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(12) **EUROPEAN PATENT APPLICATION**

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(54) **Game machine with a getting-close detector**

(57)   A game machine with a getting-close person detector, the game machine has on its front side an infrared emitter and infrared receivers to detect whether a customer passes by or stays near in front of the game machine. When the detector detects that a customer at a suitable distance away passes by the game machine, it informs a CPU to activate the game machine to display pictures, sound effects and lights around the game machine for canvassing the customer. When the customer stops to see, the game machine is controlled by the CPU to present the content of its game to call the customer to enter the game. When the customer leaves, the CPU activates the game machine to display pictures, sound effects and lights to show messages.
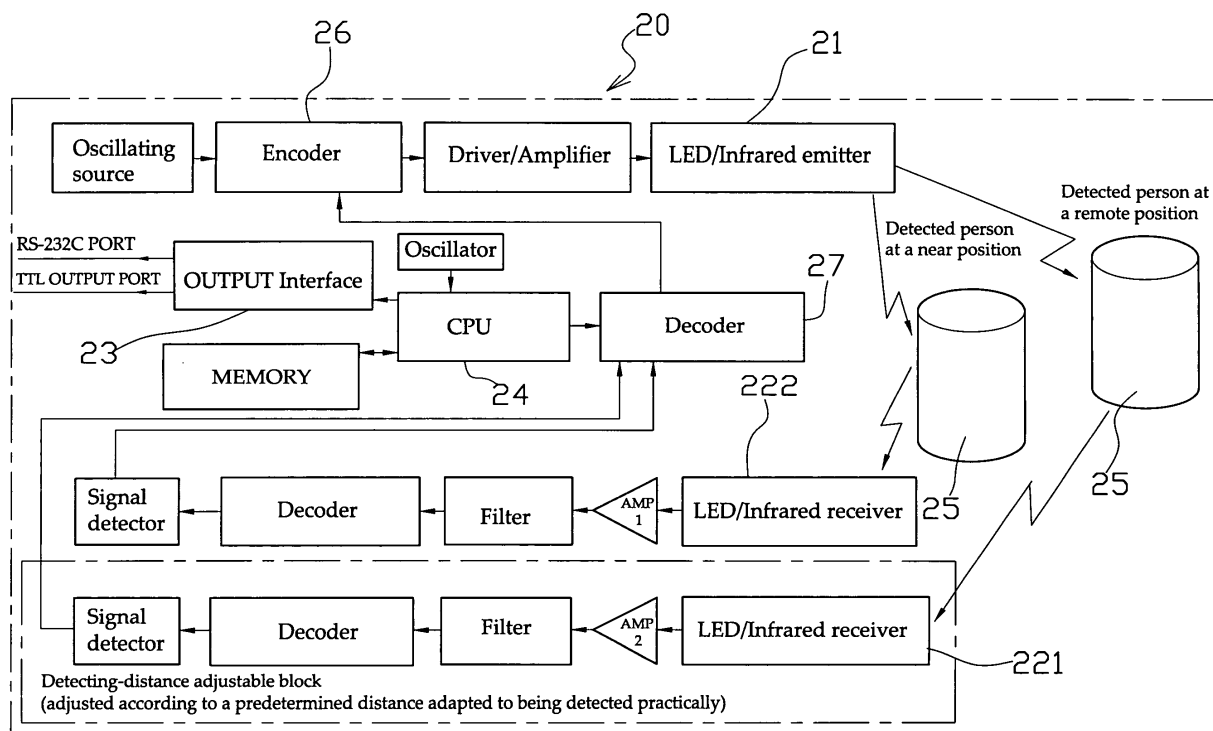
FIG. 2

EP 1 840 851 A1

Description

BACKROUND OF THE INVENTION

1. Field of the Invention

[0001]   The present invention is related to a game machine with a getting-close person detector, and especially to a game machine with a getting-close person detector for detecting a getting-close person and showing information of welcoming a customer on a screen of the game machine.

2. Description of the Prior Art

[0002]   Generally in a place of amusement, several decades or even hundreds of game machines are put together for increasing business income; businessmen all try very hard to attract customers to come. The method of attracting generally includes improvement of appearance, designs on subjects of games and acoustic and visual effects for rendering outstanding of the game machines by various means to obtain the effect of gathering customers.

[0003]   Conventionally, when in a ready state of a normal game machine, the game machine repeatedly plays some pictures and sound effects. In the case that a great number of game machines are put together, various sound effects of the game machines are mixed together, not only the expected effects can not be obtained, but also those customers in playing games are greatly affected. All these defects are supposed to be gotten rid of.

SUMMARY OF THE INVENTION

[0004]   Against the above defects, the inventor of the present invention designed a game machine with a getting-close person detector, the getting-close person detector is mounted on the front side of the game machine; when the getting-close person detector detects that a customer comes in front of the game machine, it immediately informs a CPU to activate the game machine to display pictures on a screen, and sound effects and lights around the game machine. When the customer stops to see, the game machine can further present the content of its game to the customer, and even gives a challenge for the customer. When the getting-close person detector detects that the customer leaves the game machine after playing a period of time, it can inform the CPU to provide pictures, sound effects such as "thank you", "please don't forget your personal articles" etc. In this way, the object of attracting customers can be attained.

[0005]   The getting-close person detector of the present invention mainly contains an infrared emitter and two or more infrared receivers as well as a connecting port for connecting a computer main board in a game machine. The two infrared receivers can detect the distance of a customer from the game machine when the customer comes close the front side of the game machine to thereby distinguish whether the customer passes by or stays near in front of the game machine.

[0006]   In order to prevent interferences among those game machines allocated face to face, getting-close person detectors are provided therein each with a CPU; and infrared signals from the infrared emitters are encoded, they are decoded to distinguish whether a signal is emitted from the same getting-close person detector.

[0007]   The present invention will be apparent in its characteristics and operational functions after reading the detailed description of the preferred embodiment thereof in reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008]

    Fig. 1 is a perspective view showing a plurality of the getting-close person detectors of the present invention are used;
    Fig. 2 is a schematic view showing a circuit of a getting-close person detector in detecting a getting-close person;
    Fig. 3 is a flow chart showing the process for canvassing a customer for playing a game;
    Fig. 4 is a schematic view showing the present invention in used.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0009]   Referring to Fig. 1, each of a plurality of the game machines 10 shown is provided on its front side with a getting-close person detector 20. The main machine of the game machine 10 has a game display screen 11, a broadcasting device, a control station 12 and a computer main board installed in the game machine for providing a game for a customer.

[0010]   Referring to Fig. 2, the getting-close person detector 20 has an infrared emitter 21 and two or more infrared receivers 221, 222 as well as a connecting port 23 for connecting a computer main board in the game machine 10. The getting-close person detector 20 is mounted on the front side of the game machine 10; when it detects that a customer 25 comes in front of the game machine 10, it outputs a signal to a CPU 24 to activate the game machine 10 to render the latter to enter a program of canvassing a customer for playing a game (referring to Fig. 3) and to activate the game display screen 11 and the broadcasting device to display pictures and give sound effects.

[0011]   The first infrared receiver 221 in the getting-close person detector 20 is used mainly to detect a person 25 at a remote position, while the second infrared receiver 222 is used to detect a person 25 at a near position. The first infrared receiver 221 is of a detecting-distance adjustable block, the detecting-distance can be

adjusted according to a predetermined distance adapted to being detected practically.

[0012] The infrared signal emitted from the infrared emitter 21 is encoded by an encoder 26. After the two infrared receivers 221, 222 receive the encoded infrared signal emitted from the infrared emitter 21, the signal enters a decoder 27 through an amplifier, a signal decoder and signal detector, then is output to the CPU 24. This procedure of encoding and decoding mainly is for preventing interferences among those game machines allocated face to face.

[0013] The steps of execution of the program of canvassing the customer for playing a game in the getting-close person detector 20 is as follows:

a. to provide a normal exemplary picture;
b. detecting a getting-close person, if no person, the screen restores the normal exemplary picture; if there is a person, the next step is activated;
c. to give a picture and a voice of salutation;
d. to judge whether the person stays, if not, the screen restores the normal exemplary picture; if he does, the next step is activated;
e. playing the propaganda picture;
f. to judge whether the person gets close, if not, the screen restores the normal exemplary picture; if he does, the next step is activated;
g. to introduce the content of and the way of playing the game;
h. to judge whether the person enters the game, if not, the step "f" restores to judge whether the person gets close; if he does, the next step is activated;
i. showing the content of the game;
j. to judge whether the game comes to the end, if not, the step goes on; if it does, the next step is activated;
k. playing pictures and voices for thanking;
l. backing to the normal exemplary picture.

[0014] Taking the actions of Figs. 4-1 to 4-6 for explanation, in the situation of Fig. 4-1, the customer is still far from the game machine 10 and is out of the extent of detecting of the first infrared receiver 221, thereby, the screen of the game machine 10 shows the normal exemplary picture. Referring to Fig. 2, when the customer comes close to the game machine 10 and enters the extent of detecting of the first infrared receiver 221, a signal is output to the CPU 24 to give a salutation picture and voice, such as is shown in Fig. 4-3. The customer will be attracted by the suddenly given salutation picture and voice, such as is shown in Fig. 4-4. If the customer stops to stay by the attraction, the propaganda picture is played on the screen. If the customer is interested to get close to the game machine 10 to enter the extent of detecting of the second infrared receiver 222, the content of and the way of playing the game are introduced on the screen, such as is shown in Fig. 4-5. When the customer makes a decision to enter the game, he starts to enter

the content of the game, such as is shown in Fig. 4-6. At the ending of the game, the game machine 10 plays pictures and voices for thanking such as "thank you for coming", "welcome back" and reminding words such as "please don't forget your personal articles" etc.

[0015] It is clear that the game machine having the getting-close person detector provided by the present invention can obtain the object of attracting customers to play games; it can increase the rate of using of the game machine.

[0016] The embodiment given is only for illustrating the present invention, and not for giving any limitation to the scope of the present invention; it will be apparent to those skilled in this art that various modifications or changes such as using some other detecting devices in lieu of the infrared emitter and the infrared receivers without departing from the spirit of this invention shall also fall within the scope of the appended claims.

Claims

1. A game machine with a getting-close person detector comprising:

a main machine at least having a game display screen, a broadcasting device, a control station and a computer main board installed in said game machine for providing games for a customer; and
said getting-close person detector connecting with said computer main board and mounted on a front side of said game machine to detect whether said person gets close, when said person gets close, said getting-close person detector outputs a signal to a CPU to activate said game machine to enter a program of canvassing a customer for playing a game and to activate said game display screen and said broadcasting device to display pictures and give sound effects for attracting said person.

2. The game machine with a getting-close person detector as defined in claim 1, wherein said getting-close person detector is adapted to detecting persons both at remote positions and at near positions, and outputs signals of distances to said CPU.

3. The game machine with a getting-close person detector as defined in claim 1, wherein said getting-close person detector contains an infrared emitter and at least two infrared receivers, the first one of said infrared receivers is used to detect a person at a remote position, while the second one of said infrared receivers is used to detect a person at a near position.

4. The game machine with a getting-close person de-

tector as defined in claim 3, wherein said first infrared receiver is of a detecting-distance adjustable block, said detecting-distance is adapted for adjusting according to a predetermined distance adapted to being detected practically.

5. The game machine with a getting-close person detector as defined in claim 3, wherein a signal from said infrared emitter is encoded with an encoder, said at least two infrared receivers receive said encoded signal emitted from said infrared emitter, it is decoded to be output to said CPU.

6. The game machine with a getting-close person detector as defined in claim 2, wherein steps of execution of a program of canvassing a customer for playing a game in said getting-close person detector includes:

   a. to provide a normal exemplary picture on a screen;
   b. detecting a getting-close person, if no person, said screen restores said normal exemplary picture; if there is a person, the next step is activated;
   c. to give a picture and a voice of salutation;
   d. to judge whether said person stays, if not, said screen restores said normal exemplary picture; if he does, the next step is activated;
   e. playing said propaganda picture;
   f. to judge whether said person gets close, if not, said screen restores said normal exemplary picture; if he does, the next step is activated;
   g. to introduce the content of and the way of playing said game;
   h. to judge whether said person enters said game, if not, said step "f" restores to judge whether said person gets close; if he does, the next step is activated;
   i. showing said content of said game;
   j. to judge whether said game comes to an end, if not, said step "j" goes on; if said game does, the next step is activated;
   k. playing pictures and voices for thanking;
   l. backing to said normal exemplary picture

7. The game machine with a getting-close person detector as defined in claim 6, wherein said playing pictures and voices for thanking include content of reminding words.

FIG.1
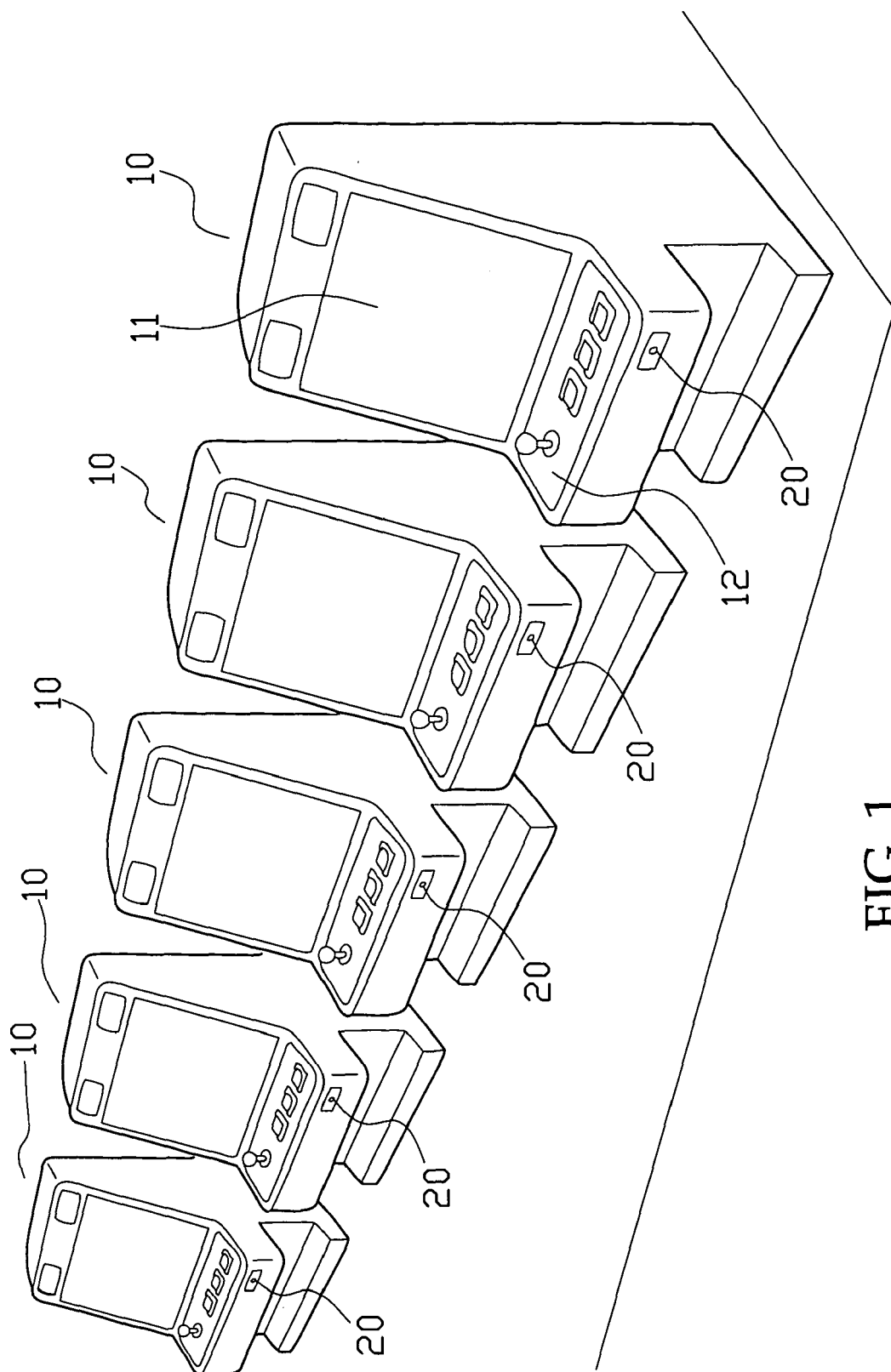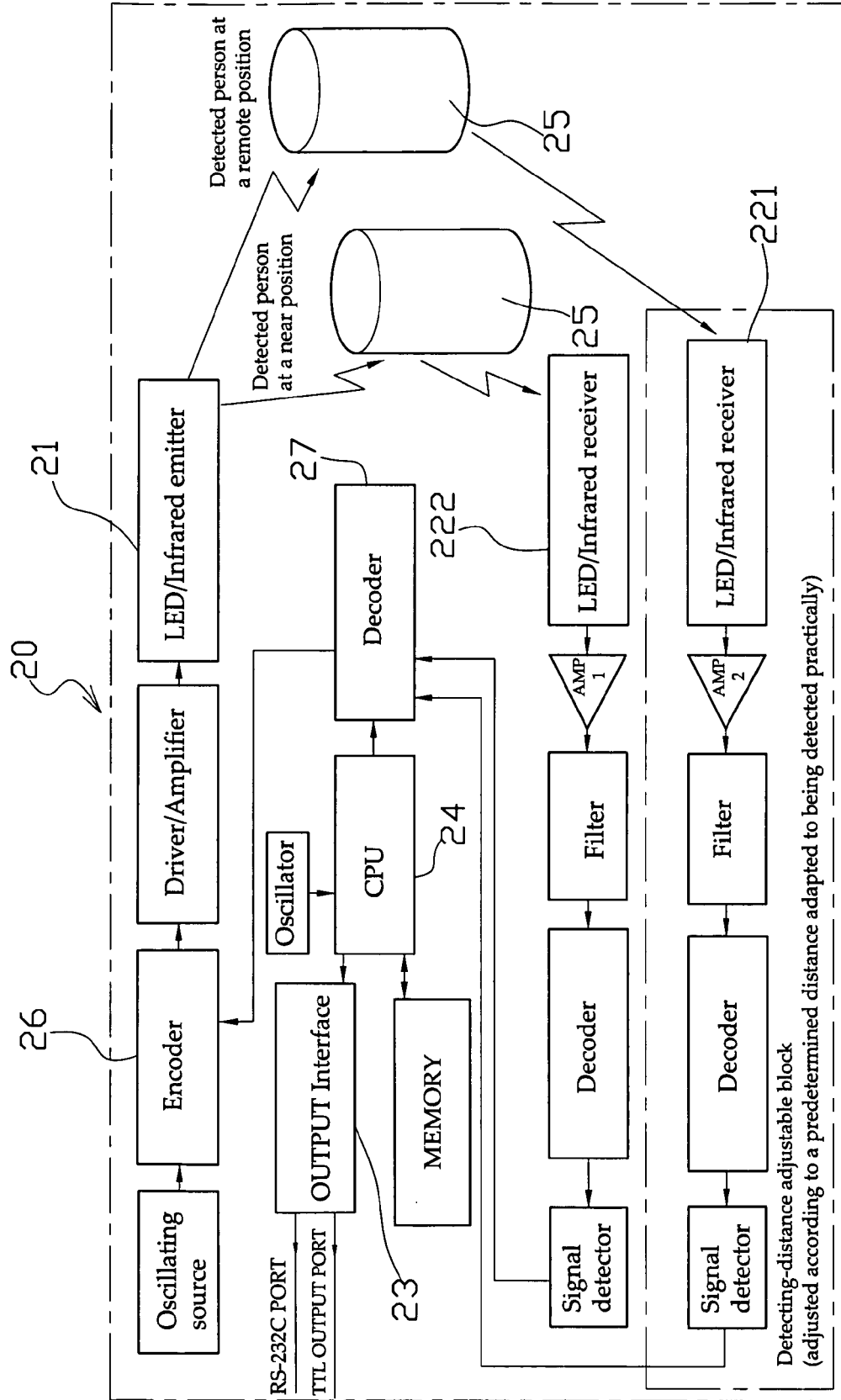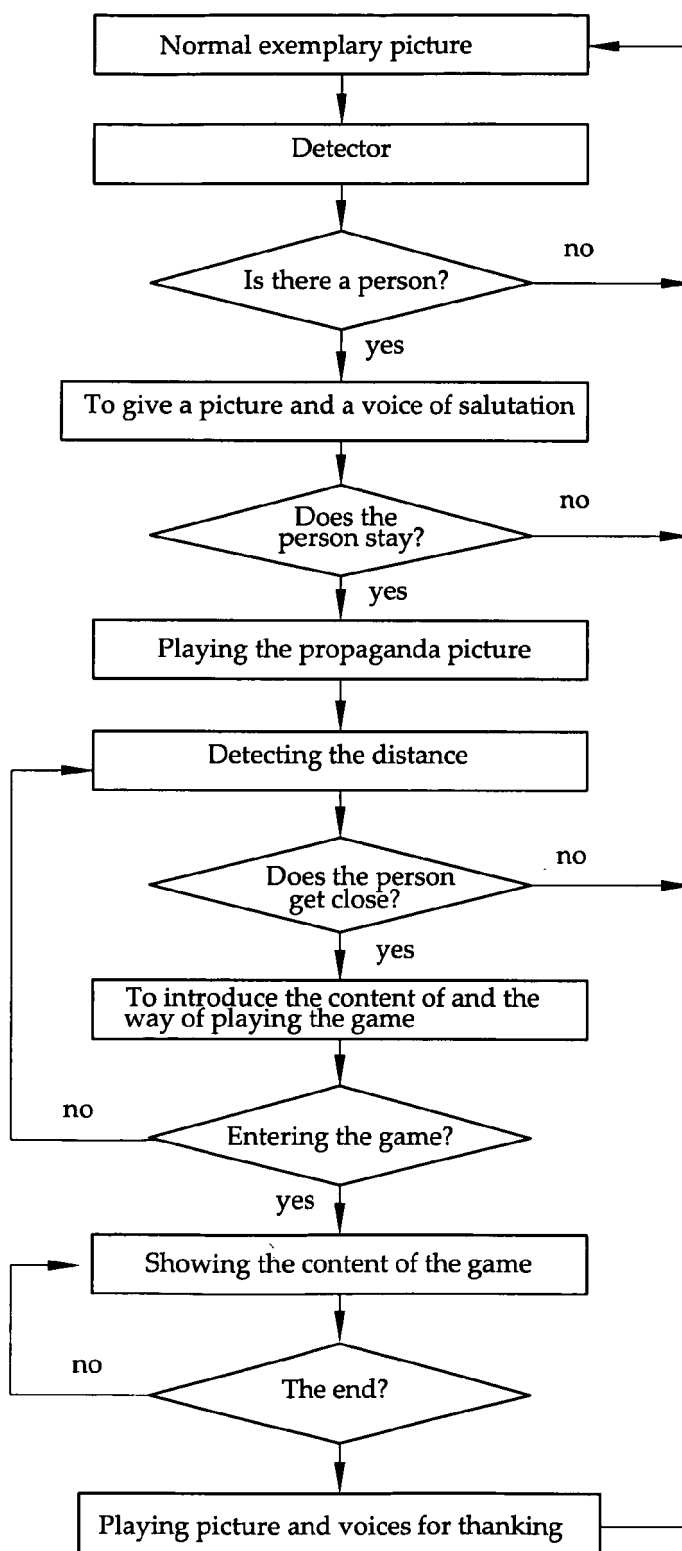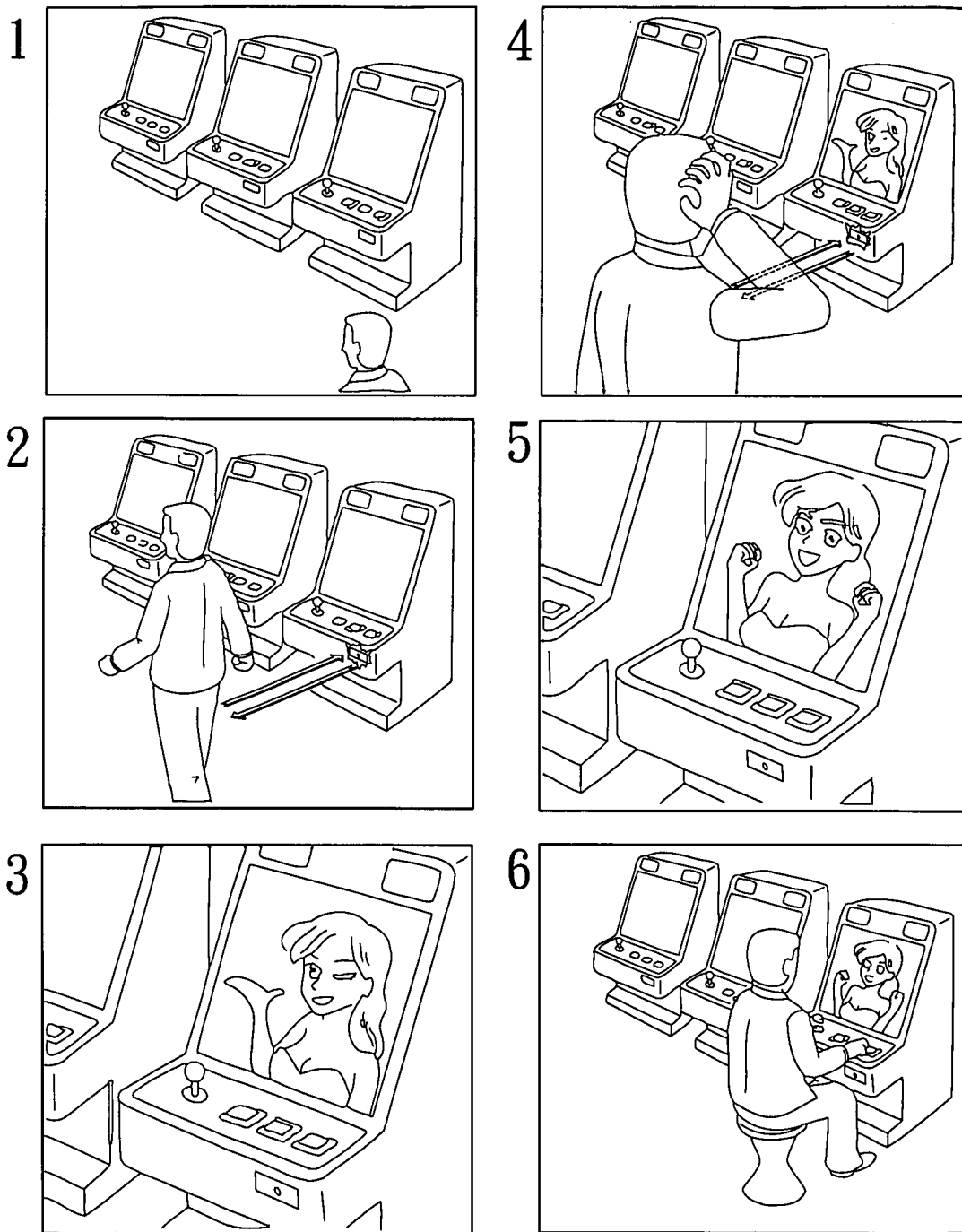
FIG. 2

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┌─────────────────────────────────────┐
│       Normal exemplary picture       │◄──────────┐
└─────────────────────────────────────┘           │
                    │                              │
                    ▼                              │
┌─────────────────────────────────────┐           │
│               Detector               │           │
└─────────────────────────────────────┘           │
                    │                              │
                    ▼                        no    │
            ◇ Is there a person? ◇──────────────►  │
                    │ yes                          │
                    ▼                              │
┌─────────────────────────────────────┐           │
│  To give a picture and a voice of    │           │
│            salutation                │           │
└─────────────────────────────────────┘           │
                    │                              │
                    ▼                        no    │
            ◇ Does the person stay? ◇────────────► │
                    │ yes                          │
                    ▼                              │
┌─────────────────────────────────────┐           │
│      Playing the propaganda picture  │           │
└─────────────────────────────────────┘           │
                    │                              │
                    ▼                              │
┌─────────────────────────────────────┐           │
│         Detecting the distance       │◄──┐       │
└─────────────────────────────────────┘   │       │
                    │                      │       │
                    ▼                 no   │       │
            ◇ Does the person get close? ◇─────────►
                    │ yes                  │       │
                    ▼                      │       │
┌─────────────────────────────────────┐   │       │
│  To introduce the content of and the │   │       │
│        way of playing the game       │   │       │
└─────────────────────────────────────┘   │       │
    no              │                      │       │
◄───────── ◇ Entering the game? ◇──────────┘       │
                    │ yes                           │
                    ▼                               │
┌─────────────────────────────────────┐            │
│     Showing the content of the game  │◄──┐        │
└─────────────────────────────────────┘   │        │
                    │                      │        │
                    ▼                 no   │        │
            ◇ The end? ◇───────────────────┘        │
                    │                               │
                    ▼                               │
┌─────────────────────────────────────┐            │
│ Playing picture and voices for       │────────────┘
│            thanking                  │
└─────────────────────────────────────┘
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FIG. 3

FIG. 4

European Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 06 00 6879

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	15 November 2006	Lavin Liermo, Jesus

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82