

tifying portion 14 is for carrying out a reading of a fingerprint of a user. The console face 20a has a tip part on which a transmitter (a microphone) 16, namely, an opening of the microphone.

[0048] On the other hand, the upper unit 30 mainly comprises the display portion unit 32 and a supporting portion unit 34. The display portion unit 32 and the supporting portion unit 34 are electrically and structurally connected to each other by a suitable rotating and sliding mechanism which will later be described.

[0049] Referring to FIGS. 4A, 4B, and 4C, the description will proceed to the rotating and sliding mechanism depicted at 40. FIG. 4A is a sectional view of FIG. 1C. FIG. 4B is an elevational view showing the rotating and sliding mechanism 40. In FIG. 4B, a rotating shaft 44 is omitted. FIG. 4C is an enlarged sectional view showing the rotating and sliding mechanism 40 enlarged.

[0050] As shown in FIG. 4A, the rotating and sliding mechanism 40 is disposed between the display portion unit 32 and the supporting portion unit 34. As shown in FIG. 4C, the display portion unit 32 has a rear face 32b having a circular hole 32b-1 while the supporting portion unit 34 has a front face 34b having a lengthwise oval hole 34b-1. In addition, as shown in FIG. 4C, the front face 34b of the supporting portion unit 34 has an inner wall on which a slide plate 42 having a circular hole 42-1 is disposed. The slide plate 42 is slidably fitted to the inner wall of the front face 34b of the supporting portion unit 34 up and down in a lengthwise groove 34b-2 formed therein, as shown in FIG. 4B. That is, the slide plate 41 has a front face (a slide face) 42a which is slidably in contact with the inner wall of the front face 34b of the supporting portion unit 34.

[0051] The rotating and sliding mechanism 40 comprises the above-mentioned slide plate 42 and a hollow cylindrical rotation shaft 44 passing through the circular hole 32b-1, the oval hole 34b-1, and the circular hole 42-1. The rotation shaft 44 has both ends 44a and 44b each of which is composed of a flange portion bent outwards in a radial direction, as shown in FIG. 4C. That is, one flange portion 44a is rotatably in contact with an inner wall of the rear face 32b of the display portion unit 32 while another flange portion 44b is rotatably in contact with a rear face 42b of the slide plate 42.

[0052] With this structure, it is possible to shift from the display portion 11 put into the lengthwise state as shown in FIG. 2A to the display portion 11 put into the oblong state as shown in FIG. 2B by rotating the display portion unit 32 counterclockwise CCW by about 90 degrees and by sliding downwards S by the rotating and the sliding mechanism 40. In addition, it is possible to shift from the display portion 11 put into the lengthwise state as shown in FIG. 2A to the display portion 11 put into the oblong state as shown in FIG. 2C by rotating the display portion unit 32 clockwise CW by about 90 degrees and by sliding downwards S by the rotating and the sliding mechanism 40. In as much as the display portion unit 32 is not only rotated but also slid in a case of making the display portion 11 from the lengthwise state to the oblong state, the foldable portable telephone set is advantageous in that it is possible to compact the display portion in the oblong state and it is attractive.

[0053] Although a switching of the display portion 11 between the lengthwise state and the oblong state is carried

out by the rotating and sliding the display portion unit 32 using the rotating and sliding mechanism 40, such a switching may be merely carried out by rotating the display portion unit 32 using a rotating mechanism. Such a rotating mechanism may be easily implemented by omitting a sliding mechanism from the rotating and sliding mechanism 40.

[0054] The rotation shaft 44 is hollow through which wiring for electrically connecting the display portion unit 32 with the supporting portion unit 34 passes.

[0055] The display portion unit 32 has a main surface (a display face) 32a on which the display portion 11 having a substantially rectangular shape is disposed. In addition, the display face 32 has a tip part on which a receiver 15 (an opening portion of a speaker) is disposed. When the display portion 11 is put into the lengthwise state, a pair of front camera portions 17a and 17b is disposed on the display portion 11 up and down, as shown in FIG. 2A. When the display portion 11 is put into the oblong state by rotating and sliding the display portion unit 32 by the rotating and sliding mechanism 40, the pair of front camera portions 17a and 17b is disposed on the display portion 11 right and left, as shown in FIG. 2B or FIG. 2C. The display portion unit 32 has another main surface (a rear face) 32b on which a rear camera portion 18 is disposed, as shown in FIG. 2D. The supporting portion unit 34 has an opposite face (a rear face) 34a, which is opposed to the display face, on which a small sub-display unit 19 is mounted.

[0056] Referring now to FIGS. 1A through 4, description will be made as regards operation of the foldable portable telephone set 10 according to the first embodiment of this invention.

[0057] According to the foldable portable telephone set 10 according to the first embodiment of this invention, it is possible to use as the display portion 11 put into the oblong state by rotating and sliding the display portion 11 by the rotating and sliding mechanism 40 as shown in FIG. 2B or FIG. 2C on stating an application such as a browser function for the Internet or the like, an electric mail function (mail creation, display of a received mail or the like), a function of a schedule management, and so on, on recording of voice or images, on reproducing (receiving) contents or the like. It is therefore possible to be easy to see display information comparison with a case where a display screen is put into the lengthwise state (FIG. 2A).

[0058] More specifically, on using a predetermined function with display, it is possible to the display portion 11 as an oblong display device by shifting the display portion unit 22 having the display portion 11 from a state illustrated in FIG. 2A to a state illustrated FIG. 2B or FIG. 2C by rotating and sliding the display portion unit 22 by the rotating and sliding mechanism 40 if a user desires. In this event, a control portion which will later be described detects that the display portion 11 is put into the oblong state and displays on the display portion 11 display contents which are suitably converted so as to fit a direction of the display screen put into the oblong state.

[0059] Referring now to FIG. 5, the description will proceed to an electric circuit portion corresponding to the above-mentioned mechanism in the foldable portable telephone set 10 according to the first embodiment of this invention.