

[0022] FIG. 9 is a schematic cross-sectional view of the latch mechanism in the second state, as viewed in the direction of arrow B in FIG. 2;

[0023] FIG. 10 is a perspective view showing a personal computer according to a second embodiment of the present invention;

[0024] FIG. 11 is a perspective view showing a first state in which a display panel and a main body of the personal computer shown in FIG. 10 are superposed on each other;

[0025] FIG. 12 is a perspective view showing a state in which the display panel of the personal computer of FIG. 10 is turned over and folded back onto the top surface of the main body;

[0026] FIG. 13 is a schematic cross-sectional view of the latch mechanism in the first state, as viewed in the direction of arrow C in FIG. 11; and

[0027] FIG. 14 is a schematic cross-sectional view of the latch mechanism in the second state, as viewed in the direction of arrow C in FIG. 11;

#### DETAILED DESCRIPTION OF THE INVENTION

[0028] Referring to FIGS. 1 to 9, a description will now be given of a personal computer (PC) 1 as an example of an electronic apparatus of a first embodiment according to the present invention. The PC 1 shown in FIG. 1 has a main body 3 as a first casing body, a display panel 2 as a second casing body, a hinge mechanism 4, and a latch mechanism 5. The display panel 2 includes a display screen 6 such as a liquid crystal display, and an input device such as a touch panel 7 superposed on the display screen 6. The main body 3 includes a keyboard 8 exposed to a top surface 3a thereof, a printed circuit board on which a CPU, etc. are mounted, and a hard disk drive as an example of a large-capacity storage medium.

[0029] The hinge mechanism 4 has a coupling member 9 and two parallel hinge shafts that allow the display panel 2 to rotate on hinge axes 10 and 11 (indicated by dot-and-dash lines in FIG. 1). The coupling member 9 and display panel 2 are coupled at the hinge axis 10. The coupling member 9 and the main body 3 are coupled at the other hinge axis 11. The hinge mechanism 4 has rotational resistance caused by friction on hinge axes 10 and 11. The coupling member 9 and display panel 2 are held at a desired angle by the friction at the hinge axis 10, and also the coupling member 9 and main body 3 are held at a desired angle by the friction at the hinge axis 11. The hinge mechanism 4 permits rotation of the display panel 2 between a first state (FIG. 2) and a second state. In the first state shown in FIG. 2, the display panel 2 is folded on the main body 3 with a display surface 2a of display panel 2 facing the main body 3. In the second state, the display panel 2 is folded on a bottom surface 3b of the main body 3 with a back surface 2b of the display panel 2 facing the bottom surface 3b. The display panel 2 is moved from the first state to the second state such that the display panel 2 is raised in the direction of double-headed arrow R (in FIG. 1) away from the top surface of the main body 3, then flipped over toward a bottom surface (lower surface) 3b of the main body 3 as shown in FIG. 3, and finally folded in the second state. In short, the hinge mechanism 4 is a so-called double hinge.

[0030] The latch mechanism 5 is provided opposed to the hinge mechanism 4. The latch mechanism 5 includes an engaging member 12 and a stopper portion 13. The engaging member 12 is built in the display panel 2, and the stopper portion 13 is provided in the main body 3. FIGS. 4 to 7 show the main structure of the latch mechanism 5, as viewed in the direction of arrow A in FIG. 2. The engaging member 12 includes a shaft 14, and first and second claws 15 and 16 extending radially from the shaft 14.

[0031] The first and second claws 15 and 16 are arranged in an angular positional relationship of about 90 degrees. Both claws 15 and 16 are directed to external-angle sides, that is, to obtuse-angle sides. The engaging member 12 rotates on the shaft 14. When the first claw 15 is exposed from the display panel 2 through a first hole 17 formed on the display surface 2a side of display panel 2, the second claw 16 retreats in the display panel 2. When the second claw 16 is exposed from the display panel 2 through a second hole 18 formed on the back surface 2b side of display panel 2 (shown in FIG. 2), the first claw 15 retreats in the display panel 2. The exposed state of the first claw 15 or second claw 16 is maintained by a fixing member 19 that is movable along the display panel 2.

[0032] The fixing member 19 is operated by a lever 20 exposed on an end face of the display panel 2. The fixing member 19 is urged toward the engaging member 12 by means of a coil spring 21. As is shown in FIG. 4, in the state in which the first claw 15 is exposed, the fixing member 19 abuts on an end face 16a that is located opposed to a distal end portion of the second claw 16 (see FIG. 8). On the other hand, as is shown in FIG. 7, in the state in which the second claw 16 is exposed, the fixing member 19 abuts on an end face 15a that is located opposed to a distal end portion of the first claw 15 (see FIG. 9). The state in which the first claw 15 is exposed from the display panel 2 is switched to the state in which the second claw 16 is exposed from the display panel 2 in the following manner. As is shown in FIG. 5, the lever 20 is operated to release the fixing member 19, and the first claw 15 is pushed into the display panel 2. When the first claw 15 is pushed in the display panel 2, the second claw 16 comes out from the second hole 18. When the second claw 16 is pulled out, the first claw 15 retreats in the display panel 2, as shown in FIG. 6. Upon restoring the lever 20 to the initial position, the engaging member 12 is fixed and the second claw 16 is exposed from the display panel 2.

[0033] In the first state shown in FIG. 4, the stopper portion 13 engages the first claw 15 that has been inserted through an opening 22 formed in the top surface 3a of main body 3. In the second state shown in FIG. 7, the stopper portion 13 engages the second claw 16 that has been inserted through an opening 23 formed in the bottom surface 3b of main body 3. The stopper portion 13 is urged toward the claw by means of a coil spring 24. The engagement between the stopper portion 13 and each claw 15, 16 is released by operating a lever 25 exposed on the main body 3.

[0034] FIGS. 8 and 9 schematically show the latch mechanism, as viewed in the direction of arrow B in FIG. 2. FIG. 8 shows the first state, and FIG. 9 the second state. In the first state, the display surface 2a of display panel 2 faces the top surface 3a of main body 3. In the second state, the back surface 2b of display panel 2 faces the bottom surface 3b of main body 3, and the display screen 6 is directed outward.