(19) DANMARK

(10) **DK/EP 3092043 T3**

Patent- og
Varemærkestyrelsen

(12) Oversættelse af
europæisk patentskrift

(51) Int.Cl.: ***A 63 H 3/28 (2006.01)*** ***A 63 H 5/00 (2006.01)*** ***A 63 H 33/00 (2006.01)***

(45) Oversættelsen bekendtgjort den: **2021-05-25**

(80) Dato for Den Europæiske Patentmyndigheds
bekendtgørelse om meddelelse af patentet: **2021-03-03**

(86) Europæisk ansøgning nr.: **15701934.0**

(86) Europæisk indleveringsdag: **2015-01-09**

(87) Den europæiske ansøgnings publiceringsdag: **2016-11-16**

(86) International ansøgning nr.: **EP2015000029**

(87) Internationalt publikationsnr.: **WO2015104222**

(30) Prioritet: **2014-01-09 DE 102014000074**
2014-01-09 DE 102014000075
2014-01-09 DE 102014000076

(84) Designerede stater: **AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**

(73) Patenthaver: **Boxine GmbH, Grafenberger Allee 120, 40237 Düsseldorf, Tyskland**

(72) Opfinder: **STAHL, Marcus, Schlehenweg 37, 40468 Düsseldorf, Tyskland**
ARNOLD, Bernhard, Königsallee 59a, 40215 Düsseldorf, Tyskland
FAßBENDER, Patric, Geistenstr. 7, 40476 Düsseldorf, Tyskland

(74) Fuldmægtig i Danmark: **NORDIC PATENT SERVICE A/S, Bredgade 30, 1260 København K, Danmark**

(54) Benævnelse: **LEGETØJ**

(56) Fremdragne publikationer:
WO-A1-2008/013356
WO-A1-2011/093694
DE-A1- 19 929 404
DE-A1-102011 056 420
US-A1- 2004 214 642
US-A1- 2006 068 366

Description

The invention concerns a system with a toy for playing back music or a narrated story.

In practice, play-back devices for CDs are known that are developed in particular for children. They are designed not only with particular regard for ruggedness but also taking into account the design of the control elements so that they can be operated by children. The play-back devices are made such that they are particularly unbreakable since it can be anticipated that they will also fall from greater heights. The control elements are often made sufficiently large to make them easier for children to recognise and can be operated by smaller children who may not have completely strong fine motor skills. In practice, a disadvantage with these play-back devices is, amongst other things, the use of CDs. It has been shown that CDs are routinely scratched when they are handled by children. The result of this is that, even after a short time, CDs cannot be played back completely.

Furthermore, in practice MP3 players are known which are able to play a piece of music from the information stored in the MP3 player and without using CDs or similar media items. It has been shown, however, that in practice MP3 players are not designed to be used by children. Due to the associated danger of damage, it is rare that children are left alone to play with these MP3 players. In addition, experience has shown that, in order to play back a piece of music on an MP3 player, it is necessary to carry out a sequence of actions of control elements, in particular for the selection of the piece of music from the memory having a great number of pieces of music. It has become evident that this sequential set of operating steps cannot be carried out by younger children alone, particularly when they have not yet learned to read.

DE 10 2011 056420 A1 discloses a method for the management, safety and playing back of digital media as well as a device for carrying this out. The method uses a play-back object and a play-back device. The play-back object comprises an RFID identification tag which holds the information for the identification of a media file. The play-back device comprises an RFID-capable reading unit for receiving and reading the information contained on the identification tag, a memory for storing the media file, and a play-back unit for playing back the media file. The method comprises the steps of retrieving the information contained on the identification tag by the reading unit, identifying the media file, transferring the identified media file from a data server which stores the media file in readiness, storing the media file in the memory of the

play-back device and of playing back the media file through the play-back unit. In this process, the media file can be played back by the play-back unit only when the identification tag is located in the receiving area of the reading unit. The invention is characterised in that the media file is transferred in an encoded form and is stored encoded in the memory of the play-back object.

Against this background, the invention was based on the task of proposing a toy for playing back music or a narrated story which is particularly simple to operate. Furthermore, the intention is to propose a method of playing back audio information which is particularly simple to operate. The task is resolved by a system according to claim 1 and a method according to claim 10.

The basic thinking behind the invention is to use a sensor as a part of the toy, or device, which can detect, within an area of its surroundings, a property or a change in a property of said surroundings, and to provide a control unit which can undertake the desired driving when the sensor detects, within the area of its surroundings, a specific property or a specific change in a property of these surroundings. A device having this sensor and this control unit, as well as a method using such a sensor and such a control unit results in a particularly simple operation. In order to play back the desired information, or to run the software, according to the invention it is sufficient to provide the surroundings with a specific property detected by the sensor, or to carry out a change in the property of these surroundings detected by the sensor and therefore - in a particularly preferred embodiment of the invention – to directly cause the playing back of the desired information or the implementation of the software.

The simplified control concept proposed by the invention can be implemented particularly well in a toy for playing back music or a narrated story. It turns out, however, that the simplified control concept also offers advantages generally in devices for playing back audio information and even with devices for the playing back of pictorial, video or 3D information or in a device for executing software. In the following description – insofar as the characteristics in the playing back of pictorial, video or 3D information are not described or execution of software is not described explicitly or explicit characteristics which are relevant only in the playing back of audio information are described – the invention is described representing the further areas of application in using it as a toy, the playing back of pictorial, video or 3D information or the execution of software by means of the preferred area of application of the playing back of audio

information. Driving the display or the connection for the display is also intended therefore for the playing back of pictorial, video or 3D information for the area of application consisting of the playing back of pictorial, video or 3D information, insofar as the driving of the loudspeaker or the loudspeaker terminal is described in the following description. The driving of the processor to execute the software is intended as the application area consisting of the execution of software, insofar as the triggering of the loudspeaker or of the loudspeaker terminal is described in the following description. The toy represents a preferred embodiment of a device for playing back audio information, specifically in that the audio information it can play back can be in the form of music or a narrated story.

The device according to the invention and the method according to the invention – comparable to an MP3 players of the conventional kind – allow it to be used to play back audio information originating from information stored in the MP3 player. Therefore, the use of CDs is avoided in this manner. In addition, the invention simplifies the control concept of conventional MP3 players. Already the adjustment of a particular property, or of a particular change in a property in the surroundings of the sensor can, in a preferred embodiment of the invention, result in an immediate play-back of the audio information. Thus, the fiddly control concept is frequently omitted, in particular for children, in conventional MP3 players. As a result, the device according to the invention and the method according to the invention are particularly well suited for use as children's toys. The simplified concept also offers, however, the possibility of playing back audio information for adults in a particularly simple manner.

One area of application of the invention is the playing back of audio information, in particular of pieces of music, narrated texts or the combination of pieces of music and narrated texts. It is particularly preferred if these pieces of audio information play back for at least 10 seconds, preferably more than 15 seconds, particularly preferably more than 20 seconds and even more preferably more than 25 seconds. In a particularly preferred embodiment, provision is even made that the playing back the audio information can last for at least 30 seconds and, particularly preferably, more than one minute. For example, radio plays which are intended particularly preferably to be played back with the invention frequently last for more than 5 minutes, some even last up to 30 minutes and even more. With regard to the audio information played back according to the invention, it is not a question in particular of a confirmation signal. More particularly, with regard to the audio information played back according to the invention, it is not a question of an acknowledgement tone, which can be issued, for example, if a first

object had been adjusted correctly relative to a second object. Also, regarding the audio information, it is particularly preferably not a question of a jingle which is played back when a first object is brought near to a second object or is placed in a previously determined, specific position relative to the second object. The invention is concerned with the audio information whose length of play-back lasts longer than is the case with pieces of music or narrated texts. The audio information is particularly preferred where, when it is played back, a non-periodic series of different sounds is played back.

The loudspeaker of the device according to the invention which is particularly preferred is a transducer which can convert the electrical signals into mechanical vibrations (sound).

Instead of a loudspeaker, the device according to the invention can also have a loudspeaker terminal, such as a Speakon-, XLR connection or perhaps a 6.35mm jack. Whereas the control unit drives the loudspeaker terminal, with a loudspeaker connected to the loudspeaker terminal, it can also drive this loudspeaker. The loudspeaker terminal can also be a transmission unit which can communicate with a loudspeaker by radio waves, for example via Bluetooth or via a WLAN radio network. The particularly preferred form of communication with the loudspeaker by the transmission unit, however, is not by means of a WLAN radio network but by, for example, Bluetooth. Furthermore, the device can have a connection, compatible with a docking station of a smartphone, as a loudspeaker terminal or as a connection for the display to play back pictorial, video or 3D information. Docking stations for smartphones can be used for this because a loudspeaker or a display to play back pictorial, video or 3D information is triggered by control instructions from the smartphone. While the device according to the invention has a connection compatible with this type of docking station and, instead of the smartphone, is connected to the docking station, the control unit of the device according to the invention gets an opportunity to drive the loudspeaker connected to the docking station or to the display, connected to the docking station, to play back pictorial, video or 3D information. The docking station can be connected to the loudspeaker or the display to play back pictorial, video or 3D information via a cable. However, the docking station can perform wirelessly, such as through a link formed by a radio network, with the loudspeaker or the display to play back pictorial, video or 3D information. In the description below – insofar as the characteristics of the driving of a loudspeaker connection or a connection for a display for playing back pictorial, video or 3D information are not explicitly described - the invention is described as representing the further possibilities of driving a loudspeaker connection or a connection for a display to

play back pictorial, video or 3D information by means of the preferred application area, i.e. the driving of a loudspeaker. The control of a loudspeaker connection or a connection for a display to play back pictorial, video or 3D information is also meant for the application area of the control of a loudspeaker connection or connection for a display to play back pictorial, video or 3D information, insofar as control of the loudspeaker or of a display to play back pictorial, video or 3D information is described in the following description.

In a preferred embodiment, the device according to the invention has at least two loudspeakers so that it is possible to play back the audio information in stereo.

In the case of the device according to the invention, a sensor can be used which can detect a property within an area of its surroundings. Furthermore, a sensor can be used which can detect a change of a property of these surroundings within an area of its surroundings. Furthermore, a sensor can be used which can detect a property both within an area of its surroundings as well as a change in a property of these surroundings within an area of its surroundings.

As a property to be detected by the sensor in an area of its surroundings, according to the invention the presence of an electromagnetic wave preferably invariant with time regarding its properties is also understood as being in the area of the surroundings of the sensor or the presence of a structure, metallic for example, which affects a present electromagnetic wave. Embodiments are conceivable wherein the sensor is designed so that it can detect the presence of a specific electromagnetic wave, for instance an electromagnetic wave with a certain speed, certain intensity, certain wave impedance, certain wavelength and/or a certain frequency. The sensor can also be designed such that it can detect a structure which can affect a certain electromagnetic wave, such as an electromagnetic wave with a certain speed, certain intensity, a certain wave impedance, a certain wavelength and/or a certain frequency. If the sensor recognises this type of electromagnetic wave or a structure of this type, it can inform the control unit by a signal. Additionally or alternatively, the sensor can be designed such that it can measure the speed, the intensity, the wave impedance the wavelength and/or the frequency and is able to inform the control unit via a signal about the respective value of the detected quantity and/or the change in the respectively detected quantity. The electromagnetic wave recognised by the sensor is not an electromagnetic wave with a wavelength or frequency in the spectrum visible to the human eye, and/or from the infrared spectrum. The interaction detected by the sensor through a structure does not involve an electromagnetic wave with a wavelength or

frequency in the spectrum visible to the human eye, and/or from the infrared spectrum. The electromagnetic wave recognised by the sensor is not an electromagnetic wave of a WLAN radio network, in particular not a wave of a radio network meeting a standard in the IEEE-802.11 family. The interaction detected by the sensor through a structure does not involve an electromagnetic wave of a WLAN radio network, in particular does not involve a wave of a radio network meeting a standard in the IEEE-802.11 family.

It is particularly preferred if the change of a property of an electromagnetic wave is understood as the change detected by the sensor of a property of an area of its surroundings. Whereas the presence of a certain electromagnetic wave, preferably with respect to its temporally invariant properties, was described in the preceding section as the property of the area of its surroundings to be identified by the sensor, the possibility will be described below that an existing electromagnetic wave can be adapted and in doing so a change, detected by the sensor in a property of an area of its surroundings, is produced on whose base the control unit can drive the loudspeaker to play back the audio information. For example, an electromagnetic wave can be produced by a reading device to communicate with a passive RFID transponder and be changed thereby such that the passive RFID transponder is placed in one area of the surroundings of the reading device, in which its presence changes the electromagnetic wave. The change of the electromagnetic wave by the introduction of the RFID- transponder can be recognised by the sensor as the change of a property of one area of its surroundings. The possibility of recognising changes in an electromagnetic wave makes it possible for the invention to carry out the specific change, needed for driving the loudspeaker, of a property of one area of the surroundings of the sensors via a radio signal or a modulated wave. The electromagnetic wave, whose change is detected, is not an electromagnetic wave of a WLAN radio network, nor is it in particular a wave of a radio network according to a standard in the IEEE-802.11 family.

In a preferred embodiment, the sensor detects a property within an area of its surroundings or a change in a property within an area of its surroundings without having direct electrical contact with a structural element affecting the property or the change. In an additional or alternative embodiment, the sensor detects a property within an area of its surroundings or a change in a property within an area of its surroundings without having direct mechanical contact with a structural element causing the property or change. For the device according to the invention this offers the advantage that the playing back of the audio information can take place when

the operator adjusts only the property in the immediate surroundings of the device in a prearranged manner, or changes the property in the immediate surroundings of the device in a prearranged manner. Thus, there is no need for playing back the audio information to bring an object in a particular manner into contact with the device according to the invention to play back the audio information, for example by inserting a key device in a slot provided in the device or inserting, for example, a USB memory stick in a USB receptacle socket in a manner known in practice.

The device according to the invention and the method according to the invention can be constructed from their operating concept, that the sensor determines, or constructs a specific, real property or a specific change in this property, that the control unit recognises from the measurement signal supplied by the sensor that a specific property is present within the area of the surroundings of the sensor, or a specific change in a property is present. A modulated wave, in particular an electromagnetic wave, particularly an electromagnetic wave in the radio frequency range is to be understood as a property of the surroundings, or as a change in the property of the surroundings.

The possibility exists, therefore, for the device according to the invention, of determining the presence of a passive RFID transponder in a particular area surrounding the sensor and of then carrying out the playing back of the audio information, for example, if an RFID transponder is in the area surrounding the sensor or to play back the audio information if a particular RFID transponder is determined to be in the sensor's surroundings. Likewise, a preferred embodiment provides that the property to be determined by the sensor in the area of its surroundings, or the change determined by the sensor in the property of the area of its surroundings is induced by an active RFID transponder.

An identification is particularly preferred which is transferred by means of the electromagnetic wave with which the control unit can identify a data set stored in a memory of the device according to the invention or on a server and, based on the data set, is able to drive the loudspeaker to play back the audio information. In the preferred embodiment, the aim is to ensure that the electromagnetic wave makes a data set identifiable, for example by transmitting an identification but not transmitting the data set itself.

Thus the sensor is a reading device to communicate with a passive RFID transponder and/or to communicate with an active RFID transponder. In an alternative embodiment, the sensor has an antenna which can transmit or receive a modulated wave.

The device can have a support on which an item can be placed permanently wherein the sensor can determine, at least in an area above the support, a property or a change in a property of this area, and/or an attachment on which an item can be fixed permanently, wherein the sensor, at least in an area adjacent to the attachment, can detect a property or a change in a property of this area. Thus an item, such as an identification carrier, described in more detail later, is placed such that it is located in the identification range of the sensor, in which the sensor can determine a property or a change in a property of this area. The advantage of this is that the item can remain in the identification range without the item or the device having to be restrained permanently by a user. The restraint can be affected by, for example, a suspension, click, magnetic, or turning mechanism or in some other manner.

The control unit of the device according to the invention can drive the loudspeaker to play back the audio information if the sensor determines within the area of its surroundings a specific property or a specific change in a property of these surroundings or the control unit determines a specific change in the property determined by the sensor. In a preferred embodiment, the sensor produces a signal with a value determined by the control unit if the sensor identifies a specific property or a specific change in a property within the area of its surroundings. It is conceivable, for example, that the sensor creates a signal that is sent to the control unit only if the sensor notices a specific property or a specific change in a property of these surroundings within the area of its surroundings. These types of embodiment cause the sensor to undertake the evaluation and only then either to send a signal to the control unit when it detects a specific property or a specific change in a property of these surroundings, or sends to the control unit a permanent signal with a particular value which is changed to another particular value, determined by the control unit, when the sensor determines a specific property or a specific change in a property of these surroundings within the area of its surroundings. Additionally or alternatively, it is conceivable that the control unit undertakes the evaluation. In this type of embodiment, the sensor sends a measurement signal constantly to the control unit. Then the control unit is urged thereby, possibly by depositing a table of values, from which its measurement signal is recognised by the sensor whether a specific property or a specific change in a property exists within of the area of the surroundings of the sensor. Here, a change in the

property of the sensor's surroundings is understood to be not only the one-time appearance of a particular change, such as the one-time appearance of a change in the field direction of the magnetic field in the surroundings of the sensor in a specific direction, but also a time-based succession of properties in the area of the sensor's surroundings, or a specific succession of changes in the properties of the sensor's surroundings or, for example when it is a case of selecting modulated waves or when evaluating electromagnetic waves.

In a preferred embodiment, the control unit drives the loudspeaker to play back the audio information only when the sensor detects a specific change in a property of these surroundings in the form of a particular succession of changes in the properties within the area of its surroundings, or if the control unit detects a specific change in the property detected by the sensor in the form of a particular succession of changes in the properties. This succession of changes can take the form of a string. This string, for example, can contain information at a particular place about the audio information to be played back and at another particular place an identifying word which can function as a protection against copying or for authentication. Depending on the type of string, if the succession of changes does indeed contain the information about the audio information to be played back but not the identifying word, the control unit will not drive the loudspeaker. As an alternative to the identifying word, the string can also be a sequence of commands of a programme (of software) executable by the control device for verification.

In one embodiment, in addition to driving the loudspeaker to play back the audio information, the control unit can also change the way in which the audio information is played back, for example the volume of the play back if the sensor detects a specific property or a specific change in a property of its surroundings within of the area of its surroundings or if the control unit detects a specific change in the property detected by the sensor. The control unit can drive the loudspeaker in this manner, depending on the angle at which an identification carrier is located relative to the sensor. For example, the play back volume can be adjusted by changing the angle.

The device has a memory in which data is stored by means of which the control unit can drive the loudspeaker to play back the audio information. It is particularly preferred if the data contains the audio information in a particular data format, such as an MP3 format or a WAV format. Data for different items of audio information are stored in the memory. The control

unit is designed such that, when the sensor detects a specific first property or a specific first change of a property of these surroundings within of the area its surroundings or the control unit detects a specific first change of the property detected by the sensor, it drives the loudspeaker to play back a first piece of audio information, which lasts for at least 10 seconds, while the control unit drives the loudspeaker to play back a second piece of audio information, the playback of which lasts for at least 10 seconds, if the sensor detects a specific second property or a specific second change of a property of these surroundings within of the area its surroundings or the control unit detects a specific second change in the property detected by the sensor. By doing so, it is possible to determine, by specifically influencing the property of the area of the sensor's surroundings or specifically influencing the change in the property of these sensor's surroundings, which audio information out of a plurality of pieces of audio information the device will play back. For example, the device may play back a specific first piece of audio information if the presence of a first RFID transponder is detected in the area of the sensor's surroundings, whereas the device may play back a second piece of audio information if the presence of a second RFID transponder is detected in the area of the sensor's surroundings.

In a preferred embodiment, the data for a piece of audio information are stored as a data set with separately readable data sequences in order, for example, to play back an audio book in the form of individual chapters, or to be able to select the individual chapters of an audio book. Each data sequence of a data set can be read out separately in one preferred embodiment and can be used to drive the loudspeaker.

In a preferred embodiment, the device has a unit for receiving data from the Internet and/or for transmitting data to the Internet, particularly preferably an antenna for a Wireless Local Area Network (WLAN), a mobile radio data transmission technology such as LTE, UMTS or their predecessors or successors or a connection socket for a connection with local network wiring which has an Internet access, such as a connection socket for an Ethernet cable. Because of the presence of a unit to receive data from the Internet, it is possible for the control unit to download the data from the Internet containing the audio information to be played back in a particular data format. Accordingly, the device can play back audio information in this manner which was not stored in the device before the sensor detects a specific property or a specific change in a property of these surroundings within of the area of its surroundings or the control unit detects a specific change in the property detected by the sensor. Thus, the control unit can be

designed such that it receives the data from the Internet and stores it permanently in a memory and the loudspeaker can be driven to play back the audio information based on the data stored in the memory. In addition, it is conceivable that the control unit uses the data received from the Internet directly in order to drive the loudspeaker to play back audio information (so-called streaming), wherein this embodiment can also include the temporary buffering of the data deceived from the Internet in a cache memory.

In the case of embodiments which receive data containing the audio information in a particular data format from the Internet, it is, for example, conceivable that the control unit stores a specific server address of a server connected to the Internet in a memory and stores a table in a memory in which a respective specific property or a respective specific change of a property of a respective identification number is allocated. The control unit is then designed in one type of embodiment when recognising the particular property, or the particular change of the property, to communicate with the actual server, and, based on the identification number assigned to the particular property, or to the particular change of the property, to download a particular data set from the server and to use the audio information resulting from this data to drive the loudspeaker for playing back. For example, music tracks on the server can be stored as data in a particular data format wherein the particular music track, or the data containing this music track, are stored on the server under a particular identification code. In a preferred embodiment, the device according to the invention already contains an allocation table, which allocates specific properties, or changes of the properties of the area of the surroundings of the sensor to some, a majority or, in a preferred embodiment, all identification numbers, which can also be used in the server's database. Therefore the control unit is able to download specific data sets from the server. Alternatively it is conceivable that the control unit is designed such that information containing the identified specific property, or information containing the identified specific change of the property, is transferred to a particular server which is connected to the Internet. The allocation of the detected particular property, or of the detected particular change of the property to a piece of particular audio information can take place on the server. The control unit is then designed to receive data from the server containing the audio information to be played back. The server transmits the data to the device according to the invention, which it has allocated to the particular property transmitted to it by the control unit, or to the particular change to the property transmitted to it by the control unit. This embodiment avoids the need to keep an allocation table in the device according to the invention and therefore increases the flexibility in receiving specific data containing the audio information based on a

particular, identified property, or on a particular identified change of a property of the area of the surroundings of the sensor. This type of embodiment, for example, allows the number of datasets stored on the server to be increased without having to update an allocation table in the control unit of the device according to the invention.

In a preferred embodiment, the control unit is designed so that the loudspeaker is driven to play back the audio information directly. It is particularly preferable if no further start signals have to be applied to the control unit to drive the loudspeaker to play back the audio information. However, in doing so, it is conceivable that the control unit delays the driving of the loudspeaker to play back the audio information by the use of a delay element.

In a preferred embodiment, the device according to the invention has no control element with which an operator could affect the driving of the loudspeaker for playing back the audio information by the control unit if, within of the area of its surroundings, the sensor detects a specific property or a specific change of a property of these surroundings or the control unit detects a specific change of the property detected by the sensor. With this embodiment, it is conceivable that control elements are provided in order that other commands to the control unit, such as allowing the first-time driving of the loudspeaker to play back the audio information, for example control elements to adjust the volume of the playing back of the audio information over the loudspeaker.

According to the invention, control elements are provided during the playing back of audio information, which occurs due to data from a dataset with a separately readable data sequence to be able to jump from a first chapter to the next chapter. Also, it is conceivable with this embodiment that a control element is provided with which an operator, after the first driving of the loudspeaker to play back the audio information by the control unit can interrupt the play back. In a preferred embodiment however, an control element is indeed provided. However, in this embodiment, the control unit can drive the loudspeaker to play back the audio information by itself since the sensor detects a specific property or a specific change of a property of these surroundings within of the area of its surroundings and without the user having to use the control element.

In an alternative embodiment, the device has an control element, and the control unit is designed such that it drives the loudspeaker to play back the audio information only when the

control unit receives a predetermined signal from this control element. For example, this control element can provide the starting command to drive the loudspeaker to play back the audio information. In a particularly preferred embodiment, this starting command, however, is the only starting command needed to start the driving of the loudspeaker to play back the audio information. With this embodiment it is particularly preferred if no provision is made wherein other command signals with this or another control element is produced which has to be supplied to the control unit before the latter has driven the loudspeaker to play back the audio information. It is particularly preferred if no control elements are provided with which a data set is selected to perform the play back from a large amount of data for audio information stored in a memory of the device. With this embodiment, the replayable data set is particularly preferred simply based on the particular property detected by the sensor, or on the particular change detected by the sensor in the property of the area of the surroundings of the sensor or based on the particular change determined by the control unit of the property detected by the sensor. This type of embodiment simplifies the service particularly compared with MP3 players known in the prior art wherein, in order to play back a particular piece of audio information, the audio information must firstly be selected from a list.

In a preferred embodiment, the control unit can be designed such that it interrupts the driving of the loudspeaker to play back the audio information as soon as the sensor no longer detects that the specific property or the specific change the property is within of the area its surroundings, or the control unit no longer detects the specific change of the property detected by the sensor. Particularly preferably, the interruption can be immediate, time-delayed or effected by a gradual reduction in the volume. In doing so, for example, this can happen if an RFID transponder used in a preferred embodiment is removed from the area of the surroundings of the sensor, thus interrupting the playing back of the audio information. Alternatively it is conceivable to design the control unit such that the play back the audio information continues even if the sensor no longer detects the specific property or the specific change the property within of the area of its surroundings, or the control unit no longer detects the specific change in the property detected by the sensor.

In a preferred embodiment, the device has an antenna for a Wireless Local Area Network (WLAN) which can be switched off. There may be an interest in reducing electromagnetic waves in the child's surroundings particularly if the device according to the invention to play

back the audio information is to be used by children. In these circumstances, it may be advisable to switch off the WLAN antenna.

In a preferred embodiment, the device according to the invention is cube-shaped in design. The device according to the invention can also have other shapes, such as spherical or can be shaped, for example, in the form of larger objects particularly preferred by children, such as in the shape of a ship, a locomotive, a house or an animal such as an elephant.

In a preferred embodiment, the device has a receptacle for an identification carrier which is visual, tactile and/or is made to be recognisable by a deposition or removal on a part of the outer surface, for instance a depression or a raised area. In a preferred embodiment, the device provides that the identification carrier is removably attached mechanically or magnetically. As described below in more detail in connection with the system according to the invention, it is particularly preferred if the device according to the invention is used as part of a system wherein the device interacts with a identification carrier wherein the identification carrier has a property which the sensor can detect when it is located within of the area of the surroundings of the sensor, or the identification carrier changes a property the surroundings of the sensor and the sensor is able to detect this change. If the device according to the invention is designed with a marked receptacle, it is possible to position the identification carrier in this receptacle. By providing a receptacle, an area can also be delineated within which the sensor can be designed to detect a specific property or a specific change of a property in this area of its surroundings. By providing a receptacle, the device according to the invention is designed, in a preferred embodiment, such that the sensor can detect the property of its surroundings in the area of the receptacle only or can detect the change of a property of these surroundings in the area of the receptacle only. This, therefore, excludes the possibility of an undesirable operating error. In the case of the system according to the invention described in more detail below, the sensor can even be designed such that the control unit drives the loudspeaker to play back audio information only if the identification carrier is positioned in the receptacle.

In a preferred embodiment, the device has a control element in the form of a rocker switch with which the volume of the play back the audio information can be influenced, wherein the rocker switch in a first position sends a first signal to the control unit, such as a signal to increase the volume of the play back the audio information, and the rocker switch in a second position sends a second signal to the control unit, such as a signal to reduce the volume of the playing back of

the audio information. Furthermore, this type of rocker switch can have a middle position in which no signal affecting the volume is sent to the control unit. Alternatively, it is conceivable that the device has a first control element, with which signals to increase the volume of the playing back of the audio information can be transmitted to the control unit, and the device has a second control element with which signals to lower the volume of the play back the audio information can be sent to the control unit. In a particularly preferred embodiment, the control element affecting the increase in the volume is designed to be larger than the control element affecting the reduction in volume of the playing back of the audio information. In a particularly preferred embodiment, both control elements have the form of ears which are attached to a housing of a base body of the device, for example projecting from the housing. The ear-shaped control elements can emit the signal generated by them to affect the volume of the playing back of the audio information by performing a pressure movement or a twisting movement. This has the advantage that the user can recognise the function of the control element without relying on language skills.

In a preferred embodiment, the device according to the invention has a display. In particular, this display can be an E ink display. The display can also be a touch-sensitive display. In addition or alternatively, the device can have one LED or a sequence of LEDs.

In a preferred embodiment, the device has a proximity sensor, a movement sensor (accelerometer), a sensor for ambient light, a moisture sensor, an inclinometer, a GPS sensor and/or a gyroscopic sensor. Sensors of this type allow other commands to be created for the control unit. For example, a device of this type can be designed to detect shaking from which a control signal is created for the control unit. For example, shaking the device can be used to play back data about different pieces of audio information in a random order. Also, a device so designed will detect whether the device has been tapped lightly from the left or from the right. This can be used, for example, within a data set to jump to the next chapter or to a previous chapter. Also, a device thus designed will recognise whether it has been thrown. Here also, control signals can be generated.

In a preferred embodiment, the device has a sensor which can generate a signal depending on the gap between an object placed in an area of the receptacle and the receptacle, such as an ultrasonic sensor. Thus it is possible, in a preferred embodiment of the device, to make the driving of the loudspeaker dependent on this signal, for instance on whether the object touches

or almost touches the receptacle. Furthermore, this enables, in an additional or alternative embodiment, other commands to be created to change the gap. For example, a short removal and replacement of the object can be used to jump to the next chapter within a data set.

A device thus orientated can detect whether it is tilted vertically or tilted horizontally. Also, these signals can be used to create command signals for the control unit. For example, vertical tilting can be used for navigation within a play list, whereas horizontal tilting enables alternating between applications.

In a preferred embodiment, the device according to the invention has a data connection, such as a USB connection. Using this type of connection, it is possible, for example, that a memory provided in a preferred embodiment as a part of the device can have data containing audio information. It is also possible that the device according to the invention can be connected via this type of connection to a computer, for example, to configure the software in the device.

In a preferred embodiment, the device is encapsulated with foam plastic or with another elastic material. It is particularly preferred if the device according to the invention is encapsulated completely with foam plastic or with another elastic material, or, in the case of an embodiment with a display, encapsulated with foam plastic or with another elastic material except for the area of the display. On the one hand, the encapsulation protects the other structural elements of the device. On the other hand, the encapsulation protects children from injury.

In a preferred embodiment, the device according to the invention has an energy storage unit, in particular a battery, wherein a rechargeable battery is especially preferred. In a preferred embodiment, the device according to the invention is designed such that the battery can be recharged wirelessly, for example by means of inductive energy transmission. This offers the advantage that the charging station can be designed so that it is child-proof, such as in the shape of a charging tray in which the device according to the invention has to be placed by itself when being charged. This avoids children having to handle electrical cables to charge the battery for the device according to the invention.

In a preferred embodiment, the device according to the invention can emit light, so as to function, for example, as a night light.

In a preferred embodiment, the device according to the invention has a housing in which the sensor is arranged in such a way wherein the area of the surroundings of the sensor in which the sensor can detect a property or a change of a property of these surroundings is no further than 1m, particularly preferably no further than 150mm, particularly preferably no further that 100mm, particularly preferably no further than 50mm, particularly preferably no further than 10mm, particularly preferably no further than 5mm extending out over an outer surface of the housing. This offers the advantage that the property, or the change in the property, which the sensor is supposed to detect so that the control unit drives the loudspeaker to play back the audio information, is recognised in only a narrow area around the housing of the device. This avoids operating errors.

In a preferred embodiment, the device is made from material which is not flammable or is fire-resistant.

In a preferred embodiment, the device has a microphone or a connection for incoming audio signals, for example from a microphone. This enables the device to be controlled by voice or to enable recordings to be made.

It is particularly preferred if the device can be linked via a WLAN antenna to a Wireless Local Area Network and can receive control commands via the WLAN antenna, controlled, for example, by a smartphone or a PC. In a preferred embodiment, these control commands are not control commands with which users can influence the beginning of the play back the audio information. Also, the device according to the invention can be designed to be operated remotely.

In a preferred embodiment, the device according to the invention has a camera. If the device according to the invention is designed, for example, as a night light, then the camera can assume a monitoring function for the child lying next to the device while the camera can be controlled, for example, by a smartphone and the photo taken by the camera can be played back on a display such as a TV, a smartphone or another mobile display. In addition or alternatively, the audio information acquired by a microphone or recorded through a connection, can be played back in this manner through a loudspeaker or smartphone.

Also, it is possible that a device connected via a WLAN antenna to a Wireless Local Area Network transfers the audio information to be played back to another participant in the network, such as streaming to a TV or to another loudspeaker.

In a preferred embodiment, the operating system of the control unit is Firefox OS. In a preferred embodiment, the operating system of the control unit can be updated.

In a preferred embodiment, the control unit is designed to provide information about the driving of the loudspeaker and to document, such as the frequency with which specific audio information had been played back or the order in which specific audio information had been played back. It is particularly preferable if the device is designed to communicate this type of information to a server.

In a preferred embodiment, the device has means to supply current to an identification carrier described later, preferably without an electrical contact, but by induction, for example.

The system according to the invention has a device according to the invention and an identification carrier wherein the identification carrier has a property which the sensor can detect if the identification carrier is located within the area of the surroundings of the sensor, or the identification carrier changes a property of the surroundings of the sensor. The basic idea of the system according to the invention is that the control unit drives the loudspeaker to play back audio information when a specific identification carrier is introduced into the area of the sensor's surroundings in which the sensor can detect a property, or a change in a property. In doing so, in a particularly preferred embodiment however, the introduction of the identification carrier into this area is supposed to drive the loudspeaker to play back the audio information without other operating commands having to be created.

This basic concept of the system according to the invention simplifies considerably the operation of devices to play back audio information. It is no longer necessary to have CDs which can be scratched, which is inevitable in the case of CD players known in practice, or to learn the complex operating sequences of control elements of MP3 players known from practical experience as being required to drive the loudspeaker to play back audio information. In the simplest embodiment of the invention, it is sufficient for the identification carrier to stay in the area of the surroundings of the sensor in which the property or a change in the property

can be detected, thus automatically driving the loudspeaker to play back the audio information by the control unit.

In a preferred embodiment the identification carrier has an RFID transponder or an antenna, with which a modulated wave can be emitted and/or received. Thus the identification carrier according to the invention can be designed, for example, such that it can communicate with the device according to the invention via the Bluetooth standard or via the NFC standard. In particular, the use of these technologies allows for a variety of communication possibilities between the identification carrier and the device. In particular, the use of these technologies allows the recognition of a variety of identifiers. As a result, it is possible for the device according to the invention to select the audio information that is to be played back from a variety of pieces of audio information, for example, if each piece of audio information gets its own identification, for example in an allocation table stored in the device according to the invention or on a server.

Alternatively it is conceivable that the identification carrier has a magnet, for example, which produces a magnetic field of a particular strength when the identification carrier is introduced into the area of the surroundings of the sensor. Also a magnet can be used to create a magnetic field which weakens from a preferred direction.

In a preferred embodiment, the identification carrier has a magnet, and the device has a surface to which the magnet can adhere. Alternatively, the device can have a magnet and the identification carrier can have a surface with which the identification carrier can adhere to the magnet. Thus the device and the identification carrier can be releasably connected together. This allows the device to move without the identification carrier having to leave a specific relative position relative to the device.

In a preferred embodiment, the identification carrier has the shape of a figure, in particular the shape of a human figure or of an animal figure or of a fantasy figure. Particularly preferably the identification carrier is in the shape of a figure with feet. In the case of an identification carrier, it is particularly preferable to have a figure with feet where the magnet in the feet of the figure is arranged so that the figure on the device according to the invention is able to stand up.

In a preferred embodiment, the identification carrier is designed as a type of figure but without a base on which the figure stands.

In a preferred embodiment, the identification carrier cannot be fixed mechanically with the device. It is particularly preferable for the device and the identification carrier not to have a plug and socket system with which the identification carrier with the device could be connected.

In a preferred embodiment, the identification carrier is designed such that the operator can associate himself/herself with a particular piece of audio information due to its shape, colour, surface structure and/or its material and that, when introduced into the area of the sensor's surroundings, in which the latter can be detected as a property or a change of a property of these surroundings, the loudspeaker is driven to play back audio information, whose content relates to that of the user. For example, it can be designed as a type of figure and the play back of audio information can be driven which is associated with the shape of the figure. For example, the figure can have the shape of Benjamin the elephant® and the played back audio information can be an audio story with Benjamin the elephant as the main figure. It is also conceivable that the identification carrier can be adapted individually. For example, the identification carrier can be designed as a figure which resembles the shape of a person in the immediate vicinity of another person and the played back audio information can be audio information of this previously recorded person. It is also conceivable that the identification carrier is in the shape of a person resembling a scientist, and the audio information has discovered details of the scientist. Furthermore, it is conceivable that the figure resembles a composer or performer, and the audio information contains details about this composer or performer. It is conceivable that an identification carrier releases the audio information about a piece of music, of a collection of music pieces (album) or a play list.

In an additional or alternative embodiment, the identification carrier is designed as an adhesive surface or module to which other objects can be attached.

In a preferred embodiment, the identification carrier is designed such that the data stored on it can be changed. In another preferred embodiment, the identification carrier is designed such that the data stored on it cannot be changed. In a further preferred embodiment, the identification carrier is designed such that the data stored on it can be changed once only and

afterwards not at all. In a preferred embodiment, an immediately changeable identification carrier is designed such that, by specific processing, it can become an identification carrier which cannot be changed, preferably so that it cannot be changed back into a changeable identification carrier. Preferably the processing can by a mechanical kind, possibly separating or connecting certain electrical wires. In additional or alternative embodiments, the processing can take place with visible light, with invisible electromagnetic waves (such as radio signals, ultraviolet light), with a magnetic, electrical and/or with a thermal impulse. In a preferred embodiment, the identification carrier is designed such that it can be secured with a click mechanism on or to other items, such as a figure. According to this procedure, the item can be regarded overall as an identification carrier. In a particularly preferred embodiment, the identification carrier is designed such that it can be made unchangeable by a mechanical operation which can be combined with the movement to operate the click mechanism to connect the identification carrier with an item, for example so that the operation can take place at the same time by clicking into the item.

In a preferred embodiment, the identification carrier is designed such that, by means of induction with a current, power can be provided to operate active electronic items. In a preferred embodiment, the identification carrier is designed such that it contains active electronic components which have a data memory. Preferably, this data memory is non-volatile. In a preferred embodiment, the data memory is designed such that it can provide an identifier and/or audio information, which can be the basis for changing the properties of the surroundings. While transferring audio information stored on the identification carrier to the device, the device is able to play back audio information which was not stored in the device before the sensor detects, within of the area of its surroundings, a specific property or a specific change of a property of these surroundings or the control unit detects a specific change in the property detected by the sensor. In a preferred embodiment, the identification carrier has active electronic components which are able to change properties of the surroundings which can be converted back into data by a sensor and by a control unit. In a preferred embodiment, the identification carrier has a processor. In a preferred embodiment, the identification carrier also has a data receiving unit.

Irrespective of the purpose, it can be advantageous for an identification carrier to also play back audio information. Generally an embodiment can be designed for storing and transmitting that in it has

- an antenna for electromagnetic waves,
- an active electrical component containing a non-volatile data memory with a storage capacity of at least 1 megabyte,
- a transmission unit which is designed such that it can transmit data from the non-volatile data memory via the antenna,
- an energy receiving unit which receives energy and can convert it into current in order to supply current to the data memory and the transmission unit so that a permanent energy storage unit is not required for the data transmission process, wherein the energy receiving unit is separate from the antenna,
- a control unit which is ready to read out data from the data memory and then transmits the data via the transmission unit.

Particularly preferably, the control unit indicates the readiness to read out data contactlessly as soon as the energy receiving unit has sufficient energy for it, and transmits data, when requested contactlessly, from the data memory via the transmission unit, either in part or totally. The aspects described above and subsequently of individual embodiments of an identification carrier can also be applied to a type of broadly available identification carrier wherein the respective processing or display of the data stored on the identification carrier supersedes the driving of a loudspeaker. In a preferred embodiment, the data memory has a storage capacity of at least 500 megabytes, 1 gigabyte or 4 gigabytes.

In a preferred embodiment, the identification carrier is designed such that it can create one specific property only or one specific change of a property of these surroundings only within an area of the sensor's surroundings and consequently can only cause the control unit to drive the loudspeaker to play back a particular piece of audio information. In this type of embodiment of the system, provision is made that additional identification carriers must be created or retained in order to play back additional audio information. Therefore, in this embodiment, the invention resolves the problem found time and time again in MP3 players of the prior art, of uniting as many functions as possible or as many piece of audio information as possible in a device so that individually they are retrievable via specific operating sequences but without adding further devices. Compared with these types of MP3 players, the system according to the invention in the embodiment described here is designed to be more elaborate since a large number of identification carriers have to be held in order to be able to play back a piece of audio information. However, it has been shown that there is a need for a simple operating concept wherein the number of identification carriers to be held is increased benefitting the

audio information assigned to the identification carrier. For example, this embodiment allows a toy system to be constructed wherein identification carriers designed in the shape of figures, each being suitable to identify respectively a specific piece of music associated with them or a specific narrated story associated with them, which by the driving of the toy's loudspeaker and by selecting the figure and due to the simple operating concept, allows in a preferred embodiment, the immediate playing of the piece of music or the narrated story as soon as the identification carrier has created, within an area of the sensor's surroundings, the one respective property or the one respective change of a property of this environment, the children can choose for themselves which piece of music or which narrated story should be played back. The , by the creation of the one respective property or the one respective change in a property of this environment can identify a data set with separately readable data sequences to play back the audio information, for example in order to identify through the one identification carrier a talking book in the form of individual chapters and to make the individual chapters of a talking book addressable, or to be able to identify the individual episodes of a running story or a serial.

Particularly preferably, the identification carrier has no control element with which the type can be influenced and with which the identification carrier can produce a property or only a change of a property of these surroundings within an area of the sensor's surroundings. This embodiment is particularly well suited for special applications in which the identification carrier is designed in such a manner that it can produce, within an area of the surroundings of the sensor, just one specific property or just one specific change of a property in these surroundings and therefore can only ensure that the control unit drives the loudspeaker to play back a particular piece of audio information. Additionally or alternatively, the identification carrier can have an control element with which, within the area the surroundings of the sensor, not only one but several specific properties or specific changes in a property of these surroundings can be produced which are detected by the sensor and, with the control unit, can change the type of play back of the audio information, such as the volume of the play back or control commands to select the next or previous chapter or piece of music. Thus, by operating the control element of the identification carrier, such as by rotating an arm or a head of an identification carrier designed as a figure, the type of play back of the audio information can be changed, such as the volume of the play back.

In a preferred embodiment, the identification carrier has no energy storage, particularly preferably no permanent energy storage such as a battery, nor particularly preferably any energy storage except for a condenser.

A method to play back audio information with a device with

- a loudspeaker or a loudspeaker terminal,
- a sensor, which, within an area of its surroundings, is able to detect a property or a change of a property in these surroundings,
- a flat surface on which an item can be placed permanently, wherein the sensor, at least in an area above the flat surface, can detect a property or a change of a property in this area, and/or a mount on which an item can be secured permanently, wherein the sensor can detect, at least in an area adjacent to the mount, a property or a change of a property in this area,
- a control unit,

wherein the control unit drives the loudspeaker or the loudspeaker terminal to play back audio information, whose play back particularly preferably lasts at least 10 seconds when the sensor, within of the area of its surroundings, detects a specific property or a specific change in a property of these surroundings or when the control unit detects a specific change in the property detected by the sensor.

A method to play back pictorial, video or 3D information is performed with a device with

- a display for pictorial, video or 3D information or a connection for a display of this type,
- a sensor, which, within an area of its surroundings, can detect a property or a change in a property of these surroundings,
- a flat surface on which an item can be placed permanently, wherein the sensor, at least in an area above the surface, can detect a property or a change of a property in this area, and/or a mount on which an item can be attached permanently, wherein the sensor, at least in an area adjacent to the mount, can detect a property or a change of a property in this area,
- a control unit,

wherein the control unit drives the display or the connection for the display to play back pictorial, video or 3D information when the sensor, within of the area of its surroundings,

detects a specific property or a specific change of a property in its surroundings or when the control unit detects a specific change in the property detected by the sensor.

A method to execute software with a device with

- a processor which can run the software,
- a sensor, which, within an area of its surroundings, can detect a property or a change in a property of these surroundings,
- a control unit,

wherein the control unit drives the processor to execute the software when the sensor, within of the area of its surroundings, detects a specific property or a specific change of a property of these surroundings or when the control unit detects a specific change in the property detected by the sensor.

The identification carrier is suitable for insertion with a device according to the invention in a system according to the invention or in a method according to the invention.

In the following, the invention is described in greater detail with the aid of one embodiment of the invention.

It shows, in:

Fig. 1

a perspective view of the device according to the invention for playing back audio information and

Fig. 2

a front view of a device according to the invention in Fig. 1 and a system according to the invention consisting of an identification carrier.

Fig. 1 shows the device according to the invention to play back audio information. The device 1 has a loudspeaker not shown in detail in the perspective view in Fig. 1. Furthermore, on its upper side 2, the device 1 has a recess 3. Inside the device 1, underneath the recess 3, a sensor (not shown in detail) is disposed which, within of the area of the recess 3, can detect a property or a change of a property in these surroundings, in particular can read out a passive RFID transponder (cf. Fig. 2). Furthermore, the device has a control unit (not shown in detail) which

can drive the loudspeaker to play back audio information when the sensor, within of the area of its surroundings, detects a specific property or a specific change in a property of these surroundings or the control unit detects a specific change in the property detected by the sensor.

The sensor is arranged inside the housing of the device 1 in such a manner that the area of the surroundings of the sensor, in which the sensor can detect a property or a change of a property of these surroundings, extends no further upwards than 100 mm beyond the surface area 4 of the recess 3.

The device according to the invention has a first ear-shaped control element 5 and a second control element 6, also ear-shaped. The control element 5 is designed to be larger than the control element 6. Both the control element 5 as well as the control element 6 can complete a tipping motion relative to the rest of the housing of the device 1 and can swing back to the basic position illustrated in Fig. 1.

Furthermore, the device 1 has a display 7.

Alongside the device illustrated in Fig. 1, the system illustrated in Fig. 2 has an identification carrier 8 designed in the shape of a figure. The identification carrier 8 designed as a figure has legs 9 and feet and no base to which the feet 9 would be firmly attached. Magnets (not shown in detail) are provided in the feet of the identification carrier 8 designed as a figure. These can co-operate directly with the magnets or metal objects underneath the floor area 4 of the recess 3 so that the identification carrier 8 can be releasably retained on the base plate 4 of the recess 3.

The operation of the system according to the invention takes place as follows:

Fig. 1 shows the device according to the invention in a basic condition in which it is not playing back any audio information in the embodiment shown here. The sensor monitors continually or periodically the area of the recess 3 to detect whether this area has a specific property or a specific change in a property. In the embodiment shown here, the sensor monitors the area of the recess 3 to detect whether a specific RFID transponder is introduced into the area of the recess. In the operating situation shown in Fig. 1 this is not the case so that the device 1 plays back no audio information.

Fig. 2 shows the operating situation in which the system according to the invention has been completed by adding the identification carrier 8. The identification carrier 8 is placed on the base plate 4 of the recess 3 and sticks there by means of the magnets provided in the feet of the identification carrier 8. The identification carrier 8 has an RFID transponder (not shown in detail). Because the identification carrier 8 had been introduced into the area of the surroundings of the sensor monitored by the sensor, this latter now has a specific property detected by the sensor. The sensor detects the presence of the RFID transponder in the identification carrier 8 and informs the control unit (not shown in detail) of this by means of a signal. On receiving this, the control unit commands the loudspeaker to play back audio information without having to activate another control element.

The sensor reads an identification from the RFID transponder of the identification carrier 8 and informs the control unit of this identification. Based on an assignment table stored in the control unit, the control unit allocates the identification read out by the sensor to a particular data set containing specific audio information in a memory (not shown in detail) of the device 1. Next the control unit commands the loudspeaker to play back the audio information stored in the particular data read out from the memory by the control unit. This audio information can consist of a piece of music whose play back time can last for at least 10 seconds.

Patentkrav

1. System med et legetøj til afspilning af musik eller en fortalt historie omfattende

- en højtaler eller en højtalerterminal,

- en sensor, der, inden for et område af sensorens omgivelser, kan fastslå en egenskab eller en ændring i en egenskab for omgivelserne, hvor sensoren er en læser til at kommunikere med en passiv RFID-transponder og/eller til at kommunikere med en aktiv RFID-transponder,

- en styreenhed, der kan udløse højtaleren eller højtalerterminalen til at afspille musik eller en fortalt historie, når sensoren, inden for området af sensorens omgivelser, fastslår en specifik egenskab eller en specifik ændring i en egenskab for omgivelserne, eller når styreenheden fastslår en specifik ændring i den egenskab, der er fastslået af sensoren,

og

- en identifikationsbærer, hvor identifikationsbæreren har en egenskab, som sensoren er i stand til at fastslå, når identifikationsbæreren befinder sig inden for området af sensorens omgivelser, eller identifikationsbæreren ændrer en egenskab for sensorens omgivelser, som sensoren kan fastslå i området af sensorens omgivelser, hvor identifikationsbæreren har en RFID-transponder eller en antenne og er i stand til at sende og/eller modtage en moduleret bølge,

kendetegnet ved, at

legetøjet omfatter en hukommelse, hvori der er lagret data, på basis af hvilke data styreenheden kan styre højtaleren til at afspille musik eller en fortalt historie, hvilke data til forskellig musik eller forskellige fortalte historier er lagret i hukommelsen,

hvor styreenheden er således designet, at, når sensoren fastslår en specifik første egenskab eller en specifik første ændring af en egenskab for omgivelserne inden for området af sensorens omgivelser eller styreenheden fastslår en specifik første ændring af den egenskab, der er fastslået af sensoren, styreenheden styrer højtaleren til at afspille et første musikstykke eller en første fortalt historie, hvor afspilningen varer i mindst 10 sekunder, mens styreenheden styrer højtaleren til at afspille et andet musikstykke eller en anden fortalt historie, hvor afspilningen varer mindst 10 sekunder, hvis sensoren fastslår en specifik anden egenskab eller en specifik anden ændring af en egenskab for omgivelserne inden for området af sensorens omgivelser, eller styreenheden fastslår en specifik anden ændring af den egenskab, der er fastslået af sensoren,

hvor

betjeningselementer er tilvejebragt til at springe fra et første kapitel til et næste kapitel

under afspilningen af musik eller en fortalte historie på basis af data fra et datasæt med adskilte læsbare datasekvenser.

2. System ifølge krav 1, kendetegnet ved en bæreflade hvorpå en genstand kan permanent anbringes hvor sensoren kan fastslå en egenskab eller en ændring af en egenskab mindst i et område over bærefladen, og/eller en befæstning, hvortil en genstand kan permanent fastgøres, hvor sensoren kan fastslå en egenskab eller en ændring i en egenskab mindst i et område stødende op til befæstningen.

3. System ifølge et af kravene 1 eller 2, kendetegnet ved, at sensoren har en antenne og er i stand til at sende og/eller modtage en moduleret bølge.

4. System ifølge et af kravene 1 til 3, kendetegnet ved, at styreenheden kan styre højtaleren eller højtalerterminalen direkte.

5. System ifølge et af kravene 1 til 4, kendetegnet ved et hus, hvori sensoren er tilvejebragt, hvor området af sensorens omgivelser, hvori sensoren kan fastslå en egenskab eller en ændring i en egenskab for omgivelserne, ikke strækker sig længere end 100 mm over husets overflade.

6. System ifølge et af kravene 1 til 5, kendetegnet ved, at der ikke er tilvejebragt et betjeningselement, hvormed en operatør kan indvirke på styringen af højtaleren eller højtalerterminalen ved starten af afspilningen af musikken eller den fortalte historie ved hjælp af styreenheden, hvis sensoren fastslår en specifik egenskab eller en specifik ændring i en egenskab for omgivelserne inden for området af sensorens omgivelser.

7. System ifølge et af kravene 1 til 6, kendetegnet ved et betjeningselement, og ved, at styreenheden alene kan styre højtaleren eller højtalerterminalen, ved, at sensoren fastslår en specifik egenskab eller en specifik ændring i en egenskab for omgivelserne inden for området for sensorens omgivelser og uden en operatør, der anvender betjeningselementet.

8. System ifølge et af kravene 1 til 7, kendetegnet ved, at legetøjet har et betjeningselement i form af en vippekontakt, hvorved volumenet af afspilningen af musikken eller den fortalte historie kan påvirkes ved, at vippekontakten sender et første signal til styreenheden i en første

position og vippekontakten sender et andet signal til styreenheden i en anden position

eller

legetøjet har et første betjeningselement, hvormed signaler om øgning af volumenet for afspilningen af musikken eller den fortalte historie kan sendes til styreenheden, og anordningen har et andet betjeningselement, hvormed signaler om sænkning af volumenet af afspilningen af musikken eller den fortalte historie kan sendes til styreenheden.

9. System ifølge et af kravene 1 til 8, kendetegnet ved, at styreenhedens operativsystem kan opdateres ved opdateringer.

10. Fremgangsmåde til afspilning af audioinformationer med et system ifølge et af kravene 1 til 9, hvori styreenheden styrer højtaleren eller højtalerterminalen til at afspille musik eller en fortalt historie, hvis sensoren fastslår en specifik egenskab eller en specifik ændring i en egenskab for omgivelserne, eller hvis styreenheden fastslår en specifik ændring i den egenskab, der er fastslået af sensoren inden for området af sensorens omgivelser.

11. Fremgangsmåde ifølge krav 10, kendetegnet ved, at afspilning af audioinformationerne varer i mindst 10 sekunder.

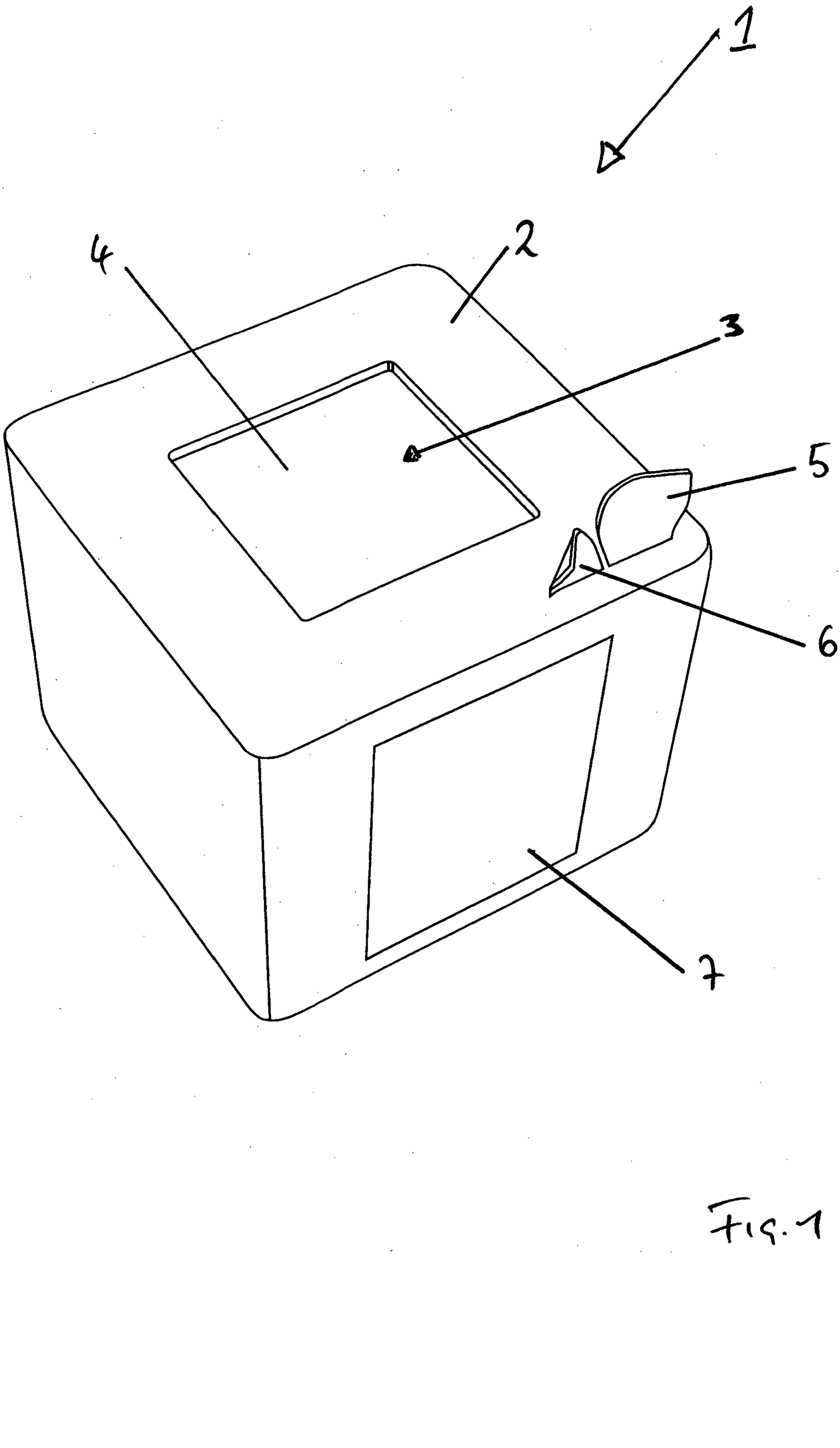

Fig. 1

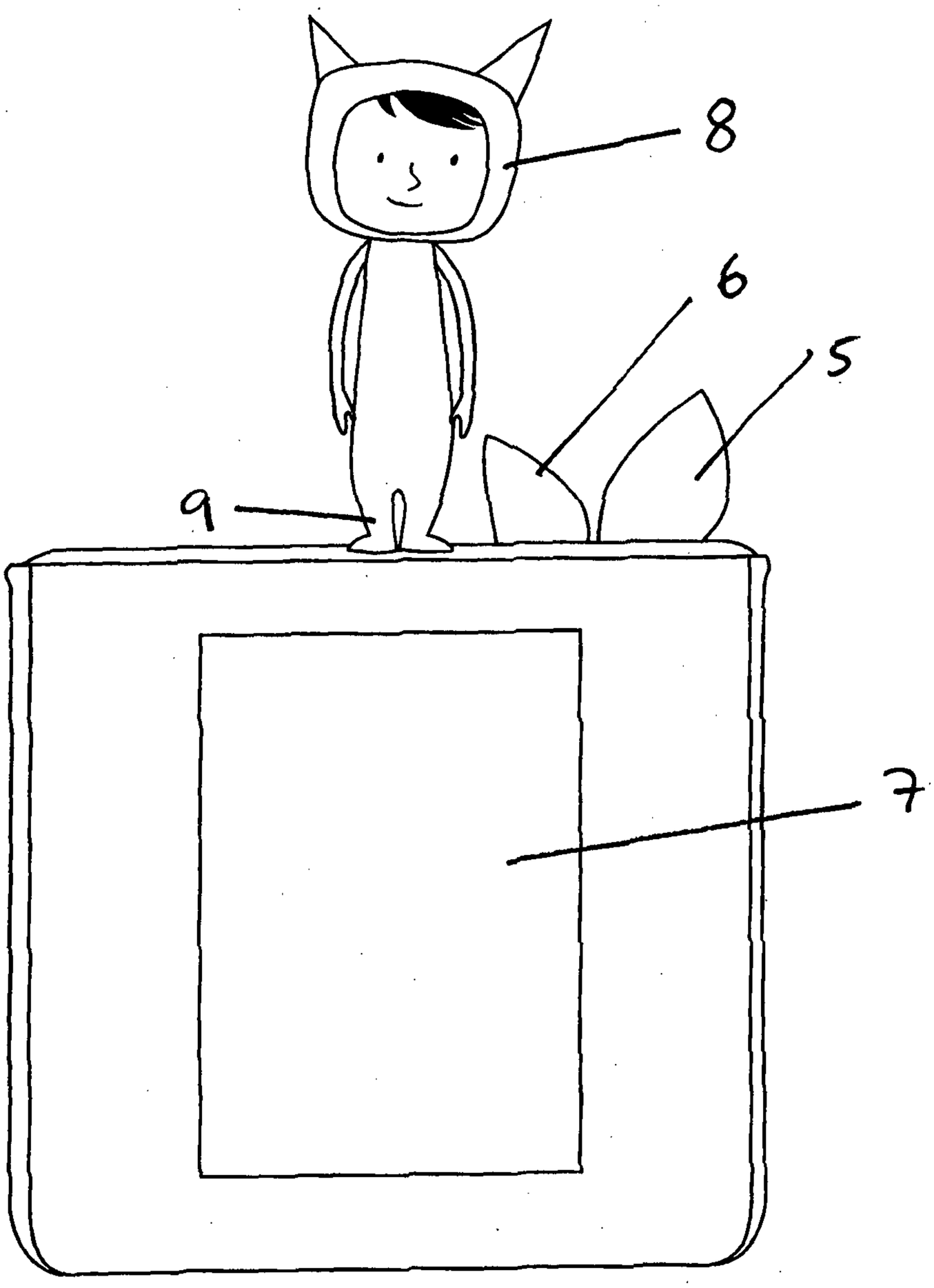

Fig. 2