obtained by means of a dome-shaped part, which is fastened to the pivoting control member while being housed inside the shell of the game controller, and which is adapted to come into abutment with a part internal to the shell of the controller with an upper stop function. This upper stop is for example constituted by an inner part of the shell near the opening through which the pivoting control member has passed or by a part internal to the shell of an attached ring fastened at this opening and surrounding the pivoting control member.

With certain video games, and for example with fighting games, it is desirable for the player to be able to be as responsive as possible and to this end to have a more responsive game controller allowing him to bring the pivoting control member in the stop position in a tilted direction as quickly as possible. With other types of video games, the speed with which the pivoting control member is brought into the stop position is less critical and the game controller used may therefore be less responsive.

Purpose of the invention

The main objective of the invention is thus to propose a new technical solution which allows a player to easily and quickly modify the responsiveness of a game controller, in particular to adapt it to different types of video games.

A more particular objective of the invention is to provide a new technical solution which allows a player to easily and quickly increase the responsiveness of a game controller, in particular to make it more suitable for use with fighting video games.

Summary of the invention

The object of the invention is thus a game controller comprising an assembled shell and control means comprising at least one control member, which is passed through the assembled shell, which comprises, on an outside of the assembled shell, a head for manipulating the control member, which is pivotable and can be tilted manually in all directions from a rest position into which the control member returns in a rotationally elastic manner.

Characteristically according to the invention, the control means further comprise at least one adjusting element for adjusting a stop angle of the

control member, which the adjusting element can be removably mounted on the control member and removed from the control member without disassembling the assembled shell of the game controller; the control member provided with said adjusting element can be tilted manually in each tilt direction until the control member reaches a stop position in which the adjusting element abuts and allows a tilting of the control member to be blocked.

More specifically, the game controller according to the invention may comprise the following additional and optional features, taken in isolation, or in combination with each other:

- the head of the control member is removable and said adjusting element is able to be removably mounted on the control member when the head is removed.
- said adjusting element is a ring, which is able to be slipped in a removable manner on a part of the control member when the head is removed.
- the control member comprises an assembly end piece having an open cavity in the upper part; a part of the removable head can be inserted into said cavity, and said adjusting element can be removably mounted, and preferably removably slipped onto the assembly end piece when the head is removed.
- said adjusting element is able to be removably mounted on the control member by being axially blocked between the head of the control member and another part of the control member.
- the value of the stop angle (α), which is the tilt angle, with respect to its rest position, of the control member provided with said adjusting element and tilted in the stop position, is identical for all tilting directions of the control member.
- the value of the stop angle (α), which is the tilt angle, with respect to its rest position, of the control member provided with said adjusting element and tilted in the stop position, is less than 90° and preferably between 20° and 70°.
- the stop angle (α) being the tilt angle, with respect to its rest position,

- part of the pivoting control member is housed and is fastened inside the assembled shell, and the game controller comprises sensors positioned inside the assembled shell and measuring the rotation of the pivoting control member.

The invention also relates to an adjusting element for adjusting a stop angle of a control member of a game controller comprising an assembled shell through which the control member has passed, which the control member comprises a head for manipulating the control member on an outside of the assembled shell, and is able to be tilted manually in all directions, from a rest position into which the control member returns in a rotationally elastic manner, to a stop position. This adjusting element for adjusting the stop angle of the control member is able to be removably mounted on the control member and to be removed from the control member without disassembling the assembled shell from the game controller.

More specifically, the adjusting element may comprise the following additional and optional features, taken in isolation, or in combination with each other:

- the adjusting element for a game controller consists of a removable ring.
- the adjusting element for a game controller is constituted by a removable ring, the outer face of which forms a straight cylinder with a circular cross-section over at least part of the height of the adjusting ring.

Another object of the invention is also an assembly comprising at least two aforementioned adjusting elements for a game controller and preferably at least three aforementioned adjusting elements for a game controller, said adjusting elements being different and allowing a blocking in rotation of the control member in the stop position with different respective stop angle values (α) for each identical tilt direction of the control member.

More specifically, said assembly may comprise the following additional and optional features, taken in isolation, or in combination with each other:

CLAIMS

1. A game controller comprising an assembled shell and control means comprising at least one control member, which is passed through the assembled shell, which comprises, on an outside of the assembled shell, a head for manipulating the control member, which is pivotable and can be tilted manually in all directions from a rest position into which the control member returns in a rotationally elastic manner, characterized in that the control means further comprise at least one adjusting element for adjusting a stop angle of the control member, which the adjusting element can be removably mounted on the control member and removed from the control member without disassembling the assembled shell of the game controller, and in that the control member provided with said adjusting element can be tilted manually in each tilt direction until the control member reaches a stop position in which the adjusting element abuts and allows a tilting of the control member to be blocked.

2. The game controller according to claim 1, wherein the head of the control member is removable and wherein said adjusting element is able to be removably mounted on the control member when the head is removed.

3. The game controller according to claim 2, wherein said adjusting element is a ring, which is able to be slipped in a removable manner on a part of the control member when the head is removed.

4. The game controller according to one of claims 1 to 3, wherein the control member comprises an assembly end piece having an open cavity in an upper part, wherein a part of the head can be inserted into said open cavity, and wherein said adjusting element can be removably mounted onto the assembly end piece when the head is

removed.

5. The game controller according to one of claims 1 to 3, wherein the control member comprises an assembly end piece having an open cavity in an upper part, wherein a part of the head can be inserted into said open cavity, and wherein said adjusting element can be removably slipped onto the assembly end piece when the head is removed.

6. The game controller according to one of claims 2 to 5, wherein said adjusting element is able to be removably mounted on the control member by being axially blocked between the head of the control member and another part of the control member.

7. The game controller according to one of claims 1 to 6, wherein a value of the stop angle, which is a tilt angle, with respect to the rest position, of the control member provided with said adjusting element and tilted in the stop position, is identical for all tilting directions of the control member.

8. The game controller according to one of claims 1 to 6, wherein a value of the stop angle, which is a tilt angle, with respect to the rest position, of the control member provided with said adjusting element and tilted in the stop position, is less than 90°.

9. The game controller according to claim 1 to 6, wherein a value of the stop angle, which is a tilt angle, with respect to the rest position, of the control member provided with said adjusting element and tilted in the stop position is between 20° and 70°.

10. The game controller according to one of claims 1 to 6, wherein the

stop angle being a tilt angle, with respect to the rest position, of the control member provided with said adjusting element and tilted in the stop position, said controller comprises at least two different adjusting elements,, which allow said blocking of the tilt of the control member in the stop position with different respective stop angle values for each identical tilt direction.

11. The game controller according to one of claim 1 to 6, wherein the stop angle being a tilt angle, with respect to the rest position, of the control member provided with said adjusting element and tilted in the stop position, said controller comprises at least three different adjusting elements, which allow said blocking of the tilt of the control member in the stop position with different respective stop angle values for each identical tilt direction.

12. The game controller according to one of claims 1 to 11, comprising an inner edge, which surrounds the control member and which delimits an opening in the assembled shell through which the control member is positioned, and wherein said inner edge acts as a bottom rotational stop when the control member provided with said adjusting element is tilted in the stop position.

13. The game controller according to one of claims 1 to 11, comprising an inner edge, which surrounds the control member and which delimits an opening in the assembled shell through which the control member is positioned, and wherein the adjusting element, when mounted on the control member, is positioned through said opening, one part of the adjusting element being housed inside the assembled shell and another part of the adjusting element being positioned outside the assembled shell.

14. The game controller according to claim 10 or 11, wherein each

adjusting element is a cylindrical adjusting ring.

15. The game controller according to claim 14, wherein an outer face of each cylindrical adjusting ring forms a straight cylinder with a circular cross-section over at least part of a height of the cylindrical adjusting ring.

16. The game controller according to one of claims 1 to 6, comprising at least two different adjusting elements, constituted respectively by cylindrical adjusting rings, an outer face of which forms a straight cylinder with a circular cross-section over at least part of a height of the cylindrical adjusting ring, and outer diameters of said cylindrical parts with the circular cross-section of the outer faces of the cylindrical adjusting rings are different.

17. The game controller according to one of claims 1 to 6, comprising at least three different adjusting elements, constituted respectively by cylindrical adjusting rings, an outer face of which forms a straight cylinder with a circular cross-section over at least part of a height of the cylindrical adjusting ring, and outer diameters of said cylindrical parts with the circular cross-section of the outer faces of the cylindrical adjusting rings are different.

18. The game controller according to claim 16 or 17, wherein the adjusting rings have a same internal cross-section.

19. The game controller according to claim 16 or 17, wherein the adjusting rings have a same internal cross-section, a same internal diameter and the same height.

20. The game controller according to one of claims 1 to 19, wherein part of the control member is housed and is fastened inside the assembled

shell, and the game controller comprises sensors positioned inside the assembled shell and measuring a rotation of the control member.

21. An adjusting element for adjusting a stop angle of a control member of a game controller, said game controller comprising an assembled shell through which the control member has passed, which the control member comprises a head for manipulating the control member on an outside of the assembled shell, and is able to be tilted manually in all directions, from a rest position into which the control member returns in a rotationally elastic manner, to a stop position, which the adjusting element for adjusting the stop angle of the control member can be mounted removably on the control member and can be removed from the control member without disassembling the assembled shell from the game controller.

22. The adjusting element for the game controller according to claim 21, further comprising a removable ring.

23. The adjusting element for the game controller according to claim 22, wherein an outer face of the removeable ring forms a straight cylinder with a circular cross-section over at least part of a height of the removable ring.

24. An assembly comprising at least two adjusting elements for the game controller according to claim 21, said adjusting elements being different and allowing a blocking in rotation of the control member in the stop position with different respective stop angle values for each identical tilt direction of the control member.

25. An assembly comprising at least three adjusting elements for the game controller according to claim 21, said adjusting elements being different and allowing a blocking in rotation of the control member in the stop

position with different respective stop angle values for each identical tilt direction of the control member.

26. The assembly according to claim 25, wherein the adjusting elements are constituted respectively by cylindrical adjusting rings, an outer face of which forms a straight cylinder with a circular cross-section over at least part of a height of the cylindrical adjusting ring, and wherein outer diameters of said cylindrical parts with the circular cross-section of the outer faces of the cylindrical adjusting rings are different.

27. The assembly according to claim 26, wherein the cylindrical adjusting rings have a same internal cross-section.

28. The assembly according to claim 26, wherein the cylindrical adjusting rings have a same internal cross-section, a same internal diameter, and the same height.

29. An adjusting method for adjusting the stop angle of the control member of the game controller of one of claims 1 to 20, said method comprising mounting the adjusting element on the control member, without disassembling the assembled shell of the game controller so that the control member provided with the adjusting element is able to be manually tilted in the each tilt direction until the control member reaches the stop position in which the adjusting element abuts and makes the adjusting element possible to block the tilting of the control member.

30. The method according to claim 29, wherein in order to assemble the adjusting element, the head of the control member is removed beforehand, and once the adjusting element is mounted, the head of the control member is replaced.