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(54) TELEVISION RECEIVER WITH A TV (VIDEO) GAME ATTACHMENT

(71) We, INTERNATIONAL STANDARD ELECTRIC CORPORATION, a Corporation organised and existing under the laws of the State of Delaware, United States of America of 320 Park Avenue, New York 22, State of New York, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement;—

This invention relates to a television receiver with a TV (video) game attachment.

Radio and television receivers have already become known, which are provided with a unit comprising various controls for a number of operating functions to be performed on the receiver, this unit being removable from the receiver from the outside so that the receiver can be remotely controlled. See, for instance, the United Kingdom patent specification 785,636.

Control units are also known, each of which is assembled to form an independent subassembly group which can be inserted into a compartment provided for that purpose in the receiver so as to be connected thereto by means of a connector and which, when removed from the receiver, is capable of being connected thereto by means of a cable provided with an adapted connector. See the German printed patent application (DT—AS) 1,277,960 or the published German petty patents (DT—GM) 1,687,333, 1,981,342, 1,981,343.

In addition thereto, it is known in respect of a command-signal transmitter housing for a remote control device by which remotely to control the operation of a radio, or television receiver, to design the control unit with touch-sensitive contact areas or electrodes which, when the housing is in its place in the receiver, are accessible and touchable from the surface of the receiver cabinet and, if necessary, to supply power to the command-signal transmitters from a local battery. See

the United Kingdom patent specifications 1,413,424 and 1,422,474.

It is also known to connect an attachment to the antenna lead of a television receiver so that the receiver can be used for displaying, instead of a television programme as received from a transmitter, game or player symbols, or both, which symbols can be moved by appropriately actuating the controls. See the German published patent applications (DT—OS) 1,917,437, 1,951,848, 2,017,312 and 2,030,959 or the corresponding U.S. patent specifications 3,728,480, 3,659,284, 3,778,058 and 3,659,285.

Finally, it is known, from column 28 of the aforementioned German published patent application (DT—OS) 2,030,959, to modify the arrangement of the unit in such a way that the attachment producing the symbols is either built directly into the television receiver or inserted directly into the circuitry of the television receiver itself, so that it no longer needs to be connected to the antenna terminals. Moreover, as disclosed in the column aforementioned, it is also known to build the circuits which produce the desired game possibilities into one single chassis, in which case the individual parts of the total circuit arrangement are replaced by switches built into the chassis, or else by external circuit sections for various programmes, such as printed circuit cards comprising the corresponding circuit interconnections for the individual games, or else by perforated (punched) cards which are used in conjunction with the external circuitry.

According to the present invention there is provided a television receiver with a home video-game attachment, wherein the game attachment with its associated housing is a plug-in unit having one or more sets of fixed contacts and is capable of being plugged into the television receiver cabinet wherein are mounted mating sets of fixed contact members whereby the attachment is operatively connected to the receiver.

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An embodiment of the invention is described below with reference to the accompanying drawings, in which:

5 Figure 1, in a perspective representation, shows a game attachment according to the invention; and

10 Figure 2, in a schematical side view representation, shows the game attachment of figure 1 inserted into a television receiver cabinet, which is shown partly and sectionally.

15 In figure 1, a home video-game attachment 1 with its housing 2 is of a substantially desk-shaped design and is provided on its front side, i.e. on the top side of the desk-shaped portion 3, with two rows of control keys 4 for controlling the parameters (tempo, the players angle, start, et cetera) of games such as tennis, soccer, squash and pelota. These statements are only made by way of example and depend on the respective home video-game to be played.

20 Two additional control unit housings 5, 6 are each connected to the game attachment 1 by means of a cable 7, 8 respectively. These additional control unit housings 5, 6 are each provided with control keys 9, 10 and a rotatable control knob 11. On these control units, the control keys 9, 10 may be provided to "start" and "reset" the game, and the rotatable control knob 11 may be provided to shift the symbols imaged on the video display screen of the television receiver. For enabling a better distinction, the members 9 to 11 may also be of coloured design.

35 On the rear side 12 of the housing 2 of the game attachment 1 there are provided two extensions 13 and 14 having contacts 15. These contacts 15 supply power to the attachment and permit the transmission of control pulses from the attachment to the television receiver. A recess 16 in the rear side 12 prevents opposing contacts provided on the television receiver, from touching the rear side 12. These contacts are provided where a recess in the television receiver cabinet is not only used for receiving the game attachment 1 but is also used to receive another control unit especially a remote-control unit.

50 Figure 2 shows how the game attachment 1 with its associated housing 2 is inserted in a receptacle 19 provided in the front panel 17 of a television receiver or television receiver cabinet 18.

55 The receptacle 19 may be designed in such a way as to form a dual purpose receptacle, so that optionally either a remote control unit for the television receiver or the game attachment is capable of being plugged into the receptacle (compartment) 19.

60 In the case illustrated, the housing 2 of the game attachment 1 is inserted horizontally (parallel to the receiver's base), as this corresponds to the operating position. Of course, this attachment may also be inserted in

another direction, such as vertically (perpendicular to the receiver's base) if this is the position in which the attachment is to be operated. The rear side 12 housing 2 meets, at the back of the receptacle 19, a vertical wall 70 20 forming a limit stop for the housing 2, while the desk-shaped portion 3 projects at the front out of the receptacle 19, thus permitting free access to the control keys 4 arranged on the top side of the housing 2. The opening 21 of the receptacle 19 is closed by a decorative part or a hinged flap 22 whenever the housing 2 is taken out of the receptacle 19. Upon insertion or plugging-in of the housing 2 into the receptacle 19, however, the hinged flap 22 is tilted upwardly thus permitting the housing 2 to be freely inserted into the receptacle 19, thus simultaneously serving the additional holding in position, and as an additional cover. 75

80 Upon the insertion of the housing 2 into the receptacle 19, the extensions 13, 14 carrying the contacts 15, are simultaneously pushed into a narrower portion 23 behind the actual receptacle 19, the fixed contacts 15 of the game attachment 1 thus being brought into contact with the fixed opposite contact members 24 as provided for in the television receiver. Male contacts 15 are here shown plugged into female contacts 24, but other arrangements, in which the contacts 15 are female and the contacts 24 are male, or both are hermaphroditic, are equally acceptable. 85

90 The contact members 24 are automatically covered in a shock-proof manner when the housing 2 is taken out, on one hand by the hinged flap 22 and, on the other hand, directly by means of one or more sliders 25 which are acted upon by a spring. The extensions 13, 14 of the housing 2 are provided with specially shaped members 26. As shown in figure 1, these portions 26 are ramps. When inserting the housing 2 of the game attachment 1, these ramps actuate the one or more sliders 25 so that the contact members 24 are exposed. 100

105 The invention, in particular, offers the advantage that a television receiver can be quickly switched over from its function of serving as a normal television receiver to an electronic home video-game unit. The game unit can be operated immediately from the front side of the television receiver without, for instance, the TV antenna cable terminals having to be switched on the rear wall of the television receiver. 110

115 WHAT WE CLAIM IS:—

- 120 1. A television receiver with a home video-game attachment, wherein the game attachment with its associated housing is a plug-in unit having one or more sets of fixed contacts and is capable of being plugged into the television receiver cabinet wherein are mounted mating sets of fixed contact members 130

whereby the attachment is operatively connected to the receiver.

2. A receiver according to claim 1, wherein the contacts on the plug-in game attachment both supply power to the game attachment and permit the transmission of the control pulses from the attachment to the television receiver.

3. A receiver according to claim 1 or 2, wherein the attachment is inserted into a receptacle provided in the front of the television receiver cabinet.

4. A receiver according to claim 3, wherein the receptacle is a dual purpose receptacle and is adapted to receive either the game attachment or a remote control unit for controlling the television receiver.

5. A receiver according to any one of the preceding claims, wherein control keys are provided for on the game attachment.

6. A receiver according to claim 5, wherein the game attachment is capable of being inserted horizontally (parallel to the base of the receiver) into the television receiver or the television receiver cabinet, and wherein the control keys are accessible when the game attachment is in its plugged-in position.

7. A receiver according to claim 5 or 6, wherein the control keys are arranged on the top side of the game attachment.

8. A receiver according to any one of the preceding claims, wherein some of the controls for operating the game attachment are arranged in at least one additional control unit housing which is connected or capable of being connected to the game attachment by means of at least one cable.

9. A receiver according to claim 3 or claim 4, or claims 5, 6, 7 or 8 as appendant to claim 3 wherein the entrance of the receptacle is capable of being closed.

10. A receiver according to claim 9, wherein the entrance of the receptacle is closed by a movable decorative member, or by a hinged flap.

11. A receiver according to any one of the preceding claims, wherein the mating sets of contact members inside the television receiver are capable of being covered in a shock-proof manner.

12. A receiver according to claim 11, wherein the mating sets of contact members inside the television receiver are automatically covered in a shock-proof manner by means of at least one spring-loaded slider when the game attachment is taken out of the receptacle.

13. A receiver according to claims 11 or 12, wherein at least one specially shaped member is provided on the game attachment which specially shaped member or members, upon insertion of the game attachment, so acts or act upon the one or more sliders as to expose the mating sets contact members.

14. A receiver according to claim 13, wherein the specially shaped member or members, forms a ramp, or form ramps.

15. A television receiver with a home video-game attachment substantially as described with reference to the accompanying drawings.

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