

[54] **METHOD AND APPARATUS FOR MAIL DISTRIBUTION**

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 25,570, April 3, 1970, abandoned.

[52] U.S. Cl. **209/71, 209/122, 209/DIG. 1, 214/16 B**

[51] Int. Cl. **B07c 7/00**

[58] Field of Search..... 209/DIG. 1, 72, 71, 209/122, 123, 124, 125; 214/11 A, 11 C, 11 R, 1 M, 16 R, 16 B; 198/DIG. 16

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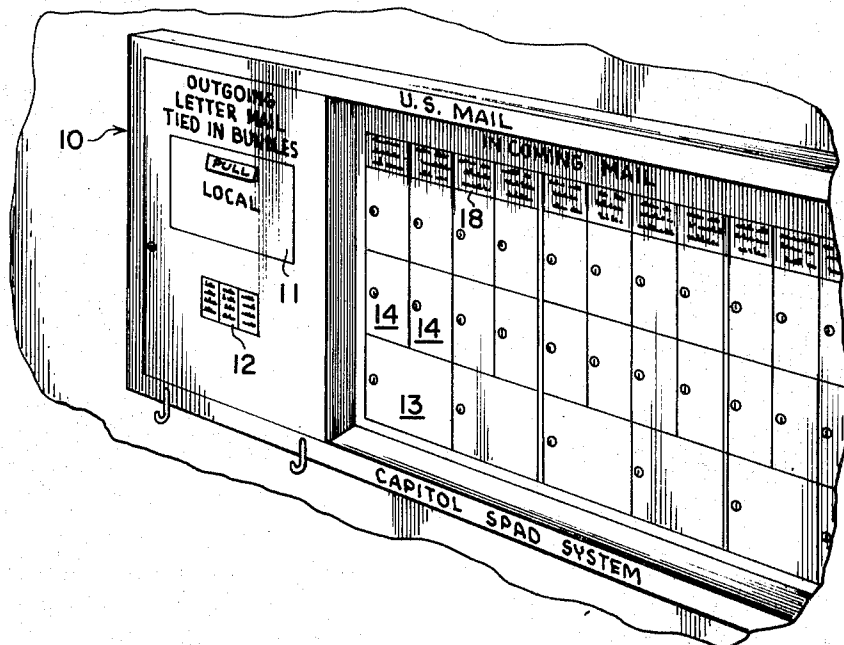
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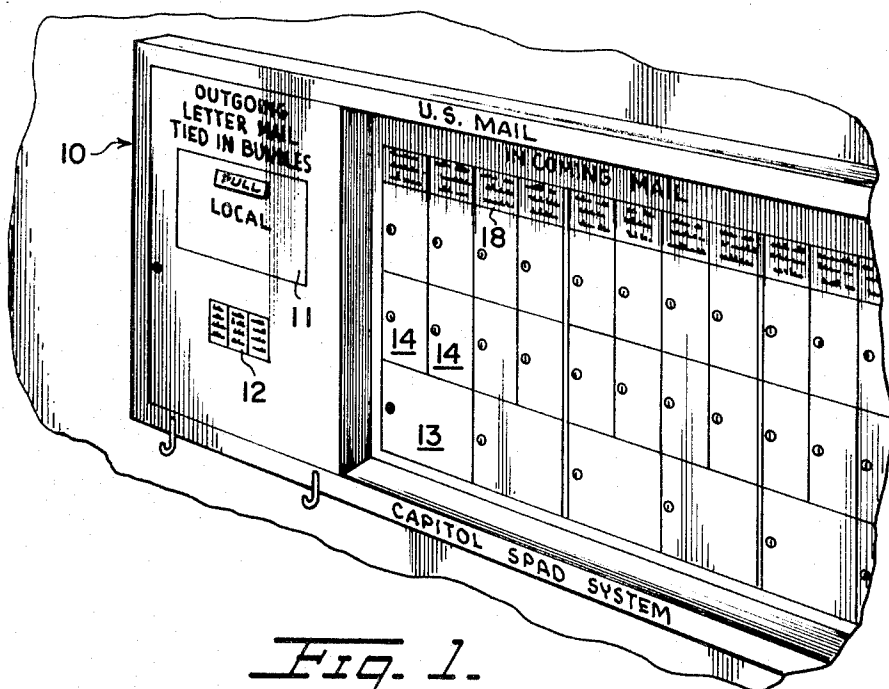
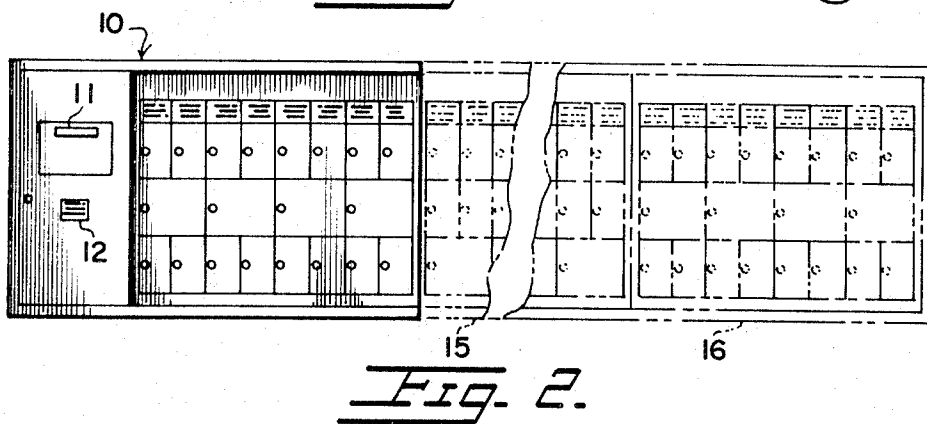
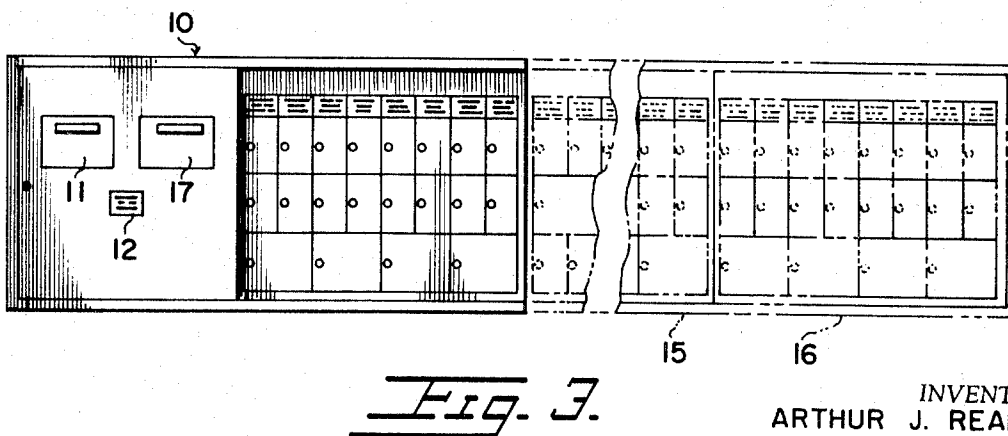
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[57] **ABSTRACT**

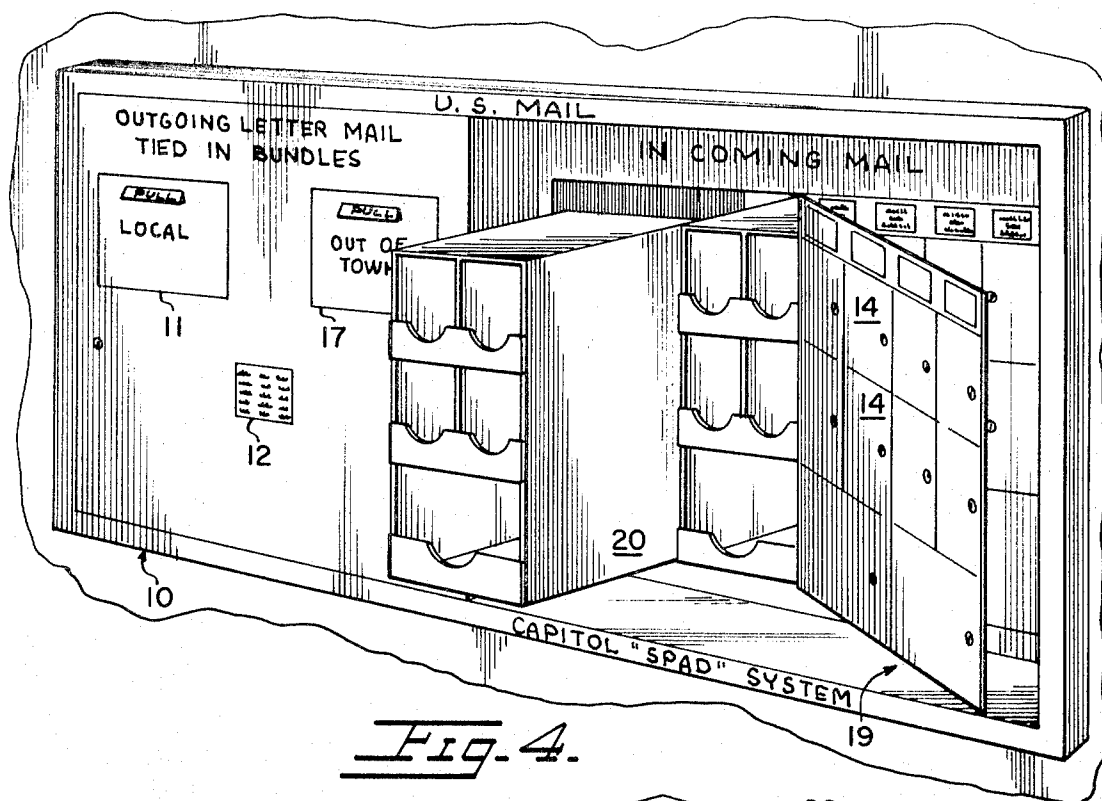
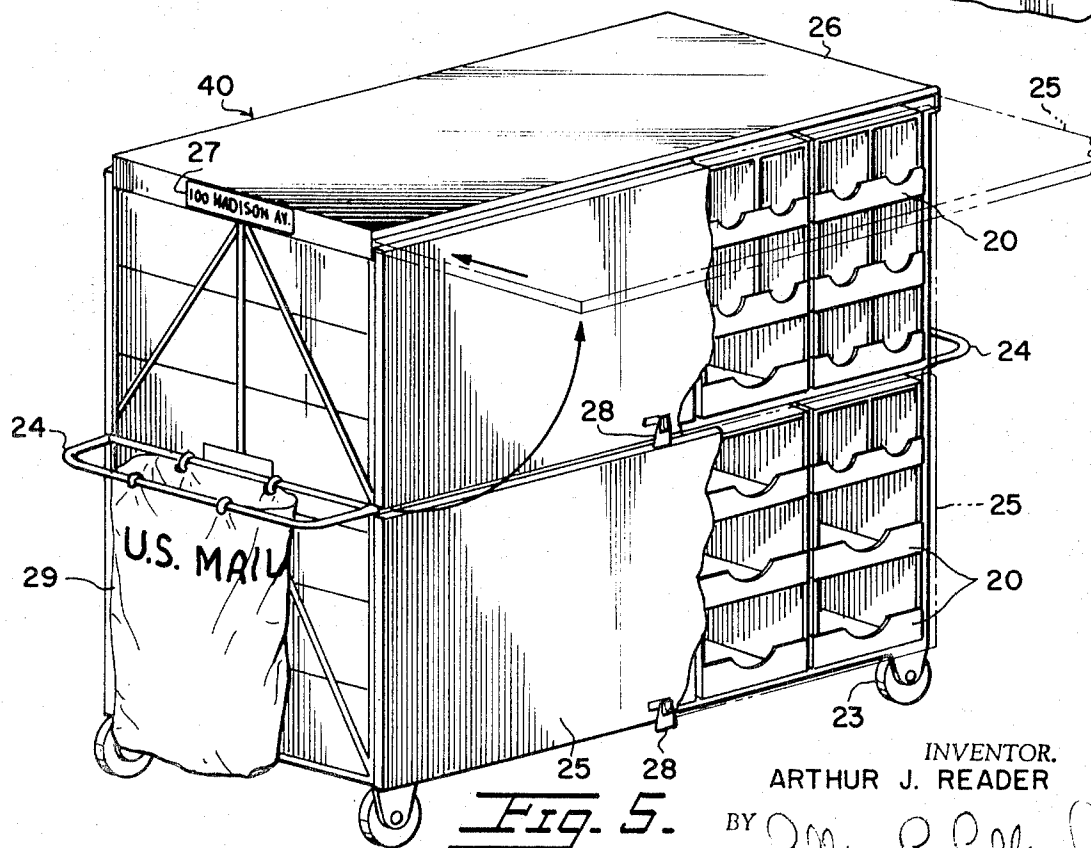
A method and apparatus for the improved distribution of mail consisting of sorting the mail at central sorting stations into containers for different addresses, placing the containers onto carts, delivering the carts to the addressees' location and inserting the containers into each addressee's mailbox. Mailbox systems for receiving the containers are located either on the first floor of the addressee's building, or on each of the floors. The containers can be detachably stacked to form modules consisting of groups of containers for holding mail.

10 Claims, 7 Drawing Figures





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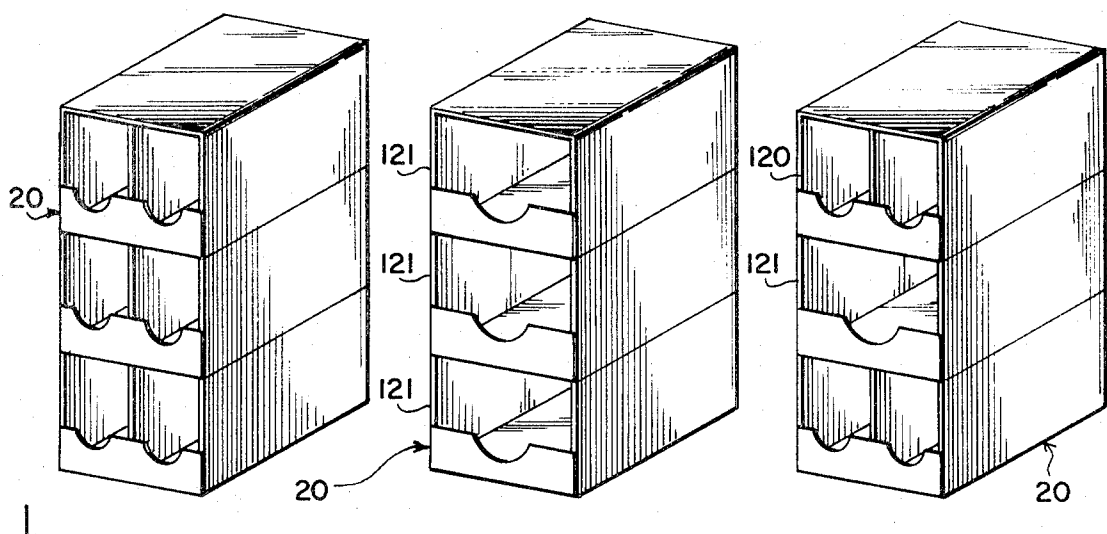


Fig. 6.

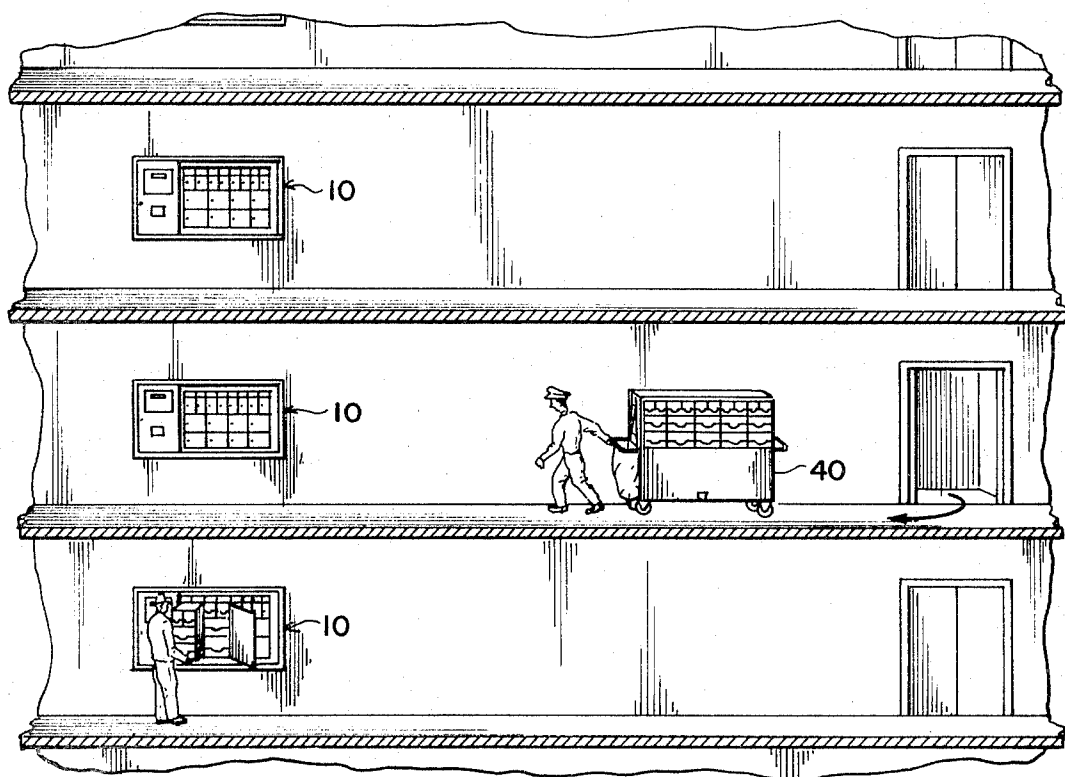


Fig. 7.

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METHOD AND APPARATUS FOR MAIL DISTRIBUTION

This is a continuation-in-part application of application Ser. No. 25,570, now abandoned, filed Apr. 3, 1970.

This invention relates to an improved method and apparatus for mail distribution.

More specifically, this invention relates to a method and apparatus for mail distribution particularly for use with multi-storied buildings whereby mail is containerized prior to its distribution and delivered in individual containers to each of the tenants of a multistoried building.

In the conventional delivery of mail, a letter carrier is provided with a supply of mail at a particular building site and must sort the mail before distributing it to each of the individual tenants. Today, the letter carrier inserts the addressee's mail into a fixed cubicle. Filling each cubicle, one at a time is a slow and inefficient method.

Accordingly, the present invention utilizes individual containers which are assigned to each business or tenant in a particular building so that mail, which would include envelopes, containers, packages and the like can be sorted and placed in the individual containers at a central distribution area of the Post Office before being delivered to a building. The containers can either be inserted into specially designed mailboxes adapted to receive the containers on the first floor of the building, or to mailboxes located on each particular floor where the tenants are housed. In a multi-storied building which has no facilities for vertical transport, or in a single story building having multiple addresses, the containers can be positioned at a mail room and inserted in particular mailboxes for each of the addresses. The method and apparatus of the present invention eliminates the need for a letter carrier to be assigned to a particular route since the containers can be delivered by truck to the particular address and quickly located in the addressees' mailboxes. Thus, the carrier is taken off the streets and relocated at the building which is used by the Post Office to sort and containerize the mail before it is transported to the addressees' office building.

Moreover, since the mail will be sorted into these individual containers at a central location prior to being removed from the Post Office premises, the probability of the loss of pieces of mail is greatly reduced. It is hoped that this practice will reduce any attempt by letter carriers to dump mass mailings or magazines, since the sorting operation will be under close supervision in a Post Office owned building. Furthermore, the operators of the vehicles carrying the mail containers to the addressees' buildings will have no incentive to engage in mail dumping practices since they do not have to carry the weight of the heavy mailings or sort the mail at the addressees' building. Many letter carriers under present mail delivery systems carry letters and envelopes in unlocked shoulder pouches or in open pouches mounted on carts. In either case, a moment's inattention on the part of the letter carrier enables easy pilferage of mail pieces from the pouches.

In the present invention, the individual containers may vary in size depending upon the activity of a particular addressee. The containers are preferably constructed from an unbreakable light weight plastic mate-

rial, and adapted to be detachably connected together and loaded onto a hand cart so that a multitude of containers can be transported at any one time to a particular building location. The mail boxes to be used at the addressees' location are preferably constructed to slidably receive the containers so that the hinged doors of the mailboxes can be locked after the containers are inserted.

It is therefore an object according to the present invention to provide a method and apparatus for distributing mail by means of containers from a central sorting location to the addressees' building for insertion into the addressees' postal box.

It is another object according to the present invention to provide a mail distribution system which overcomes the inefficiency and distribution problems of conventional mail distribution systems.

It is still a further object according to the present invention to provide a method and apparatus for mail distribution which is simple in design, efficient in operation and inexpensive in cost.

Other objects and features of the present invention will become apparent from the following detailed description considered in connection with the accompanying drawings which disclose the embodiments of the invention. It is to be understood however, that the drawings are designed for the purpose of illustration only and not as a definition of the limits of the invention.

In the drawings wherein similar reference characters denote similar elements throughout the several views:

FIG. 1 is a perspective view of an addressees' mailbox method and system according to the present invention;

FIG. 2 is a front plan view of the system and possible extensions thereof of FIG. 1;

FIG. 3 is another embodiment of the mailbox distribution system of FIG. 1;

FIG. 4 is a detailed perspective view of the mailbox system of FIG. 3 including the use of containers therein;

FIG. 5 is a hand cart for transporting containerized mail;

FIG. 6 are detailed views of several types of container modules; and

FIG. 7 is a plan view showing the mailbox distribution method and system employed on several floors of a multi-storied building.

Referring to FIGS. 1 and 2, there are shown an addressees' mail distribution system 10 including a plurality of individual locked mailboxes 13 and 14 for use by addressees included on list 18 above each of the individual boxes. On one side of the individual mailboxes which are preferably recessed in the system, in an outgoing letter box 11 having a pivotable door for receiving individual letters and bundles of mail. The collection schedules are indicated on list 12 below the mailbox. The housing of system 10 is recessed into a wall surface of a building either on the first floor, or on each individual floor preferably adjacent to the elevators or stairway. As shown in detail in FIG. 2, additional subsystems 15 and 16 can be added onto the main housing 10 depending on the capacity of the building.

FIG. 3 shows an additional embodiment of the invention of FIG. 2 which includes a second outgoing mailbox 17 which can be used for out-of-town mail, adjacent to a local outgoing mail box 11.

In FIG. 4, the addressees' mailbox portion of housing 10 is opened to expose a plurality of mailboxes 13 and 14 in order to receive container modules 20. Each of modules 20 include a plurality of elongated containers which are preferably open at one end to receive sorted mail for each addressee.

The container modules 20 may be assembled and transported by means of a cart 40 as shown in detail in FIG. 5. Cart 40 preferably includes a top surface 26 for slidably receiving side panels 25 which enclose the sides of container modules 20. Panels 25 may include a catch or lock 28 to secure the container modules in the cart while it is being transported to its destination. The address of the building may be located at one or both ends of the carts by an address plate 27. Handles 24 are also provided at the ends of the cart which may support mail bags 29, for transporting bulk goods to the addressee's location, or receiving the outgoing mail at each of the mail stations. Wheels 23 are provided on the four corners of the cart to permit the cart to be easily moved from station to station. Rubber bumpers and other safety features, such as a foot brake may also be added to the cart.

As shown in FIG. 6, container modules 20 may consist of 6 small, elongated containers 120 which may preferably be 12 inches high, 6 inches wide and 16 inches deep. In another embodiment of the module, three wider containers are provided which may preferably be 12 inches high, 12 inches wide, and 16 inches deep. Since the individual containers may be fitted together, any combination of these containers can also be used depending upon the individual needs of the addressee.

FIG. 7 shows a plan view of several mailbox systems 10 mounted on each of the floors to be serviced by mail delivery personnel. Cart 40, which may contain over 100 individual containers of mail, can be moved from floor to floor so that the containers can be inserted into the individual mailboxes, and the empty containers removed for return to the central sorting station.

While only a few embodiments of the present invention have been shown and described, other changes and modifications may be made thereunto without departing from the spirit and scope of the invention.

What is claimed is:

1. A method for the distribution of mail in containers to specified addressees, comprising the steps of:

sorting the mail at a central sorting station and simultaneously inserting the mail into individual portable containers each designated for delivery to a specific destination and addressee,

placing the containers on moveable carts, delivering the carts to a plurality of delivery stations in the designated addressees' buildings, and removing the containers from said carts and inserting them in the addressees' mail boxes.

2. The method of claim 1, wherein said step of placing additionally comprises the step of closing the carts after the containers are inserted.

3. The method as recited in claim 2 wherein said step of inserting the containers in the addressees' mailboxes additionally comprises the step of removing empty containers from the mailboxes and placing them on said carts.

4. The method as recited in claim 3, additionally comprising the step of locking the container into the addressees' mailboxes after the containers have been inserted.

5. The method as recited in claim 1, additionally comprising the step of detachably combining said containers to form modules for placement on said carts.

6. The method as recited in claim 1, additionally comprising the step of vertically transporting the carts to predetermined locations on each addressees' floor after the carts are delivered to the addressees' floor after the carts are delivered to the addressees' building.

7. The method as recited in claim 1, additionally comprising the step of labeling each of said carts with the building location of the addressees.

8. The method as recited in claim 1, additionally comprising the step of collecting the outgoing mail from the addressees' mailboxes in pouches on said carts after said carts are delivered to the addressees' building.

9. The method as recited in claim 5, wherein said step of inserting the containers into the addressees' mailboxes comprises the step of inserting modules formed from a plurality of containers into plural boxes of the addressees.

10. The method as recited in claim 2, wherein said step of closing the carts additionally comprises the step of locking the containers in said carts.

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