 6, wherein the side of the tongue facing the coin holder is substantially flat, the locking part on the tongue

is disposed within a recessed portion in the substantially flat side thereof, and the locking part on the coin holder extends into said recessed portion for locking engagement with the locking part on the tongue.

10. A coin-operated rack for newspapers or the like, comprising a cage having a window therein to permit access to newspapers stacked therein, a coin box on the cage having a coin slot therein, a gate hingedly mounted on the box for swinging between positions opening and closing the window, a tongue on the gate having a locking part, a slot in the coin box to receive the tongue when the gate is closed, and a coin holder having a passageway therein to receive coins deposited in the coin slot and a locking part, said coin holder being mounted in the coin box for movement between a first position in which the locking part thereof is disposed for engagement with the tongue locking part to prevent withdrawal of the tongue from the tongue slot prior to the deposit of a predetermined number and denomination of coins within the coin slot and, upon the deposit of said coins and swinging of the gate toward open position, a second position in which said coin holder locking part is removed from disposal for locking engagement with the tongue locking part to permit withdrawal of the tongue from said tongue slot, said locking parts on the tongue and on the coin holder supporting one of said coins in fixed bearing relation therebetween in the first position of said coin holder in the coin box so that it is rendered ineffective and permits movement of the tongue locking part therepast.

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