Aug. 1, 1933. H. D. STITZELL 1,920,221

ADVERTISING DISPLAY DEVICE

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Fig. 1.

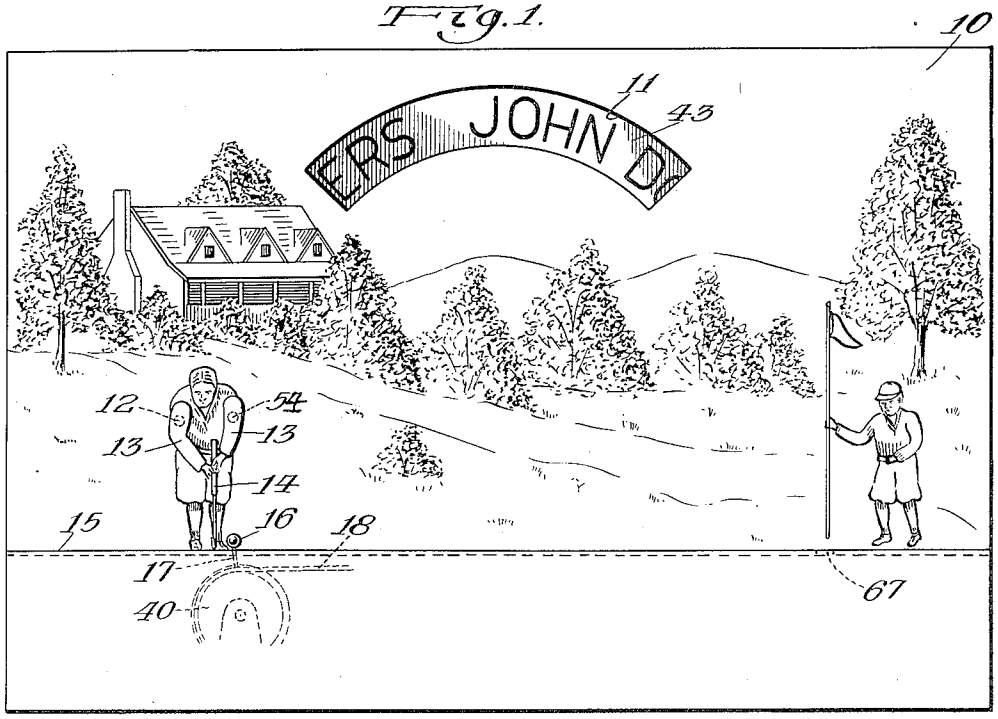
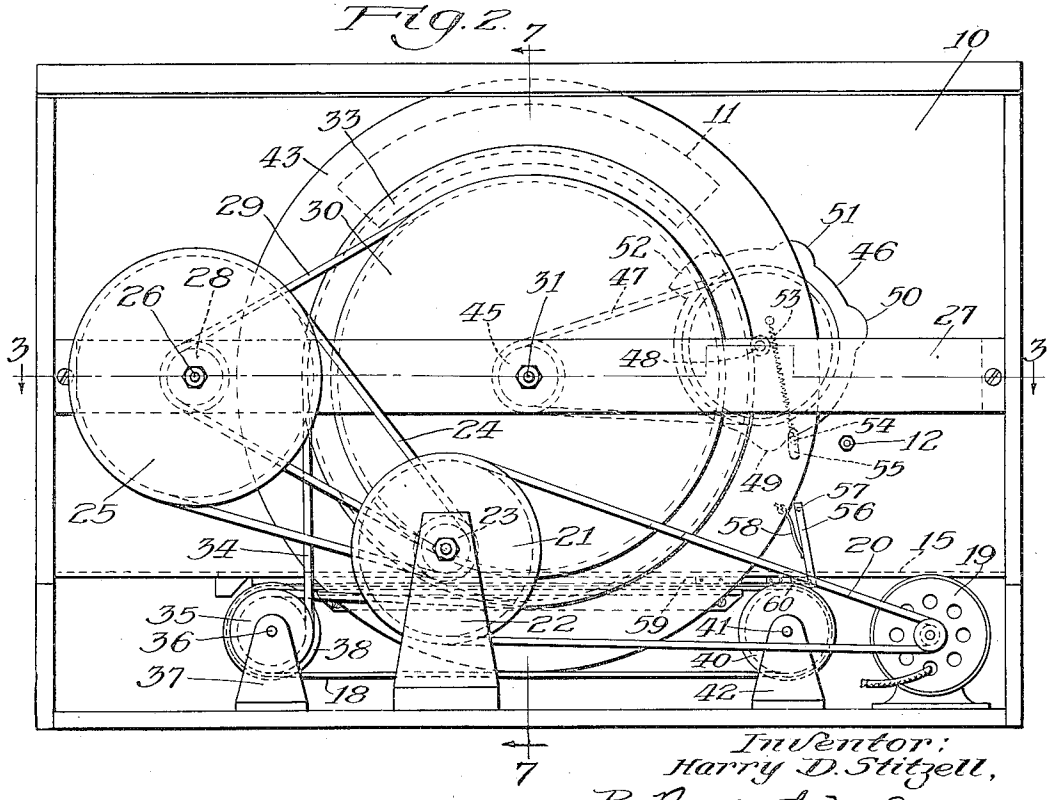


Fig. 2.



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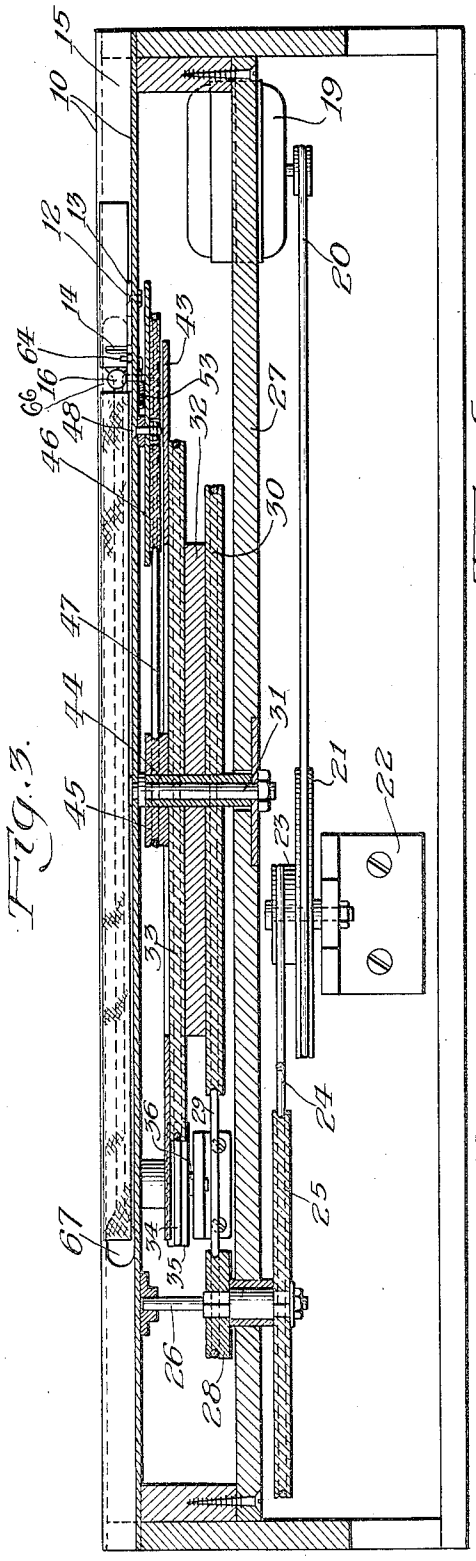


Fig. 3.

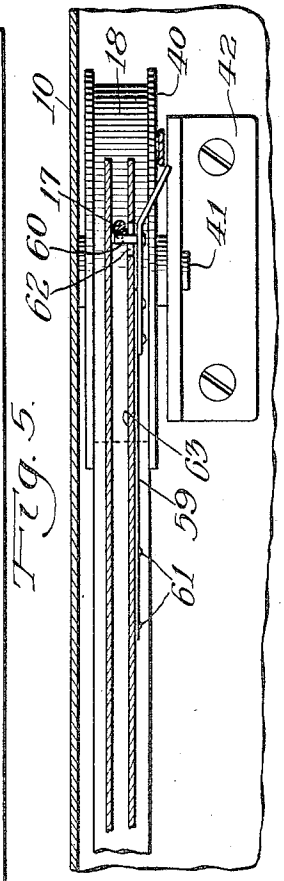


Fig. 5.

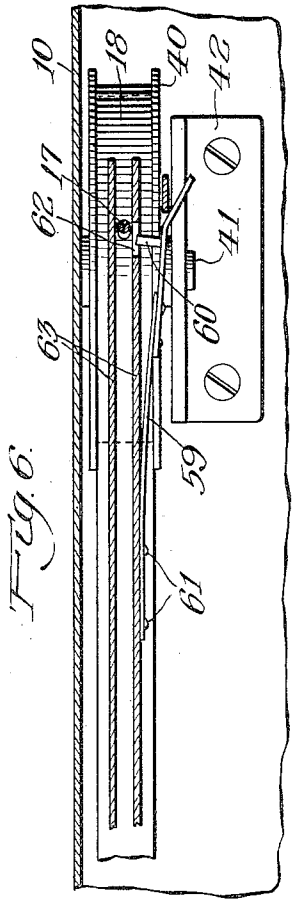


Fig. 6.

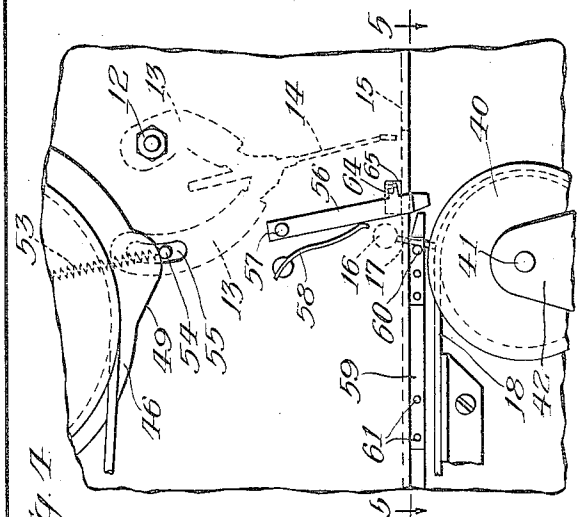


Fig. 4.

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ADVERTISING DISPLAY DEVICE

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Fig. 8.

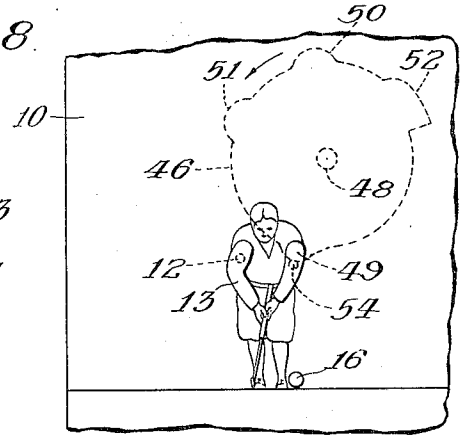


Fig. 7.

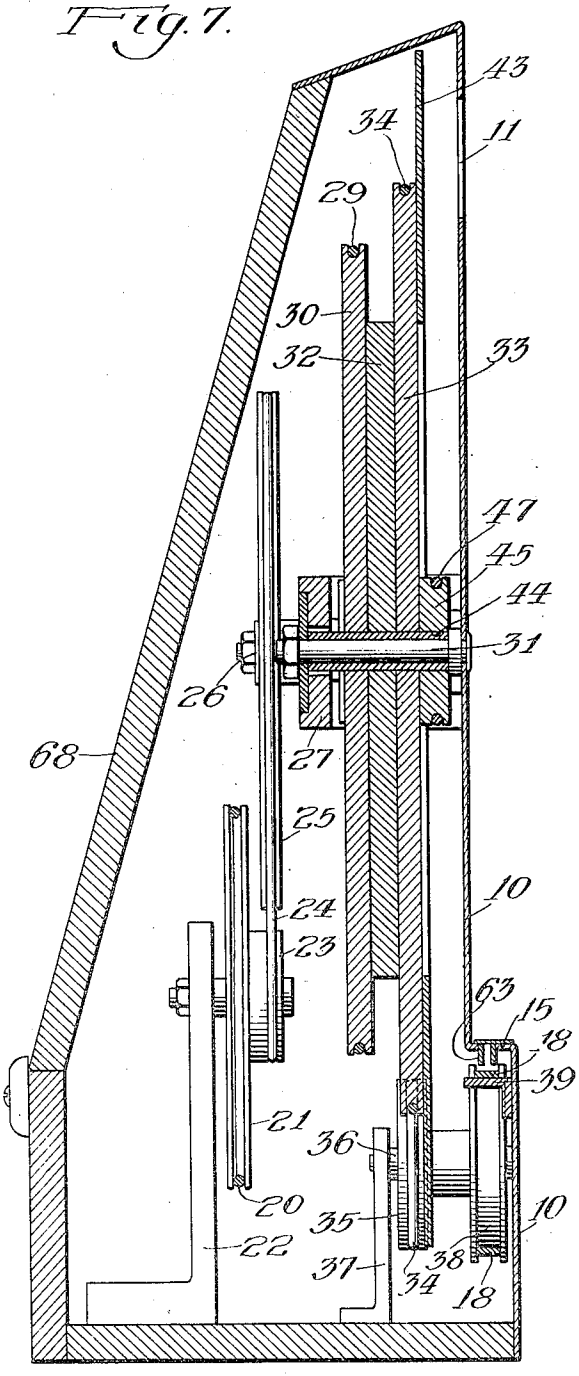


Fig. 9.

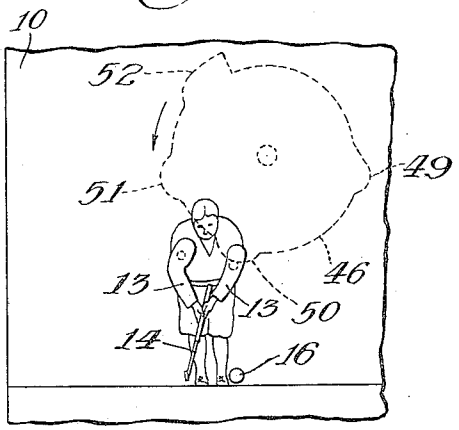
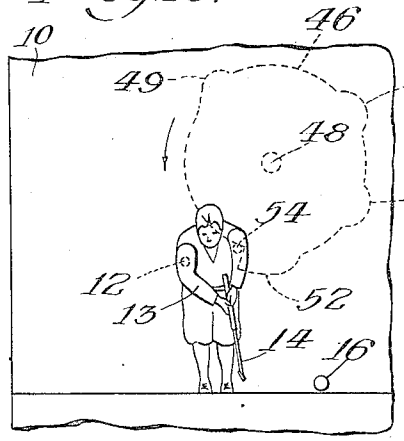


Fig. 10.



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UNITED STATES PATENT OFFICE

1,920,221

ADVERTISING DISPLAY DEVICE

Harry D. Stitzell, Highland Park, Ill.

Application January 6, 1933. Serial No. 650,378

16 Claims. (Cl. 40—126)

This invention relates to advertising display devices, and more particularly to motor operated apparatus comprising means for simulating or demonstrating the use of the articles being advertised.

I have chosen to embody my invention in a display device for advertising golf clubs, golf balls and other golf equipment, but the invention is not limited to embodiment in any particular class of display device.

The invention is preferably embodied in a device comprising an upright support on which is depicted a suitable scene and on which are mounted movable elements adapted to be actuated by a motor and operative connections located behind the support. In the present embodiment the support has painted or otherwise reproduced thereon a golf course scene and a golfer, and pivotally secured to the support, in an appropriate position, are flat metal pieces simulating the golfer's arms and hands, from which depend a miniature golf club. One object of the present invention is to reciprocate the arms and club in such manner as to simulate the addressing of the golf ball, the ball being held in stationary position the while, followed by striking the ball as in the golf stroke, and movement of the ball across the support to a hole. The means for reciprocating the club and for carrying the ball across the support may be operatively connected with a rotatable disc carrying advertising matter visible through a slot in the support.

Further objects and advantages will be noted as I proceed with my specification.

In the drawings:—

Fig. 1 is a front elevation of an advertising display device embodying my invention.

Fig. 2 is a rear view of the same.

Fig. 3 is a horizontal sectional view, slightly enlarged, taken on the line 3—3 of Fig. 2, looking downwardly.

Fig. 4 is an enlarged view showing part of the rear view of Fig. 2.

Fig. 5 is a horizontal section, enlarged, taken on the line 5—5 of Fig. 4, looking downwardly, showing the position of the ball while the player is addressing it.

Fig. 6 shows the parts of Fig. 5 after the ball retaining member has been released, just following the reciprocation of the club.

Fig. 7 is a vertical section taken on the line 7—7 of Fig. 2, looking in the direction indicated by the arrows.

Figs. 8, 9 and 10 are front elevations showing successive positions assumed by the golfer's arms and club and showing in dotted lines the cam for actuating the arm.

In that embodiment of the invention shown in the drawings, the upright support 10, slotted at 11, has pivotally connected to it at 12, in appropriate position on the figure of the golfer, one of the flat metal arms 13 carrying a club 14. The support 10 is offset to form a forwardly projecting, horizontally disposed, longitudinally slit runway 15 on which the golf ball 16 apparently rests and travels. The balls 16 is connected by a rigid link 17 to an endless conveyor 18. The conveyor 18 is located beneath the runway 15, rearwardly of the support 10, and the link 17 on which the ball is mounted, projects from the conveyor through the slit in the runway, but is not visible from the front of the device.

Referring more particularly to Figs. 2, 3 and 7, a motor 19 is connected for speed reduction by a belt 20 to a pulley 21 rotatably mounted on a support 22. The pulley 21 carries a small pulley 23 connected by belt 24 to pulley 25 mounted on a shaft 26 extending through a cross bar 27 secured to the side walls of the device. A pulley 28 connected to pulley 25 on the shaft 26 is connected by a belt 29 to the pulley 30 rotatably mounted on the shaft 31 which is fixed in the wall 10 and cross bar 27. 32 indicates a spacer, 33 is a pulley movable with the pulley 30 about the shaft 31, and 34 is a twisted belt connecting the pulley 33 with a pulley 35 on a shaft 36 mounted in the wall 10 and a support 37.

The pulley 35 drives a pulley 38 on the shaft 36. The endless conveyor 18 is looped about the pulley 38 and a ismilar pulley 40 on shaft 41 mounted in the wall 10 and support 42, the pulleys 38 and 40 and conveyor 18 being located beneath the runway 15. Supports 39 prevent the conveyor 18 from sagging.

Reverting now to the pulley 33, the forward face 43 of same is extended radially so as to be visible through the curved opening 11 in the wall 10. Advertising matter may be placed on the face 43 of the pulley 33.

Between the pulley 33 and wall 10, carried with the pulleys 30 and 33 on the sleeve 44 of the shaft 31, is a pulley 45 which drives a cam 46 to which it is connected by a belt 47. The cam 46 is rotatably mounted on a pin 48 fixed to the rear of the wall 10. The cam 46 is provided with cam faces 49, 50, 51 and 52. The wall is connected by a spring 53 to a stud 54 projecting rearwardly from that arm 13 of the golfer which is not pivotally connected to the wall 10. The stud 54 is normally held in the upper end of the slot 55 in

the wall 10, through which it extends, by the spring 53.

A lever 56 is pivotally mounted at 57 to the rear of the wall 10, and is held in the position shown in Figs. 4 and 5 by the spring 58. A weak leaf spring 59, carrying a pin 60, is connected at 61 to the rear of the wall 10, so that the pin 60 may project forwardly through a slot 62 in the guideway 63. The lever 56 carries a pin 64 on its lower end, the pin 64 projecting forwardly through the slot 65 in the wall 10. 66 indicates an opening in the floor of the runway 15 through which the ball emerges, and 67 is the hole into which the ball falls.

The operation of the device is as follows:

The motor 19 drives the conveyor 18 carrying the ball 16 by means of the operative connections between the motor and the pulleys 35—38. When the ball has appeared through the opening 66 in the runway 15, the link 17, connecting the ball to the conveyor, is engaged by the pin 60 attached to the spring 59, as shown in Figs. 4 and 5, and although the drive from the motor to the pulleys 35—38 is not interrupted, the conveyor is held stationary temporarily by reason of the engagement of pin 60 and link 17, in proper position before the golfer. While the pin 60 engages the link 17 the conveyor 18 slips relatively to the pulleys 38 and 40.

The cam 46, also continuously driven by the motor through the operative connections described, engages the stud 54 on one arm 13 of the golfer. As the cam face 49 engages the stud 54, the arms 13 are pivoted about the point 12 and the golf club 14 is caused to take the position shown in Figs. 4 and 8. As the cam 46 rotates, the cam faces and portions intermediate the faces 49 and 50, 50 and 51, and 51 and 52 pass the stud 54 and cause the club 14 to move toward but not quite to the ball 16, and back again, thus simulating the addressing of the ball; Fig. 9 showing the position when the cam face 50 engages the stud 54, which position is repeated when cam faces 51 and 52 reach the stud 54, and finally as cam face 52 passes the stud 54, as shown in Figs. 10 and 6, the stud 54 is drawn upwardly by the spring 53, and the club 14 is moved beyond its previous positions, that is, to the ball 16 as for striking the same. The result of this movement is that the club 14 engages the pin 64 of the lever 56, projecting through the slot 65 of the wall 10, thereby forcing the lever 56 from the positions shown in Figs. 4 and 5 to the position of Fig. 6, and moving the spring 59 and pin 60 away from the guideway wall 63, releasing the link 17 and permitting the conveyor 18 to be driven and the ball 16 to move toward the hole 67.

As the cam moves from the position shown in Fig. 10 to that of Fig. 8, the club 14 will be moved to the left of the opening 66 in the runway 15 (as viewed from the front of the apparatus) so as to be in proper position relatively to the ball as it emerges from beneath the runway 15. As soon as the club returns from the position of Fig. 10 to that of Fig. 8, the lever 56, under influence of the spring 58, will resume the position shown in Figs. 4 and 5 and thus the spring 59 and pin 60 again prevent the ball from moving while the golfer is addressing the ball.

The pulley 33, carrying the disc 43 for advertising matter, being part of the driving means between motor and conveyor and motor and cam, is continuously driven toward the left of Fig. 1, the cam being driven in the same direction, while the conveyor is driven in the opposite direction by means of the twisted belt 34.

The slit in the runway is covered with a flexible fabric simulating grass, the fabric being fastened to the runway along its outer longitudinal edge, and the inner edge being adapted for overlying the slit but permitting passage of the link 17 carrying the ball 16.

A housing 68 may be provided for enclosing the apparatus.

It will be understood, therefore, that the three driven members, namely, the conveyor, the cam and the advertising-carrying disc, are constantly in driven connection with the motor, but the conveyor and golf ball are restrained from moving during a part of the cycle of operations, by means operatively connected with the means for actuating the golfer's arms and club. Thus the ball is stationary while the golf club is being actuated to simulate addressing the ball preparatory to playing the stroke.

Changes may be made in details of construction without departing from the scope of my invention and I do not intend to be limited to the exact form shown and described, except as set forth in the appended claims.

I claim:—

1. An advertising display device comprising a display wall provided with an elongated narrow slit, an endless conveyor located in juxtaposition to the slit, a member adapted to be moved longitudinally of the slit, a link connecting said member to the conveyor and extending through the slit, a motor, operative connections between the motor and conveyor for moving the conveyor and means for intermittently holding the conveyor in stationary position while the motor is running and driving said operative connections.

2. An advertising display device comprising a display wall provided with an elongated narrow slit, an endless conveyor located in juxtaposition to the slit, a member adapted to be moved longitudinally of the slit, a link connecting said member to the conveyor and extending through the slit, a motor, operative connections between the motor and conveyor for moving the conveyor, and means for intermittently holding the conveyor in stationary position while the motor is running and driving said operative connections, said means comprising a spring pressed pin adapted to engage the link and prevent movement of the conveyor, a lever for moving said pin out of link-engaging position and means for reciprocating the lever.

3. An advertising display device comprising a display wall provided with an elongated narrow slit, an endless conveyor located in juxtaposition to the slit, a member adapted to be moved longitudinally of the slit, a link connecting said member to the conveyor and extending through the slit, a reciprocable member mounted on the face of the display wall, a cam operatively connected to the reciprocable member, a motor, operative connections between the motor, the conveyor and the cam, and means for intermittently holding the conveyor in stationary position while the motor is running and driving said operative connections between motor, cam and conveyor.

4. An advertising display device comprising a display wall provided with an elongated narrow slit, an endless conveyor located in juxtaposition to the slit, a member adapted to be moved longitudinally of the slit, a link connecting said member to the conveyor and extending through

the slit, a reciprocable member mounted on the face of the display wall, a cam operatively connected to the reciprocable member, a motor, operative connections between the motor, the conveyor and the cam, and means for intermittently holding the conveyor in stationary position while the motor is running and driving said operative connections between motor, cam and conveyor, said means comprising a spring pressed pin adapted to engage the link and prevent movement of the conveyor, a lever for moving said pin out of link-engaging position and means on the reciprocable member for contacting with the lever and moving it into link-engaging position.

5. An advertising display device comprising a display wall provided with an elongated narrow slit, an endless conveyor located in juxtaposition to the slit, a member adapted to be moved longitudinally of the slit, a link connecting said member to the conveyor and extending through the slit, a striker reciprocably mounted on the face of the display device, a motor, operative connections between the motor, conveyor and striker for moving the conveyor longitudinally of the slit in the display wall and for reciprocating the striker, and means for preventing movement of the conveyor while the striker is being reciprocated, said means comprising a link-engaging member normally in link-engaging position and adapted to be moved out of link-engaging position by one of the reciprocating movements of the striker.

6. An advertising display device comprising a display wall provided with an elongated narrow slit, an endless conveyor located in juxtaposition to the slit, a member adapted to be moved longitudinally of the slit, a link connecting said member to the conveyor and extending through the slit, a pulley rotatably mounted behind the display wall, carrying advertising matter on its forward face, the display wall having an opening through which said advertising matter is visible, a motor, and operative connections between the motor, the pulley and the conveyor for continuously rotating the pulley and for moving the conveyor parallel to the slit in the display wall.

7. An advertising display device comprising a display wall provided with an elongated narrow slit, an endless conveyor located in juxtaposition to the slit, a member adapted to be moved longitudinally of the slit, a link connecting said member to the conveyor and extending through the slit, a pulley rotatably mounted behind the display wall, carrying advertising matter on its forward face, the display wall having an opening through which said advertising matter is visible, a motor, operative connections between the motor, the pulley and the conveyor for continuously rotating the pulley and for moving the conveyor parallel to the slit in the display wall, and means for intermittently holding the conveyor in stationary position while the motor is running and driving said operative connections.

8. An advertising display device comprising a display wall provided with an elongated narrow slit, an endless conveyor located in juxtaposition to the slit, a member adapted to be moved longitudinally of the slit, a link connecting said member to the conveyor and extending through the slit, a pulley rotatably mounted behind the display wall, carrying advertising matter on its forward face, the display wall having an opening through which said advertising matter is visible, a motor, operative connections between the motor, the pulley and the conveyor for continuously rotating the pulley and for moving the conveyor parallel to the slit in the display wall, and means for intermittently holding the conveyor in stationary position while the motor is running and driving said operative connections, said means comprising a spring pressed pin adapted to engage the link and prevent movement of the conveyor, a lever for moving said pin out of link-engaging position, and means for reciprocating the lever.

9. An advertising display device comprising a display wall provided with a longitudinal slit and an opening at each end of the slit, a conveyor located opposite the slit, a ball, a link connecting the ball to the conveyor, a pair of pulleys on which the conveyor is carried, means for driving said pulleys and means for intermittently holding the conveyor stationary while said pulleys are being driven.

10. An advertising display device comprising a display wall provided with a longitudinal slit and an opening at each end of the slit, a conveyor located opposite the slit, a ball, a link connecting the ball to the conveyor, a pair of pulleys on which the conveyor is carried, means for driving said pulleys and means for intermittently holding the conveyor stationary while said pulleys are being driven, said means comprising a spring pressed pin adapted to engage the link and prevent movement of the conveyor, a lever for moving said pin out of link-engaging position and means for reciprocating the lever.

11. An advertising display device comprising a display wall provided with a longitudinal slit and an opening at each end of the slit, a conveyor located opposite the slit, a ball, a link connecting the ball to the conveyor, a pair of pulleys on which the conveyor is carried, a striker reciprocably mounted on the display wall adjacent one of said openings, means for driving said conveyor pulleys and for actuating said striker, and means for automatically holding the conveyor stationary while the striker is being reciprocated.

12. An advertising display device comprising a display wall provided with a longitudinal slit and an opening at each end of the slit, a conveyor located opposite the slit, a ball, a link connecting the ball to the conveyor, a pair of pulleys on which the conveyor is carried, a striker reciprocably mounted on the display wall adjacent one of said openings, means for driving said conveyor pulleys and for actuating said striker, means for automatically holding the conveyor stationary while the striker is being reciprocated, and means actuated by the striker for releasing said conveyor-holding means.

13. An advertising display device comprising a display wall provided with a longitudinal slit and an opening at each end of the slit, a conveyor located opposite the slit, a ball, a link connecting the ball to the conveyor, a pair of pulleys on which the conveyor is carried, a striker reciprocably mounted on the display wall adjacent one of said openings, a cam rotatably mounted on the display wall and operatively connected with the striker, means for rotating said conveyor pulleys and said cam, means for holding the conveyor stationary while said striker is being reciprocated by the cam, and means actuated by the striker for releasing the conveyor-holding means.

14. An advertising display device comprising a longitudinally slit runway, a ball, a conveyor beneath the runway, a link connecting the ball

to the conveyor and extending through the slit, an opening at each end of the slit, a figure adjacent one of said openings, an arm pivotally mounted on the figure, a second arm, means operatively connected to said second arm for intermittently reciprocating the same, a striker carried by said arms, means for intermittently moving the conveyor and for holding the same stationary when the ball emerges from the hole adjacent the figure, and means for releasing the conveyor-holding means when the striker has been reciprocated.

15. An advertising display device comprising a display wall provided with an elongated narrow slit, an endless conveyor located in juxtaposition to the slit, a member adapted to be moved longitudinally of the slit, a link connecting said member to the conveyor and extending through the slit, a striker reciprocably mounted on the face of the display device, and means for alternately moving the conveyor and reciprocating the striker.

16. An advertising display device comprising a display wall provided with an elongated narrow slit, an endless conveyor located in juxtaposition to the slit, a member adapted to be moved longitudinally of the slit, a link connecting said member to the conveyor and extending through the slit, a striker reciprocably mounted on the face of the display device, a pulley rotatably mounted behind the display wall, carrying advertising matter on its forward face, the display wall having an opening through which said advertising matter is visible, and means for continuously driving said pulley and for alternately moving the conveyor and reciprocating the striker.

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