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(54) WALL CALENDAR

(71) We, ARLAC-WERK HEIKO IPPEN of In der Masch 4, 2000 Hamburg 61, Federal Republic of Germany, a German firm do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:–

This invention relates to wall calendars.

Various types of wall calendars are known which consist of a casing having one or more windows therein and a plurality of indicia-bearing members mounted within the casing for movement to bring selected indicia into view through the window(s), the indicia representing days of the month, days of the week, etc. The display members have hitherto been plate or disc shaped members of cardboard or plastics material.

An object of the present invention is to provide a wall calendar with a clear and distinct display of the actual date when adjusted, which is simple to manipulate to adjust the display, and which is economical to manufacture.

The invention accordingly provides a wall calendar comprising a casing of generally rectangular shape and having window means in the upper part of a front wall thereof, a plurality of endless belts bearing indicia representing calendar information, a guidance element adjacent the window means around which the endless belts are trained, and roller means in the lower part of the casing, the roller means comprising a rod spanning the breadth of the belts, a plurality of guidance rollers rotatable on the rod and each having one of the belts trained thereabout, and a corresponding plurality of rotatable actuating rollers each in frictional contact with a respective belt on its guidance roller and each having part of its periphery projecting from the lower part of the casing for manual rotation to set the respective belt to a desired position.

An embodiment of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a front elevation of a wall calendar embodying the present invention;

Figure 2 is a side elevation of the wall calendar of Figure 1; and

Figure 3 is a cross-section taken on the line III–III of Figure 1.

Referring to Figures 1 and 2, a wall calendar comprises a box-shaped casing or housing 10 of substantially rectangular basic configuration. For manufacturing reasons, the housing is preferably formed of two parts 10*e*, 10*f* (Fig. 2). A rear wall 12 of the housing is provided with mounting means 13 for attachment to a vertical wall or the like. A housing cavity 14 (Fig. 3) is defined between the rear wall 12 and a front wall 11. In its upper part 10*a* the housing includes an angled portion 15 which is closed at the front by a vertical front panel 18. The lower end of the housing remote from the angled portion 15 is indicated by the reference numeral 10*b*.

The housing 10 may be made from plastics or other suitable material by injection moulding, deep drawing, or the like.

The front panel 18 in the angled portion 15 of the housing 10 includes a number of window apertures. Alternatively a single window aperture of a sufficient size may be used. In the embodiment shown, the front panel 18 has four window apertures 20, 21, 22, 23. The aperture 20 displays the day of the week, 21 and 22 the day of the month, and 23 the month. The window apertures 20 – 23 may be covered by a transparent cover member (not shown).

Endless data belts or webs 30, 31, 32, 33 are arranged in the housing cavity 14, the belts corresponding to the window apertures 20 – 23. The web 30 bears indicia represent-

ing the days of the week, i.e. Monday to Sunday, the web 31 bears the numbers 0 to 3, the web 32 the numbers 0 to 9, and the web 33 the months January to December. The data webs 30 – 33 are arranged in the housing cavity 14 in such a manner that, when suitably adjusted, the corresponding day of the week, date and month are displayed in the windows 20–23. The data webs 30 – 33 may be of plastics sheet material, plastics coated textile or the like. Materials having a high degree of friction are particularly suitable.

The data webs 30 – 33 are guided at one end by a guidance element 40 disposed within the housing cavity 14 adjacent the window apertures 20 – 23. The guidance element 40 includes a vertical planar portion 41 extending in a direction parallel to the front panel 18, and an arcuate portion 42 extending toward the rear of the cavity 14 and merging in an upper edge region 41*a* into the vertical portion 41. The guidance element 40 is arranged in the angled portion 15 of the housing 10 so that the vertical portion 41 is only slightly spaced from the front panel 18 whereby the data webs 30 – 33 are guided in this space between the front panel 18 and the vertical portion 41. The guidance element 40 extends across the whole width of the housing 10.

In the lower region of the housing 10, roller means are provided for guiding the webs 30 – 33. The roller means comprises rollers 50, 51, 52, 53 mounted for rotation on a rod 56 (Fig. 3) which is supported in the side walls of the housing 10.

Thus the endless data webs 30 – 33 are trained around the guidance element 40 at one end and around the rollers 50 – 53 at the other. Since the webs 30 – 33 ar usually longer than the height of the housing 10, additional guiding means may be used to lengthen the path of the webs within the housing. In the embodiment shown, a roller 66 rotatably journalled in the housing 10 is provided for this purpose, the roller 66 having a length corresponding to the overall width of the webs 30 – 33. Alternatively, an individual guide roller for each web may be provided, such rollers being mounted for rotation about a common axis.

The rollers 50 – 53 are operatively associated with respective actuating rollers 60 – 63 for adjusting the data webs 30 – 33. The actuating rollers 60 – 63 are mounted for free rotation about a common spindle 65 which is secured at its ends to the housing 10. Each actuating roller is positioned to engage the respective data belt between it and the corresponding one of the rollers 50 – 53, whereby rotation of one of the actuating rollers 60 – 63 causes the respective data web 30 – 33 to be driven until the desired indicium is displayed. The actuating rollers 60 – 63 are made of rubber or plastics material, at least the surface portion preferably being resileint to ensure sufficient engagement between the actuating roller and the data web. The return rollers 50 – 53 may likewise be provided with resilient surfaces.

The actuating rollers are disposed in a recess 19 at the lower end of the housing 10. The ends of the spindle 65 journalling the actuating rollers are retained in portions 10*c*, 10*d* laterally defining the recess 19. The mounting of the actuating rollers 60 – 63 is such that each has u portion of its periphery projecting beyond the plane of the front panel 11. As may be seen in Figure 3, the exposed peripheral portions of the actuating rollers amount to approximately two-thirds of the total periphery. This arrangement allows the data webs to be readily adjusted even when the calendar is mounted on a vertical wall or the like.

Modifications of the above embodiment may of course be made within the scope of the invention as defined in the claims. For example, a differing number of data webs may be used, and the housing may be formed without an angled upper portion, the window apertures being arranged in the front panel 11.

The described embodiment provides a number of advantages in comparison with previous wall calendars. The data webs may easily be adjusted by moderate finger pressure on the actuating rollers and the latter, by virtue of their position at the lower edge of the housing, may be wide for ease of operation by the user. The use of additional guiding means within the housing allows the webs to follow a sinuous path and thus long webs can be accommodated within a relatively small overall size of housing. Also, the provision of an angled upper portion causes the part displaying the date to project and thus aids legibility of the display.

WHAT WE CLAIM IS:–

1. A wall calendar comprising a casing of generally rectangular shape and having window means in the upper part of a front wall thereof, a plurality of endless belts bearing indicia representing calendar information, a guidance element adjacent the window means around which the endless belts are trained, and roller means in the lower part of the casing, the roller means comprising a rod spanning the breadth of the belts, a plurality of guidance rollers rotatable on the rod and each having one of the belts trained therearound, and a corresponding plurality of rotatable actuating rollers each in frictional contact with a respective belt on its guidance roller and each having part of its periphery projecting from the lower part of the casing for manual rotation to set the respective belt to a desired position.

ing the days of the week, i.e. Monday to Sunday, the web 31 bears the numbers 0 to 3, the web 32 the numbers 0 to 9, and the web 33 the months January to December. The data webs 30 – 33 are arranged in the housing cavity 14 in such a manner that, when suitably adjusted, the corresponding day of the week, date and month are displayed in the windows 20–23. The data webs 30 – 33 may be of plastics sheet material, plastics coated textile or the like. Materials having a high degree of friction are particularly suitable.

The data webs 30 – 33 are guided at one end by a guidance element 40 disposed within the housing cavity 14 adjacent the window apertures 20 – 23. The guidance element 40 includes a vertical planar portion 41 extending in a direction parallel to the front panel 18, and an arcuate portion 42 extending toward the rear of the cavity 14 and merging in an upper edge region 41*a* into the vertical portion 41. The guidance element 40 is arranged in the angled portion 15 of the housing 10 so that the vertical portion 41 is only slightly spaced from the front panel 18 whereby the data webs 30 – 33 are guided in this space between the front panel 18 and the vertical portion 41. The guidance element 40 extends across the whole width of the housing 10.

In the lower region of the housing 10, roller means are provided for guiding the webs 30 – 33. The roller means comprises rollers 50, 51, 52, 53 mounted for rotation on a rod 56 (Fig. 3) which is supported in the side walls of the housing 10.

Thus the endless data webs 30 – 33 are trained around the guidance element 40 at one end and around the rollers 50 – 53 at the other. Since the webs 30 – 33 ar usually longer than the height of the housing 10, additional guiding means may be used to lengthen the path of the webs within the housing. In the embodiment shown, a roller 66 rotatably journalled in the housing 10 is provided for this purpose, the roller 66 having a length corresponding to the overall width of the webs 30 – 33. Alternatively, an individual guide roller for each web may be provided, such rollers being mounted for rotation about a common axis.

The rollers 50 – 53 are operatively assoicated with respective actuating rollers 60 – 63 for adjusting the data webs 30 – 33. The actuating rollers 60 – 63 are mounted for free rotation about a common spindle 65 which is secured at its ends to the housing 10. Each actuating roller is positioned to engage the respective data belt between it and the corresponding one of the rollers 50 – 53, whereby rotation of one of the actuating rollers 60 – 63 causes the respective data web 30 – 33 to be driven until the desired indicium is displayed. The actuating rollers 60 – 63 are made of rubber or plastics material, at least the surface portion preferably being resileint to ensure sufficient engagement between the actuating roller and the data web. The return rollers 50 – 53 may likewise be provided with resilient surfaces.

The actuating rollers are disposed in a recess 19 at the lower end of the housing 10. The ends of the spindle 65 journalling the actuating rollers are retained in portions 10*c*, 10*d* laterally defining the recess 19. The mounting of the actuating rollers 60 – 63 is such that each has u portion of its periphery projecting beyond the plane of the front panel 11. As may be seen in Figure 3, the exposed peripheral portions of the actuating rollers amount to approximately two-thirds of the total periphery. This arrangement allows the data webs to be readily adjusted even when the calendar is mounted on a vertical wall or the like.

Modifications of the above embodiment may of course be made within the scope of the invention as defined in the claims. For example, a differing number of data webs may be used, and the housing may be formed without an angled upper portion, the window apertures being arranged in the front panel 11.

The described embodiment provides a number of advantages in comparison with previous wall calendars. The data webs may easily be adjusted by moderate finger pressure on the actuating rollers and the latter, by virtue of their position at the lower edge of the housing, may be wide for ease of operation by the user. The use of additional guiding means within the housing allows the webs to follow a sinuous path and thus long webs can be accommodated within a relatively small overall size of housing. Also, the provision of an angled upper portion causes the part displaying the date to project and thus aids legibility of the display.

WHAT WE CLAIM IS:–

1. A wall calendar comprising a casing of generally rectangular shape and having window means in the upper part of a front wall thereof, a plurality of endless belts bearing indicia representing calendar information, a guidance element adjacent the window means around which the endless belts are trained, and roller means in the lower part of the casing, the roller means comprising a rod spanning the breadth of the belts, a plurality of guidance rollers rotatable on the rod and each having one of the belts trained therearound, and a corresponding plurality of rotatable actuating rollers each in frictional contact with a respective belt on its guidance roller and each having part of its periphery projecting from the lower part of the casing for manual rotation to set the respective belt to a desired position.

* C L M S *

2. A wall calendar according to claim 1, in which said peripheral parts of the actuating rollers project through an aperture in the lower edge of the front wall of the casing.

3. A wall calendar according to claim 1 or claim 2, in which said guidance element comprises a planar portion disposed adjacent the front wall of the casing in the area of and parallel to the window means, and a part-cylindrical portion extending from said planar portion to the rear part of the interior of the casing.

4. A wall calendar according to claim 3, in which the guidance element extends across the whole width of the casing.

5. A wall calendar according to claim 3 or claim 4, including further guidance means for the belts adjacent said guidance element.

6. A wall calendar according to claim 5, in which said further guidance means comprises a roller spanning the interior of the casing.

7. A wall calendar according to claim 5, in which said further guidance means comprises a plurality of rotatable rollers, one for each belt.

8. A wall calendar according to any preceding claim, in which the casing has an angled top section including a curved top wall and a vertical front panel in which said window means is disposed, the remainder of the front of the casing being set back from said front panel.

9. A wall calendar according to any preceding claim, in which the window means comprises a plurality of windows, one for each belt.

10. A wall calendar according to any of claims 1 to 8, in which the window means comprises a single window spanning the width of the belts.

11. A wall calendar substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

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