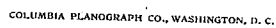


1,065,320.

2 SHEETS—SHEET 1.



W. F. SWEET.
STREET CAR ADVERTISING DEVICE.
APPLICATION FILED JAN. 17, 1910.

1,065,320.

Patented June 17, 1913.

2 SHEETS-SHEET 2.

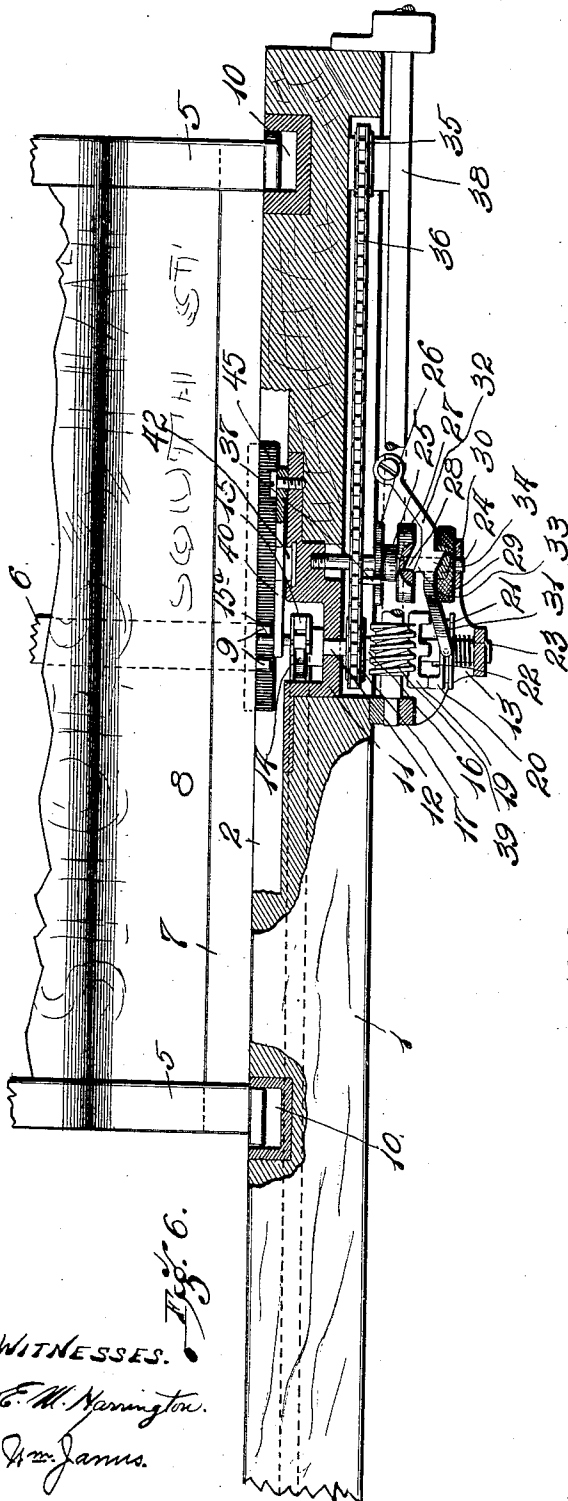


Fig. 6.

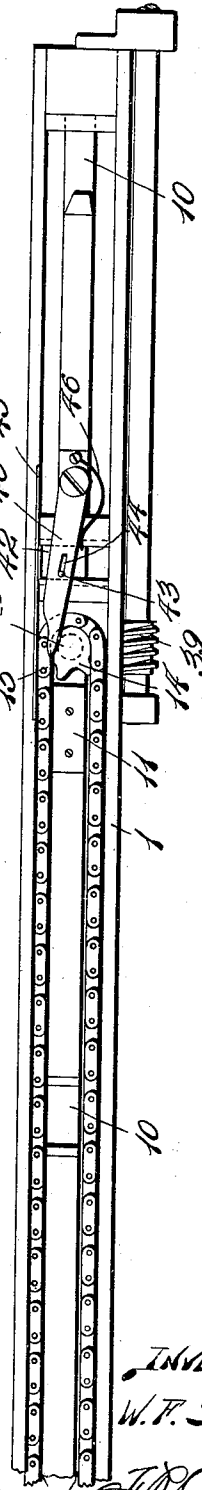


Fig. 7.

WITNESSES.

E. M. Harrington.

J. M. James.

INVENTOR.
W. F. SWEET.

By J. M. Cornwall.

UNITED STATES PATENT OFFICE.

WELCOME F. SWEET, OF ST. LOUIS, MISSOURI.

STREET-CAR ADVERTISING DEVICE.

1,065,320.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed January 17, 1910. Serial No. 538,463.

To all whom it may concern:

Be it known that I, WELCOME F. SWEET, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Street-Car Advertising Devices, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of the lower molding used in connection with my improved street car advertising apparatus, and showing the arrangement of the advertising cards thereon. Fig. 2 is a cross section of a portion of the car immediately above the car windows, and showing the advertising cards in position between the upper and lower moldings. Fig. 3 is a plan view of one of the cards utilized in connection with my improved street car advertising apparatus. Fig. 4 is a detail plan view of a portion of the lower molding illustrating the means utilized in shifting the cards from one row to the other. Fig. 5 is a detail view of the section illustrating a portion of the driving mechanism of my improved advertising apparatus. Fig. 6 is a vertical section taken through the lower molding and illustrating the driving mechanism of the apparatus. Fig. 7 is a plan view of the end of the lower molding and showing the card shifting means together with a portion of the card conveyer.

My invention relates to an advertising apparatus, particularly intended for use in street cars immediately above the windows in the sides thereof.

The principal objects of my invention are to arrange supports on the sides of a car, to arrange a series of card carrying frames between the supports, and to provide an endless carrier for moving the frames from one end of the car to the other in order that the advertising cards carried by the frames will consecutively appear to view, and the operation of the endless carrier being continuous or intermittent as desired.

A further object of my invention is to provide simple means at the ends of the supports, whereby the card carrying frames are automatically shifted from one row to the other.

In street car advertising devices hereto-

fore constructed there has generally been a space at each end of the car equal to the length of one of the advertising cards, which may be termed a "dead space," owing to the fact that such space is generally covered or inclosed to accommodate the card shifting mechanism at the ends of the double row of cards, and it is one of the objects of my present invention to provide means, whereby the full space between the ends of the car may be utilized for displaying the advertising cards, thus doing away with the two dead spaces at the ends of the row of cards and consequently increasing the capacity or visible space of the apparatus.

To the above purposes my invention consists in certain novel features of construction and arrangement of parts hereinafter more fully described and claimed.

Referring by numerals to the accompanying drawings 1 designates a molding strip or rail which is positioned on the interior of the side wall of the car immediately above the windows therein and formed in the top of said molding is a pair of parallel grooves 2, which are traversed by the endless chain utilized for moving the advertising cards from one end of the car to the other. Arranged on the wall of the car, a suitable distance above the molding 1 is a molding 3 in the under side of which is formed grooves 4, which are traversed by the upper portions of the card carrying frames. Each of these card carrying frames comprises a pair of end strips 5 preferably of metal, a center strip 6, preferably of metal, and which strips are united by top and bottom strips 7, preferably of wood. The ends of strips 5 are provided with lugs 5^a having beveled or inclined faces 5^b so disposed as to readily pass one another when the cards are being shifted from one row to the other at the ends of the car.

Formed on the lower end of the center strip 6 is a pair of depending lugs 9, which are adapted to be engaged by pins carried by the endless chain for the purpose of moving the card carrying frames lengthwise upon the molding 1.

Formed in the molding 1 at each end thereof, and uniting the pair of grooves 2 are short transverse grooves 10, which are provided to accommodate the lower ends of the strips 5 while the card carrying frames are being shifted from one row to the other.

Seated in the molding 1 at a central point between the transverse grooves 10 is a casting 11, in which is journaled the upper portion of a short vertically disposed shaft 12, the lower end thereof being journaled in a bracket 13 fixed to the under side of molding 1. Fixed on the upper end of this shaft 12 is a small sprocket wheel 14, around which passes a sprocket chain 15, which latter passes around a corresponding sprocket wheel (not shown) arranged for operation at the opposite end of the molding 1. This chain 15, which performs the function of an endless carrier, traverses the grooves 2 and projecting upward from said chain is a series of pins such as 15^a which are adapted to engage between the lugs 9 depending from the card carrying frames.

Loosely mounted for rotating upon the shaft 12 below the casting 11 is a sleeve 16, upon which is fixed a sprocket wheel 17, and formed on or fixed to said sleeve immediately below this sprocket wheel 17 is a worm wheel 18. The lower end of the sleeve 16 is provided with a disk 19, the underside of which is provided with teeth, thus forming a clutch face, which is adapted to be engaged by a lug 20 formed on a grooved disk 21. This disk is adapted to be driven by a feather 22 seated in the lower portion of the shaft 12, and thus said disk rotates with and slides vertically upon said shaft 12. An expansive coil spring 23 is arranged upon the lower portion of the shaft 12 beneath the disk 21 and normally tends to force said disk upward.

Seated in the casting 11 and bracket 13 immediately adjacent the shaft 12 is a pin 24, and mounted for rotation thereon is a collar 25 the upper end of which is provided with a star wheel 26. The lower end of the collar 25 is provided with a disk 27, in the under side of which is formed a notch 28. Loosely mounted on the lower portion of the pin 24 is a disk 29 in which is formed notch 30.

31 designates a yoke, the ends of which engage on the opposite sides of the grooved disk 21, and lugs or pins seated in the ends of said yoke engage in the groove formed in said disk 21. An arm 32 is formed on or fixed to this yoke which arm passes between the disks 27 and 29, and the outer end of said arm is pivotally connected to a portion of the bracket 13. Formed on the top of this arm 32 is a lug 33, which is adapted to engage in the notch 28, and formed on the underside of said arm is a lug 34, adapted to engage in the notch 30 formed in the disk 29.

A sprocket wheel 35 is mounted for rotation beneath the molding 1 in alinement with the sprocket wheel 17 and passing around said sprocket wheels 17 and 35 is a sprocket chain 36, from which depends a pin 37,

adapted to engage with the points of the star wheel 26.

Journaled in suitable bearings depending from the under side of the molding 1 is a driving shaft 38 carrying a worm 39, which meshes with the worm wheel 18. This shaft can be driven in any suitable manner.

40 designates a lever which is pivotally mounted at one end to the top of the casting 11, and the free end of this lever is adapted to swing from one groove 2 to the other immediately above the sprocket wheel 14.

42 designates a plate which is arranged to slide in a transverse groove formed in the casting 11 beneath the lever 40, and seated in said plate is a pin 43, which extends through a slot 44 formed in said lever. A vertically disposed plate 45 is fixed to one end of plate 42, said plate 45 normally occupying a position against the rear wall of the rear one of the grooves 2.

A spring 46 fixed to the casting 11 bears against the front side of the lever 40 and tends to hold the same and carried parts in a rearward position, or with the plate 45 against the rear wall of the rear one of the grooves 2.

It will be understood that the driving mechanism shown and described is only necessary at one end of molding 1, while the card frame shifting mechanism comprising the lever 40 and its carried parts are arranged at both ends of the molding. The shifting lever 40 as illustrated is adapted to move the card carrying frames from the rear row into the front row, while the lever at the opposite end of the molding (not shown) is so arranged as to automatically shift the card carrying frames from the front row into the rear row.

The operation of my improved apparatus is as follows: The shaft 38 is constantly driven and the worm 39 upon said shaft meshing with the worm wheel causes rotary motion to be imparted to the sleeve 16 and parts carried thereby. In this manner the sprocket chain 36 is continuously driven, and the pin 37 depending from said chain engages the point of the star wheel 26, thus partially rotating the same with intermittent movement, and when the disk 27 has been rotated so that the notch 28 coincides with the lug 33 on the arm 32 the expansive coil spring 23 forces the grooved disk 21 upward, thus causing the lug 20 to engage between the teeth of the clutch face on the disk 19, and thus said sleeve 16 which carries said disk 19 is locked to the shaft 12, and will rotate therewith. Normally one of the card carrying frames occupies a central position immediately above the shaft 12 midway between the grooves 2 and with the lower ends of the end strips 6 occupying positions in the grooves 10. As soon as the shaft 12 starts to rotate with the sleeve 16,

after the clutch has been thrown in as previously described, a card carrying frame will be drawn into position immediately back of the card occupying a central position by the chain 15, and as soon as such action takes place the pin 15^a on said chain, which has brought the frame into position to the rear of the frame occupying the central position, will engage against the rear side of the free end of the lever 40. As said pin is carried around the sprocket wheel 41 it will move the free end of the lever forward. This movement pulls the plates 42 and 45 forward and said plate 45 bearing against the rear side of the lower portion of the rear one of the card carrying frames will draw said frame into a central position, or to a position midway between the grooves 2, and the frame, which heretofore occupied the central position will be moved forwardly so that its lower edge is in alinement with the front one of the grooves 2. As the chain 15 continues to operate the pin will ride off from the free end of the lever 40 and will pass into position between the pair of lugs 9, which depend from the frame which has been moved forward and this frame will now be carried to the left, the distance of one frame, thus uncovering and exposing the face of the card carried by the frame occupying a central position on the molding 1, and at the right hand end thereof. When the frame thus moved forward and shifted toward the left hand, a distance equal to its own length, the point of the star wheel 26 will be engaged by the pin 37 depending from the chain 36, thus partially rotating the sleeve 25, and disk 27 carried thereby, which movement forces the lug 33 out of the notch 28, and thus moves the yoke 31 downward which action disengages the lug 20 from the clutch face on the underside of the disk 19. This operation breaks the connection between the shaft 12 and sleeve 16 and consequently said shaft ceases to rotate while the sleeve and parts carried thereby continue to rotate by reason of their connection with the continuously driven shaft 38. When the pin 15^a passes the free end of the lever 40 said lever together with the carried parts will be moved rearward to its normal position by the action of the spring 46, and thus the plate 45 will be in position to engage the next card carrying frame brought into position to the rear of the frame occupying the central position. It will be readily understood how the frames are shifted from the front row to the rear row by a lever arranged at the opposite end of the molding 1 and which lever corresponds to the lever 40.

As herein described my improved advertising apparatus is adapted to move intermittently, and where it is desired to cause the apparatus to operate continuously the

disk 29 is partially rotated upon the pin 24, or until the lug 34 is forced out of the notch 30 which movement elevates the yoke 31, thus causing the lug 20 carrying the disk 21 to engage between the teeth of the clutch face formed on the disk 19 and when so positioned the lug 33 is permanently positioned in the notch 28. When the yoke 31 is held in its elevated position to cause the apparatus to operate continuously the pin 37 is detached from the sprocket chain 36. The lugs 5^a on the ends of strips 5 are provided with beveled or inclined faces, as shown in Fig. 3 in order to facilitate the movements of the frames in passing one another at the time said frames are shifted from one row to the other.

A street car advertising apparatus of my improved construction is comparatively simple, can be operated with little power, can readily be adjusted so as to operate continuously or with an intermittent movement, and the shifting of the card carrying frames is accomplished at the ends of the apparatus in such a manner as to do away with the dead spaces which usually occur at the ends of a street car advertising apparatus, and the full space occupied by the advertising apparatus is utilized.

It will be readily understood that minor changes in the form and construction of the various parts of my improved apparatus can be made without departing, in the least, from the spirit of my invention, as set forth in the appended claims.

I claim:

1. In a street car advertising apparatus, a support, there being grooves formed therein, an endless carrier operating in said grooves, a double row of card carrying frames arranged to travel upon the support, pins on the endless carrier for engaging the frames, and moving the same upon the support, means adapted to be actuated by the pins on the endless carrier for moving the frames from one row to the other at the ends of the carrier, and means whereby the endless carrier can be continuously or intermittently driven.

2. In an advertising apparatus, a pair of supports, an endless carrier arranged for operation on one of said supports, a double row of card-carrying frames arranged to move between the supports, pins on the endless carrier for engaging the frames to move the same with the carrier, and means mounted on the support for the carrier and adapted to be actuated by the pins on said carrier for shifting the frames from one row to the other at the ends of the apparatus.

3. In a street car advertising apparatus, a support, a double row of independent and unattached card carrying frames arranged to travel upon said support, an endless carrier on the support for moving the frames,

and a member arranged for lateral movement at each end of the carrier and actuated thereby for successively engaging the frames and shifting the same from one row to the other.

4. In a street car advertising apparatus, a support, a double row of card carrying frames arranged for movement thereon, an endless carrier for moving the frames, pins on the endless carrier which engage the frames, and shifting means arranged at the ends of the carrier and arranged to be actuated by the pins carried thereby for moving the frames from one row to the other.

5. In a street car advertising apparatus, a support, a double row of card carrying frames arranged for movement thereon, an endless carrier for moving the frames, pins on the endless carrier which engage the frames, shifting means arranged at the ends of the carrier and arranged to be actuated by the pins carried thereby for moving the frames from one row to the other, driving means for the endless carrier, and means whereby the operation of said driving means can be rendered continuous or intermittent.

6. In a street car advertising apparatus, an endless carrier, a double row of card carrying frames which are moved by the carrier and sliding plates actuated by the carrier for moving the frames from one row to the other at one end of each row.

7. In a street car advertising apparatus, the combination with an endless carrier, of a series of independent unattached card carrying frames adapted to be moved by said endless carrier, a constantly rotating member, means whereby the motion of said rotating member is imparted to the endless carrier, means for causing said motion imparting means to operate continuously or intermittently, and means at the ends of the double row of frames, and operated by the endless carrier for shifting the frames from one row to the other.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 15th day of January, 1910.

WELCOME F. SWEET.

Witnesses:

M. P. SMITH,
BESSE REID.