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ADVERTISING APPARATUS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH J. SLEEPER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Advertising Apparatus, of which the following is a specification.

My invention relates to improvements in advertising apparatus, and has particular relation to apparatus of this type in which a plurality of signs are caused to be successively moved to a display-exposure position.

One of the objects of my invention is to provide an apparatus of this type in which a flexible carrier will have a path of movement normally guided to prevent excessive swaying, the carrier being provided with a plurality of inflexible display surfaces, the guides for the carrier serving to retain the display surfaces in a position corresponding to or parallel with the plane of the path of travel of the carrier while the surface is being displayed.

A further object is to provide, in a device of this character, a guide which serves not only as a guide for the carrier, but in addition for each of the display surfaces carried by the carrier, during predetermined lengths of movement of the display surfaces.

A further object is to provide a display-card frame with means whereby it may be removed by movement in the direction of its path of movement in an apparatus of this type.

A further object is to provide, in an apparatus of this character, a single endless carrier provided with a plurality of display-card frame supports, in connection with display-card frames removably secured thereon, the removal or placing in position of the frames being in a direction corresponding with that of the path of movement of the carrier.

A further object is to provide an apparatus of this character which is simple and efficient in operation, durable in construction, which can be readily installed, and which is of relatively low cost of manufacture.

To these and other ends, the nature of which will be understood as the invention is hereinafter disclosed, said invention consists in the improved construction and com-

bination of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the accompanying drawings, in which similar reference characters indicate similar parts in the views, Figure 1 is a rear elevation, partly in section, of an apparatus constructed in accordance with my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical cross sectional view taken on the line 3—3 of Fig. 2. Fig. 4 is a view in elevation of a portion of the carrier and one of the supports carried thereby, and also showing one of the display-card frames carried thereby. Fig. 5 is a horizontal longitudinal sectional view of one of the display-card frames, the card carried thereby being shown as partly withdrawn.

10 designates a housing approximately U-shaped in cross section, and preferably of a length exceeding that of the distance between the extremes of the path of movement of the endless carrier hereinafter referred to. Mounted within the bottom of said housing, and spaced from one end thereof, is a shaft 11, which extends through the housing, and is adapted to be driven from a suitable source of power indicated conventionally by the shaft 12 and coöperating gears 13. The end of the shaft 11 within the housing is provided with a carrier driving wheel 14, which may be, if desired in the form of a sprocket wheel, but which is preferably in the form of a wheel with a minimum number of equally spaced teeth 15 adapted to engage with the links of a suitable sprocket chain 16 forming the endless carrier herein referred to. At a point adjacent the opposite end of the housing is mounted a wheel similar to the wheel 14, but which is not driven, it serving mainly as an idler for the chain 16 to retain the latter in a substantially taut condition, so that its main path of travel will be in a single plane. To insure that the carrier will retain such movement in a single plane, I provide, on the inner side of the path of movement of the carrier, a suitable strip 17 which, with the vertical walls of the housing, forms a passageway within which the carrier travels, a passageway being formed in connection with each of the vertical walls of the housing. The strips 17 have their upper edges located on a plane below that of the top plane of the links of the sprocket

chain, and are of a length less than the distance between the points of mounting of the two wheels 14.

At predetermined points in the length of the carrier, I provide supports for display-card frames, each support being preferably in the form of a rod 18, having its lower end mounted in and carried by a link of the chain 16, the particular form in which the rod 18 is secured to the carrier not being essential, it being obvious that the rod might form one of the pivots for connecting adjacent links of the sprocket chain together. The number of rods employed corresponds to the number of display-card frames which it is desired to employ in connection with the apparatus, each rod being of a length slightly greater than the width or height of the display-card frame, in order that when the latter are positioned thereon, the free end of the rod will project above the top of the frame, said projecting portion being adapted to travel within a suitably grooved strip 19 located at the top of the apparatus, and providing a guide for the free ends of the rods to produce a path of travel corresponding to that of the lower ends of the rods.

While I have herein disclosed the use of rods having a length greater than that of the height of the display-card frames, and a track within which such projecting portions may ride, I may omit said latter track and, if desired, reduce the length of the rods 18 to practically eliminate such projecting portions, the track formed by the strip 19 and the projecting ends of the rods 18 being absolutely necessary only when the display-card frames are intended to be held inclined, as when used in connection with a car, the remaining structure being sufficient for the purpose of retaining the parts in position and providing true movements thereof, when the rods extend vertically.

20 designates a display-card frame of suitable type, that shown in the drawings consisting of a frame having folded edges to provide a card receiving recess within the frame, one end of the frame being cut away to permit of the introduction or removal of the card from the frame. Each frame 20 is provided, approximately midway of its length, with engaging members 21, two members being preferably employed and located approximately at the upper and lower edges of the frame, each member being secured at one end to the frame, as by rivets 22, the opposite end of the member being unsecured, the portion of the member intermediate the ends being suitably bent, as indicated more clearly in Fig. 5, to provide a bearing for the rod 18, the free end of the member permitting of a placing of the frame in position or a withdrawal thereof by a movement corresponding to that of

the path of movement of the carrier, so that there is no requirement of the provision of a space of a height greater than that of the height of a frame, since there is no requirement of a movement of the frame in a direction axially of the rod either to place the frame in position on the rod or to remove it therefrom.

As will be seen by reference to Fig. 2, the path of travel of the frames while having a display-movement, is in substantial correspondence with the inner face of the vertical wall of the housing 10, and since said wall extends above the bottom plane of each frame, said wall will form a guide to prevent a rotation of the frame on its supporting rod so long as the frame may be in contact with the wall on opposite sides of the point of pivotal connection. This contact of the frame and vertical wall is continued until the supporting rod for the frame begins to travel around the wheel 14. During this movement around the wheel any tendency of the frame to have an excessive pivotal movement is prevented by the continuation of such vertical wall to a point beyond the point of mounting of the wheel 14, the projecting length of the housing being equal to or slightly greater than the distance between the point of pivotal connection of the frame and rod and the end of the frame. The continuation of the housing is not intended to prevent pivotal movement of the frame on the rod, but any movement which might take place when the frame is reaching the end or beginning of its display-movement is corrected by the frame being brought into contact with the vertical walls of the housing, the projecting portion of the housing preventing a turning movement of the frame sufficiently great to cause the frame to have its position shifted materially. During the return movement of the frames, the latter are not held in actual contact with the guides, but with the vertical wall of the housing 10, the frame in this case being located on the inner side of the path of movement of the carrier.

By reason of the fact that the frame 20 contacts only with the guide on its outer face, it will be understood that by springing the frame to an extent sufficient to permit the sprung end to pass in rear of the adjacent frame, the frame may be detached from its carrier by a movement laterally of the support 18 to disengage the clips 21 from the support, this disengagement being possible by reason of the fact that the strips 17 do not extend to a height sufficient to interpose a stop against this withdrawal movement. In view of this fact it will be readily understood that the display frames are disengageable from the supports at any point within the carrier path.

The present invention may be used in connection with various forms of advertising, it being unessential as to whether the rods 18 extend in a vertical direction or a direction inclined relatively to be vertical, it being only necessary in the latter case, as hereinbefore stated, that the free end of the rods be supported to provide a fixed path of movement. The utility of the apparatus herein disclosed is partly increased by the fact that there is no requirement of any excessive amount of space between the paths of travel of the carrier in opposite directions, the frames themselves being relatively thin and not necessitating an excessive amount of space; therefore, the entire apparatus may be placed in position within relatively narrow confines of space, the absence of such space not providing any tendency to affect movement of the frames by the carrier.

While I have herein disclosed one embodiment of my invention and have described different ways in which the same may be used, it will be understood that the same may be further modified without departing from the spirit of the present invention, and I desire it understood that I reserve the right to make such changes and modifications therein as may be necessary so far as they may fall within the scope of the invention as expressed in the claims.

Having now described my invention what I claim as new is:

1. In advertising apparatus, a flexible carrier, means for driving said carrier, an inflexible display-carrying frame pivotally carried by said carrier intermediate the ends of the frame, and stationary guides for the carrier, the guide on one side of the carrier path extending within the path of pivotal movement of the frame, the ends of said frame and said guide cooperating to normally cause the frame to have its display path of movement extend in an approximate single plane, the guide on the opposite side

of the carrier path being located out of the path of pivotal movement of the frame.

2. In advertising apparatus, a housing having spaced opposing walls, a traveling carrier carried by said housing, a support extending from said carrier, a display-card frame removably carried by the support at a point intermediate the ends of the frame, said housing projecting beyond the ends of the carrier path and having a wall on each side of the carrier path, the outer wall of the carrier path being of a height to extend into the plane of the path of pivotal movement of the frame on its support, the inner wall of the carrier path being of a height insufficient to extend into the path of pivotal movement of the frame.

3. In advertising apparatus, a housing, a traveling carrier having a substantially horizontal path of movement, a display card support carried by and extending at substantially right angles to the carrier, and a display-card frame provided with clips for engaging its support at a plurality of points intermediate the ends of the frame.

4. In advertising apparatus, a traveling carrier having a substantially horizontal path of movement, a support carried thereby and movable therewith, said support extending at substantially right angles to the carrier, a display-card frame, and a pair of clips carried by the frame, said clips being spaced one from the other intermediate the ends of the frame and each having a bearing to receive the support, said bearings being in axial alinement, said clips permitting a disengagement of support and frame in a direction laterally of the support.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH J. SLEEPER.

Witnesses:

HENRY J. WALTER,

LOUIS C. HIZENMILLER, Jr.