

## GAMING MACHINE

### CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is based upon and claims the benefit of priority from the prior Japanese Patent Applications No. 2003-018037, 2003-018038, 2003-018039, 2003-018040, and 2003-018041 filed on Jan. 27, 2003; the entire contents of which are incorporated herein by reference.

### BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] This invention relates to a gaming machine.

[0004] 2. Related Background of the Invention

[0005] In recent years, gaming machines such as slot machines have come into fashion, and various types of gaming machines have been developed by gaming machine manufacturers.

[0006] Such a gaming machine is provided with a display device on its cabinet, and various images including images showing contents of games and attractive images are displayed on the display device. Thus, display devices for gaming machines have become indispensable for gaming machines.

[0007] The display devices include cathode ray tube (CRT) displays and various types of liquid crystal displays such as super-twisted nematic transistor (STN) type ones and thin film transistor (TFT) type ones. Such a display is mounted inside the cabinet of a gaming machine in such a manner that the display is protruding inside of the gaming machine, and hence a thinner liquid crystal display has been in the mainstream for the purpose of securing parts installation space in a gaming machine as well (see Japanese Patent Application Laid-Open No. 2002-272903, for example).

### SUMMARY OF THE INVENTION

[0008] Incidentally, it has been requested that such a display device is mounted on a reclosable front door provided at the front of a gaming machine.

[0009] However, a liquid crystal display is so structured that electrodes and liquid crystal film are disposed between thin plates such as glass plates, thus being sensitive to the stress of its torsion or strain, and easy to be broken accordingly when such stress is applied. Since a liquid crystal display is thinner in comparison with the proportion of the display area to the whole area, the stress of torsion or strain applied to it must be especially considered.

[0010] On the other hand, the front door of a gaming machine is so structured in a flat shape that the control panel and the like of the gaming machine are mounted on the frame fixed to the cabinet through a hinge mechanism. Thus, the front door is easy to be twisted or strained by its own weight or externally applied force in its open state.

[0011] In addition, the front door is opened and closed frequently for the purpose of ordinary maintenance such as setting the operation of the gaming machine and taking out the medals stored in the gaming machine. Impact force generated when the front door having a considerable weight

is opened or closed is transferred not only to the cabinet of the gaming machine but also to the door itself. When a liquid crystal display is mounted on this front door, the liquid crystal display may be broken easily.

[0012] It is therefore an object of the present invention to provide a gaming machine which is so structured that a liquid crystal display is mounted on the front door so as not to be broken easily when the door is opened or closed.

[0013] A gaming machine according to the present invention comprises (a) a cabinet, (b) a door openably and reclosably supported by the cabinet, (c) a liquid crystal display unit which is supported by the door and an image associated with a game, (d) a transparent member which is supported by the door, and (e) a buffer provided between the liquid crystal display unit and the door.

[0014] According to the present invention, the buffer is provided between the door and the liquid crystal display unit, thus reducing the energy caused by the impact force generated when the door is opened or closed consequently, in the gaming machine according to the present invention, the liquid crystal display unit is not broken easily.

[0015] In the gaming machine according to the present invention, the door may include a frame supporting the liquid crystal display unit through the buffer. The liquid crystal display unit is supported by the frame at a back thereof. The buffer can keep a distance between the liquid crystal display unit and the transparent member.

[0016] In this configuration, the buffer prevents the liquid crystal display unit from being broken easily. The transparent member is disposed apart from the front of the liquid crystal display unit, thereby protecting the liquid crystal display unit. Further, the manufacturing error of the liquid crystal display unit or frame is absorbed by the buffer, and the gaming machine can be thus assembled.

[0017] In the gaming machine according to the present invention, the buffer may have a first groove in which the liquid crystal display unit is inserted and a second groove distant from the first groove, in which the transparent member is inserted. According to this configuration, the liquid crystal display unit and the transparent member can be protected by the single buffer. Moreover, the buffer has the first groove and second groove distant from each other, and thereby the liquid crystal display unit and the transparent member can be easily mounted to the frame keeping a distance therebetween.

[0018] In the gaming machine according to the present invention, the door may include a frame supporting the liquid crystal display unit through the buffer. The liquid crystal display unit is supported by the frame at a back thereof. The buffer may be in contact with the liquid crystal display unit and the frame. In this configuration too, the buffer is able to reduce the energy caused by the impact force generated when the door is opened or closed. Thus, the liquid crystal display unit is not broken easily.

[0019] In the gaming machine according to the present invention, an end face of the liquid crystal display unit has a hollow extending in a direction perpendicular to the end face, the buffer has a projection of which shape corresponds to a shape of the hollow, and the projection can be inserted in the hollow. According to this configuration, the buffer can