

[0044] FIG. 7 is a front view showing a first modification of the displaying apparatus 100. According to the present modification, the displaying apparatus 100 includes one bend member 160 in place of both the bend member 120a and the bend member 120b. Other components except the bend member 160 will not describe because they have the same configuration as the displaying apparatus 100 in FIG. 3. The bend member 160 extends in one direction, such as perpendicular direction. The bend member 160 includes a plurality of deformation volume detectors 162, each of which is located in certain interval along a longitudinal direction of the bend member 160. Each of the deformation volume detectors 162 includes piezoelectric material and outputs a signal of the bend direction and a signal of the deformation volume to the display controller 140. In the present modification, the displaying apparatus 100 detects which a part of the bend member 160 the user bends. The displaying apparatus 100 selects the display data to be displayed firstly or sets the updating speed based on the results of the detections. Therefore, the user can operate the displaying apparatus 100 with one hand.

[0045] FIG. 8 is a flowchart showing another operation of the display controller 140. The display controller 140 detects which a part of the bend member 160 the user bends. More specifically, the display controller 140 decides that which the deformation volume detectors 162 detects its deformation (S200). Next, the display controller 140 sets the display data to be displayed firstly, based on the position of the bended part (S202). For example, when the user moves the bend position to an upper part in the bend member 160 shown in FIG. 7, the display controller 140 sets data of which order is previous to the present display data, as the display data to be display firstly. When the user moves the bend position to a lower part in the bend member 160 shown in FIG. 7, the display controller 140 sets data of which order is next to the present display data, as the display data to be display firstly.

[0046] Next, the display controller 140 decides the deformation volume of the bend member 160 (S204), and sets the updating speed of the display data, based on the deformation volume that is decided (S206). For example, the display controller 140 speeds up the updating speed of the display data, as the decided deformation volume is larger.

[0047] Next the display controller 140 decides the bend direction at the bend member 160 (S208), and sets the order for updating the display data based on the bend direction that is decided (S210). Next, the display controller 140 updates the display data, based on both the updating speed and the updating order (S212). The display controller 140 repeats the steps from S204 to S212, as long as the user continues to bend the bend member 160 (S214).

[0048] Thus, according to this modification, the user can input both the updating speed and the updating order of the display data, by bending a particular part in a particular direction. Therefore, the operation required to the user become simple.

[0049] FIG. 9 is a front view showing a second modification of the displaying apparatus 100. In this modification, the display controller 140 displays the display data in a display region 116 except for both a space 112 and a space 114. The space 112 is provided at the left side of the display panel 110 and the space 114 is provided at the right side of the display panel 110. In this case, the display controller 140

decides the width of the space 112 based on the quantity of display data, of which orders are previous to the order of the present display data in the display region 116. Also, the display controller 140 decides the width of the space 112 based the data amount of the display data, of which orders are next to the present display data in the display region 116. Thus, the display region 116 is changed according to a location in a display order of the present display data in the all display data. More specifically, both a position of a boundary between the space 112 and the display region 116, and a position of a boundary between the space 114 and the display region 116 are changed according to the location in the display order of the present display data. Therefore, the user can visually recognize the location in the display order of the present display data, based on the display position of the display data in the display panel 110.

[0050] In addition, the display controller 140 preferably keeps a total length of the width of the space 112 and the width of the space 114. In this case, the display controller 140 displays the width of the region for displaying the display data, i.e. the width of the display region 116, to be constant without relying on the display order of the display data

[0051] In addition, the display panel 110 displays a plurality of vertical lines in both the space 112 and the space 114. Accordingly, it is possible to provide the image of opening the book for the user. Moreover, the display panel 110 displays a vertical line as a dot line in the middle of the region for displaying the display data, i.e. in the middle of the display region 116. Therefore, it is possible to give the image of opening the book to the user. According to the present invention, it is possible to give the feeling of turning the pages of the book to the user.

[0052] Although the present invention has been described by way of exemplary embodiments, it should be understood that those skilled in the art might make many changes and substitutions without departing from the spirit and the scope of the present invention which is defined only by the appended claims.

What is claimed is:

1. A displaying apparatus comprising:

- a frame;
- a display panel, which is provided on a surface of said frame;
- a bend member, which is provided at an edge of the surface and bended by an external force;
- a deformation volume detector for detecting deformation volume at said bend member; and
- a display controller for controlling display of said display panel.

2. The displaying apparatus as claimed in claim 1, wherein said display controller controls an updating speed of the display data displayed in said panel display.

3. The displaying apparatus as claimed in claim 2, wherein said bend member is operable to bended at least in two directions,

said deformation volume detector further detects a bend direction of said bend member, and