Aug. 26, 1958 W. S. DOYLE 2,849,534

SERVING TRAY SUPPORT FOR DRIVE-IN RESTAURANTS

Filed Dec. 1, 1955

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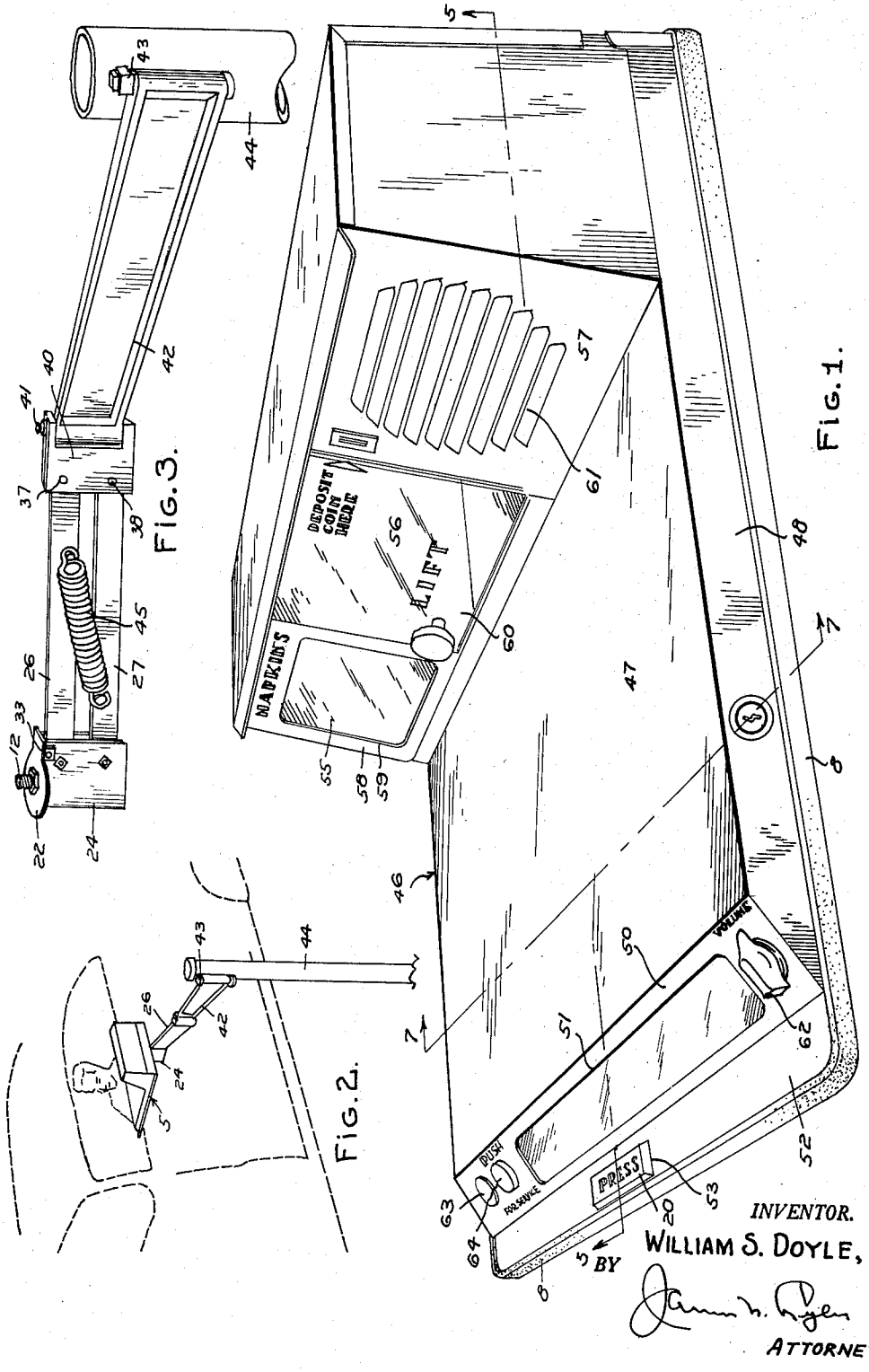


Fig. 1.

Fig. 3.

Fig. 2.

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4 Sheets-Sheet 2

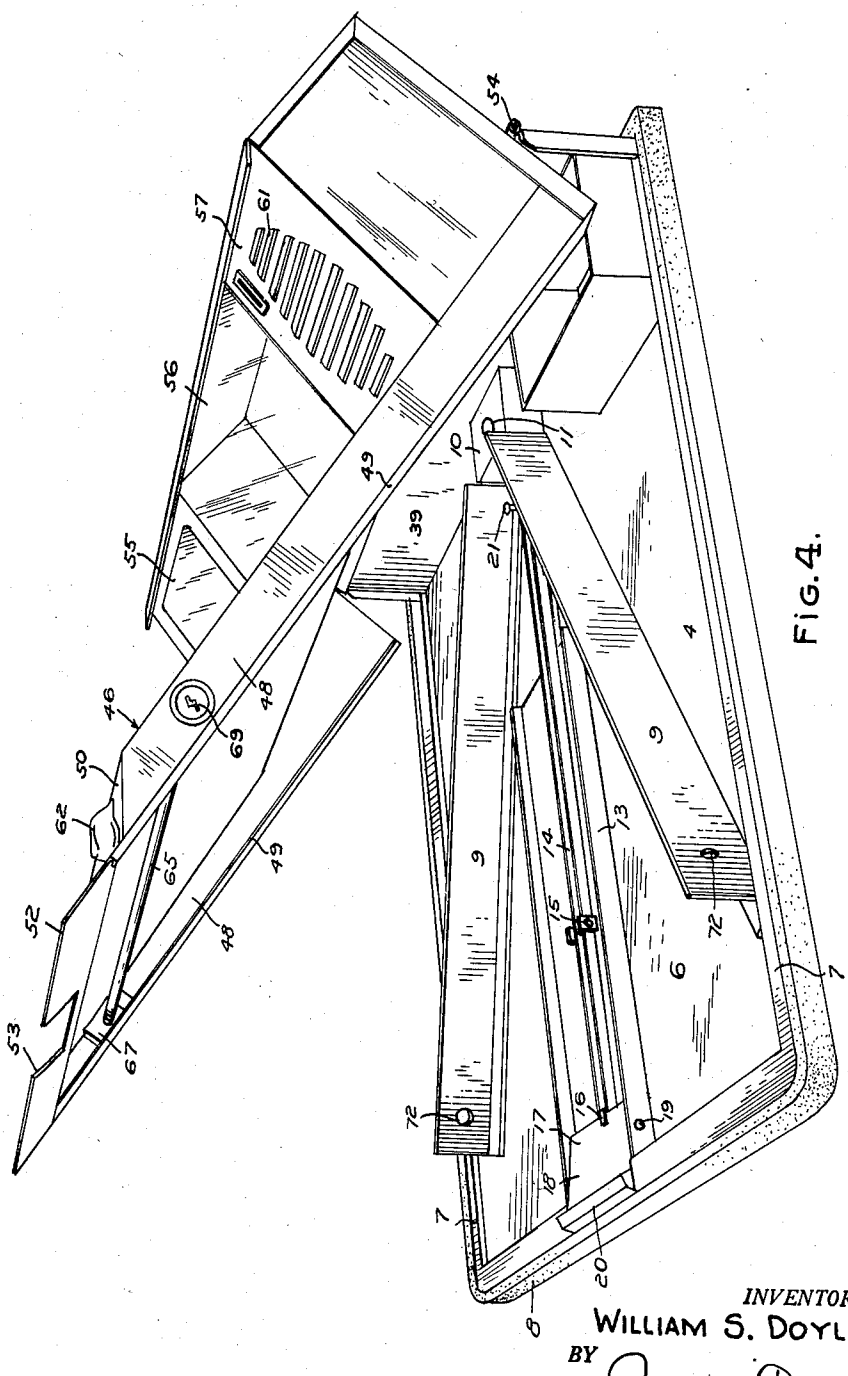


FIG. 4.

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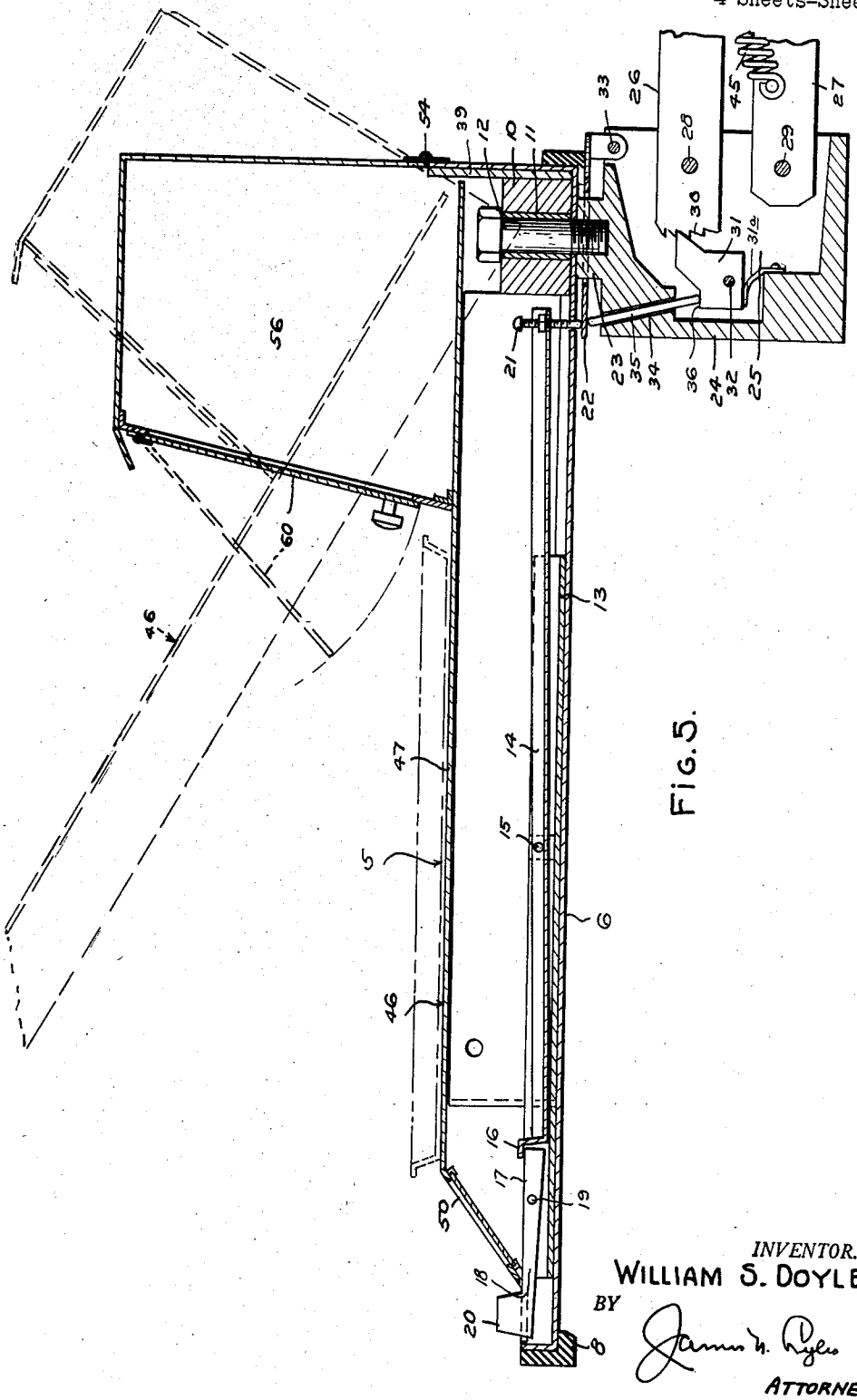


FIG. 5.

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4 Sheets-Sheet 4

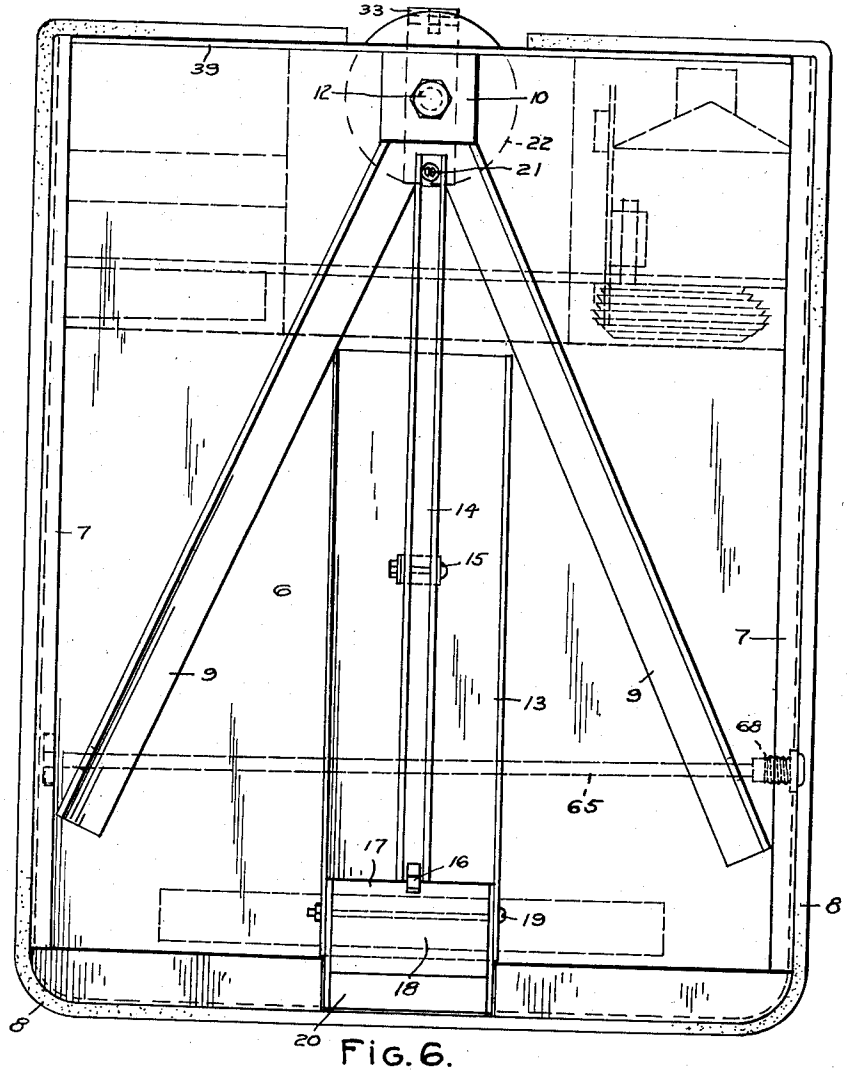


Fig. 6.

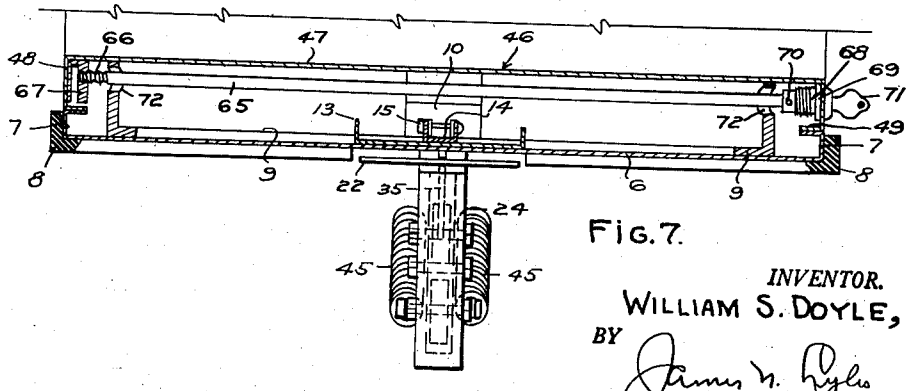


Fig. 7.

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SERVING TRAY SUPPORT FOR DRIVE-IN RESTAURANTS

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Application December 1, 1955, Serial No. 550,355

4 Claims. (Cl. 179—1)

This invention relates to a food or serving tray and utility support adapted for use in the well known drive-in restaurants and whereby food and drinks are served to the customers in the vehicle.

The invention consists generally in a supporting structure that is carried by a fixed ground standard or other support whereby the supporting structure may be swung in a horizontal plane toward and from the window of a vehicle that is disposed within a predetermined driving lane and whereby the supporting structure is capable of swinging away from the vehicle after use and thereby to permit the free and unobstructed movement of the vehicle to and from the driving lane.

The invention further contemplates a support for a tray that is swingable toward and from a vehicle whereby to move the device in close proximity to a window opening of the vehicle and with means being provided whereby the device may be easily adjustable vertically to accommodate itself to overlying relation to the sill of the vehicle window for convenient reach of the occupants of the vehicle.

The invention further contemplates a novel tray support having a rigid base plate that is swingable upon extension arms carried by a fixed standard and with the base plate supporting an overlying housing that comprises a flat bed surface for the resting support of a food or a food carrying tray and with the housing being provided with accessory cabinets and an audible speaker cabinet whereby the conventional napkins are housed against the weather and whereby the various condiments are likewise housed against the weather to be readily accessible to the occupants of the vehicle and with the audible speaker cabinet providing audible transmission of music whereby the occupants of the vehicle may be entertained during the use of the device, and wherein the device is adapted to be provided with a 2-way well known communication system.

The invention further contemplates a novel panel carried by the housing whereon is disposed a signal switch and indicator and a volume control switch and whereby the occupants of the vehicle may indicate to the restaurant the desirability for service or the like and with the housing having its panel provided with a site opening wherein is displayed indicia corresponding to remotely reproduced musical compositions or the like.

A further novel feature of construction resides in a latch plate that is disposed at the forward end of the device and whereby the occupants of the vehicle may easily and quickly control the vertical movement of the support to accommodate it to the window opening.

Novel features of construction and operation of the device will be more clearly apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated the preferred embodiments of the invention and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

Figure 1 is a perspective view of a tray support embodied in the invention,

Figure 2 is a perspective view of the tray support and associated mechanism in adjusted position with respect to the window opening of a vehicle,

Figure 3 is a perspective view of an adjustable arm for the horizontal and vertical adjustable movement of the tray support,

Figure 4 is a perspective view of the tray support and with a tray supporting housing being swung to an upper position for access to its base and interior mechanism,

Figure 5 is a longitudinal section taken substantially on line 5—5 of Figure 1,

Figure 6 is a top plan view of a base plate and associated mechanism, an upper covering housing having been removed and,

Figure 7 is a traverse section taken substantially on line 7—7 of Figure 1.

Referring specifically to the drawings, the numeral 5 designates a tray support as a whole, embodying a rectangular base plate 6 having its marginal edges bent to form a U-shaped channel 7. The marginal edges of the base plate is provided with a flexible strip 8 and with the strip 8 preferably being formed of rubber or the like whereby to protect the sill finish of a vehicle window opening when the device is engaged thereover. The base plate 6 is preferably formed of sheet metal and is reinforced against flexing around its marginal edges by the formation of the U-shaped channel. The base plate is further reinforced against flexing by a pair of rearwardly converging angle irons 9, that are preferably spot welded to the upper surface of the plate. Welded or otherwise connected to the base plate 6 at its rear end and intermediate its width is a relatively thick block 10. The block 10 is apertured at 11 for the support of a pivotal stud 12 that constitutes the point of swivel movement whereby the base plate and associated elements are shifted in a horizontal plane. The angle irons 9 at their rear ends are also preferably welded to the block 10, providing a very rigid means whereby the device is supported from a rearward pivotal point and maintained in substantially a horizontal plane. A channel member 13 is welded or otherwise rigidly connected to the base plate 6 and extends longitudinally of the base plate 6 centrally thereof and provides the mounting support for a trip lever 14, that is pivotally supported intermediate its length as at 15, upon ears preferably struck upwardly from the member 13. The lever 14 at its forward end is provided with a lip 6 that overlies the tail end 17 of a latch plate 18. The latch plate 18 is pivotally supported at 19 upon the side walls of the channel member 13, as shown. The latch 18 is provided with an upstanding exposed head portion 20 that is provided with suitable indicia, such as "press" and that indicates to the user the object thereof.

The lever 14 at its rear extremity is provided with an adjustable threaded screw 21 that extends downwardly through an opening in the base plate for engagement with a trip ring 22, to be described. The stud 12 has threaded engagement within a cylindrical boss 23 carried by a rectangular housing 24. The housing 24 is chambered at 25 for the reception of the ends of a pair of parallel bracket arms 26 and 27, that are pivotally supported within the chamber 25 through the medium of pins 28 and 29. The arm 26 at its forward end is provided with a plurality of ratchet teeth 30 for latching engagement with a dog 31 that is pivotally supported within the chamber 25 as at 32. The dog 31 is biased in a direction toward the teeth 30 by a spring 31*a* and whereby the dog will be constantly urged into a ratchet engagement with the teeth 30. The ring 22 is pivotally supported upon the head 24, as at 33 for vertical swinging

movement and with the ring 22 being centrally apertured to floatingly engage over the boss 23. The housing 24 is further apertured at 34 for the freely sliding reception of a release pin 35 that underlies the ring 22 at its upper end and has resting engagement at its lower end upon a shoulder 36 carried by the dog 31. Thus, when the lever 14 is rocked by the latch plate 18, the screw 21 will engage the upper surface of the ring 22, pressing the ring downwardly, forcing the pin 35 downwardly to rock the dog 31 upon its pin 32 and whereby to release the dog from the teeth 30, to thereby permit the raising and lowering of the base plate and associated elements in any degree of pivotal movement thereof. It will be apparent, that the use of arms 26 and 27, serves to maintain the tray support horizontal throughout its vertical adjustment. The bracket arms 26 and 27 at the opposite ends are pivotally connected as at 37 and 38 within a recess 39 formed within a swivel head 40. The head 40 is bifurcated to engage a pin 41 carried by the forward end of a bracket arm 42. The bracket arm 42 is hingedly connected at 43 upon a fixed standard or other support 44 that is positioned adjacent a driving lane that denotes the position of parking for the vehicles to be serviced. The arms 26 and 27 are connected together by a spring 45 whereby to bias the arms and the head 42 and associated elements in an upward direction and whereby to counterbalance the weight of the support and a tray supported thereon. The base plate 6 and the associated mechanism including the head 24 are thus shiftable in a vertical plane through the medium of the arms 26 and 27 and the dog 31. It will thus be apparent, that with the device being in an uppermost position, pressure may be exerted upon its upper surface, causing the arms 26 and 27 to swing downwardly when the latch mechanism actuates the dog to a release position. Movement to an upper position merely requires that the operator lift upon the outer end of the base, causing the dog to ratchet over the teeth 30 where the mechanism will be held against further downward movement by the dog. Welded to the block 10 and extending across the rear end of the base 6 is a relatively heavy upstanding plate 39. The plate 39 imparts additional rigidity to any lateral twisting of the base and provides a connecting means for a structure, to be described.

Disposed in overlying relation to the base 6 is a housing, denoted generally by the numeral 46. The housing 46 is formed of sheet metal and comprises a relatively wide flat bed 47 that constitutes the support for a food containing tray. The housing is provided with flat side walls 48 that are inwardly bent along their longitudinal edges as at 49 and with the edges overlying the channel 7 to be flush therewith. The bed 47 at its forward end is downwardly inclined to form a panel 50. The panel 50 is provided with a site opening 51, wherein is disposed a chart having indicia corresponding to musical recordings or the like. The panel 50 terminates in a horizontal lip portion 52 that terminates in flush overlying arrangements to the forward marginal end of the base 6. The lip 52 is provided with an elongated aperture 53 that engages over the latch head 20 and whereby the latch head projects above the lip for operative engagement by the finger of an operator. The housing 46 at its rear end is hingedly supported as at 54 whereby to permit the housing to be bodily elevated for exposing the mechanism supported upon the base plate. The housing 46 at its rear portion is also provided with a plurality of cabinets 55, 56 and 57. The cabinet 55 is provided with a closure door 58 having a site opening 59 whereby to expose napkins or the like. The cabinet 56 is provided with a closure door 60, preferably transparent and with the cabinet 56 supporting such elements as condiments or the like. The cabinet 57 is provided with a louvered front wall 61 and with the cabinet being provided with a conventional sound speaker, not shown. The speaker mechanism is of a conventional construction and preferably to be actuated by any well known coin device that is time controlled and the panel 50 may carry a volume control button 62 that is electrically connected with the speaker mechanism whereby to vary the volume of the sound. It is contemplated of course that the speaker shall be connected through suitable electrical conductors to a remote reproducing machine usually disposed within the main building of the drive-in restaurant and preferably embodies a 2-way communication system employing a speaker. Other signal means, such as a button 64 and a visual signal 63 are preferably disposed upon the panel 50, whereby the button 64 may be electrically connected to suitable signal mechanism within the restaurant and whereby attention may be directed to the fact that service is desired at a particular vehicle. Various electrical circuits may be employed in connection with the support, all of which are conventional and well known and form no essential part of the structure herein recited. Suitable illuminating lamps will obviously be employed upon the base 6 whereby to illuminate the site openings 51 and 63. It is contemplated that all of the parts shall be constructed of a metal that is resistant to corrosion or rusting.

It becomes necessary that the housing 48 be locked against unauthorized elevation above the base 6, such being necessary in view of the fact that the speaker mechanism is coin controlled and that obviously there will be a coin receptacle below the cabinet 57. To provide for the locking of the parts together, there has been provided a rod 65 having one end threaded at 66 for threaded engagement within a lug 67 carried by the housing 46. The rod at its opposite end is provided with a key actuated lock mechanism 68. The lock mechanism 68 is connected to the rod 65 by a pin 70 and the rod may be released and wholly removed through the medium of a key device 71. The rod 65 extends transversely of the support and passes through apertures 72 formed in the angle arms 9. Thus with the rod in position, the housing 46 is securely held against unauthorized elevation.

In the use of the device, when a vehicle drives within the driving lane, the patron stops at a point adjacent a standard 44. He then reaches out and swings the support 5 toward the vehicle and if necessary elevates the support so as to permit it to partially engage over the sill of the window opening.

Since a menu is usually supplied with articles of this type, the operator proceeds to determine the particular service desired and then presses upon the button 64, causing a signal to be displayed within the restaurant. During the time necessary for consuming the food, the operator may insert a coin within the coin slot for the speaker and causing a circuit connection whereby the speaker will be placed in connection with a reproducing machine within the restaurant for a predetermined period of time. As before pointed out, napkins and condiments are readily available from the cabinets 55 and 56. Through the medium of the arms 26 and 27 and the rigid arm 42, the support may be easily adjusted to a most convenient position within the window opening. The use of the spring biased arms 26 and 27 permits of a quick and easy adjustment of the support in a vertical plane in order to accommodate it within window openings of varying heights. Now, when the operator has consumed the food, he signals again to the restaurant by pressing the button 64 at which time the entire device is shifted rearwardly away from the vehicle through the medium of the arms 26, 27 and 42, thus permitting the vehicle to be driven away without interference with the device. The bed 47 is of a size calculated to support a conventional tray whereupon is disposed the food products to be consumed.

It will be apparent from the foregoing, that a very novel tray support has been provided. The device provides an adequate area for supporting a tray and has the added features of providing and protecting the napkins and the

condiments from the weather and provides an available support that readily accommodates itself as to height and extensive movement from its fixed support **44**. The extension movement obviously is necessary in view of the fact that the distance of the vehicle from the support quite frequently varies. The device has the added desirable feature of a sound speaker that is coin operated and whereby the driver of the vehicle may, if he so desires to be entertained while he is eating. The parts are few and simple, are ornamental in appearance, are strong, durable, economical to manufacture and most convenient as a service device for drive-in types of restaurants.

It is to be understood that while a preferred form of the device has been illustrated, changes are contemplated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claims.

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

1. A food carrying tray support for use in vehicle drive-in restaurants that comprises a rigid standard that is positioned adjacent to a drive-in lane that defines the approximate position of a vehicle to be served, inner and outer bracket arms that are hinged together and with the inner arm being hingedly connected to the standard, the outer arm being also connected in a manner to swing in a vertical plane, the tray support embodying a rigid base that is pivotally connected to the outer end of the outer arm and whereby the tray support is capable of being swung in a horizontal plane, a housing overlying the base and with the housing being provided with a flat bed for the resting support of a food carrying tray, latch means whereby to control the vertical movement of the outer arm, the said latch means being actuatable in any desired degree of horizontal angularity of the tray support with respect to the outer arm, means embodied in the outer arm whereby the tray support and its flat bed is maintained in a horizontal plane throughout all degrees of vertical or horizontal adjustment, the said base being reinforced longitudinally and wherein the base is pivotally connected to a head member carried at the outer end of the outer arm and whereby the base may swing in a horizontal plane, ratchet means disposed in the head member and that has ratchet engagement with the outer end of the outer arm and whereby a predetermined degree of adjustment is maintained between the arm and the pivotal means of the base when the tray support is vertically adjusted and latch control means extending longitudinally of the base and provided with an exposed release head at the forward end of the support and whereby the base and associated elements may be vertically adjusted throughout any degree of lateral pivotal movement of the base.

2. A food carrying tray support for use in vehicle drive-in restaurants that comprises a rigid standard that is positioned adjacent to a drive-in lane that defines the approximate position of a vehicle to be served, inner and outer bracket arms that are hinged together and with the inner arm being hingedly connected to the standard, the outer arm being also connected in a manner to swing in a vertical plane, the tray support embodying a rigid base that is pivotally connected to the outer end of the outer arm and whereby the tray support is capable of being swung in a horizontal plane, a housing overlying the base and with the housing being provided with a flat bed for the resting support of a food carrying tray, latch means whereby to control the vertical movement of the outer arm, the said latch means being actuatable in any desired degree of horizontal angularity of the tray support with respect to the outer arm, means embodied in the outer arm whereby the tray support and its flat bed is maintained in a horizontal plane throughout all degrees of vertical or horizontal adjustment, the said base and the overlying housing being rectangular in top plan, the pivotal connection for the base being at a point intermediate the width of the base and adjacent its rear end and whereby to protect the finish of the vehicle sill, the flat bed of the housing being parallel with the base and overlying its major area, the housing being provided with cabinets having sight openings and whereby to house convenience articles, one cabinet having its front wall louvered for the transmission and or reception of sound through or from a magnetic speaker that is adapted to be installed in the cabinet, the forward end of the flat bed being downwardly angled to form a panel and with the panel being provided with a program sight opening and an electrical actuating button and volume control.

3. A food carrying tray support for use in vehicle drive-in restaurants that comprises a rigid standard that is positioned adjacent to a drive-in lane that defines the approximate position of a vehicle to be served, inner and outer bracket arms that are hinged together and with the inner arm being hingedly connected to the standard, the outer arm being also connected in a manner to swing in a vertical plane, the tray support embodying a rigid base that is pivotally connected to the outer end of the outer arm and whereby the tray support is capable of being swung in a horizontal plane, a housing overlying the base and with the housing being provided with a flat bed for the resting support of a food carrying tray, latch means whereby to control the vertical movement of the outer arm, the said latch means being actuatable in any desired degree of horizontal angularity of the tray support with respect to the outer arm, means embodied in the outer arm whereby the tray support and its flat bed is maintained in a horizontal plane throughout all degrees of vertical or horizontal adjustment, the said housing being hingedly connected to the rear end of the base and whereby the housing may be swung in a vertical plane to expose control mechanism within the base and a key actuated locking device whereby the housing is locked in overlying relation to the base.

4. A food carrying tray support for use in vehicle drive-in restaurants that comprises a rigid standard that is positioned adjacent to a drive-in lane that defines the approximate position of a vehicle to be served, inner and outer bracket arms that are hinged together and with the inner arm being hingedly connected to the standard, the outer arm being also connected in a manner to swing in a vertical plane, the tray support embodying a rigid base that is pivotally connected to the outer end of the outer arm and whereby the tray support is capable of being swung in a horizontal plane, a housing overlying the base and with the housing being provided with a flat bed for the resting support of a food carrying tray, latch means whereby to control the vertical movement of the outer arm, the said latch means being actuatable in any desired degree of horizontal angularity of the tray support with respect to the outer arm, means embodied in the outer arm whereby the tray support and its flat bed is maintained in a horizontal plane throughout all degrees of vertical or horizontal adjustment, the said outer arm embodying a pair of parallel bars, one end of each of the bars being pivotally connected to a bifurcated block and with the block being pivotally connected to the inner arm to swing in a horizontal plane, the pivotal connection for the bars being at a right angle to the pivotal connection of the block whereby the bars are shiftable in a vertical plane, spring means between the bars whereby they are biased toward each other whereby to counter balance the supporting structure, the opposite ends of the bars being pivotally connected within a pivot block, the forward end of one bar being provided with ratchet teeth, a latch dog pivotally supported within the pivot block and biased toward the said teeth, a stud formed upon the upper end of the pivot block for the overlying and pivotal support of the base, a pivot pin between the base and the stud, a trip ring pivoted upon the upper end of the pivot block to swing in a vertical plane, a trip pin that is slidable through an opening of the pivot block and with its upper end pro-

jecting above the block and in the path of movement of the ring, the opposite end of the pin having resting contact with the latch dog and whereby the latch dog is released from the ratchet teeth when the ring is depressed, a trip lever extending longitudinally of the base and having connection at its forward end with a trip head, the rear end of said lever being provided with a contact screw that projects downwardly to engage the upper surface of the ring and whereby the ring is depressed to release the dog.

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