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(12) **United States Patent**
Ogata

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(54) **ACTUATING DEVICE FOR GAME MACHINE**

JP 62-194389 12/2001

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PS Analog Controller Finally Launched on the Market!, Game Walker, Jun. 1997, p. 76, No. 32, Japan.

(73) Assignee: **Sony Computer Entertainment Inc.** (JP)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(57) **ABSTRACT**

(30) **Foreign Application Priority Data**

Sep. 22, 1997 (JP) 9-257216

An actuating device for a game machine is disclosed in which the hand or fingers do not fatigue on prolonged use, thereby imparting an optimum feel for the user. The actuating device has a main body unit and first and second grips projecting from one side of the main body unit at opposite ends thereof. Vibration-imparting units are enclosed within the first and second grips. First and second actuating units are mounted at opposite ends of the main body unit. The first and second actuating units include plural thrusting actuators which protrude from the upper surface of the main body unit. Third and fourth actuating units are arranged on the proximal ends of the first and second grips so as to confront one another. The third and fourth actuating units include rotation actuators and signal input elements actuated by the rotation actuators. The portions of the rotation actuators which actuate the third and fourth actuating units are provided with top portions of a flexible material having outwardly bulging distal end portions.

(51) **Int. Cl.⁷** **A63F 13/06**

(52) **U.S. Cl.** **463/38; 463/37; 273/148 B**

(58) **Field of Search** **463/37, 38; 273/148 B**

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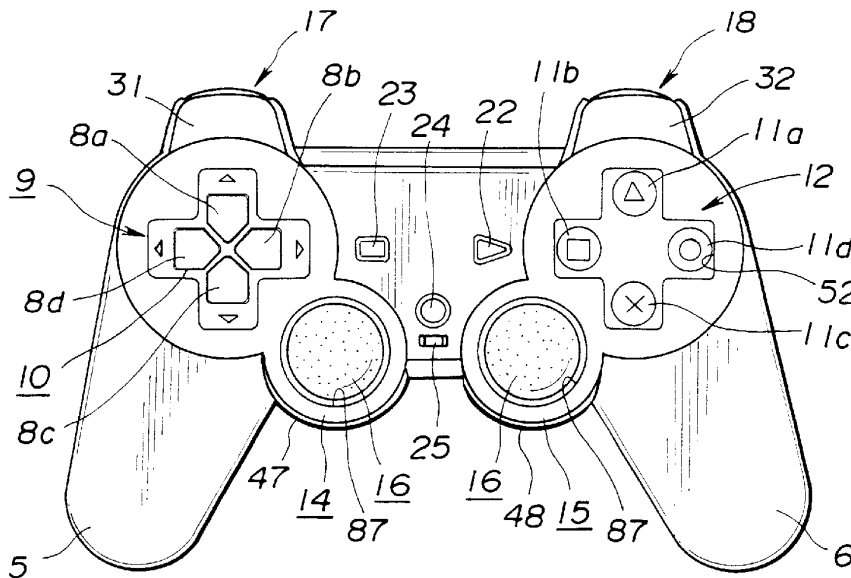
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15 Claims, 15 Drawing Sheets



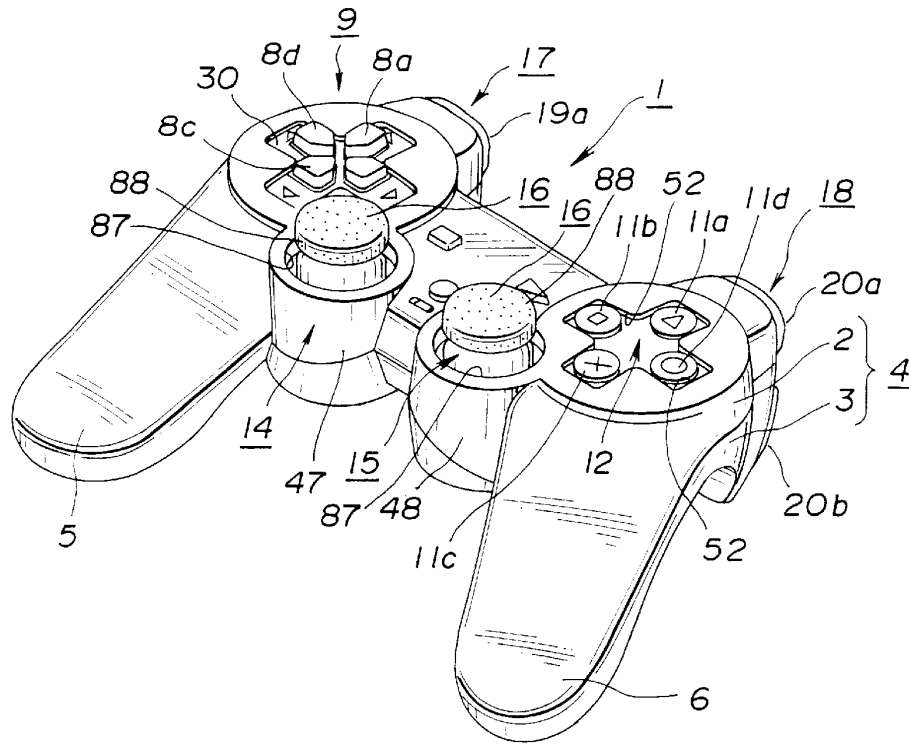


FIG. 1

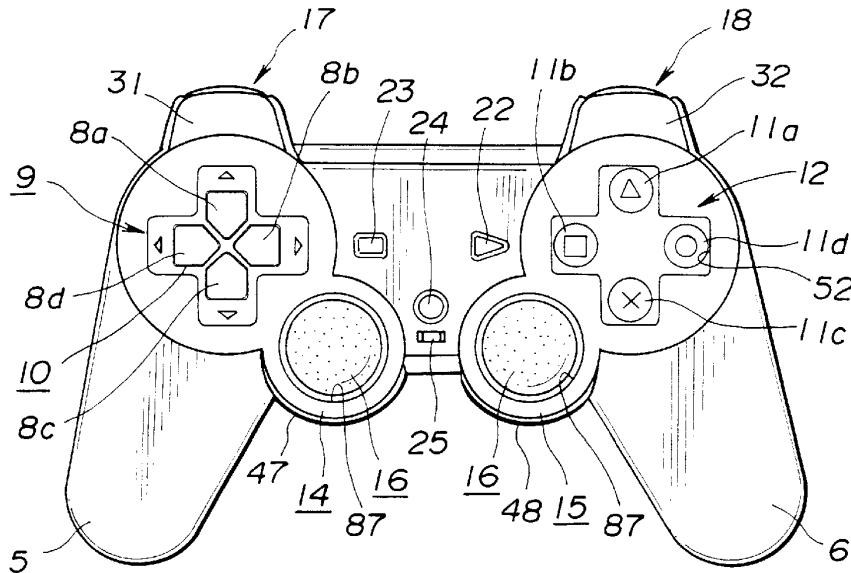


FIG. 2

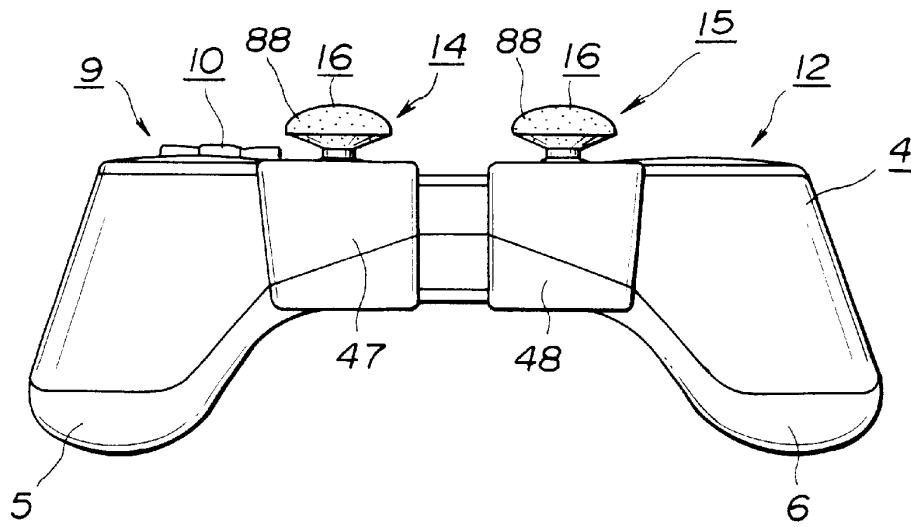


FIG. 3

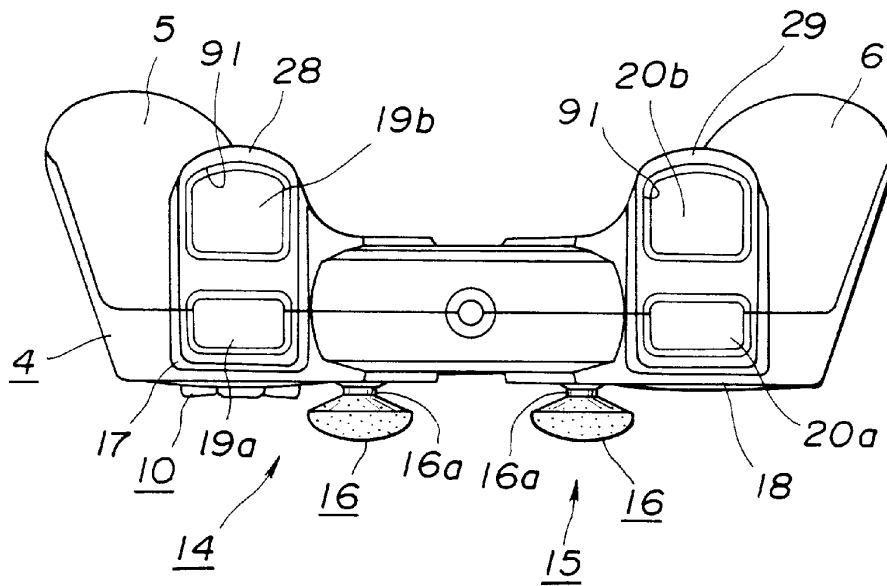


FIG. 4

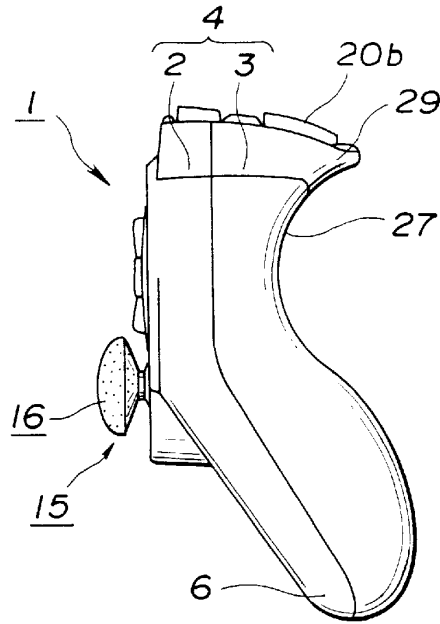


FIG.5

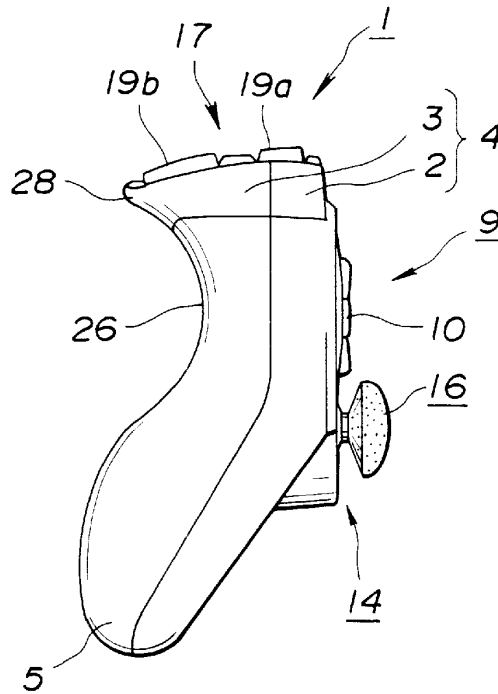


FIG.6

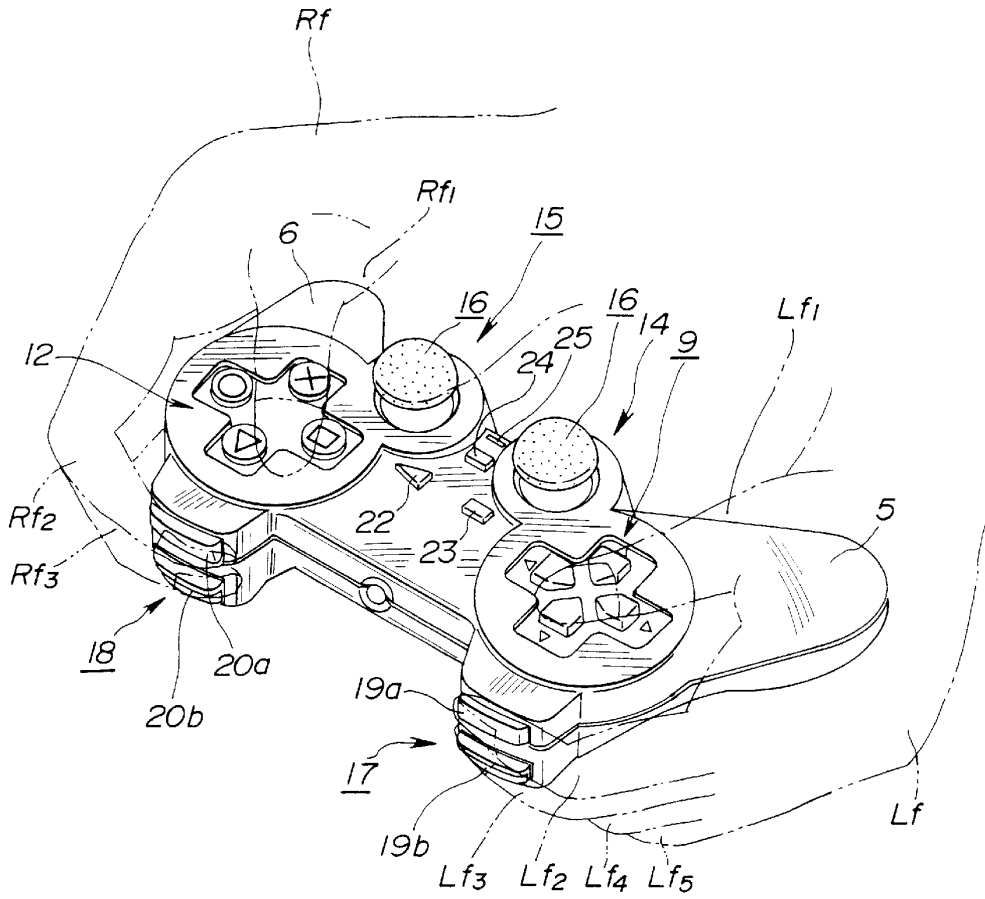


FIG. 7

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