

[54] **PORTABLE DATA INPUT APPARATUS WITH DIFFERENT DISPLAY MODES**

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[52] **U.S. Cl.** 235/472; 235/462; 340/711; 340/727

[58] **Field of Search** 235/462, 472, 375, 383, 235/454; 340/707, 711, 727; 341/22, 23

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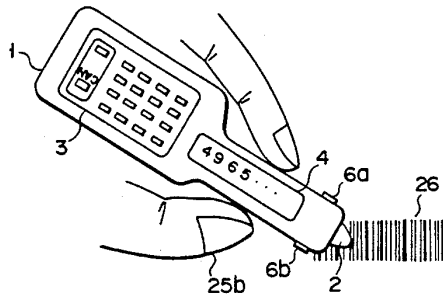
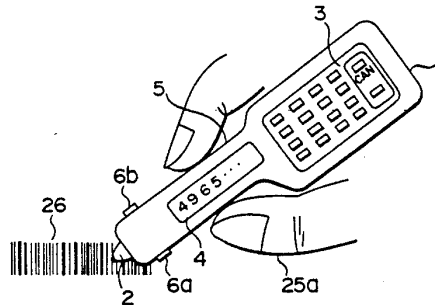
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Primary Examiner—Stuart S. Levy
Assistant Examiner—Steven M. duBois
Attorney, Agent, or Firm—Nixon & Vanderhye

[57] **ABSTRACT**

A portable data input apparatus comprises an elongated casing. A pen-scanner type bar code reader reads a bar code provided according to the kind of a commodity, and outputs a corresponding code data unit. A keyboard is designed to input at least a numerical data unit representative of the amount of the commodity. A display device displays the code data unit and the numerical data unit. A display mode changing circuit is designed to invert the image of the data units displayed on the display device in the vertical direction and the horizontal direction, in response to a detection signal, which is output when the code data and numerical data are inversely displayed.

14 Claims, 10 Drawing Sheets



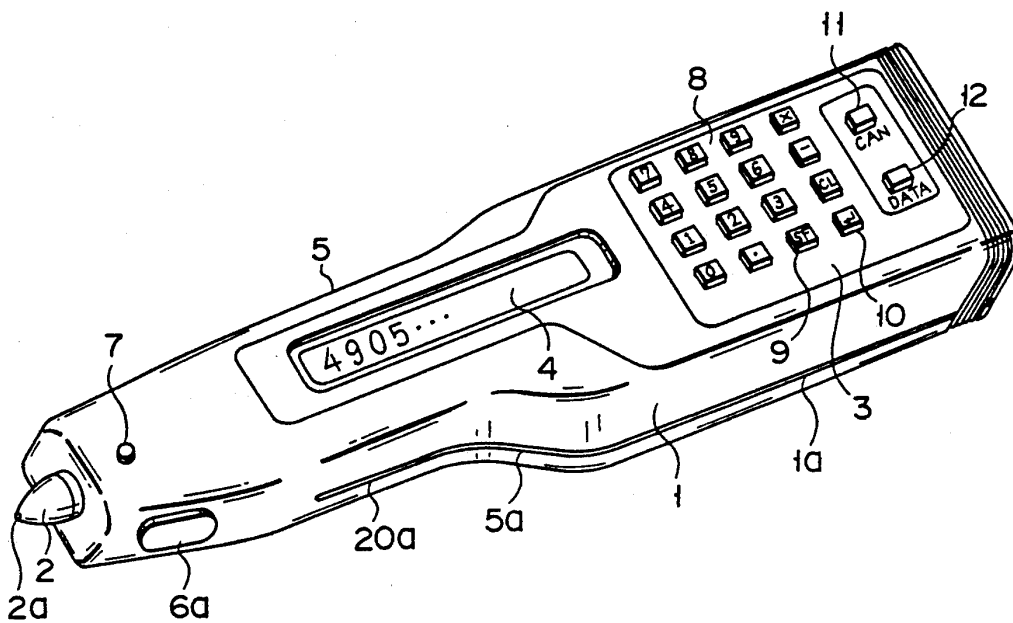


FIG. 1A

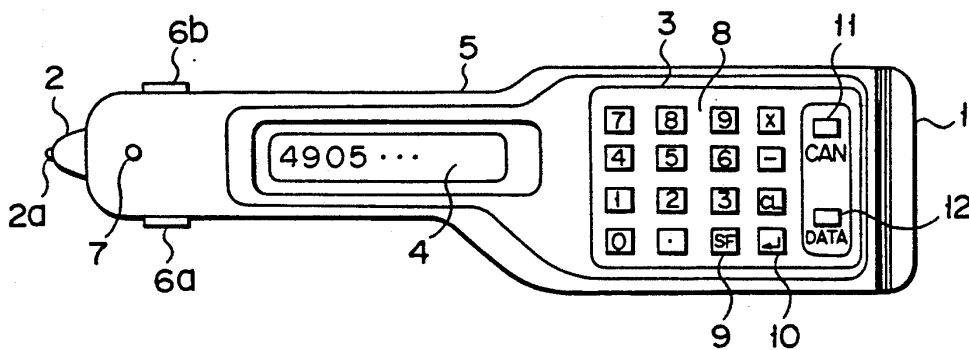
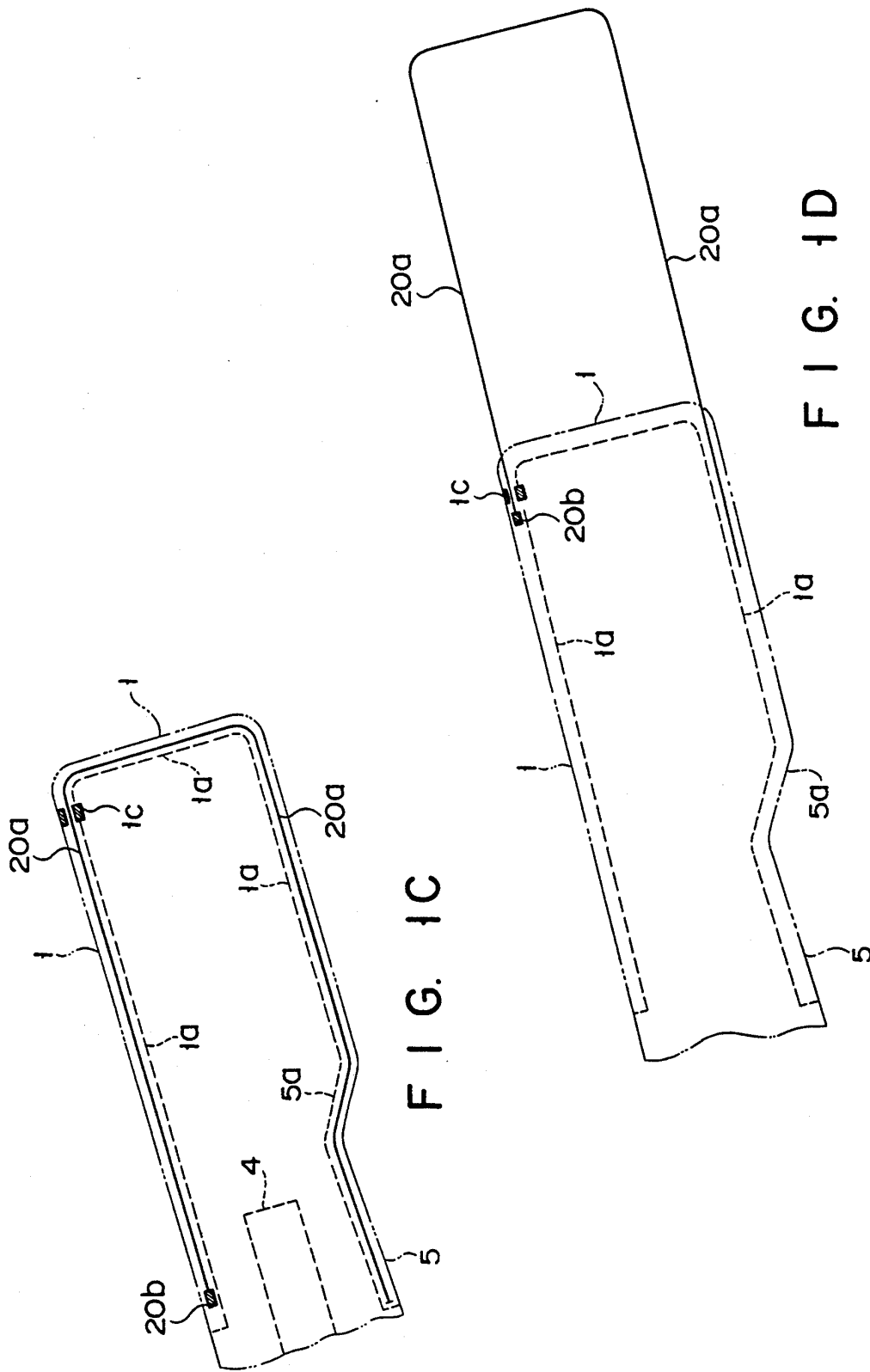


FIG. 1B



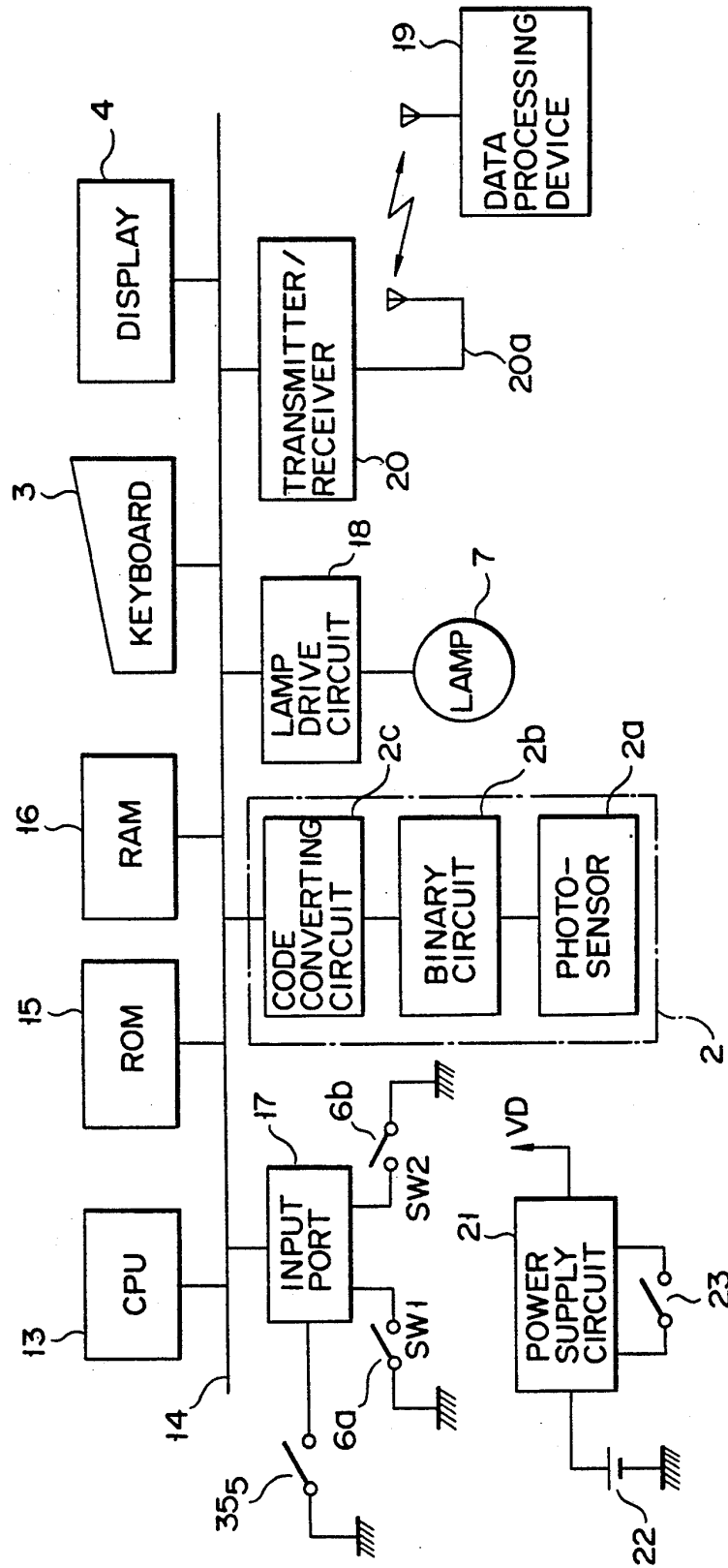


FIG. 2

COMMODITY CODE		AMOUNT	COMMODITY CODE	AMOUNT	GOODS
CODE	NUMBER	-----			
-----		-----			
-----		-----			

FIG. 3A

16a

FIG. 3B

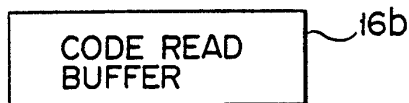


FIG. 3C



FIG. 3D



FIG. 3E



FIG. 3F



FIG. 4A

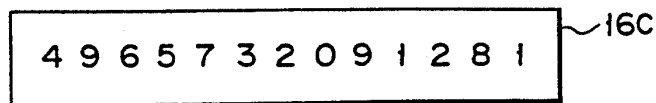
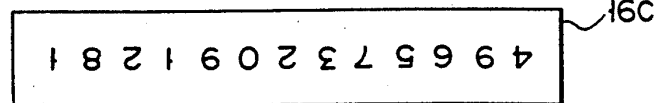


FIG. 4B



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