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(54) Sound-controlled structure connectable to a multimedia player

(57) A sound-controlled structure connectable to a multimedia player (4) includes a sound-controlled mechanism (1) having a covering (11), an actuating unit (12), a sensing unit (13), and a power transmission unit (14); a container (2) connected to the covering of the sound-controlled mechanism with the power transmission unit extended into the container; and a connecting mechanism (3) received in the container and having at least one receiving slot (31). The connecting mechanism (3) has a processing unit (32) electrically connected to a connector (33) arranged in the receiving slot, a power cord (34), a jack (35) for the power transmission unit to plug in, a display unit (36), and two speakers (37). When a portable multimedia player is inserted in the receiving slot of the connecting mechanism to output image and sound, the sound-controlled mechanism (1) is brought to continuously act in response to the sound.

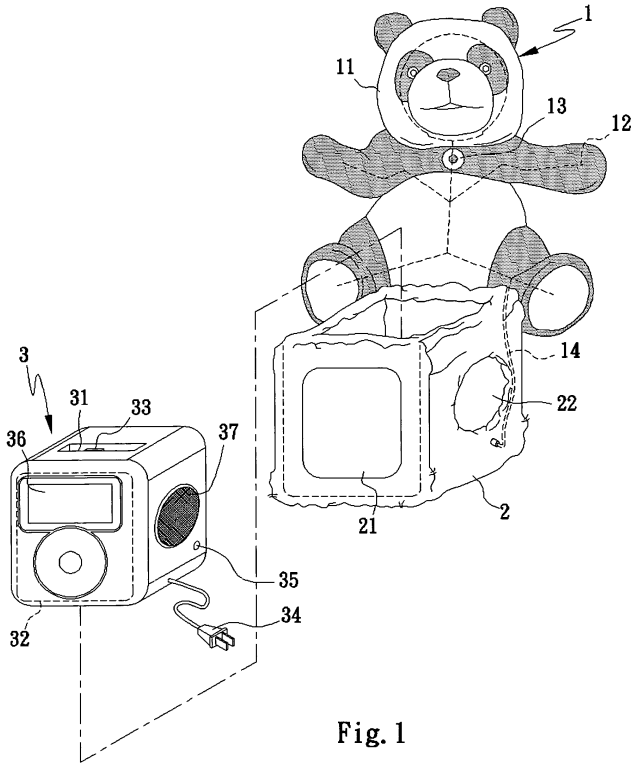

Fig. 1

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Description

Field of the invention

[0001] The present invention relates to a sound-controlled structure, and more particularly to a sound-controlled structure connectable to a portable multimedia player, so that the sound-controlled structure is continuously activated to act when the portable multimedia player operates to thereby create more fun.

Background of the invention

[0002] A conventional sound-controlled toy includes a covering, an actuating unit provided in the covering, a sensing unit located on an outer side of the covering and electrically connected to the actuating unit, and a battery electrically connected to the actuating unit. When the sensing unit receives an external sound signal, the actuating unit is enabled to drive the covering to act in response to the sound signal. That is, the sound-controlled toy is controlled by sound to act.

[0003] Since the sound-controlled toy is powered by a battery that can only provide limited power for the sound-controlled toy to act, it is impossible for the sound-controlled toy to continuously act for a long period of time. Even if a transformer may be used to provide the required power supply, the sound-controlled toy also relies on an external sound. In general, the sensing unit of the sound-controlled toy can only sense a relatively intense external sound signal to actuate the toy. In the event the intensity of the external sound signal is weak or unstable, the sensing unit will only receive an intermittent sound signal. Under this circumstance, the sound-controlled toy will act dully or discontinuously without the ability of attracting children.

Summary of the invention

[0004] A primary object of the present invention is to provide a sound-controlled structure connectable to a portable multimedia player, so that the sound-controlled structure continuously acts in response to sound output by the multimedia player to create more fun.

[0005] To achieve the above and other objects, the sound-controlled structure of the present invention includes a sound-controlled mechanism having a covering, an actuating unit provided in the covering, a sensing unit located on an outer side of the covering and electrically connected to the actuating unit, and a power transmission unit electrically connected at a first end to the actuating unit; a container connected to the covering of the sound-controlled mechanism with a second end of the power transmission unit extended into the container; and a connecting mechanism received in the container. At least one receiving slot is provided on one side of the connecting mechanism, and a processing unit is provided in the connecting mechanism. The processing unit is electrically connected to a connector arranged in the receiving slot, a power cord, a jack for the second end of the power transmission unit to plug in, a display unit provided on another side of the connecting mechanism, and two speakers located at two lateral sides of the connecting mechanism.

Brief description of the drawings

[0006] The structure and the technical means adopted by the present invention to achieve the above and other objects can be best understood by referring to the following detailed description of the preferred embodiments and the accompanying drawings, wherein:

[0007] Fig. 1 is an exploded perspective view of a sound-controlled structure according to an embodiment of the present invention;

[0008] Fig. 2 is an assembled perspective view of Fig. 1;

[0009] Fig. 3 shows the connection of a portable multimedia player to the sound-controlled structure of the present invention; and

[0010] Fig. 4 shows the sound-controlled structure of the present invention is activated when the portable multimedia player operates.

Detailed description of the preferred embodiments

[0011] Please refer to Figs. 1 and 2 that are exploded and assembled perspective views, respectively, of a sound-controlled structure connectable to a multimedia player according to an embodiment of the present invention. As shown, the sound-controlled structure includes a sound-controlled mechanism (1), a container (2), and a connecting mechanism (3).

[0012] The sound-controlled mechanism (1) includes a covering (11), an actuating unit (12) located in the covering (11), a sensing unit (13) located on an outer side of the covering (11) and electrically connected to the actuating unit (12), and a power transmission unit (14) electrically connected at a first end to the actuating unit (12). The covering (1) may be configured as an animal, a character, a plant, or a geometrical figure.

[0013] The container (2) is connected to the covering (11) of the sound-controlled mechanism (1) with a second end of the power transmission unit (14) extended into the container (2). A window (21) is formed on one surface of the container (2). In addition, two openings (22) are separately formed on two lateral surfaces of the container (2).

[0014] The connecting mechanism (3) is positioned in the container (2). At least one receiving slot (31) is provided on one side, such as a top side, of the connecting mechanism (3), and a processing unit (32) is provided in the connecting mechanism (3). The processing unit (32) is electrically connected to a connector (33) arranged in the receiving slot (31), a power cord (34), a jack (35) for the second end of the power transmission unit (14) to plug in, a display unit (36) provided on one side, such as

a front side, of the connecting mechanism (3) corresponding to the window (21) on the container (2), and two speakers (37) located at, for example, two lateral sides of the connecting mechanism (3) corresponding to the two openings (22) on the container (2).

[0015] Please now refer to Figs. 3 and 4. To actuate the sound-controlled structure of the present invention, first plug the second end of the power transmission unit (14) into the jack (35) of the connecting mechanism (3), and connect the power cord (34) of the connecting mechanism (3) to an indoor power socket (not shown), so that electric power is supplied to the sound-controlled mechanism (1) and the connecting mechanism (3). Then, put a portable multimedia player (4) in the receiving slot (31) on the connecting mechanism (3) with a mating connector (41) of the portable multimedia player (4) electrically connected to the connector (33) arranged in the receiving slot (31). Accordingly, when the portable multimedia player (4) operates to output image and sound, the output sound is played via the speakers (37) of the connecting mechanism (3). The portable multimedia player (4) in the receiving slot (31) may also be charged as necessary or used for signal transfer. When the portable multimedia player (4) operates, the sound output via the speakers (37) is received by the sensing unit (13). After receiving the sound, the sensing unit (13) actuates the actuating unit (12), bringing the covering (11) to act in response to the sound. In brief, when the portable multimedia player (4) operates, the connecting mechanism (3) cooperatively actuates the sound-controlled mechanism (1) to move, making the sound-controlled structure novel and interesting for use.

[0016] In addition to be powered via the power cord (34), the sound-controlled mechanism (1) may also be powered by one or more batteries (not shown) provided in the sound-controlled mechanism (1).

[0017] With the above arrangements, the present invention enables the sound-controlled mechanism (1) to continuously act in response to the sound output by a portable multimedia player (4) inserted in the connecting mechanism (3) positioned in the container (2) associated with the sound-controlled mechanism (1), making the sound-controlled structure of the present invention novel and attractive.

[0018] The present invention has been described with a preferred embodiment thereof and it is understood that many changes and modifications in the described embodiment can be carried out without departing from the scope and the spirit of the invention that is intended to be limited only by the appended claims.

Claims

1. A sound-controlled structure connectable to a multimedia player, comprising:

a sound-controlled mechanism including a covering, an actuating unit provided in the covering, a sensing unit located on an outer side of the covering and electrically connected to the actuating unit, and a power transmission unit electrically connected at a first end to the actuating unit;

a container connected to the covering of the sound-controlled mechanism with a second end of the power transmission unit extended into the container; and

a connecting mechanism received in the container and having at least one receiving slot provided on one side of the connecting mechanism, a processing unit provided in the connecting mechanism and electrically connected to a connector arranged in the receiving slot, a power cord, a jack for the second end of the power transmission unit to plug in, a display unit provided on another side of the connecting mechanism, and two speakers located at two lateral sides of the connecting mechanism.

2. The sound-controlled structure connectable to a multimedia player as claimed in claim 1, wherein the covering may be differently configured as an animal, a character, a plant, or a geometrical figure.

3. The sound-controlled structure connectable to a multimedia player as claimed in claim 1, wherein the container is provided on one surface with a window corresponding to the display unit on the connecting mechanism, and at two lateral surfaces with two openings corresponding to the two speakers of the connecting mechanism.

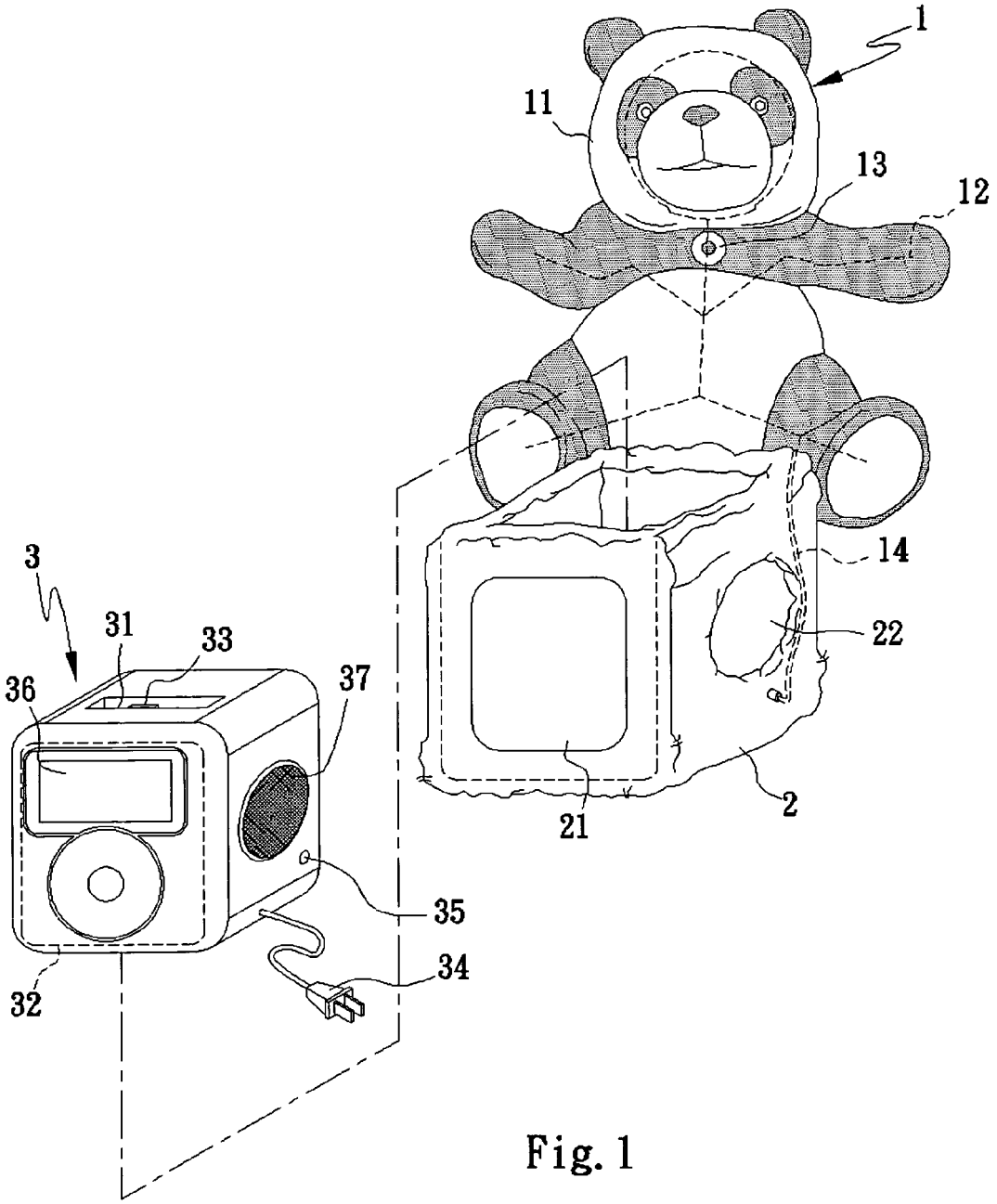

Fig. 1

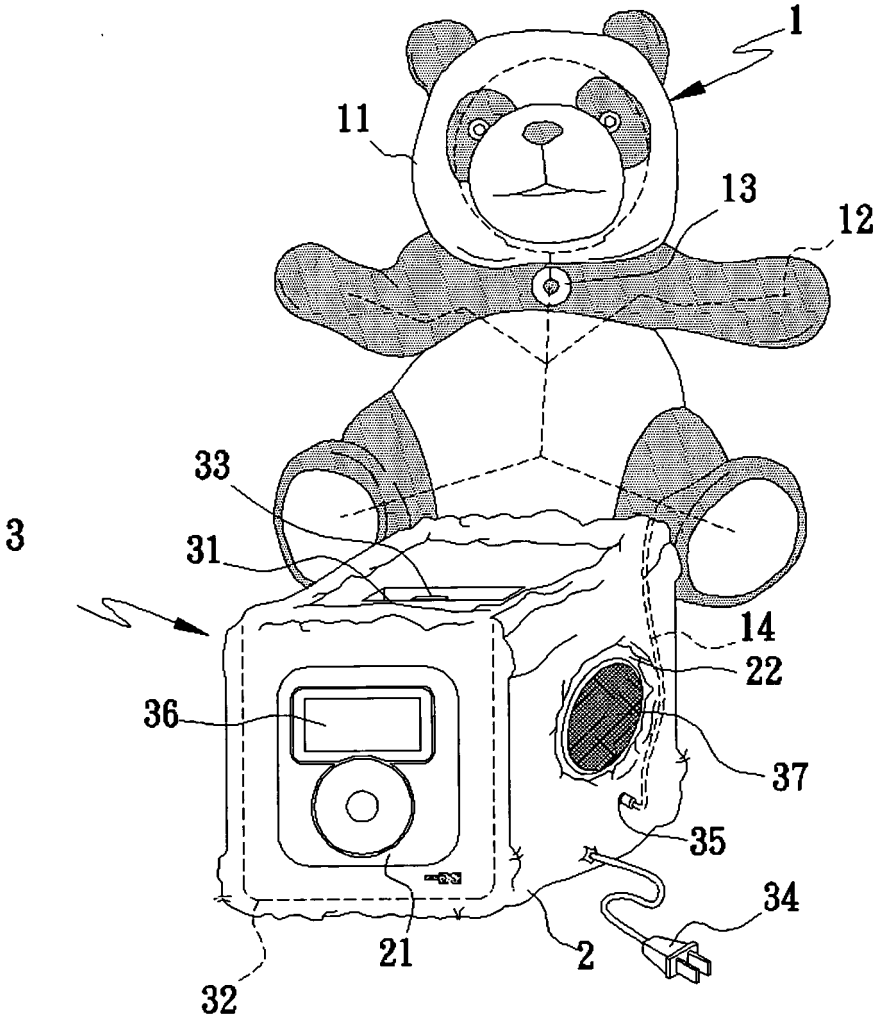

Fig. 2

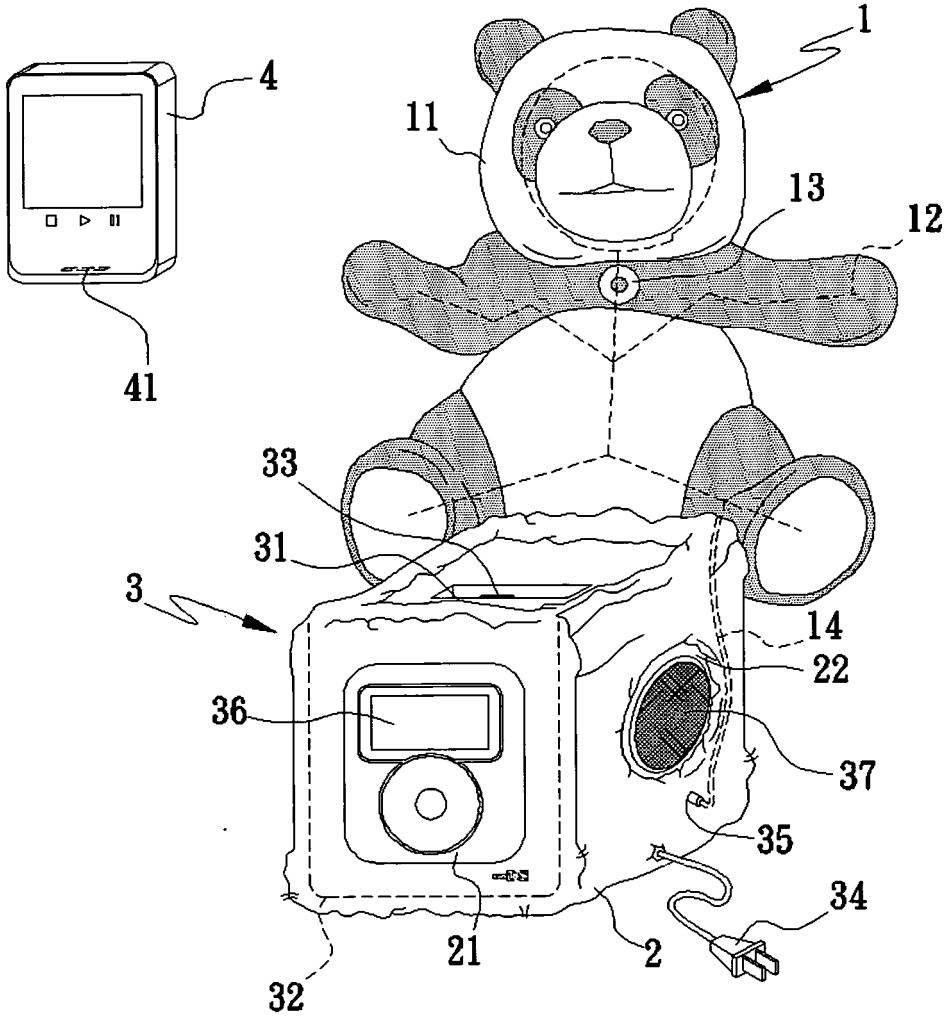

Fig. 3

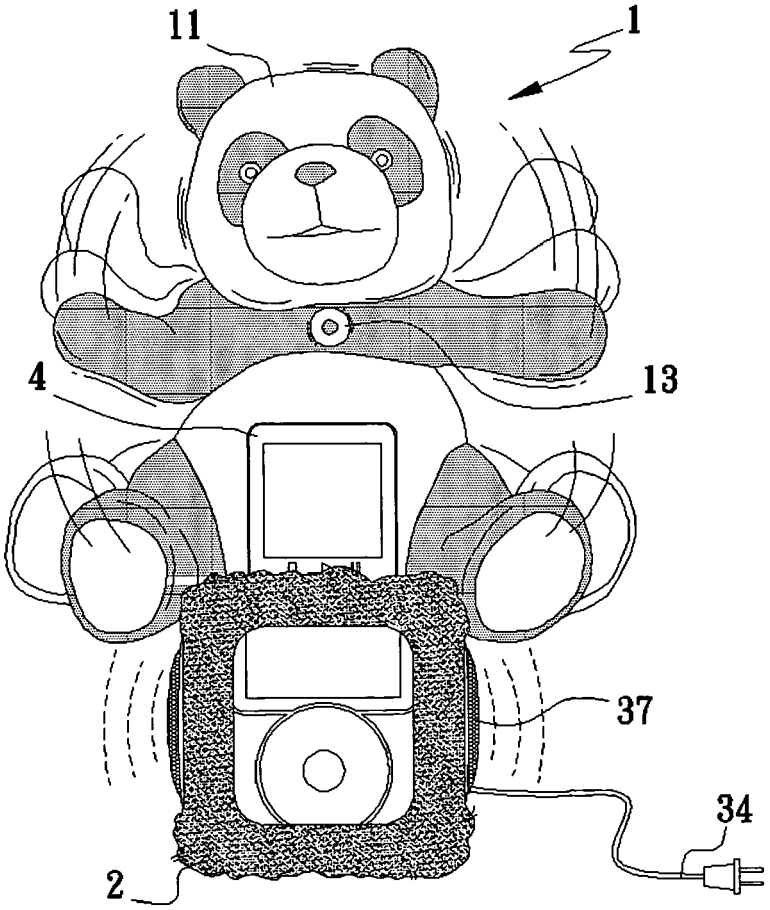

Fig. 4

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EUROPEAN SEARCH REPORT

Application Number
EP 08 01 7781

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	WO 2007/079187 A (KASH N GOLD LTD [US]; GOBINDRAM KASH [US]) 12 July 2007 (2007-07-12) * page 3, line 17 - page 8, line 1 * * figures 1-5 *	1	INV. A63H5/00 A63H13/00 A63H30/02 A63H3/28
A	US 4 640 034 A (ZISHOLTZ BARRY [US]) 3 February 1987 (1987-02-03) * figures *	1	
A	WO 2008/011340 A (NAPTOWN DREAMS LLC [US]; OSBORN KATHY [US]) 24 January 2008 (2008-01-24) * paragraph [0057] * * figures 1,2 *	1	
A	US 2007/060020 A1 (CIVETTINI ROBERT J [US] ET AL) 15 March 2007 (2007-03-15) * the whole document *	1	
A	GB 2 193 652 A (IWAYA KK IWAYA KK [JP]) 17 February 1988 (1988-02-17) * the whole document *	1	TECHNICAL FIELDS SEARCHED (IPC) A63H

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	26 February 2009	Turmo, Robert

CATEGORY OF CITED DOCUMENTS

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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26-02-2009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007079187 A	12-07-2007	NONE	
US 4640034 A	03-02-1987	NONE	
WO 2008011340 A	24-01-2008	US 2008016624 A1	24-01-2008
US 2007060020 A1	15-03-2007	NONE	
GB 2193652 A	17-02-1988	JP 1744837 C	25-03-1993
		JP 4034429 B	05-06-1992
		JP 63009473 A	16-01-1988
		KR 900007158 Y1	06-08-1990
		US 4795395 A	03-01-1989

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