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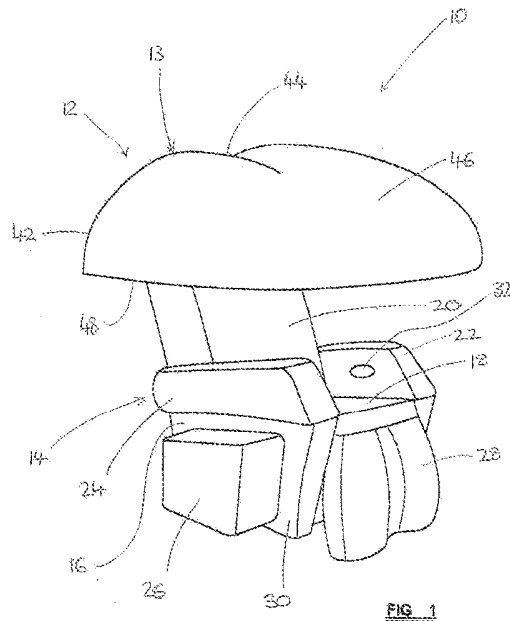
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Other: **WPI, EPDOC, TXTE, TXTWOT, TXTJPT, TXTJPS,**
NPL, XPESP, INSPEC, TDB, XPRD, XPI3E, XPIPCOM,
XPIEE

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(54) Title of the Invention: **Amusement device**
Abstract Title: **Amusement device**

(57) An amusement device 10 includes a canopy structure 12 and a seat portion 14. The canopy structure 12 includes a canopy 13 which is moveable between a first position in which the canopy 13 prevents a potential user from sitting on the seat portion 14, and a second position in which the canopy 13 is clear of the seat portion 14 to allow the potential user to take his seat. The canopy structure 12 includes an amusement system for presenting content to the user and a holding system for holding the canopy in its first position when the device is not in use, the holding system including a token recognition system 26 and the canopy is token-freed and moveable from its first position to its second position. The canopy may be pivotable or tiltable. The token may be a coin, card or counter. The amusement system may include display screens for visual media and loudspeakers for audio content. The user can play games, watch movies, surf the internet whilst using the amusement device. The amusement device 10 may be located in airports, railway stations or other areas where people wait the periods of time.



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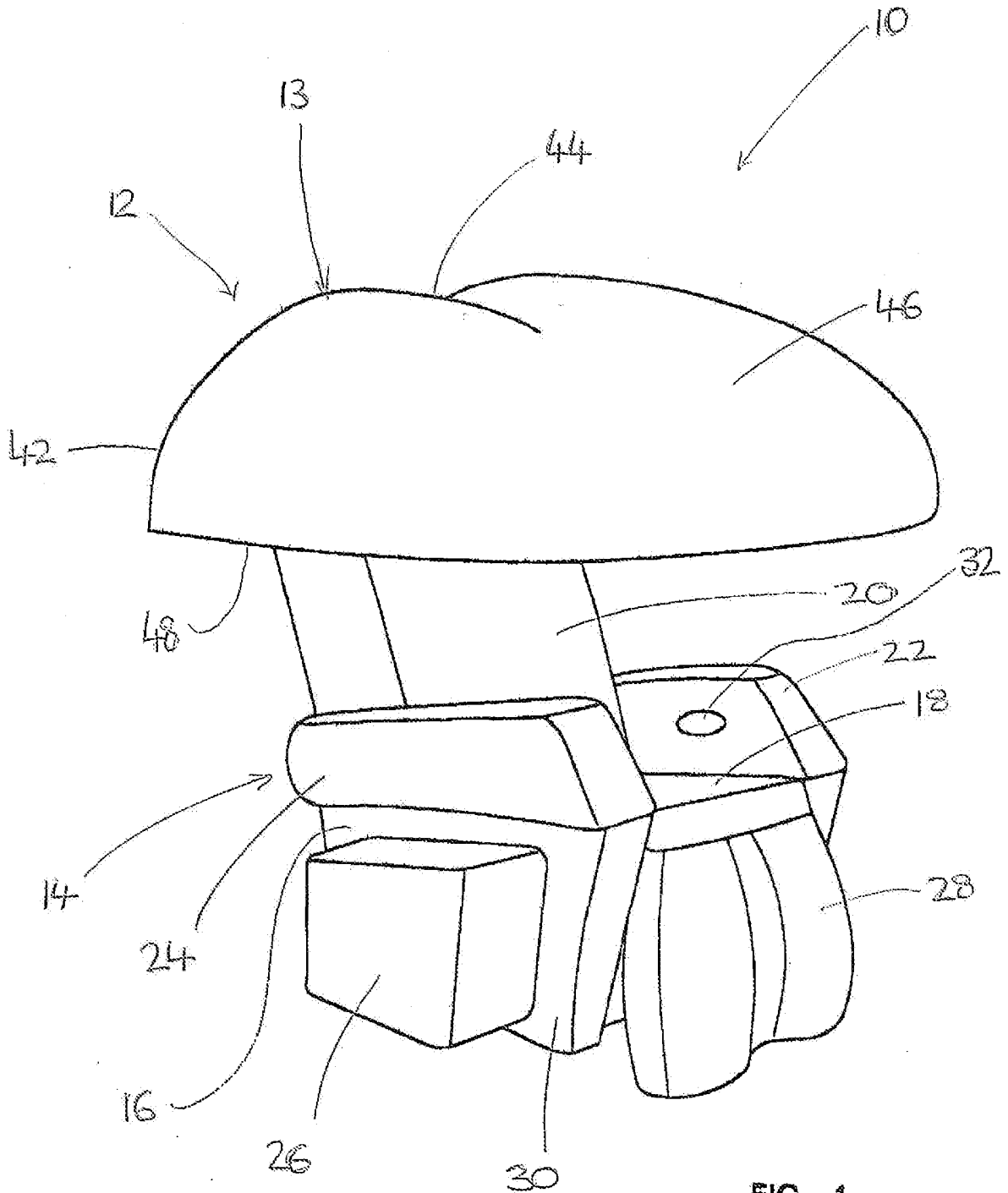


FIG 1

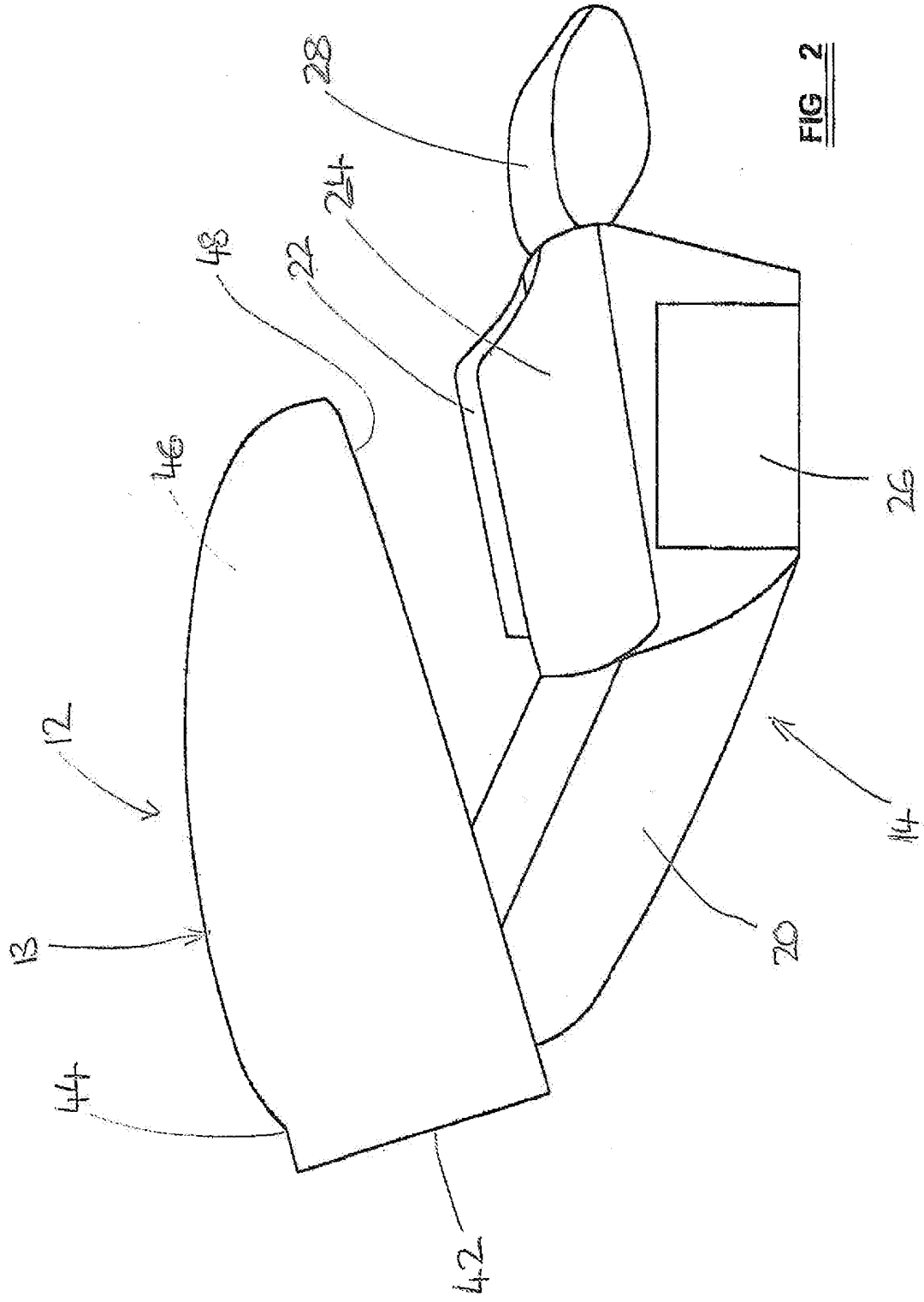


FIG. 2

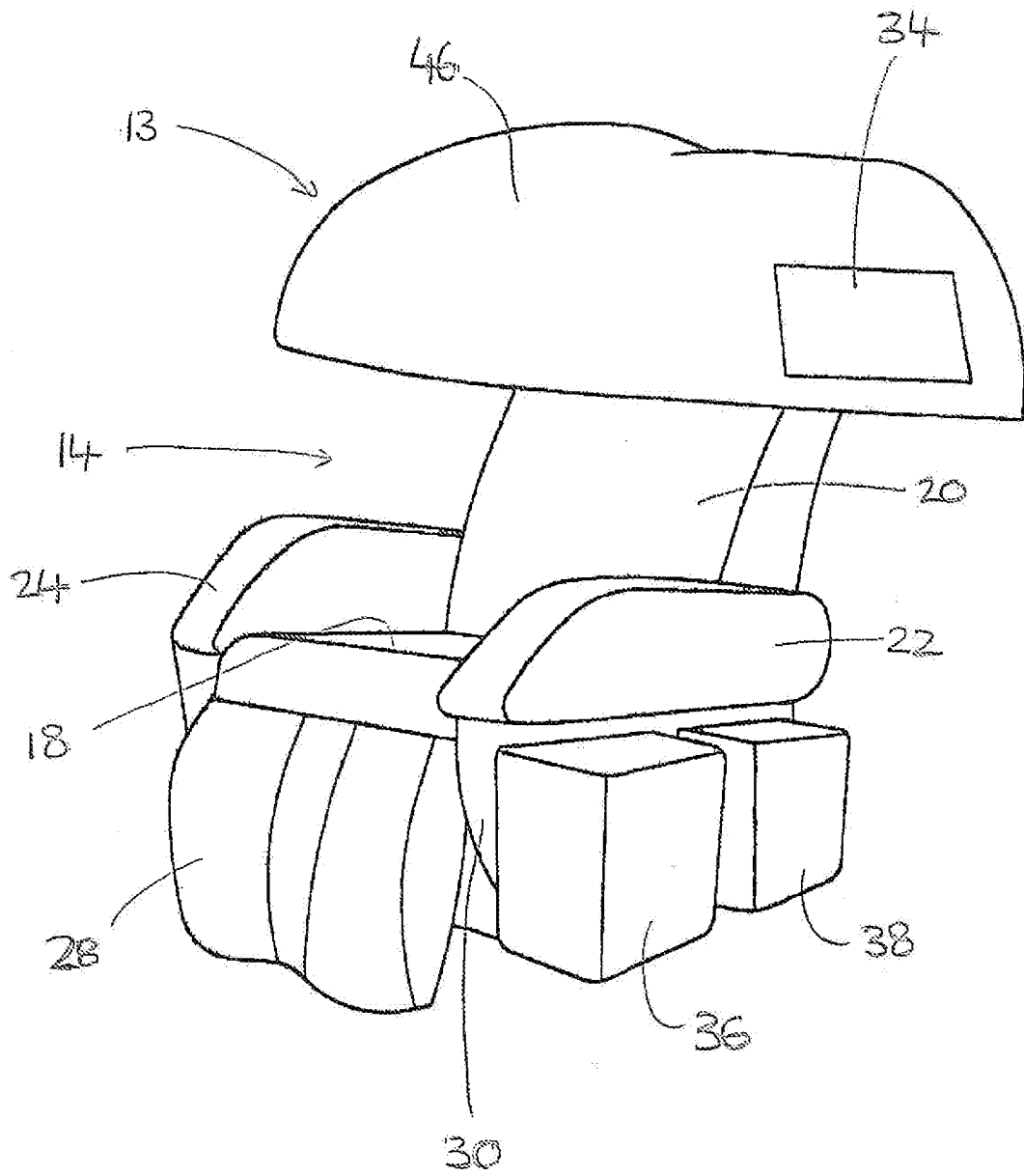


FIG 3

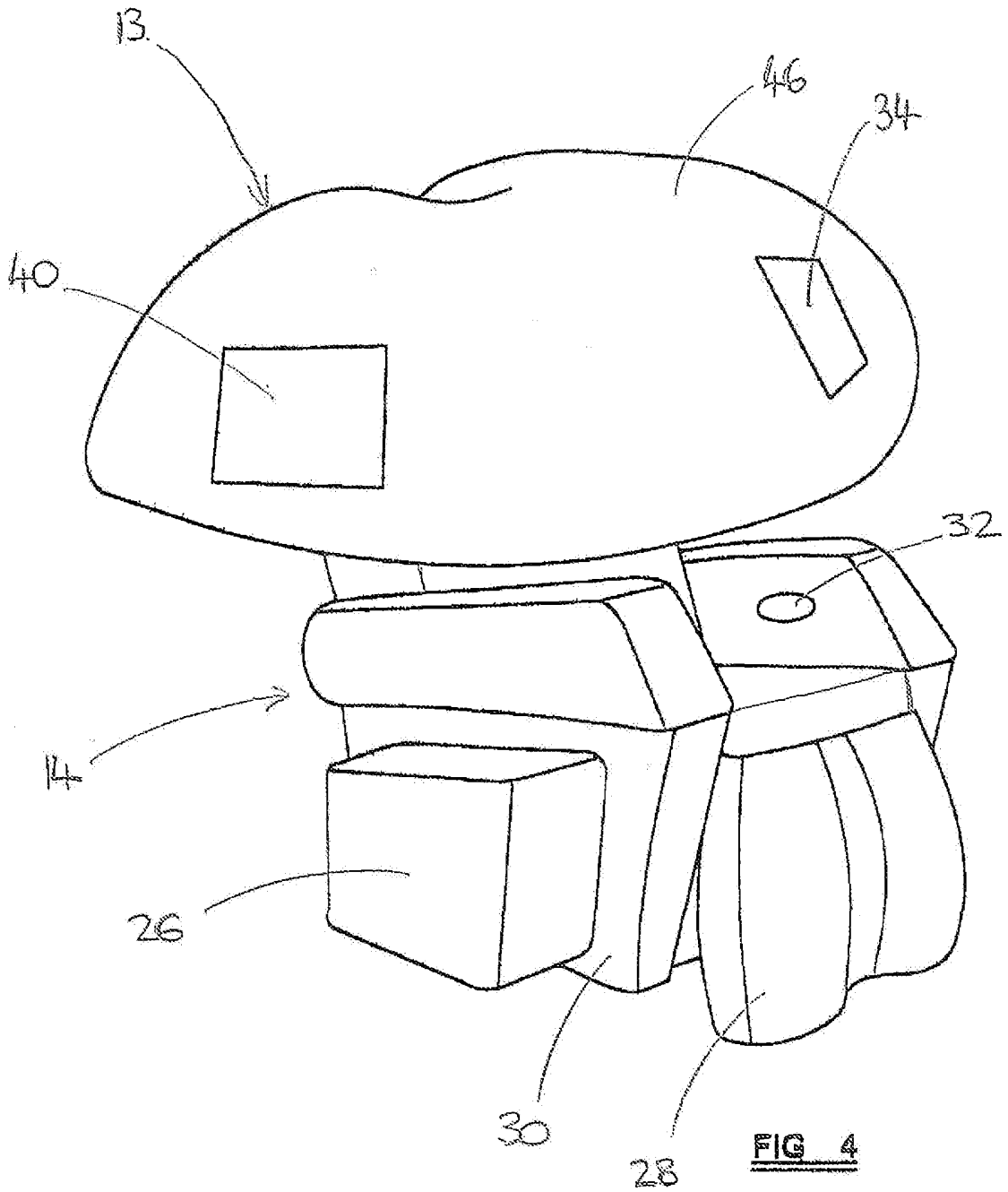


FIG. 4

Title: Amusement Device

5 Description of Invention

The present invention relates to an amusement device, and to a canopy structure for providing an amusement system.

10 Each year millions of people travel by aeroplane on business or personal trips, such as holidays abroad. It is usual for a passenger to spend several hours at an airport before boarding a flight; due to the volume of passengers passing through an airport one must arrive early in order to pass through the security and baggage checks in time to catch the flight. Once luggage has been
15 checked-in with the airline, and security and border controls have been completed, passengers are free to do as they please with their time until boarding the flight. However, the facilities for entertainment provided at an airport are limited, and it is often the case that passengers must spend hours in airport departure lounges with little or nothing to do.

20 Of course, airports are not the only places where people regularly spend large amounts of time in waiting areas with little to keep them occupied – railway stations, hospitals, hotels, service stations, cruise ships and at events, are but a few other examples.

25 In these situations it is desirable to provide a form of entertainment whereby a person or group of people may be kept occupied. Due to the indeterminate nature of the length of time to be spent waiting (delays are not uncommon), it is preferable for a person to sit down whilst waiting. However, a problem of
30 providing seated entertainment areas – such as a video arcade machine – is that a person may sit in the seat whilst not using the service offered. In this

case, not only is the person not paying to use the facility provided, but he is preventing someone else from using it.

According to a first aspect of the invention, we provide an amusement device,
5 the device including a canopy structure and a seat portion for accommodating
a user, the canopy structure including a canopy which is supported so as to be
moveable between a first position in which the canopy prevents a potential
user from sitting on the seat portion, and a second position in which the
canopy is sufficiently clear of the seat portion to allow the potential user to take
10 his seat, the canopy structure including an amusement system for presenting
media content to the user and a holding system for holding the canopy in its
first position when the device is not in use, the holding system including a
token recognition system such that the canopy can be token-freed to move
from its first position to its second position.

15

It is beneficial that when the amusement device is not in use, the canopy is
held in its first position. Whilst in the first position, potential users cannot sit on
the seat portion of the device, and therefore the seat portion can only be
occupied by a person intending to make use of the device, having used a
20 token to activate the device to release the canopy.

It is preferable that the canopy is user-adjustable such that the canopy may be
raised, lowered and/or tilted. Once accommodated by the seat portion, a user
can adjust the canopy so that it is at height suitable for use, which may be
25 dependent on the height of the user.

Preferably, the canopy structure includes a motor which is operable to move
the canopy. The canopy may be raised and lowered automatically by the
motor. For instance, when the canopy is freed it may automatically move from
30 its first position to its second position, to enable a user to sit on the seat
portion.

The seat portion may be provided with a back support portion, at least one arm rest and a leg rest, such that the back support portion may be reclined, and the position of the canopy moved relative to the back support portion.

5

A back support portion, the arm rest and, if desired, a leg rest provide comfort for the user, allowing him to relax in the amusement device. Reclining seats are well known, and are preferable as they allow a user to configure the seat to a comfortable position.

10

Preferably, the token recognition system which is operable to recognise a token may be for examples one of: a coin, a credit or debit card, a bank note, a paper ticket or token, an identification card, a metal or plastics counter, or an identification fob. In order to activate the amusement device, a potential user must present a token to pay for use of the device, or at least to identify himself to the device.

The amusement system may include a screen, such as a wrap-around screen, for displaying visual media, the screen being located on an inner surface of the canopy. The amusement system may also include one or more audio transducers such as speakers, for presenting audio media.

20

A screen and/or transducers are housed within the canopy, so that when a user has adjusted the position of the canopy, the user may view the screen and hear audio.

25

The amusement device, and potentially the canopy structure, preferably includes a human interface operable to control the amusement system, which interface may include a keyboard, mouse, joystick or the like. The human interface may allow the user to navigate menus efficiently and select options. The amusement system may further include a camera that is operable to

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record image and/or video footage of the user. The camera may allow a user to record a video, as if using a web-cam on a personal computer, to record a video-diary or the like, or alternatively to interact with the amusement system through image-recognition, as is used in known video game systems. The device may provide a video conferencing or voice over IP facility.

The amusement device (potentially the canopy structure) may include a memory device on which media content is stored, such that the amusement system may retrieve media from the memory device. In addition, or alternatively, the amusement device (potentially the canopy structure) may be connected to a network including a control centre which is operable to receive data from and send data to the amusement device. Access to the World Wide Web may be provided over the network and/or over a further network connection, and the amusement system may be operable to display data from the World Wide Web on the screen.

The media content available for presentation through the amusement system preferably includes at least one of music, films and video games. Media available through the amusement system may be streamed to the screen and/or speakers from a memory device in which it is stored within the amusement system. Alternatively, the media may be streamed from a remote location over a network to the device. The amusement device may also be controlled remotely from a control centre, and data may be sent to the control centre from the device to allow the status of the device to be monitored. The provision of internet access allows user to surf the internet from the amusement device, and send or receive messages (such as e-mails). Additionally, the amusement device and/or control centre may be accessed over the internet from a remote location to diagnose and/or fix technical problems with the amusement device.

The amusement device may include at least one container for storing items. The or each container may include a lock for preventing access to the container.

5 A user may have luggage and other personal possessions with him which must be safe-guarded whilst the user is using the amusement device. The user may store such items in containers external to the device, and lock the container so that the items cannot readily be stolen whilst the user is being entertained.

10

The amusement system may include an alarm operable to alert the user at a time, or after a period of time, configurable by the user. The user may be using the device whilst passing time in a waiting room, and may wish to be alerted at a specific time so as not to miss an appointment or a transport
15 connection, for example. The alarm may be linked to an external information system, so that in an airport context the user may input his flight number and be alerted by an airport system when his flight is ready to board.

The canopy structure and/or the seat portion may include one or more external
20 screens, the or each external screen being located on the outer surface of the canopy, for displaying visual media. External screens on the canopy can be used to advertise the amusement device, or to provide advertising from which revenue may be accrued.

25 The seat portion of the amusement device may be suitable for accommodating more than one user. The seat may be suitable for two users, sat side-by-side, or else may be large enough for a group of users such as a family.

The amusement device preferably includes a sensor operable to determine
30 whether a user is accommodated by the seat portion. The device, and

potentially the canopy structure, may include a further sensor operable to sense resistance to the movement of the canopy.

5 The incorporation of sensors allows the canopy to operate safely when moving to its first position, and to enable it to detect if a person is sat in the seat portion. Depending on the configuration of the device, it may be safe for the canopy to be lowered to its first position whilst a user is accommodated by the seat portion. In an alternative configuration, a user may not be able to sit on the seat portion whilst the canopy is in its first position. In either case, it is
10 undesirable for a user to occupy the seat portion whilst the canopy is being lowered after the end of a session of usage. If the device attempts automatically to lower the canopy whilst a person is sat in the device, at a time when a person should not, at least one of the sensors provides a signal to indicate that it is not safe to do so.

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According to a second aspect of the invention, we provide a canopy structure for providing an amusement system, and for use with a seat, the canopy structure including a canopy which is supported so as to be moveable between a first position in which the canopy is lowered, and a second position in which
20 the canopy is raised, the canopy structure including an amusement system for presenting media content to the user and a holding system for holding the canopy in its first position when the canopy structure is not in use, the holding system including a token recognition system such that the canopy can be token-freed to move from its first position to its second position.

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Thus, the canopy structure which provides the amusement system may be a separate entity from the seat.

The canopy structure may include one or more of the features of the canopy structure of the first aspect of the invention.
30

Embodiments of the invention will now be described by way of example only with reference to the accompanying drawings wherein;

5 Figure 1 is a perspective view of an amusement device embodying the present invention,

Figure 2 is a perspective view of the amusement device of figure 1, shown in a reclined configuration,

Figure 3 is a perspective view of an amusement device including further screens,

10 Figure 4 is a perspective view of the amusement device of figure 3, shown with the canopy in its first position.

Referring now to the drawings, an amusement device 10 is shown, including a canopy structure 12 and a seat portion 14. In this example the seat portion 14
15 is in the form of an arm-chair, but may take other forms.

The seat portion 14 has a flat portion 18 for a person to sit on, supported on a body 16, and a back support portion 20 which extends upward from the back edge of the flat portion 18 for supporting the back of a person sat in the seat
20 portion 14. The seat portion 14 further includes a leg rest 28 which extends downwardly from the front edge of the flat portion 18. On either side of the seat portion 14, arm rests 22, 24 are provided to support the arms of a person using the amusement device 10. The leg rest 28 and back support portion 20 are each pivotably attached to the body 16 of the seat portion 14, such that the
25 back support portion 20 may rotate about an axis lying across the width of the back of the flat portion 18, and the leg rest 28 may rotate about an axis lying across the width of the front of the support portion 18.

The seat portion 14 may be moved from a sitting configuration as shown in
30 figure 1, to a reclining configuration as shown in figure 2. This allows a user to lie in a comfortable position, where the back support portion 20 is inclined only

slightly from horizontal, and the leg rest 28 is raised. The pivoting movement of the back support portion 20 and leg rest 28 may be performed automatically by motors housed within the seat portion 14.

- 5 The manufacture of reclining arm-chairs of this type is well known, and the parts of the seat portion 14 are constructed from suitably durable materials having sufficient strength to support a person or persons using the amusement device, as known in the art.
- 10 In this example, the canopy structure 12 is supported on the back support portion 20 of the seat portion 14, but may be supported on another part of the seat portion 14, or alternatively may be provided separately from the seat portion 14. The canopy structure 12 includes a canopy 13, which includes in the example, a generally dome-shaped part 46, a flat back part 42 and a
15 hollow inner part 48, which is accessible from underneath the canopy 13. The dome-shaped part 46 is "dimpled" to a point (indicated at 44) centred at the middle of back part 42. Of course, it will be understood that the canopy 13 may be of a different shape to that described.
- 20 The canopy 13 is pivotable about a generally horizontal axis lying across the width of the back part 42, so as to swivel the dome-shaped part 46 between a lowered first position and a raised second position. The canopy 13 may be swivelled manually by a person exerting a force on it, or else it may be swivelled automatically by a motor in the canopy structure 12. In its first
25 position (which is shown in figure 4) the canopy 13 is angled downward to overlie the flat portion 18 of the seat portion 14. In this position, an unauthorised person is prevented from taking a seat on the flat portion 18, as the canopy 13 is in the way.
- 30 The canopy structure 12 further includes a holding system, which may be actuated by resistance from the gears of a motor of the canopy structure 12, or

by a brake, interlock or the like, to prevent the canopy 13 from being moved from its first position. This prevents an unauthorised person from lifting the canopy 13 from its first position into its second position so as to occupy the seat portion 14. This holding system is beneficial as it prevents a person from
5 sitting on the seat portion 14 of the amusement device but not using the device, or paying to use the device.

When in its second position, there is sufficient clearance between the canopy 13 and the seat portion 14 for a user to sit down on the flat portion 18 of the
10 seat portion 14. Once a user is sat on the seat portion 14, the user may manually lower the canopy 13 mechanically into a desired position by pulling downward on the canopy 13. Alternatively, the canopy 13 may be moved downward using the motor, either operated by the user, or automatically using a sensor to determine when the canopy 13 is in close proximity to the user's
15 head. The canopy 13 may be swivelled upward or downward by the user, as described. The canopy 13 may also include means directly to raise and lower the canopy 12 in relation to the seat portion 14.

The holding system of the amusement device 10 includes a token recognition
20 system 26, which in this example includes a box-shaped unit which is attached to one side of the body 16 of the seat portion 14. In alternative configurations, the token recognition system 26 may be provided elsewhere on the device 10. The token recognition system 26 may include a payment-collecting device, which may be coin-operated, or operable by presentation of a credit or debit
25 card, or other token such as a bank note or paper ticket. Alternatively, the token recognition system 26 may include an identification system for reading an I.D. card, or other form of identification. Suitable I.D. cards may be cards issued to people who have paid for subscriptions to use the amusement device 10. As a further alternative, the token recognition system 26 may
30 include a slot for receiving non-monetary tokens or the like, e.g. counters.

Such tokens may be purchased at a machine or other outlet and then used to activate the amusement device 10.

5 The holding system is token-freed by a user operating the token recognition system 26, and the amusement device 10 becomes operational for a period of time corresponding to the nature (amount) of the payment / identification provided. The deactivation of the holding system allows the canopy 13 to move to its second position, which allows the user to sit on the seat portion 14. The user may then adjust the position of the canopy 13 as described above.
10 After the period of time has expired, the canopy 13 is raised, by the user or automatically by the motor, so that the user may vacate the seat portion 14.

The amusement device 10 is provided with one or more sensors which is/are operable to sense whether the seat portion 14 is occupied by a person. Once
15 it has been determined that the user has vacated the seat portion 14, the canopy 12 may automatically be moved to its first position. A further sensor may be provided which is operable to detect resistance against the motor moving the canopy 12 to the first position. If this further sensor detects that a person or an object is resisting the movement of the canopy, i.e. the user is
20 still in the seat, the canopy 12 will stop moving to prevent damage to the amusement device 10, or injury to the person / damage to the object obstructing the canopy 12.

Whilst the user is using the amusement device 12, he may wish to store his
25 luggage securely so that it cannot readily be stolen. For this purpose one or more containers 36, 38 are provided for storing items, as shown in figure 3. The containers 36, 38 are box-shaped units attached to a side of the body 16 of the seat portion 14, having a hollow interior for storing items, and at least one door for allowing access to the interior of the container. Each container
30 36, 38 may include a lock, so that the user may leave items locked within the

container without having to worry about the safety of the items, whilst the device 10 is in use. The locks may be key-operated, or token-freed.

The canopy 12 also includes an amusement system, for providing media content to the user. The amusement system includes a screen, or more than one screen, that is positioned on the inside wall of the hollow inner part 48 of the canopy. The screen may be a wrap-around screen, lying around the curved inside wall of the canopy 12. Speakers or other audio transducers may be provided within the hollow inner part 48, and may be positioned at points spaced around the curved inside wall. The speakers may be suitable for providing surround sound, such as a cinematic surround format.

The user may operate the amusement system through a user interface, which in this example includes a control panel 32, but may also include input via a touch-sensitive portion of the screen, a keyboard, or alternative input devices. The control panel 32 may be configured as a games controller to allow a user to play games through the amusement system. The control panel 32 and/or keyboard may be located in an arm rest 22, 24 of the seat portion 14, so that it may be accessed easily by the user, or alternatively may be provided within the canopy 13. The control panel 32 may be detachable from the seat portion 14 or canopy 13, so that the user can hold it in both hands to operate it more easily. The user interface 32 provides options to select media content for display on the screen, or to be played through the speakers. Volume controls for the speakers and screen setting options may also be provided through the user interface 32.

The media content provided to the user through the amusement system of the amusement device 10 may include films, music and video games. The amusement device 10 may have an internal memory, in which the media content is stored. Alternatively, or in addition to having an internal memory, the amusement device 10 may be connected to a network, such as a local

area network, and this connection may be provided through cabling or wirelessly. A control centre may be provided on the network which may be operable to provide media content to the amusement device 10 through the network. The control centre may also send and receive data to and from the amusement device 10 so as to monitor its operational status, and instruct it to perform specific operations, and to receive information relating to the amusement device 10, such as whether it is in use or not.

The network may include a connection to the World Wide Web, so that the control centre and/or amusement device 10 may send and receive data over the internet. Alternatively, the amusement device 10 may be connected to a further network over which a connection to the World Wide Web is provided. Furthermore, this allows a support technician remotely to access the control centre and/or the amusement device to perform diagnostic tests, collect stored usage data, and carry out some repair work. Access to the World Wide Web may be provided to the user, wherein web-based content may be accessed through browser software and displayed to the user on the screen. The user can interact with the browser through the user interface, to perform operations such as sending and reading e-mail, viewing web pages, or interacting with friends over a web-based communication service.

The canopy 13 may also include a camera that positioned inside the hollow inner part 48, and directed towards the user. The user may record still images or video using the camera, such as a photograph or a video diary. Video or image content may be stored in the memory of the device, and/or then transmitted over the internet via e-mail.

The canopy 13 may have further screens 34, 40 located on the exterior of the dome-shaped part 46. The screens 34, 40 are operable to display advertisements, such as advertisements showing features of the amusement device 10, or commercial advertising.

In an alternative embodiment of the invention, the seat portion 14 may be suitable for accommodating more than one user. In this embodiment, two or more users may sit side-by-side on the seat portion 14. The canopy 12 is proportionally larger in order to allow more than one user to view the screen and listen to audio presented over the speakers. The user interface 32 in this embodiment may include more than one control device, and may include one shared screen, or more than one screen, in order that users can select different media to be displayed on the shared or each respective screen, and allow separate control over the media provided to them.

The features disclosed in the foregoing description, or the following claims, or the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a method or process for attaining the disclosed result, as appropriate, may, separately, or in any combination of such features, be utilised for realising the invention in diverse forms thereof.

CLAIMS

1. An amusement device, the device including a canopy structure and a seat portion for accommodating a user, the canopy structure including a canopy which is supported so as to be moveable between a first position in which the canopy prevents a potential user from sitting on the seat portion, and a second position in which the canopy is sufficiently clear of the seat portion to allow the potential user to take his seat, the canopy structure including an amusement system for presenting media content to the user and a holding system for holding the canopy in its first position when the device is not in use, the holding system including a token recognition system such that the canopy can be token-freed to move from its first position to its second position.
2. An amusement device according to claim 1, wherein the canopy is user-adjustable such that the canopy is raiseable, lowerable and/or tiltable.
3. An amusement device according to claim 1 or claim 2, wherein the canopy structure includes a motor which is operable to move the canopy.
4. An amusement device according to any preceding claim, wherein the seat portion is provided with a back support portion, at least one arm rest, and a leg rest.
5. An amusement device according to claim 4, wherein the back support portion is reclinable, and the position of the canopy is moveable relative to the back support portion.
6. An amusement device according to any preceding claim, wherein the token recognition system is operable to recognise a token that is one of: a

coin, a credit card, a bank note or paper ticket, an identification card, a metal or plastics counter, or an identification fob.

7. An amusement device according to any one of the preceding claims,
5 wherein the amusement system includes a screen for displaying visual media,
the screen being located on an inner surface of the canopy.

8. An amusement device according to any one of the preceding claims,
wherein the amusement system includes one or more audio transducers for
10 presenting audio media.

9. An amusement device according to any one of the preceding claims,
wherein the device includes a human interface operable to control the
amusement system.

15

10. An amusement device according to claim 9, wherein the human
interface includes one or more of a keyboard, mouse and joystick.

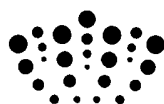
11. An amusement device according to any one of the preceding claims,
20 wherein the amusement system includes a camera that is operable to record
image and/or video footage of the user.

12. An amusement device according to any one of the preceding claims,
wherein the amusement device includes a memory device on which media
25 content is stored, such that the amusement system may retrieve media from
the memory device.

13. An amusement device according to any one of the preceding claims,
wherein the amusement device is connected to a network, the network
30 including a control centre which is operable to receive data from and send data
to the amusement device.

14. An amusement device according to claim 13, wherein access to the World Wide Web is provided over the network and/or over a further network connection.
- 5
15. An amusement device according to claim 14, where dependent on claim 7, wherein the amusement system is operable to display data from the World Wide Web on the screen.
- 10
16. An amusement device according to any one of the preceding claims, wherein the media content available for presentation through the amusement system includes at least one of music, films and video games.
17. An amusement device according to any one of the preceding claims,
- 15
- wherein the device includes at least one container for storing items.
18. An amusement device according to claim 17, wherein the container includes a lock for preventing access to the container.
- 20
19. An amusement device according to any one of the preceding claims, wherein the amusement system includes an alarm operable to alert the user at a time, or after a period of time, configurable by the user.
- 20.
- 25
20. An amusement device according to any one of the preceding claims, wherein the canopy structure includes one or more external screens for displaying visual media..
21. An amusement device according to claim 20 wherein the or each external screen is located on the outer surface of the canopy.

22. An amusement device according to any one of the preceding claims, wherein the seat portion is suitable for accommodating more than one user.
23. An amusement device according to any one of the preceding claims, wherein the device includes a sensor operable to determine whether a user is accommodated by the seat portion.
24. An amusement device according to any one of the preceding claims, wherein the device includes a further sensor operable to sense resistance to the movement of the canopy.
25. An amusement device substantially as hereinbefore described with reference to and/or as shown in the accompanying drawings.
26. A canopy structure for providing an amusement system, and for use with a seat, the canopy structure including a canopy which is supported so as to be moveable between a first position in which the canopy is lowered, and a second position in which the canopy is raised, the canopy structure including an amusement system for presenting media content to the user and a holding system for holding the canopy in its first position when the canopy structure is not in use, the holding system including a token recognition system such that the canopy can be token-freed to move from its first position to its second position.
27. A canopy structure substantially as hereinbefore described with reference to and/or as shown in the accompanying drawings.
28. Any novel feature or novel combination of features described herein and/or shown in the accompanying drawings.



Application No: GB0912867.9

Examiner: Andrew Hole

Claims searched: 1 to 27

Date of search: 23 November 2009

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X,Y	X: 26. Y: 1 at least.	US 2006/0014586 A1 (GATTO et al.) Please see drawings, Figs 5 & 6 in particular, and paragraphs 45-51.
X,Y	1 & 26 at least.	US 2602492 A (FOWLER) Please see whole document, especially column 1, lines 5 to 54 and column 4, line 61 to column 5, line 28.
Y	1 & 26 at least.	DE 29512759 U1 (FUNEX) Please see drawings and WPI/Thomson abstract, accession number 1996-426385 [43].
Y	1 & 26 at least.	CN 1943475 A (GUO) Please see drawings, EPODOC abstract and WPI/Thomson abstract, accession number 2007-779108 [73].
Y	1 & 26 at least.	US 6354044 B1 (LAGACE Jr.) Please see drawings and column 2, lines 16-54.
Y	1 & 26 at least.	JP 2005115399 A (SONY) Please see Fig 1, EPODOC abstract and WPI/Thomson abstract, accession number 1998-312668 [27].

Categories:

X Document indicating lack of novelty or inventive step	A Document indicating technological background and/or state of the art.
Y Document indicating lack of inventive step if combined with one or more other documents of same category.	P Document published on or after the declared priority date but before the filing date of this invention.
& Member of the same patent family	E Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

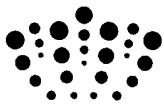
Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^X :

Worldwide search of patent documents classified in the following areas of the IPC

A47C; A63F; A63G; G02B; G07F; G09B

The following online and other databases have been used in the preparation of this search report

WPI, EPDOC, TXTE, TXTWOT, TXTJPT, TXTJPS, NPL, XPESP, INSPEC, TDB, XPRD, XPI3E, XPIPCOM, XPIEE



International Classification:

Subclass	Subgroup	Valid From
G07F	0017/08	01/01/2006
A47C	0007/72	01/01/2006
A47C	0015/00	01/01/2006