

United States Patent [19]

Bertrand

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[54] **PORTABLE DIGITAL MAP READER**

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[30] **Foreign Application Priority Data**

Oct. 30, 1991 [FR] France 91 13345

[51] Int. Cl.⁶ **G06F 165/00**

[52] U.S. Cl. **364/443; 364/449; 340/990; 340/995**

[58] Field of Search **364/443, 444, 364/449; 73/178 R; 340/988, 990, 995**

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,312,577	1/1982	Fitzgerald	.....	353/12
4,527,155	7/1985	Yamaki et al.	.....	340/990
4,570,227	2/1986	Tachi et al.	.....	364/444
4,608,656	8/1986	Tanaka et al.	.....	364/449
4,628,456	12/1986	Hatano et al.	.....	364/449
4,694,583	9/1987	Blaney	.....	33/361
4,812,980	3/1989	Yamada et al.	.....	364/449

4,951,211	8/1990	De Villeroche	.....	364/444
5,021,961	6/1991	Ross et al.	.....	364/444
5,297,051	3/1994	Arakawa et al.	.....	364/443
5,353,034	10/1994	Sato et al.	.....	340/988

FOREIGN PATENT DOCUMENTS

0355232	2/1990	European Pat. Off.	.
2634707	2/1990	France	.
3933458	4/1991	Germany	.
55-112508	8/1980	Japan	.

OTHER PUBLICATIONS

Patent Abstracts of Japan, vol. 4, No. 163 (P-36)(645), 13 Nov. 1980.

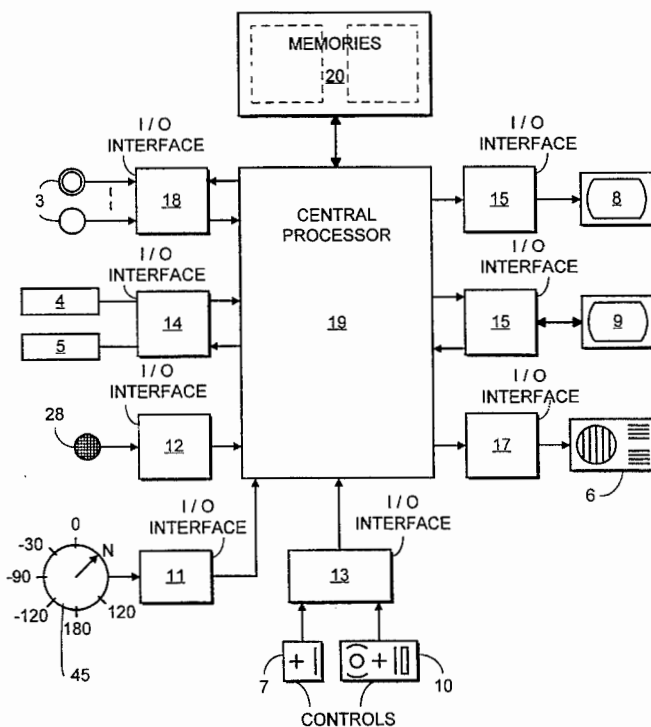
Primary Examiner—Gary Chin

Attorney, Agent, or Firm—Ladas & Parry

[57] **ABSTRACT**

The invention relates to an appliance for reading digital geographical maps, in particular topographical or road maps, recorded on magnetic or optical media, the appliance comprising in conventional manner a central processor unit (19), means (4, 5) for reading magnetic or optical media, at least one display screen (8, 9), control means (7, 10), and electrical power supply means. It includes a compass (45) adapted to measure the angle between the orientation of the appliance and magnetic north, and to send corresponding information to the central unit (19), said central unit responding to said information by issuing a corresponding order to the screen display process to cause the displayed image to be oriented as a function of said information. The appliance is designed to replace a conventional paper map, together with guidebooks, diaries, and directories.

8 Claims, 7 Drawing Sheets



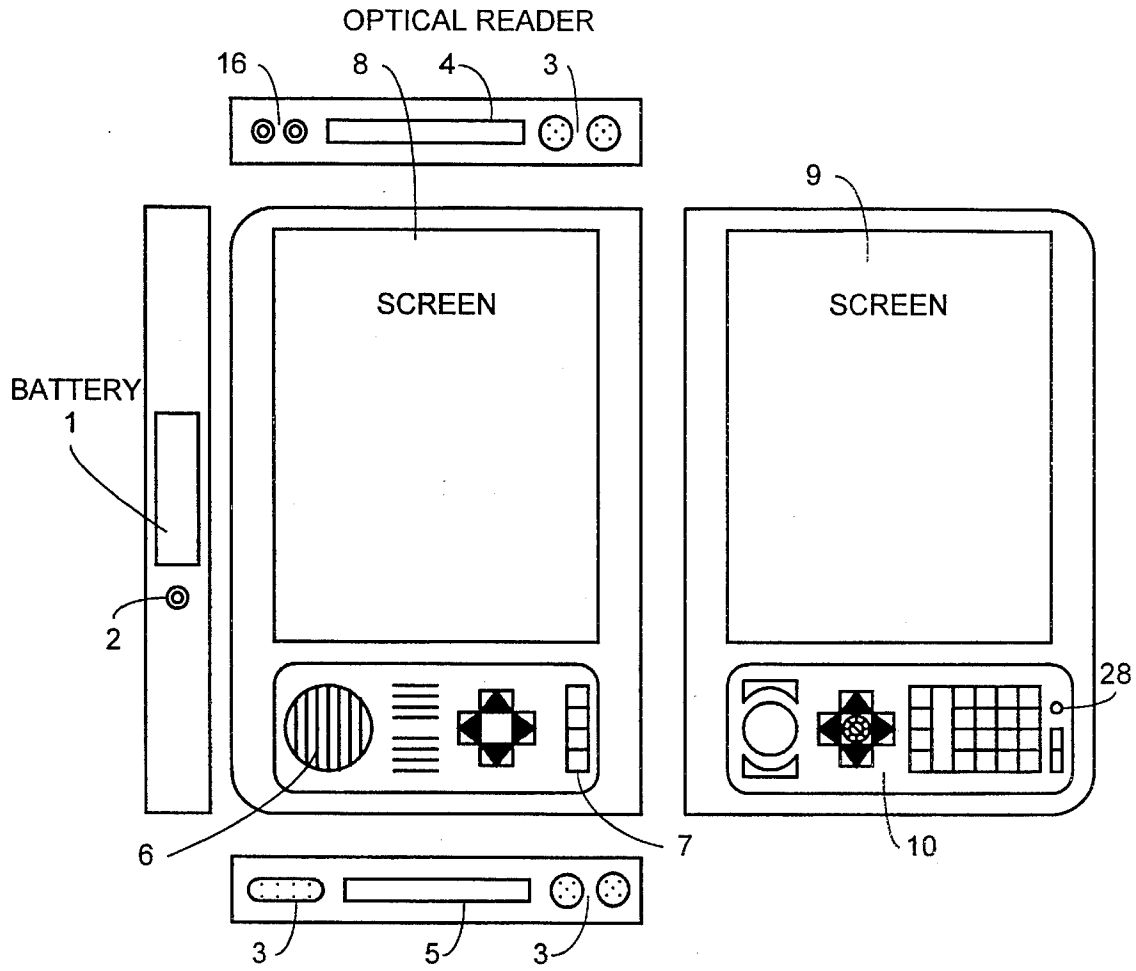


FIG. 1

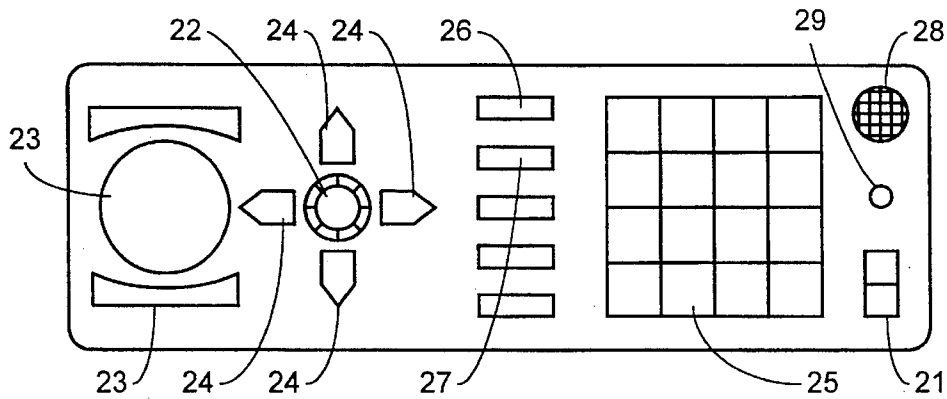


FIG. 2

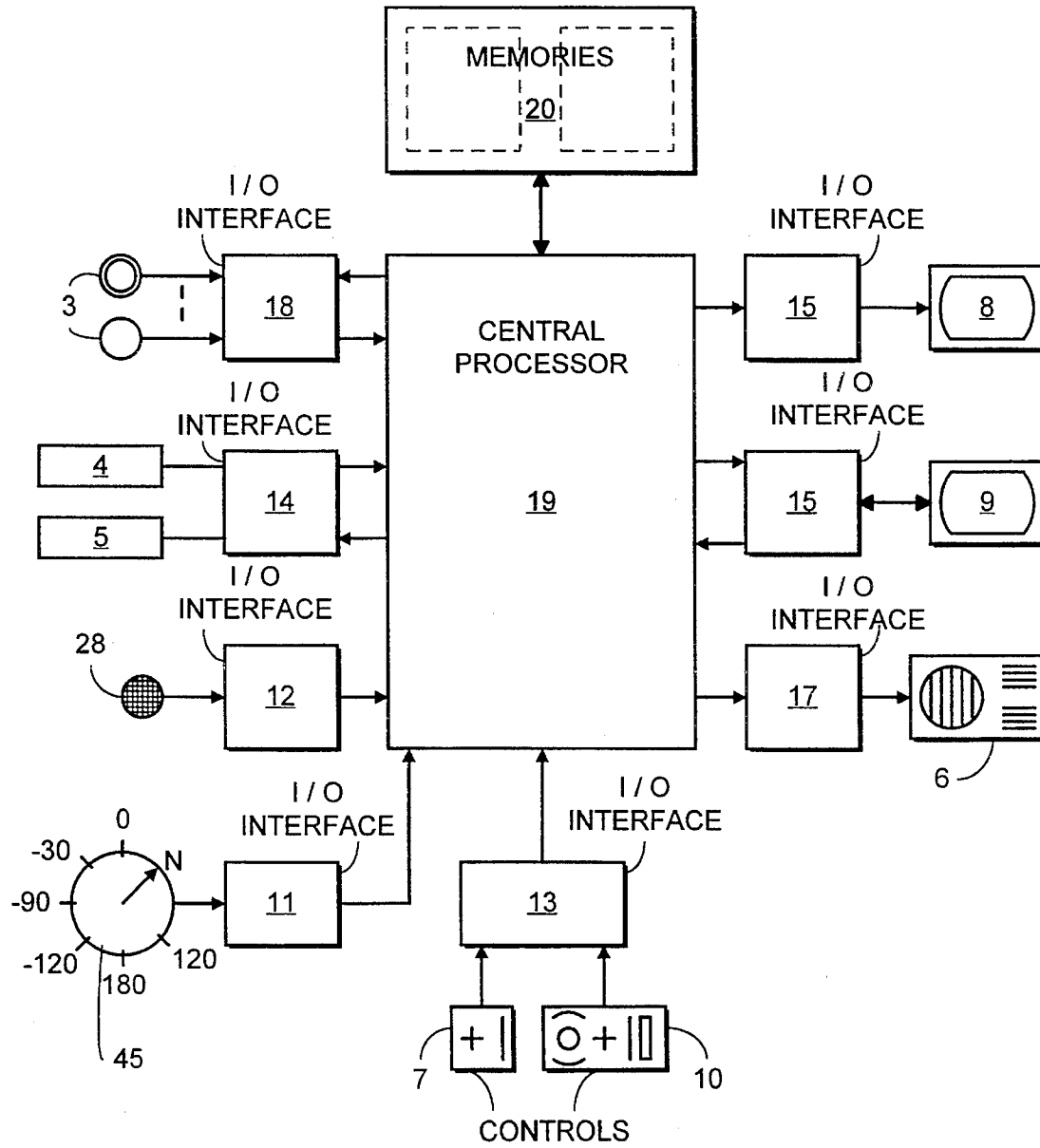


FIG. 3

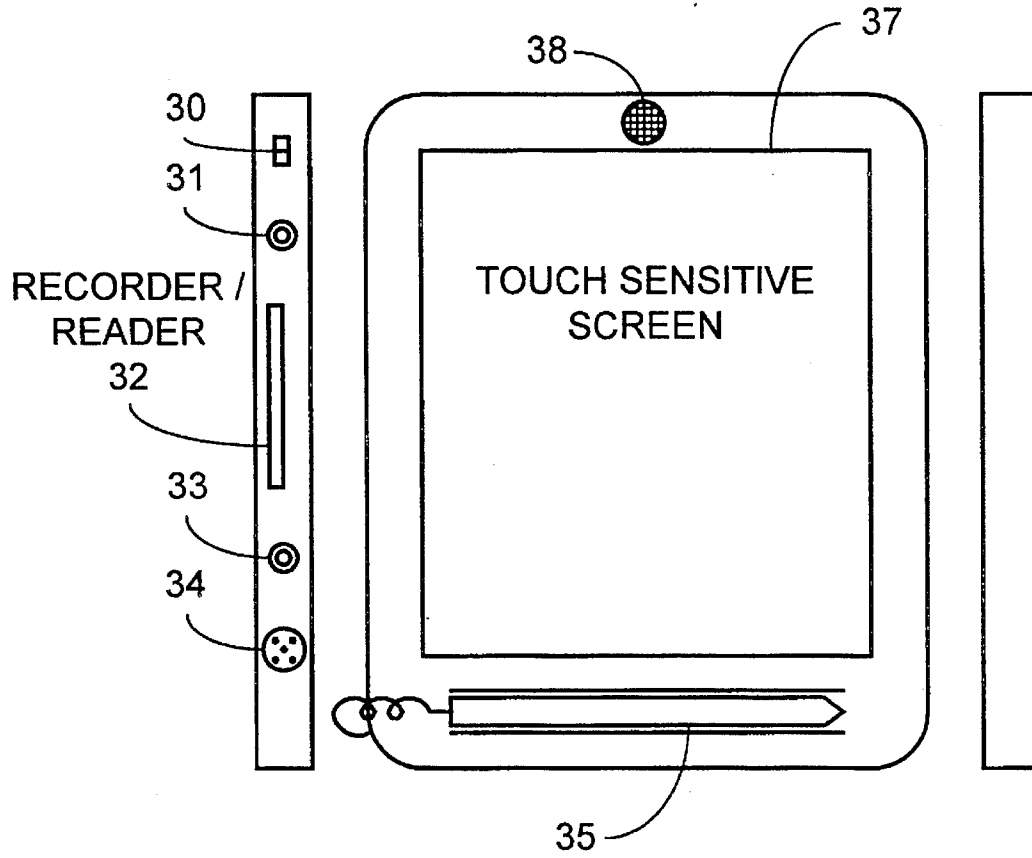


FIG. 4

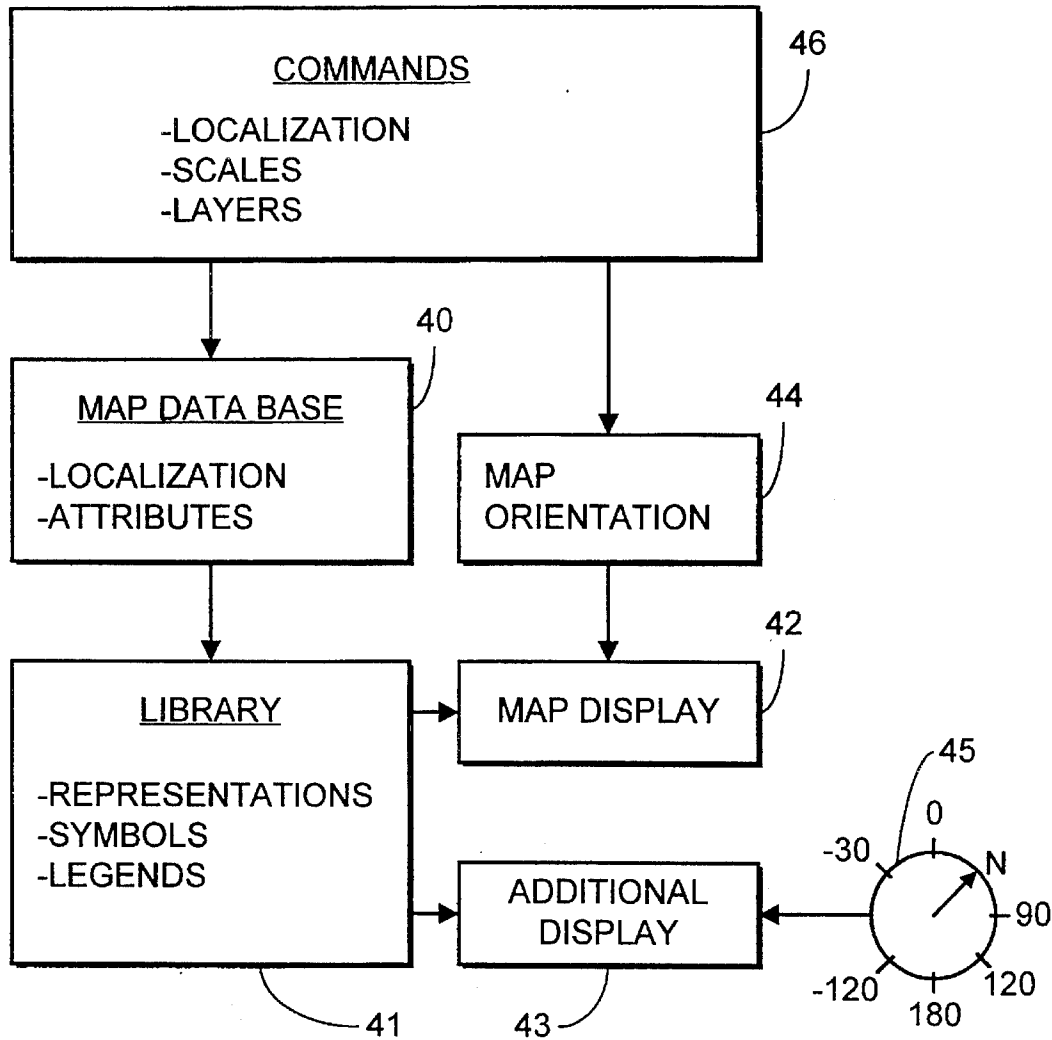


FIG. 5

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