

May 16, 1933.

R. M. HOLLINGSHEAD, JR

1,909,537

DRIVE-IN THEATER

Filed Aug. 6, 1932

3 Sheets-Sheet 1

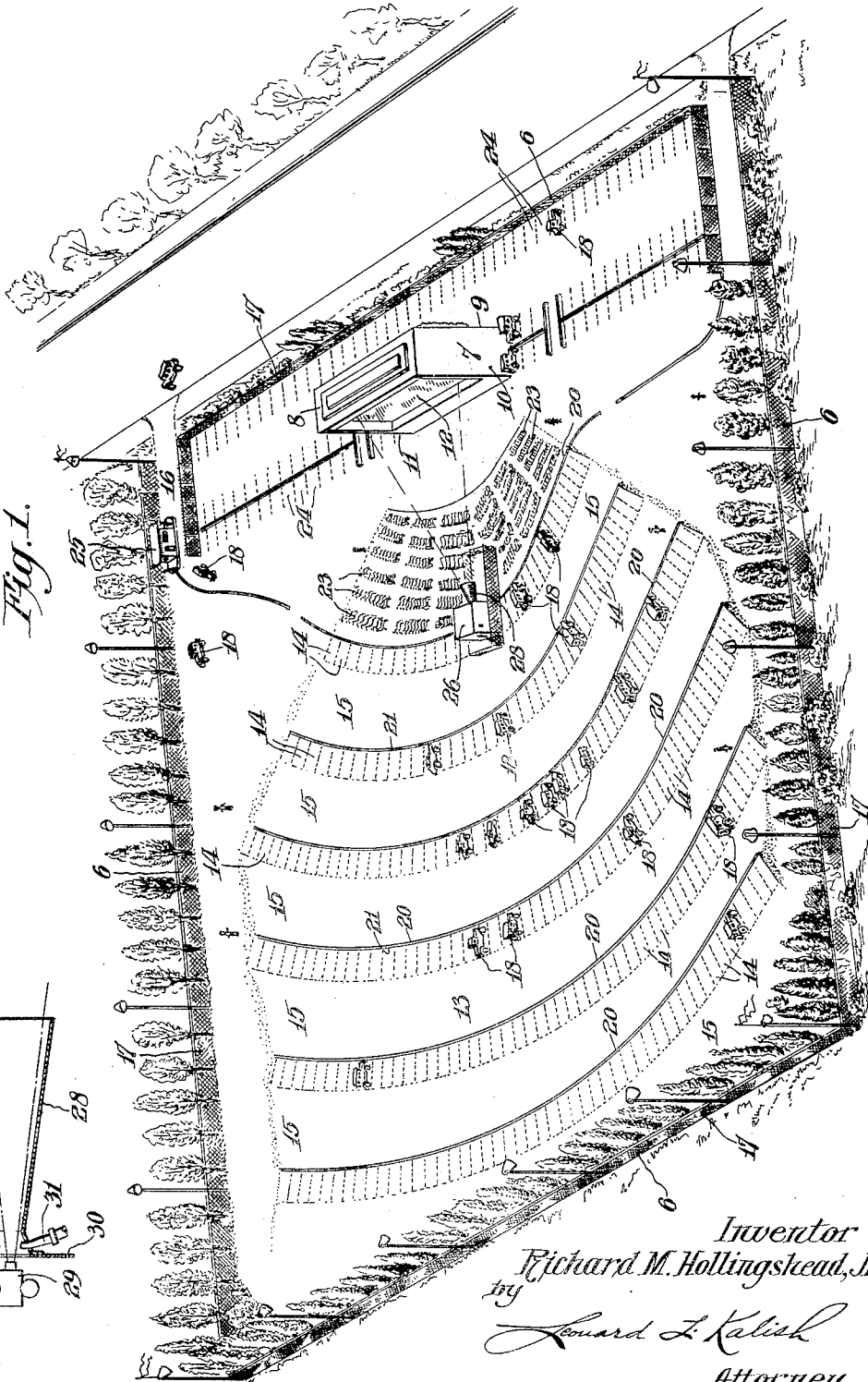


Fig. 1.

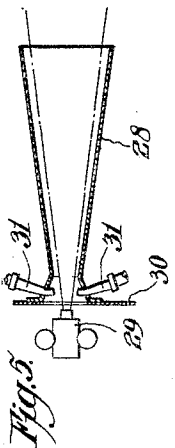


Fig. 5.

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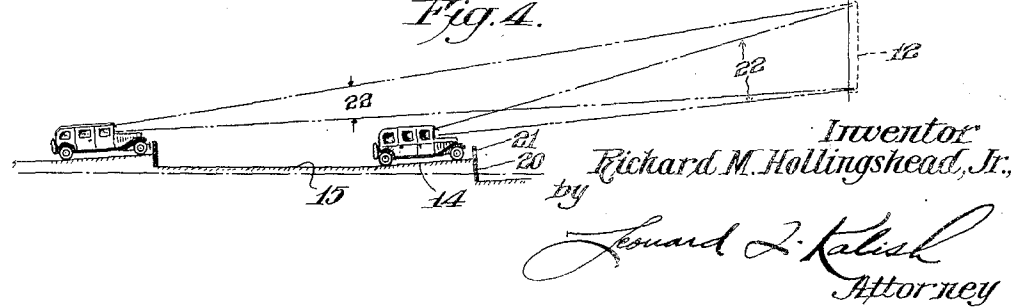
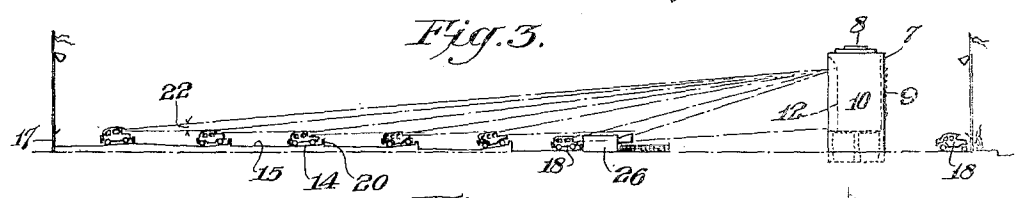
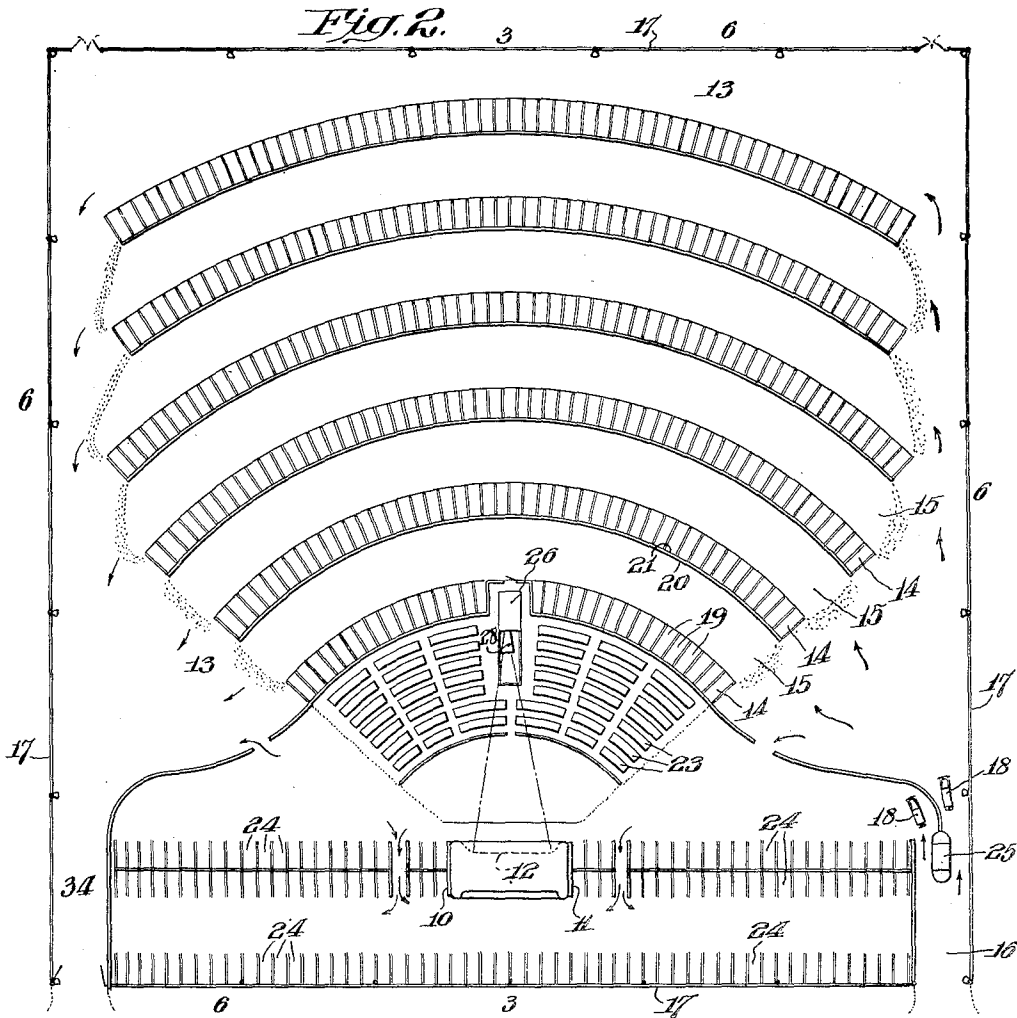
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DRIVE-IN THEATER

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3 Sheets-Sheet 2



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DRIVE-IN THEATER

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3 Sheets-Sheet 3

Fig. 6.

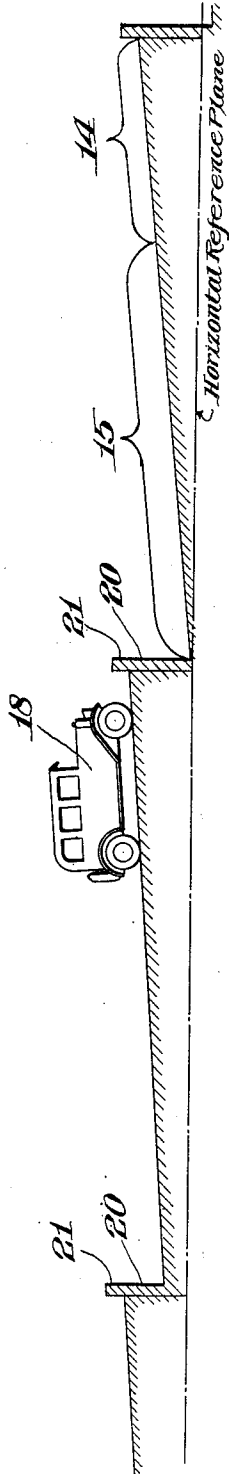


Fig. 7.

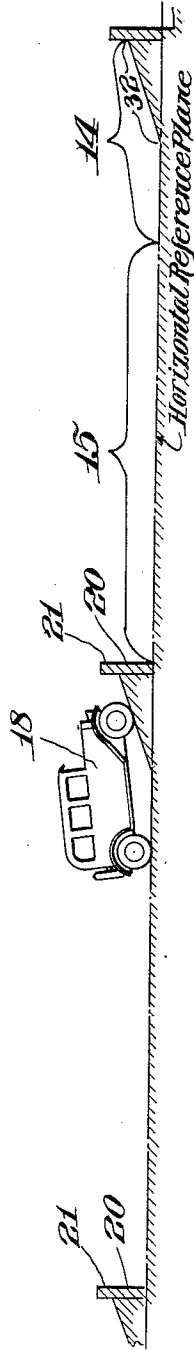
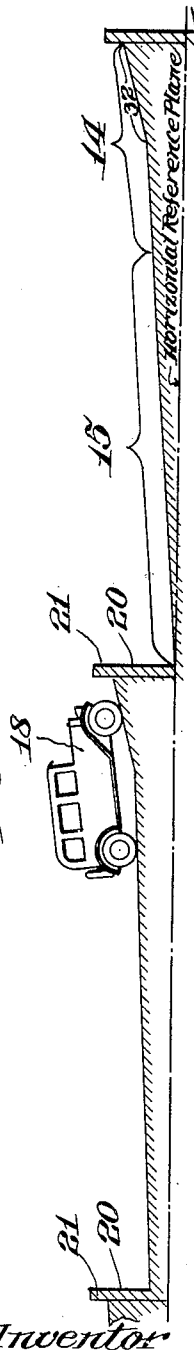


Fig. 8.



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UNITED STATES PATENT OFFICE

RICHARD M. HOLLINGSHEAD, JR., OF RIVERTON, NEW JERSEY

DRIVE-IN THEATER

Application filed August 6, 1932. Serial No. 627,704.

My invention relates to a new and useful outdoor theater and it relates more particularly to a novel construction in outdoor theaters whereby the transportation facilities to and from the theater are made to constitute an element of the seating facilities of the theater.

My invention relates more particularly to a novel construction in outdoor theaters wherein the performance, such as a motion picture show or the like, may be seen and heard from a series of automobiles so arranged in relation to the stage or screen, that the successive cars behind each other will not obstruct the view.

My invention further relates to other novel features of construction, all as will appear more fully from the following detailed description.

For the purpose of illustrating my invention, I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

Referring to the drawings in which like reference characters indicate like parts:

Figure 1 represents a perspective view of an outdoor theater embodying our invention.

Figure 2 represents a top plan view of the same.

Figure 3 represents a section on line 3—3 of Figure 2.

Figure 4 represents a view similar to that shown in Figure 3 on a somewhat larger scale and with the angular relationship of elements somewhat exaggerated in order to bring more clearly to view these angular relationships, which otherwise would not be clearly visible on such reduced scale as this drawing, because the angles in actual practice are comparatively small.

Figure 5 represents a somewhat diagram-

matic sectional view of the projection guard and guarding means employed.

Figure 6 represents a diagrammatic sectional view of a modified embodiment of my invention.

Figure 7 represents a diagrammatic sectional view of a still further modified embodiment of my invention.

Figure 8 represents a further modified embodiment of my invention.

According to my invention, I provide a suitable plot of ground as shown in Figures 1 and 2, preferably having one boundary, such as the boundary 6 bordering upon the highway or street.

At a point near the boundary 6, I provide a screen house 7, of any suitable frame construction, sufficient to resist wind and other weather conditions, and including top 8, back wall 9, and side walls 10 and 11, and having a screen 12 facing the field 13, and set into the screen house a suitable distance, so that it might be shielded to some extent from foreign sources of light.

The surface of the field 10 in front of the screen 12 is graded with a slight generally down grade towards the screen, as shown particularly in Figures 3 and 4, and alternate arcuate stall-ways and drive-ways 14 and 15 are arranged generally about the screen as the center of the arcs. The stall-ways 14 are each inclined upwardly at a slight angle as seen particularly in Figures 2 and 3, while the drive-ways 15 may be generally horizontal, and the rear boundaries of the drive-ways 15 are at a level below the front boundaries of the next succeeding stall-way.

The automobiles enter through a gateway 16 which is formed in the fence or other suitable enclosure 17 surrounding the field, and after paying the admission fee, the car 18 is driven by its occupant into any one of the driveways 15, and then into the first stall 19 which may be open or unoccupied in the stall-way 14 directly in front of the driveway into which the car has been driven;—so that the automobile will face the screen.

The individual "stalls" or individual automobile-receiving spaces of the stallways

are preferably marked off by any suitable markings or lines of division, either on the ground or surface of the stall-ways, or slightly above the ground or surface of the stall-ways;—though obviously, it is not necessary or essential to the practice of the present invention to “mark off” individual automobile-receiving spaces or individual “stalls”. Thus, it is not necessary for the practice of the present invention, to in any way either mark off, or to separate adjacent automobile-receiving spaces or “stalls” from each other, within the respective “stall-ways”;—though some such marking may be desirable to facilitate the convenient spacing of adjacent automobiles within each “stall-way”. Hence the term “stall-way” is intended to mean, and should be understood to mean, the areas adapted to receive the automobiles in adjacent relation to each other, facing the stage or screen.

The front boundaries of the stall-ways 14 may be retained by suitable bracings or plankings 20, which bracings or plankings 20 may project slightly above the front of the stall-way 14 so as to form an upwardly projecting abutment 21, for limiting the forward movement or the position of the automobile in its stall.

As will be observed from the drawings, the stall-ways 14 are each inclined upwardly at a slight angle in a forward direction, so that the automobile will be tilted upwardly to an extent sufficient to bring the angle of vision 22 between the car and the screen 12, clear of the top of the car ahead of it;—each stall-way, however, being slightly below the stall-way behind it, so that the angle of vision from each car to the screen will clear not only the car directly ahead of it, but all cars ahead of it. By this means also, each automobile may be backed into its drive-way 15 without starting the engine, and the same may coast backward.

The stall-ways are made approximately 15 or 16 feet wide while the driveways are made approximately thirty-five feet wide.

If desired, rows of seats 23 may also be provided in front of the first row of automobiles, and to accommodate the occupants of the seats 23, I may also provide parking spaces 24 for automobiles outside of the zone of visibility of the screen 12.

As the automobiles 18 drive in through the drive-way 16, they pass through any suitable collection booth 25, and are then driven through one of the drive-ways 15 into an empty stall. Due to the arcuate arrangement of the stall-ways 14, each space or stall 19 is of generally tapered form, wider at its entrance end or its end joining the drive-way 15. This facilitates the movement of the automobiles into and from the stall or space.

A projection booth 26 is provided at a suit-

able distance from the screen 12, below the angle of vision. From this projection booth, the motion pictures are projected onto the screen 12, and the sound of talking motion pictures may be reproduced through any suitable electrical sound reproducers or amplifiers directly in the vicinity of the screen 12, or the sound may be reproduced through electrical sound reproducers or amplifiers distributed at suitable points in the field. The motion picture projection apparatus and the sound reproducing apparatus are not shown in the drawings, as any conventional sound reproducing and motion picture projecting means may be employed.

In order to eliminate all insects from the path of the light from the motion picture projector to the screen, particularly in proximity to the motion picture projector, I provide a funnel-shaped guard member 28 directly ahead of the motion picture projector 29, outside of the wall 30 of the projection house;—said funnel-like member having an angle sufficient to afford suitable passage for the light without any obstruction. The funnel-like member is of any suitable length, as for instance, three to six feet, and from a suitable fan or blower, (not shown), clean or filtered air is blown into the small end of the funnel 28 through suitable nozzles 31, so that a clean stream of air passes through the guard funnel 28 and out through its large end. This stream of air tends to prevent insects from gathering in the funnel, or approaching the lens of the projector. At a distance equal to the length of the guard, or at a greater distance, an insect in the path of the light will not be as conspicuous as would be the same insect in the path of the light in close proximity to the lens of the projector. In this manner, the projection of the motion picture may be rendered more free of undesirable obstructions, through insects passing through the beam of light in proximity to the lens.

It is contemplated through my invention to provide means whereby an audience, particularly in rural sections, may view a motion picture without the necessity of alighting from the automobile, and as a matter of fact, the automobile serves as an element of the seating facilities.

If desired also, the entire field may be inclined to a suitable extent towards one or the other side, or towards both sides from the center, so that the automobiles may not only be backed into the drive-ways, but may be coasted along the driveways until they entirely clear the drive-way, so that interference due to sound of the engine may be minimized.

If desired, the inclination of the stall-way portion may continue through the corresponding drive-way portion, as indicated particularly in Figure 6. Thus, the drive-way may be rearwardly inclined to the same

extent as the stall-way, so as to lower the car more clearly below the lowest line of vision of the cars in the next succeeding stall-way.

5 I may also provide, as shown in Figures 7 and 8, front wheel lifts or risers at the front end of each stall-way or space, onto which the front wheels of the automobile are adapted to be driven to a varying extent, in order
10 not only to more sharply incline the front of the car upwardly, but so as also to permit each car to be inclined to a greater or lesser degree, at the will of the driver or occupant. Thus, the riser portion 33, is of a greater
15 inclination than the portion onto which the rear wheels of the car be placed, and by driving the front wheels onto the riser portion 33, to a greater or lesser extent, the front end of the car may be raised to varying degrees,
20 and the car thereby inclined upwardly to varying degrees.

This provision thus enables the occupants of each car to adjust the inclination of their car to the particular relative height of seats to windshield, or to the particular height of the occupant in relation to the seats and windshield of the car. Thus, while some automobiles have relatively high seats and large windshields, other automobiles have
30 relatively low seats and windshields of relatively small vertical dimension placed at various heights. By this means, the angle of vision may be adjusted individually and selectively for each individual occupant with-
35 out interference with any other automobile.

I may also raise or elevate the entrance 16 and the side of the field on which said entrance is located, in relation to the exit 34 and the side of the field on which said exit
40 is located, so that automobiles entering through the entrance 16 may coast into any one of the drive-ways 15 without power and also enter any of the stall-ways under the influence of momentum. When it is desired
45 to leave the stall-way and drive-way, the car may be backed into the drive-way from the stall-way ahead of it, by coasting, at the same time by turning the rear end of the car towards the up incline of the drive-way. When
50 the automobile stops in its rearward motion, due to the up incline of the drive-way, the car can be permitted to coast forwardly out through the drive-way on the down incline thereof, towards the side of the field on which
55 the exit 34 is located, and may be permitted to coast right out through said exit gate 34. By this means, with a reasonable amount of skill and care, the automobiles may be placed into the stalls and removed from the stalls
60 without the use of the engine, or the use of the engine may be minimized, depending upon the skill of the driver. In this manner, the disturbance due to the engine starting, and due to the racing of the engine, may
65 also be minimized, if not entirely eliminated.

In order to simplify the definition of the present invention the term "stage" is employed to designate a motion picture screen or other zone or field of action, and wherever the word "stage" appears in the claims,
70 it is intended to mean, and is intended to include, both a motion picture screen (that is, the "stage" for motion picture projection) as well as any other "stage" for visual entertainment. So, too, the words "inclination"
75 or "inclined" or "angle" appearing in the claims and referring to the stall-ways is intended to refer to the effective inclination or angularity of the stall-way. Thus, as will be seen particularly from Figures 3, 6, 7 and
80 8, the entire surface of the stall-way may be uniformly "inclined" or may be at a uniform "angle" as particularly shown in Figures 3, 4 and 6, or only a portion of the stall-way, that is the front portion may be "inclined"
85 or at an "angle" as shown in Figure 7, yet producing for the whole "stall-way" an effective "inclination" or "angle", because the effective inclination or angle of the stall-way is the inclination or angle between the front
90 and rear wheel-contact points or automobile-supporting points or zones of the stall-way. So, too, as seen in Figure 8 of the drawings, the angle or inclination of the stall-way may be different at the front than at the rear;—
95 again producing an effective "inclination" or "angle".

I am aware that my invention may be embodied in other specific forms without departing from the spirit or essential attributes
100 thereof, and I therefore desire the present embodiment to be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the
105 scope of the invention.

Having thus described my invention, what I hereby claim as new and desire to secure by Letters Patent, is:

1. An outdoor theater comprising a stage,
110 alternate rows of automobile drive-ways and vertically inclined automobile stall-ways arranged in front of the stage, said stall-ways being adapted to receive automobiles disposed adjacent to each other and facing the
115 stage;—said automobile stall-ways being at a vertical angle with respect to the stage such as will produce a clear angle of vision from the seat of the automobile, through the windshield thereof to the stage, free of obstruction from the automobiles ahead of it.
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2. An outdoor theater comprising a stage,
125 alternate rows of curvilinear automobile drive-ways and curvilinear and vertically inclined automobile stall-ways arranged in front of the stage, said stall-ways being adapted to receive automobiles disposed adjacent to each other and facing the stage;—said automobile stall-ways being at a vertical angle with respect to the stage such as
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will produce a clear angle of vision from the seat of the automobile, through the windshield thereof to the stage, free of obstruction from the automobiles ahead of it.

5 3. An outdoor theater comprising a stage, alternate rows of automobile drive-ways and vertically inclined automobile stall-ways arranged in front of the stage, said stall-ways being adapted to receive automobiles disposed adjacent to each other and facing the stage;—said automobile stall-ways being at a vertical angle with respect to the stage such as will produce a clear angle of vision from the seat of the automobile, through the windshield thereof to the stage, free of obstruction from the automobiles ahead of it, and an abutment along the front boundary of each of said stall-ways for limiting the forward position of the automobiles therein.

20 4. An outdoor theater comprising a stage, alternate rows of curvilinear automobile drive-ways and curvilinear and vertically inclined automobile stall-ways arranged in front of the stage, said stall-ways being adapted to receive automobiles disposed adjacent to each other and facing the stage;—said automobile stall-ways being at a vertical angle with respect to the stage such as will produce a clear angle of vision from the seat of the automobile, through the windshield thereof to the stage, free of obstruction from the automobiles ahead of it, and an abutment along the front boundary of each of said stall-ways for limiting the forward position of the automobiles therein.

35 5. An outdoor theater comprising a screen, alternate rows of automobile drive-ways and vertically inclined automobile stall-ways arranged in front of the screen, said stall-ways being adapted to receive automobiles disposed adjacent to each other and facing the screen;—said automobile stall-ways being at an angle with respect to the screen such as will produce a clear angle of vision from the seat of the automobile, through the windshield thereof to the screen, free of obstruction from the automobiles ahead of it, a motion picture projection booth in operative relation to said screen and electrical sound reproducing means in operative relation to said stallways.

60 6. An outdoor theater comprising a screen, alternate rows of automobile drive-ways and vertically inclined automobile stall-ways arranged in front of the screen, said stall-ways being adapted to receive automobiles disposed adjacent to each other and facing the screen;—said automobile stall-ways being at an angle with respect to the screen such as will produce a clear angle of vision from the seat of the automobile, through the windshield thereof to the screen, free of obstruction from the automobiles ahead of it, an abutment along the front boundary of each of said stall-ways for limiting the forward

position of the automobiles therein, and a motion picture projection booth in operative relation to said screen, and electrical sound reproducing means in operative relation to said stall-ways.

70 7. An outdoor theater comprising a stage, alternate rows of automobile stall-ways and automobile drive-ways arranged in front of the stage, said stall-ways being adapted to receive automobiles disposed adjacent to each other and facing the stage;—said automobile stall-ways being at an effective angle with respect to the stage, such as will produce a clear angle of vision from the seat of the automobile through the windshield thereof to the stage, free of obstruction from the automobiles ahead of it, and said driveways being inclined towards an outer end thereof, thereby to permit the coasting of automobiles from said drive-ways.

80 8. An outdoor theater comprising a stage, alternate rows of automobile stall-ways and automobile drive-ways arranged in front of the stage, said stall-ways being adapted to receive automobiles disposed adjacent to each other and facing the stage;—said automobile stall-ways being at an effective angle with respect to the stage, such as will produce a clear angle of vision from the seat of the automobile through the windshield thereof to the stage, free of obstruction from the automobiles ahead of it, and means for permitting the egress of automobiles from the stall-ways and drive-ways without power.

90 9. An outdoor theater comprising a stage, alternate rows of automobile drive-ways and automobile stall-ways arranged in front of the stage, said stall-ways being adapted to receive automobiles disposed in generally adjacent relation to each other and facing the stage, and means associated with said stall-ways for raising the front end of an automobile disposed therein in order to produce a generally clear angle of vision from the seat of the automobile through the windshield thereof to the stage, generally free of obstruction from the automobiles ahead of it.

100 10. An outdoor theater comprising a stage, alternate rows of automobile drive-ways and automobile stall-ways arranged in front of the stage, said automobile stall-ways being adapted to receive automobiles disposed in generally adjacent relation to each other and facing the stage, and means for longitudinally tilting the automobiles in said stall-ways in order to produce a generally clear angle of vision from the seat of the automobile through the windshield thereof to the stage, generally free of obstruction from the automobiles ahead of it.

110 11. An outdoor theater comprising a stage, alternate rows of automobile drive-ways and automobile stall-ways arranged in front of the stage, said automobile stall-ways being adapted to receive automobiles dis-

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posed generally adjacent to each other and facing the stage, said automobile stall-ways being so disposed with respect to the stage that the vertical included angle between the stage and the effective automobile-supporting surface of the stall-ways is more than 90°.

12. An outdoor theater comprising a stage, alternate rows of automobile drive-ways and automobile stall-ways arranged in front of the stage, said automobile stall-ways being adapted to receive automobiles disposed generally adjacent to each other, said automobile stall-ways being vertically inclined with respect to the horizontal.

13. An outdoor theater comprising a stage, alternate rows of automobile drive-ways and automobile stall-ways arranged in front of the stage, said automobile stall-ways being adapted to receive automobiles disposed generally adjacent to each other, said automobile stall-ways being vertically inclined with respect to the horizontal, and successive stallways, removed from the stage, being at successively lesser angles with respect to the horizontal.

14. An outdoor theater comprising a stage, alternate rows of automobile drive-ways and automobile stall-ways arranged in front of the stage, said automobile stall-ways being adapted to receive automobiles disposed generally adjacent to each other, said automobile stall-ways being vertically inclined with respect to the horizontal, and successive stallways, removed from the stage, being successively higher.

15. An outdoor theater comprising a stage, alternate rows of automobile drive-ways and automobile stall-ways arranged in front of the stage, said automobile stall-ways being adapted to receive automobiles disposed generally adjacent to each other, said automobile stall-ways being vertically inclined with respect to the horizontal, and successive stall-ways, removed from the stage, being successively higher, and successive stall-ways, removed from the stage, being at successively lesser angles with respect to the horizontal.

16. An outdoor theater comprising exhibiting means and space for spectators in front thereof, inclined means for supporting automobiles in such space in rows further and further from said exhibiting means, the supporting means in the rows further and further away from the exhibiting means being higher and less inclined successively to an extent as will produce a clear line of vision from the seat of an automobile in a row, through a windshield thereof to the exhibiting means, free of obstruction from the automobile ahead of it, and an automobile driveway leading to and from said supporting means of a row.

17. An outdoor theater comprising exhibit-

ing means and space for spectators in front thereof, means for supporting automobiles in such space in rows further and further from said exhibiting means, the supporting means in the rows being inclined vertically to an extent as will produce a clear line of vision from the seat of an automobile in a row, through a windshield thereof to the exhibiting means, free of obstruction from the automobile ahead of it, and an automobile driveway leading to and from said supporting means of a row.

18. An outdoor theater comprising exhibiting means and space for spectators in front thereof, vertically inclined means for supporting automobiles in such space in rows further and further from said exhibiting means, the supporting means in the rows further and further away from the exhibiting means being higher successively to an extent as will produce a clear line of vision from the seat of an automobile in a row, through a windshield thereof to the exhibiting means, free of obstruction from the automobile ahead of it, and an automobile driveway leading to and from said supporting means of a row.

19. An outdoor theater comprising exhibiting means and space for spectators in front thereof, inclined means for supporting automobiles in such space in rows further and further from said exhibiting means, the supporting means in the rows further and further away from the exhibiting means being higher and less inclined successively to an extent as will produce a clear line of vision from the seat of an automobile in a row, through a windshield thereof to the exhibiting means, free of obstruction from the automobile ahead of it, and an automobile driveway at the front and an automobile driveway at the back of the automobile supporting means.

20. An outdoor theater comprising exhibiting means and space for spectators in front thereof, means for supporting automobiles in such space in rows further and further from said exhibiting means, the supporting means in the rows being inclined vertically to an extent as will produce a clear line of vision from the seat of an automobile in a row, through a windshield thereof to the exhibiting means, free of obstruction from the automobile ahead of it, and an automobile driveway at the front and an automobile driveway at the back of the automobile supporting means.

In testimony whereof I have hereunto set my hand.

RICHARD M. HOLLINGSHEAD, Jr.