VACANCY INDICATOR FOR DRIVE-IN THEATERS

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This invention relates to a vacancy indicating means in drive-in theaters.

In drive-in theaters portable audio or speaker units are removably mounted on supports or posts which are arranged throughout the parking area for vehicles and these units are removed from their supports and placed within a vehicle which is parked adjacent to the support. At present no means has been provided whereby the driver of a vehicle entering the parking area is able to determine whether there is a vacant space in a particular row without driving along such row. This procedure results in considerable confusion and annoyance to people in parked vehicles particularly where a row is found to be filled so that the incoming vehicle must then cruise about the area to find a vacant location. It is, therefore, an object of this invention to provide a means whereby the driver of an incoming vehicle may determine whether there are any vacant positions in a particular row when the driver is at one end of a row.

In the carrying out of this invention there is an illuminable panel at one or both ends of a row of speaker units and the lights of the panel are illuminated through closing of one or more switches at each vehicle location at the time the speaker unit or units are removed from the support.

Another object of this invention is to provide an indicating panel which not only includes individual lights for each vehicle location but also includes a “full” indication which will only be illuminated when all of the vehicle locations are occupied.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawings and specification, and then more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a plan view of a drive-in theater having mounted within the parking area thereof a vacancy indicating means constructed according to an embodiment of this invention.

Figure 2 is a detailed side elevation partly broken away and in section of one of the switch units within the parking area.

Figure 3 is the plan view of the unit.

Figure 4 is a detailed end elevation of one of the units with the speakers removed therefrom.

Figure 5 is a detailed front elevation of one of the annunciator units.

Figure 6 is an end elevation partly broken away and in section of one of the annunciator units.

Figure 7 is a fragmentary sectional view taken on the line 1—1 of Figure 6.

Figure 8 is a diagrammatic view showing the electric circuits embodied in this invention.

Figure 9 is a fragmentary sectional view taken on the line 8—8 of Figure 7.

Referring to the drawings the numerals 1 to 13, inclusive, indicate arcuate rows of parking locations disposed in a position whereby the occupants of the vehicles may view the picture which is projected onto the screen 15. At each parking position in each row there are disposed a pair of loud speaker units 16 which are detachably mounted on upright posts 17. In the present instance each post 17 has mounted on the upper end thereof a switch housing generally designated as 18 which is formed at its lower end with a collar 19. The housing 18 includes a top wall 20 which is formed with an opposed pair of U-shaped upstanding members 21 which are engaged by a hook shaped arm 22 fixed to the speaker unit 16.

An annunciator housing generally designated as 22 is disposed at one end of each row of parking positions, being disposed at the entrance of each row. The annunciator housing 23 is mounted on an upright post 24 and includes separable upper and lower housing members 25 and 26. A panel 27 is carried by the front wall 25 and 28 of the housing members 25 and 28 and has mounted therein a plurality of jewels 29. The housing 23 is divided into a plurality of light compartments 31 by means of upstanding partitions 32, and a light bulb 33 is mounted in each compartment 31.

The light bulbs 33 are carried by sockets 34 which are secured to a base plate 35, and the plate 35 divides the lower housing member 26 into an additional light compartment 36 within which a light bulb 37 carried by a socket 38 is positioned. A transparent panel 39 is disposed at the front of the compartment 36 and has formed thereon the characters 40 which in the present instance spell the word “full.” A panel 41 is disposed in the front of the upper housing member 25 and has characters 42 disposed thereon which spell the word “vacancies.”

An arrow 43 is also carried by the panel 42 and is directed downwardly so that the driver will know that the jewels 30 indicate vacancies when the jewels are lighted or indicate full positions when the jewels are unlighted by the bulbs 33. A numbered tag 44 is carried by each support 24 so as to designate the row numbers of the vehicle locations. In order to provide a means whereby associated light bulbs 33 will not be
lighted when corresponding speaker units 16 are removed from the supporting structures including the switch housing 18, I have provided a spring pressed normally open switch 45 which has a projecting operator 46 extending from an end wall 47 of the switch housing 18. The switch operator 46 is disposed in a position to be engaged by a speaker unit 16 when the latter is mounted on the supporting housing 18 so that the switch operator 46 will be pushed inwardly to a circuit closing position. There are two of these switches 45 and 45a disposed one at each end of the switch housing 18, and these two switches 45 and 45a are connected together in series by a conductor 48. The movable arm 49 of switch 45 is connected to a supply wire 50, and the stationary contact 51 of switch 45a is connected by means of a wire 52 to one side of a light bulb 33. The other side of the light bulb 33 is connected to a common ground or a negative wire 53.

The "full" indicating light bulb 37 is illuminated when all of the light bulbs 33 of one indicator or annunciator are unlighted by means of a series connected switches 54 and 55. Switch 54 is operatively connected with switch 45 by an insulating connector 56, and switch 55 is connected by means of an insulating connector 57 to switch 45a. The last one of the series connected switches 54 and 55 is connected by means of a conductor 59 to one side of the light bulb 37, and the other side of the light bulb 37 is connected by means of a conductor 59 to a negative line 53.

In the use and operation of this system and apparatus, each speaker supporting post 17 will have mounted on the upper end thereof a combined speaker support and switch housing 18. There may be one or more speaker units 16 mounted on the housing 18, and in the present instance it is contemplated that there be two of these speaker units on each switch housing 18.

When the hook 22 is engaged with the keeper or U-shaped member 21 the speaker unit 16 will gravitationally swing inwardly toward the adjacent end wall 47 of housing 18 and will thereby move the switch operator 16 inwardly to a circuit closing position. When the speaker unit 16 is removed from the support, operator 46, which is normally biased outwardly to a circuit breaking position, will move outwardly and thereby permit opening of one of the vacancy indicating switches 45 such as switch 45. When both of the speaker units have been removed from the support, the two switches 45 and 45a will be in circuit breaking position thereby turning out light bulb 33.

When a vehicle driver moves along the incomming side of the vehicle locations, any vacant positions can be readily determined by viewing the indicator or annunciator 23. If any jewels 31 are lighted, the vehicle driver will know which one of the vehicle positions is available and can enter the row of vehicle locations so as to park the vehicle in an unoccupied position. In the event all of the jewels are unlighted the circuit through the series connected switches 54 and 55 will be open thereby turning out light bulb 37. In the event only one of the speaker units is removed from the support, the associated light bulb 33 will not be lighted as one switch 45 will be in circuit breaking position due to removal of one of a pair of speaker units.

The structure hereinafter described will provide a means whereby incoming drivers will be able to determine by a glance at the annunciator or indicating member 23 whether any vehicle locations are vacant in any particular row. This will eliminate any cruising about in the parking area of vehicles so that the occupants of the vehicles already in the parking positions will not be disturbed.

What is claimed is:

A circuit closing means for a vacancy indicator means for drive-in theaters including a supporting post adapted to be disposed at a coupled position, a housing on the upper end of said post, a signal means, a circuit thereof, and a normally open switch carried by said housing said circuit closing means including a laterally projecting operator disposed at one end of said housing, a loudspeaker unit, a laterally projecting hook-shaped arm carried by said unit, a keeper carried by the top of said housing engageable by said arm to suspendingly support said unit at one end of said housing in confronting position to said operator whereby the latter will be moved by pressure of said unit thereagainst to switch closing position.

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