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(54) **Post having a flag securing channel with illuminating means**

(57) The present invention proposes a post comprising a base (22), at least one lighting means and a carrier framework (13) with holder slots (32) for receiving said lighting means or solar units (12) having a solar panel and a rechargeable electrical battery. Said post further comprises at least one longitudinal channel accommodating a movable block displaceable in said longitudinal

channel by means of an electrical motor. Said movable block fixedly joined to said carrier framework (13) with holder slots receiving said solar units (12) or said lighting means. The invention further proposes a post with advertisement flags (35) secured on two axes, namely to the lower edge of said carrier framework (13) and to said longitudinal channel accommodating said movable blocks.

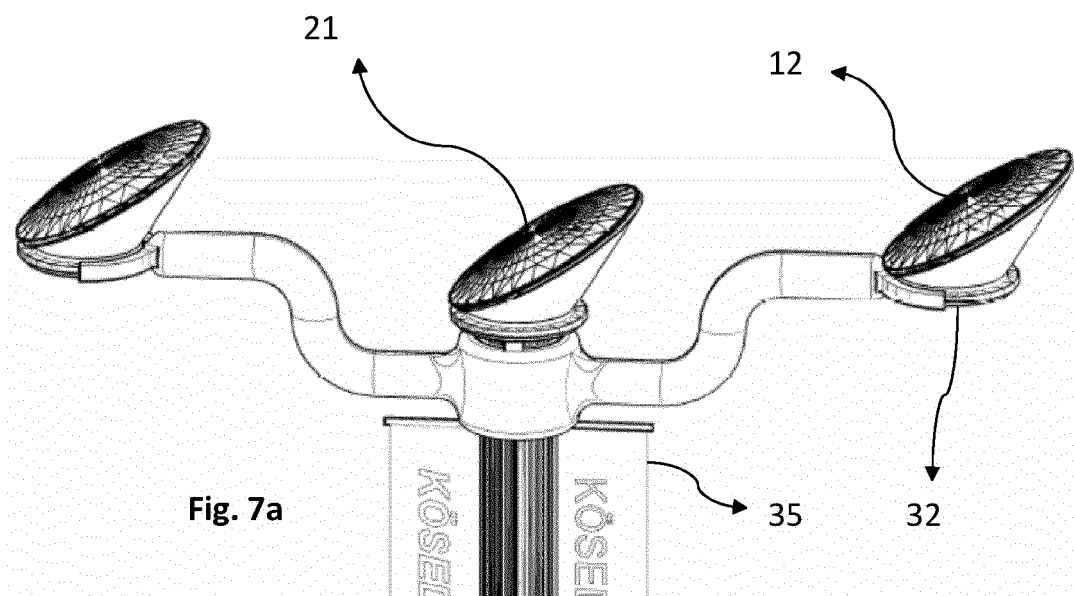
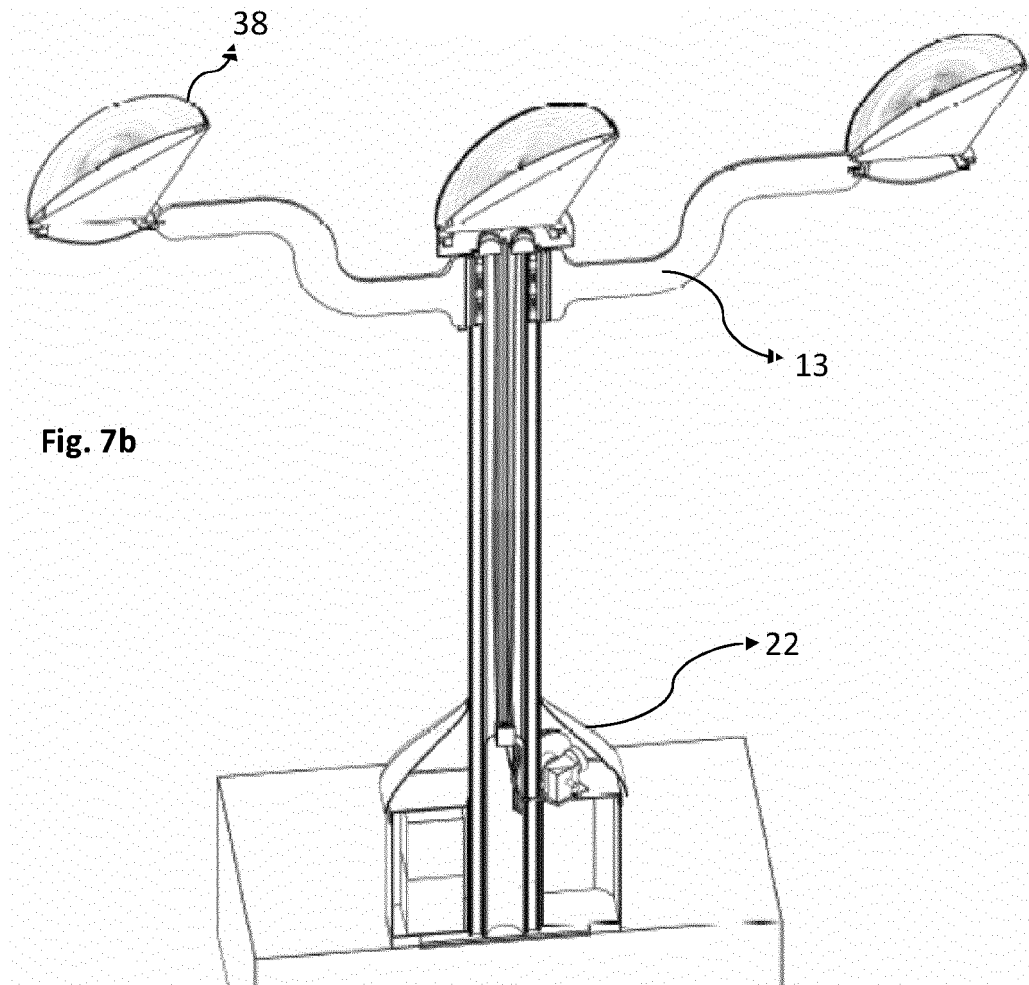


Fig. 7a



Description

Technical Field of the Invention

[0001] The present invention relates to a post having an advertisement flag securing channel, also featuring means for illuminating said advertisement flag.

Background of the Invention

[0002] A plurality of patents/patent applications are present in the field in relation to posts and to their configuration with regards to fixing of posts and fittings thereof.

[0003] The present invention on the other hand provides a post having an advertisement flag securing channel, also featuring means for illuminating said advertisement flag.

[0004] The present invention further ensure easier repair of the post solar units by maintenance workers such that maintenance and repair operations are substantially accelerated. Considering quite a large number of posts may require routine maintenance in a large area (for instance a military area), slow maintenance operations prove to be a serious cost item. To this end, the lifting mechanism according to the present invention allows easier and faster maintenance and repair of said post solar units.

[0005] Said advertisement flag is conveniently mounted on two axes such that maintenance operations can be effected without removing said flag. To this end, an easier maintenance or repair operation is ensured. On the other hand, mounting or replacing of said flags is also facilitated by the same way of lowering said post solar units as in repair operations. To this end, a multipurpose illumination post having easily changeable advertisement flags are obtained according to the invention.

Objects of the Invention

[0006] One of the objects of the present invention is to provide a post having an advertisement flag securing channel.

[0007] Another object of the present invention is to provide means for illuminating an advertisement flag.

[0008] Another object of the present invention is to provide a post solar unit which incorporates a solar panel in association with a battery.

[0009] Another object of the present invention is to provide a post having an advertisement flag mounting or replacing of which is also facilitated.

Summary of the Invention

[0010] The present invention provides a post with at least one longitudinal channel accommodating a movable block with rollers. Said movable blocks displace in said longitudinal channels in order for raising and lower-

ing said solar units relative to the ground surface on which said posts are erected. This is either achieved manually or by means of an electrical motor whose rotary shaft is conventionally coupled to a pulley mechanism in communication with a wire, the latter carrying said movable block.

[0011] The solar units are provided at both sides of the post. Said carrier framework being in association with said movable blocks provides that said solar units mounted on said framework are lowered by means of said electrical motor, for instance for maintenance purposes.

[0012] The present invention ensuring easier repair of post solar units by maintenance workers is especially advantageous in substantially accelerating maintenance and repair operations.

[0013] Said electrical motor is powered by an electrical battery embedded in the post base. Said motor's power leads are extending to said base of said post through the tubular longitudinal portion. Said motor may also be remotely actuated by signals from a suitable radio transmitter as is conventionally practiced in the available art. Upon termination of routine maintenance or repair, said motor is reactuated to reposition said framework to its initial position. The initial position thereof is detected by microswitches upon which said lighting means are powered by said solar units.

[0014] The present invention features advertisement flags secured on two axes, namely to the lower edge of said carrier framework and to said longitudinal channel accommodating said movable blocks. Two stabilizer rods are used to maintain position of said flags. The upper stabilizer rod is directly attached to said carrier framework and the lower rod is attached to said longitudinal channel. When said flags are replaced or maintenance action is required, said lower stabilizer rod is unmounted and said pulley mechanism is operated without removing said upper stabilizer rod. This is advantageous in that said upper rod can be conveniently unmounted when the carrier framework is lowered. On the other hand, it is not necessary to unmount said upper rod if only repair or maintenance is intended.

Brief Description of the Figures

[0015] The figures whose brief explanations are herewith provided are solely intended for providing a better understanding of the present invention and are as such not intended to define the scope of protection or the context in which said scope is interpreted in the absence of the present description.

Fig. 1a demonstrates a general perspective view of the post profile according to the present invention.

Fig. 1b demonstrates a cross-sectional view of the post profile according to the present invention.

Fig. 2 and Fig. 8 demonstrate perspective views of

the post profile with the illumination means lifting mechanism according to the present invention.

Fig. 3 demonstrates another perspective view of the post profile while the illumination means lifting mechanism rollers are within the profile according to the present invention.

Fig. 4a and 4b respectively demonstrates planar views of the positions before and after the illumination means framework reaches its operational position according to the present invention. Fig. 10 demonstrates a perspective view of an alternative design of said illumination means framework according to the present invention.

Fig. 5a demonstrates a planar view of the post base according to the present invention. Fig. 5b demonstrates a cross-sectional view taken along the A-A line as indicated in Fig. 5a. Fig. 5c demonstrates a perspective view of the base according to the present invention.

Fig. 6 demonstrates an exploded view of the post solar unit according to the present invention and Fig. 9 demonstrates an alternative embodiment of the solar unit housing.

Fig. 7a demonstrates an perspective view of an erected operable post according to the present invention. Fig. 7b demonstrates a longitudinal cross-sectional view of the post indicating dome-shaped caps according to the present invention.

Fig. 8 demonstrates an perspective view of the pulley mechanism according to the present invention.

Fig. 9 demonstrates perspective views of a solar panel unit according to the present invention.

Fig. 10a demonstrates a perspective view of the post according to the present invention. Fig. 10b demonstrates a perspective view of the post with an advertisement flag according to the present invention.

Fig. 11 demonstrates an exploded perspective view of the base unit components according to the present invention.

Fig. 12 demonstrates a general perspective view of the base unit according to the present invention.

Fig. 13a and 13b respectively demonstrates the base unit according to the present invention with and without a central flange portion.

Fig. 14 demonstrates water discharge path of the base unit according to the present invention.

Detailed Description of the Invention

[0016] Referring now to the figures outlined above, the present invention provides a post (11) with a solar panel unit (12), either anchored in the ground or provided with wheels to enable easy displacement.

[0017] Said post (11) is shaped to have a circular-like central portion (29) in the form of an inner profile. Said central portion (29) although being circular-like in the preferred embodiment, it is not necessary to use this form and various other shapes in cross section may be utilized for providing a post (11).

[0018] Said post (11) features a first closed geometry longitudinally hollow profile (29) interconnected by bridging elements (31) to a second closed geometry longitudinally extending profile (30) enclosed said first profile (29).

[0019] Said solar unit (12) is shaped and dimensioned to be mounted on a carrier framework (13) with holder slots (32) receiving said solar units (12), typically serving to the purpose of supporting the same.

[0020] Said posts (11) have at least one longitudinal channel (14) accommodating a movable block (15) having rollers (16). Said movable blocks (15) displace in said longitudinal channels (14) in order for raising and lowering said solar units (12) relative to the ground surface on which said posts (11) are erected. This is achieved by means of an electrical motor (17) whose rotary shaft is conventionally coupled to a pulley (18) mechanism in communication with a wire (19), the latter carrying said movable block (15). Alternatively, repair and maintenance workers may effect rotation of said pulley (18) mechanism manually by said wire (19) in the absence of an electrical motor (17).

[0021] The solar units (12) are provided at both sides of the post (11) as indicated in Fig. 7. Said carrier framework (13) being in association with said movable blocks (15) therefore provides that said solar units (12) mounted on said framework (13) are lowered by means of said pulley (18) mechanism, for instance for maintenance purposes.

[0022] The illumination means according to the invention are LEDs (light emitting diodes) embedded within a central housing (21) above the electrical motor (17). Said illumination means are separately provided on said carrier framework (13).

[0023] Said electrical motor (17) is powered by a base battery embedded within said base (22). Said motor's (17) power leads extend to the base (22) of said post (11) through its central hollow space, i.e. the longitudinally hollow profile (29). To this end, said motor (17) is continuously connected to said base battery. Said motor (17) may also be remotely actuated by signals from a suitable radio transmitter as is conventionally practiced in the available art. Upon termination of routine maintenance or repair, said motor (17) is reactivated to reposition said framework (13) to its initial position. Said motor's base battery connection is not affected by moving parts of the

mechanism, i.e. the displacement of said framework (13). The initial position of the same is easily detected by microswitches (33) upon which said lighting means in said central housing (21) are powered by said solar units (12).

[0024] The present invention provides a compact solar energy station such that said illuminating elements in said central housing (21) are powered by a solar panel (23) as shown in Fig. 6. Said solar panel (23) is in electrical communication with a rechargeable electrical battery (24, symbolically shown in Fig. 6).

[0025] Fig. 6 according to the present invention demonstrates the main components of the post (13) solar unit (12) where said solar panel (23) is maintained within a cage-like housing (25) onto which a sealing element (27) is secured by means of a grooved rim (26). Said cage-like housing (25) is rotatable around its base such that said solar panel's (23) inclined outer surface can be positioned to face a certain desired direction.

[0026] In a nutshell, the present invention proposes a post (11) with advertisement flags (35) secured on two axes, namely to the lower edge of said carrier framework (13) and to said longitudinal channel (14) accommodating said movable blocks (15). Two stabilizer rods (36, 37) are used to maintain position of said flags (35). The upper stabilizer rod (36) is directly attached to said carrier framework (13) and the lower rod (37) is attached to said longitudinal channel (14).

[0027] When said flags (35) are replaced or maintenance action is required, said lower stabilizer rod (36) is unmounted and said pulley mechanism (18) is operated without removing said upper stabilizer rod (36). This is advantageous in that said upper rod (36) can be conveniently unmounted when the carrier framework (13) is lowered. On the other hand, it is not necessary to unmount said upper rod (36) if only repair or maintenance is intended. In this case, only the lower rod (37) will be unmounted for lowering the framework (13) and will be re-mounted after termination of the work.

[0028] Further, said posts (11) incorporate illuminating means (not shown) directly intended for illuminating said advertisement flags (35). Said illuminating means (38) are electrically connected to said solar units (12) and are disposed on the outer surface of said framework (13).

[0029] The figures 11 to 14 demonstrate an alternative base unit (22) embodiment different than that shown in Fig. 10a in terms of physical structure. The base unit (22) embodiment of Fig. 11 comprises a central flange portion (39) annularly encircling said post (11) body above said base unit (22), an inner housing receiving at least one electrical battery (40) and anchoring means for ground fixation. The post (11) of the invention may alternatively comprise a manual drive coupling (43) in said base unit (22) for operating said pulley mechanism (18). Said manual drive coupling (43) may be operated by means of a conventional drilling tool in the possession of maintenance and repair workers such that said pulley mechanism (18) installed within said base (22) instead of being coupled to the shaft of said electrical motor (17) as in the

embodiment of Fig. 2 according to the present invention is operated.

[0030] The base unit (22) of the invention provides a water discharge path A-B within said base (22) as shown by respective arrows in Fig. 14. Water penetrating into said base (22) through annular openings in between the post (11) body and said central flange portion (39) advances parallel to the post (11) body and is discharged from lateral openings on the ground.

Claims

1. A post (11) comprising a base (22), at least one lighting means and a carrier framework (13) with holder slots (32) for receiving said lighting means or solar units (12) having a solar panel (23) and a rechargeable electrical battery (24), said post (13) further comprising at least one longitudinal channel (14) accommodating a movable block (15) displaceable in said longitudinal channel (14) by means of a pulley (18) mechanism, said movable block (14) being fixedly joined to said carrier framework (13) with holder slots (32) receiving said solar units (12), said post (11) further comprising at least one exhibition medium (35) secured to the lower edge of said carrier framework (13) in a first axis and to said longitudinal channel (14) in a second axis.
2. A post (11) as set forth in Claim 1 wherein said exhibition medium (35) is attached by two stabilizer rods (36, 37), an upper stabilizer rod (36) being directly attached to said carrier framework (13) and a lower stabilizer rod (37) being attached to said longitudinal channel (14).
3. A post (11) as set forth in Claim 1 wherein said pulley (18) mechanism is driven by an electrical motor (17).
4. A post (11) as set forth in Claim 1 wherein said pulley (18) mechanism comprises a manual drive coupling (43) for operating said pulley mechanism (18).
5. A post (11) as set forth in Claim 3 wherein said electrical motor's (17) rotary shaft is coupled to said pulley (18) mechanism in communication with a wire (19), the latter displacing said movable block (15) in said longitudinal channel (14).
6. A post (11) as set forth in Claim 5 wherein said post (11) features a closed geometry longitudinally hollow profile (29) in which said electrical motor (17) is stationarily installed such that a central housing (21) located immediately above said longitudinally hollow profile (29) contains said pulley (18) mechanism.
7. A post (11) as set forth in Claim 4 or 5 wherein said lighting means are LEDs embedded within said cen-

tral housing (21).

8. A post (11) as set forth in Claim 1, 3 or 7 wherein said solar units (11) installed within said holder slots (32) of said carrier framework (13) comprises a solar panel (23) and a rechargeable electrical battery (24) in electrical communication with said lighting means embedded within said central housing (21). 5
9. A post (11) as set forth in Claim 1, 3 or 6 wherein said movable block (15) has at least one roller (16) rotatable within said longitudinal channel (14). 10
10. A post (11) as set forth in Claim 1 or 9 wherein said electrical motor's (17) power leads extend to said base (22) of said post (11) through said longitudinally hollow profile (29). 15
11. A post (11) as set forth in Claim 1 or 9 wherein said electrical motor's (17) is remotely actuatable by a radio transmitter. 20
12. A post (11) as set forth in Claim 1, 2 or 11 wherein said carrier framework's (13) position is detected by microswitches (33) upon which said lighting means are powered by said solar units (12). 25
13. A post (11) as set forth in Claim 2 or 12 wherein said framework (13) comprises illuminating means (38) on its outer surface for direct illumination of said exhibition medium (35). 30

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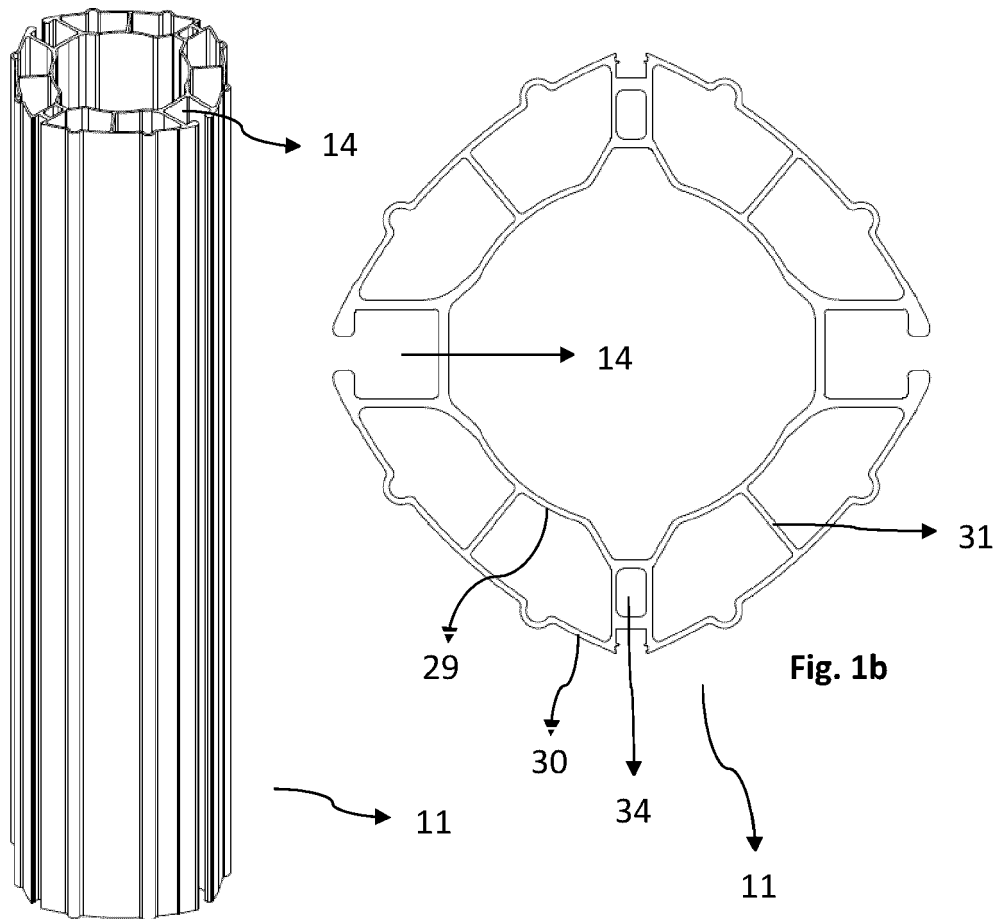


Fig. 1a

Fig. 1b

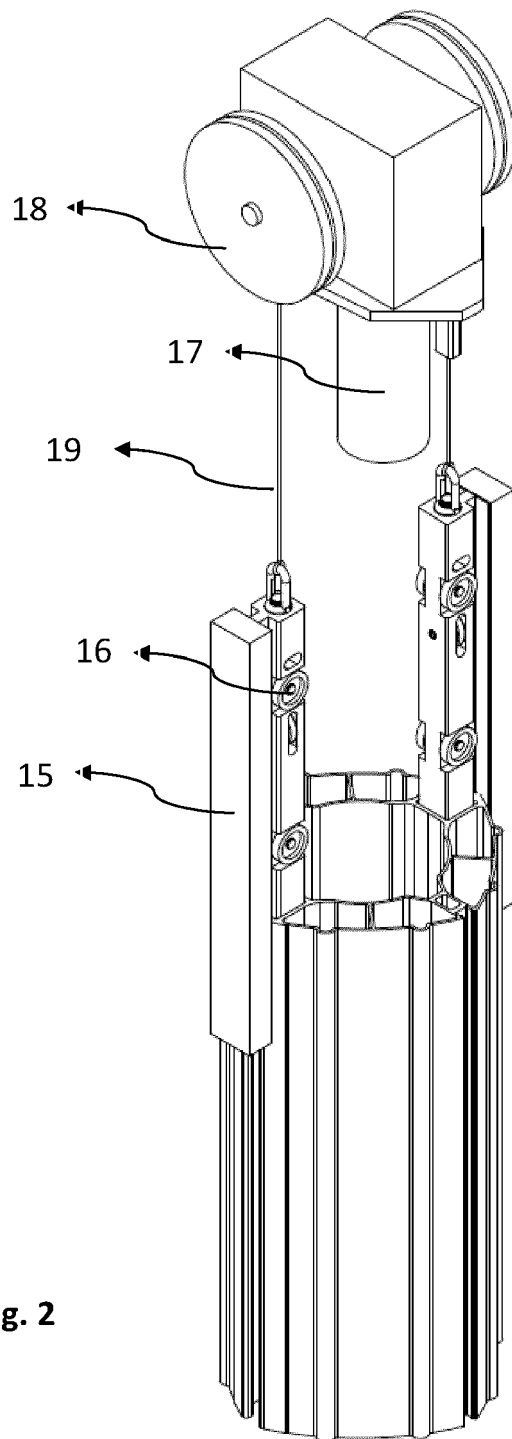


Fig. 2

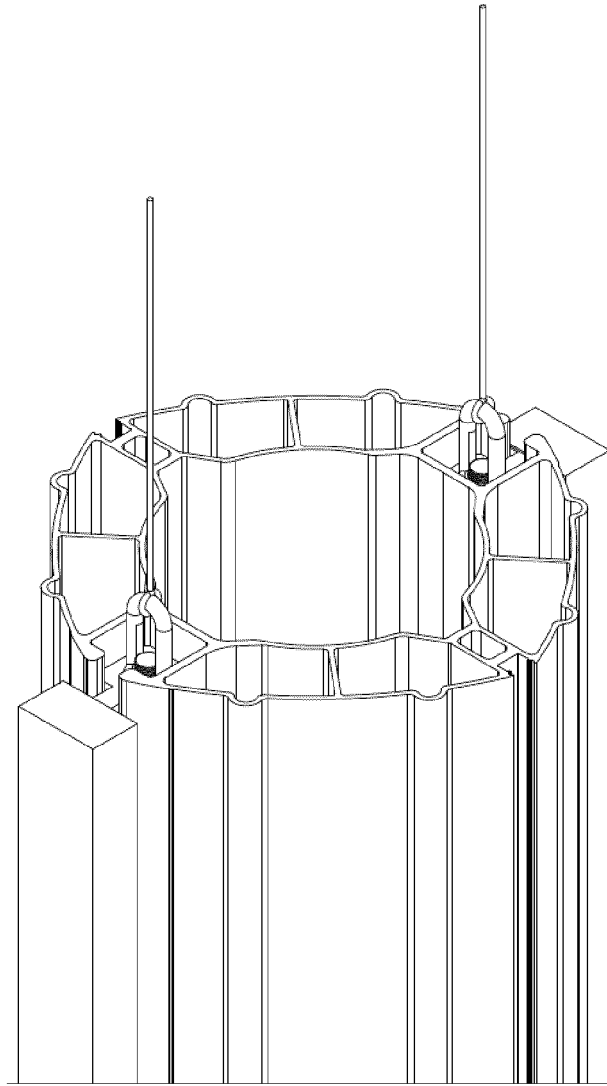


Fig. 3

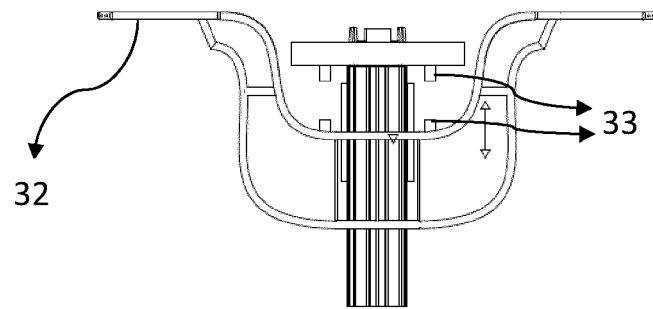


Fig. 4a

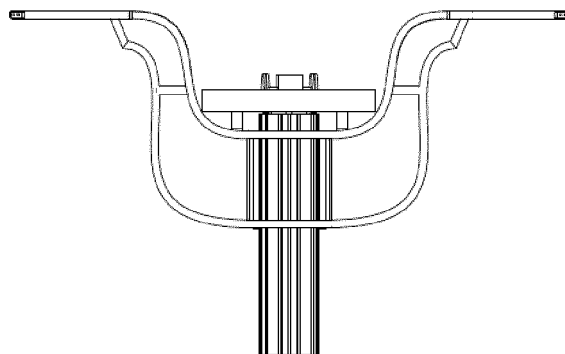


Fig. 4b

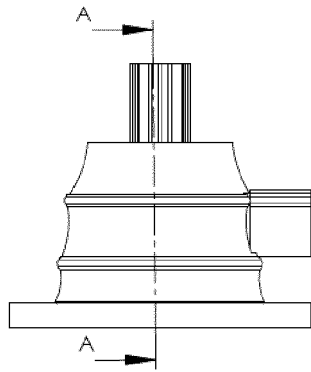


Fig. 5a

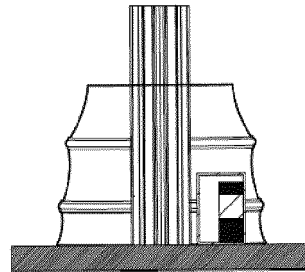


Fig. 5b

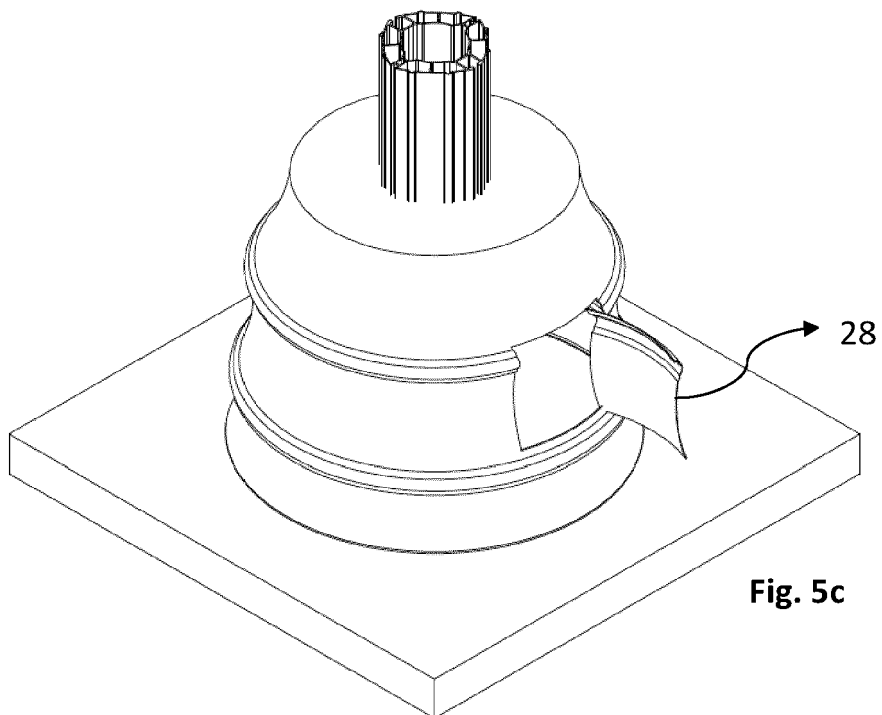


Fig. 5c

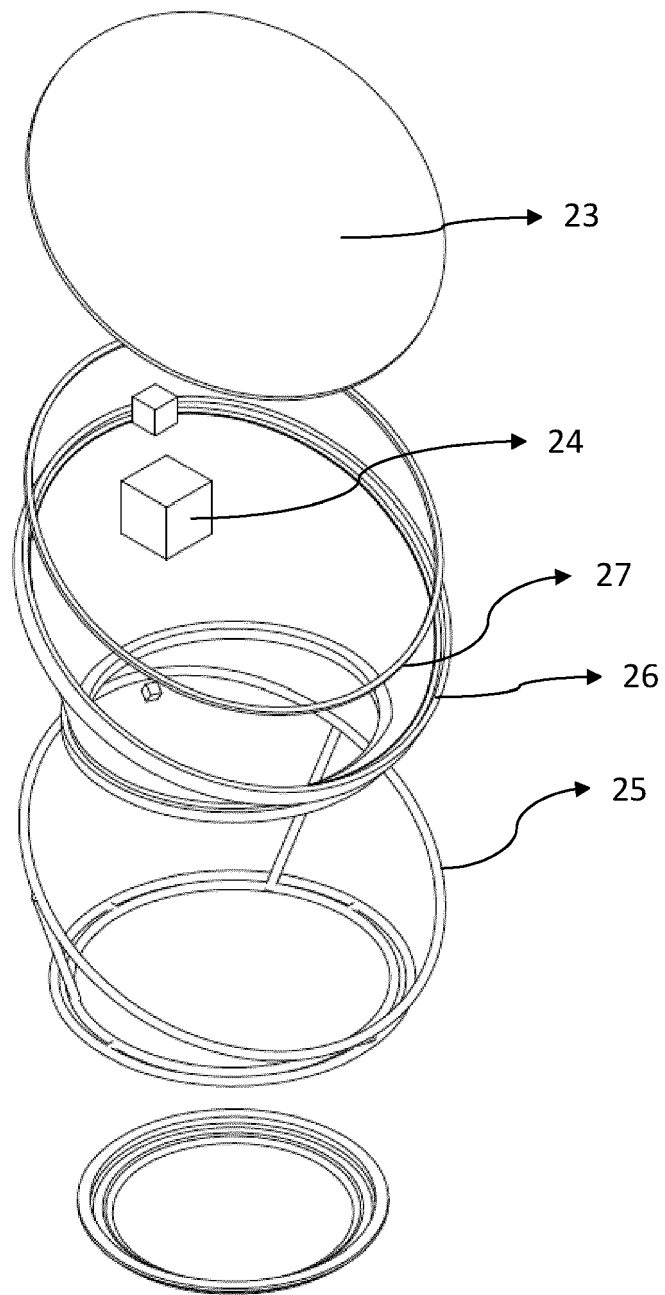
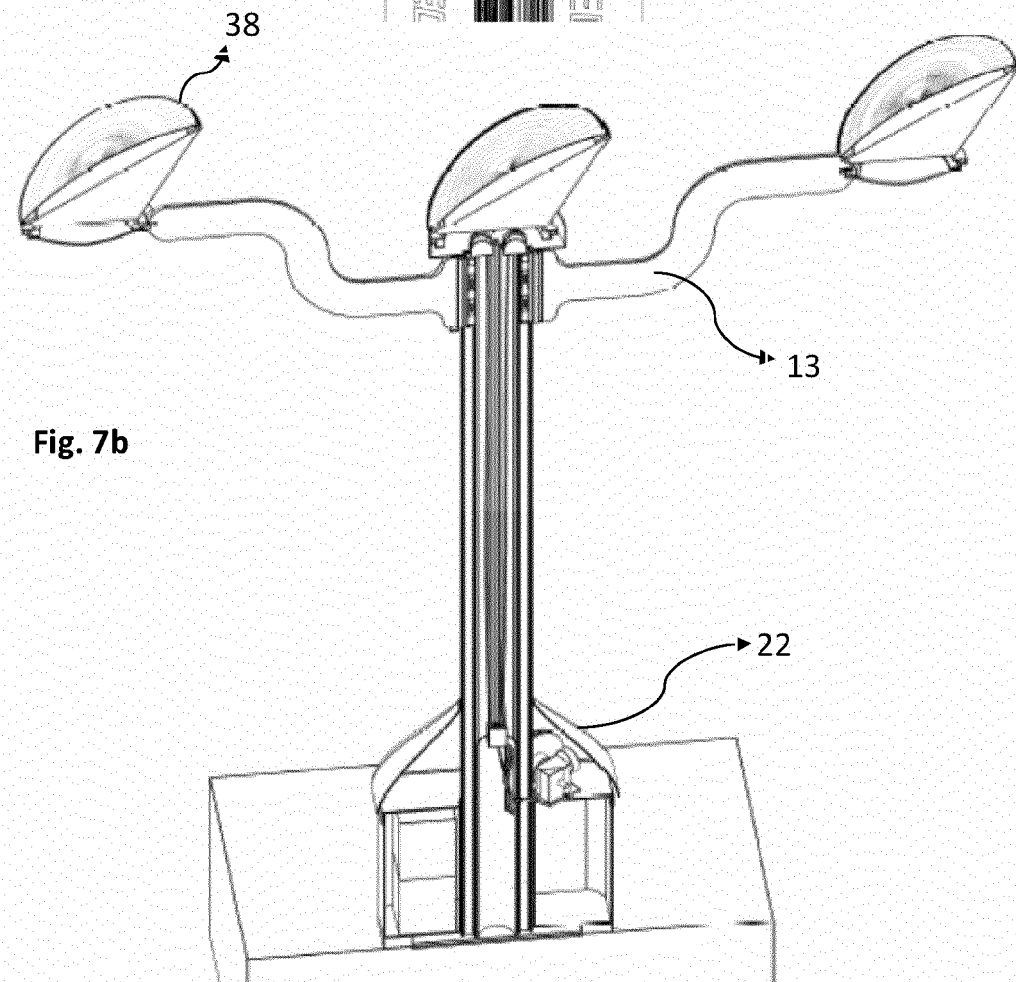
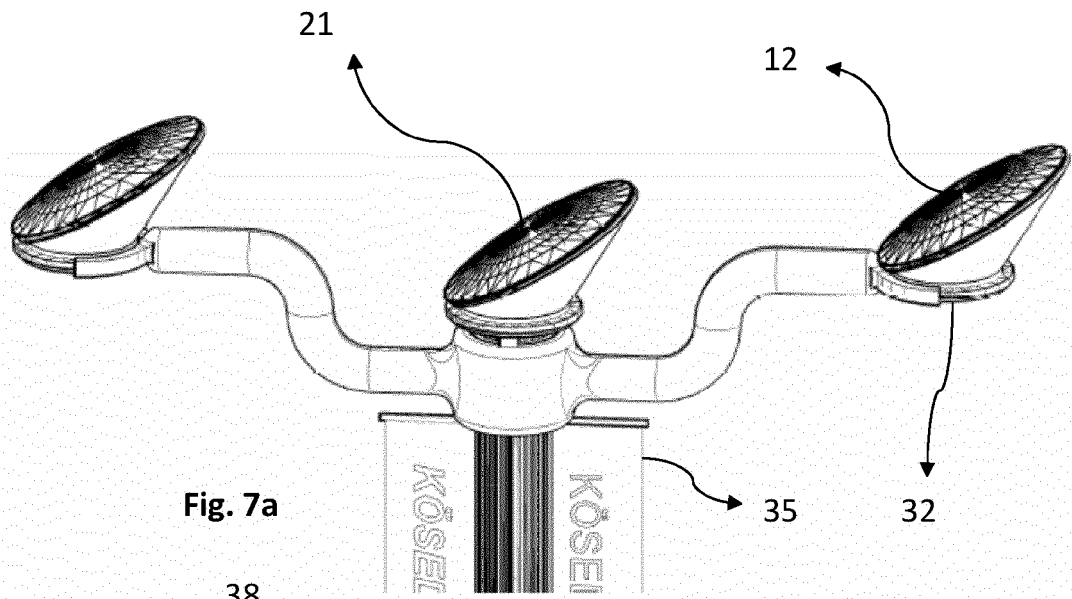


Fig. 6



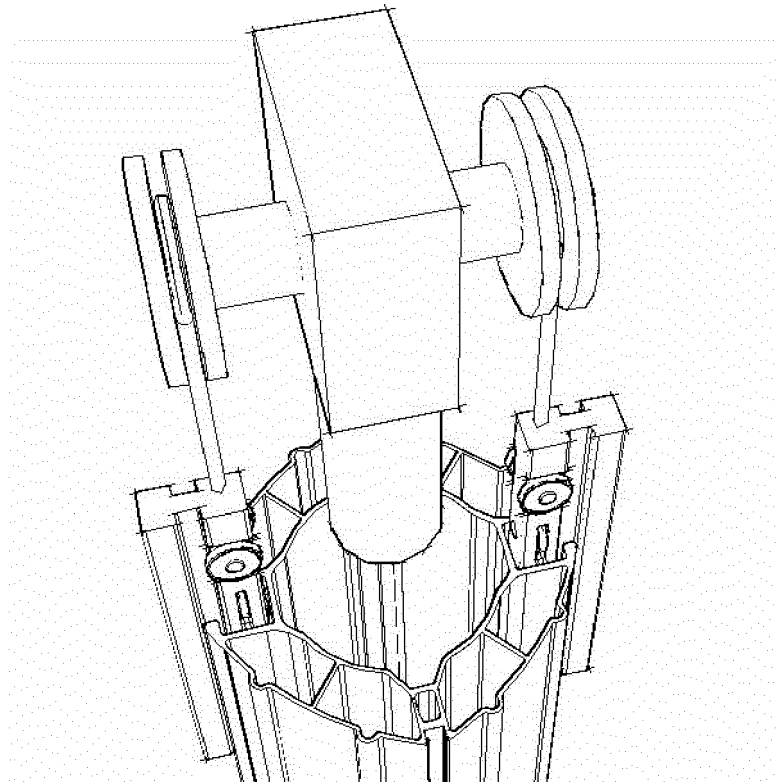


Fig. 8

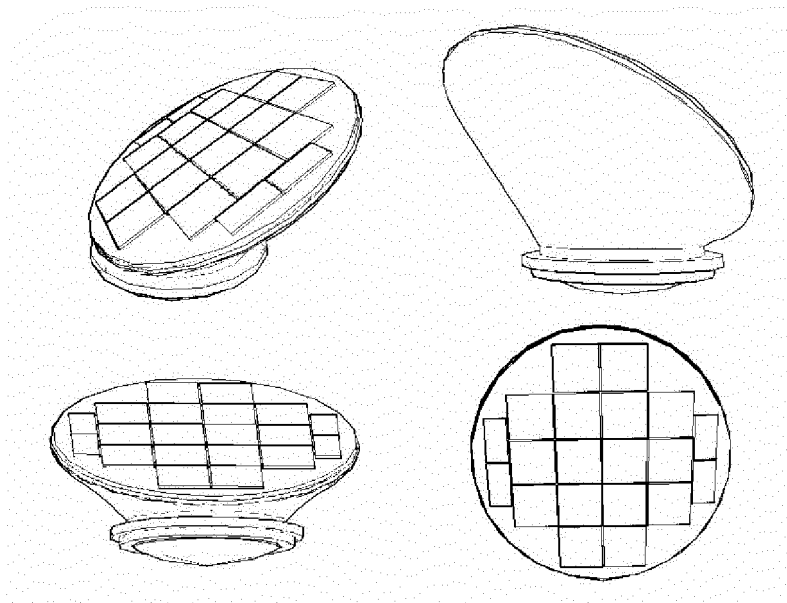


Fig. 9

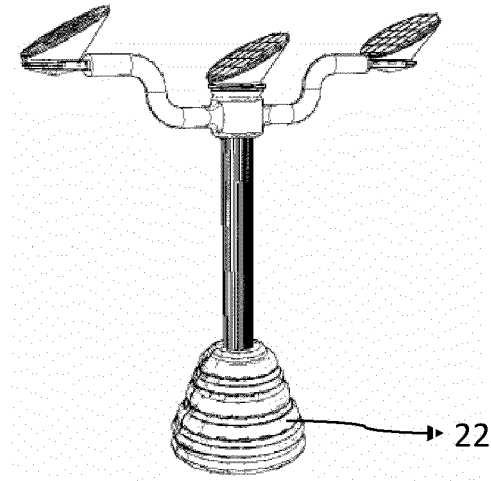


Fig. 10a

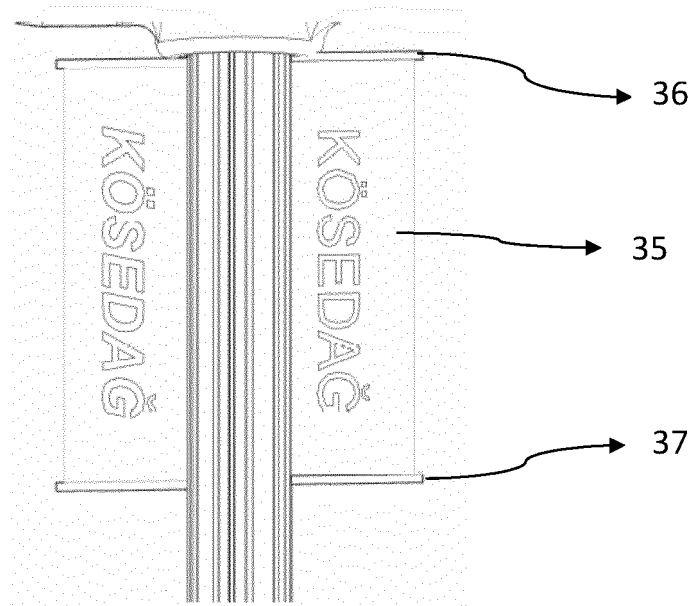


Fig. 10b

Fig. 11

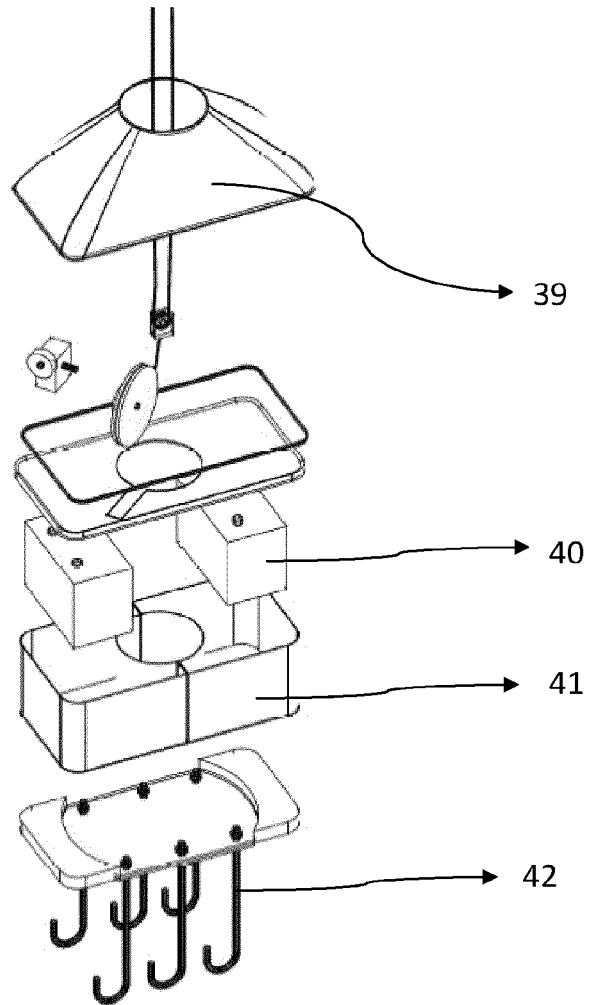


Fig. 12

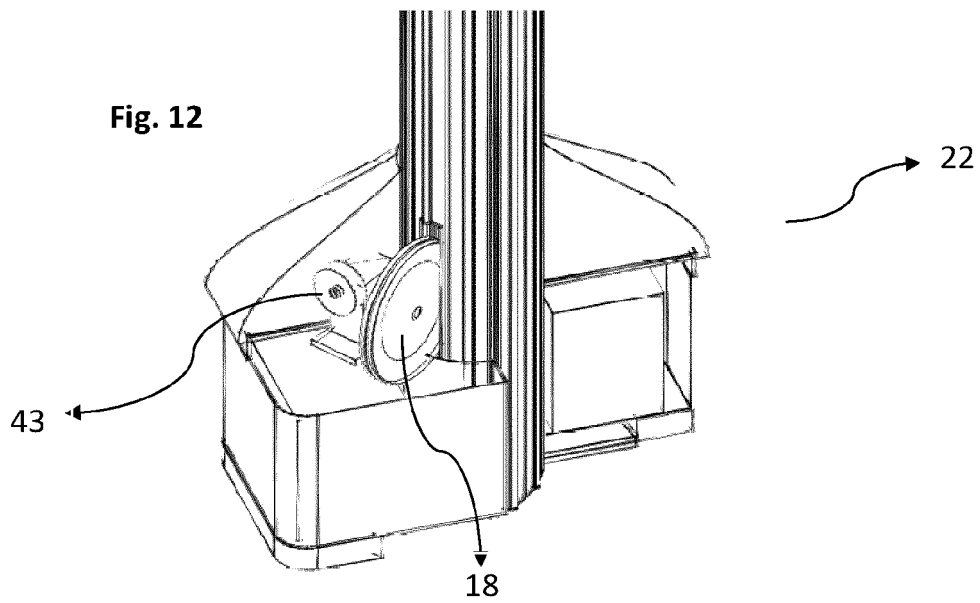


Fig. 13a

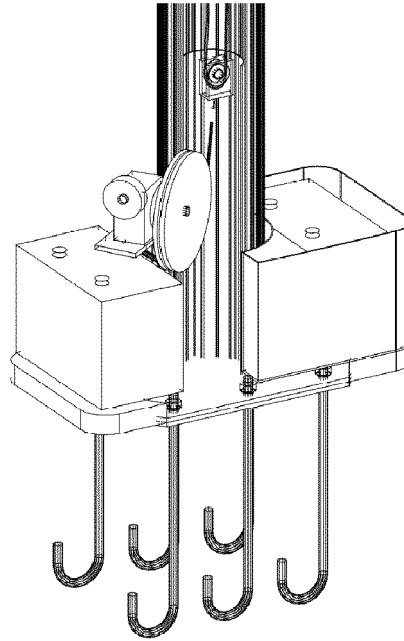
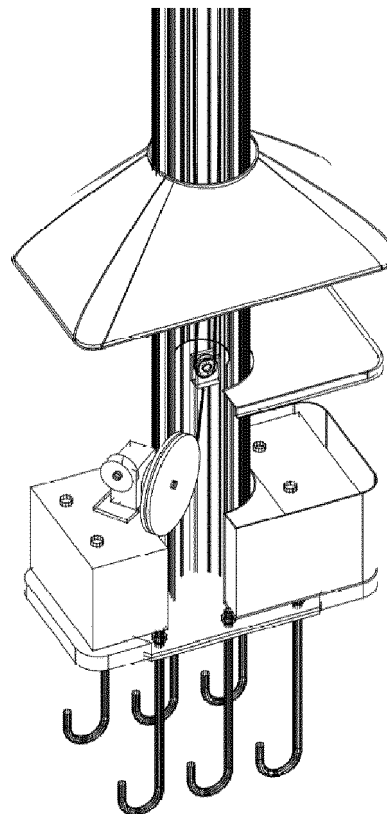


Fig. 13b



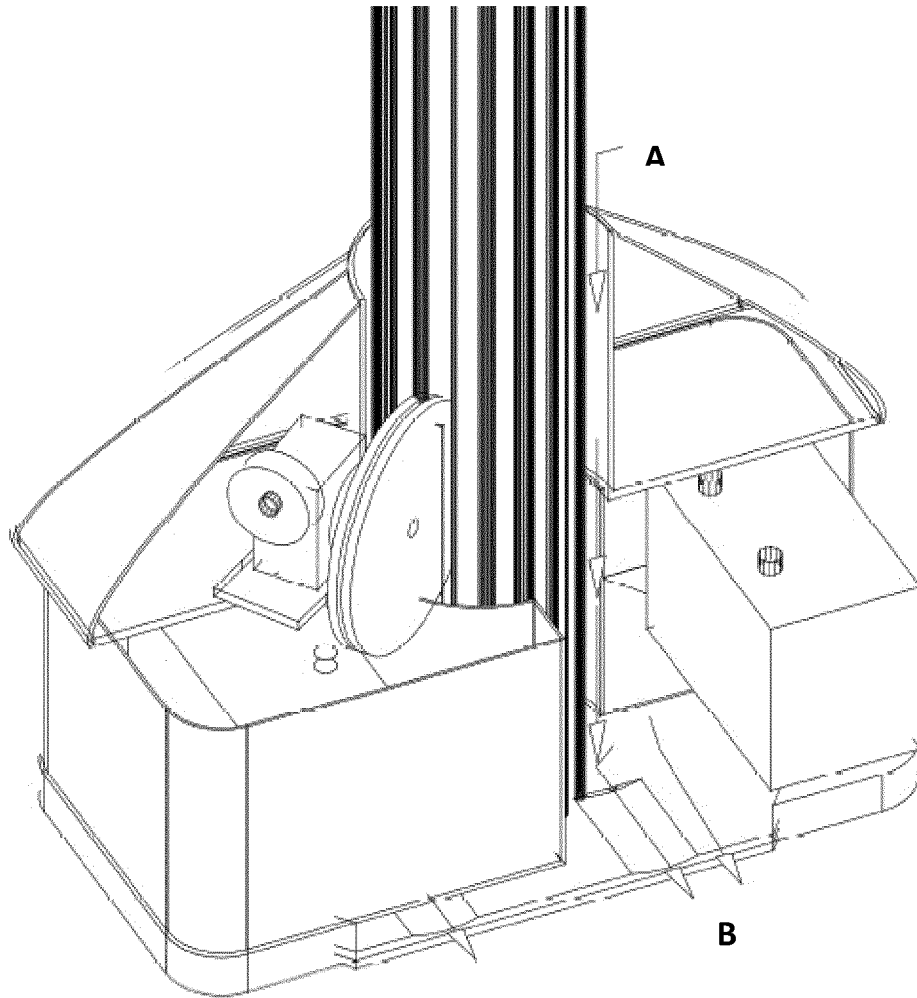


Fig. 14



EUROPEAN SEARCH REPORT

Application Number
EP 12 16 0886

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 01/75849 A2 (VIDEOLARM INC [US]; JEN CHUNG HUA [US]; SCHNEIDER PETER G [US]; SEITZ) 11 October 2001 (2001-10-11)	1-7, 9-11,13	ADD. G09F17/00
Y	* page 5, line 13 - page 7, line 8 * * page 8, line 26 - page 9, line 20 * * page 11, line 19 - page 12, line 26 * * page 15, line 8 - page 16, line 9 * * figures 1-16 *	8,12	
Y	----- JP 2011 210483 A (CHUGOKU ELECTRIC POWER) 20 October 2011 (2011-10-20) * abstract; figures 1-9 *	8	
Y	----- CN 202 031 373 U (XUEBAO TAO; ZUAN ZHOU) 9 November 2011 (2011-11-09) * the whole document *	12	
A	----- CN 201 765 786 U (ZHEN LI) 16 March 2011 (2011-03-16) * the whole document *	1-7	TECHNICAL FIELDS SEARCHED (IPC)
			G09F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 2 October 2012	Examiner Pantoja Conde, Ana
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 12 16 0886

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The members are as contained in the European Patent Office EDP file on
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02-10-2012

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0175849	A2	11-10-2001	AU 4977501 A 15-10-2001
		CA 2405123 A1	11-10-2001
		US 6447150 B1	10-09-2002
		US 2003024144 A1	06-02-2003
		WO 0175849 A2	11-10-2001

JP 2011210483	A	20-10-2011	NONE

CN 202031373	U	09-11-2011	NONE

CN 201765786	U	16-03-2011	NONE

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