July 16, 1929. M. M. MOORE 1,720,917

STORE SYSTEM

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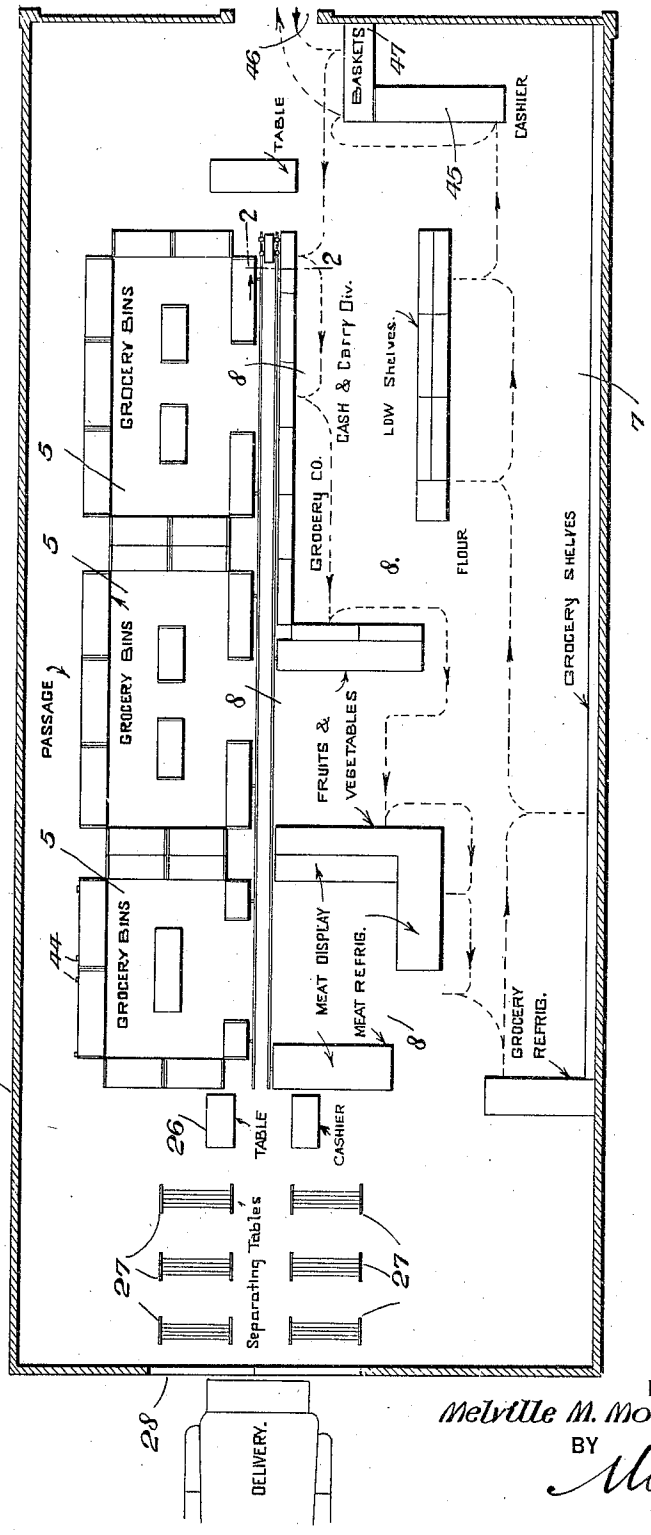


Fig. 1.

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Fig. 2.

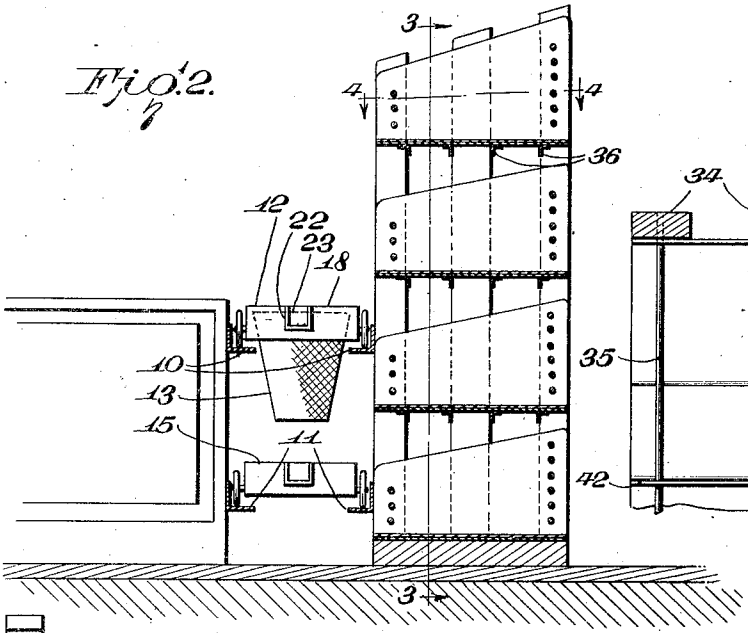
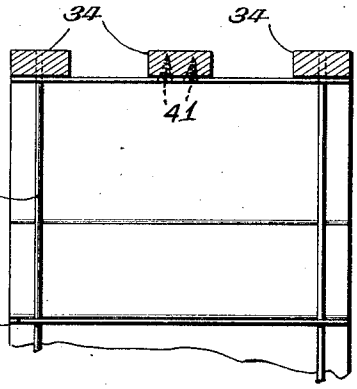


Fig. 4.



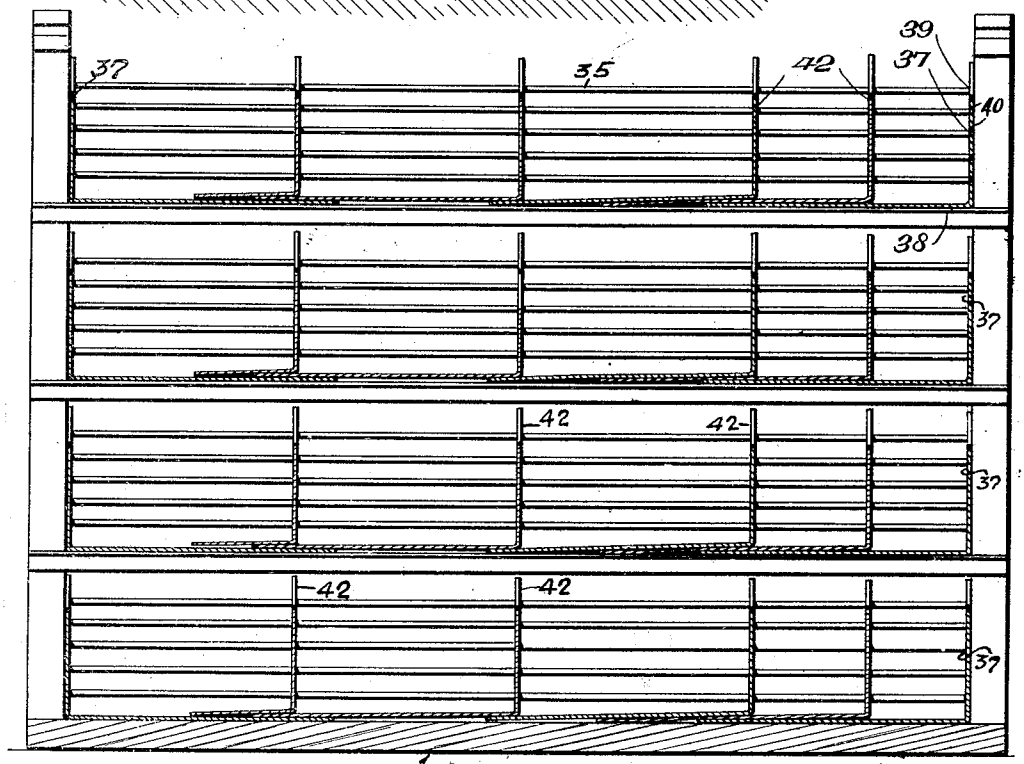


Fig. 3.

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STORE SYSTEM

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Fig. 5.

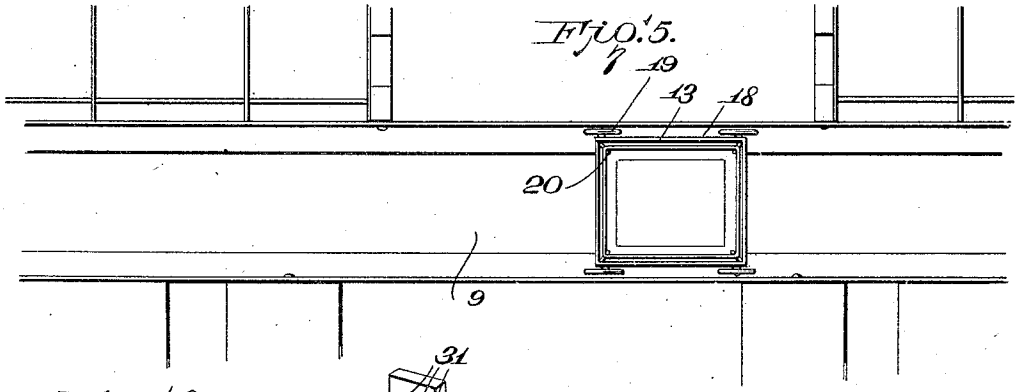


Fig. 8.

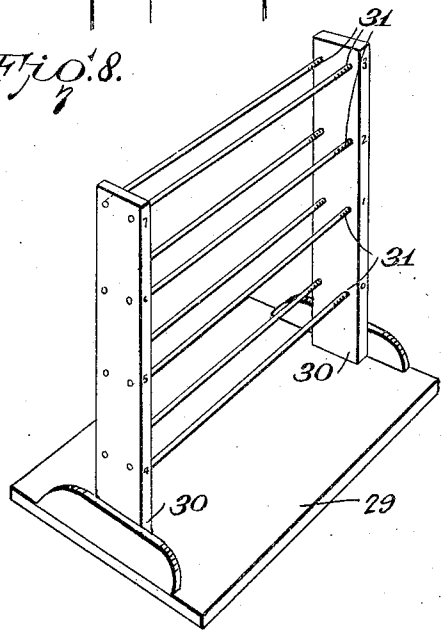


Fig. 7.

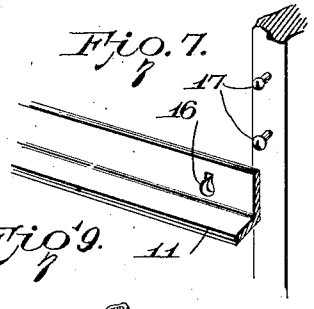


Fig. 9.

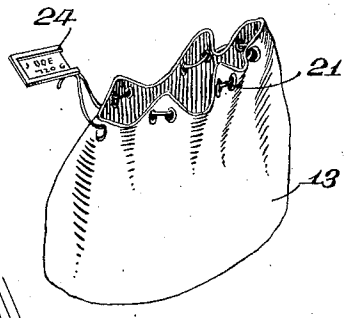


Fig. 6.

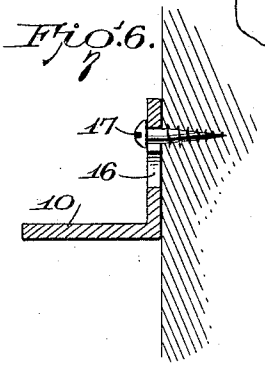


Fig. 10.

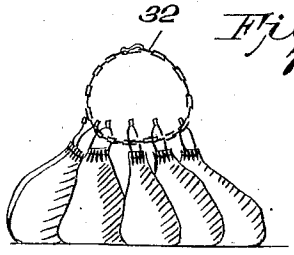
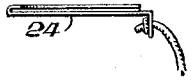


Fig. 11.



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UNITED STATES PATENT OFFICE.

MELVILLE M. MOORE, OF NEW ORLEANS, LOUISIANA.

STORE SYSTEM.

Application filed August 10, 1927. Serial No. 212,113.

My invention relates to store systems and has as an object the provision of a system arranged to permit self service, or order service such as where the customers telephone the orders, or personally visit the store and make the order.

Further the invention provides a store system wherein a portable receptacle is successively moved to a plurality of clerks or attendants, whose duty it is to place the ordered merchandise into the receptacle from bins or shelves arranged along the path of the portable receptacle.

The invention also contemplates a store system characterized by improved store furniture or shelving which is adjustable to provide bins or compartments of predetermined sizes.

With the preceding and other objects and advantages in mind the invention consists in the combination of elements, construction and arrangement of parts, and operations to be hereinafter specifically referred to, claimed, and illustrated in the accompanyings drawings, wherein

Figure 1 is a plan view of my store system, the passage of the patrons to the self service being indicated by the broken lines;

Figure 2 is a vertical transverse section on line 2—2 of Figure 1;

Figure 3 is an enlarged front elevation partly in section of the adjustable shelf or other furniture;

Figure 4 is a fragmentary transverse sectional view of the same;

Figure 5 is a fragmentary plan view illustrating the portable carriage and tracks therefor;

Figure 6 is a fragmentary vertical sectional view of one of the tracks;

Figure 7 is a detail perspective of the same;

Figure 8 is a perspective of one of the order routing racks embodied in the invention;

Figure 9 is a perspective of one of the merchandise sacks or containers embodied in the invention;

Figure 10 is a detail elevation illustrating the manner in which a plurality of merchandise sacks or containers are connected together to be carried to a delivery vehicle, and

Figure 11 is a detail view of the identification tag for attachment to the sacks or containers.

Referring to the invention in detail a plurality of longitudinally alined order filling compartments or booths 5 are provided at one side of a store room 6.

Arranged at the opposite side of the room is a self-service system 7 embodying longitudinally alined compartments or booths 8, the latter being arranged in transverse alinement with certain of the booths or compartments 5. The self-service system embodies the usual store furniture, such as shelving, bins, refrigerator, display stands, etc.

A longitudinal passage-way 9 is provided between the order service system and the self-service system, and extending longitudinally thereof are pairs of trackways 10 and 11, the latter being in the form of oppositely extending angle rails.

As illustrated in Figure 2 these trackways 10 and 11 are arranged one above the other and movable longitudinally along these upper trackways to the various compartments or booths is an order collection carriage 12 carrying a relatively deep sack or container 13, while movable over the lower trackways is a small order wheeled carriage 14 carrying a shallow sack or container 15.

To provide for vertical adjustment of the trackways for the convenience of the compartment or booth attendants the vertical flanges of the angle rails are formed with vertical slots 16 engageable with selected vertically alined headed studs 17 projecting laterally from the store furniture along opposite sides of the longitudinal passage 9.

The collection carriages 12 and 14 are identical in construction as are the containers 13 and 15, the latter, however, being shallow so as to clear the floor of the building. These portable carriages comprise a rectangular frame 18 mounted upon wheels 19 movable over the trackways. To suspend the containers, the frames carry hooks 20 within their corners which engage the interlaced securing string 21 of the containers to support the latter within the frame with its upper end open.

A pocket 22 is carried by the frame for receiving an order slip 23 containing the purchaser's name and address, which after the order has been filled is folded to expose the name and address to view and placed in a pocket or card holder 24 and carried by the string 21 to subsequently enable the deliveryman to deliver the goods to the purchaser.

As the portable carriages reach the ends of the trackways at the far end of the store the

containers are removed therefrom and temporarily placed on assorting tables 26 where they are assorted and suspended from routing racks 27 arranged at the rear of the store adjacent a rear exit 28.

The routing racks comprise a base 29 from which vertical standards 30 arise and supported in these standards are vertical rows of rods 31. In practice there will be a sufficient number of standards to cover a certain territory so that there will be a rod corresponding to each street and as illustrated in Figure 8 the street numbers designating each street are inscribed on the standards adjacent the rods. With this arrangement the deliveryman may route the orders to suit his convenience, and preferably the orders are grouped according to delivery zones, each group being strung upon a chain 32 whereby they may be conveniently carried to the delivery wagon through the rear exit 28.

The present invention is characterized by an improved storage bin making up the booths or compartments 5, comprising a base or bottom 33 from the ends of which spaced vertical bars 34 extend, the latter being arranged in longitudinal alined pairs. Extending longitudinally of the base or bottom and supported by the outermost longitudinal front and rear alined pairs of bars 34 are groups of spaced vertically alined guide rods 35, the groups at the front and rear being disposed in transverse alinement with the front groups having a less number of rods than the rear groups.

Extending longitudinally of the base and attached to the vertical bars intermediate their ends is a plurality of angle bars 36. Supported upon the bottom or base 33 and the angle bars 36 at the ends thereof are oppositely arranged fixed partition members 37 formed from lengths of sheet metal and each having a bottom wall 38 and a vertical wall 39. The vertical walls of these fixed partition members are provided at their opposite ends with alined openings 40 according to the number of rods in the groups and through which the rods pass. Intermediate their ends these vertical walls are attached to the intermediate vertical bars 34 by fastenings 41.

Longitudinally adjustable on the bottom or base or angle bars are a plurality of partition members 42 identical to the partition members 37, but having their vertical walls slidably engaged with the rods 35 so that the partition members may be adjusted longitudinally and with the groups of rods, provide bins of varying widths to suit the needs of the attendants.

As illustrated in Figure 3 these adjustable partition members are arranged parallel to the fixed partition members at the right hand end of the bin with their bottom walls overlapped and may be adjusted to provide vertical rows of bins of desired width. It will be observed that the partition members adjacent the left end of the bin have their bottom walls shorter than the bottom walls of the remaining partition members and project on to the fixed partition members at this end of the bin. This arrangement permits adjustment of those partition members having the shorter bottom walls, a maximum distance to the left of the bin to produce compartments at this end, of a maximum width, when desired. Should it be desired the number of compartments may be reduced by shifting the necessary partition members to a position where their vertical walls will contact and their bottom walls superimposed.

As illustrated in Figure 1 the booths or compartments 5 are formed by the bins just described, that is, a plurality of these bins are arranged parallel with longitudinal disposed bins at the rear and bridging the adjacent parallel bins. To facilitate entrance to the booths or compartments the longitudinally extending bins are mounted on rollers 44.

A cashier's booth 45 is arranged adjacent the store entrance 46 which serves both the self service and order service departments.

A basket containing table 47 is arranged adjacent the entrance for holding baskets for the self service department.

"Operation."

Assuming a purchaser calls at the store the order is given to the cashier who tabulates it upon an order slip and transmits it to the attendant at the first booth. The attendant then fills his part of the order from his stock and places it in a container suspended from one of the movable carriages which is now at the forward end of the trackways. The attendant then calls out other articles on the slip known by him to be in the stock of the booth 8 directly across from him, to the attendant therein, who also places the specified articles in the container. Upon placing the order slip in the pocket 22 of the carriage the latter is advanced rearwardly on the trackways and stopped at the adjacent compartments 5 and 8 and the operation repeated until the completed order arrives at the rear end of the trackways, whence the container is removed from the carriage and placed upon the assorting rack as above stated, the carriage then being returned to the forward end of the trackways. In the event the purchaser merely desires a small order and wishes to take the same with him the same operation is repeated, but a shallow container is attached to the carriage which is moved along the lower trackways. With regard to the self service department the patrons enter the store and make the rounds of the usual containers and bins in the well known manner and pay the cashier upon leaving the store.

What I claim is:

1. In a store system a plurality of longitu-

dinally alined booths containing merchandise, trackways extending along the booths, a portable vehicle movable from the trackways to the various booths, a removable order receptacle carried by the carriage, and means for routing the orders at the rear ends of the trackways.

2. In a store system rows of booths, a portable carriage movable longitudinally along the booths, to successively stop adjacent the latter, a pocket carried by the carriage for containing an order slip to indicate to attendants in the booths articles of merchandise to be removed therefrom and placed in the carriage.

3. In a store system a plurality of longitudinally alined booths, a portable carriage movable successively to each of the booths, a removable bag carried by the carriage, and routing racks upon which the bags are placed according to street location after the order has been filled.

4. In a store system a plurality of longitudinally alined booths, a portable carriage movable successively to each of the booths, a removable bag carried by the carriage, and routing racks upon which the bags are placed according to street location after the order has been filled, each rack including a plurality of rods, each of which corresponds to a predetermined street.

5. In a store system rows of longitudinally alined booths, trackways between the rows of booths, a portable carriage movable over the trackways and open at the bottom, and means for suspending a removable order container from the carriage.

6. In a store system a plurality of longitudinally alined booths from which merchandise is to be dispensed by attendants therein, a carriage movable over the trackways to be stopped in front of each booth, elements associated with the carriage for supporting an order receiving container from the carriage and a routing rack at the rear end of the trackways including a plurality of supported horizontal rods, each of which corresponds to a street, and means for identifying each of the rods.

MELVILLE M. MOORE.