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DISPLAY DEVICE

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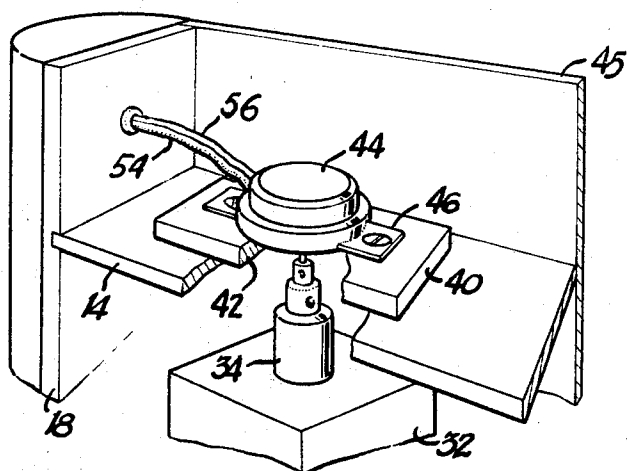
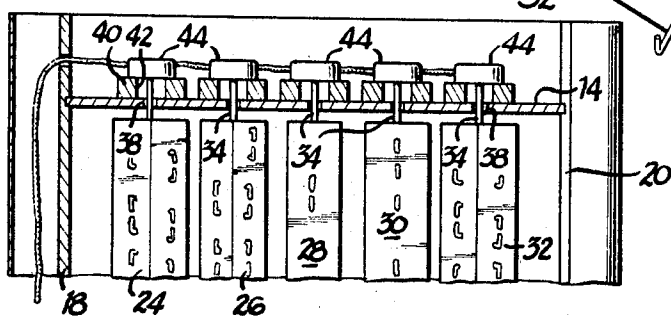
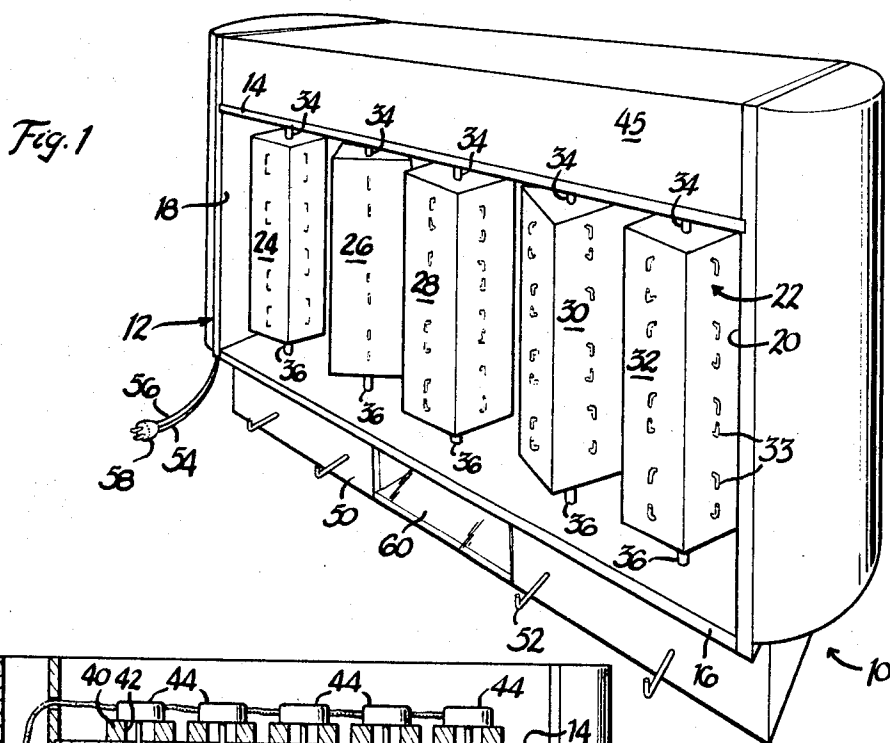


Fig. 3

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DISPLAY DEVICE

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ABSTRACT OF THE DISCLOSURE

A display device which includes an open sided frame having a plurality of independently mounted display carriers with independent drive means for each of the carriers which will sequentially expose articles supported by the carriers.

Background of the invention

This invention relates generally to display devices, and more particularly to a device for displaying smoking pipes on carriers which rotate so as to display groups of pipes sequentially.

In the marketing of smoking pipes and smoking accessories, it has been difficult to display enough of the merchandise to give a customer a good idea of what is available. The space available in most stores for displaying smoking products is quite limited, and much of this space is allotted to products other than pipes, such as cigars and cigarettes. A relatively little space remains for display of pipes, and a representative sample of the pipes which are available cannot be displayed.

Summary of the invention

The present invention now provides a display device which, in a relatively small space, is capable of attractively displaying a relatively large number of pipes. This is accomplished by mounting pipes on plural sides of carriers, which may be in the form of boxes, and rotating the carriers so as to bring different groups of pipes into view at the front of the display device. A particular embodiment of the invention includes a frame which has a central open space in which a plurality of vertically extending carriers are mounted. Each carrier may be affixed to a shaft which is supported by the frame for rotation, and the shaft-carrier assemblies rotate independently of each other. Pipes may be mounted all about the circumference of each carrier so that different pipes come into view at the front of the device as each carrier slowly rotates. A plurality of electric motors are provided, and one motor is coupled to each shaft-carrier assembly so that these assemblies are driven independently of each other. Thus, a given carrier may be stopped, for example, to remove a pipe from it or place a pipe or pipes on it while the other carrier assemblies continue to rotate.

The carriers may have as many sides as desired and may even be circular if desired, but carriers which are rectangular or triangular in cross-section have proved to be practical in actual embodiments. By virtue of the multiple-sided nature of the carriers and their rotation, a relatively large number of pipes can be displayed in quite a small space and this is a definite advantage of the display device of the invention. The device may be placed in an elevated position over a counter, for example, so that the device does not take up limited counter space. The device may also have a plurality of stationary hooks on it on which display cards may be hung. The display cards may contain smoking accessory items such as lighters, flints, tools, etc., so that a variety of products may be displayed. Also, the device may be provided with a compartment covered by transparent material for displaying the more expensive lighters and other items of relatively great value. This compartment is protected from

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pilfering since it is enclosed at the front side of the display device.

Accordingly, it is an object of this invention to provide a display device wherein smoking pipes may be displayed on plural sides of carriers which are rotated to successively bring different groups of pipes into view.

Another object of the invention is to provide a display device wherein carriers for displaying smoking pipes are rotated independently of each other.

A further object of the invention is to provide a display device with a frame mounting a plurality of carriers for independent rotation and a plurality of motors respectively coupled to the carriers so that each carrier has its own motor for rotating the same.

Another object of the invention is to provide a display device having a four-sided frame surrounding an open space with vertically extended carriers mounted in the open space for rotation, each carrier having a motor provided in a part of the frame beyond the open space, thereby providing a very compact device.

Another object of the invention is to provide a display device having movable carriers for displaying pipes and having fixed carriers for displaying accessory items.

Other objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawings forming a part of this specification wherein like reference characters designate corresponding parts in the several views.

On the drawings

FIGURE 1 is a perspective view on a reduced scale of a display device in accordance with the invention;

FIGURE 2 is a fragmentary view partly in section, showing the manner in which each carrier is connected to a motor; and

FIGURE 3 is a fragmentary perspective view, partly broken away, showing one corner of the device where a motor is mounted.

Before explaining the present invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practiced or carried out in various ways. Also, it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation.

As shown on the drawings

The display device 10 has a frame 12 comprised of two parallel horizontal frame members 14 and 16 and two parallel vertical frame members 18 and 20. These frame members may be in the form of wooden boards which are fastened together so as to form a rectangular frame 12 surrounding an open central space 22.

Mounted within this central space 22 and within the confines of the frame 12, there are five carriers 24, 26, 28, 30 and 32. Carriers 24, 28 and 32 are four-sided boxes and carriers 26 and 30 are three-sided boxes. All of these boxes are extended in the vertical direction and are generally parallel to each other. Each of the carriers has a plurality of clamping fingers 33 extending through its side walls from within the carrier, and these clamping fingers are so designed as to clamp a pipe to hold it in place on a carrier for display purposes. Each carrier 24-32 is adapted to hold several pipes on each of its sides, and consequently a relatively large number of pipes may be displayed on a single carrier. Objects other than pipes, such as pouches, may be affixed to the clamping fingers or otherwise supported on a carrier if desired.

The carriers 24-32 are mounted for rotation on the frame 12 by means of shafts 34 which project downward

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from the upper side of frame member 14 through the latter frame member into the central space 22. The shafts 34 are parallel to each other and are mounted to rotate independently of each other so as to provide independent rotation of the carriers 24-32. Shafts 34 may extend all the way through the carriers and through the bottom frame member 16, or separate upper and lower shafts 34 and 36 may be provided if desired.

As shown in FIGURES 2 and 3, each shaft 34 extends through an opening 38 in the upper frame member 14 to a space partially enclosed by the frame member 14 and extensions of the side frame members 18 and 20. A mounting block 40 having a central aperture 42 is secured to frame member 14 so that its aperture 42 receives one end of shaft 34. Mounted on top of the block 40 is a motor 44, and one such motor 44 is provided for each of the carriers 24-32 as shown most clearly in FIGURE 2. Thus, each of the carrier members 24-32 has its own drive motor so that each carrier rotates independently of the others. The motor 44 (FIGURE 3) is fastened to the mounting block 40 by screws extending through ears 46, and the reduced end portion of shaft 34 is coupled to the motor 44 so that the motor rotates the shaft 34. The motors are masked from view by paneling 45. The motors 44 are all of the electrical type, and there are wires 54 and 56 which supply operating current to each of the motors. The wires are connected to an electrical outlet by means of a plug 58.

Below the lower frame member 16 there is a panel 50 on which a plurality of hooks 52 are mounted. These hooks are adapted to receive display cards which hang on the hooks, and each of which has a plastic case affixed to it for containing a product such as a smoking accessory. The display cards might contain lighters, flints, pipe knives and other items of merchandise in the smoking accessory line. Thus, the display device has both moving and stationary displays.

The panel 50 masks the lower ends of the shafts 36, and the space behind panel 50 may be enclosed by walls and used for storage purposes. Some of this storage space may be converted into a small compartment for displaying relatively expensive items by replacing a portion of the panel 50 with a transparent panel 60 through which items in the compartment may be seen. This display space is protected against pilfering since the items are enclosed behind the transparent panel 50.

The entire display device is a very compact unit for displaying a wide variety of smoking products. Since the carriers 24-32 are multiple-sided units, each one of them will carry a relatively large number of pipes. The motors

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44 rotate the carriers very slowly so that pipes attached to the various sides of the carrier are sequentially brought into view at the front of the display device. The display device may be mounted in an elevated position where it does not interfere with other displays, perhaps contained in a counter.

I claim:

1. A device for displaying smoking accessories comprising a four-sided frame having an open central space surrounded by four side members including two spaced and parallel vertical members, a plurality of shafts extending into said central space from one of said horizontal frame members and extending parallel to each other, said frame mounting said shafts for independent rotation relative to each other, a display carrier affixed to each of said shafts with each of said carriers having a plurality of sides each adapted to carry one or more items of merchandise for displaying a plurality of items on each carrier successively due to the rotation of the shaft thereof, a plurality of electric motors coupled respectively to said shafts for independently rotating the same, means for mounting each motor on said upper horizontal frame member, a cover panel extending above said upper horizontal frame member and masking said motors from view, and means for supplying operating current to said motors.

2. The display device of claim 1 including stationary display means affixed to said frame for displaying additional items of merchandise.

3. The display device of claim 2 in which said stationary display means includes a plurality of hooks mounted on a portion of said frame means below said shafts and carriers.

4. The display device of claim 3 in which said stationary display means further includes a compartment affixed to said frame means and having a transparent panel at the front side of said display device through which items provided in said compartment may be seen.

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