Nov. 8, 1932. J. W. LITTMAN 1,887,100

DISPLAY DEVICE

Filed June 5, 1931 3 Sheets-Sheet 1

Fig. 1.

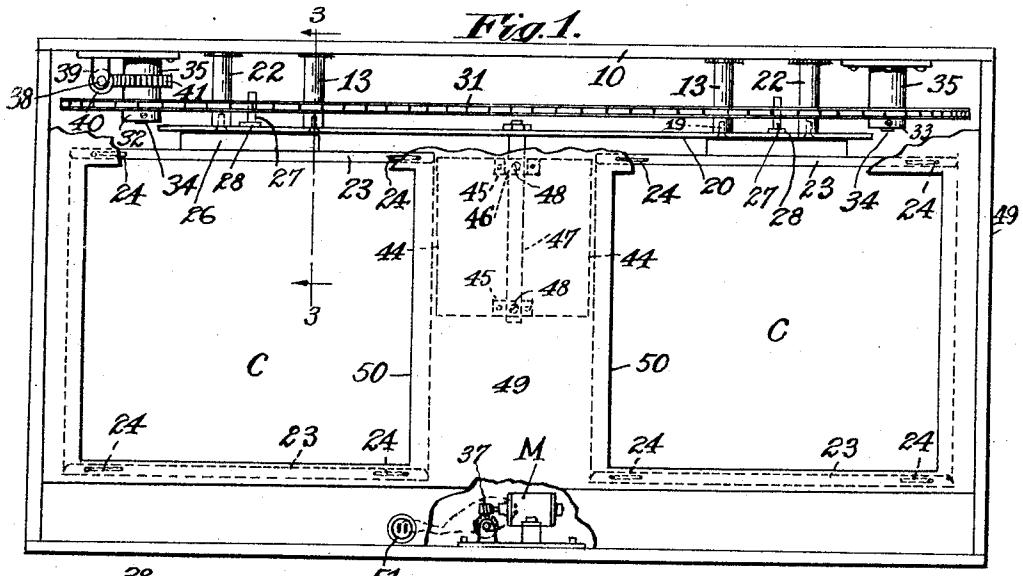


Fig. 2.

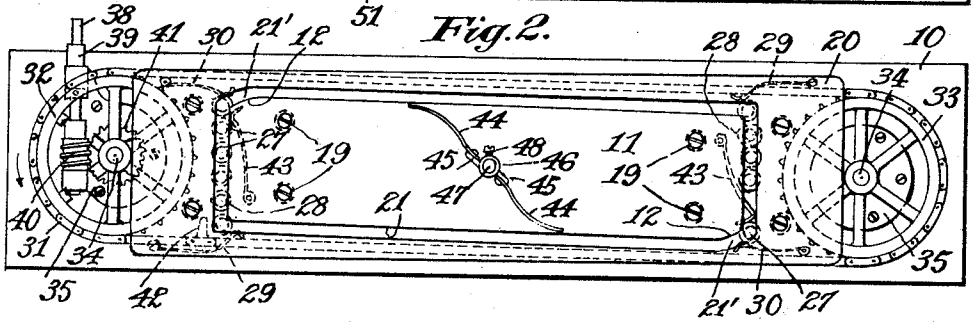
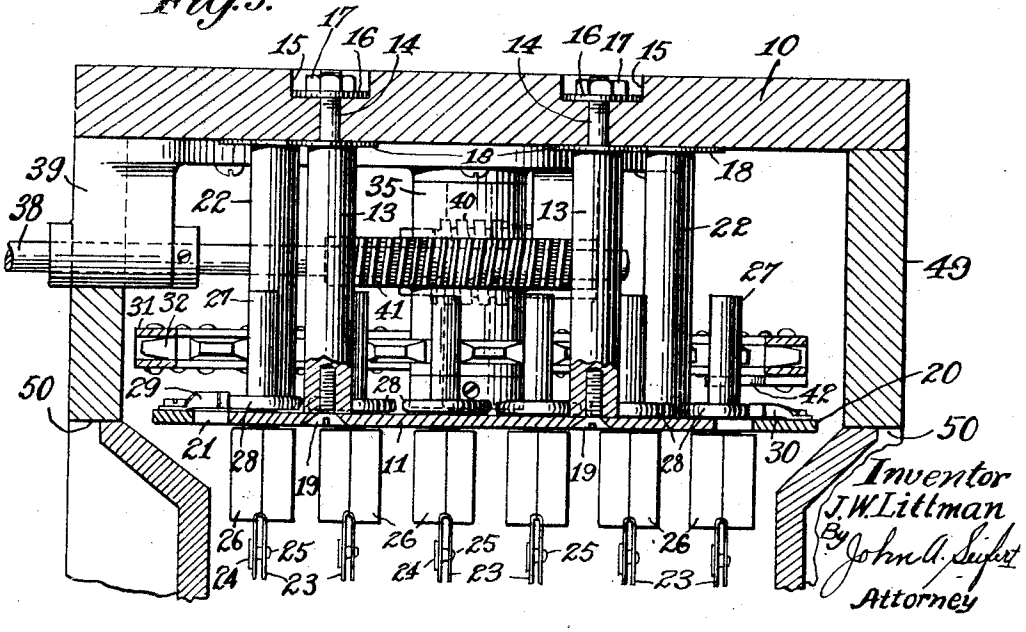


Fig. 3.



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DISPLAY DEVICE

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Fig. 4.

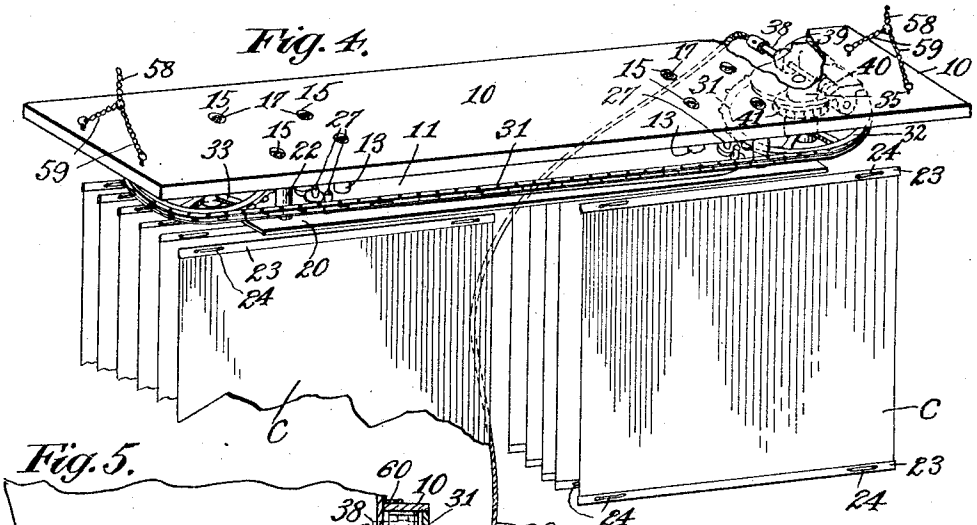


Fig. 5.

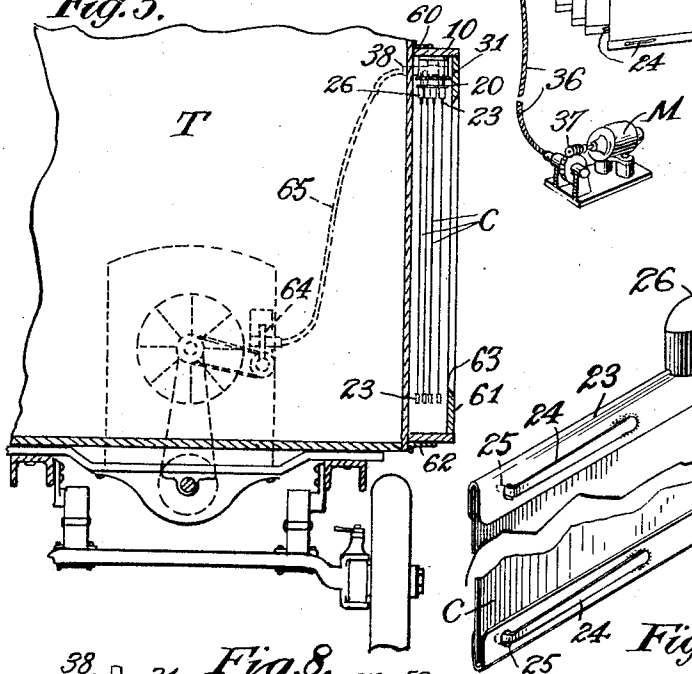


Fig. 6.

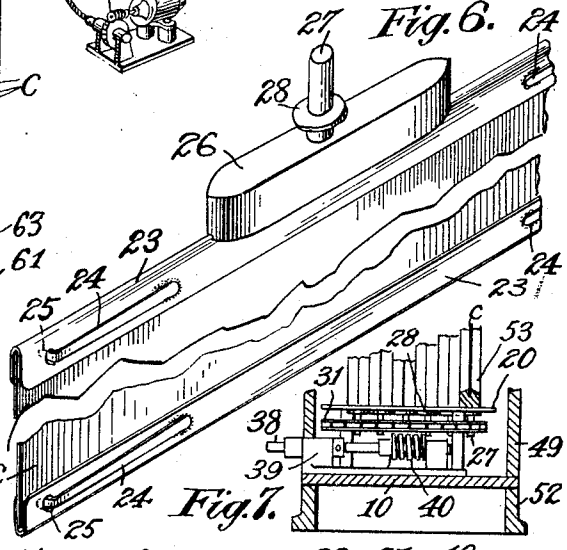


Fig. 7.

Fig. 8.

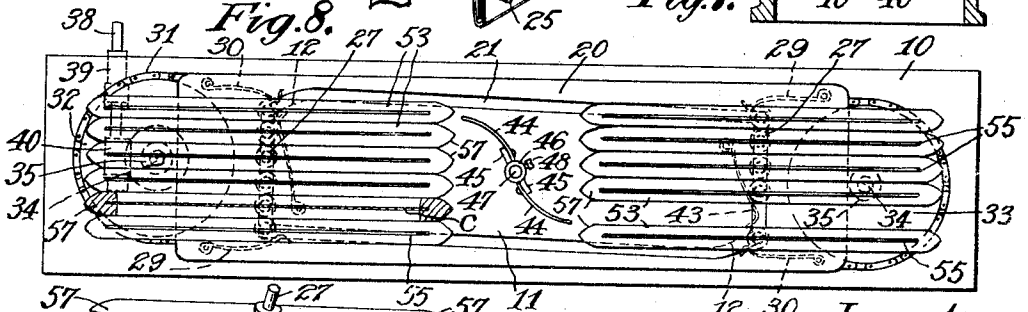
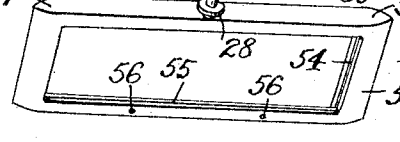


Fig. 9



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Fig. 10

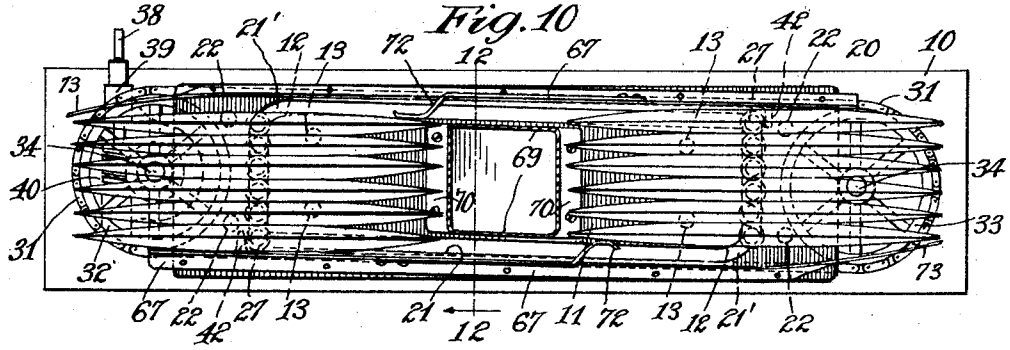


Fig. 11.

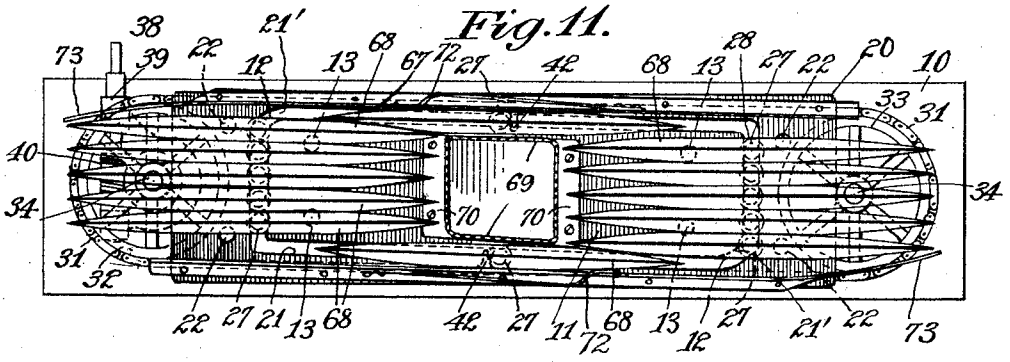
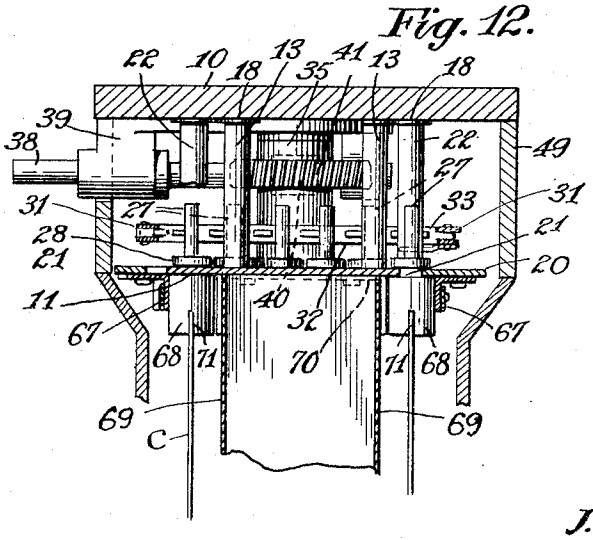


Fig. 12.



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UNITED STATES PATENT OFFICE

JOSEPH W. LITTMAN, OF NEW YORK, N. Y.

DISPLAY DEVICE

Application filed June 5, 1931. Serial No. 542,248.

This invention relates to a device for automatically and intermittently exposing to view a series of display cards for advertising purposes in normally unoccupied spaces, such as the upper portion of a show window, the transom of the entrance to a store or building, or on the walls of the body of a motor vehicle, and it is an object of the invention to provide such a device which is positive in operation and inexpensive to manufacture.

It is another object of the invention to provide a display device that intermittently exposes to view display cards by constant moving transferring means thereby eliminating switching mechanism to control the movement of said transferring means.

It is still another object of the invention to expose to view the same display card successively so that the advertising matter thereon can be fully ascertained by interested observers and to expose four different cards at the same time.

It is a further object of the invention to position the display cards at a successive showing thereof in horizontal alinement with the position of the cards at the first showing to assure proper observation of the cards at all showings.

It is a still further object of the invention to advance the cards to a successive position and provide simple and inexpensive means to retain the advanced cards in the successive positions until another card is advanced.

Another further object of the invention is to provide a simple and inexpensive frame member for releasably supporting display cards whereby the cards may readily be renewed without the necessity of removing the frames from the supporting structure.

A still further object of the invention is to provide such a device whereby it may readily be mounted in a suitable supporting casing or suspended from the ceiling or other convenient support.

Still another object of the invention is to arrange the actuating means of the device whereby the same may be actuated from power means remote from the device through means of a flexible shaft.

In carrying out the invention, parallel series of display cards in pack formation are mounted in a continuous track structure with the end cards of each series retained in said series to present the subjects-matter of said cards to view, and to present different cards to view a flexible member is continuously actuated in one direction and arranged with means to engage an end card of one series and transfer the same to the other series in front of an end card of said latter series, where the transferred card is directed away and released from the transferring means. The transferring means after being released from the transferred card continues to move and engages the exposed card at the other end of the last mentioned series of cards, which card is transferred by said transferring means in front of the end card of the first mentioned series of cards, the last mentioned transferred card being retained in the series in the same manner as the first mentioned card that was transferred, this operation being continuously repeated whereby all the cards of each series are exposed successively at the alined ends thereof.

In the drawings accompanying and forming a part of this application, Figure 1 is a front elevation of the device supported in a cabinet with parts of the cabinet broken away to show the actuating parts of the device.

Figure 2 is a plan view showing the actuating parts of the device separated from the cabinet looking at the bottom of Figure 1.

Figure 3 is a cross section on an enlarged scale of the actuating parts supported in the upper portion of the cabinet taken on the line 3—3 of Figure 1.

Figure 4 is a perspective view of the device showing the same arranged with means to suspend the device from a support not shown.

Figure 5 is a fragmentary view in cross section showing the device mounted on the body of a motor vehicle.

Figure 6 is a fragmentary view in perspective of a display card and novel supporting frame therefor used in the device shown in Figures 1 to 5, inclusive.

Figure 7 is a cross sectional view on a reduced scale of the device showing the same

modified to support the display cards and the actuating parts of the device in the bottom portion of a cabinet with the upper portion of the cabinet broken away.

Figure 8 is a view of the actuating parts of the device and the cards supported thereby looking at the top of Figure 7.

Figure 9 is a perspective view of a modified form of card carrying frame used in the embodiment of the invention shown in Figures 7 and 8.

Figure 10 is a plan view similar to Figure 2 of a modified arrangement for supporting an equal number of cards in each series.

Figure 11 is a view similar to Figure 10 showing two cards being simultaneously transferred from opposite series; and

Figure 12 is a cross section on an enlarged scale of the actuating parts taken on the line 12—12 of Figure 10 looking in the direction of the arrows.

In the embodiment of the invention illustrated in the accompanying drawings display cards C and the means to support and actuate the same to different viewable positions are carried by a support in the form of sheet or plate 10, of any suitable material, such as wood, in spaced relation in which the cards C are supported in track and guide means comprising a center plate 11 of rectangular shape having diagonally opposed corners curved, as at 12 in Figures 2 and 8, and said plate being connected to and supported from and in spaced relation to the support 10 by studs 13 having one end reduced and threaded to engage perforations in the supporting plate 10, as at 14 in Figure 3, and said ends of the studs terminating within enlargements 15 of the perforations at the outer surface of the supporting plate 10 for the reception of washers 16 engaged on the stud ends and nuts 17 threaded onto the projecting stud ends to impinge the washers against the recess and secure the studs to the plate 10. To prevent forcing of the studs through the plate perforations when the nuts are threaded thereon washers 18 are interposed between the shoulders formed by the reduced ends of the studs and the adjacent surface of the plate 10. The guide plate 11 is secured to the ends of the studs 13 opposite to the ends secured to the supporting plate 10 by screws 19 passed through perforations in the plate 11 and having threaded connection with recesses in the studs, as shown in Figure 3. To form a guideway or track portion in which carriers for the cards are supported and transferred from one series to another a plate 20 having a rectangular recess centrally thereof conforming to and of a size slightly greater than the size of the plate 11 is mounted on the supporting plate 10 centrally of the plate 11 and form therewith a continuous passageway or guide slot 21, said plate 20 having curved diagonally opposed corners in parallel relation to the curved corners 12 of the plate 11 to form a curved passage 21′ at an opposite end of each lateral section of the slot 21. The plate 20 is connected to and supported by the plate 10 by studs 22 in a manner similar to the connection of plate 11, and therefore it is not deemed necessary to describe the connections of the studs 22 with the plates 10 and 20.

The supporting plate 10 may be mounted either with the plates 11 and 20 below or above said supporting plate, and in the mounting of the supporting plate with the card supporting and guide plates 11 and 20 below the plate 10 (as illustrated in Figures 1 to 6, inclusive,) the cards C, having appropriate advertising matter thereon, are adapted to be suspended from the guide slot 21 by engaging the top and bottom edges of the cards in U-shaped metallic members 23 having resilient strips 24 attached at one end to one of the legs of the members, as by soldering or welding, with the opposite ends bent at right angles and passed through alined perforations in the legs of the members 23 and cards engaged in the members 23, as at 25 in Figure 6, whereby the cards are secured between the legs of the members 23 and are released from the members 23 by lifting the bent ends 25 out of engagement with the perforations. The material of the cards is of sufficient stiffness and the material of the members 23 secured to the bottom edges of the cards is of such weight to maintain the cards in a straight vertical plane and prevent buckling of the cards. The members 23 secured to the top edges of the cards are arranged with blocks 26 (Figure 6) attached to the U-portions of the members midway of the ends thereof by means of solder or in any other suitable manner, and the opposite side walls of the ends of said blocks are tapered or converge toward each other to sharp edges for a purpose to be hereinafter described. The cards are slidably mounted in the slot 21 by pins 27 fixed in and extended from the blocks 26 midway of the ends thereof, said pins being extended into and are of a diameter to fit loosely in the slot 21 with annular shoulders 28 on said pins spaced from the blocks to engage the upper surfaces of the plates 11 and 20 and support the card carrying blocks therefrom, as shown in Figure 3.

To present to view four different cards at the same time, the cards are normally yieldingly and releasably retained in pack formation in parallel series in the lateral or side sections of the slot 21, as shown in Figures 1, 2, 4 and 8, by engaging the card carriers of each series between resilient members 29, 30 at the opposite ends of each lateral slot section, said members being fixed at one end to the plate 20 with the free ends of curved

formation positioned to yieldingly engage the shoulders 28 of the pins 27 of the end card carriers, as shown in Figures 2, 3 and 8, and maintain said shoulders in juxtaposed relation to each other.

To expose to view the inner cards of each series the exposed cards at the end of each series diagonally opposite to each other and in opposed alined relation to the curved corners 21′ of the slot 21, and constituting the rear cards of each series, are transferred along the longitudinal sections of the slot to the curved front end portions 21′ of the lateral slot sections by a flexible member, in the present instance an endless sprocket chain 31 supported by sprocket wheels 32, 33 fixed on spindles 34 rotatably mounted in bearing sleeves 35 fixed to the supporting plate 10 beyond the ends of the guide plate 20, as shown in Figures 1 and 2. The chain is continuously actuated to travel in the direction indicated by the arrow in Figure 2 by a motor M, which may be mounted on the supporting plate 10, or at a place remote from said plate as illustrated in the drawings, and operatively connected to the sprocket wheel 32 through a flexible shaft 36 connected at one end with the motor shaft through a worm and gear connection 37 and connected at the other end to a shaft 38 rotatably mounted in the sleeve of a bracket 39 fixed to the plate 10 with the free end of shaft 38 carrying a worm 40 meshing with a worm gear 41 fixedly mounted on the spindle of sprocket wheel 32. The bracket 39 may be integral with the bearing sleeve 35 supporting the spindle of sprocket wheel 32 to facilitate the assembling of the same on the supporting plate 10, as shown in Figures 2 and 3.

The chain is releasably coupled with the cards to transfer the cards from one series to the other series of cards by a projection in the form of a finger member 43 fixed to and extending laterally from a link of the sprocket chain so that said member will clear the sides of the sprocket wheels 32 and 33, as shown in Figure 3, and engage the portion of the pins 27 of the blocks 26 of the card carriers extending above the shoulders 28, the finger member 42 being shown in Figure 2 in position just prior to the engagement thereof with the pin of the carrier for the card at the rear of the left hand series of cards. By the movement of the finger 42 the engaged pins 27 are forced over the retaining members 29 and moved along the longitudinal sections of the card guiding slot into the curved end portions 21′ of the end sections of the slot for engagement by the resilient retaining members 30, said curved slot portions 21′ and engaging portions of the retaining members 30 being in the path of travel of the card pins 27 of the transferred cards as the longitudinal walls of the recess in the guide plate 20 and the opposed longitudinal edges of the plate 11 extend in an oblique direction longitudinally of the supporting plate 10, whereby the longitudinal sections of the slot 21 will extend in the same direction. To further assure disengaging the finger 42 from the pins of the card carriers delivered to the portions 21′ the supporting spindles for the sprocket wheels 32 and 33 are mounted at opposite sides of the longitudinal axis of the support 10, whereby the distance between the chain and pins of the card carriers positioned in the curved portions 21′ is greater than the distance between the chain and the pins of the card carriers positioned at the rear ends of the lateral slot sections opposite the curved end portions of said slot sections, as shown in Figure 2. The end cards of each series facing on the same longitudinal slot section are positioned by the retaining members 29 and 30 in horizontal alinement with each other to assure proper observation of each card. One lateral slot section to which a card is delivered, shown as the section at the right in Figure 2, is not filled to capacity with cards, there being a space for one card, as shown in said figure, to prevent the forcing of the card at the rear end of said slot section opposite the curved end 21′ out of said section pass the retaining member 29 upon the delivery of a card to said curved end, and to maintain the end cards in the front curved end portions of said slot sections in alinement with the rear end cards in the other lateral slot sections, resilient members 43, similar to the members 29 and 30, are fixed at one end to the guide plate 11 with the free ends curved and positioned to engage the pin shoulders 28 of the card carriers positioned in the curved portions 21′. Upon the transfer of a card from either of the rear ends of the lateral slot sections a space is provided relative to which the successive card in the series is positioned to properly expose the same to view by the force of the resilient member 43 against the card adjacent the front end card retained by members 30 and 43, whereby the remaining cards will be moved toward the member 29 with the forward card taking the place of the end card engaged and transferred by finger 42. The movement of the members 43 to move the cards forward will position the free curved end thereof to the rear of the pin in the curved slot end 21′ to retain the same in position. The cards positioned in the curved slot portion 21′ are moved into the lateral slot sections by the movement of the card being transferred by the chain 31 through the engagement of the tapered ends of the blocks 26 of said cards.

Due to the pivotal mounting of the cards in the guide slot 21 the cards will have a tendency to swing on the supporting pins during the travel thereof along the longitudinal sections of the slot which movement may direct the ends of the moving card into engagement

with the cards in the lateral section to which said card is being moved which engagement will stop the movement of the traveling card and cause breakage of parts due to the continuous travel of the chain 31. To prevent this occurence resilient guide sheets or strips 44 of curved formation are fixed to ears 45 extending diametrically opposite from sleeves 46 mounted on a post 47 fixed to and extended from the guide plate 11 intermediate of the sides and ends thereof. The sleeves 46 are adjustably secured to the post 47 by setscrews 48 to position the outer portions of the strips 44 to extend in parallel relation to the longitudinal slot sections, as shown in Figures 2 and 8, to yieldingly engage the surfaces of and maintain the cards in straight vertical planes during the travel thereof.

It will readily be seen that a compact advertising device which may easily be transported and mounted in any convenient place has been set forth and the size of the different parts may be changed to accommodate the device to different size spaces. In Figures 1 and 3, the device is shown mounted in a cabinet 49 having the top portion open and of a size to support the supporting plate 10 of the device with the actuating parts thereof within the cabinet, the supporting plate serving as a closure for the cabinet. The longitudinally extending walls of the cabinet are arranged with view openings 50 with the marginal frame portions about said openings extended inwardly to position the same in juxtaposed relation to the exposed end display cards, as shown in Figure 3. The motor M is mounted on the bottom of the cabinet and is connected by the flexible shaft 36 to the shaft 38, and the motor being adapted to be connected to a source of electricity through an electric connection member 51 mounted in the wall of the cabinet and electrically connected to the motor.

The actuating mechanism and the guide and support for the cards may be mounted at the bottom of the cabinet 49 with the supporting plate 10 engaged upon a base 52 and the cabinet supported upon the plate 10, and the latter constituting the bottom of the cabinet, as shown in Figure 7. To support the display cards in upright positions from the guide plates 11 and 20 when the device is located in the bottom of the cabinet the cards are releasably mounted in frames 53 of suitable light weight material having grooves 54 in three adjoining side members thereof with the other member having a slot 55 extended therethrough parallel to the grooves to permit the insertion of display cards into engagement with the grooves 54, and said cards retained in the frames by pins engaged in alined perforations in the frame member arranged with the slot 55, as shown at 56 in Figure 9. The bottoms of the frames are the frame members opposite to the frame members having the slots 55 and are arranged with the pins 27 having the shoulders 28 engaging in the slot 21, as heretofore described. The card supporting frames are arranged with tapered lateral edges, as at 57, similar to the tapered edges of the blocks 26 for the purpose of guiding the card carrying frames as they are transferred from one series to the other series. It will readily be seen that the frames 53 may be used in connection with the device when the guide plates 11 and 20 are mounted below the supporting plate 10 and that in such use the cards may easily be removed from the frame.

When it is desirable to utilize the device in an unoccupied upper space of a show window, or the transom portion of a door entrance to a building, the device may be suspended from the ceiling or other suitable support, as shown in Figure 4, by flexible means, such as cables or chains 58 attached at one end to the ceiling as by eye screws, not shown, and the opposite ends arranged with extensions 59 attached to the supporting member 10 of the device at the opposite ends and opposite longitudinal marginal portions thereof.

The device may be mounted on the side of the body of a motor vehicle T, as shown in Figure 5, the supporting member 10 being attached to the body by angle brackets 60, and further supported by a casing 61 mounted on the body by angle brackets 62 and enclosing the display cards which are suspended from the guide members 11 and 20 in the manner shown in Figures 1 to 4, inclusive, with an end card of each series of cards exposed through view openings 63 in the front of the casing. The shaft 38 of the transferring means is actuated from an operative part of the vehicle, such as the engine, as indicated in a general way at 64, through a flexible shaft 65 connected at the ends to a moving part of the engine and the shaft 38.

The arrangement of the device illustrated in Figures 1 to 9, inclusive, has been found not to be suitable for certain types of advertising and especially where it is desirable to show the cards C at a more rapid rate of speed. To provide a device of this type an even number of cards are retained in each of the lateral slot sections, as shown in Figures 10 to 12, inclusive, and the rear card of each section or series are moved simultaneously to the front portion of the opposite section, as shown in Figure 11, by arranging two fingers 42 in opposed relation to each other in the chain 31, so that the fingers will simultaneously engage the pins 27 of the rear card of each lateral section during the continuous actuation of the chain. The cards are guided along the longitudinal slot sections by angle rails 67 having one angle portion secured to the guide plate 20 adjacent the longi-

tudinal edge thereof with the other angle portion extending perpendicularly from said plate in parallel relation to said longitudinal slots to engage holders 68 for the cards C, as shown in Figure 12, and prevent the swinging of the cards on their supporting pins 27 by co-operating with the sides of a box shaped member 69 supported from the guide plate 11 by flanged portions 70 extended from the opposite sides of the upper end of said member 69 and abutting said plate and secured thereto by screws, as shown in Figures 10 and 11, the distance between the sides of member 69 and the rails 67 is sufficient to permit passage of the card holders 68. To prevent interlocking engagement of the traveling cards with the front cards of the sections to which they are being transferred the holders 68 comprise strips having the opposite ends tapered relative to the longitudinal axis thereof and of a length equal to the length of the cards C with slots arranged in the undersurface thereof for the engagement and retention of the cards, as shown at 71 in Figure 12. The upper surface of the holder is arranged with a pin 27 as in the other type of holder. The cards C may be releasably retained in the holder slots by pins, not shown, engaged in alined perforations in the holders and cards. Interlocking engagement is further prevented by maintaining the end of the front card of each series or section nearest an advancing card out of the path of travel of said latter card by a resilient finger member 72 fixed at one end to the guide rail 67 and extended therefrom in a sinuous direction to engage said end of the front card, as shown in Figure 10, and said finger 72 is flexed toward the guide rail 67 by the traveling card but assumes its normal position when the pin of the traveling card engages the lateral slot section toward which it was traveling as the rear card of said lateral section has been simultaneously transferred to the opposite lateral slot section and the cards in both lateral sections are moved rearwardly with the pin 27 of the rear card abutting the outer edge of the longitudinal slot section and the holder thereof abutting the guide rail, as shown in Figures 10 and 12, for the engagement of the chain finger 42.

It will readily be seen that the cards are maintained in pack formation in the lateral slot sections between the guide rails 67 and resilient fingers 72 and due to the position of said fingers relative to the adjacent cards the guide rails are arranged with extended portions 73 at the ends of said rails adjacent the card engaging portions of fingers 72 with the free ends of said portions 73 curved inwardly to extend in juxtaposed relation to the free end of the front card holder of each series, as shown in Figures 10 and 11, to prevent the free end of said cards from swinging outward and also guide the travelling cards into the curved sections and out of engagement with the chain fingers 42.

By transferring the rear cards of each series simultaneously with each other the presentation of different advertising matter is more continuous and rapid, and is more advantageous when both sides of the device is exposed to the same member of passer-bys.

It will be obvious that various modifications may be made in construction and arrangement of parts without departing from the scope of the invention, and that portions of the invention may be used without others and come within the scope of the invention.

Having thus described my invention, I claim:

1. In a display device, a support to extend in a horizontal plane, a member associated in spaced relation with the support and arranged with a continuous guideway, display cards movably supported on said member in the guideway, and means interposed between the support and the member arranged with the guideway to engage and transport the cards along the guideway.

2. In a display device, a cabinet arranged with opposed and juxtaposed view openings in the wall thereof, means mounted on a horizontal wall of the cabinet in spaced relation with said wall and arranged with a continuous guideway, display cards normally supported by said means in the guideway in parallel series with the end cards in register with the view openings, and continuously actuated means interposed between said wall of the cabinet and card supporting means to engage and transport the cards along the guideway from one series to the other series and relative to the view openings.

3. In a display device as claimed in claim 1, fingers of resilient material carried to engage the cards during the travel thereof along the guideway and maintain the said cards parallel with the cards in the series.

4. In a display device, the combination with a motor vehicle, of a support fixed to the body of the vehicle and arranged with a continuous guideway, display cards movably mounted in said guideway in viewable positions, and means carried by the support to engage the cards and adapted to be continuously actuated by the motive means of the vehicle to transport the cards along the guideway to different viewable positions.

5. In a display device, a support to extend in a horizontal plane, a member associated in spaced relation with the support and arranged with a continuous track portion extended in a rectangular path, display card carriers normally supported in the end sections of the track in parallel series, and means interposed between the support and track member traveling in a path encircling

the track portion to engage the end card carriers of each series and transport the same along the track portion to the other series.

6. In a display device, a support to extend in a horizontal plane, a member mounted on the support in spaced relation thereto and arranged with a continuous track portion extended in a rectangular path, carriers for display cards suspended from the member in the end sections of the track, means carried by the track member to yieldingly engage the end card carriers in each end section and retain the same in said sections, and means interposed between the support and track member to engage the end card carriers and transport the same along the longitudinal track sections from one end track section to the opposite end track section.

7. In a display device, a support to extend in a horizontal plane, means mounted on the support in spaced and parallel relation thereto and arranged with a continuous guide slot extending in a rectangular path, display cards, carriers for slidably supporting the display cards on said means and engaging in the slot, and continuously operating means interposed between the support and said guide means to engage and transfer the card carriers about the guide means.

8. In a display device, a support to extend in a horizontal plane, a plate mounted on the support in spaced and parallel relation thereto and arranged with a continuous slot extending in a rectangular path, resilient members carried by the plate relative to the ends of the end sections of the slot, carriers for display cards slidably supported on the plate and engaging the slot and normally positioned in parallel series in the opposite end slot sections between the resilient members, and continuously operating means interposed between the support and the plate to engage the card carrier of one series of carriers engaged by the resilient members and transfer the same to the series in the opposite end slot section.

9. A display device as claimed in claim 8, wherein the resilient members are arranged relative to the cards to position the cards in the opposite end sections in alinement with each other to assure engagement thereof by the transferring means.

10. A display device, comprising in combination, a support, a member associated in spaced relation with the support and arranged with a continuous track portion, carriers for display cards movably supported at all times by the track portion, means interposed between the support and track member to engage and transport the cards along the track, and motive means mounted at a distance from the card transferring means and operatively connected therewith to continuously actuate the same.

11. In a display device, a support to extend in a horizontal plane, a plate mounted on the support in spaced relation thereto and arranged with a continuous slot extending in a rectangular path, carriers for display cards slidably supported by the plate in the slot, and means adapted to travel in a path substantially parallel to the longitudinal sections of the slot to engage and transfer the cards from and to the end sections of the slot.

12. In a display device, a support to extend in a horizontal plane, a plate mounted on the support in spaced relation thereto and arranged with a continuous slot extending in a rectangular path, carriers for display cards adapted to be slidably supported on the plate in the slot and releasably retained at the end sections of the slot, and means to engage and transfer the cards from and to the end slot sections, comprising an endless flexible member traveling in a circuitous path in a plane between the support and plate, and projections extending from said flexible member to releasably engage the end card carriers in the end slot sections and transfer the same along the longitudinal slot sections to the opposite end slot sections.

13. A display device as claimed in claim 12, wherein the portions of the slot to which the card carriers are delivered by the flexible member are curved in a direction away from the flexible member to facilitate disengagement of the projections of the flexible member from the card carriers.

14. In a display device as claimed in claim 12, wherein the portions of the slot to which the card carriers are delivered by the flexible member are curved in a direction away from the flexible member, and resilient members extended into the slot at said curved portions to engage and release the delivered card carriers from the flexible member and retain the card carriers in said slot portions.

15. In a display device, a support to extend in a horizontal plane, a plate mounted on and spaced from the support and arranged with a continuous slot extending in a rectangular path, carriers for display cards slidably supported on the plate in the slot and adapted to be retained in the opposite end sections of the slot, a flexible member adapted to travel in a plane parallel with the opposite longitudinal sections of the slot between the support and plate to engage the end card carriers in the end slot sections and transfer the same along the longitudinal slot sections to and from the end sections, and resilient members adjacent the longitudinal slot sections intermediate the end sections to engage the card carriers traveling along the longitudinal slot sections and maintain the same in a plane parallel to said longitudinal slot sections.

16. A display device as claimed in claim

15, wherein the resilient members comprise strips adjustably carried by the plate and extended therefrom with the end portions thereof extending in plane substantially parallel to the longitudinal slot sections.

17. In a display device, a support to extend in a horizontal plane, a plate mounted on and spaced from the support and arranged with a continuous slot extending in a rectangular path, frames adapted to releasably carry display cards and having means to slidably engage the slot and support the frames on the plate, flexible means adapted to travel in a circuitous path in a plane parallel to the plate and engage the frame supporting means to transfer the card frames along the longitudinal slot sections and assemble the same in parallel series in the end slot sections with the end cards of each series in visible positions.

18. A display device as claimed in claim 17, wherein the means of the card frames to slidably engage the plate slot comprises a pin extended from the frame and engaging in the slot, and a shoulder extended laterally from the pin to engage the plate, and the portion of the pin extended beyond the shoulder adapted to be engaged by the card frame transferring means.

19. A display device as claimed in claim 17, wherein the card carrying frames are arranged with means whereby the frames traveling along the longitudinal slot sections are adapted to engage said means of and move the end card frames in the end slot sections to which the traveling card frames are delivered along said end sections.

20. In a display device as claimed in claim 12, rails extended parallelly of the longitudinal slot sections to engage and guide the card carriers being transferred along said sections into the end slot sections.

21. In a display device as claimed in claim 12, wherein the projections of the flexible member are adapted to simultaneously engage and transfer separate card carriers from the opposite end slot sections.

Signed at the city of New York, in the county of New York and State of New York, this 1st day of Nov., 1930.

JOSEPH W. LITTMAN.