March 28, 1939. W. OTTO 2,152,495

ADVERTISING DISPLAY

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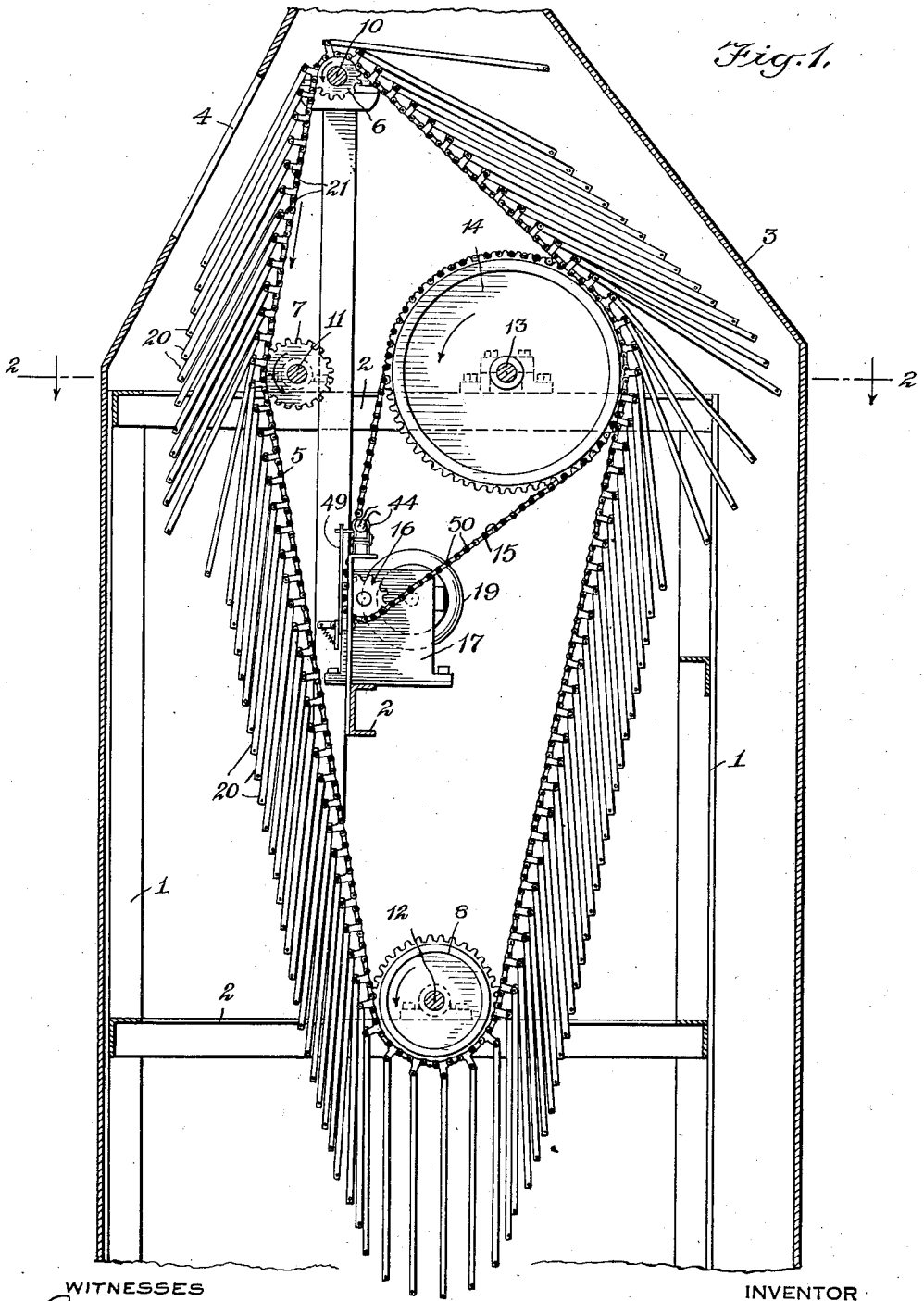
Fig. 1.



WITNESSES

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ADVERTISING DISPLAY

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Fig. 2.

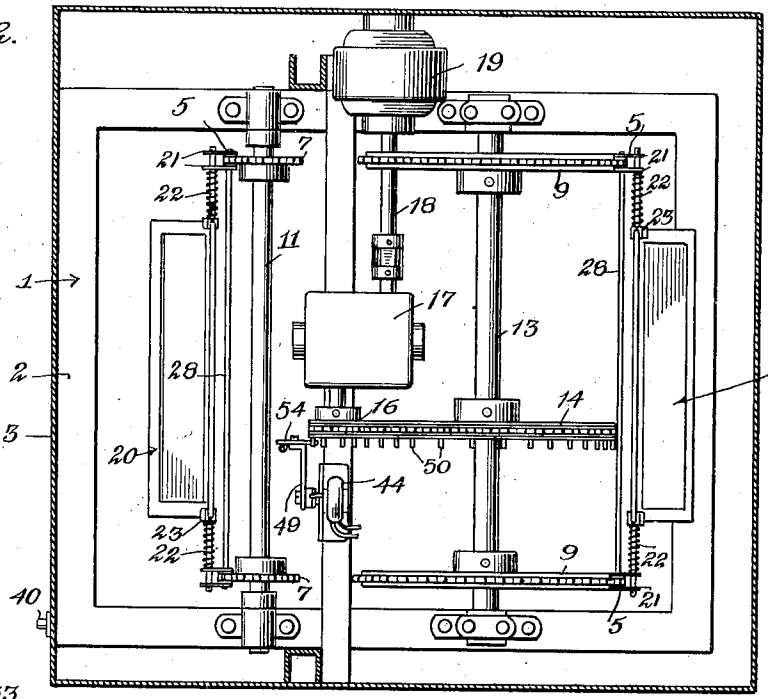


Fig. 7.

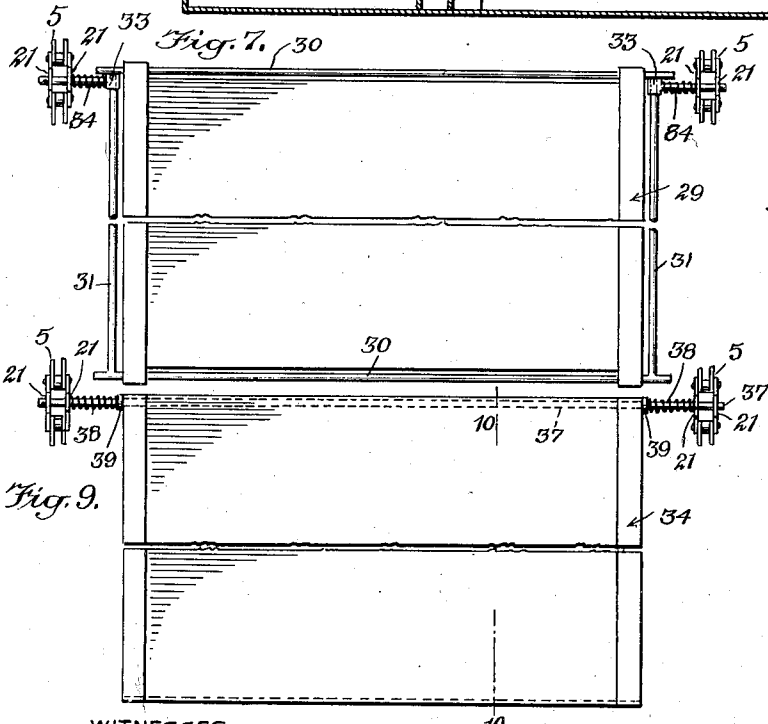


Fig. 8.

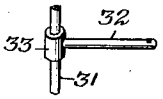
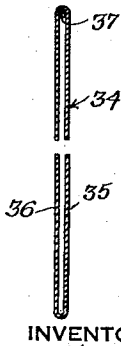


Fig. 9.

Fig. 10



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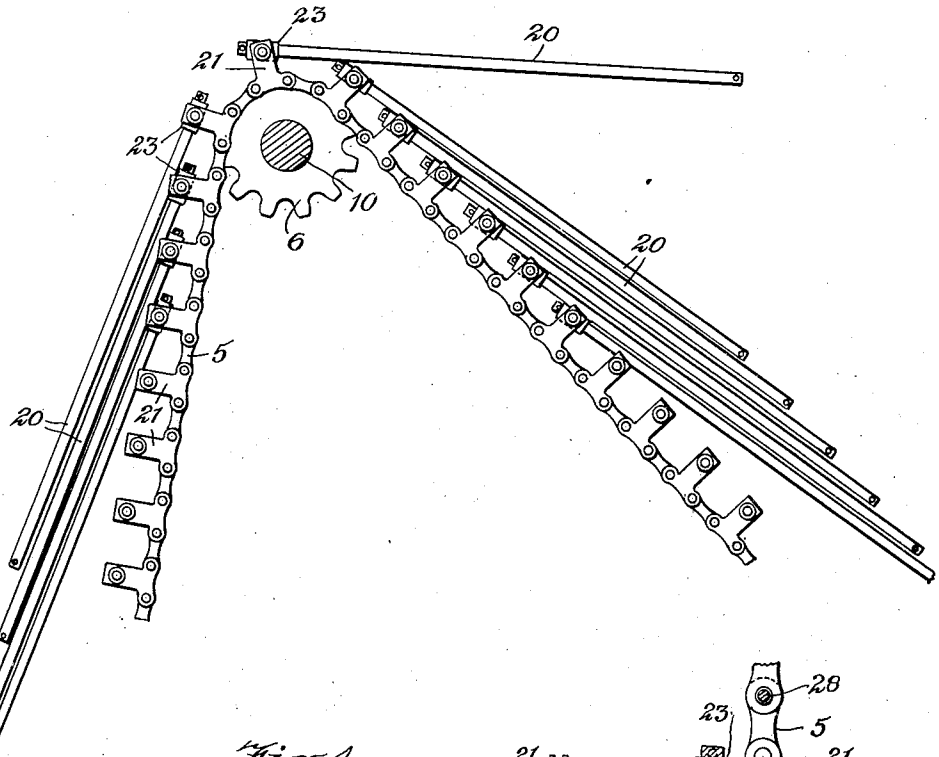
ADVERTISING DISPLAY

Filed June 8, 1938 4 Sheets-Sheet 3

Fig. 3.



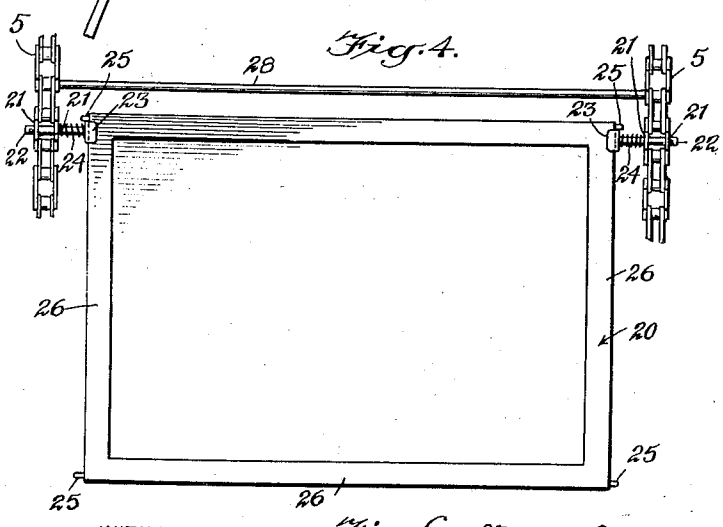


Fig. 4.

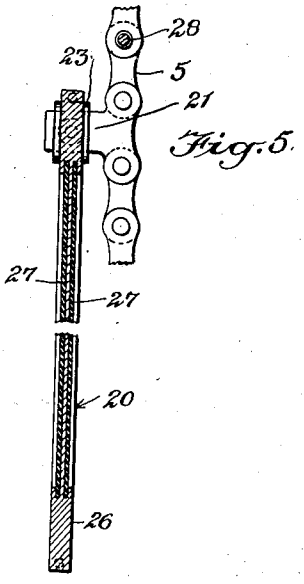


Fig. 5.

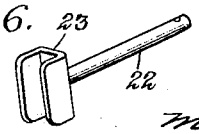


Fig. 6.

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ADVERTISING DISPLAY

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Fig. 13.

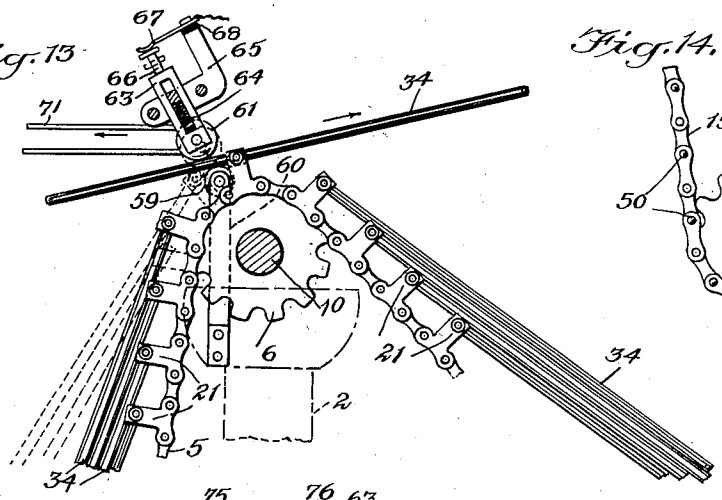


Fig. 14.

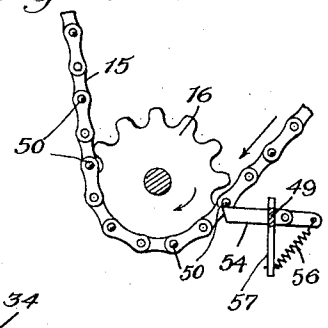


Fig. 15.

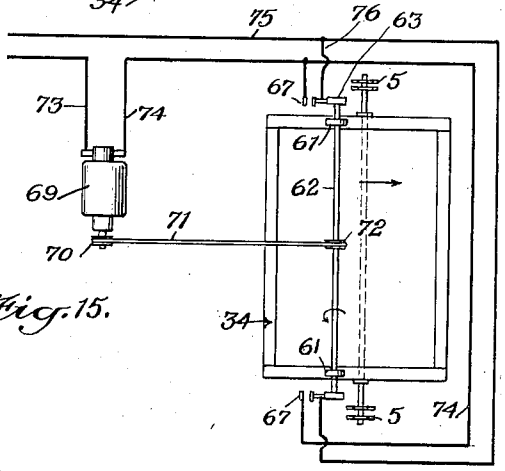


Fig. 12.

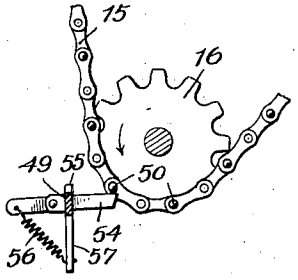
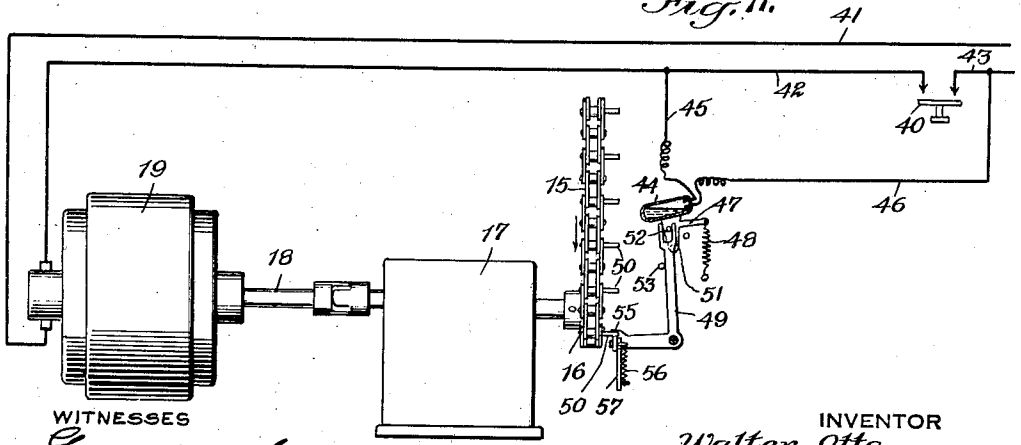


Fig. 11.



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Patented Mar. 28, 1939 2,152,495

UNITED STATES PATENT OFFICE

2,152,495

ADVERTISING DISPLAY

Walter Otto, New York, N. Y.

Application June 8, 1938, Serial No. 212,460

10 Claims. (Cl. 40—97)

This invention relates to improvements in display devices and particularly to devices used for sequentially exhibiting advertising or display placards and the like.

It is an object of the invention to provide an improved display device of compact construction in which a plurality of display frames or placards are arranged in sequence and which is provided with improved operating mechanism whereby one side of each of the display placards can be separately exhibited in sequence and then the other side of each of the placards can be separately exhibited in sequence without being turned or manipulated by the operator.

A further object is the provision of an improved display device of the above character in which the speed of operation may be varied at will and which may be controlled by the person viewing the display or advertising matter in such a manner that each individual placard may be displayed as long as desired.

In carrying out my invention I provide an endless flexible supporting member such as a belt or chain and a plurality of separate placards or frames, which are secured to the endless flexible member by means of sliding connections. The flexible member may be rotated or fed to sequentially display the separate placards or frames. At one point in the path of movement of the belt the frames or placards shift on their slidable connections and in this way both sides of the frame or placard are exhibited at the point of display. In operation first one side of each of the placards or frames are displayed and then the other side of each of the placards or frames are displayed in sequence.

For a fuller understanding of the invention reference should be had to the accompanying drawings, in which

Fig. 1 is a longitudinal sectional view of a device embodying my invention;

Fig. 2 is a plan view in section in the direction of the arrows on the line 2—2 of Fig. 1;

Fig. 3 is a detailed view of the upper portion of the flexible supporting member showing the manner in which the frames or placards are shifted;

Fig. 4 is a detailed view of one of the frames or placards showing the manner in which it is supported on the device;

Fig. 5 is a sectional view through the frame or placard shown in Fig. 4;

Fig. 6 is a view of one of the guide channels which support the frames or placards upon the flexible member;

Fig. 7 is a view of a modified type of frame or placard;

Fig. 8 is a view of the supporting sleeve for the type of frame or placard shown in Fig. 7;

Fig. 9 is another modified form of frame or placard;

Fig. 10 is a sectional view on the line 10—10 of Fig. 9;

Fig. 11 is a diagram of the circuit for the motor and switches controlling the operation of my device;

Fig. 12 is a detailed view showing a portion of the automatic switch for automatically stopping the operation of the device when a new placard or frame has been shifted to display position;

Fig. 13 is a view of an auxiliary mechanism which may be used for operating my device in a reverse direction;

Fig. 14 shows a modified type of automatic switch arrangement to be used when my device is operated in a reverse direction; and

Fig. 15 is a diagram of the circuit controlling the motor for the auxiliary feed mechanism shown in Fig. 13.

My device preferably comprises a suitable supporting frame which may be formed of vertical members 1 and connecting horizontal members 2. Disposed around the device I preferably provide a suitable casing 3 of attractive appearance which is provided with an opening 4 of the proper size and at the proper position as shown, through which placards or frames are exhibited.

Suitably supported on the frame so that it may be fed or rotated is an endless flexible member on which the individual placards or frames are mounted by means of a shiftable connection. The endless flexible member may be made of an endless belt or from chains or the like. However, I prefer to form the member of a pair of sprocket chains 5 suitably supported adjacent the opposite sides of the frame as shown most clearly in Fig. 2, each of the chains preferably being disposed around three idling sprocket wheels 6, 7 and 8 and around a driven sprocket wheel 9. The sprocket wheels 6, 7, 8 and 9 are mounted on shafts 10, 11, 12 and 13 which in turn are suitably journaled to the frame of the device as shown.

Mounted upon the shaft 13 which supports the drive sprocket wheels 9 is another sprocket wheel 14 connected by a sprocket chain 15 to sprocket wheel 16 on gear box 17. The gear box 17 in turn is connected by drive shaft 18 to an electric motor 19. Thus it will be appreciated that upon

the operation of electric motor 19, through the interconnecting shaft 18, gear box 17, sprocket chain 15, shaft 13 and sprocket wheels 9, the pair of sprocket chains 5 are caused to feed or rotate. The normal direction of operation is in the direction of the arrows as shown in Fig. 1.

Mounted on the pair of chains 5 are a plurality of separate frames or placards 20, the frames or placards preferably being arranged in spaced relationship as shown, and having pivotal shiftable connection with the chain, so that upon the rotation of the chains one side of each of the placards or frames are first displayed in sequence through the opening 4 in the casing and thereafter the opposite side of each of the frames or placards are displayed sequentially through the opening 4.

The preferred form of connection between the chains and the placards or forms is shown in Figs. 3, 4, 5 and 6, from which it will be noted that alternate links of the sprocket chains are provided with pairs of outwardly projecting lugs 21 and pivotally connected to each pair of lugs is a pin 22 provided on its inner end with a channel-shaped guide or head 23 which engages the side edge of frame 20. The outer end of each pin 22 is provided with a cotter pin or the like to retain it in position, while between the channel-shaped end 23 and the ears 21 a coil spring 24 is preferably provided so as to hold the channel-shaped head in contact with the side of the frame or placard 20. The two sprocket chains 5 are arranged so that the projecting ears 21 of one chain will be disposed opposite the projecting ears 21 of the other chain. In this way a pair of channel-shaped heads 23 extending from the two sprocket chains engage each of the frames or placards 20 on opposite sides thereof. It will be seen that each of the frames 20 can have pivotal movement with respect to the chains 5 due to the fact that the pins 22 are pivotally mounted on the chains and also that the frame or placard may shift lengthwise in the channel-shaped heads 23. To limit the longitudinal movement of the frames or placards with respect to the channel-shaped heads I provide stop pins 25 at the lower and upper ends of the frames at opposite sides thereof as shown most clearly in Fig. 4.

The construction just described causes the automatic reversal of each of the placards or frames after they have completed one revolution in the path of movement of the chains 5. Thus, referring to Fig. 1 it will be seen that the frames 20 disposed beneath the opening 4 in casing 3 is caused to depend downwardly due to gravity, as the chains 5 are rotated or fed in the direction of the arrows. Due to the angle at which the upper portion of the chains is disposed the frame 20 is disposed at a convenient visual angle when it is exposed beneath the opening 4. When each of the frames or placards 20 reach the lowermost point of their path of movement, which is beneath the sprocket wheels 8, they are disposed in substantially a vertical plane. As the frames or placards approach the uppermost point in their path of movement they gradually assume a horizontal position, as most clearly shown in Figs. 1 and 3. As each frame or placard passes over the top of sprocket wheels 6 and starts its downward movement, the forward edge is disposed beneath the rear edge. At that point the frame or placard slides or shifts downwardly relative to the channel-shaped heads 23 which support it, causing the opposite sides of the frame or placard to be exposed beneath the opening 4. It will be seen that the shifting action of the placard is due to the combined action of gravity and the lifting force exerted by the succeeding placard. While the placards pass through the lower portion of their path of movement they hang freely and may pivot with respect to the chains 5. During the upper portion of their path of movement each placard rests upon the succeeding placard and at the very top of its path of movement the succeeding placard exerts a definite lifting force upon the adjacent placard. In shifting longitudinally the placard is guided both by the preceding and by the succeeding placard.

The frames 20 are preferably formed to support advertising or display cards on both faces thereof. Thus the marginal edges of the frame may be raised relative to the central portion thereof on both faces as shown at 26 and the marginal raised edges 26 may be provided with grooves parallel to the face of the frame to receive the lateral edges of display or advertising cards 27 as shown most clearly in Fig. 5.

To aid or guide the longitudinal shifting of the frames as they pass over the top of the sprocket wheels 6 I preferably provide connecting rods 28 between the two chains 5, at alternate connecting points between the links as shown most clearly in Figs. 2 and 4.

From the foregoing description it will be appreciated that when the chains 5 have completed one revolution one face of each of the frames or placards 20 have been exposed beneath the opening 4. If the chains 5 are then rotated through a second revolution the opposite face of each of the frames or placards will then be exposed beneath the opening 4, due to the longitudinal shifting of each of the frames as it passes over the top of the sprocket wheels 6 and starts on its downward path of movement.

The frames or placards 20 and the mountings therefor may be varied. Thus, in Figs. 7 to 10 two modified types of frames and mountings are shown. Referring first to the form shown in Figs. 7 and 8 the frame or placard is indicated at 29 and is mounted upon a pair of horizontal rods 30 having vertical rods 31 connected therebetween in spaced relation with respect to the lateral edges of the frame or placard 29. Pivotally connected in the lugs 21 of the sprocket chains 5 are the pins 32 which are provided with sleeves 33 at the ends thereof, for receiving the vertical rods 31. Coil springs 84 are disposed between the lugs 21 and the sleeves 33 so as to properly center the frames or placards 29. Thus it will be seen that in the modified construction shown in Figs. 7 and 8 the frames or placards 29 may pivot with regard to the chains and shift longitudinally in a similar manner to the frames or placards 20. In pivoting it will be appreciated that the pins 32 pivot with respect to the lugs 21. In shifting longitudinally it will be appreciated that the vertical rods 31 slide in the sleeves 33. The frames 29 are arranged on the chains 5 in a similar manner to the frames 20. Thus each alternate link preferably supports a frame and the frames are normally in overlapping relationship. However, adjacent the top of the device each frame is caused to shift longitudinally as it begins on its downward path of movement.

Referring now to the modified form shown in Figs. 9 and 10 the frame or placard is indicated by the numeral 34. In cross section the frame 34 is preferably in the form of a loop as shown in Fig. 10 there being two separate spaced faces 35 and 36 connected along their upper and lower edges. The frames are connected to the chains

by means of connecting rods 37 extending between the pairs of lugs 21 on the two chains 5. One connecting rod 37 passes through each of the frames 34 thereby permitting a pivotal movement of the frame and also longitudinal shifting thereof. To center the frames between the chains 5 coil springs and washers 38 and 39 are provided between the chains and the frames. The frames 34 are preferably mounted on alternate links as in the first form of my invention, so as to be normally disposed in overlapping relationship, and when they start on their downward path of movement they shift longitudinally. Each of the frames 29 and 34 is preferably provided with a marginal raised flange as shown, to receive the lateral edges of advertising or display cards.

My display device may be operated in many different manners. Thus the motor 19 may intermittently feed the chains 5 so as to cause each frame or placard 20 to stop temporarily beneath the opening 4, or the chains may be provided with a slow, continuous drive so that each frame or placard will appear beneath the opening 4 for a sufficient length of time to be viewed by the operator. However, I prefer to provide my device with control mechanism whereby the operator or person viewing the displays can vary the speed of operation and can determine the length of time that each placard or frame is disposed beneath the opening 4. For this purpose I provide the device with a manually operated switch 40 which is conveniently located at the front of the casing 3 as shown most clearly in Fig. 2. The operation of the device is initiated by pressing the manual switch 40 and thereafter the operation continues automatically until the next frame or placard is exposed beneath the opening 4, when the circuit is automatically broken and further operation automatically stops. To expose the next frame it is necessary for the operator to again press the switch 40. The circuit whereby I accomplish this result is shown in the diagram Fig. 11, in which the motor 19 is connected by a lead 41, to one side of a source of current supply and by a lead 42 to switch 40 which in turn is connected by lead 43 to the other side of the source of current supply. It will thus be seen that by closing switch 40 the circuit of the motor is closed, and the motor will accordingly operate, causing the feeding of the chains 5 in the direction of the arrows in Fig. 1.

Switch 40 is of the push button type and when pressure is removed therefrom the circuit will again open. I accordingly provide means to automatically continue the operation of the motor until the next frame or placard is exposed beneath the opening 4. This mechanism includes a conventional type of mercury switch 44 connected in parallel with the switch 40 by means of lead 45 connected to lead 42, and lead 46 connected to lead 43. It will thus be appreciated that when the mercury switch is closed the operation of the motor 19 will continue even though manual switch 40 is open. Mercury switch 44 is mounted on a pivotally supported crank 47 which is provided with a spring 48 arranged to normally hold the mercury switch in a position to close the circuit. As viewed in Fig. 11 the mercury switch 44 is open. When it is tilted to the right as viewed in the same figure the switch is closed and the spring 48 is arranged so as to exert tension to normally close the switch.

To synchronize the operation of mercury switch 44 with the operation of my device so that the circuit is broken when the next succeeding frame or placard is disposed beneath opening 4 I provide a pivotally mounted crank 49 which is arranged so as to be engaged by pins 50 connected to alternate links of sprocket chain 15 and thereby cause mercury switch 44 to open the circuit of the motor 19. To accomplish this, crank 49 is provided with a bifurcated end 51, between the forked ends of which is a pin 52 on the crank 47, while adjacent the side of the crank 49 I provide a stop 53. When crank 49 is shifted to the left so as to engage stop 53 it shifts or tilts mercury switch 44 against the tension of spring 48, causing the switch to open. When crank 49 is released the spring 48 causes mercury switch 44 to close.

The lower end of crank 49 is provided with a pivotally mounted lever 54 which is engaged by the pins 50 so as to provide a releasable abutment whereby crank 49 may be shifted against stop 53 to open the circuit, but the further operation or rotation of chain 15 will not be prevented when manual switch 40 is closed. Crank 49 is provided with a stop 55 engaging the upper surface of lever 54, and the opposite end of lever 54 is connected by spring 56 to a downwardly depending lug 57 formed on crank 49. The tension of spring 56 is greater than the tension of spring 48, so that when downward pressure is exerted upon lever 54 by one of the pins 50, crank 49 will be caused to pivot and will overcome the tension of spring 48.

The pins 50 are synchronized with regard to the frames or placards 20 so that one of the pins 50 engages lever 54 and through the medium of crank 49 and mercury switch 44 opens the circuit of motor 19 when the next frame is positioned beneath opening 4. In Fig. 12 the relative position of crank 49 and lever 54 with regard to sprocket chain 15 and sprocket wheel 16 is shown. Thus the lever 54 is positioned on the lefthand side of sprocket wheel 16, as viewed in Figs. 1 and 12, so as to be engaged by the downwardly moving pins 50 which are secured to the sprocket chain 15.

In operating my device the operator stands in front of the casing so that he may view the placards or frames through the opening 4. When he desires to see the next frame or placard he merely presses switch 40 thereby closing the circuit of motor 19 and causing the feeding of chains 5 in the direction of the arrows. When the circuit has thus been manually closed the sprocket chain 15 is rotated causing the pin 50 which engages lever 54, to press the lever downwardly against the tension of spring 56 and it will be appreciated that the pin 50 soon passes out of engagement with lever 54, releasing the lever and crank 49 and permitting spring 48 to close the circuit through mercury switch 44. The operator may then release manual switch 40 and motor 19 will continue to operate due to the fact that the circuit through the mercury switch is closed. As the motor continues operating the next frame or placard passes over the top of sprocket wheels 6 and starts its downward path of movement with the result that the forward edge of the frame is disposed in a lower plane than the rear edge, causing the frame to shift longitudinally.

After the frame has completed its longitudinal shifting it will be disposed beneath the opening 4. At that time the next pin 50 engages lever 54, shifting crank 49 against stop 53 and opening the circuit through mercury switch 44, with the result that the motor stops operating. The

operator can view the frame or placard as long as he desires and then can repeat the operation just as described, to expose the next frame or placard. It will be appreciated that if this operation is repeated for one complete revolution of the sprocket chain, one side of each of the frames or placards will be exposed sequentially beneath the opening 4. If the operation is again repeated for another complete revolution of the chains 5 the other side of each of the frames or placards will thus be sequentially exposed.

At times it may be desirable to operate my device in a reverse direction. This may be accomplished by arranging the motor to rotate in an opposite direction and by positioning the crank 49 and its associated mechanism on the opposite side of sprocket wheel 16 so that lever 54 is engaged by pins 50 in their downward path of movement as shown most clearly in Fig. 14. Also, the auxiliary feed mechanism must be provided at the top of the device adjacent the sprocket wheels 6 whereby the frames will be shifted longitudinally when they reach the top of their path of movement. The mechanism whereby this may be accomplished is shown in Figs. 13 to 15. When this arrangement is employed I preferably eliminate the cross rods 26. In Figs. 13 to 15 I have illustrated frames 34 of the type shown in Figs. 9 and 10 but it should be understood that other types of frames may be employed.

The auxiliary feeding mechanism used to shift the frames 34 longitudinally when the device is operated in an opposite direction preferably consists of a pair of idling rollers 59 (only one of which is shown), engaging the under surface of the frames 34 adjacent opposite sides thereof. The idling rollers 59 are preferably supported on brackets 60 mounted on the top of the frames. Disposed above the idling roller 59 are a pair of spring mounted feed rollers 61 which are adapted to engage the upper surface of the placards or frames and feed them faster than the sprocket chains 5, so that they shift longitudinally. As shown most clearly in Fig. 15 the feed rollers 61 are mounted on a shaft 62 which in turn is mounted in shiftable brackets 63 which are normally held in extended position by means of compression springs 64 extending between the lower portion of the brackets and fixed supports 65. Connected to each bracket 63 is a shiftable contact 66 which is adapted to engage fixed contact 67 which is connected by means of an insulating mounting 68 to fixed support 65.

As shown in dotted lines in Fig. 13 when no frame or placard 34 is disposed between the rollers 59 and 61, contact 66 is out of engagement with contact 67 due to the fact that spring 64 exerts pressure to hold the bracket 63 in extended position. Upon the operation of the device so as to cause one end of a frame 34 to engage roller 61, the roller 61 and bracket 63 will be shifted upwardly to the position shown in full lines in Fig. 13, causing contact 66 to engage contact 67. This results in the closing of the circuit of motor 69, which is connected through pulley 70, belt 71 and pulley 72 to shaft 62. The operation of the motor causes the rotation of belt 71, shaft 62, and feed roller 61 in the direction of the arrow as viewed in Fig. 13. Feed roll 61 is rotated at such a speed as to cause the feeding of frame 34 at a greater speed than the normal operation of the sprocket chains 5, with the result that the frame is shifted longitudinally with respect to the chains 5 in the direction of the arrows.

The circuit of motor 69 is shown in Fig. 15. Thus, it is connected by lead 73 with one side of the source of current supply and by the lead 74 to the two fixed contacts 67. The movable contacts 66 are connected by leads 75 and 76 to the other side of the source of current supply.

Where my display device is to be operated in an opposite direction to normal, as just described, the primary feeding mechanism for the sprocket chains 5 is the same as in the first form of my invention, with the exception that the motor 19 is operated in an opposite direction and the crank 49 and associated mechanism is disposed on the opposite side of sprocket wheel 16 as described above and as shown in Fig. 14. To cause the operation of the device and the display of the next picture the operator presses switch 40 to cause the device to feed in the direction opposite to the arrows in Fig. 1. When the frame 34 that was displayed beneath opening 4 engages with the roller 61 the feed roller is shifted upwardly, closing the circuit of motor 69. The motor causes the operation of feed rollers 61 with the result that frame 34 is shifted longitudinally in the direction of the arrow in Fig. 13, and when the feed roller 61 is released from engagement with the rollers, the roller shifts downwardly, opening the circuit of motor 69. Simultaneously, one of the pins 50 engages lever 54, shifting crank 49 and opening the circuit of motor 19 through mercury switch 44. The next succeeding frame or placard is thus displayed beneath the opening 4.

In using my device it will be appreciated that many different types of advertising or display cards may be inserted in the frames or placards 20, 29 and 34. It should be borne in mind that the cards on opposite sides of the same frame should be in inverse relationship so that they are properly displayed when exposed beneath the opening 4.

My device is particularly suited for showing real estate, used car and similar advertising. Where my device is employed in real estate advertising all of the houses or property for rent and for sale in a given community can be advertised in one machine. The cards may be conveniently arranged so as to give all the pertinent details and may preferably contain a picture of the property. The operator can thus view the displays relative to each of the properties for rent or for sale and can select those which he desires to personally inspect. In this way a considerable saving of time both on the part of the real estate agent and the customer can be effected, and the customer can view a wide selection of properties with a minimum of effort. It will be apparent of course, that my device may be employed for other advertising and display purposes.

From the foregoing description of the several embodiments of my invention it will be appreciated that I have provided an improved display device particularly suited for exhibiting advertising and display placards and the like, which is of compact construction, and which may be controlled by the operator to display each placard for any desired length of time.

It will be appreciated that modifications may be made in the illustrated and described embodiment of my invention without departing from the invention as set forth in the accompanying claims.

1. A display device comprising an endless flexible member mounted so that it will travel through a predetermined path, an electric motor, a driving connection between the motor and flexible member whereby the flexible member is caused to travel through the said predetermined path, a control circuit for said electric motor having a manually operated switch which is normally open whereby the circuit may be temporarily closed and having another switch which is normally closed and which is provided with means for opening the switch when the flexible member has travelled a predetermined distance, a placard having a plurality of display faces, and means for supporting the placard on the flexible member so that it can shift longitudinally and pivot with respect to the flexible member whereby upon the rotation of the flexible member through the predetermined path the several display faces of the placard are successively exhibited.

2. A display device comprising a pair of spaced flexible members, means supporting the members in parallel relationship so that they may travel through spaced predetermined paths, driving means for feeding the flexible members through the predetermined paths, a placard having a plurality of display faces and having a pair of parallel lateral edges, and means for supporting the placard between the flexible members so that it can shift longitudinally and pivot with respect to the flexible members, comprising a pair of rods rotatably mounted on the flexible members and provided with channel-shaped heads engaging the lateral edges of the placard.

3. A display device comprising a pair of spaced flexible members, means supporting the members in parallel relationship so that they may travel through spaced predetermined paths, driving means for feeding the members through the predetermined paths, a placard having a plurality of display faces and provided with a pair of shafts parallel to and spaced from the lateral edges thereof, and means for supporting the placard between the flexible members so that it can shift longitudinally and pivot with respect to the flexible members, comprising a pair of rods pivotally mounted on the flexible members and having sleeves connected to the ends thereof engaging the said shafts, whereby upon the feeding of the flexible members through the predetermined paths the several display faces of the placards are successively exhibited.

4. A display device comprising a supporting member mounted so as to travel through a predetermined path, means for feeding the supporting member through the predetermined path, a placard having a plurality of display faces, means for supporting the placard on the supporting member so that it can shift longitudinally and pivot with respect to the supporting member, and auxiliary feed means including a roller disposed in the path of movement of the placard and adapted to engage the face of the placard and shift it longitudinally whereby upon the feeding of the supporting member through the predetermined path the several display faces of the placard are successively exhibited.

5. A display device comprising an endless flexible member, means supporting said flexible member so that it may travel through a predetermined path, driving means operatively connected to said flexible member to feed it through the predetermined path, a placard having a plurality of display faces, means for supporting the placard on the flexible member so that it can shift longitudinally and pivot with respect to the flexible member, and means including a roller, and a motor operatively connected thereto for rotating said roller, disposed in the path of movement of the placard and adapted to engage the face of the same and feed it longitudinally, whereby upon the feeding of the flexible member through its predetermined path the several display faces of the placard are successively exhibited.

6. A display device as specified in claim 5 in which the roller is provided with a shiftable spring-pressed mounting whereby the roller is shifted when it engages the placard and returns to normal position when it is released from engagement with the placard, and the motor is provided with a control circuit having a switch which is closed when the roller is in shifted position and is open when the roller is in normal position.

7. In a display device, a supporting member adapted to travel through a predetermined path, a plurality of display devices mounted on the supporting member and adapted to be successively exhibited upon the rotation of the supporting member, means including an electric motor and a driving connection between the motor and the supporting member for feeding the supporting member through its predetermined path, and means for controlling the operation of said motor, comprising an operating circuit for the motor, a normally open manually operated switch in said circuit adapted to be temporarily closed, and a second normally closed switch in the circuit and provided with means for automatically opening the second switch when the supporting member is shifted a predetermined distance.

8. A display device comprising a pair of spaced endless flexible members, means supporting said members so that they may be rotated through parallel paths, the axes of which are in substantially vertical planes, a plurality of relatively flat placards each having a pair of display faces, and means supporting said placards between said flexible members in longitudinally spaced but overlapping relationship, the connection between each placard and the members permitting the placard to shift longitudinally and to pivot around its axes of support, and the spacing between the placards being substantially less than the length of the placards whereby each placard pivots with respect to said flexible members during the lower portion of its path of movement and rests upon the succeeding placard during the upper portion of its path of movement so that the combined action of gravity and the lifting force exerted by the succeeding placard causes each placard to shift longitudinally as it starts its downward path of movement.

9. A display device comprising a pair of spaced endless sprocket chains, means supporting said chains so that they may be rotated through parallel paths, the axes of which are in substantially vertical planes, said means including sprocket wheels positioned at the upper end of the path of movement of the chains, a plurality of relatively flat placards each having a pair of display faces, and means supporting said placards between said sprocket chains in longitudinally spaced but overlapping relationship, the connection between each placard and the chains permitting the placard to shift longitudinally and to pivot around its axes of support, and the spacing between the placards being substantially less than the length of the placards whereby each

placard pivots with respect to said sprocket chains during the lower portion of its path of movement and rests upon the succeeding placard during the upper portion of its path of movement so that the combined action of gravity and the lifting force exerted by the succeeding placard causes each placard to shift longitudinally as it starts its downward path of movement, the preceding and succeeding placard serving as guides when the placard shifts longitudinally.

10. A display device as specified in claim 9 in which the sprocket chains are provided with a plurality of spaced outwardly projecting lugs to which the supporting means for the placards are connected.

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