

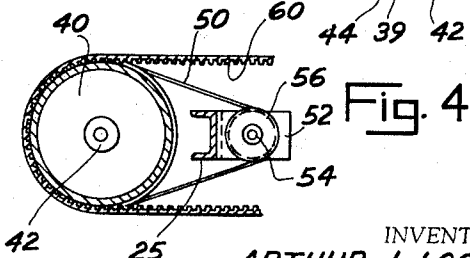
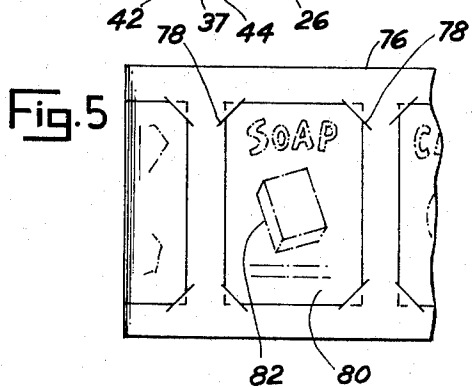
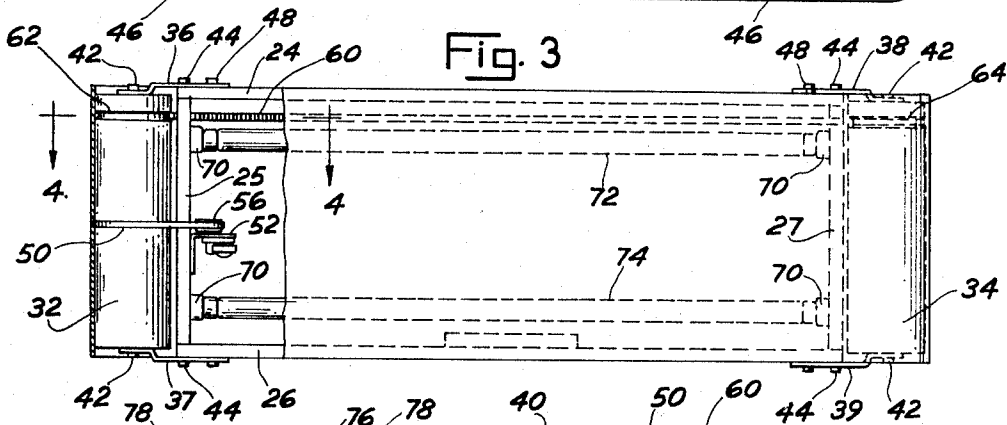
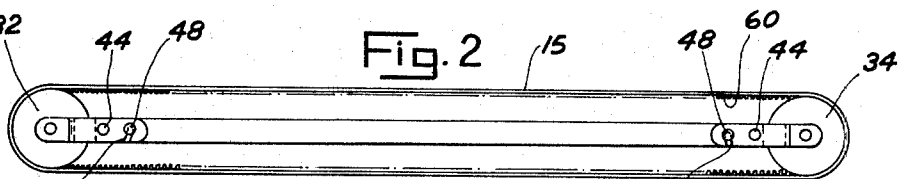
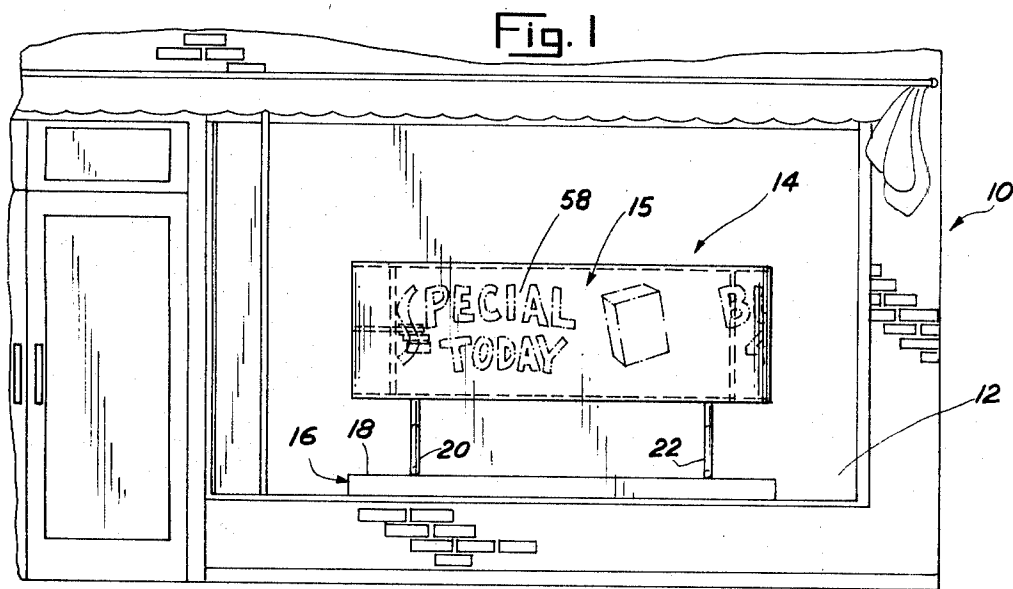
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A. J. LOOK

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TRAVELING TAPE DISPLAY

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INVENTOR
ARTHUR J. LOOK

BY
Dominick, Stein & Knechtel

ATTORNEYS

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TRAVELING TAPE DISPLAY

Arthur J. Look, Elmhurst, Ill., assignor to Prevue Display Service, Inc., Chicago, Ill., a corporation of Illinois
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ABSTRACT OF THE DISCLOSURE

A traveling tape display which includes, generally, a frame supporting a pair of rollers in spaced relation and about which the tape travels, the driving mechanism for the rollers, and the lighting, if desired, for the display. The tape has a track formed about its interior, preferably parallel to and adjacent to its upper edge, which is engageable within a correspondingly shaped guide slot formed in each of the pair of rollers as the tape travels about them, to maintain the alignment of the tape on the rollers. One of the rollers has a peripheral slot therein in which is engaged a belt which is, in turn, coupled to driving means such as an electric motor for driving the roller and hence the tape. The track, the drive means, and the lighting, if provided, are all concealed between the opposite sides of the tape so that when mounted only the tape is observed.

This invention relates to advertising displays of the traveling tape type, and more particularly, to an improved traveling tape therefor and method for mounting the traveling tape thereon.

Traveling tape displays are known and have been used in the past for displaying advertising material and the like, however, the available displays are objectionable for one reason or another. These displays usually can be mounted so that the tape travels either horizontally or vertically, but there are certain advantages to having them mounted so that the tape travels horizontally. In this position, the display can be placed so that both sides can be viewed, and the advertising material thereon is presented in proper fashion, or order, as the tapes move. If the display is mounted so that the tape travels vertically, it will be appreciated that the advertising material will be inverted on the "back side" of the display.

When the displays are mounted so that the tapes travel horizontally, some means must be provided to guide and retain the tapes in horizontal alignment. In the past, these means have usually been in the form of extending flanges in spaced relation and position so that the tape travels and is retained between them. In many cases, the flanges are formed on cups which are inserted within the opposite ends of the rollers about which the tapes travel. This method or means for aligning the tapes is unsatisfactory since the edges of the tapes are generally frayed after a short period of operation, thereby rendering the display unsightly.

Another objectionable feature of these available displays is the complex driving mechanism generally used to drive the tape. These driving mechanisms usually require considerable maintenance, and furthermore, substantially increase the cost of the display.

Another objectionable feature is the lighting generally provided for the display in that it is usually inadequate and, in some cases, the lighting tends to enhance any defects in the construction of the tape.

Still another objectionable feature is the difficulty encountered in replacing the tape.

Accordingly, it is an object of the present invention to provide improved displays of the traveling tape type and, more particularly, improved traveling tapes therefor and method of mounting the traveling tape thereon.

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Still another object is to provide improved traveling tapes having an improved arrangement, for maintaining the alignment of the tape on the traveling tape display, particularly when the display is mounted so that the tape travels in a horizontal direction.

Still another object is to provide a traveling tape display constructed in a fashion such that the tape can be easily and quickly replaced.

Another object is to provide traveling tape displays having improved driving arrangements which are simple in construction and virtually maintenance free.

Still another object is to provide improved traveling tape displays having transparent tapes of plastic or similar material which are substantially permanent and which are formed so that advertising material and the like can be removably affixed to it.

And still another object is to provide improved traveling tape displays which are relatively simple in construction, easily assembled and adapted for operation, and relatively inexpensive in comparison to presently available traveling tape displays.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The above objectives are accomplished with a traveling tape display which includes, generally, a frame supporting a pair of rollers in spaced relation and about which the tape travels, the driving mechanism for the rollers, and the lighting, if desired, for the display. The tape has a track formed about its interior, preferably parallel to and adjacent to its upper edge, which is engageable within a correspondingly shaped guide slot formed in each of the pair of rollers as the tape travels about them, to maintain the alignment of the tape on the rollers, one of the rollers has a peripheral slot therein in which is engaged a belt which is, in turn, coupled to driving means such as an electric motor for driving the roller and hence the tape. The track, the drive means, and the lighting, if provided, are all concealed between the opposite sides of the tape so that when mounted only the tape is observed.

The invention accordingly comprises the features of construction, combination of elements, and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the invention will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings in which:

FIGURE 1 is a partial view illustrating a store front having a window in which there is mounted a traveling tape display, exemplary of the invention;

FIGURE 2 is a top planned view of the traveling tape display;

FIGURE 3 is a front planned view of the traveling tape display, partially sectionalized to illustrate its construction;

FIGURE 4 is a sectional view taken along lines 4—4 of FIG. 3; and

FIGURE 5 is a partial view of the tape illustrating the manner in which it can be constructed to removably affix advertising material and the like thereto.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Referring now to the drawing, in FIG. 1 there is illustrated a store front 10 having a window 12 in which there is mounted a traveling tape display 14, exemplary of the present invention. The traveling tape display 14 is illustrated as being mounted so that the tape 15 thereof travels horizontally, by means of a support stand 16 having a base 18 and a pair of vertically disposed support legs 20 and 22. It will be appreciated, however, that the traveling tape display can also be mounted so that

the tape 15 travels vertically and, furthermore, the display can be mounted in most any fashion. For example, it could be suspended by means of guide wires or mounted in gondola fashion or included as a part of a complete display.

The display 14, as can be best seen in FIGS. 2 and 3, includes a rectangular frame formed of the bars 24-27 which may be U-shaped channels (FIG. 4) of aluminum or other material which is sufficiently sturdy and which preferably is light weight. The length and width of the frame can be of any desired dimensions.

A pair of rollers 32 and 34 are rotatably affixed by means of brackets 36-39 to the opposite sides of the frame, parallel to one another. The rollers 32 and 34 are cylindrical cardboard tubes having end inserts 40 (FIG. 4) therein for supporting an axle 42. The rollers 32 and 34 need not be fabricated of cardboard but can be of most any type of material such as rubber or plastic and can also be solid, if desired, with axles integrally formed therewith or the ends thereof appropriately formed to provide a bearing surface for rotatably supporting the rollers. The brackets 36-39 are each pivotally affixed by means of a pivot pin 44 to the respective bars 24 and 26 of the rectangular frame and each have an arcuate slot 46 therein in which is engaged a bolt 48 for locking the rollers 32 and 34 in parallel aligned position. Only one of the rollers generally needs to be pivotally affixed to the rectangular frame in the described manner, however, both may be pivotally affixed thereto, as described.

Motor means such as an electric motor 52 is affixed to the bar 25 of the rectangular frame. The output shaft 54 of the electric motor 52 has a pulley 56 affixed to it which is drivingly coupled to the roller 32 by means of a drive belt 50. The roller 32 has a peripheral groove (not shown) formed therein for receiving the drive belt 50 so that the exterior surface of the roller 32 presents a smooth flat surface area for the tape 15.

The tape 15 is an elongated sheet having its ends affixed together to form a continuous loop of a size such that it will fit snugly about the rollers 32 and 34, and may be of any flexible material such as paper, plastic or fabric. Descriptive material such as the advertising material 58 may be formed on the tape 15 in any appropriate manner, as by printing, so that it can be easily observed as the tape 15 travels about the rollers 32 and 34. As indicated above, when the traveling tape display 14 is mounted so that the tape 15 travels horizontally, the message thereon is properly positioned so that it can be read on both sides of it as the tape travels. Accordingly, the traveling tape display 14 is advantageously mounted so that both sides of it can be observed.

A track 60 which is of narrow width and projects outwardly is affixed to the interior surface of the tape 15, and peripheral grooves 62 and 64 for receiving the track 60 are formed in the rollers 32 and 34, respectively. The track 60 extends about the entire interior surface of the tape 15, and may be of corrugated cardboard having one flat face which is affixed to the tape 15, as illustrated, or it can be of any material, such as rubber, which is sufficiently flexible to rotate about the rollers 32 and 34 and of sufficient rigidity to form a raised surface on the interior of the belt. The track 60 in cooperation with the grooves 62 and 64 and the rollers 32 and 34 function to maintain the tape 15 in alignment on the rollers 32 and 34 as it rotates about them.

With this arrangement, the traveling tape display 14 can be operated for extended periods of time without deterioration to the tape 15, particularly due to its edges being frayed, as in the past. Another advantage of this arrangement is the fact that the tapes 15 are not limited or required to have straight parallel edges, but can have various configurations, for example, scalloped, to provide a far more decorative display. Also, the rollers 32 and 34 can be completely concealed by the tape so that they cannot be seen.

In the event a lighted traveling tape display is desired, electrical connectors can be affixed to the rectangular frame, between the opposite sides of the tape 15. In the illustrated example, electrical connectors 70 for a pair of fluorescent lights 72 and 74 are affixed to the bars 25 and 27 of the rectangular frame. Individual light sockets could also be connected to the bars 24-27, in spaced relation to light the display if desired.

In FIG. 5, there is illustrated a tape 76 which is fabricated of a substantially permanent material having a number of angularly disposed slits 78 therein in predetermined positions which permit the corners of individual sheets 80 having advertising material 82 or the like thereon to be engaged and retained therein. It can be seen that with this arrangement, the individual sheets 80 can be easily and quickly replaced merely by engaging the corners thereof within the slots 78 formed in the tape. To highlight the individual sheets 80, the tape 76 can be of a type which will not emit light and the area of the tape behind the individual sheets 80 can be removed so that only the individual sheets are illuminated and therefore emphasized when the display is lighted. The tape 76 also can be of a light transmitting material, such as a translucent plastic, so that the lighting illuminates the entire tape between the areas of the rollers 32 and 34.

To place or remove a tape 15, or 76, about the rollers 32 and 34, the bolts 48 are loosened sufficiently to permit the brackets 38 and 39 to be pivoted about the pivot pins 44, to effectively decrease the span between the outermost points of the rollers 32 and 34. Sufficient slack is thereby provided so that the tape can be easily removed simply by lifting it about the rollers 32 and 34. A new tape is installed in the same fashion and after the track 60 is engaged within the peripheral grooves 62 and 64 in the rollers 32 and 34, respectively, the roller 34 is again pivoted to its operative position and the bolts 48 again tightened to lock the brackets 38 and 39 in position. As indicated above, if additional slack is desired or necessary, the roller 32 can also be pivoted by loosening the bolts 48 locking the brackets 36 and 37 in position.

The track 60 can be affixed to the tapes 15 and 76 at any point along its height, however, it is preferably affixed thereto adjacent to its upper edge so that it will not cast a shadow which may detract from the material affixed to the tapes when the display is lighted. Also, only one track 60 is generally required to retain the tapes in alignment about the rollers, however, additional tracks can be affixed to the tape and corresponding grooves formed in the rollers, if desired. The requirement for grooves in the rollers can be eliminated by affixing a pair of tracks to the tape in spaced relation so that one of them engages the top and bottom edge of the rollers, respectively, as the tape travels about the rollers. In this way, the cooperative action of the tracks running about the edges of the rollers functions to maintain the alignment.

It can be seen from the above description that the traveling tape of the present invention provides numerous advantages not heretofore provided by the presently available traveling tapes. Forming a track 60 within and about the interior surface of the tape and correspondingly formed grooves in the rollers about which the tape travels permits the display to be operated over extended periods of time, without damaging the tape as, for example, by fraying its edge or edges. Also, since alignment is not maintained by engaging the ends of the tape within flanges on the rollers, as in the past, the edges of the tape can be decoratively formed with, for example, a scalloped edge or animated figures thereon. Still another advantage is that the edges of the tape can overlap the edges of the rollers or, in other words, the width of the tape can be larger than the width of the rollers, so that the rollers can be completely concealed by the tape and the entire drive arrangement for the display, therefore, hidden. With respect to the drive arrangement, the motor

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is illustrated affixed to the bar 25 of the frame, concealed between the sides of the tape, but it is apparent that it can also be affixed at the top of the roller and coupled to the axle 42 thereof to drive it, if desired. Also, the motor can be affixed to the axle and drivingly coupled to and concealed within the roller itself. In such a case, the axle would be fixedly secured against rotation and the roller rotatably affixed to the axle.

With the traveling tapes constructed in the described fashion, the same display can be used in conjunction with a number of different sized and shaped tapes so that the display is made more versatile and not limited to using tapes having a width corresponding to the width of the rollers or straight parallel edges. Also, if the tape is constructed as illustrated in FIG. 5, or with cut-outs behind the individual display sheets, as described, a traveling tape display which can be easily and quickly changed can be provided. In such case, the tape is preferably of a more stable material than paper so that it has a relative long useful life. Also, if the display has a tape of the described type, the tape portion thereof can be integrally formed as a part of a much larger display which has only the moving tape observable, and in a fashion such that it is not at all apparent in what manner the tape is held or driven.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained and, since certain changes may be made in the above construction without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention, which, as a matter of language, might be said to fall therebetween.

Now that the invention has been described, what is claimed as new and desired to be secured by Letters Patent is:

1. A traveling tape display comprising, in combina-

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tion: a pair of cylindrical-shaped rollers each having a flat peripheral surface with at least one peripheral groove formed therein; frame means adapted to rotatably retain said pair of rollers in parallel, spaced relation; a tape formed as a continuous loop encircling said pair of rollers and driven thereby, said tape being supported in alignment on said pair of rollers by alignment means completely concealed therein in a fashion such that the width of said tape is independent of the length of said rollers and can have opposite edges other than straight edges so as to provide decorative edges on said tape; said alignment means comprising an outwardly projecting track extending about the interior surface of said tape and engaged within said peripheral grooves formed in said rollers; and drive means affixed to said frame means and concealed within said tape, a drive pulley affixed to and rotated by said drive means, belt drive means coupling said drive pulley to one of said rollers, said roller having a peripheral slot formed therein for receiving said belt drive means, whereby said belt drive means does not engage said tape.

2. The traveling tape display of claim 1 wherein said peripheral groove in each of said rollers is spaced from and adjacent to one end thereof.

3. The traveling tape display of claim 1, wherein said peripheral groove in each of said rollers is formed in the edge thereof at its one end.

4. The traveling tape display of claim 1, wherein said track comprises corrugated cardboard having a flat face on one side thereof which is affixed to said tape.

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EUGENE R. CAPOZIO, *Primary Examiner*.

WILLIAM H. GRIEB, *Assistant Examiner*.