May 14, 1940. C. T. RICE 2,200,639

TRAFFIC CONTROLLING MEANS FOR PARKING LOTS AND ONE-WAY DRIVES

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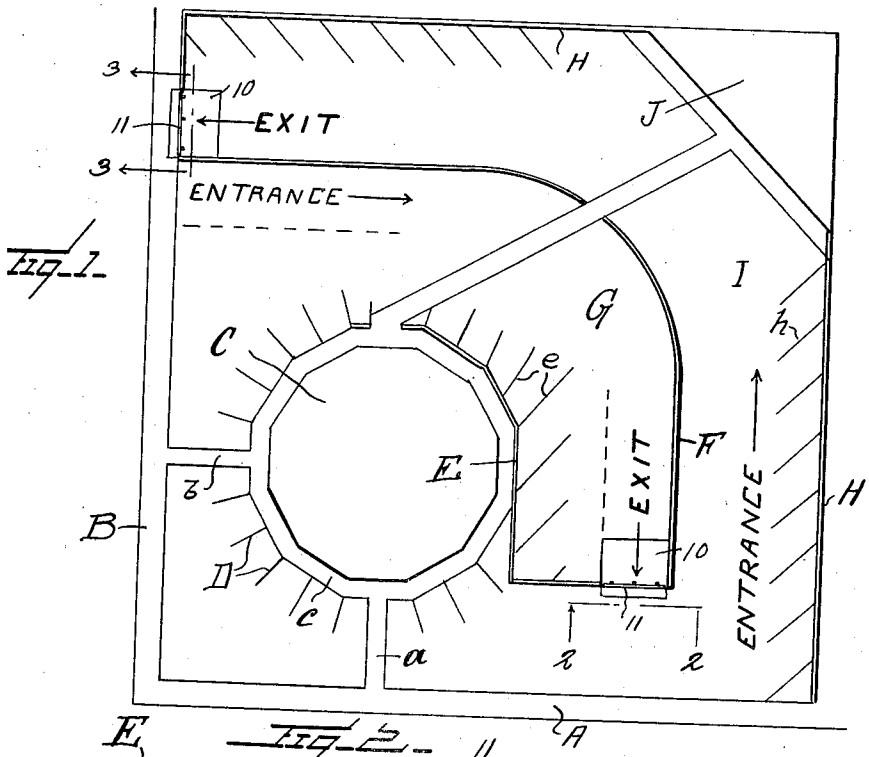


Fig. 1.

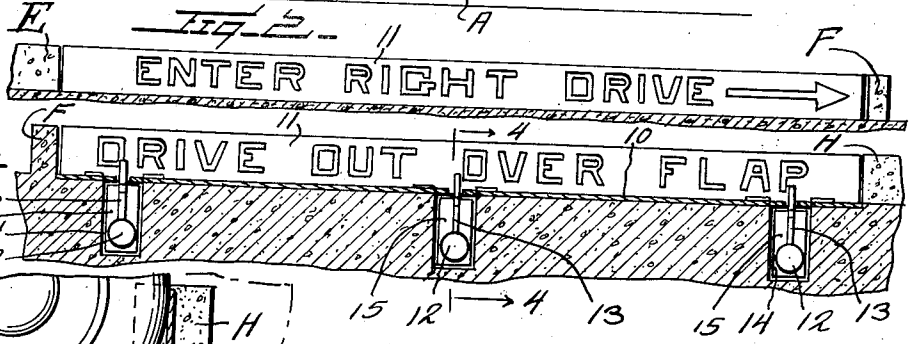


Fig. 2.

Fig. 3.

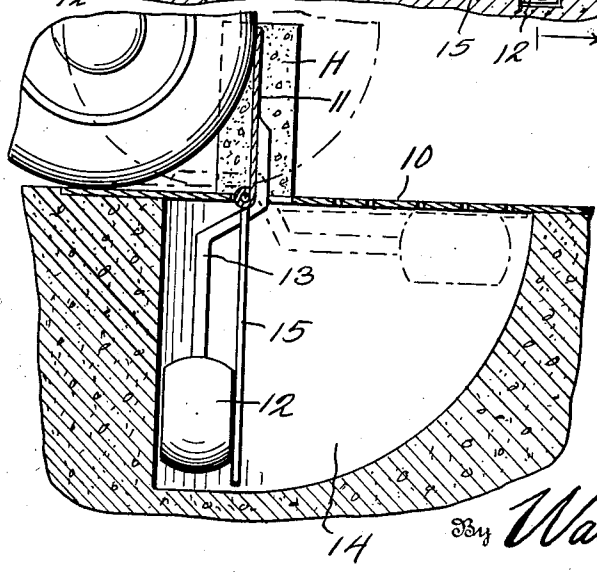


Fig. 4.

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TRAFFIC CONTROLLING MEANS FOR PARKING LOTS AND ONE-WAY DRIVES

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3 Claims. (Cl. 39—5)

This invention relates to traffic directing and controlling devices and particularly to means adapted to be disposed in the pavement of a parking lot, the lot having thereon a dispensing building such as is illustrated in my Patent No. 1,798,810, granted March 31, 1931, which will prevent the passage of vehicles into the roadway of the parking lot in one direction but permit the passage of the vehicle out of the lot in the opposite direction.

Another object is to provide in connection with adjacent driveways, means which will prevent the entry of vehicles onto one driveway, direct the entering vehicle into the other adjacent driveway, but permit the exit of vehicles from the first driveway.

A further and more detailed object is to provide a driveway barrier that is pivoted at the surface of the driveway for swinging movement in a vertical plane and which is normally held in a raised position by a weight, the barrier being easily forced into a horizontal position, approximately flush with the pavement surface by the wheels of a car moving in one direction, but which will prevent the movement of the car in an opposite direction over the barrier.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawing wherein:

Figure 1 is a diagrammatic top plan view of a parking lot arranged in accordance with my invention.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a section on the line 3—3 of Figure 1.

Figure 4 is a longitudinal section through the pavement and the barrier taken on line 4—4 of Figure 3, the barrier being shown in raised position.

In Figure 1, I have illustrated diagrammatically a parking lot shown as located at the intersection of two streets, the sidewalks of which are designated A and B. Within the parking lot is placed a shop C. A sidewalk *c* extends around the shop and radial walks *a* and *b* lead from the walk *c* to the sidewalks A and B. The sidewalk *c* is defined by a curb radiating from the curbs D defining parking places for cars. Diametrically opposite to the walk *a* there starts a wall E which extends partway around the building C, then tangentially thereto toward the sidewalk A. Extending in spaced relation thereto is a second wall F. which is conterminous at one end with the wall E and at its other end extends to the sidewalk B. These walls define a driveway G and extending from the wall E are curbs *e* defining parking spaces or stalls. The dotted lines in Figure 1 show the driveway proper.

The outer boundaries of the parking lot may be defined by walls, fences or curbs H, and between the wall H and the wall G is a second parking place I. Restrooms may be disposed conveniently in the triangular space J at the corner of the walls H. Stalls *h* extend diagonally from the walls H. The entrance to and at one end of the section I is entirely open and free, but at the exit from the section I there is disposed a barrier such as shown in Figures 3 and 4. At this point there is disposed a supporting plate 10 and hinged to this supporting or chamber covering plate is a barrier 11. This barrier swings in a vertical plane and is normally supported in an upright position by a weight or weights 12, each attached to an arm 13. Each arm is deflected forward so that the barrier may swing down to a horizontal plane into the dotted line position in Figure 4 without causing the weight to strike or be impeded in the last part of its movement by the plate 10. Of course, each weight operates in a chamber 14 formed in the pavement.

A like barrier 11 is disposed at the exit of the driveway G. Each barrier 11 swings downward into a horizontal plane when struck by the wheels of a car. Thus, for instance, in Figure 4, it is assumed that the car wheel shown in dotted lines has struck the barrier moving from the right in Figure 4 and has depressed the barrier to the dotted line position and is passing over it. Thus a car passing out of either exit will readily depress barrier 11 and ride over that barrier, but immediately after the passage of the car, the barrier will swing up again in the position shown in full lines in Figure 4, and this will prevent the entry of a car into the "exit" passageway in the manner shown by full lines in Figure 4, wherein the wheel shown in full lines is supposed to be moving toward the right.

Preferably the barrier will have on its outward face the words "Enter right drive" meaning that the car is to enter the next adjacent entranceway, and on the other face of the barrier will be the words "Drive out over flap" or words to this general effect.

It will be seen that adjacent each driveway entrance there is a barrier which provides for the exit of cars from the adjacent driveway and that the barriers are located at opposite ends of the respective driveways G and I. It will be seen

that by my arrangement, I have provided one-way passages for cars entering the two parking lots and that a car cannot enter either of the parking spaces G or I except by the proper entrance and in one direction.

In order to prevent the too quick return of the barrier after the front wheels of the car had passed over it and in this way eliminate the possible flopping back against the lower portions of the car between the time that the front wheels had passed over the barrier and before the back wheels had mounted thereon, I may provide means for retarding or delaying this raising movement so that the full raising movement will not occur until after the car has had time to pass over the barrier. While many different means might be provided for this purpose, I have illustrated a plate 15 extending radially from the center of pivotal movement of the barrier and more or less closely fitting the pit 14 within which the weight 12 operates. Sufficient perforations will be provided in the plate 15 to permit the upward movement of this plate 15 without material impediment but upon the reverse movement of the plate 15 under the action of the weight 12, the air will compress slightly in front of the plate and thus impede or delay its movement. The construction illustrated in Figure 4 is purely illustrative of the fact that some retarding means as, for instance, an air check or hydraulic check may be provided to retard the movement of the barrier.

It is to be understood that while I have illustrated a weight for the purpose of lifting the barrier, yet I do not wish to be limited to this as springs might be used for this purpose.

While I have illustrated my barrier as being applied to a parking lot having a certain definite arrangement, it is obvious that this barrier might be used to control traffic in many different situations and that it might be used at the entrance, for instance, of one-way streets or blocks to prevent the entrance of cars in the wrong direction but permit the passage of cars in the right direction.

What is claimed is:

1. Means for controlling one-way car traffic, including a pit, a covering element extending over the pit, a barrier hingedly mounted upon the covering element immediately above said pit, means disposed within the pit and normally holding the barrier raised, the barrier when struck by a car wheel moving in one direction being swingable to a horizontal position against and supported by said covering element to permit the passage of a car over it, means preventing the barrier from swinging downward to a horizontal position when the barrier is struck by a car moving in the opposite direction, and a plate carried by the barrier and movable through said pit and constructed and arranged to retard the movement of the barrier from a horizontal position to a vertical position.

2. Means for controlling one-way car traffic, including a pit, a covering element for the pit, a barrier hingedly mounted upon the covering element immediately above said pit, means disposed within the pit and normally holding the barrier raised, the barrier when struck by a car wheel moving in one direction being swingable to a horizontal position against said covering element to permit the passage of a car over it, the portion of the covering element against which the barrier swings being perforated, means for preventing the barrier from swinging downward to a horizontal position when the barrier is struck by a car moving in the opposite direction, and a plate carried by the barrier and movable through said pit and constructed and arranged to retard the movement of the barrier from a horizontal position to a vertical position.

3. Means for controlling one-way vehicle traffic, including a pit in a roadway, a cover plate over the pit, a barrier hingedly disposed upon the cover plate and extending transversely of the pit, the barrier having an arm extending through the cover plate into the pit, said arm being formed within the pit to provide a terminal portion offset from the plane of the barrier plate, a weight carried upon the end of the offset portion of the arm remote from the barrier, the weight normally maintaining the barrier in vertical position across the pit and the plate, the barrier when struck by a vehicle moving in one direction being swingable to a position against the top of the plate, air inlet means for the pit at one side of the vertical plane in which the barrier is pivoted, and means supported in the pit and carried by and movable with the barrier for retarding the return of the barrier to vertical position after it has been oscillated into position against the top of the plate, the said means operating to effect a partial compression of air in the pit upon return of the barrier to its vertical position, in the side of the pit remote from the air inlet means.

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