United States Patent [19]

Stackhouse

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[54] **MAILBOX UNIT**

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[52] **U.S. Cl.** **312/215,** 70/DIG. 17, 232/24

[51] **Int. Cl.** **E05b 65/46**

[58] **Field of Search** 312/215; 232/21, 24; 70/DIG. 17, 339

[56] **References Cited**

UNITED STATES PATENTS

1,735,379	11/1929	Content	232/24
2,765,646	10/1956	Hepler	20/539 X
2,563,094	8/1951	Becker	232/24
3,154,738	11/1964	Cohen	70/339 X

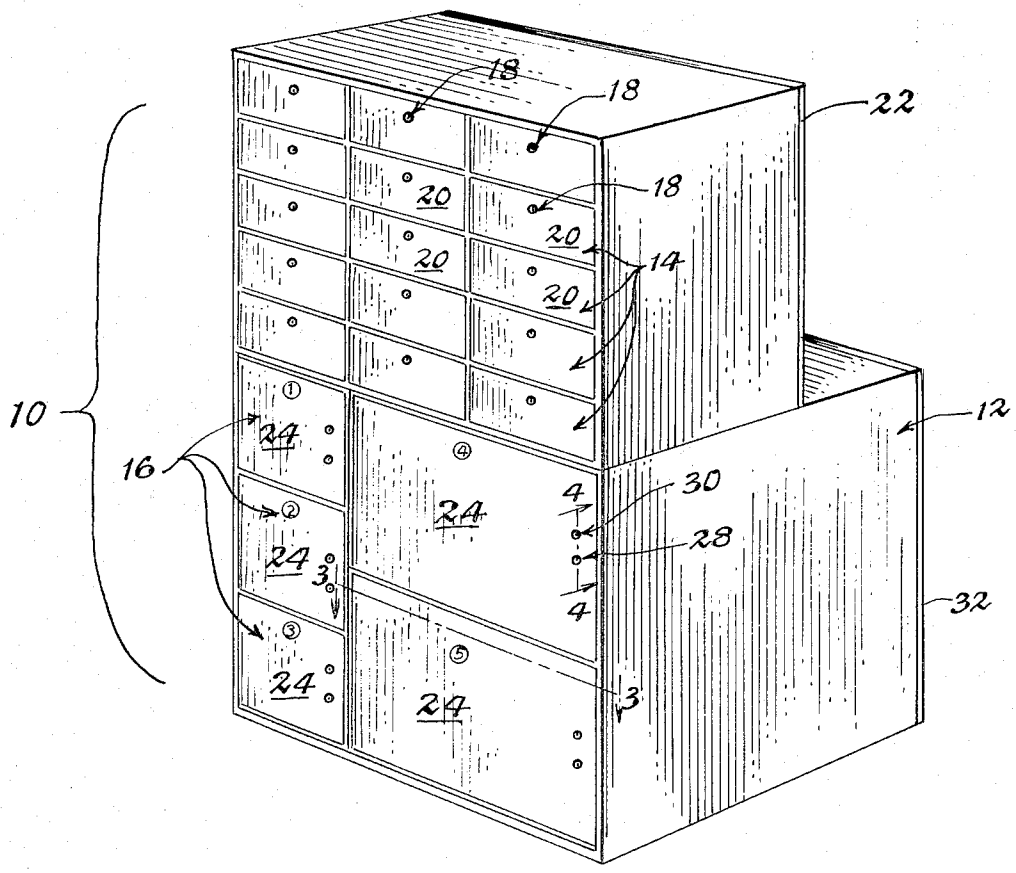
Primary Examiner—Paul R. Gilliam

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[57] **ABSTRACT**

A mailbox unit permitting delivery and safe storage until pickup of both letters and packages to tenants of multiple tenant buildings. The unit employs conventional tenant key controlled letter boxes in combination with large sized package storage cabinets, which may be opened by a tenant with a special key placed in his letter box by the mailman.

3 Claims, 5 Drawing Figures



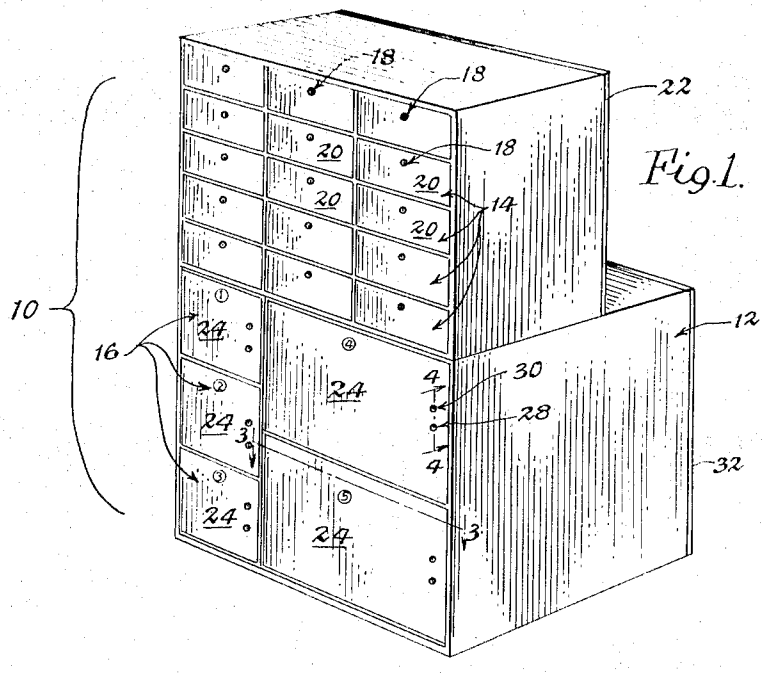

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Fig. 1.

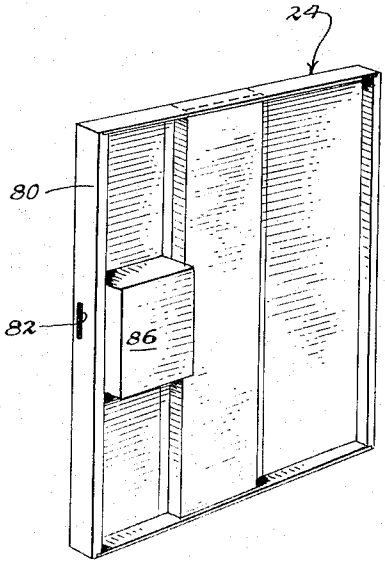

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Fig. 2.

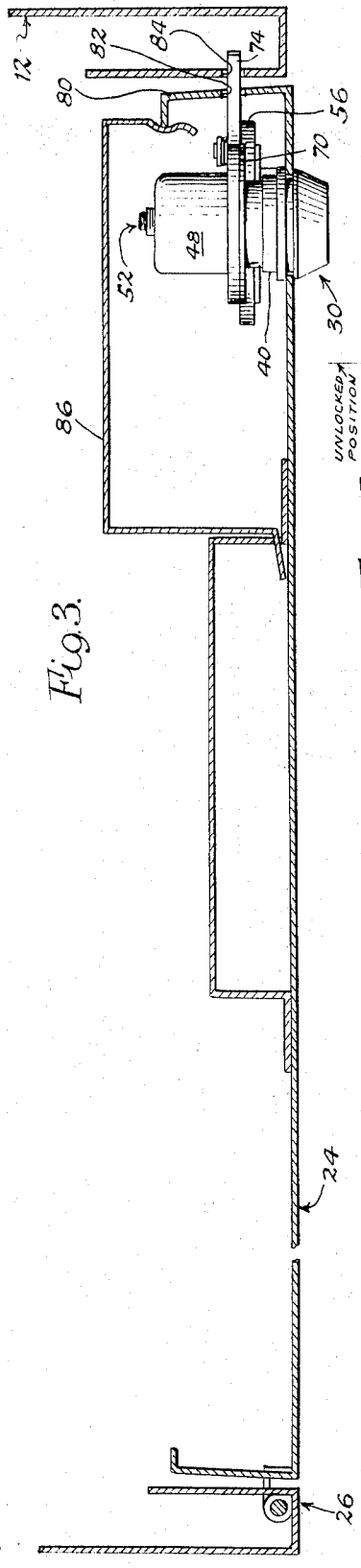


Fig. 3.

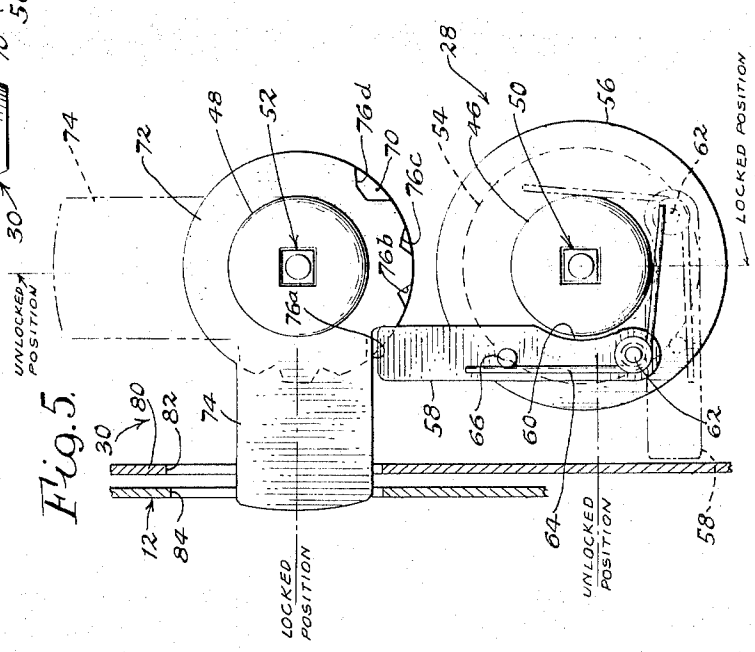


Fig. 5.

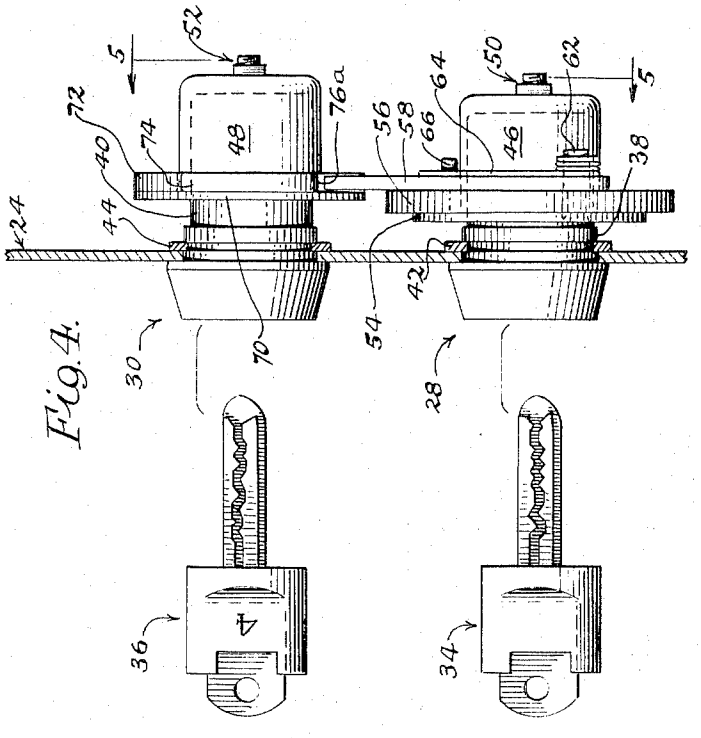


Fig. 4.

MAILBOX UNIT

BACKGROUND OF THE INVENTION

The delivery of a package mailed to a tenant of a multiple tenant building, such as an apartment house or office building, has been a time consuming procedure both for the mailman charged with its delivery and for the recipient. In this respect, tenant letter boxes normally provided in the lobby or entrance of a multiple tenant building are of small size, and thus it has been necessary for the mailman to carry a large or medium size package directly to the tenant's door. In the absence of the tenant, it was necessary for the mailman to return the package to the Post Office to await personal pickup by the tenant.

It is thus an object of the present invention to negate the need for door to door delivery of packages mailed to tenants of multiple tenant buildings.

It is also an object of the present invention to negate the need of a tenant of a multiple tenant building, who is absent at the time of an attempted delivery, to travel to the Post Office to pick up such package.

SUMMARY OF THE INVENTION

The present invention relates to a mailbox unit facilitating the delivery of the mail, including packages, to the tenants of multiple tenant buildings.

In accordance with the present invention, a plurality of large sized package storage cabinets are provided in proximity to conventional tenant key controlled letter boxes normally provided in the lobby or entrance hall of a multiple tenant building. The door of each storage cabinet is provided with a pair of key operated locks, namely, a custodian lock, which is operable by a key continuously retained in the possession of the mailman, and a tenant lock, which is over-controlled by the custodian lock for single-shot door opening operation by a selective access tenant key placed in the temporary custody of a predetermined tenant.

More specifically, when the mailman has a package for a particular tenant, he places the package in one of the storage cabinets and then places the associated selective access key, which is appropriately numbered or otherwise marked in conformity with such cabinet, in the tenants' letter box. The presence of a selective access key in his letter box automatically advises the tenant that he has received a package and he then uses such key to open the door of the storage cabinet to gain access to his package. As the selective access key is turned to unlock the tenant lock in order to permit opening of the storage cabinet door, a latch device controlled by the custodian lock automatically locks the tenant lock in unlocked condition, with the result that its selective access key is "captured" or retained in the tenant lock. During a subsequent mail delivery, the mailman may re-use the now empty storage cabinet by placing another package therein and then employing his key to momentarily unlock the custodian lock in order to release the tenant lock for return to its cabinet door locked condition. The selective access key is then removed and deposited in the appropriate tenant's letter box.

DRAWINGS

The nature and mode of the present invention will now be more fully described in the following detailed description taken with the accompanying drawings wherein:

FIG. 1 is a perspective view illustrating a mailbox unit according to the present invention for use in a multiple tenant building;

FIG. 2 is a perspective view showing the rear of one of the storage cabinet doors;

FIG. 3 is a sectional view taken generally along line 3—3 in FIG. 1;

FIG. 4 is a sectional view taken generally along line 4—4 in FIG. 1; and

FIG. 5 is a sectional view taken generally along line 5—5 in FIG. 4.

DETAILED DESCRIPTION

Reference is now made more particularly to FIG. 1, wherein a mailbox unit according to the present invention is generally designated as 10. Unit 10 is shown as including a framework 12 housing a plurality of tenant letter boxes 14 and a plurality of package storage cabinets 16; the letter boxes being stacked on the storage cabinets for purposes of convenience. The number of letter boxes 14 and storage cabinets 16 provided for any given unit will of course vary depending upon the postal requirements of the building in which the unit is to be installed.

As in present day practice, each tenant of a multiple tenant building, that is, the leasee or owner of each apartment or office, would be assigned one of letter boxes 14 and a corresponding key, not shown, for the purpose of operating a lock 18 carried by hingedly mounted letter box front closure door 20. Preferably, a mailman would be afforded simultaneous access to the rear of all letter boxes 14 for the purpose of depositing mail therewithin, by single removable or hingedly mounted rear panel 22, which is normally locked in closed position by a single key operated lock, not shown, operable only by the mailman. Alternatively, letter box lock 18 and/or the lock for panel 22 may be combination locks.

Storage cabinets 16, which may vary in size to provide convenient storage for variously sized packages, are best shown in FIGS. 1–3 as each including a front closure door 24, which is hingedly mounted to framework 12 as by hinged device 26 and carries vertically spaced, key operated custodian and tenant locks 28 and 30, respectively. Preferably, a mailman would be afforded simultaneous access to the rear of all of cabinets 18 for the purpose of depositing packages therewithin by means of a single removable or hingedly mounted rear panel 32 controlled by a single key or other suitable lock, not shown, operable only by the mailman.

The provision of removable panels 22 and 32 permits unit 10 to be mounted to extend through a building wall in order to expose the rear of the unit including panels 22 and 32 to a mail sorting room to which only the mailman has access and to expose the front of the unit including doors 20 and 24 to a lobby or entrance hall of a building to which the tenants have access. If desired, however, unit 10 may be left free standing within the building lobby or mounted on casters to permit it to be moved to the lobby from a mail sorting room.

Custodian and tenant access locks 28 and 30 of each storage cabinet are preferably conventional cylinder type locks adapted to be operated by custodian and selective access keys designated as 34 and 36, respec-

tively, only in FIG. 4. Preferably, a single custodian key in the exclusive possession of the mailman is adapted to operate the custodian locks of all of the storage cabinets, whereas a different selective access key is required to operate the tenant access lock of each storage cabinet; each selective access key bearing indicia, such as a numeral, letter or the like, which corresponds to indicia provided on the storage cabinet having its associated tenant access lock.

As with conventional cylinder lock constructions, locks 28 and 30 are formed with housings 38 and 40, which are fixed within vertically spaced apertures in door 24 by means of C-rings 42 and 44; and lock cylinders, not shown, which are rotatably supported within their associated housings and normally locked against rotation by suitable tumbler mechanisms adapted to be released upon insertion of appropriate keys 34 and 36 thereinto. It is important to note that, since each tenant access lock 30 is a conventional cylinder lock, key 36 may be inserted into or removed from its associated lock cylinder only when the latter is in its locked position; the key at all othe rotatable positions of the lock cylinder being automatically "captured" or retained within the lock by the tumbler mechanism. The specific structural design of locks 28 and 30 forms no part of the present invention but are preferably of the type presently employed in association with commercial coin operated lockers.

By referring to FIG. 4, it will be understood that cup shaped barrels 46 and 48 are supported concentrically outwardly of housings 38 and 40 for rotation with the lock cylinders, by means of lock cylinder affixed coupling devices 50 and 52, which extend freely outwardly through the rear ends of housings 38 and 40, respectively. Each coupling device may be of the type conventionally employed to attach a lock bolt or cam element for rotation with a lock cylinder.

Now referring to FIGS. 4 and 5, it will be seen that the forward end of barrel 46 has an integrally formed, radially extending flange 54 to which an annular plate or washer 56 is suitably attached, as by welding. A latch plate or arm 58 having an arcuate side opening cutout or recess 60 is fixed to plate 56 by pin shaft 62 for pivotal movement about an axis arranged essentially parallel to the axis of rotation of barrel 46. Plate 58 is normally biased by a suitable spring device 64 to pivot about pin shaft 62 in a clockwise direction, as viewed in FIG. 5, such that the edge of recess 60 is normally disposed in abutting engagement with the cylindrical surface of barrel 46. For purpose of illustration, spring device 64 is shown as being in the form of a leaf spring, which is coiled about pin shaft 62 and has its legs arranged in engagement with the cylindrical surface of barrel 46 and a pin 66 carried by plate 58.

Again referring to FIGS. 4 and 5, it will be seen that the forward end of barrel 48 includes an integrally formed, radially extending flange 70 to which an annular plate 72 is suitably affixed, as by welding. Plate 72 is formed with a radially extending enlargement defining a locking bolt 74 and a plurality of side opening notches or serrations, eg. notches 76a-76d, which are adapted to receive a free swinging end of plate 58.

As best shown in FIG. 3, each cabinet door 24 is formed with a rearwardly extending side flange 80 having a slot opening 82 adapted to be arranged in registry with an associated framework slot opening 84 when the door is in fully closed position. Openings 82 and 84 are dimensioned to removably lock bolt 74 when the latter is moved by operation of an appropriate selective access key 36 between its unlocked and locked positions to be described. A box shaped cover 86 is affixed to the rear of each door 24 in order to prevent unauthorized tampering with locks 28 and 30, when the door is unlocked.

Again referring to FIG. 5, it will be understood that, when door 24 is closed and locks 28 and 30 are in a locked condition, locking bolt 74 is in its locked position and disposed to extend through registered slots 82 and 84, and the free end of latch plate 58 is engaged within notch 76*a*, as shown in full line. Door 24 may be freed for opening movement by inserting an appropriate selective access key 36 into lock 30 and employing same to rotate its associated lock cylinder from its locked position to effect rotation of locking bolt 74 in a clockwise direction into its fully unlocked position, illustrated in phantom line in FIG. 5. During unlocking rotational movements of locking bolt 74, spring device 64 permits plate 58 to freely ratchet relative to notches 76*a*–76*c* until it finally engages within notch 76*d* when the locking bolt is in its fully unlocked position. It will be understood that engagement or plate 58 within any of notches 76*b*–76*d* serves to prevent counterclockwise rotation of locking bolt 74 towards its fully locking position and that notch 76b is arranged to receive plate 58 before the locking bolt has been rotated sufficiently to remove it from within framework slot 84. Thus, once key 36 has been operated to free door 24 for opening movement, plate 58 serves to retain lock 30 in an unlocked condition with the result that key 36 remains "captured" within the lock.

Lock 30 may be released for return to its locked condition by inserting key 34 into lock 38 and employing same to rotate the lock cylinder from its locked position to effect rotation of plate 56 in a counterclockwise direction to position plate 58 in its fully unlocked position illustrated in phantom line in FIG. 5, wherein it is removed from association with notches 76*a*–76*b*. After lock 30 is returned to its locked position and key 36 removed, lock 28 may be returned to its locked position and key 34 removed to return the parts to their full line positions illustrated in FIG. 5.

To facilitate description of the mode of operation of the mailbox unit of the present invention, it will be assumed that storage cabinets 16 are empty and their respective doors 24 locked in closed position; that key 34 is in the possession of the mailman assigned to the building; and that keys 36 are either in the possession of the mailman or deposited within their associated storage cabinets to which access was gained for this purpose by means of rear panel 32. When the mailman has a package for delivery to one of the building tenants, he opens rear panel 32, places the package in an appropriately sized one of storage cabinets 16, withdraws the tenant access key 36 from the selected storage cabinet, and places the withdrawn tenant access key in the appropriate tenant's letter box to which access has been gained by opening rear panel 22. Rear panels 22 and 32 are locked in closed condition before the mailman leaves unit 10 unattended. When the tenant to which the package is addressed inspects his letter box, he is automatically appraised by the presence of key 36 that the package is retained in one of storage cabinets 16, which bears identifying indicia corresponding to that appearing on key 36. Upon use of key

36 by the tenant to obtain access to his package, the associate tenant lock 30 is automatically locked in unlocked condition by its associated custodian lock 28 and key 36 "captured." The mailman may subsequently lock the door of the now empty storage cabinet in closed condition and remove key 36 for redisposition in such storage cabinet by momentary manipulation of the custodian lock 28.

Unit 10 may be variously modified without departing from the spirit of the present invention as for instance by mounting each pair of locks 28 and 30 on framework 12, rather than on doors 24.

I claim:

1. A mailbox unit permitting delivery and safe storage until pick up of both letters and packages to tenants of a multiple tenant building, which comprises in combination:

a plurality of letter boxes assigned one to each of said tenants and accessible only to the tenant to which it is assigned and to a mailman charged with the delivery of mail to said building; and

a plurality of package storage cabinets individually sized to receive packages too large to be accommodated within said letter boxes and accessible only to a given tenant to which a package is to be delivered and to said mailman, each said cabinet having a front closure door, tenant access lock movable between cabinet front closure door locking and unlocking conditions for permitting access to its associated cabinet by means of a selective access key bearing indicia corresponding to indicia appearing on said associated cabinet, said access lock permitting said selective access key to be inserted into and/or removed therefrom only when said access lock is in said cabinet locking condition, a custodian lock movable between a normal locked condition and an unlocked condition by means of a single custodian key in the possession of said mailman, said single custodian key being operable to control movements of said custodian lock of all of said cabinets, latch means, and latch receiving means carried on said access lock, said latch means being positioned in latching engagement with said latch receiving means by said custodian lock when in locked condition and being removed from latching engagement with said latch receiving means by movement of said custodian lock into unlocked condition, said latch means when in latching engagement with said latch receiving means cooperating therewith to permit movement of said access lock towards and into said cabinet unlocking condition while preventing return movement thereof towards said cabinet locking condition, wherein the presence of a selective access key in the letter box of said given tenant gives indication of the presence of and provides means for gaining access to a package locked within the one of said cabinets bearing indicia corresponding to indicia appearing upon said selective access key and said selective access key when employed to gain access to the package as aforesaid is automatically retained within its access lock until movement of said custodian lock from its normal locked condition is effected under control of said mailman.

2. A mailbox unit according to claim 1, wherein said mailman is afforded access to said letter boxes and said cabinets by lockable panel means affording simultaneous access to the rear of each of said letter boxes and said cabinets.

3. A mailbox unit according to claim 1, wherein each of said letter boxes is accessible only to a tenant to which it is assigned by means of a lockable front door, said letter boxes being simultaneously accessible to said mailman by means of a lockable panel rearwardly closing each of said letter boxes, said package storage cabinets being collectively accessible only to said mailman through a lockable panel rearwardly closing each of said cabinets, each said tenant access lock being mounted on its associated cabinet front closure door and, said custodian lock being mounted on its associated cabinet front closure door and carrying said latch means.

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