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(72) Inventor; and

(71) Applicant: SNIR, Itshak [IL/IL]; Moshav Menucha 67,
7953500 Moshav Menucha (IL).

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(54) Title: URINATING GUIDING ACCESSORY

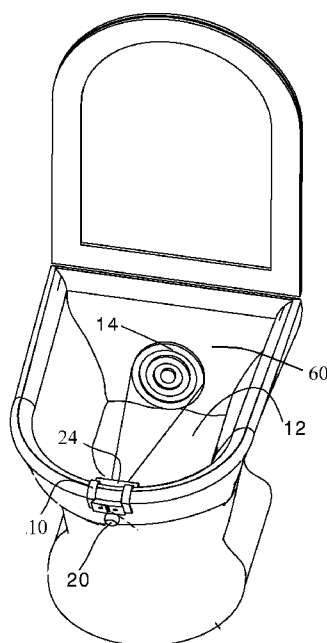


FIG 1

(57) Abstract: A urinating guiding accessory (10), including: a projector (24), being disposed on a rear (64) top (66) of a toilet bowl (12), and directed towards a front internal wall (60) of the bowl (12), for projecting a guiding picture (14) onto the front internal wall (60) of the bowl (12); and a sensor (20), being disposed on the rear top of the toilet bowl (12) and directed outwards back (70) the toilet bowl (12) towards the user (50), for sensing the user's position, for controlling the guiding picture (14) accordingly.



TITLE**URINATING GUIDING ACCESSORY**

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TECHNICAL FIELD

The invention relates to the field of urinating training.

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BACKGROUND

There is a long felt need to provide a solution to train a new user, such as an infant, correct standing urinating.

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SUMMARY

A urinating guiding accessory, including: a projector! and a sensor, for controlling the guiding picture.

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BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 depicts a urinating guide according to one embodiment of the invention.

Fig. 2 is a top view, for explaining the determination of the sensor of Fig. 1 according to the location of the user.

25 Fig. 3 is the top view of Fig. 2 in case the user is located right to the center.

Fig. 4 is the top view of Fig. 2 in case the user is located left to the center.

Fig. 5 is the top view of Fig. 2 in case the user is disposed rotated.

5 Fig. 6 is the top view of Fig. 2 in case the user is disposed rotated to the other direction.

Fig. 7 shows the accessory from another angle of view.

Fig. 8 shows the accessory of Fig. 1 only.

Fig. 9 shows the accessory from another angle of view.

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DETAILED DESCRIPTION

Fig. 1 depicts a urinating guide according to one
15 embodiment of the invention.

A urinating guide 10 according to one embodiment of the invention, is intended to be disposed on a wall top of a toilet's bowl 12; and includes a projector 24, for producing a picture 14; and a sensor 20, for controlling the content of picture 14,
20 according to the position of the user.

Fig. 2 is a top view, for explaining the determination of the sensor of Fig. 1 according to the location of the user.

In case the user 50 is located against sensor 20, projector 24 produces a picture recommending the current position of the user.

Fig. 3 is the top view of Fig. 2 in case the user is located
5 right to the center.

In case the user 50 is located right (52A) to the center 62, i.e. right to sensor 20, projector 24 produces picture 14, instructing the user to move left (54A).

Fig. 4 is the top view of Fig. 2 in case the user is located
10 left to the center.

In case the user 50 is located left (52B) to the center, i.e. left to sensor 20, projector 24 produces picture 14, instructing the user to move right (54B).

Referring again to Fig. 2, in case the user 50 is located
15 parallel to sensor 20, projector 24 produces an OK picture.

Fig. 5 is the top view of Fig. 2 in case the user is disposed rotated.

In case the user 50 is disposed rotated, projector 24 produces a picture, instructing the user to rotate to the other
20 direction.

Fig. 6 is the top view of Fig. 2 in case the user is disposed rotated to the other direction.

In case the user 50 is disposed rotated to the other direction, projector 24 produces a picture, instructing the user to rotate thereagainst.

Fig. 7 shows the accessory from another angle of view.

5 Projector 24 and as well sensor 20 are disposed on the rear 64 of toilet bowl 12 at the top 66 thereof. Projector 24 is directed to the front 68 of the bowl, and sensor 20 is directed outwards back 70 the toilet bowl 12.

Fig. 8 shows the accessory of Fig. 1 only.

10 A loudspeaker 16 may further guide the user, in addition to the guidance of projector 24. For example, in the case of Fig. 3, loudspeaker may announce "move to the left".

Straps 22 crossing the rear top of the bowl allow directing projector 24 to the front and sensor 20 to the rear.

15 Fig. 9 shows the accessory from another angle of view.

Projector 24 aims rays to the front, and sensor 20 includes a source aiming rays to the rear.

The terms "preferred location" or "preferred rotational state" refer herein to the state considered best aiming the
20 urinating flush.

Thus, in one aspect, the invention is directed to a urinating guiding accessory (10), including:

- a projector (24), being disposed on a rear (64) top (66) of
25 a toilet bowl (12), and directed towards a front internal

wall (60) of the bowl (12), for projecting a guiding picture (14) onto the front internal wall (60) of the bowl (12); and
- a sensor (20), being disposed on the rear top of the toilet bowl (12) and directed outwards back (70) the toilet bowl (12) towards the user (50), for sensing the user's position, for controlling the guiding picture (14) accordingly.

The guiding picture (14) may constitute a projected spot, being located on a location being preferred for aiming the urinating.

The guiding picture (14) may constitute a picture (14) guiding the user to position himself as a function of the sensed user's position.

The sensing of the user's position may constitute sensing sided location (52A) of the user, for guiding the user to locate himself to an opposite side (54A).

The sensing of the user's position may constitute sensing a rotational state (56A) of the user, for guiding the user to rotate himself to an opposite direction (58A).

- Numeral 10 denotes the urinating guiding accessory according to one embodiment of the invention!
- numeral 12 denotes the toilet bowl!
- numeral 14 denotes the projected picture!
- numeral 16 denotes a loudspeaker!

- numeral 20 denotes the sensor, for sensing the user's location and rotational state!
- numeral 22 denotes a strap!
- numeral 50 denotes the user!
- 5 - numeral 52A denotes the state that the user is located right to the preferred location!
- numeral 52B denotes the state that the user is located left to the preferred location!
- numeral 54A denotes a picture guiding the user to move to
10 the left!
- numeral 54B denotes a picture guiding the user to move to the right!
- numeral 56A denotes the state that the user is rotated counter-clockwise from the preferred rotational state!
- 15 - numeral 56B denotes the state that the user is rotated clockwise from the preferred rotational state!
- numeral 60 denotes the front internal wall of the toilet bowl!
- numeral 64 denotes the rear of the toilet bowl!
- 20 - numeral 66 denotes the top of the toilet bowl!
- numeral 68 denotes the front of the toilet bowl!
- numeral 70 denotes outwards back the toilet bowl!

The reference numbers in the claims are not a part of
25 the claims.

CLAIMS

What is claimed is:

1. A urinating guiding accessory (10), comprising:
 - 5 - a projector (24), being disposed on a rear (64) top (66) of a toilet bowl (12), and directed towards a front internal wall (60) of said toilet bowl (12), for projecting a guiding picture (14) onto said front internal wall (60) of said bowl (12); and
 - 10 - a sensor (20), being disposed on said rear top of said toilet bowl (12) and directed towards outwards back (70) said toilet bowl (12), for sensing the user's position, for controlling said guiding picture (14) accordingly.
- 15 2. A urinating guiding accessory (10) according to claim 1, wherein said guiding picture (14) comprises a projected spot, being located on a location being preferred for aiming the urinating.
- 20 3. A urinating guiding accessory (10) according to claim 1, wherein said guiding picture (14) comprises a picture (14) guiding the user to position himself as a function of said sensed user's position.
- 25 4. A urinating guiding accessory (10) according to claim 3, wherein said sensing of the user's position comprises sensing sided location (52A) of the user, for guiding the user to locate himself to an opposite side (54A).

5. A urinating guiding accessory (10) according to claim 3, wherein said sensing of the user's position comprises sensing rotational state (56A) of the user, for guiding the user to rotate himself to an opposite direction (58A).

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6. A urinating guiding accessory (10) according to claim 1, further comprising:
- a loudspeaker (16), for producing a vocal guiding as a function of said sensed user's position.

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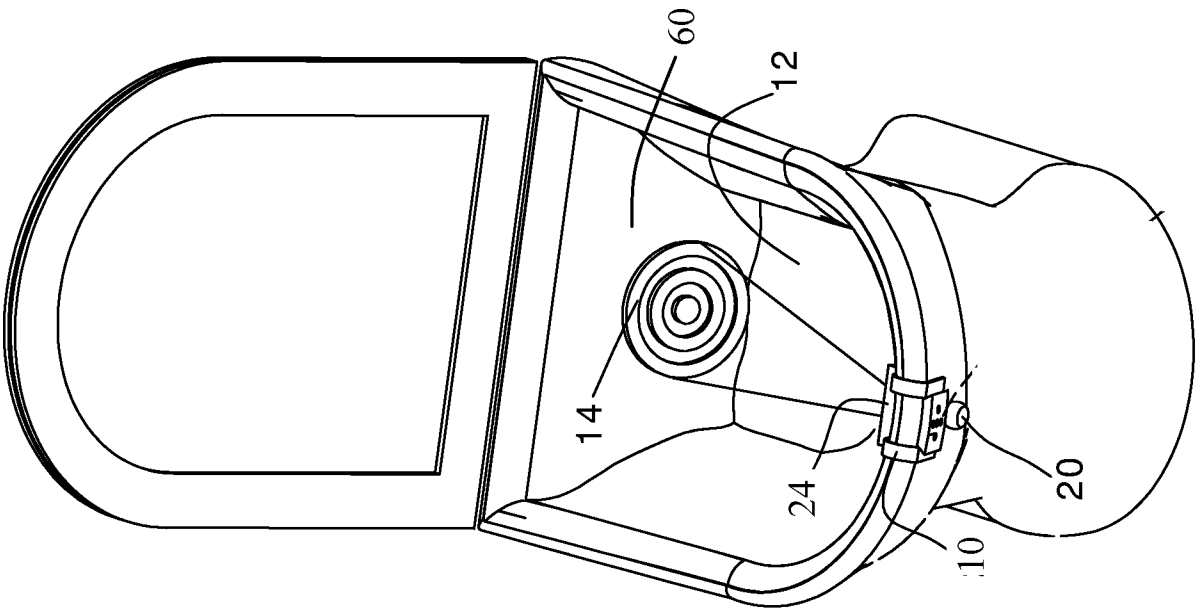


FIG 1

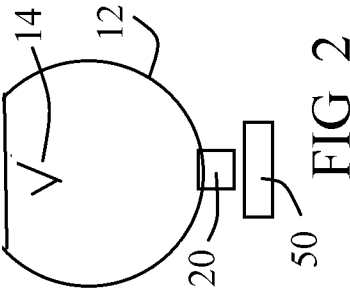


FIG 2

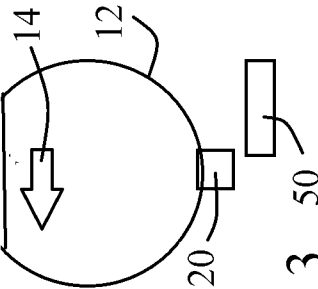


FIG 3

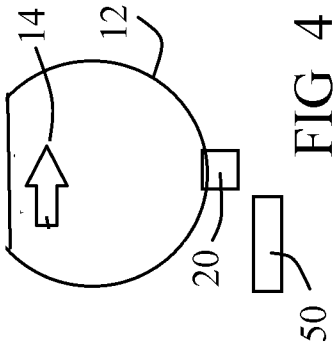


FIG 4

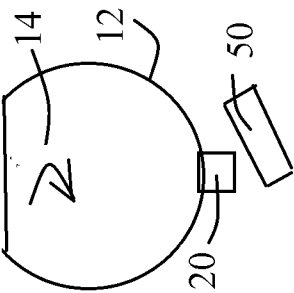


FIG 5

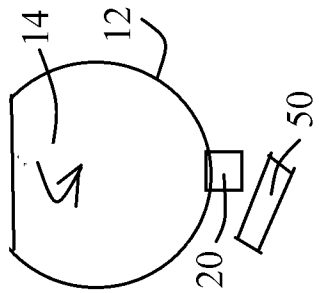


FIG 6

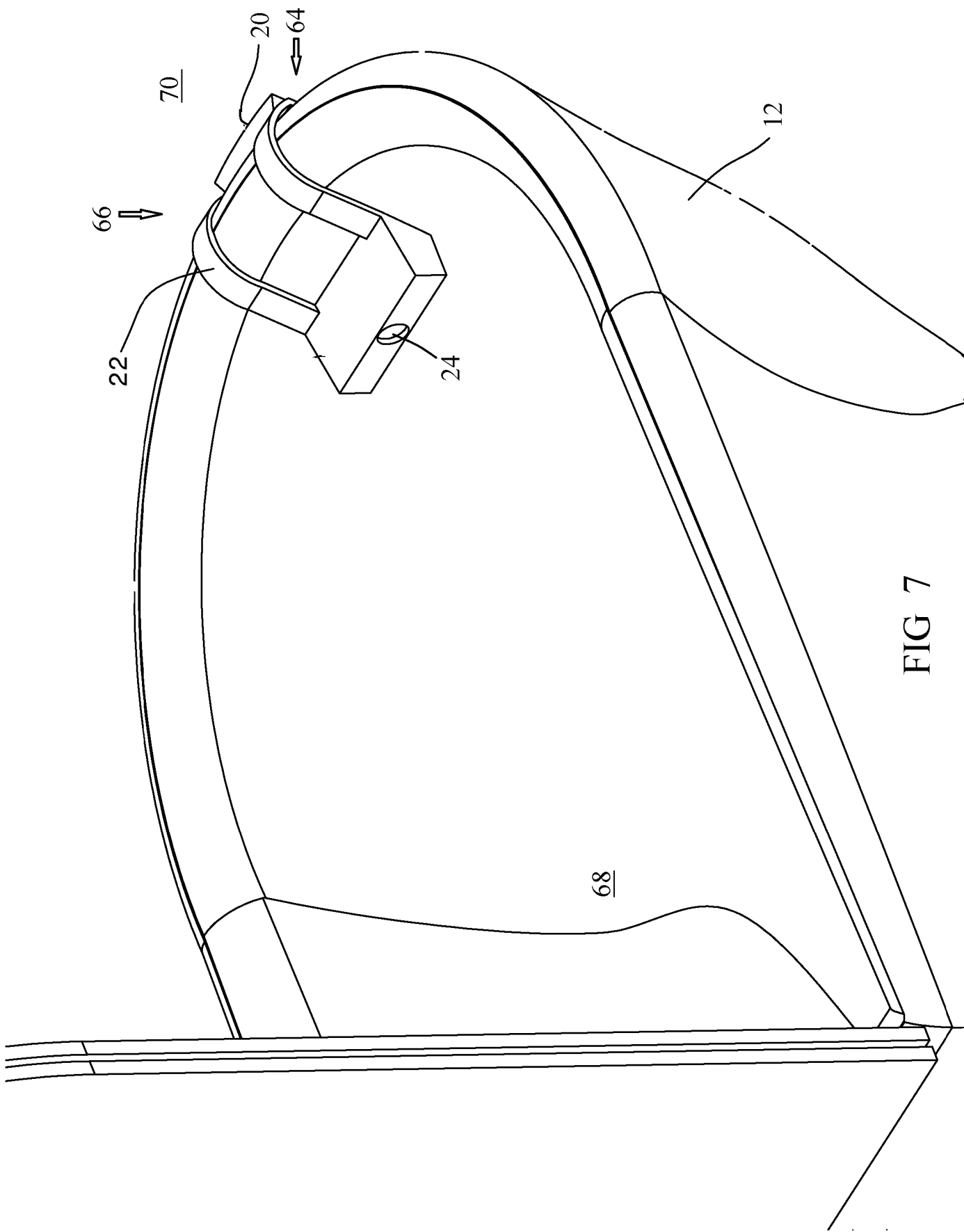


FIG 7

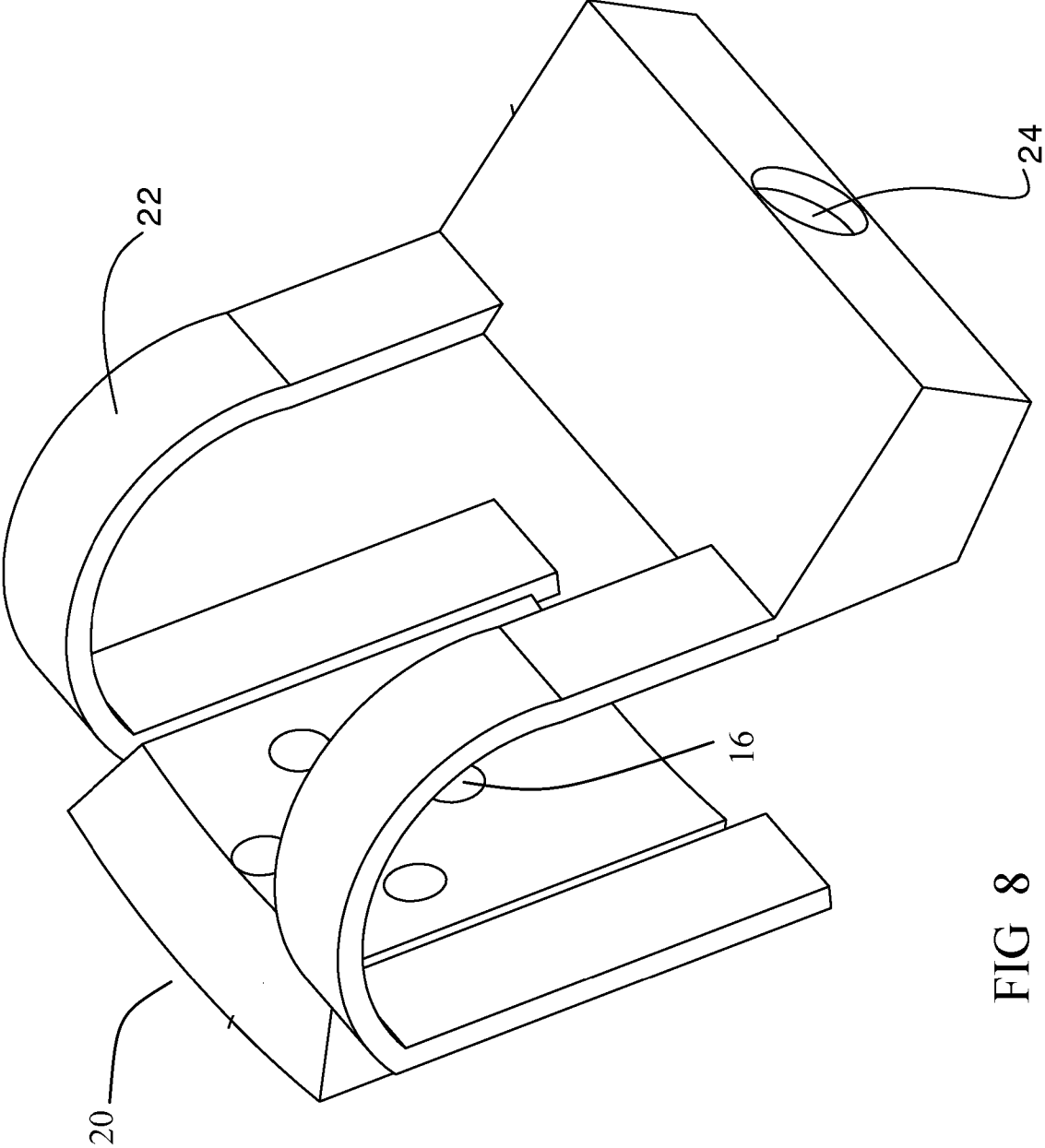


FIG 8

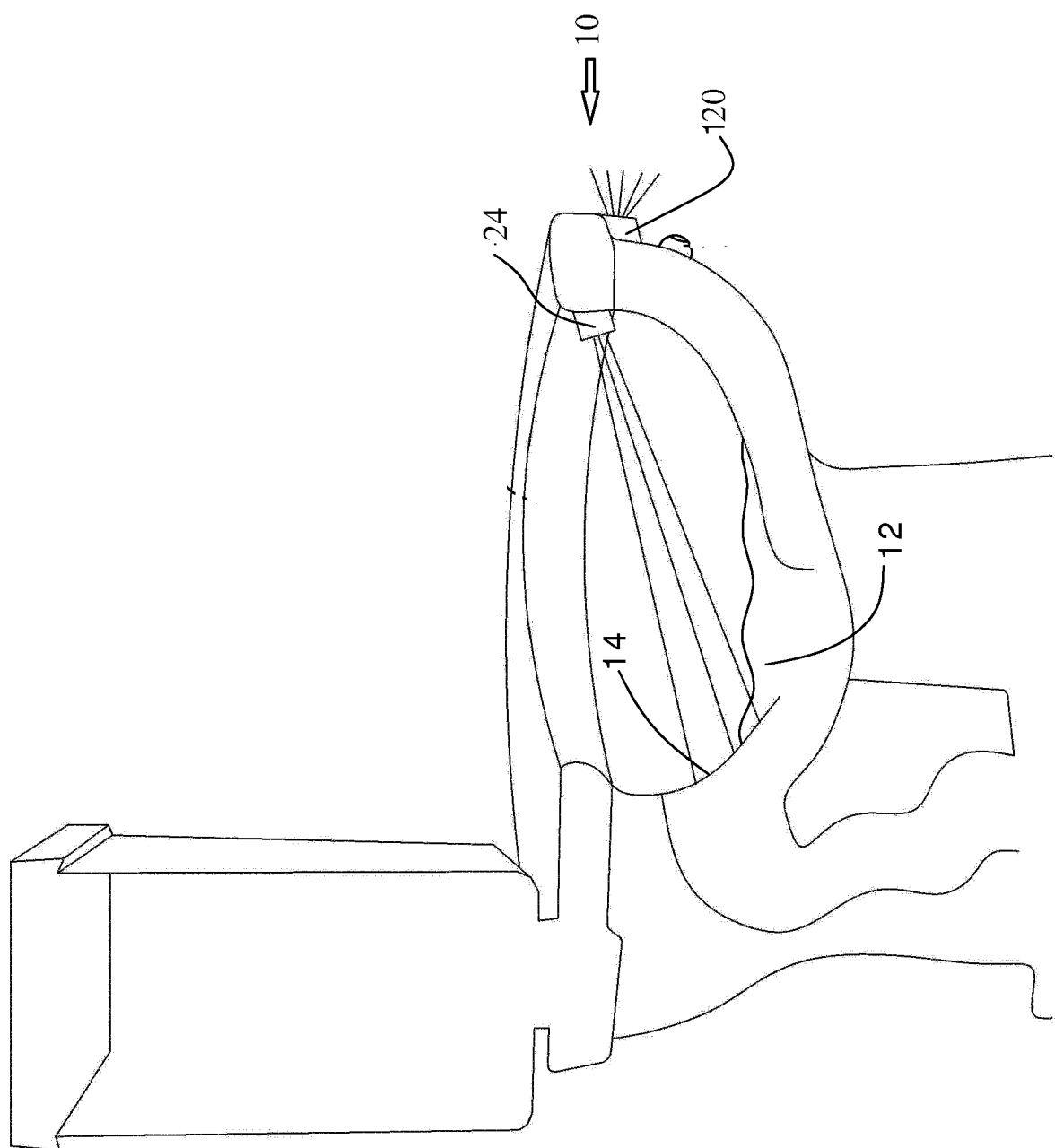


FIG 9

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL2017/051211

A. CLASSIFICATION OF SUBJECT MATTER IPC (2017.01) G09B 19/00, E03D 1/00, G03B 21/00 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC (2017.01) G09B 19/00, E03D 1/00, G03B 21/00 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Databases consulted: Esp@cenet, Google Patents, Derwent Innovation, Orbit Search terms used: urinate, toilet, closet, sensor, position, detect, project		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003035302 A1 GARY FRIEDMAN 20 Feb 2003 (2003/02/20) See sensors in Figs 1-3 and projection system directed to urinal stream as part of a target game.	1-6
A	JP 2005299342 A TOTO 27 Oct 2005 (2005/10/27) See Fig 3 for sensor on outer surface of toilet bowl	1-6
P,A	WO 2017161270 A1 DESIGN MILL 21 Sep 2017 (2017/09/21) See Figs 17-19 and paragraph 135 for sensor and projector in regards to child's position ON a toilet	1-6
A	< https://www.youtube.com/watch?v=zd-fOdKS6ok > Downloaded from internet 09/01/2018 IllumiBowl 07 Dec 2015 (2015/12/07) See proximity sensor on outer rim of toilet bowl connected to light for illuminating the inside of the toilet bowl	1-6
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is 3/4 to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the International search 09 Jan 2018		Date of mailing of the international search report 16 Jan 2018
Name and mailing address of the ISA: Israel Patent Office Technology Park, Bldg.5, Malcha, Jerusalem, 9695101, Israel Facsimile No. 972-2-5651616		Authorized officer COHAY Mattan Telephone No. 972-2-565161 1

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL2017/051211

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2016307462 A1 John Vincent McCarthy 20 Oct 2016 (2016/10/20) See figures 6A 6B 7A 7B and description thereof	1-6

INTERNATIONAL SEARCH REPORT

Information on patent family members

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				US	2015297044	A1	22 Oct 2015
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