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ILLUMINATED DISPLAY OR ADVERTISING CASING

Filed July 6, 1962

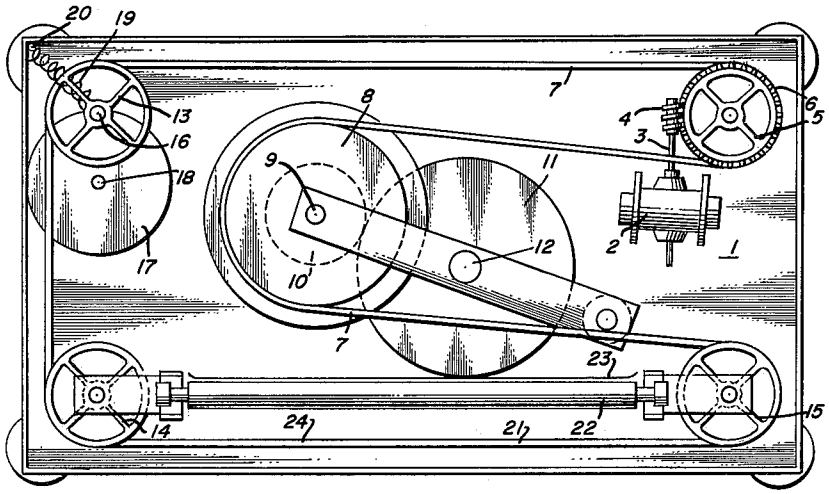


FIG. 1

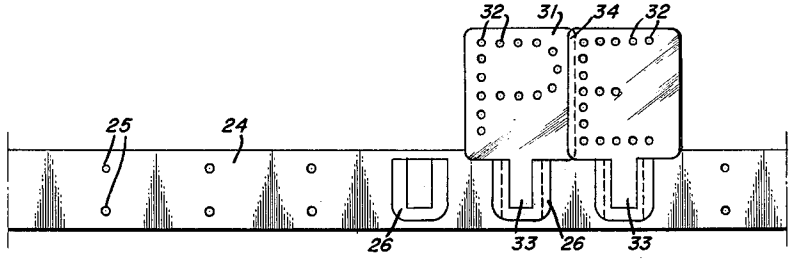


FIG. 2

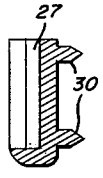


FIG. 3

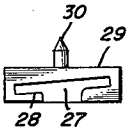


FIG. 4

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ILLUMINATED DISPLAY OR ADVERTISING CASING

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4 Claims. (Cl. 40—32)

My invention has for its object an illuminated display or advertising casing adapted to show one or more advertising or the like captions while one or more superposed platforms are adapted to rotate separately or together, each plate carrying one or more presentation trays.

According to a chief feature of my invention, there is provided inside the casing, an endless belt, guided over pulleys and driven by an electric motor, said belt being perforated at uniform spacings with one or more holes distributed along lines perpendicular to the line of progression of the belt and adapted to be engaged by studs rigid with letter-carrying plates. Said studs, the length of which is the same as the thickness of the belt, are cylindrical with conical ends and are frictionally secured in the belt. Thus portions of the moving belt appearing through a transparent viewing section of the casing may be read in succession.

According to a second feature of my invention, the letter-carrying plates are each provided with a transverse slot adapted to carry the letter or digit carrying plate and forming a predetermined angle with the belt surface. Said slot allows positioning automatically the letters, digits or the like symbols in the desired position.

According to a further feature of the invention, the letters, digits or symbols are separately formed each on a small individual plate of opaque or the like plastic material provided with perforations which perforations are arranged so as to form a line which, when illuminated through transparency forms a luminous sign corresponding to the desired letter or symbol or else I may resort to a small plate through which appears the desired letter or symbol in transparency, the sections of the plate on the outside of said letter or symbol being made opaque through any known or suitable means. A second transparent colored plate allows obtaining in all cases any desired color for the caption which is thus constituted by any desired combination of symbols and colors.

According to my invention, the slight overlapping of the successive letter or symbol-carrying plates and the obliquity of the latter with reference to the direction of progression of the belt remain constant as well along straight lines of progression of the belt as along incurved lines whereby any risk of interengagement between successive simple or double letters, is cut out.

Various other features and advantages of my invention will appear from the reading of the following detailed description of a preferred embodiment thereof.

FIG. 1 is a diagrammatic plan view of the apparatus as a whole,

FIG. 2 is an elevational view of a segment of the belt showing two of the indicia bearing plates which form the letters of a moving display,

FIG. 3 is a vertical cross-sectional view of a supporting member for an indicia bearing plate,

FIG. 4 is a plan view of the supporting member shown in FIG. 3.

Turning to FIG. 1, the apparatus is mounted on a base plate 1, over which is fitted a cover (not shown). Inside the casing thus formed, is an electric motor 2 including a speed reducer the shaft 3 of which terminates with a worm 4 driving a pulley 5 by engagement with a worm wheel 6 integral with the pulley 5. The pulley 5 has a peripheral cross-sectional configuration which drivingly receives a

belt 7 made of reinforced nylon or similar material. The belt 7 carries along with it the letters and symbols and also drives the rotary display platforms by means of a pulley 8 of which the supporting shaft 9 carries a drive wheel 10 in contacting relationship with a cooperating drive wheel 11 fast on a platform carrying shaft 12. The belt 7 is guided and displayed for observation by the driven pulleys 13, 14 and 15. In order to provide constant tension for the belt 7, the pulley 13 is mounted on a shaft 16 which is carried eccentrically by a circular plate 17 freely revolubly carried by a fixed upright spindle 18. The entire assembly is yieldingly urged by a helical tension spring 19 one end of which is secured to the shaft 16 of the pulley 13 the other end being secured to the base plate 1 by means of a screw 20. The perforated indicia carried along by the belt 7 are illuminated from the rear surface portion 21 of the belt by a tubular electric lamp 22 provided with a reflector 23, the observer being assumed to look at the front surface 24 of the letter-carrying belt.

In FIG. 2, the belt is perforated at uniformly spaced intervals with a plurality of apertures 25 aligned along lines perpendicular to the line of travel of the belt, the spacing of which matches the vertical spacing of integrally formed studs 30 of the supporting plates 26.

As illustrated in FIGS. 3 and 4, each of the supporting plates 26 is provided with a recess 27 which is obliquely inclined with respect to the front surface 24 of belt 7 at a suitable angle positioning of the indicia. The lateral edges of the recess 27 are defined by flanges 28. Each plate 26 is provided on its surface 29 facing the belt with securing studs 30 adapted to be fitted in the perforations 25 formed for this purpose in the belt 7.

The indicia bearing members, as illustrated in FIG. 2, are individually constituted each by a plate member 31, of opaque plastic or other suitable material, provided with apertures 32 arranged to form, when illuminated from the rear, a luminous line corresponding to the shape of a letter or other symbol, or else each letter or symbol may be formed by a member in which the outline of said letter or symbol as defined by a continuous transparent area, the background sections of said letter or symbol member being made opaque. By utilizing a sheet of transparent colored material, it is possible to obtain any desired color for the indicia and to form a caption with as many colors as may be desired. The overlapping of the edges 34 of adjacent indicia bearing members 31 and the oblique positioning provided by the recesses 27 will be maintained when the belt travels along straight lines. When traveling around curves, this oblique positioning prevents interengagement between the edges 34 of adjacent indicia bearing members 31.

While I have shown and described what I believe to be the best embodiments of my invention, it will be apparent to those skilled in the art that various changes and modifications may be made therein without departing from the spirit and scope of the invention as defined in the appended claims.

What I claim is:

1. In a display device comprising an endless belt; supporting means comprising driving and driven pulleys for moving said belt around a closed path including a straight portion; a series of supporting members carried by said belt, each supporting member having a plurality of cylindrical projections integrally formed thereon and extending perpendicularly outwardly from said supporting member into said belt, said belt having complementary apertures formed therein in which said projections are removably received, each supporting member having a slot of generally rectangular cross-sectional configuration formed therein, the longitudinal axis of said slot extending transversely of said belt; a series of flat indicia bearing plates

each comprising an extension which is received in one of said slots with the edge portions of adjacent plates overlapping each other, said rectangular configurations being inclined obliquely with respect to the top and bottom edges of said belt in said straight portion of said path for causing free overlapping of said edge portions of said flat plates.

2. A display device according to claim 1, wherein said extensions are integrally formed with said plates, the surfaces of said plates including said extensions being flat and continuous throughout their entireties.

3. A display device according to claim 1, wherein said projections are frictionally held in said complementary apertures.

4. A display device according to claim 1, wherein each of said plates comprises light transmitting portions defining the indicia to be observed, said device further comprising illumination means for illuminating said plates in the straight portion of said path, said illuminated plates being interposed between said illumination means and an observer of said indicia.

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