June 28, 1927. 1,633,886

J. R. DUFFIN

SELF SERVING STORE

Filed Dec. 4, 1926 4 Sheets-Sheet 1

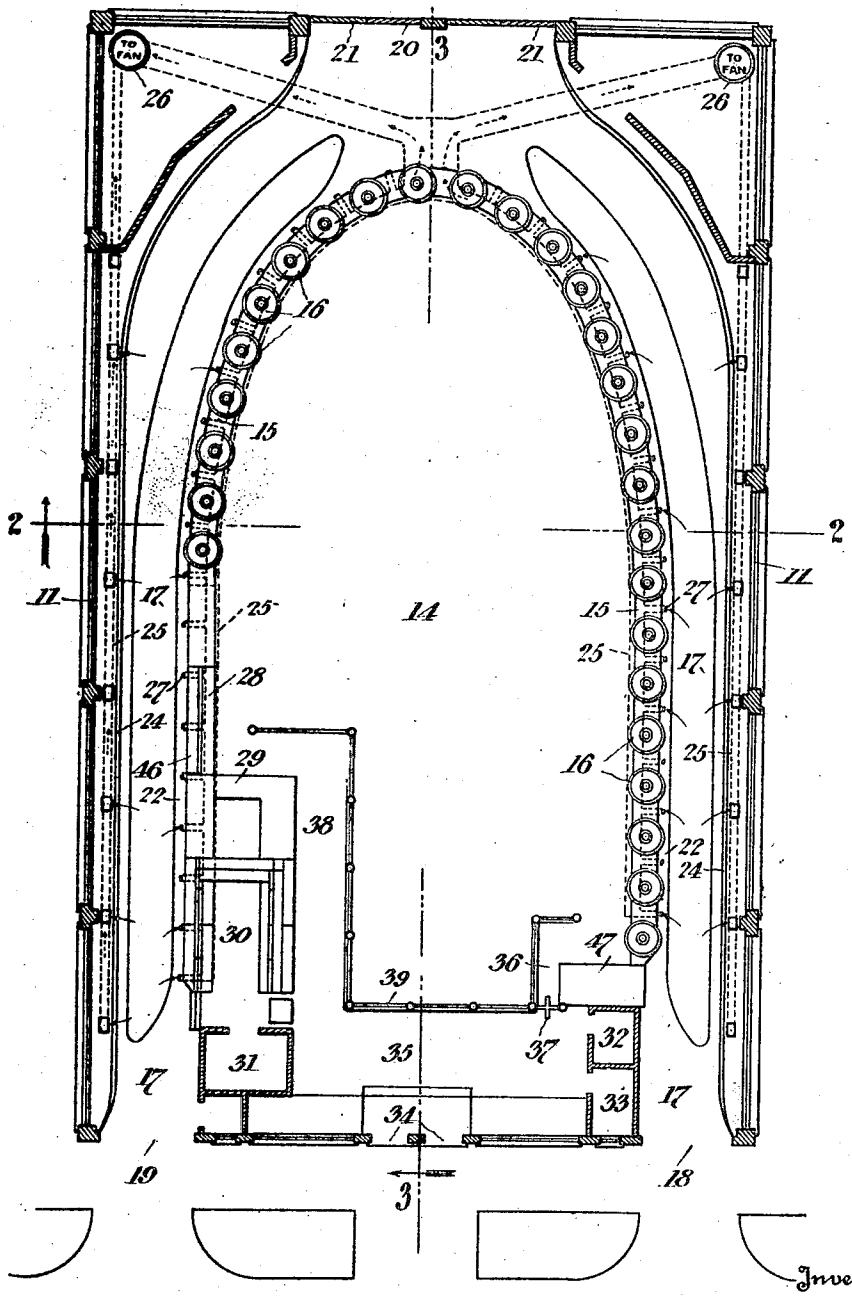


Fig. 1.

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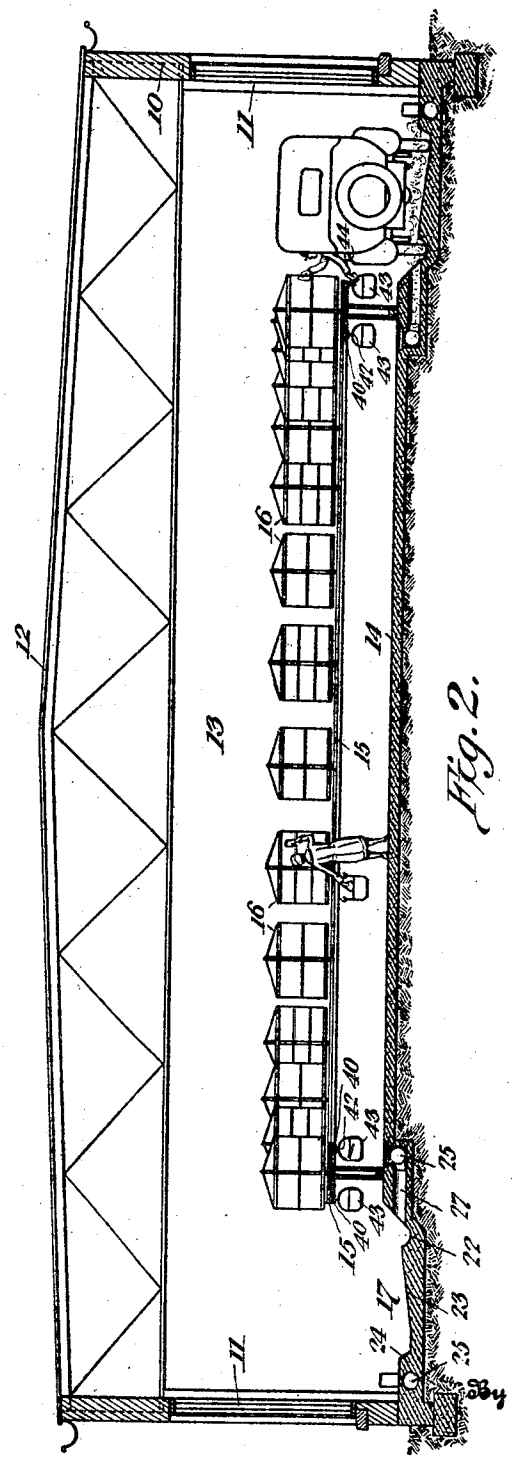


Fig. 2.

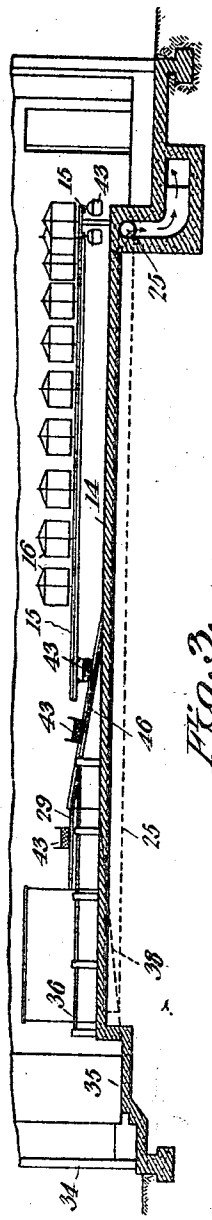


Fig. 3.

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Fig. 4.

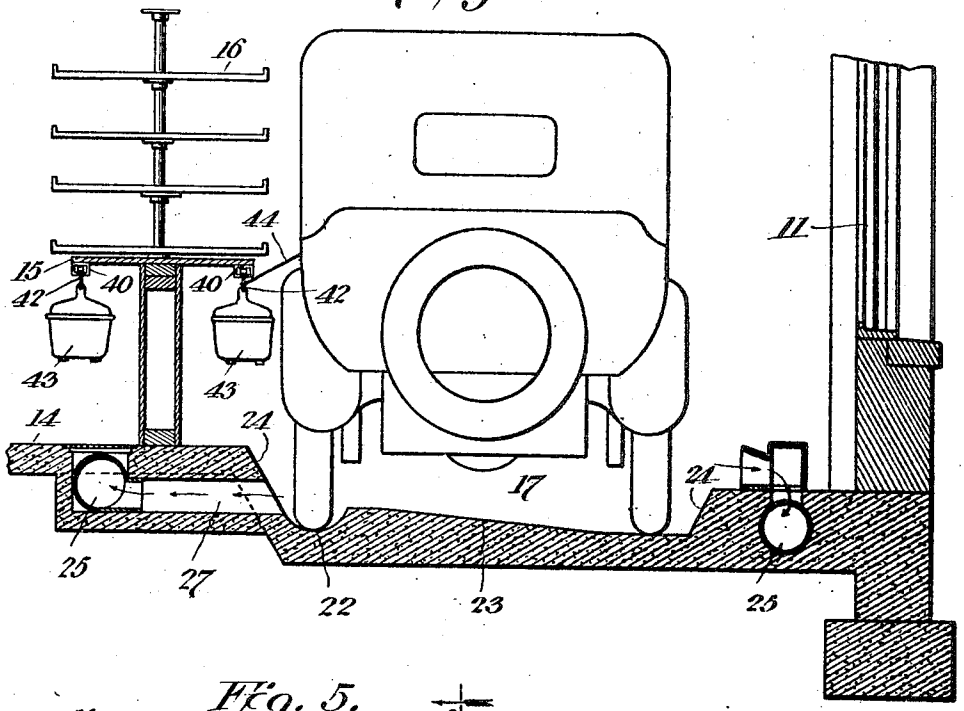
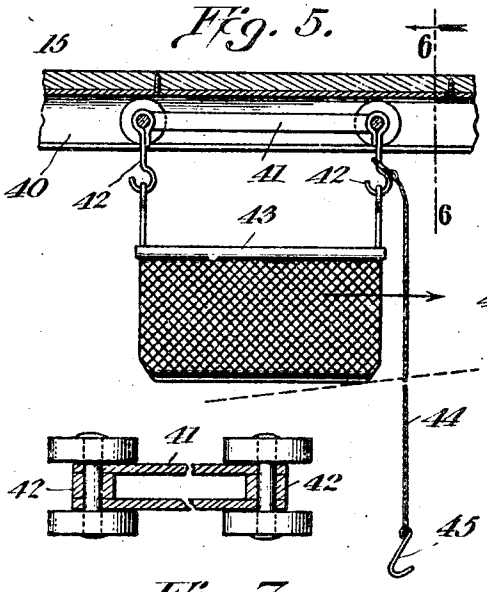


Fig. 5.



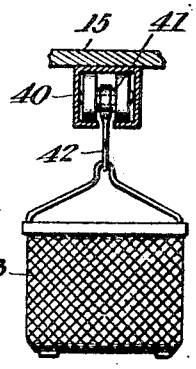


Fig. 6.

Fig. 7.

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SELF SERVING STORE

Filed Dec. 4, 1926 4 Sheets-Sheet 4

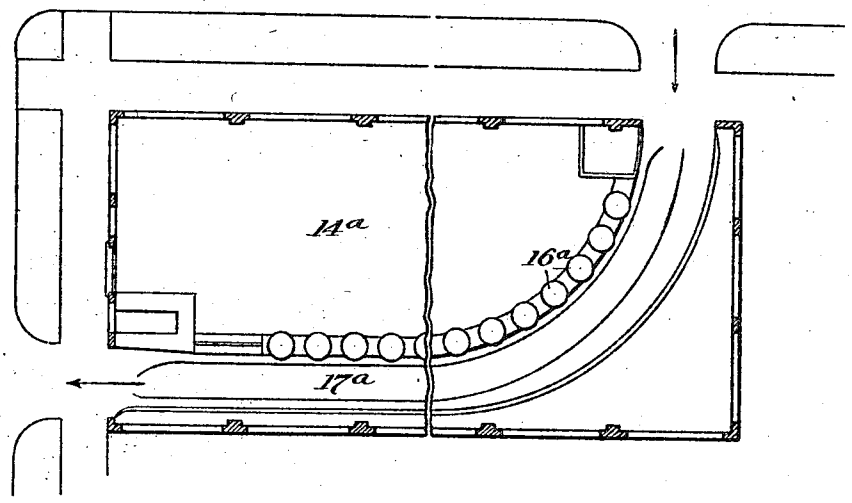


Fig. 8.

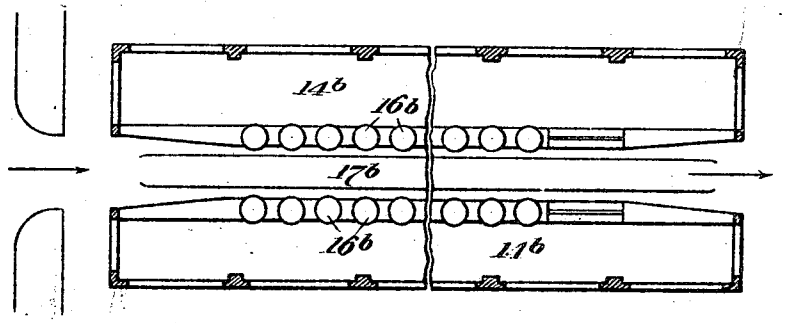


Fig. 9.

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Patented June 28, 1927. 1,633,886

UNITED STATES PATENT OFFICE.

JAMES R. DUFFIN, OF LOUISVILLE, KENTUCKY.

SELF-SERVING STORE.

Application filed December 4, 1926. Serial No. 152,602.

The present invention relates to self-serving store structures, namely, that type in which the customer selects and secures for himself the articles he desires to purchase, which articles are then checked up by a cashier and are wrapped for transportation away from the store.

The object is to provide a novel, simple and practicable means, whereby occupants of vehicles and pedestrians without interference can secure their purchases, the apparatus moreover being compact and capable of various modifications according to the location and form of the available ground.

In the accompanying drawings:

Figure 1 is a plan view of one embodiment of the invention,

Figure 2 is a cross sectional view on the line 2—2 of Figure 1,

Figure 3 is a longitudinal view on the line 3—3 of Figure 1,

Figure 4 is an enlarged sectional view through one side portion of the apparatus,

Figure 5 is a longitudinal sectional view of the trackway and a carriage and container suspended therefrom,

Figure 6 is a sectional view on the line 6—6 of Fig. 5,

Figure 7 is a plan view of a carriage,

Figures 8 and 9 are diagrammatic views indicating modified forms of construction.

In the embodiment disclosed in Figures 1 to 7 inclusive, a suitable building is provided, having side walls 10 with windows 11 and a roof structure 12, the whole enclosing a store space 13.

The central portion of this space is elevated, and is provided with a suitable floor 14. On the margins of this floor space is a substantially U-shaped support in the form of a counter 15, and mounted on this counter is a series of rotatable shelves 16 that are thus accessible from opposite sides of the counter. A driveway for vehicles extends around the outer side of the floor 14 and counter 15 and is designated 17. This driveway has an entrance at one corner of the building, shown at 18 in Figure 1 and an exit at the opposite corner of the same end, and shown at 19. The driveway may further have a rear entrance or outlet, as shown at 20 for the receipt of supply trucks and the like, this entrance however being ordinarily closed by suitable doors indicated at 21. The driveway as shown particularly in Figures 2 and 4 has along its inner side a trough 22 constituting a guideway for the inner wheels of the vehicles that traverse the driveway. The floor preferably slopes outwardly and downwardly from the outer wall of the trough 22, as shown at 23. The opposite sides of the driveway are provided with suitable curbs 24 that preferably incline inwardly and downwardly. Along these curbs extend exhaust conduits 25 leading to suitable exhaust mechanism, as for example, fans 26 that discharge outside the building at any suitable points. The conduits have intake ports 27 opening along the driveway and thus means are provided for removing the exhaust gases of automobiles passed through the driveway.

Towards the exit 19 of the driveway the rotatable shelves may be dispensed with, and the counter suitably arranged for vegetables, dairy products and refrigerated materials. Such a space is indicated at 28. Nearer the exit there is a wrapping table 29, beyond which is a cashier's booth 30. A refrigerator may be placed at 31 and suitable rest-rooms may be provided as 32 and 33.

A suitable entrance for pedestrians is shown at 34, and opens into a vestibule 35. From this space a passageway 36, controlled by a turnstile 37, opens into the central space 14, so that pedestrians can readily gain access to the space 14 and follow along the counter, selecting goods. These are brought to the counter 29, along side which a passageway 38 leads past the cashier's desk and back into the vestibule 35. The vestibule 35 may be on a slightly lower level than the space 14, and it is separated therefrom by any suitable means, as for example, a railing 39.

Supported on the underside of the counter 15 along its opposite margins are longitudinally disposed tracks 40, having open ends in which can be placed wheeled carriages 41. These tracks are preferably of the well-known character, being U-shaped in cross section. From the carriages depend hanger hooks 42, on which can be hung baskets 43. The forward hook in each carriage is preferably provided with a suitable cable 44 having a hook or other fastener 45 secured to its front end, this hook being adapted to be attached to a convenient part of an automobile for the carriages located in the outer track or can be grasped by a pedestrian when the carriages are placed in the inner track. These trackways, as shown in

Figure 3, terminate at their delivery end above an inclined runway 46 so located that the baskets or containers 43 will slide up the same, and thus become disengaged from the carriages. At the entrance end of the counter and shelving a suitable bin 47 is provided for the reception of baskets and carriages that can be thus started at said end.

It is believed the operation will be clear from the drawings. The occupant of a vehicle who wishes to make purchases drives through the entrance 18, secures a carriage with a basket suspended therefrom and attaches the cable to the automobile, so that the basket will be convenient to receive goods. He then traverses the driveway and secures from the different rotatable shelves the articles desired, the basket being pulled along by the automobile until the cashier's and wrapping tables are reached, whereupon the amount due for the purchases is determined, the packages are wrapped, and after payment has been made the vehicle departs from the exit 19. A pedestrian entering through the doors 34, passes the turnstile 37 and secures a basket and carriage on the inner side. This in turn is transported along the inner side of the shelving where the selections are made and the basket is pulled to the wrapping counter and cashier's booth, where the exchange is made, customers departing again through the doors 34. It will thus be evident that two classes of customers have free access to all the goods, and neither interferes with the other.

That the structure can be widely modified will be evident from the diagrammatic views of Figures 8 and 9. In Figure 8 a corner store is shown with a curved driveway illustrated at 17^a. The space for the pedestrian customer is shown at 14^a. In this instance the vehicles enter from one street and make their exit on another. In Figure 9 a driveway is shown directly through the building at 17^b with the shelving on opposite sides at 16^b. In this case two areas 14^b are provided on opposite sides of the driveways. It will of course be understood that the apparatus shown in detail in Figures 1–7 inclusive are employed in connection therewith.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim is:

1. In a store structure of the character set forth, the combination with a display means for goods, of a vehicle driveway along one side of the same that gives occupants of vehicles traversing the same access to the goods, an area for pedestrians along the opposite side of said display means and affording access to the goods on said means, and an entryway to said area.

2. In a store structure of the character set forth, the combination with display shelving for goods, of a vehicle driveway along one side of the same that gives occupants of vehicles traversing the same access to the goods, an area for pedestrians along the opposite side of said display shelving and affording access to the goods on said means, and an entryway to said area.

3. In a store structure of the character set forth, the combination with a series of rotatable display shelves for goods, of a vehicle driveway along one side of the same that gives occupants of vehicles traversing the same access to the goods, an area for pedestrians along the opposite side of said display shelves and affording access to the goods on said means, and an entryway to said area.

4. In a store structure of the character set forth, the combination with a support and a plurality of rotatable shelves for goods mounted thereon, of a driveway for vehicles along one side of the shelves that gives occupants of the vehicles traversing the same access to the goods on said shelves, and a pathway for pedestrians along the opposite side of the shelves and at a higher elevation than the driveway.

5. In a store structure of the character set forth, the combination with extended means for displaying goods, of a driveway for vehicles alongside the same, having a trough for guiding the wheels of one side of the vehicle.

6. In a store structure of the character set forth, the combination with extended means for displaying goods, of a driveway for vehicles alongside the same having a trough for guiding the wheels of one side of the vehicle, said driveway sloping transversely downwardly from the inner side wall of the trough.

7. In a store structure of the character set forth, the combination with extended means for displaying goods, of a driveway for vehicles alongside the same, and exhaust means for drawing off the exhaust gases from the driveway.

8. In a store structure of the character set forth, the combination with extended means for displaying goods, of a driveway for vehicles alongside the same, and exhaust means for drawing off the exhaust gases from the driveway, including inlets located along the driveway.

9. In a store structure of the character set forth, the combination with extended means

for displaying goods, of a driveway for vehicles alongside the same, having curbs and a trough for the wheels of the inner side of the vehicles, exhaust conduits, and inlets to said conduits located along the curbs.

10. In a store structure of the character set forth, the combination with a support and display shelving thereon, of a driveway for vehicles alongside the support, a track mounted on the support below the shelves, goods carriers movable on the track, and means for attaching the carriers to vehicles traversing the driveway.

11. In a store structure of the character set forth, the combination with a support and display shelving thereon, of a track on the support, carriages that move on the track, containers detachably suspended from the carriages, a receiving table for the containers adjacent the track, and means for detaching the containers from the carriages as they approach the receiving table.

12. In a store structure of the character set forth, the combination with a support and display shelving thereon, of a track on the support, carriages that move on the track, containers detachably suspended from the carriages, a receiving table for the containers adjacent to the track, and an inclined runway in advance of the table and engaged by the containers as the carriages approach said table.

13. In a store structure of the character set forth, the combination with a support and display shelving thereon, of a track on the support, carriages that move on the track, containers detachably suspended from the carriages, a receiving table for the containers adjacent the track, a driveway for vehicles alongside the support and shelving, means for attaching the carriages to vehicles traversing the driveway, and an inclined runway in advance of the table and engaged by the containers as the carriages approach said table.

In testimony whereof, I affix my signature.

JAMES R. DUFFIN.