

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets

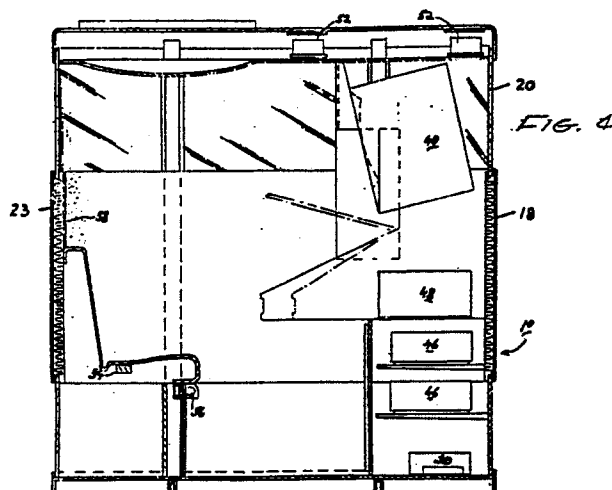
(11) Publication number:

**0 277 403
A1**

(12)

EUROPEAN PATENT APPLICATION(21) Application number: **87300959.1**(51) Int. Cl.⁴: **E04B 1/82**, **E04H 1/12**(22) Date of filing: **03.02.87**(43) Date of publication of application:
10.08.88 Bulletin 88/32(84) Designated Contracting States:
AT BE CH DE ES FR GB GR IT LI LU NL SE(71) Applicant: **Serap, Earl**
107 avenue Général-Guisan
CH-1009 Pully(CH)Applicant: **Serap, Deborah**
107 avenue Général-Guisan
CH-1009 Pully(CH)(72) Inventor: **Serap, Earl**
107 avenue Général-Guisan
CH-1009 Pully(CH)
Inventor: **Serap, Deborah**
107 avenue Général-Guisan
CH-1009 Pully(CH)(74) Representative: **Arthur, George Fitzgerald et al**
KILBURN & STRODE 30, John Street
London WC1N 2DD(GB)(54) **Entertainment module device.**

(57) An audio-visual entertainment device includes an enclosed module (10) which contains a video screen (40), audio speakers (42) and seating (28) for one or two viewers. Sensors (54) respond to the presence of a viewer to change from an "attract mode" audio visual display to one that invites selection of an entertainment program from an inventory of programs. Upon payment of a "fee", the apparatus selects and displays the desired program. The program inventory is maintained on video discs which can be periodically replaced.

**EP 0 277 403 A1**

ENTERTAINMENT MODULE DEVICE

The present invention relates to entertainment devices.

Over the years, entertainment devices have been provided for the individual which were energised by the tender of a predetermined payment. These devices have been as varied as the imagination could conceive. Coin operated pianos, music boxes, "bands" and "juke-boxes" have all, through the years, provided entertainment for a price. All have presented popular songs and melodies for the edification of those who chose to pay the price.

According to the present invention, a personal viewing module or booth has been created which can offer a viewer a choice of audio visual music selections, with the selections being changed from time to time. The booth provides a certain amount of isolation from the ambient environment so that the viewing and listening will not be disturbed by outside light and sound, and, on the other hand, the musical presentation within the booth will not unduly impinge on the surrounding environment.

A preferred feature of the invention is the formation of at least a portion of the walls of the module from a transparent material such as polycarbonate, or another plastics material, or glass.

Before entry, the customer can see something of the interior of the module and can be attracted to enter. Once he is inside, the lighting may be lowered or otherwise varied, and then it is not easy for others to see in. However, there can be a sense of privacy inside, with light reflected from the inner surface of the plastics materials, and with a sense of spaciousness due to the walls not being opaque.

Because the present invention is intended to operate in response to the payment of money, the apparatus can either utilise a coin mechanism or can be made to respond to tokens which are sold in the vicinity of the viewing booth. Normally, the invention will operate in an "attract" mode in which a prescribed program intended to be viewed by passers-by will appear on the visual display. An audio program may also be included as a part of the "invitation". When a viewer decides to avail himself (or herself) of the entertainment program, the booth is entered and a sliding door is closed.

When the viewer is seated within the booth, sensors in the seats and the door signal the presence of the viewer and a second operating mode is entered which instructs the viewer in the proper use of the viewing booth. A set of instructions may audio-visually advise the viewer of the steps required in the operation of the viewing booth. A list of available programs may be posted on the exterior of the booth and will also be found on the inside. The program list may also be displayed on

the viewing screen.

A selection mechanism enables the viewer to choose a program to be viewed. When actuated, a video player is energised and the selected program is found and displayed on a suitable monitor. High quality acoustical speakers whose volume can be controlled will present the audio portion of the program. The chosen entertainment segment is then displayed for the viewer. At the conclusion of the presentation, the machine returns to the second operating mode during which the viewer can select and pay for a second presentation, or the viewer can exit the booth, in which case the presence sensors activate the "attract" mode of operation.

In alternative embodiments, a sliding door can be replaced with a curtain or drape which can also provide a limited amount of light and sound isolation. Further, although the preferred embodiment employs one or more video disc players, alternative embodiments could use video cassette recorders. It is also possible, in alternative embodiments, to utilise speakers that are mounted in the seating portion and are positioned adjacent the ears of the viewer to enhance the stereophonic effects of the recorded sound.

The invention may be carried into practice in various ways, and one embodiment will be described by way of example, with reference to the accompanying drawings, in which:-

Figure 1 is a perspective view of an audio video display device according to the present invention;

Figure 2 is an exterior side view of the audio video display device of Figure 1;

Figure 3 is a sectional view of the audio video display device of Figure 2, taken along the line 3-3 in the direction of the appended arrows;

Figure 4 is a side sectional view of the audio video display device of Figure 3, taken along the line 4-4 in the direction of the appended arrows;

Figure 5 is a sectional view of the audio video display device of Figure 3, taken along the line 5-5 in the direction of the appended arrows; and

Figure 6 is a functional block diagram of the operating components of the audio video display device according to the present invention.

An audio video display booth 10 has parallel flat sides 11, and curved ends 13. Decorative peripheral upper and lower rim panels 12 and 14 have illuminating elements 15. There is a sliding door 16 which, when opened, is slid into a pocket 17 formed in one of the sides 11. The upper and lower parts 20 and 22 of the sides 11 and ends 13 are of transparent sheet polycarbonate, and be-

tween them is a central panel 18.

On the wall panel 18 adjacent the door panel 16 is placed a graphic display 24 which can include an attractive presentation of the subjects that are available for viewing. The transparent upper wall portion 20 and lower wall portion 22 provide some sound isolation from the surrounding environment while permitting some exterior illumination. More importantly, the transparent panels afford some measure of spaciousness to the occupants of the booth 10. A prospective customer can see something of the inside of the booth, but after entering he may see little of the outside because of reflection from the interior surfaces of the transparent portion. This is thus a compromise between a sense of privacy and a sense of space.

A door sensor 26 is provided to signal when the door is in the closed position.

A control panel 30 is positioned to be easily accessible to a viewer seated on a bench type, double seat 28. The control panel 30 includes a display 2 of available selections and a key pad 34 enables the viewer to choose one or more of them. There is a volume control 36. A coin or currency device 38 collects the appropriate coins or note for the play of one or more of the selections.

A video monitor 40 displays the video portion of the presentation and a pair of high fidelity, parabolic speakers 42 give a stereophonic effect to the audio portion. The view available to an occupant of the booth 10 is best seen in Figure 5.

Concealed behind access doors 44 are the operating components of the audio visual display system, comprising a pair of video disc players 46, a microcomputer 48 with peripherals to control all of the operating functions of the system, a stereophonic audio amplifier and a power supply 50.

The control panel 32 is hinged for access to the microcomputer 48 and to the various system elements carried by the control panel 32. This simplifies maintenance for the graphic display 24 and coin collector 38.

Two fans 52 provide air circulation; one fan 52 may run continuously while the other would be activated only when there are occupants in the booth 10.

A seat sensor 54 can signal the microprocessor that the booth 10 is occupied and can, either alone or in conjunction with the door sensor 26, change the operation of the system from an "attract" operating mode to an "entertain" mode. If the entertain mode includes a dimming of the interior lighting, a courtesy light strip 56 can be illuminated for safety.

Sound insulating material 23 is provided in the wall panel 18 to provide some isolation from the ambient noise and to protect the surrounding environment from the excesses of an occupant of the

booth 10. Internal, sound-deadening carpeting 58 may also be used.

Figure 6, which is a block diagram of the component elements of the system, shows internal lights 78, which are normally bright to provide a constant level of illumination whenever the power is applied to the system.

The circulation fans 52 are used to provide a comfortable environment within the booth 10. However, because of the heat that is generated by the electronic components that are stored behind the access doors 44, an additional fan 62 is supplied. The amplifier and power conditioner 50 includes a power conditioner element 64, a stereophonic amplifier element 66 and a stereophonic mixer 68. The mixer 68 receives its inputs from the audio channels of the video disc players 46 and from a so-called spiel generator 70.

The spiel generator is used to produce instructional messages which can be played over the speakers to enable users to operate the various system. The "spiel" can explain the operation of the various controls and can teach a user how to view a desired program.

The microcomputer 48 applies certain signals and receives other input signals from an input-output expander 72 which applies control signals from the microcomputer 48 to the various elements of the system. The input-output expander 72 receives signals from the coin collector 38, the door sensor 26, the seat sensor 54 and the key pad 34. Output control signals are applied to the spiel generator 70, the stereo amplifier 66, a video switcher 74 and to a power driver 76, which is energised by the amplifier and power conditioner 50.

The power conditioner 50 also powers the video monitor 40, the video disc players 46, the microcomputer 48, the circulation fans 52, the cooling fan 62, the stereo mixer 68, the video switcher 74 and a static lighting system 78. The power driver 76 is coupled to furnish power to a special effects and lighting system 80.

A selection memory 82 stores information pertaining to the performances contained on the video discs that have been placed in the video disc players 46. The selection memory 82 can be a read only memory device (ROM) which is changed or replaced each time the video discs are replaced. However, the selection memory 82 can also be alterable if it is desired to store counts of the selections that are played or other information such as the frequency of use, the time of day that the system is in use and the time of day that each program is played for analysis and future programming.

A video disc controller 84 receives data from the input-output expander 72 and supplies informational data to the video disc players 46. This in-

formational data directs the operation of the player 46 containing the appropriate selection and directs that player to access the chosen program.

In operation, and with reference to the Figures, the booth 10 in its quiescent condition has power applied to its various electronic and electromechanical systems. The static lighting system 78 is energised and the lighting 60 is illuminated. The "attract mode" is operating and various special lighting effects are displayed to direct attention to the booth 10. The circulation fans 52 are operating as is the cooling fan 62.

Since, in the preferred embodiment, the upper portion of the booth 10 is enclosed by a transparent upper panel 12, the video monitor 40 can be activated and a video display generated by the microcomputer 48 is presented. Alternatively, the video display can be left off until a viewer enters the booth 10.

The booth 10 is intended to accommodate one or two viewers. The door panel 16 slides open to admit the viewers and when the door panel 16 is slid closed, the door sensor 26 signals their presence. When the viewers are seated, the seat sensor 54 sends a signal to the input-output expander 72 which applies the signal to the microcomputer 48. A planned sequence of activities is then commenced and signals are sent through the input-output expander 72 to power driver 76 which, in turn, energises the video monitor 40, the stereo amplifier 66 and the special effects and lighting system 80. The level of the interior lighting is changed and the monitor displays an instructional program as does the spiel generator 70 which produces an audio program that can explain the next operational steps.

Following the instructions thus provided, the viewer is presented with a choice of selections. Utilising the coin collector 38 which also may be provided with a bill receiving mechanism for handling paper currency, the viewer energises the selection mechanism which begins with the key pad 34. By actuating the proper keys in a directed sequence, the various program selections are made and the microcomputer 48 is provided with the necessary information to proceed.

The appropriate one of the video disc players 46 which contains the initial selection is energised. The video output is applied through the video switcher 74 to the video monitor 40 and the audio portion of the program is applied through the stereo mixer 68 to the stereo amplifier 66 and then to the speakers 42. By manipulating the volume control 36, the viewer can adjust the audio level of the stereo amplifier 66.

If a plurality of selections have been made and paid for, the program continues, switching between the video disc players 46 as required until all of the

desired program has been viewed and heard. At the conclusion of the program, the microcomputer 48 may generate a signal to the lighting system to return to the attract mode and raise the interior illumination level, effectively ignoring the signals of the seat and door sensors 54, 26. The opening of the door panel 16 and the departure of the viewers causes the door sensor 26 and seat sensor 54 to signal the availability of the booth 10 for a subsequent viewer and can "reset" the system in readiness.

The sequence just described is illustrative only and should not be deemed an exhaustive or complete one. The individual elements of the system can be more or less complex and the system can operate in a variety of ways limited only by the imagination of the assembler. For example, a plurality of key/switches can be provided, one for each available program selection. Alternatively, a 10-key pad might be utilised and the video monitor 40 could direct the appropriate key actuations for a desired program.

The door panel 16 can either be a full height or part height sliding panel or could be replaced by a curtain.

Claims

1. An entertainment module in which a customer can sit and pay to experience a selected pre-recorded audio/video presentation.

2. A module as claimed in Claim 1 including curved and/or flat transparent wall portions (20, 22).

3. A module as claimed in Claim 1 or Claim 2, including a video monitor (40).

4. A module as claimed in Claim 1, Claim 2 or Claim 3 including speakers (42).

5. A module as claimed in any preceding claim including at least one video disc player (46).

6. A module as claimed in any preceding claim including disc selecting means (34) for accessing one of a number of pre-programmed video discs.

7. A module as claimed in any preceding claim including acoustic isolation means (23) between the interior and the exterior of the module.

8. A module as claimed in any preceding claim including a sensor (54) for signalling the presence of a customer.

9. A module as claimed in Claim 8 including light switching means (80) coupled to interior illuminating means (78) and said sensor for changing the intensity of the interior illumination in response to the presence of a customer.

10. A module as claimed in Claim 8 or Claim 9 including invitational program means (70) for normally displaying a repeating audio visual invitational display and program switching means

operable in response to said sensor for switching to a menu program from said invitational display in response to the presence of customers.

5

10

15

20

25

30

35

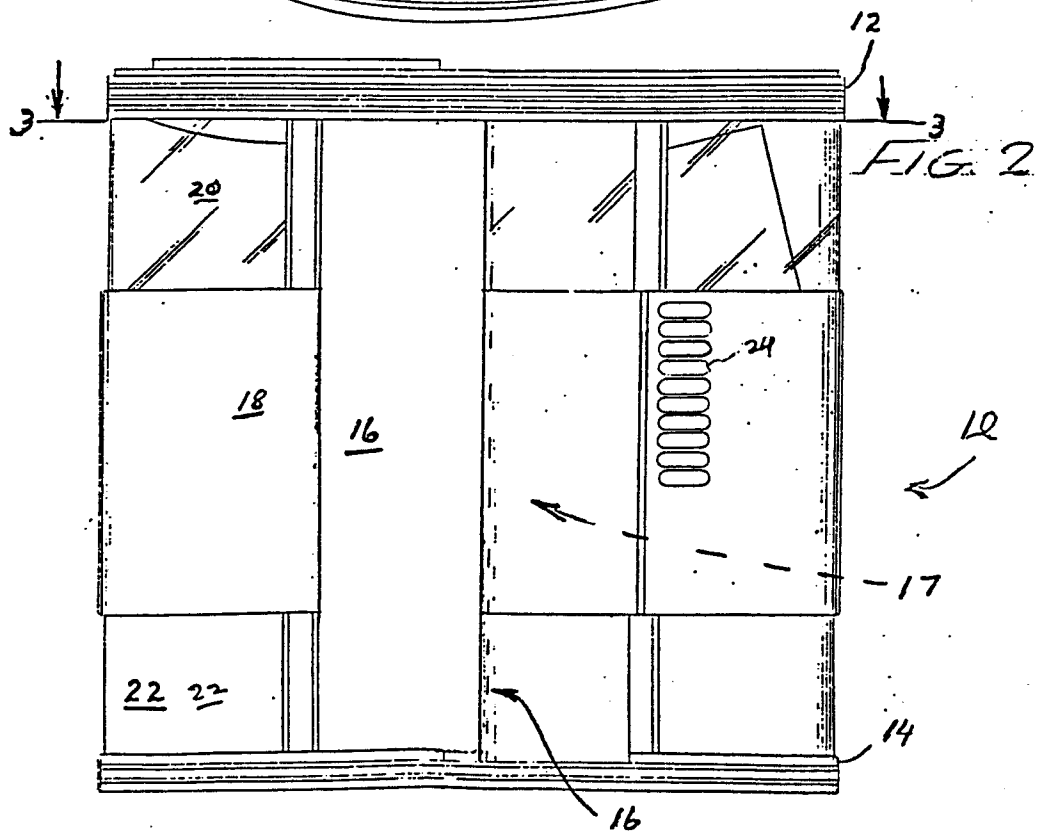
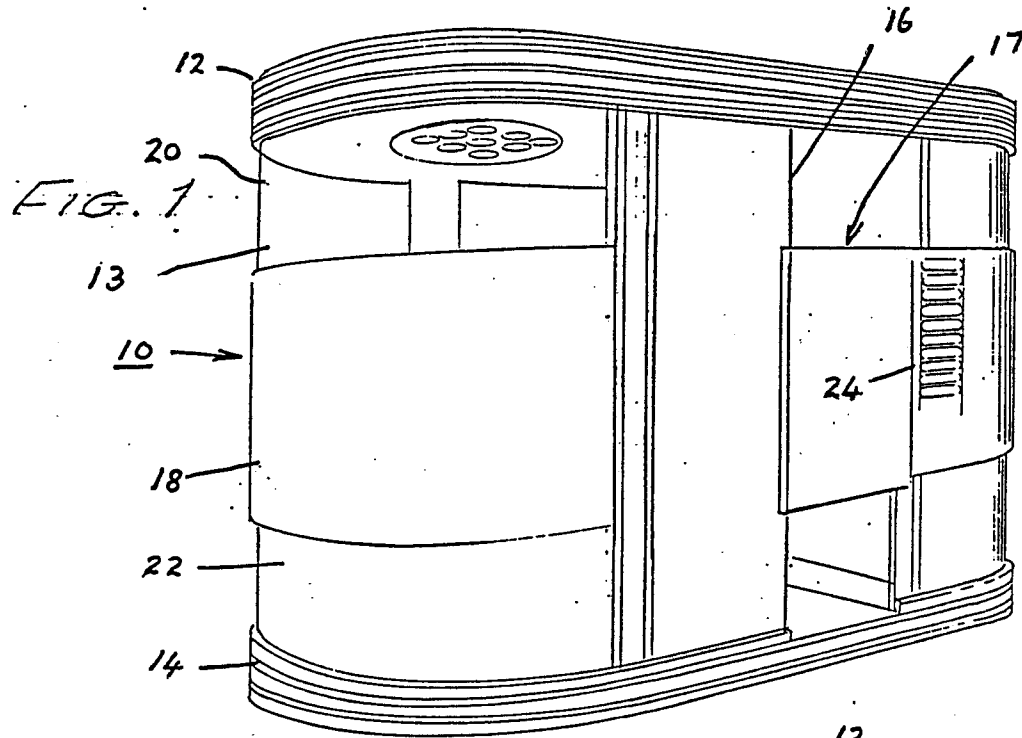
40

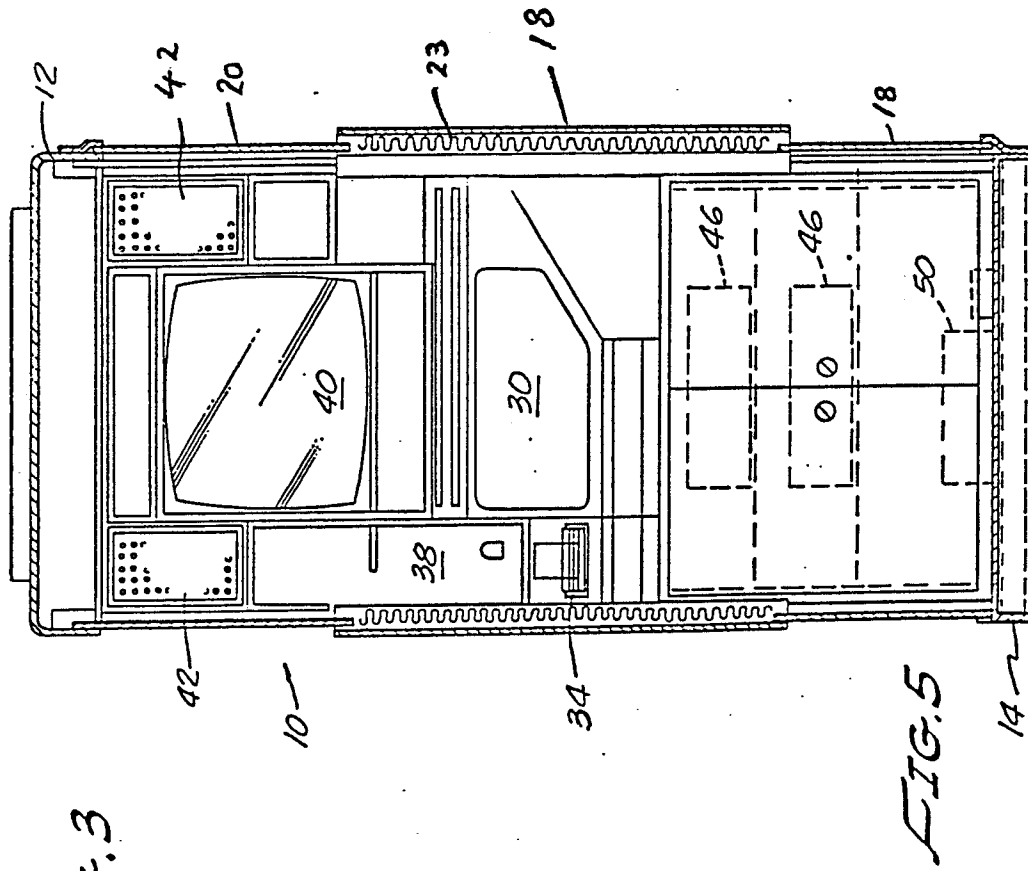
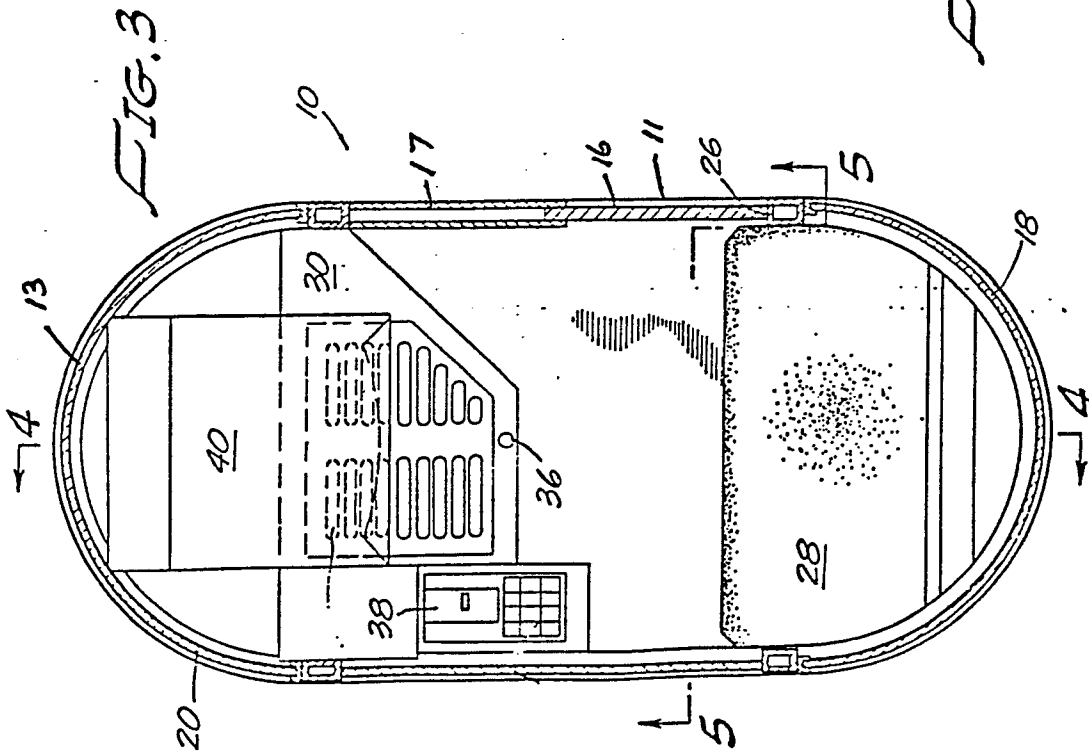
45

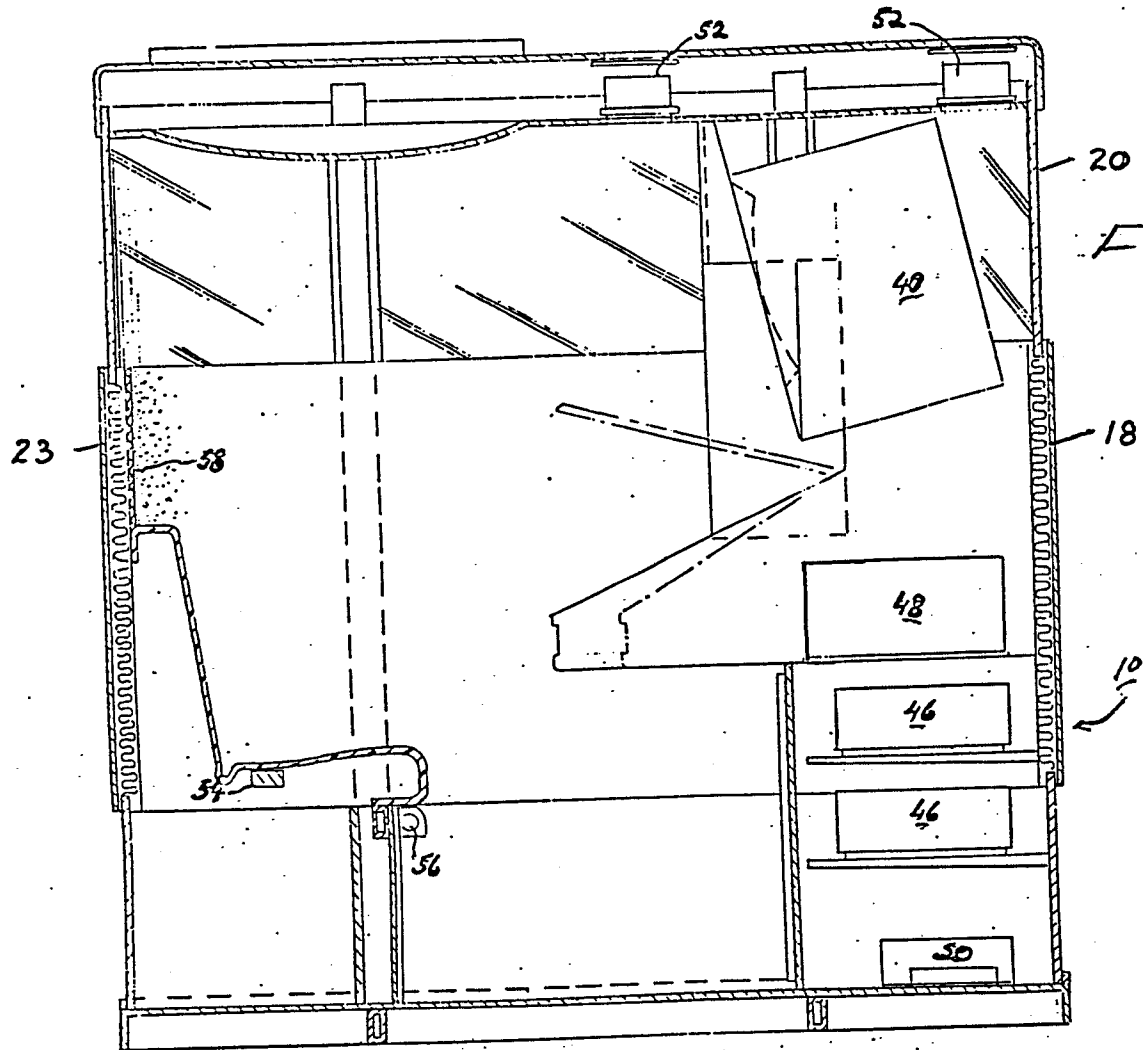
50

55

5







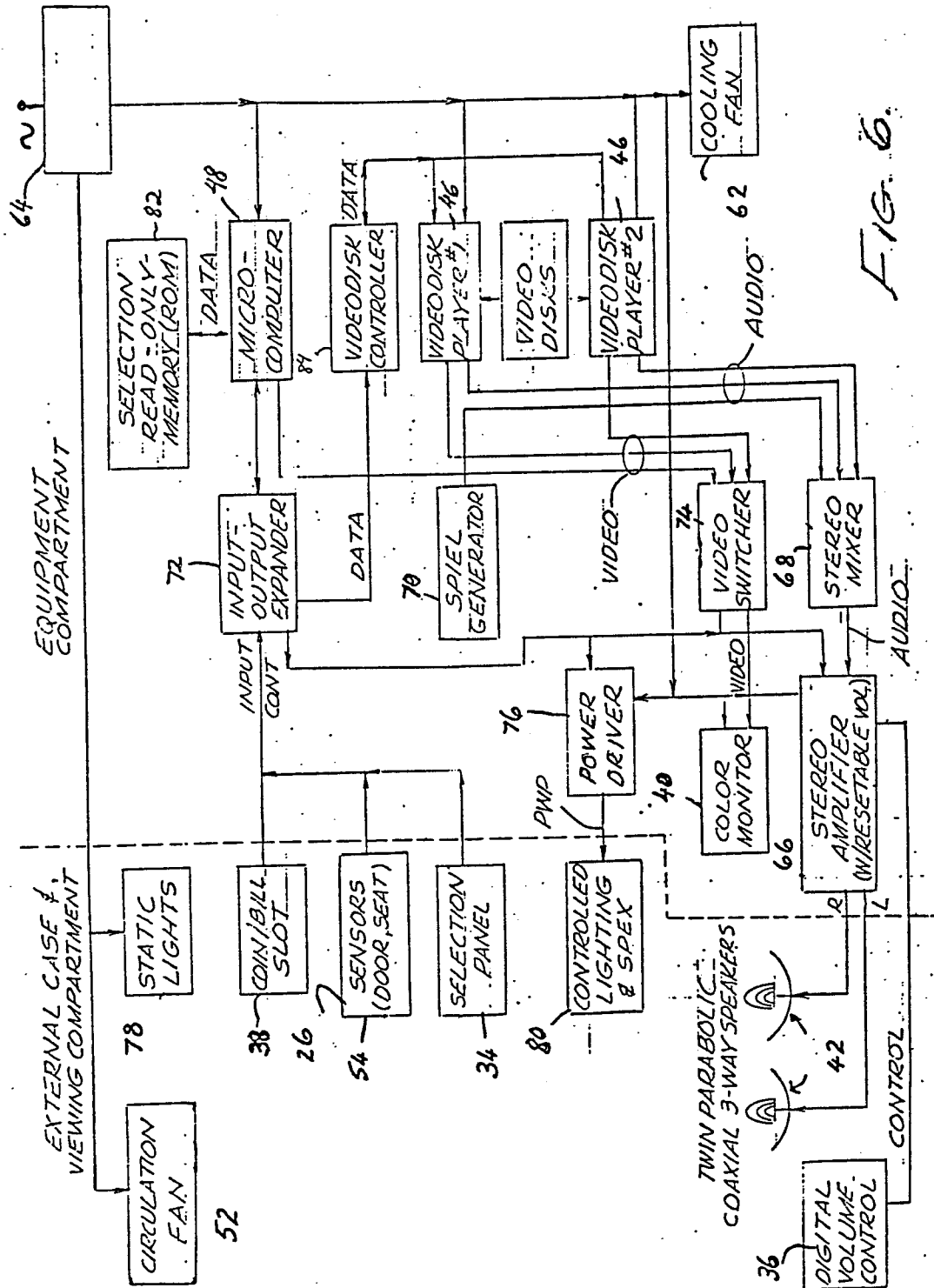


FIG. 6.



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	FR-A-2 556 029 (WEISS) * Page 1, lignes 29-34; page 2, lignes 29-36; page 3, lignes 1-36; page 4, lignes 1-36; page 5, lignes 1-3,35,36; page 6, lignes 1-6; figures 1-5 *	1,3-5	E 04 B 1/82 E 04 H 1/12
A	--- US-A-3 694 974 (ECKEL) * Colonne 1, lignes 28-68; colonne 2, lignes 1-22; figures 1-5 *	2,7	
A	--- FR-A-2 559 298 (BOURDIN) * Page 1, lignes 1-29; page 2, lignes 1-64; figures 1-4 *	1-3,9	

			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			E 04 B E 04 H
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 15-06-1987	Examiner SCHOLS W.L.H.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	