



US005436954A

# United States Patent [19]

Nishiyama et al.

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[54] **FOLDABLE RADIO TELEPHONE SET WITH ROTARY SELECTOR INTEGRAL WITH FOLDABLE HINGE ELEMENT**

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[73] Assignee: **Hitachi, Ltd., Tokyo, Japan**

[21] Appl. No.: **117,326**

[22] Filed: **Sep. 7, 1993**

[30] **Foreign Application Priority Data**

Sep. 8, 1992 [JP] Japan ..... 4-239735

[51] Int. Cl.<sup>6</sup> ..... **H04M 11/00**

[52] U.S. Cl. .... **379/58; 379/61; 379/428; 379/433; 379/434; 455/89; 455/90**

[58] Field of Search ..... 379/58, 61, 428, 433, 379/434; 455/89, 90

[56] **References Cited**

### U.S. PATENT DOCUMENTS

4,481,382	11/1984	Villa-Real .....	379/61
4,739,128	4/1988	Grisham .....	379/96
4,845,772	7/1989	Metroka et al. ....	379/61
5,027,394	6/1991	Ono et al. ....	379/434

5,260,998	11/1993	Takagi .....	379/433
5,278,993	1/1994	Reiff et al. ....	379/433 X

### FOREIGN PATENT DOCUMENTS

0373387A1	6/1990	European Pat. Off. .
0463856A2	1/1992	European Pat. Off. .
0463856	1/1992	European Pat. Off. .

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[57] **ABSTRACT**

A portable radio telephone set provided with a display section includes a rotary selector which turns to select various functions. A menu displayed on the display section is selected by the rotary selector during a non-conversation time, and the sound volume can be adjusted during the conversation time. The adjusting operation can be performed from both the front and the rear sides of the telephone set. The rotary selector and button keys are arranged within the operation range of the thumb, and ordinary dial functions performed by operating these rotary selector and button keys are provided.

**13 Claims, 7 Drawing Sheets**

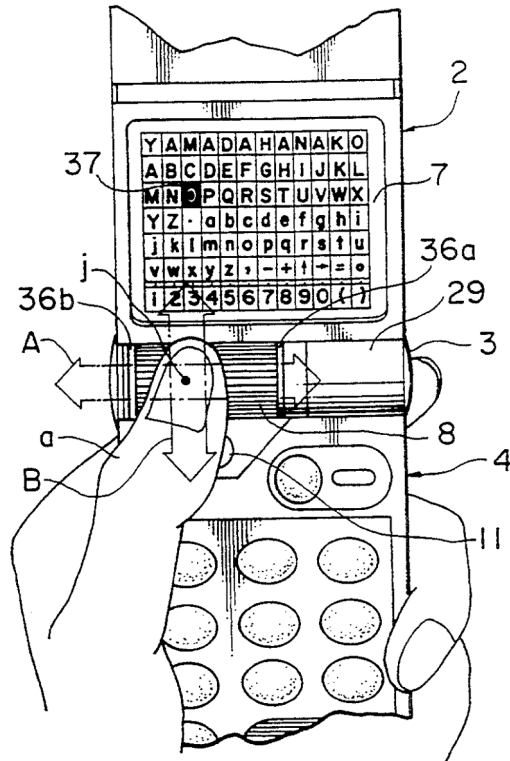
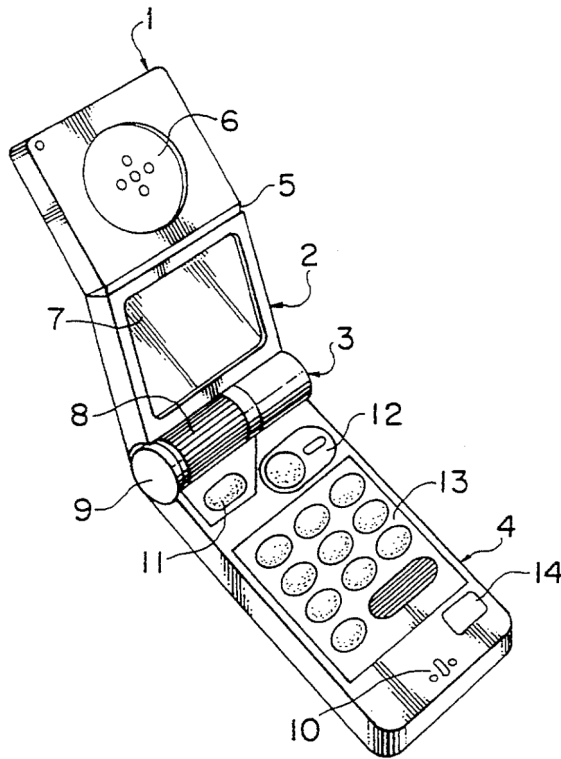


FIG. 1

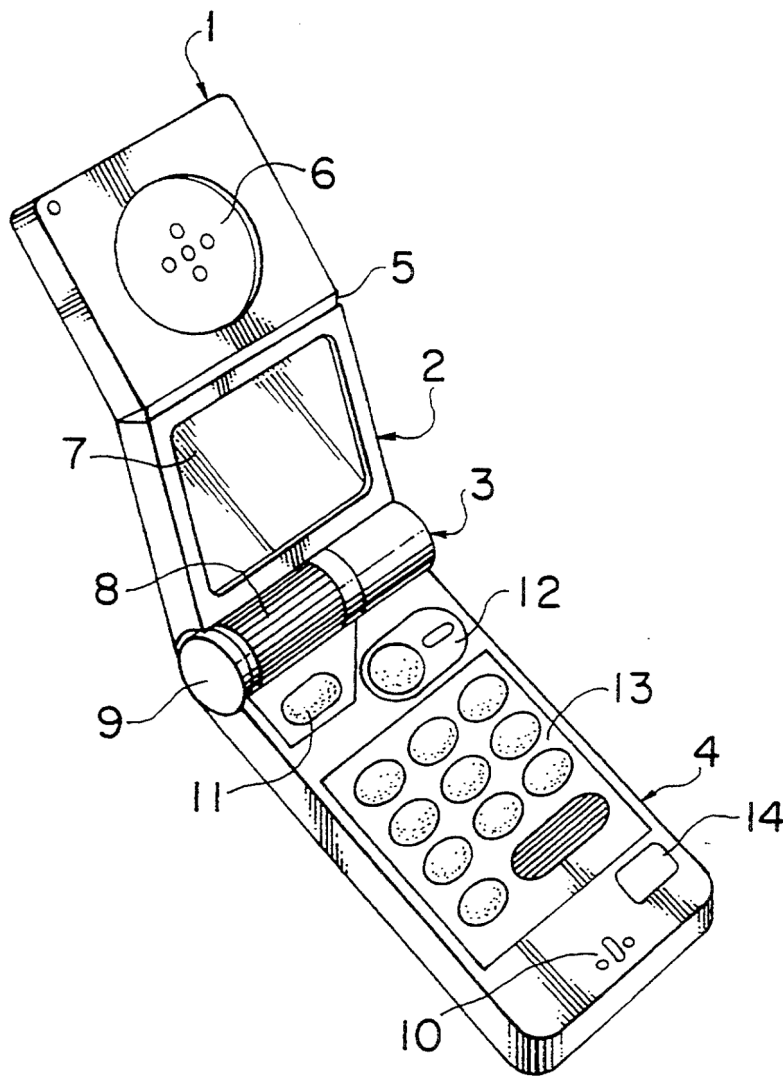


FIG. 2

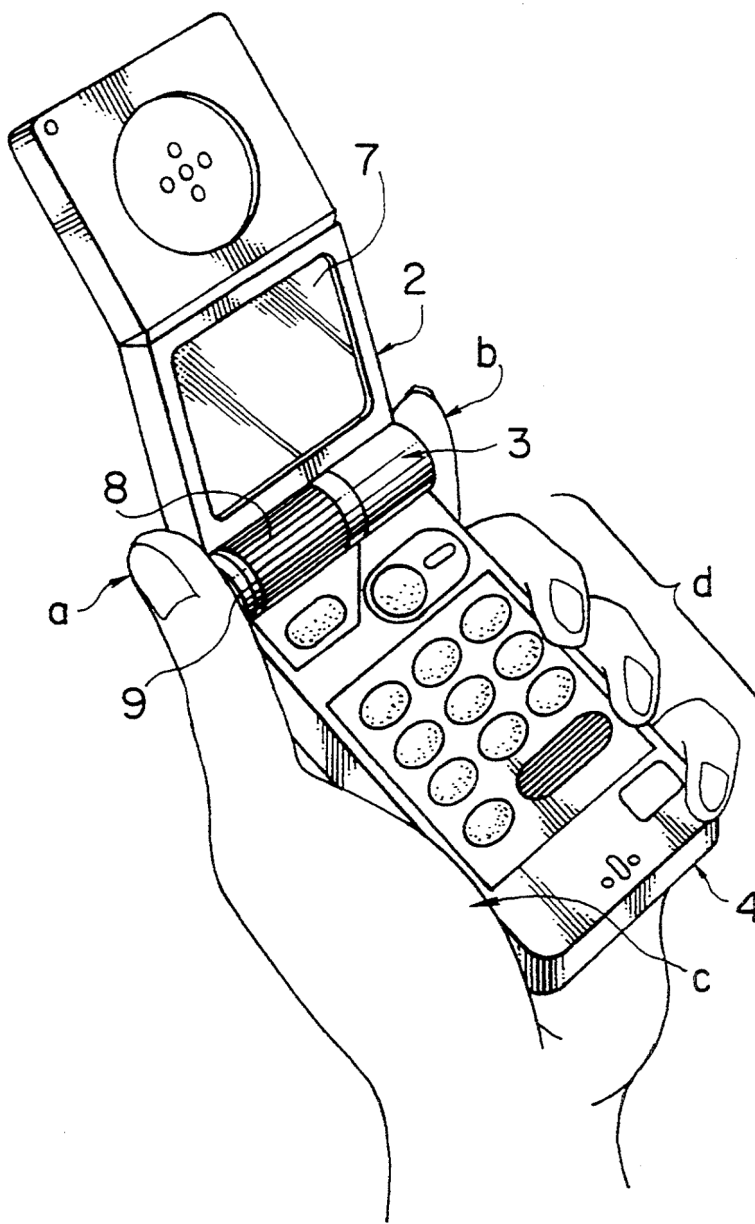


FIG. 3

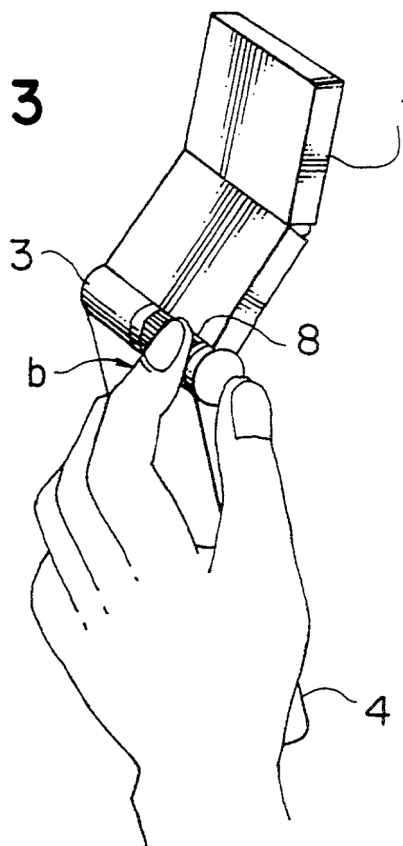


FIG. 5

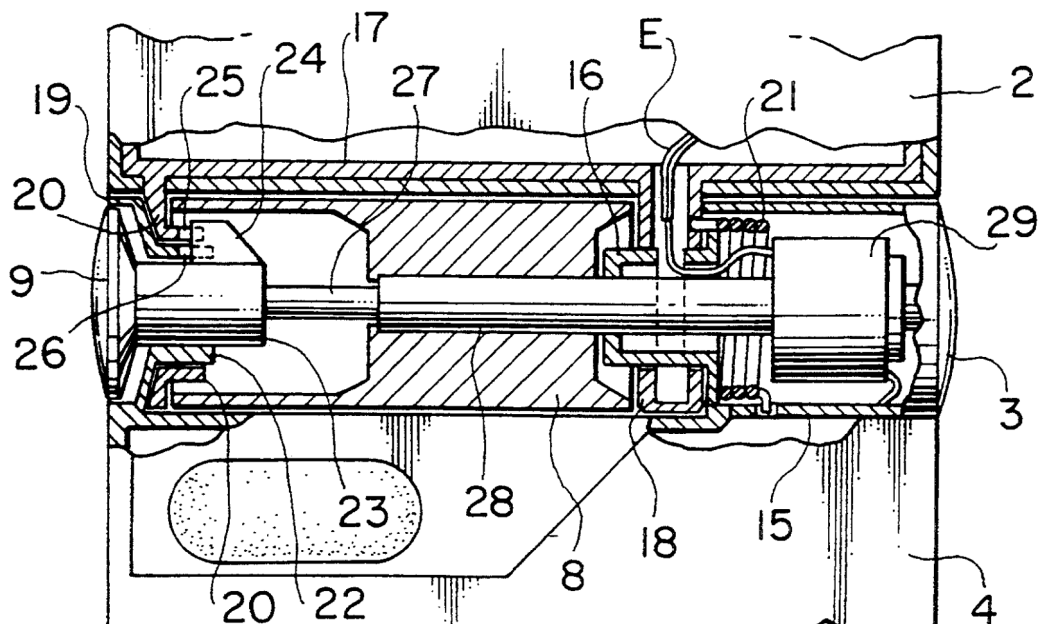
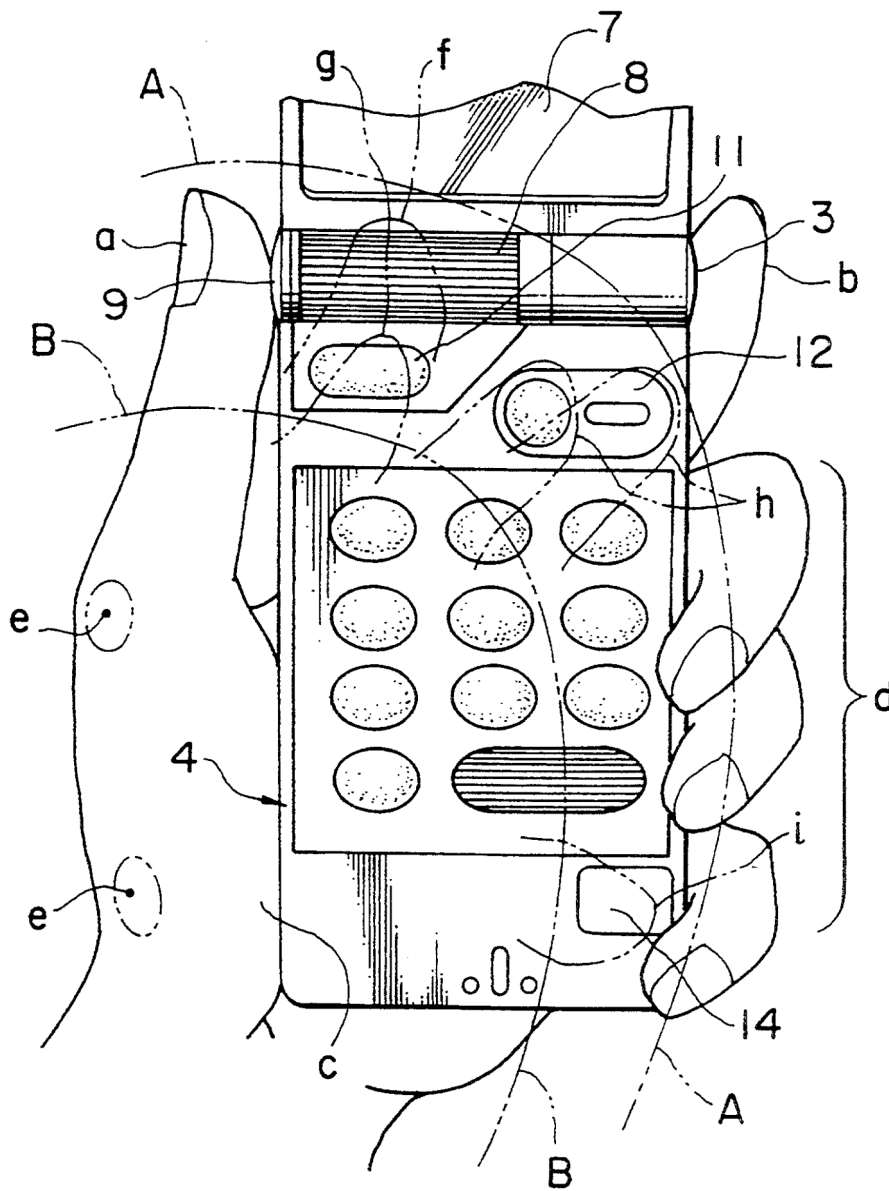


FIG. 4



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