F. W. DAVIS.

SELF SERVING STORE.

APPLICATION FILED APR. 12, 1919.

1,345,481.

Patented July 6, 1920.

2 SHEETS—SHEET 1.

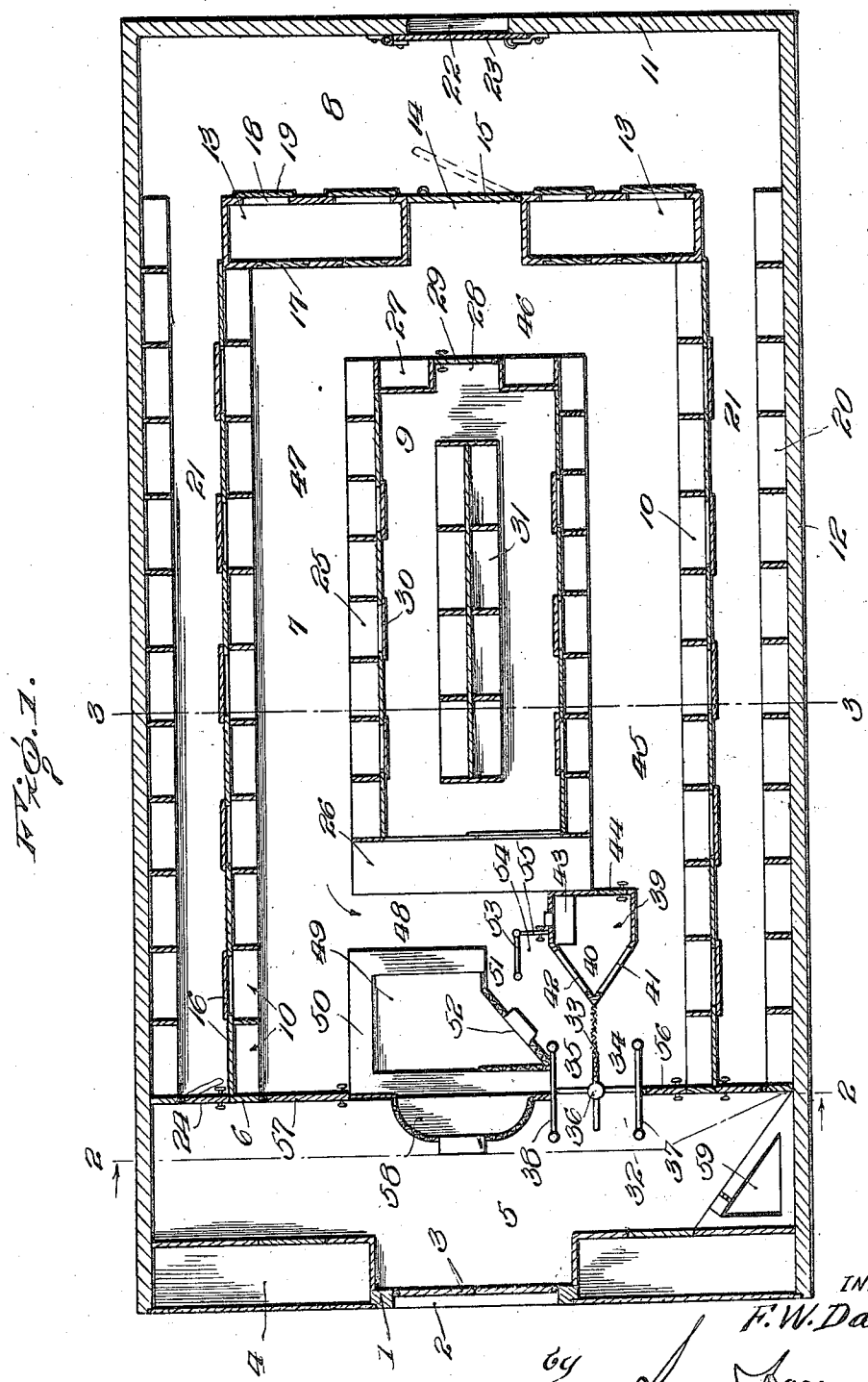


FIG. 1.

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Attys

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2 SHEETS—SHEET 2.

Fig. 2.

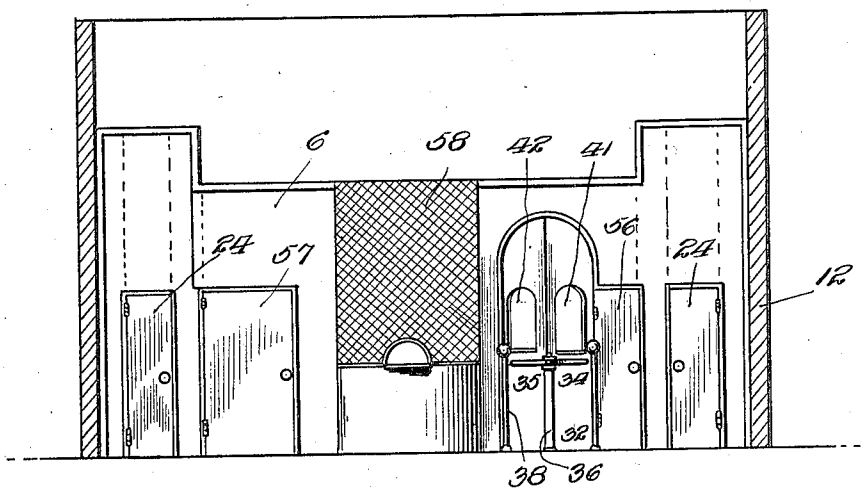
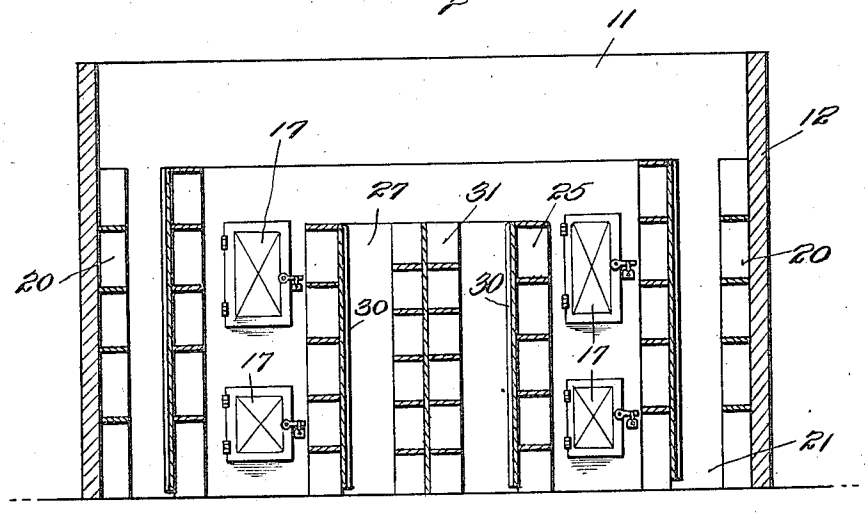


Fig. 3.



INVENTOR.

F. W. Davis.

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UNITED STATES PATENT OFFICE.

FREDERICK W. DAVIS, OF DAYTON, OHIO.

SELF-SERVING STORE.

1,345,481. Specification of Letters Patent. Patented July 6, 1920.

Application filed April 12, 1919. Serial No. 289,635.

To all whom it may concern:

Be it known that I, FREDERICK W. DAVIS, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Self-Serving Stores, of which the following is a specification.

This invention relates to improvements in store service and more particularly to that particular type of store service in which the customers are required to pass, and thus have brought to their attention, all of the various goods on sale, the customers making their selections from the goods and, prior to leaving the store, being required to pass a station where the selections are inspected, checked up, and then paid for by the customer. The primary purposes of this class of store service are, of course, to reduce to the minimum the overhead expenses of conducting the business, thus enabling the stock to be sold at lower prices to customers; to increase the amount of goods sold by bringing all of the varieties of goods carried in stock to the customer's attention in the most attractive manner; and, to provide for the more expeditious serving of the customers so that a greater number of customers may be handled in a given period of time than would be possible by the employment of clerks to wait upon the customers. It follows therefore that in order that the benefits to be derived from such a system may be fully realized, the arrangement of appurtenances such as cabinets and counters, aisles, stock rooms, etc., shall be such that the customers will not be confused in making their purchases by being compelled to pass through any intricate arrangement of aisles and that the replenishment of stock may be accomplished without interfering with the progress of the customers through the store and the making of their selections from the stock. One object of the present invention is therefore to provide a novel arrangement of the stock room or rooms and the display shelves or other goods containers whereby the stock upon the shelves or the like may be replenished from the stock room, thus avoiding the necessity of supplying these shelves or the like by carrying stock thereto through the aisles through which the customers must pass.

Another object of the invention is to provide an arrangement of aisles which will not in any way be confusing to the customers entering the store, thus avoiding the embarrassment which might deter new customers from patronizing the store.

A further object of the invention is to provide an arrangement such that the stock on sale may be displayed to the best advantage and in the most attractive manner.

The invention also has as a further object to provide an arrangement whereby if desired an auxiliary checker may be employed if the number of customers entering the store should warrant.

A still further object of the invention is to provide an arrangement whereby goods may be returned or exchanged without the necessity of the customer entering the salesroom of the store for this purpose.

A further object of the invention is to provide a novel arrangement of entrance and exit passageways which will greatly facilitate the passage of the customers through the store and which also will result in an economy in space.

The invention also contemplates an arrangement whereby goods may be carried to the stock room or rooms through the front of the store as well as through the rear and incidentally the arrangement is such that the store may be quickly cleared of customers in an emergency and without the customers being required to make the complete circuit of the aisles in the salesroom.

In the accompanying drawings:

Figure 1 is a view partly in plan and partly in section illustrating in a general way the arrangement of the store and its appurtenances;

Fig. 2 is a sectional view on the line 2—2 of Fig. 1 looking in the direction indicated by the arrow;

Fig. 3 is a similar view on the line 3—3 of Fig. 1.

Fig. 1 of the drawings illustrates in plan a storeroom divided off and arranged in accordance with the principles of the present invention. The front of the store is indicated in general by the numeral 1 and is provided, preferably centrally, with a doorway 2 closed by the usual doors 3 of any desired type. At each side of the doorway the store front may be provided with a display window or case 4 and within these windows or cases there may be arranged any desired display of goods carried in stock. En-

trance is gained through the doorway 2 to a lobby 5 located between the store front and a transverse partition 6 which divides the interior of the storeroom at a suitable distance inwardly from the store front. This partition 6 may extend to the ceiling of the storeroom or only partway to the ceiling as shown in Fig. 2 of the drawings, and will presently be more specifically described.

In addition to the lobby 5, the storeroom is divided to provide a salesroom, indicated in general by the numeral 7, and main and auxiliary stock rooms indicated respectively by the numerals 8 and 9. In providing the salesroom 7, two series of cabinets or tiers of shelves, indicated by the numeral 10 are arranged within or built into the storeroom, each series extending rearwardly from the partition 6 to a point suitably spaced from the rear wall 11 of the storeroom and being spaced a suitable distance inwardly from the adjacent side wall 12 of the storeroom. These series of cabinets or tiers of shelves, or goods holders of any other nature, thus form the side walls of the salesroom 7, the partition 6 forming the front wall of the said room, and the rear wall of the room being furnished by refrigerators or cold storage cabinets 13 arranged at opposite sides of a doorway 14 designed to be normally closed by a door 15. The cabinets or tiers of shelves 10 are preferably open at their sides which are presented toward the interior of the salesroom 7, the backs or opposite sides of the cabinets being closed by suitable doors 16 preferably mounted for sliding movement. The refrigerators or cold storage cabinets, or such other cabinets or the like as are to constitute the rear wall of the salesroom, may be provided with glass paneled doors 17 either mounted to slide or hingedly mounted to swing into the salesroom 7, and doorways 18 are provided in the opposite sides or rear walls of the refrigerators or the like and may be closed by doors 19. Inasmuch as the cabinets or shelves 10 are spaced inwardly from the side walls 12 of the storeroom and the refrigerators or the like 13 are spaced inwardly from the rear wall 11 of the said storeroom, the said refrigerators or the like and the rear wall of the storeroom together with the shelves 10 and side walls 12 define or bound the main stockroom 8, this stockroom surrounding three sides of the salesroom 7. Cabinets or tiers of shelves 20 are arranged along the side walls 12 and thus aisles 21 are formed between said shelves 20 and the cabinets or shelves 10 and communicate with the main portion of the stockroom 8.

Due to the arrangement above described the shelves 20 may be stocked with goods which are to be transferred to the shelves 10 in replenishing the stock on sale and as a matter of convenience the same variety of goods will be kept in stock upon each of the shelves 20 as is on display and sale upon the particular shelf 10 directly opposite. Thus the replenishment of the stock may be effected in the most expeditious manner and without any confusion, it being only necessary to open any particular one of the doors 16 and to then transfer the goods in stock upon the shelves 20 to the respective shelves 10. These doors 16 may as a matter of convenience be provided with transparent panes so that the stock keeper may ascertain at a glance the quantity of any particular variety of goods on display and sale on any of the said shelves 10. Also the stock keeper may readily replenish the stock within the refrigerators or cold storage cabinets 13 by opening the doors 19. Stock may be carried into the stockroom 8 through a doorway 22 in the rear wall 11 of the stockroom and closed by a door 23, or it may be carried in through the doorway 2 and past doors 24 in the partition 6 at the forward end of the aisles 21. Of course, ordinarily these doors 24 will be kept latched or locked so that unauthorized persons cannot enter the stockroom, and this will also hold true of the door 15.

The auxiliary stock room 9 is located substantially centrally within the salesroom 7 and is bounded on its sides by cabinets or tiers of shelves 25, at its front by a display cabinet or tiers of shelves 26, and at its rear by other shelves or cabinets 27, these latter being located at opposite sides of a doorway 28 closed by a door 29. As in the case of the cabinets or shelves 10, the rear sides or backs of the cabinets 25 may be closed by suitable doors 30, and the display cabinet 26 and the cabinets 27 may be likewise provided with sliding or hinged doors. Thus the stock keeper within the auxiliary stockroom 9 may have access to any of the cabinets or shelves 25, 26 and 27 and may replenish the stock thereon from a series of tiers of shelves 31 arranged centrally within the room 9 and preferably facing toward the cabinets or shelves 25. Stock will, of course, be carried into the auxiliary stockroom 9 from the room 8 through the doors 15 and 29, but as there is ample space upon the shelves 31 for storage of a considerable amount of goods, this transfer of stock from the main to the auxiliary stockrooms may be accomplished prior to opening of the store or subsequent to closing of the store so as not to interfere with the passage of customers through the store.

Entrance to the store is to be had by way of a doorway 32 located in the partition 6 and divided by a partition 33 into an entrance side or passageway 34 and an exit side or passageway 35. A turnstile 36, which may be provided with means to prevent its turning movement except in one

direction, is positioned within the doorway 32 with its axis of turning movement located in the vertical plane of the partition 33 and, of course, this turnstile must be passed by all customers who enter through the passageway 34 or leave through the passageway 35. Suitable rails 37 and 38 may be arranged at the opposite sides of the turnstile 36 to define the outer sides of the passageways 34 and 35, respectively.

Between the inner or rear end of the partition 33 and the adjacent corner of the display cabinet or case 26 there is arranged a booth, indicated in general by the numeral 39, and this booth is provided interiorly with a basket shelf or rack 40 and has converging side walls between which the said shelf or rack is located, one of the walls being provided with a delivery window 41 and the other with a receiving window 42. A counter 43 may also be arranged within the booth and the booth may be occupied by an assistant checker if the number of customers warrants. The provisions made for the assistant checker will presently be more specifically described. Access to the booth is to be had by way of a door 44 in the rear wall of the booth.

From the preceding description it will be understood that the customers will enter the lobby 5 by way of the doors 3 and will pass through the entrance passage 34 into the aisle 45 which is formed between the adjacent row or series of cabinets or shelves 10 and the corresponding shelves or cabinets 25. In passing down the aisle the customer may select any goods desired from either of these rows of cabinets or shelves and may also select goods from that one of the refrigerators 13 located at the rear end of this aisle. Passing from the aisle 45 the customer will enter the aisle 46 which extends between the refrigerators and the cabinets or shelves 27 and may then make his selection from the said cabinets or shelves 27 and from the other one of the refrigerators 13. The customer will next pass along the aisle 47 which extends between the other series of cabinets or shelves 10 and the other cabinets or shelves 25, making his selections as before. At the forward end of the aisle 47 and directly in advance but spaced forwardly from the cabinet 26 by an aisle 48, there is arranged a booth 49 surrounded by a counter 50 at which the customer, entering the aisle 48, may submit the goods selected by him and placed within the basket which he has taken through the window 41 from the shelf or rack 40, to the checker who occupies the said booth 49. It is the duty of this attendant to inspect the goods selected, suitably wrap the same, and determine the cost. Having obtained his sales slip, the customer will pass from the aisle 48 through a passageway 51 to the cashier's booth 52 where he will make payment in accordance with the amount of his sales slip and may then leave the store through the exit passage 35 and by way of the turnstile 36. A railing or partition 53 divides the space between the booth 49 and the booth 39 into the said passageway 51 and an auxiliary passageway 54, the latter normally closed, however, by a gate or door 55 which may be opened, if there are a great number of customers in the store, so that some of the customers may pass out through the passageway 51 and others through the passageway 54, the latter customers having their selections inspected and checked by the auxiliary checker within the booth 39. However, whether the purchasers leave by way of the passageway 51 or the passageway 54, they must pass the cashier's booth 52. As the customers leave the cashier's booth they will return their baskets to the basket shelf or rack 40 through the window 42.

In order that the store may be quickly cleared in an emergency, emergency doors 56 and 57 are located respectively at the forward ends of the aisles 45 and 47. Thus while the aisle 45 under normal conditions is an entrance aisle solely and is connected by the connecting aisle 46 with the aisle 47 which is, properly speaking, the exit aisle, in an emergency when both doors 56 and 57 are thrown open, both aisles 45 and 47 may become exit aisles.

In order to accommodate customers desiring to return or exchange goods, a window or cage for this purpose, indicated by the numeral 58, is provided at the front of the booth 49 and extends a suitable distance forwardly from the partition wall 6 so that the needs of customers may be attended to in this respect without the customers being required to enter the salesroom.

Also it is desirable that a booth 59 be provided in one corner of the lobby 5, preferably that corner toward which the customers pass in reaching the entrance passage 34, so that any parcels which the customers may have with them may be checked thus relieving the customers of the necessity of carrying said parcels into said salesroom where they might be lost, or concerning which there might be some dispute at the checking booth 49 or the auxiliary checking booth 39.

While the drawings more or less specifically illustrate and I have herein described a particular arrangement of aisles, cabinets, shelves, and other appurtenances, it will be understood that this arrangement may be departed from within the terms of the claims. For example the refrigerators or cold storage compartments 13 may be located otherwise than as shown in the drawings or may be replaced by shelves, cabinets of some other nature or by some other

means or devices for supporting articles to be displayed or placed on sale. Also instead of the single turnstile 36 provided between the entrance and exit passages 34 and 35, a separate turnstile may be arranged within each of these passages or the passages may be left open or they may be closed by suitable gates or doors.

Having thus described the invention, what is claimed as new is:

1. A store service arrangement comprising a salesroom having a continuous aisle therein having an entrance and an exit at one side of the room, a stockroom surrounding the remaining sides of the salesroom, article storage means dividing the said remaining sides of the salesroom from the stockroom and accessible from both rooms, and article storage means within the stockroom opposite certain of the first mentioned article storage means.

2. A store service arrangement comprising a salesroom having a continuous aisle having an entrance and an exit at one side of the room, a stockroom surrounding the other sides of the said salesroom, article storage means flanking the aisle and dividing the salesroom from the stockroom and accessible from either room, means for closing the said storage means to the stockroom, and article storage means located within the stockroom opposite and in relatively close proximity to certain of the first mentioned article storage means.

3. A store service arrangement comprising a salesroom having an entrance and an exit, article storage means arranged within the salesroom about the walls thereof, article storage means arranged within the salesroom in hollow formation whereby to provide an inclosure constituting a stockroom, the first and last mentioned article storage means providing between them a continuous aisle leading from the entrance to the exit.

4. A store service arrangement comprising a salesroom having an entrance and an exit, article storage means arranged within the salesroom about the walls thereof, article storage means arranged within the salesroom in hollow formation whereby to provide an inclosure constituting a stockroom, the first and last mentioned article storage means providing between them a continuous aisle leading from the entrance to the exit, and the last mentioned article storage means being accessible from both the salesroom and the stockroom.

5. A store service arrangement comprising a salesroom having an entrance and an exit, article storage means arranged within the salesroom about the walls thereof, article storage means arranged within the salesroom in hollow formation whereby to provide an inclosure constituting a stockroom, the first and last mentioned article storage means providing between them a continuous aisle leading from the entrance to the exit, the last mentioned article storage means being accessible from both the salesroom and the stockroom, and a stockroom partly surrounding the salesroom, the first mentioned article storage means being accessible both from the salesroom and the last mentioned stockroom.

6. A store service arrangement comprising a salesroom, a main stockroom partly surrounding the salesroom, article storage cabinets or the like defining certain of the walls of the salesroom and extending between the salesroom and stockroom and accessible from both rooms, article storage means within the salesroom arranged in hollow formation, the inclosure defined by the last mentioned article storage means constituting an auxiliary stockroom, the last mentioned article storage means being accessible from both the salesroom and the auxiliary stockroom, and an aisle extending continuously within the salesroom and having an entrance and an exit and flanked by the first and last mentioned article storage means.

7. A store service arrangement comprising a salesroom, a main stockroom partly surrounding the salesroom, article storage cabinets or the like defining certain of the walls of the salesroom and extending between the salesroom and stockroom and accessible from both rooms, article storage means within the salesroom arranged in hollow formation, the inclosure defined by the last mentioned article storage means constituting an auxiliary stockroom, the last mentioned article storage means being accessible from both the salesroom and the auxiliary stockroom, an aisle extending continuously within the salesroom and having an entrance and an exit and flanked by the first and last mentioned article storage means, and duplicate article storage means arranged within the main stockroom and located opposite certain of the first mentioned article storage means.

8. A store service arrangement comprising a salesroom, a main stockroom partly surrounding the salesroom, article storage cabinets or the like defining certain of the walls of the salesroom and extending between the salesroom and stockroom and accessible from both rooms, article storage means within the salesroom arranged in hollow formation, the inclosure defined by the last mentioned article storage means constituting an auxiliary stockroom, the last mentioned article storage means being accessible from both the salesroom and the auxiliary stockroom, an aisle extending continuously within the salesroom and having an entrance and an exit and flanked by the first and last men-

tioned article storage means, duplicate article storage means arranged within the main stockroom and located opposite certain of the first mentioned article storage means, and duplicate article storage means arranged within the auxiliary stockroom and located opposite certain of the last mentioned article storage means.

9. A store service arrangement comprising a salesroom, a main stockroom partly surrounding the salesroom, article storage cabinets or the like defining certain of the walls of the salesroom and extending between the salesroom and stockroom and accessible from both rooms, article storage means within the salesroom arranged in hollow formation, the inclosure defined by the last mentioned article storage means constituting an auxiliary stockroom, the last mentioned article storage means being accessible from both the salesroom and the auxiliary stockroom, an aisle extending continuously within the salesroom and having an entrance and an exit and flanked by the first and last mentioned article storage means, the main and auxiliary stockrooms each having a doorway and the said doorways being located opposite each other and establishing communication between the salesroom and the respective stockroom.

10. A store service arrangement comprising a salesroom, a main stockroom partly surrounding the salesroom, article storage cabinets or the like defining certain of the walls of the salesroom and extending between the salesroom and stockroom and accessible from both rooms, article storage means within the salesroom arranged in hollow formation, the inclosure defined by the last mentioned article storage means constituting an auxiliary stockroom, the last mentioned article storage means being accessible from both the salesroom and the auxiliary stockroom, an aisle extending continuously within the salesroom and having an entrance and an exit and flanked by the first and last mentioned article storage means, the main and auxiliary stockrooms each having a doorway and the said doorways being located opposite each other and establishing communication between the salesroom and the respective stockrooms, the main stockroom having an outer doorway located opposite its doorway which establishes communication between it and the salesroom.

11. A store service arrangement comprising a storeroom having a front provided with an entrance and an exit, article storage means arranged within the storeroom in hollow formation to provide an inclosure constituting a salesroom and dividing said storeroom into said salesroom and a stockroom surrounding the salesroom except at the front, and means defining a continuous aisle within the salesroom extending from the entrance to the exit and flanked by the said article storage means.

12. A store service arrangement corprising a storeroom having a front provided with an entrance and an exit, article storage means arranged within the storeroom in hollow formation to provide an inclosure constituting a salesroom and dividing said storeroom into said salesroom and a stockroom surrounding the salesroom except at the front, means defining a continuous aisle within the salesroom extending from the entrance to the exit and flanked by the said article storage means, the said storage means being accessible from both the salesroom and the stockroom, and duplicate article storage means arranged within the stockroom opposite and in relatively close proximity to certain of the first mentioned storage means.

13. A store service arrangement comprising a storeroom having a front provided with an entrance and an exit, article storage means arranged within the storeroom in hollow formation to provide an inclosure constituting a salesroom and dividing said storeroom into said salesroom and a stockroom surrounding the salesroom except at the front, means defining a continuous aisle within the salesroom extending from the entrance to the exit and flanked by the said article storage means, and means located between the entrance and exit ends of the aisle and defining the same and constituting means for the support or reception of baskets or the like, the last mentioned means being accessible from both the entrance and exit ends of the aisle.

14. A store service arrangement comprising a storeroom having a front provided with an entrance and an exit, article storage means arranged within the storeroom in hollow formation to provide an inclosure constituting a salesroom and dividing said storeroom into said salesroom and a stockroom surrounding the salesroom except at the front, means defining a continuous aisle within the salesroom extending from the entrance to the exit and flanked by the said article storage means, means located between the entrance and exit ends of the aisle and defining the same and constituting means for the support or reception of baskets or the like, and a checking station located opposite the said basket receiving means.

15. A store service arrangement comprising a storeroom having a front provided with an entrance and an exit, article storage means arranged within the storeroom in hollow formation to provide an inclosure constituting a salesroom and dividing said storeroom into said salesroom and a stockroom surrounding the salesroom except at the front, means defining a continuous aisle

within the salesroom extending from the entrance to the exit and flanked by the said article storage means, means located between the entrance and exit ends of the aisle and defining the same and constituting means for the support or reception of baskets or the like, a checking station located opposite the said basket receiving means, means dividing the exit end of the aisle for a portion of its length, the said checking station being located at one side of the said means, and an auxiliary checking station located at the other side of the said means.

16. A store service arrangement comprising a storeroom having a front provided with an entrance and an exit, article storage means arranged within the storeroom in hollow formation to provide an inclosure constituting a salesroom and dividing said storeroom into said salesroom and a stockroom surrounding the salesroom except at the front, means defining a continuous aisle within the salesroom extending from the entrance to the exit and flanked by the said article storage means, means located between the entrance and exit ends of the aisle and defining the same and constituting means for the support or reception of baskets or the like, a checking station located opposite the said basket receiving means, means dividing the exit end of the aisle for a portion of its length, the said checking station being located at one side of the said means, an auxiliary checking station located at the other side of the said means, and means whereby the divided passageway between the said means and the auxiliary checking station may be closed.

In testimony whereof I affix my signature.

FREDERICK W. DAVIS. [L. S.]