Nov. 2, 1926.

1,605,017

W. W. WAKEFIELD ET AL

INDOOR PARKING SERVICE

Filed Dec. 18, 1924

4 Sheets-Sheet 1

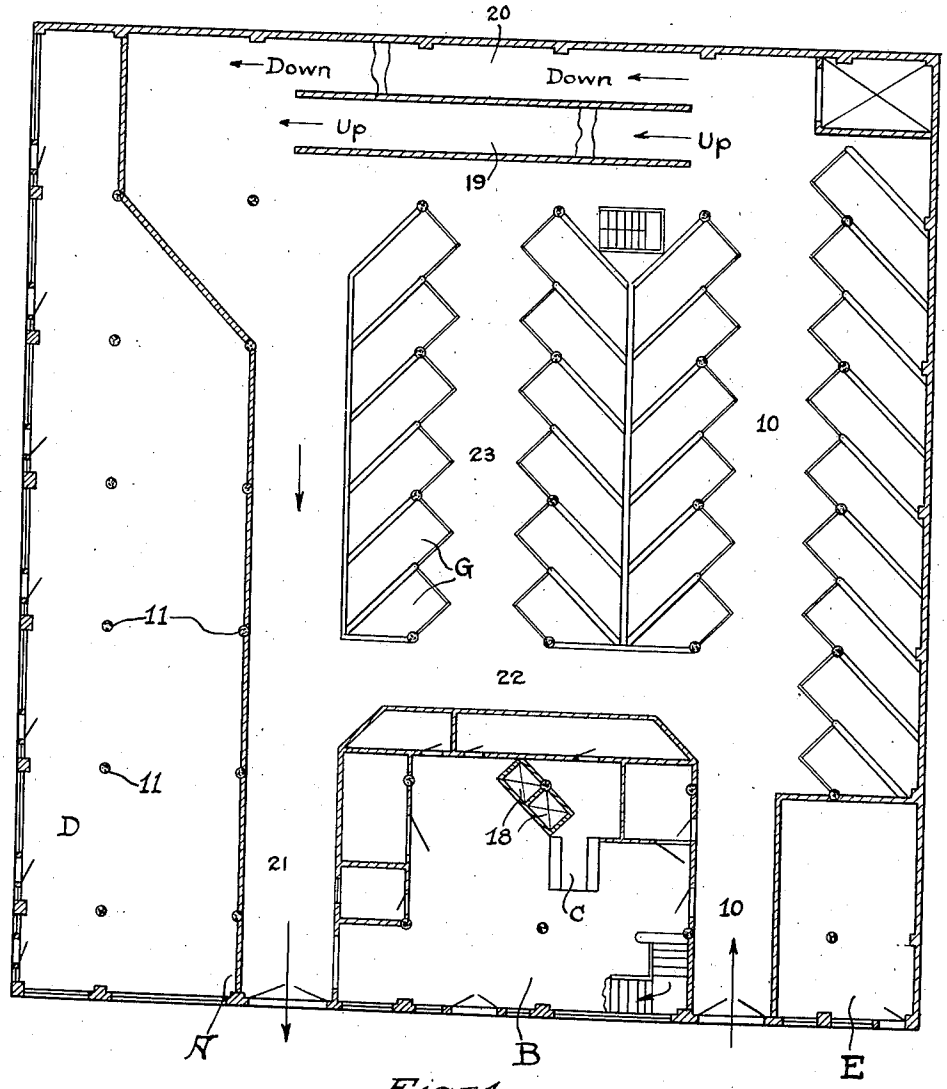


Fig. 1.

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4 Sheets-Sheet 2

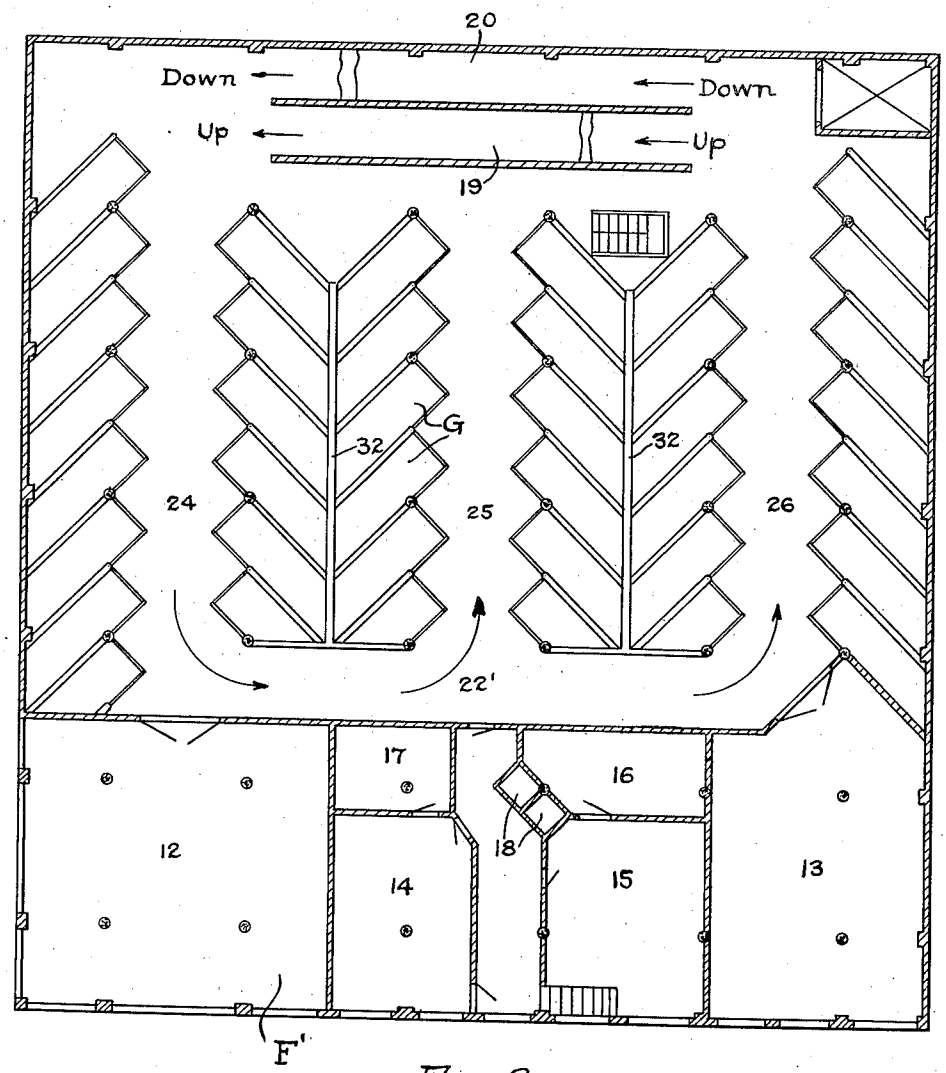


Fig-2.

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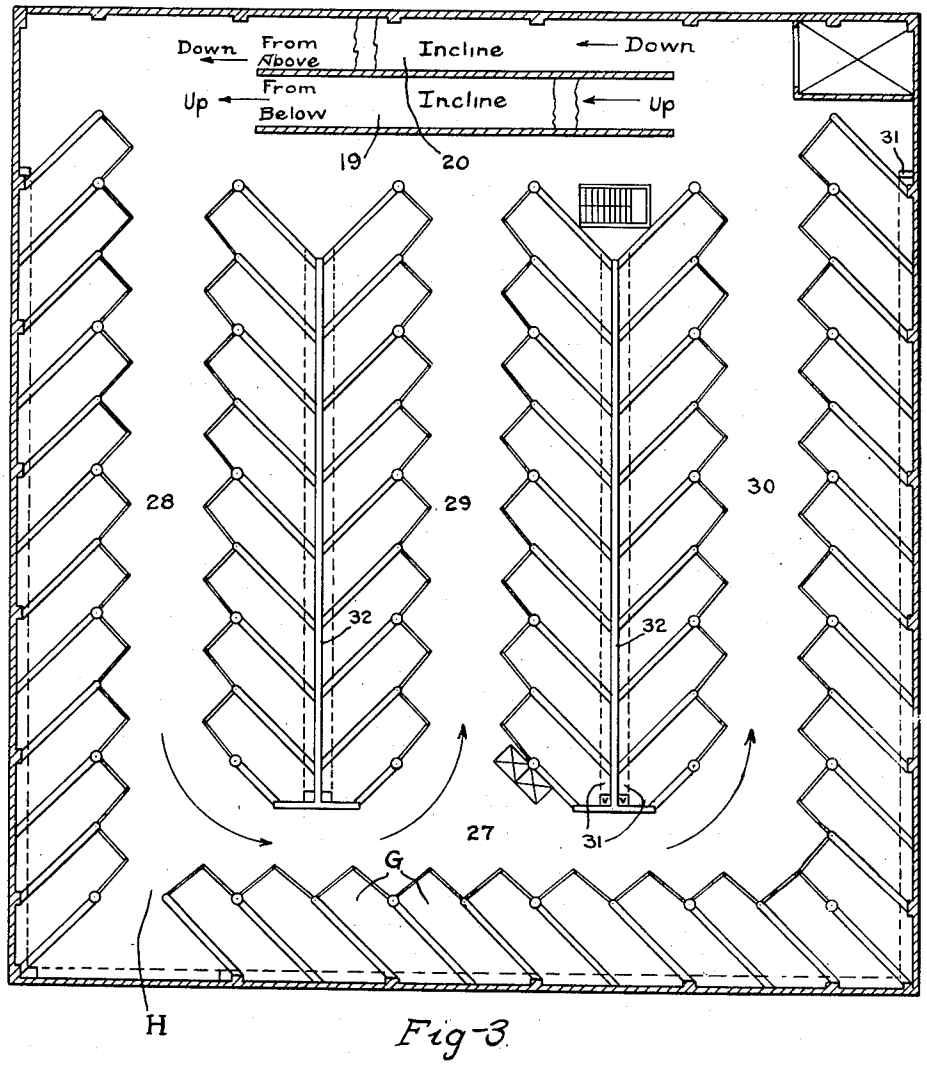
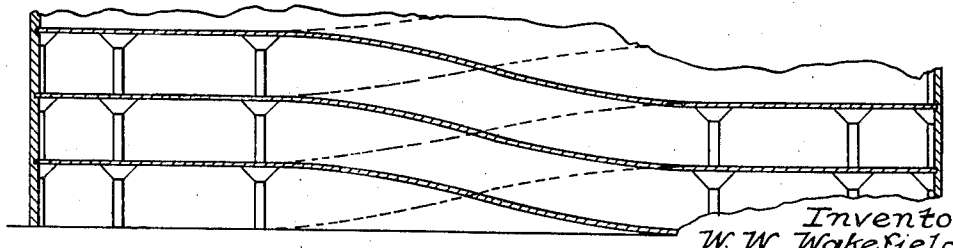


Fig-3

Fig-4



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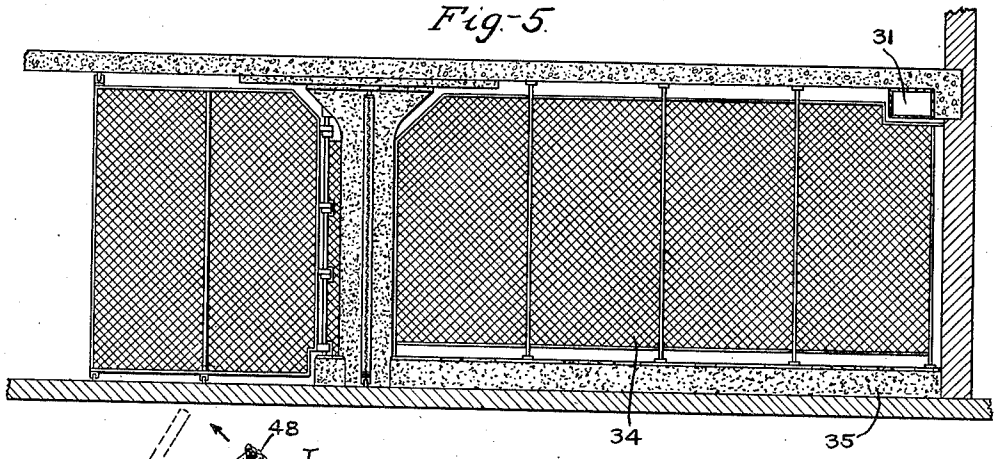
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INDOOR PARKING SERVICE

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Fig-5.



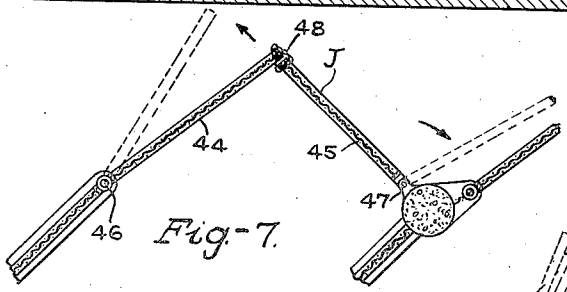


Fig-7.

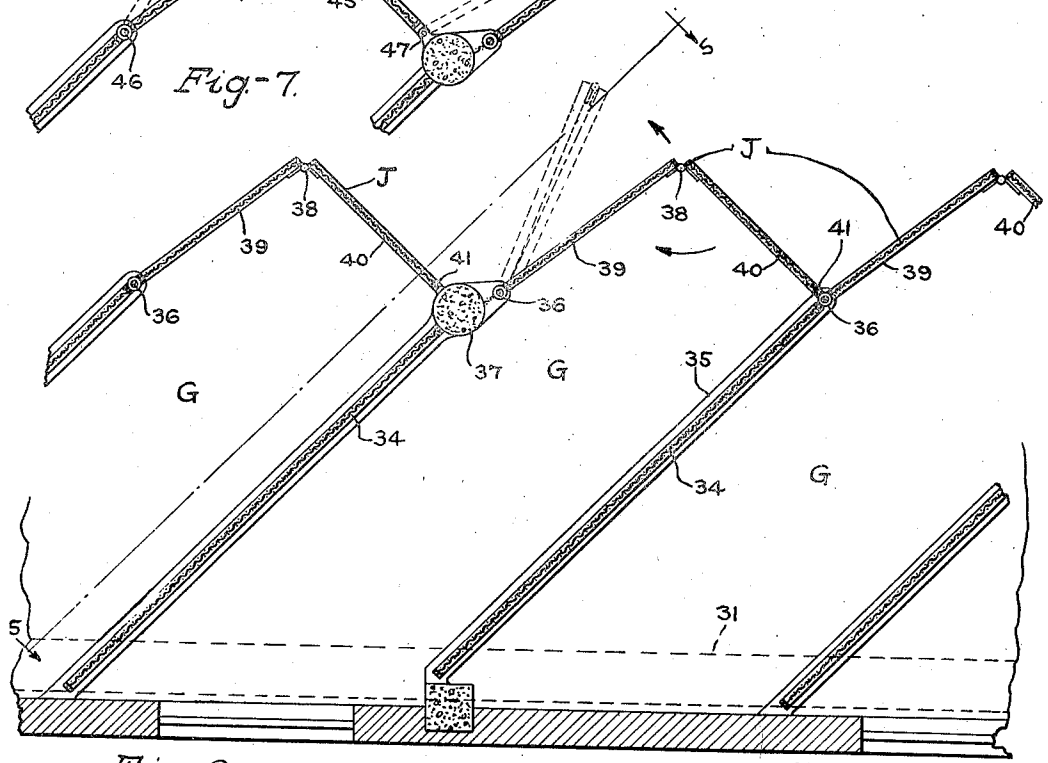


Fig-6

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Patented Nov. 2, 1926. 1,605,017

UNITED STATES PATENT OFFICE.

WILLIAM W. WAKEFIELD AND ERNEST E. MEIER, OF ST. PAUL, MINNESOTA; SAID MEIER ASSIGNOR OF ONE-HALF OF HIS UNDIVIDED INTEREST TO ALBERT H. SCHUETT, OF WHITE BEAR, MINNESOTA.

INDOOR-PARKING SERVICE.

Application filed December 18, 1924. Serial No. 756,674.

Our invention relates to indoor parking service wherein it is desired to provide a parking for automobiles, particularly in a building designed for such purpose and having in mind the parking of the automobiles in a convenient manner so that each automobile will have an individual stall or garage by itself.

A feature of the invention resides in providing a building designed to receive the automobiles on the various floors thereof, having ramps permitting the autos to travel from one floor to the other and wherein the traffic is in one direction only throughout the entire travel of the auto in the building.

It is also a feature of our invention to provide individual stalls for the automobiles which are arranged obliquely along the dividing walls of the building and in a manner so that the closure for each stall can be folded back out of the way at an angle to permit a shorter turn and allowing the auto to be parked more easily within the stall. To accomplish this the closure forms the door opening and a part of the division wall of the stall.

It is also a feature of our invention to provide a protecting curbing at each division wall so that the automobile will not bump into the wall separating one stall from the other.

A feature of the invention is in a building which is particularly for the convenience of the car owners a waiting and comfort room therein with a waiting lobby on the first floor, while the comfort rooms are provided on the second floor or other floors above and so designed so that the first floor can be used partially for stores and merchants, whereby the first floor is utilized to the best advantage for rental purposes, whereas the upper floors are for parking and for the convenience of the automobile owner in parking his car in this building. The one-way traffic feature throughout the building is of importance and the fact that the aisle or runway between the stalls is of a width just sufficient to permit the cars to drive through makes it of real importance to provide a closure for the stalls which will not project into the runway or driveway, and by folding a portion of the same back with the door opening the cars can be more easily driven into the parking stalls.

The building is equipped with ventilating flues which extend along the stalls and the partitions between the stalls are of an open netting so that the building can be properly ventilated to prevent the gases from the automobile engines poisoning the air so that it would be impractical to house a large number of cars on a single floor, especially when they are running their motors. The open mesh for the partitions permits of a more freely ventilated building.

In carrying out our invention it is desirable to provide a building where the owner can drive his car into the same directly to the stall assigned to him and park it therein without any danger of cross traffic or without inconvenience in entering the stall assigned him. In connection with this the other occupants of the car can remain in the lobby of the first floor and the driver can return to the lobby by elevator. Thus a building for storing a large number of cars in the smallest possible space is provided wherein the automobile owner can be assured that his car will be in safe keeping in an individual stall until he returns for it. Upon returning to get his car it is necessary for the owner to pass through the lobby and at that time notify the office of his intentions to remove his car from the individual stall.

Other features of the invention will be more clearly set forth in the specification and claims. In the drawings forming part of this specification,

Figure 1 is a plan view of the first floor of our building.

Figure 2 is a plan view of the second floor of our building.

Figure 3 is a plan view of the third floor of our building.

Figure 4 is a side elevation of a portion of the building illustrating the ramps from floor to floor.

Figure 5 is a side elevation of a portion of the building in section illustrating the partitions, doorway and the curbing, together with the ventilating pipe for the stalls.

Figure 6 is a plan view of a detail show-

ing enlarged a portion of the stalls with the folding doorway and side wall therefor.

Figure 7 is an alternative construction of doorway and side wall.

In the drawings the building is provided with the first floor A wherein an entrance lobby B is provided in the front portion thereof, comparatively central between the sides of the same. The lobby is provided with an office C where the automobile owners register their cars and secure the number of the stall to which they are assigned when they drive their car into the entrance driveway 10.

Upon entering this driveway 10 the occupants, outside of the driver, remain in the lobby B while the driver, after receiving an assignment of a particular stall, proceeds through the runways to the stall assigned.

The first floor A of our building is provided with such space as is indicated at D, where the building is located upon a corner, which can be used for stores for offering merchandise to patrons on the street, while it is also true that the space indicated at E can be used for a similar purpose, thus increasing the renting revenue from our building.

A feature of our building is that no walls of a particular design are necessary to divide the building, other than is of ordinary construction for a concrete or fire proof building. The arrangement of the storage stalls for the automobiles is separated by curbing and walls made of wire mesh or other suitable open material so as to permit the ventilation of the building and to provide such a structure that can be converted into ordinary building structures at any time. The only part which is of essential construction is the supporting pillars 11 which are of the same general construction now used for concrete supporting pillars in ordinary fire proof buildings. The stalls and runways are associated with these pillars in a manner so as to provide an economical construction and so that the building can be converted into use for other purposes than storing automobiles. This is an important feature of our invention, because as time progresses it is possible that the building space and building itself may become too valuable as an automobile storage and it can then be converted into ordinary use very readily and without an extensive cost.

The second floor F of the building is taken up mostly by the individual stalls G for the automobiles. However, it is desirable to provide a portion of the same with the partitioned rooms 12 and 13 on the sides, while rooms 14, 15, 16 and 17 are arranged in close proximity to the elevator shafts 18, which lead up into the building from the lobby B.

The third floor H of our building is practically entirely taken up by the individual stalls G for the automobiles. These stalls are arranged obliquely throughout the entire building. All of the floors including the third floor and above the same are practically taken up entirely by the individual stalls G, while the ascending and descending ramps 19 and 20 respectfully are positioned at the back wall of the building, out of the way, and in a manner so as to direct the traffic always in one direction only, throughout the entire building. This permits the car owner to drive into the building and continue to drive in one direction until he comes to his assigned stall and then when he gets his car he can take it out of the stall and continue in the same direction of travel and out through the exit driveway 21.

The entrance driveway 10 extends directly to the back of the building where the ramps for ascending and descending are located. The exit driveway 21 extends from the back of the building to the front and is on the opposite side of the building to the entrance driveway 10. A transverse driveway 22 is provided, extending from the entrance driveway to the exit driveway on the first floor directly in back of the lobby, which permits the traffic to enter the center driveway 23 on the first floor. The second floor is provided with a similar transverse driveway 22′ to the driveway 22 of the first floor and extending in approximately the same position, and this driveway connects with the entrance 24 from the ascending ramp 19, so as to connect the entrance driveway 24 with the central driveway 25 and the side driveway 26 on the sceond floor.

On the third floor and all of the floors above the same a transverse driveway 27 is provided near the front of the building, which connects the entrance driveway 28 of this floor with the ascending ramp 19. The drive way 27 connects the entrance driveway 28 with the driveways 29 and 30, extending from the front to the back of the building on the floors above and including the third floor. The traffic from any one of the floors is directed always in the same direction as indicated by the arrows in the drawings and when the car owner removes his car from his assigned stall he drives in the shortest route to the down ramp from the floor on which he is parked and by reason of the fact that the stalls are properly positioned and arranged it is possible for the car owner to pass quickly out of the building with practically little or no conflict with any traffic, owing to the fact that the traffic is all directed in the same general direction through the building.

This plan of parking service for a building provides an ideal arrangement for the car owner, so that he can have his car parked in an inclosed private stall, locked and safe

from being molested, so that it cannot be stolen or any of his belongings taken therefrom without his knowledge and without the knowledge of the one in charge of the office in the lobby; as no cars are allowed to pass in or out of the entrance or exit driveway without the direction of the office in the lobby, the entrance and exit doors being controlled accordingly.

To properly ventilate each and all of the stalls, we provide a ventilating system which includes ordinary means of causing a vacuum or draft of air to be circulated through the building. The ventilating pipe 31 is positioned at the back of and extends along the division wall between the rows of obliquely positioned stalls so as to provide sufficient ventilation to withdraw the undesirable gases and odors from the building. Each stall through which the ventilating pipes extend is provided with an individual opening, not shown in the drawing, so as to draw the gases from the same, or as many openings as are desirable can be provided. The ventilating pipes 31 are shown only extending along the central partitions 32, but it is obvious that they can be placed in a manner so as to extend through all of the stalls, as is illustrated in dotted outline in Figure 3 of the drawings. Any form of ventilating system can be adapted to our building, and by reason of the fact that the stalls are provided with mesh-like partition walls 34, which extend up from the curbing 35 in the floor, the building and individual stalls can be freely ventilated without having any objectionable pockets for the air walls are solid and practically air tight. The open mesh division walls also prevent anyone from being affected by the gas in any individual stall and permit of a very free and efficient ventilation of the building as a whole. The doors J of the individual stalls are also made of the open mesh material.

The curbing 35 extends from the back of the stall to the hinged point 36 for the doors J, or up to and about the supporting posts 37, so as to fully protect the walls 34 of the stalls and prevent the car owners from driving their cars in against the partition walls. This is a feature of our invention. The curbing 35 is a material advantage and provides a feature of our invention which protects the open mesh partitions 34 against damage. Without this protecting curbing the open mesh-like partition walls 34 would not be a practical division between the respective stalls.

An important feature of our invention resides in the door construction which is carried out in the particular doors J which we use for closing the individual stalls G in a manner so that the doorways leading into and from the stalls can be of a much narrower dimension than otherwise would be possible, thus permitting the easy parking and removal of the cars from the stalls. Each door J is hinged at 36 and is provided with a joint 38 which hingedly connects the portions 39 and 40 of each door. The portion 39 forms an extension of the side walls 34, while the portion 40 forms the front or closure end of the stalls G.

By means of this peculiar construction of door the doors J can be opened by releasing the free end 41 of the same, by unlocking an ordinary lock or other fastening means not illustrated in the drawing, and folding the portion 40 over against the portion 39, when no car is parked in the stall. If a car is parked in the stall then the door is first opened at 41 and swung on the pivot point 36 into the position illustrated in dotted outline in Figure 1 of the drawings. When the door J is opened far enough so that the portion 40 will swing free of the car parked therein, then the portion 40 is folded over against the portion 39 and in this position the extension or side wall portion 39 of the door J is moved out, extending angularily from the pivot point 36 in a manner so that the auto can be more easily steered into and out of the individual stall G. This folding arrangement of the doors of each of the stalls permits the cars to be turned much more easily into and out of the stall by permitting a wider curve in steering the auto into and out of the individual stalls G.

In Figure 7 we have illustrated an alternative formation of our doors J. In this construction the door is formed in two parts 44 and 45, portion 44 being hinged at 46 and the portion 45 at 47, while the free ends of the portions 44 and 45 are connected at 48 by suitable locking means. In this construction of the doors J the individual portions 44 and 45 are swung into the desired position when entering or leaving the individual stall of our parking building. The door illustrated in the two parts in Figure 7 performs the same function as those illustrated in Figure 6 and in the drawing of each of the floors.

In accordance with the patent statues we have described the principles of our invention, together with the apparatus which we now consider to represent the best embodiment thereof, but we desire to have it understood that the construction shown is only illustrative and that the invention can be carried out by other means and applied to uses other than those above set forth within the scope of the following claims.

We claim:

1. A parking service including a building having a one-way traffic extending throughout the same for automobiles, a series of individual stalls for parking the automobiles in a manner to lock the same within the

stalls to prevent theft of the automobiles and a door for each of said stalls including means for swinging said door out of the path of travel of the automobile entering or leaving the stall, whereby the division walls between the stalls can be shortened and the driveway leading to the stalls can be made of a comparatively narrow passageway, so as to permit the free entrance and exit of the automobile by the swinging wide and clear of the individual stall door.

2. A parking service including a building having a series of superimposed floors, independent entrance and exit driveways, a series of individual automobile stalls, means for inclosing said stalls with an open mesh wall and doorway, ramps for ascending and descending travel from floor to floor and folding doors for each of said stalls including portions hinged in a manner to form a closure end and a portion of the side wall of the stall which can be opened to an angle to permit a short turn into or out of any of the stalls.

3. A parking service including a building having a series of superimposed floors, a series of individual parking stalls, an opening for each stall, including a movable side wall portion and a closure door associated with said movable portion in a manner to permit the stall to be opened wide enough to permit a short turn into said stall.

4. A parking stall for a building wherein it is desired to provide a series of stalls adjacent each other, including a closure having a movable side wall portion, a closure door member associated with said movable side wall portion in a manner to permit a wide opening to facilitate the entrance or removal of the automobile from the stall.

5. A closure for individual parking stalls, including a movable side wall portion, a closure door member associated with said side wall portion in a manner to form a closure for an individual stall, said wall member and said closure member being adapted to close together and to swing outwardly to permit a short turn into the stall, thereby providing a narrow driveway in front of the stall.

6. A building structure designed to provide a parking service on the floors thereof, driveways arranged through said building, a series of individual parking stalls arranged adjacent each other in said building, a closure for each of said stalls, forming a portion of the side wall of each stall and adapted to swing outwardly to shorten the side wall and swing the portion of the same out free to permit a short turn into the individual stall.

7. A building structure including means arranged therein to afford individual parking stall service for automobile owners, each individual stall having a closure including a portion adapted to form the side wall of each stall and a member associated with the side wall portion adapted to connect therewith to close the individual stall, said side wall portion being adapted to swing outwardly to open the stall, when the closure portion is swung to open position.

8. An automobile parking stall including side walls, a movable portion formed in the side wall thereof and a front end closure therefor adapted to cooperate with said movable portion to permit the opening of the closure and the movable portion of the side wall, to facilitate easy entrance or exit from said stall.

9. An automobile parking stall having side walls extending obliquely from the inner end thereof, and of approximately the same length, a movable side wall portion extending from one of said side walls and an end closure portion connected with the free end of said movable side wall extension portion.

10. A building structure for automobile parking service including a series of obliquely positioned individual stalls, side walls of approximately equal length for said stalls and a movabe side wall extension portion and end closure door connected together in a manner to fold into open and closed position to permit the easy entrance or exit to or from the individual stalls.

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