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(54) **Power generating apparatus using water vacuum system or other similar fluid**

(57) The invention relates to a generator apparatus for generating electric current by means of pressure from water or another similar fluid, comprising a circuit formed by an open tank (1) with at least one shut-off valve (2) intercalated between a collection container (4) and an upper leak-tight tank (9) provided with a motor (15) and a return pipe (14) communicating the collection container (4) with the leak-tight tank (9). The fluid acts on at least one scoop wheel, turbine or horizontal hydraulic wheel (3) linked to a flywheel (8) and gears (6) associated with an alternator (7) connected to a distribution board (16), the motor (15) being connected to the distribution board (16). Alternatively, it further incorporates a second scoop wheel, turbine or horizontal hydraulic wheel (21) coupled to a second group of gears (18) feeding a second alternator (20) linked to a second distribution board (22).

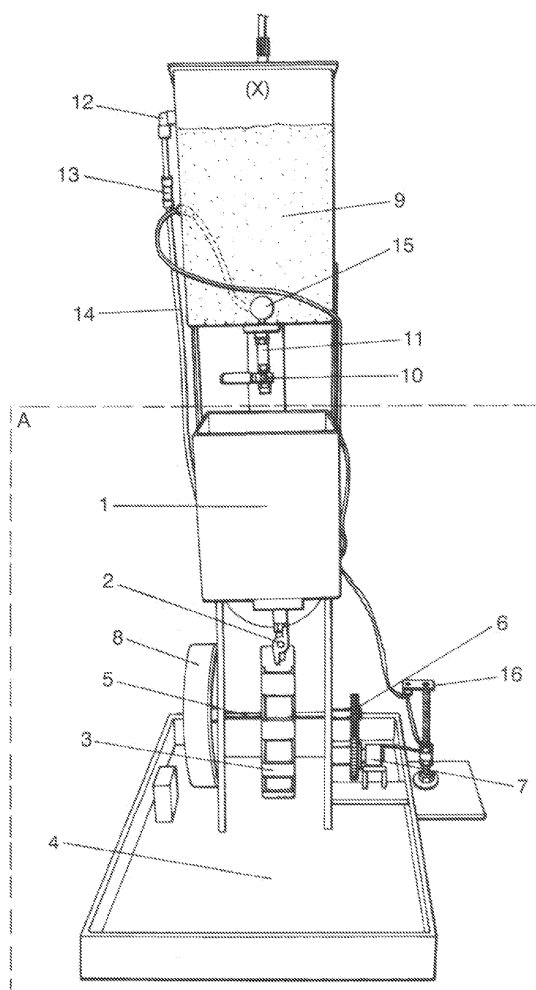


FIG. 1

Description

Object of the Invention

[0001] As indicated by the title of the present specification, the invention relates to a generator apparatus for generating electric current by means of a vacuum system based on water or another similar fluid.

[0002] More particularly, the object of the invention is focused on an apparatus intended for producing electric current that is structurally designed so that one or two alternators can be made to rotate by means of a closed circuit of fluid such as water, antifreeze or another similar fluid, moved by means of a vacuum adsorption system, allowing the production of completely clean energy with a minimum consumption of said fluid, comprising one or two mechanisms of movement by means of a scoop wheel, turbine or horizontal hydraulic wheel generating energy and feeding one or respective independent alternators.

Field of Application of the Invention

[0003] The field of application of the present invention is encompassed within the technical sector of the industry dedicated to the manufacture of electric energy generators.

Background of the Invention

[0004] Currently, and as a reference to the state of the art, although many types of apparatuses and devices designed for generating a mechanical energy capable of being transformed into electric current, such as the apparatus herein disclosed, are known, it must be pointed out that the applicant is unaware of the existence of any apparatus having technical, structural and constitutive features similar to those of the generator apparatus for generating electric current proposed herein, the characterizing details distinguishing it being suitably listed in the final claims that accompany the present specification thereof.

Summary of the Invention

[0005] The generator apparatus for generating electric current by means of pressure from water or another similar fluid proposed by the invention is configured as a notable novelty within its field of application, the characterizing details thereof being suitably listed in the final claims that accompany the present specification.

[0006] Specifically, the invention proposes an electric current generator which is based on a closed circuit of fluid, preferably water, although it may be an antifreeze or another similar fluid or liquid which is moved by means of a vacuum system, having for that purpose a hermetic tank with at least one drain pipe with a shut-off valve and a collection container for collecting said water with a vac-

uum system intercalated in a return pipe which carries the fluid from the collection container to the hermetic tank, there being arranged below the shut-off valve a scoop wheel, or a turbine, or a horizontal hydraulic wheel which will be moved when the liquid falls on it and it is linked by means of its shaft to a flywheel and to gears associated with an alternator connected to feed a distribution board.

[0007] In an alternative embodiment variant, the apparatus incorporates a second energy generating group comprising a second scoop wheel, turbine or horizontal hydraulic wheel, located between the leak-tight tank and the open tank and to the shaft of which there is linked a second flywheel and a second group of associated gears which in turn are linked to a second alternator connected to a second distribution board.

[0008] The generator thereby has a dual energy generation system for generating energy through the described mechanisms, such that the energy generated by one of them is released completely for the desired use, while the other system, in addition to driving the apparatus, also produces the remaining energy for external consumption.

[0009] The described generator apparatus proposed herein thereby represents an innovative structure having structural and constitutive features unknown up until now for such purpose, for which reasons together with the practical use thereof provide it with the support sufficient for obtaining the exclusive privilege that is sought.

Description of the Drawings

[0010] To complement the description that is being made and for the purpose of aiding to better understand the features of the invention, a set of drawings is attached as an integral part of the present specification in which the following has been depicted with an illustrative and non-limiting character:

Figure 1 shows a schematic front perspective view of an embodiment of the generator apparatus object of the invention, the main parts and elements integrated therein being seen.

Figure 2 shows a schematic front elevational view of a second embodiment of the apparatus object of the invention, in this case in an embodiment thereof with a dual mechanism of movement, the main parts and elements integrated therein being seen.

Preferred Embodiment of the Invention

[0011] In view of the aforementioned figures and according to the numbering adopted therein, respective preferred embodiments of the invention which comprises the parts and elements indicated and described in detail below can be observed.

[0012] In relation to Figure 1, it can be seen how the generator apparatus proposed by the invention comprises a first circuit indicated in said Figure 1 as part (A),

intended for starting the generator, in which there is contemplated an open tank (1) having at the bottom a shut-off valve (2), the opening of which starts the operation of the machine, passing the liquid contained in said open tank (1) to actuate a scoop wheel, turbine or horizontal hydraulic wheel (3) arranged below said stopcock (2), which in turn rotates the shaft (5) associated thereto and acts on gears (6) arranged at its end which in turn rotate an alternator (7) suitably linked to them. At the opposite end, the aforementioned shaft (5) of the scoop wheel (3) incorporates a flywheel (8) that prevents pulls that may loosen the other elements.

[0013] Still referring to the aforementioned circuit (A), the existence of a container (4) which is used for collecting liquids once they have passed through the scoop wheel, turbine or horizontal hydraulic wheel (3) is contemplated in the lower part.

[0014] This container (4) is provided with a liquid return pipe (14) communicating with a leak-tight tank (9) arranged in the upper part of the generator.

[0015] Said leak-tight tank (9) is a hermetic tank which performs a vacuum function in order to achieve moving liquid up from the container (4) through said pipe (14) by means of a vacuum adsorption system.

[0016] Once the scoop wheel area (part A) is in operation, a cock (10) arranged in the lower part of the leak-tight tank (9) will be opened, which cock is provided with a first check valve (11) at the outlet of the leak-tight tank (9), a second check valve (13) also being provided in the pipe (14) close to the inlet (12) connecting it to the leak-tight tank (9).

[0017] Once the entire system of the circuit (A) is operating, electric current will be generated through the alternator (7). This energy produced passes through a distribution board (16) connected thereto, shunting sufficient energy to drive a motor (15) or a pressure group provided in the leak-tight tank (9) to create the vacuum (X) in said leak-tight tank (9).

[0018] Due to the operation of the motor (15), sufficient vacuum (X) is created to move the liquid up from the container (4) to the leak-tight tank (9) through the pipe (14) and the liquid falls into the open tank (1) through the cock (10) arranged in its lower part, from which open tank it falls on the scoop wheel (3), maintaining the movement of the shaft (15) and closing the cycle.

[0019] Once the entire circuit is functioning and the motor (15) is operating with a minimum amount of energy produced, the alternator (7) saves the surplus energy for exportation.

[0020] In an embodiment variant shown in Figure 2, the generator apparatus comprises a first circuit similar to the one described above and also indicated in Figure 2 as part (A), intended for starting the generator, in which there is contemplated an open tank (1) having at the bottom a shut-off valve (2), the opening of which starts the operation of the machine, passing the liquid contained in said open tank (1) to act on a first scoop wheel, turbine or horizontal hydraulic wheel (3) arranged in the lower

part of the apparatus below said stopcock (2), which in turn rotates the shaft associated thereto indicated with reference (5) and acts on a first group of gears (6) arranged at its end which in turn rotate a first alternator (7) suitably linked thereto, there further being a first flywheel (8) linked to the aforementioned shaft (5) of this first scoop wheel, turbine or horizontal hydraulic wheel (3) that prevents pulls that may loosen the other elements.

[0021] Still referring to the aforementioned circuit (A), the existence of the container (4) which is used for collecting liquids once they have passed through the described first lower scoop wheel, turbine or horizontal hydraulic wheel (3) is contemplated in the lower part.

[0022] This container (4) is provided with a liquid return pipe (14) communicating with the leak-tight tank (9) provided in the upper part of the generator.

[0023] As in the previous case, said leak-tight tank (9) is a hermetic tank which performs a vacuum function in order to achieve moving the liquid up from the container (4) through said pipe (14) by means of a vacuum adsorption system, the existence of at least a first check valve (11) arranged in the outlet pipe of the leak-tight tank (9) at the end of which there is a cock (10) for the exit of the fluid, and a second check valve (13) located in the pipe (14) where it is connected to the leak-tight tank (9), being contemplated

[0024] Still referring to the features of this second variant of the proposed apparatus, the latter also has a pressure motor (15) located in this case in the outlet pipe of the leak-tight tank (9), which is electrically fed through a distribution board (16) that is connected to the alternator (7).

[0025] Finally and now in a differentiating manner, the apparatus of this embodiment variant incorporates a second generator mechanism, indicated in Figure 2 as area B, arranged on the open tank (1) and below the aforementioned cock (10) for the exit of the fluid, which comprises a second scoop wheel, turbine or horizontal hydraulic wheel (21) moved by the circuit of fluid. This second scoop wheel, turbine or horizontal hydraulic wheel (21), similar to the first scoop wheel (3), incorporates a second group of gears (18) and a second flywheel (19) linked to its shaft (17) such that its rotating movement feeds a second alternator (20) which in turn is linked to a second distribution board (22) for supplying electricity.

[0026] The motor (15) creating a void in the leak-tight tank (9) thereby moves the liquid up from the container (4) into said leak-tight tank (9) through the pipe (14), and the liquid falls on the second scoop wheel, turbine or horizontal hydraulic wheel (21) through the cock (10) provided in its lower part, rotating its shaft, and then it falls into the open tank (1), from which tank it falls on the first scoop wheel, turbine or horizontal hydraulic wheel (3), maintaining the movement of the shaft (15) thereof and closing the cycle.

[0027] Once the entire circuit is operating, electric current will be generated through both the first alternator (7) and the second alternator (20), passing the energy pro-

duced through the respective distribution boards (16 and 22) connected thereto, one of which boards shunts sufficient energy to drive the motor (15), while the remaining energy and the energy from the other distribution board serves for exportation.

[0028] Having sufficiently described the nature of the present invention as well as the way of carrying it out to practice, it is not considered as necessary to explain it further for any person skilled in the art to understand its scope and the advantages derived therefrom, hereby stating that it can be carried out to practice within its essential nature in other embodiments which differ in detail from the embodiment indicated by way of example, and such embodiments will be equally covered by the protection sought provided that its fundamental principle is neither altered, changed nor modified.

Claims

1. A generator apparatus for generating electric current by means of a vacuum system based on water or another similar fluid, **characterized by** comprising a closed circuit of fluid moved by means of vacuum adsorption, formed by: an open tank (1) with at least one shut-off valve (2) intercalated between a collection container (4) and an upper leak-tight tank (9) linked to a motor (15) or a pressure group having a return pipe (14) communicating the collection container (4) with the leak-tight tank (9); in that said fluid of the circuit acts on at least one scoop wheel, turbine or horizontal hydraulic wheel (3) arranged below said shut-off valve (2) and linked by means of the shaft (5) thereof at one end to a flywheel (8) and at the opposite end to respective gears (6) associated with the shaft of an alternator (7) connected to feed a distribution board (16), the motor (15) being connected to said distribution board (16) for the power supply thereof.
2. The generator apparatus for generating electric current by means of pressure from water or another similar fluid according to claim 1, **characterized by** the fact that the leak-tight tank (9) has a cock (10) in its lower part provided with a check valve (11); and in that a second check valve (13) located close to the inlet (12) connecting it to the leak-tight tank (9) has been provided in the pipe (14).
3. The generator apparatus for generating electric current by means of a vacuum system based on water or another similar fluid according to claims 1 and 2, **characterized in that** in addition to a first scoop wheel, turbine or horizontal hydraulic wheel (3) arranged below the shut-off valve (2) and linked by means of the shaft (5) thereof to a first flywheel (8) and first group of gears (6) associated with a first alternator (7) connected to a first distribution board

(16), the pressure group or motor (15) being connected to said distribution board (16) for the power supply thereof, there is incorporated on the open tank (1) and below the cock (10) for the exit of the fluid a second scoop wheel, turbine or horizontal hydraulic wheel (21) which has, linked to its shaft (17), a second group of gears (18) and a second flywheel (19) feeding a second alternator (20) which in turn is linked to a second distribution board (22).

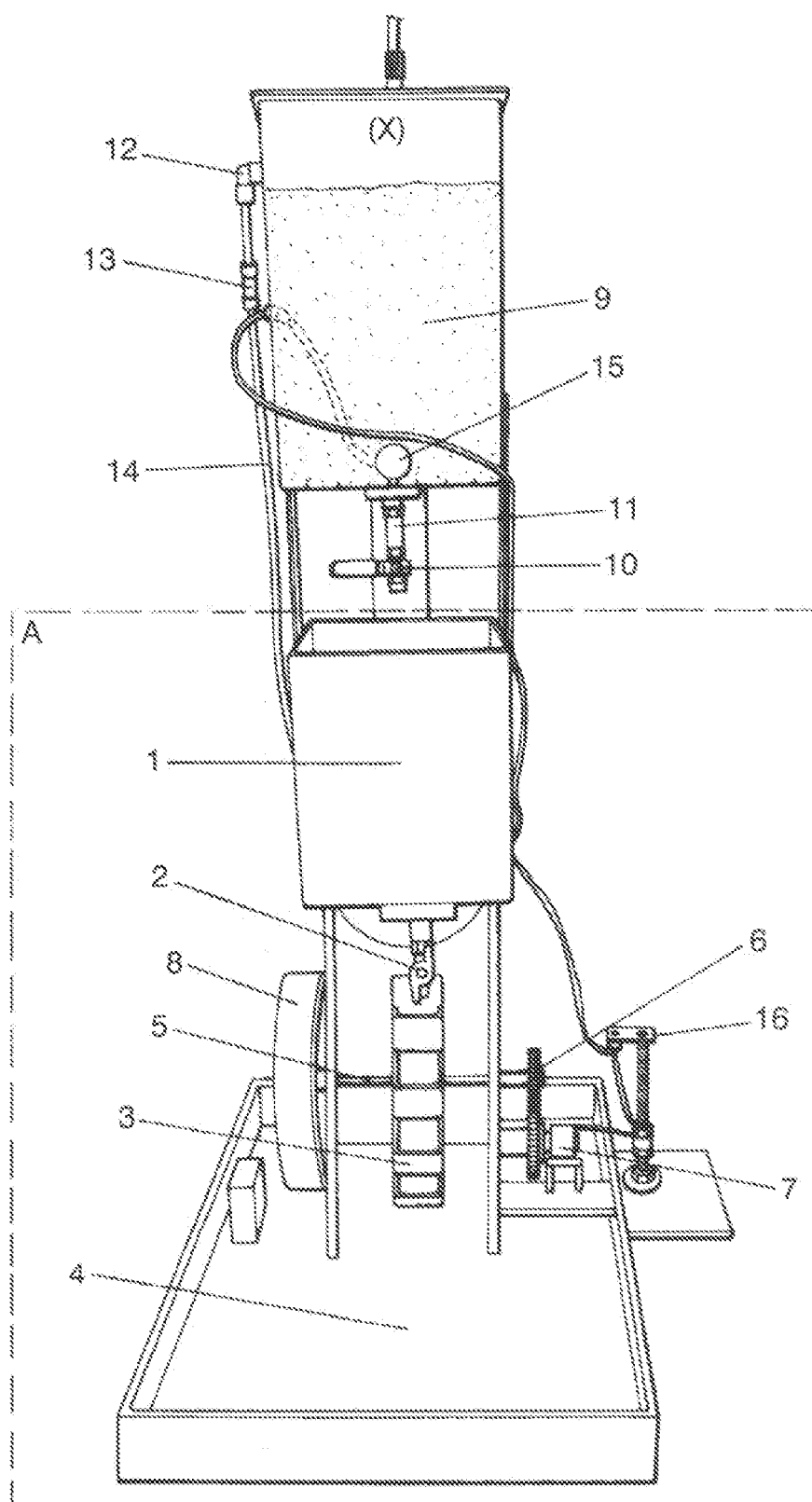


FIG. 1

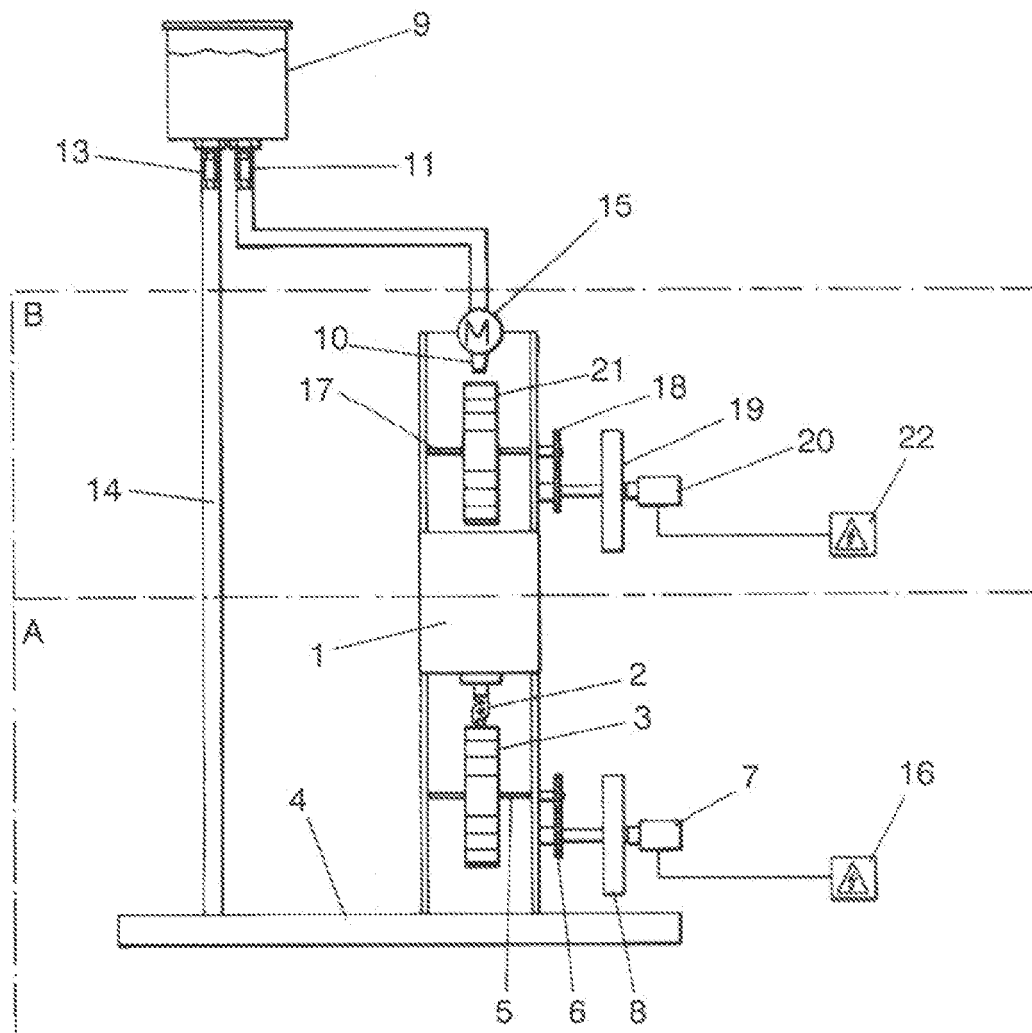


FIG. 2