(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 1 980 800 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
15.10.2008 Bulletin 2008/42

(51) Int Cl.:
F24F 13/22 *(2006.01)* ***F25D 21/14*** *(2006.01)*

(21) Application number: **08151468.9**

(22) Date of filing: **15.02.2008**

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

(30) Priority: **04.04.2007 AR P070101445**

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(54) **Device for eliminating the water produced by air conditioning systems**

(57) Device (1) for eliminating the water produced by air conditioning systems comprising a main housing provided with an electrical connection box (e), one water intake (a), two water outlet pipes (b, c), water dissipating means (g) by means of heat, and outlet holes (d) for the dissipated water. The water intake (a) is connected to the flowing out water hose of an air conditioning apparatus and receives the water produced during its performance, and water outlet pipe (b) is an overflowing water outlet of the device (1) for use in case of emergency like for example a lack of power supply, to which also a hose can be connected for a proper output of the water in such cases. Water outlet pipe (c) is a drain plug to be used also in emergency situations when the device is not working and the water contained in the device (1) must be had out.

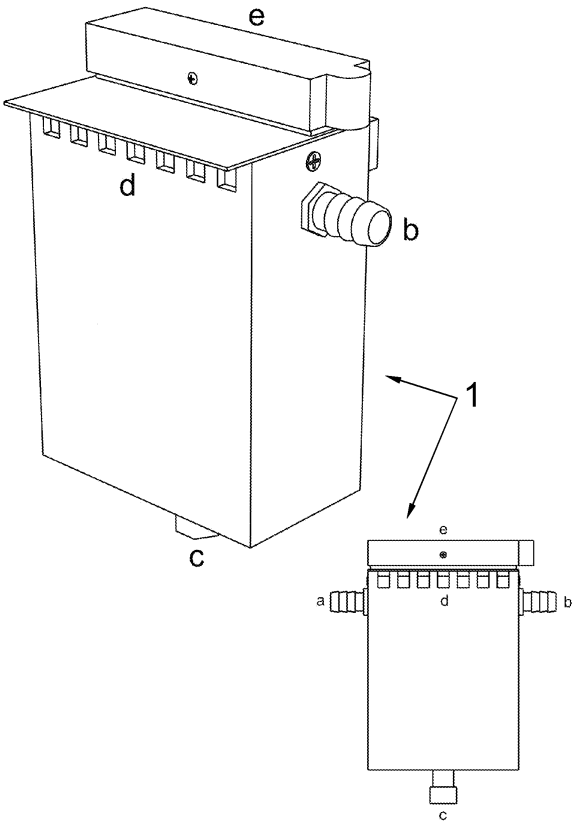

Fig.- 1

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Description

Technical field

[0001] The present invention relates to a device for eliminating the water produced by air conditioning systems which is not canalized or directed to a draining pipe.

Description of related art

[0002] The water produced by air conditioning devices is a well known problem.

[0003] People walking along sidewalks in summer days are disturbed by the water produced by air conditioning equipments.

[0004] Besides, it causes a number of problems among neighbours, especially those who live in an apartment building, where the air conditioner located on an upper floor permanently drips on the lower floor, causing damages and annoyance to the dwellers.

[0005] It is possible to observe the damages that this dripping water produces, rusting canopies, destroying wooden frames, eroding awnings and the like. Besides, sidewalks become slippery and unsafe, due to the mould growing on them.

[0006] It is therefore an object of the invention to provide a solution which avoids the mentioned problems.

SUMMARY OF THE INVENTION

[0007] This and other objects of the invention are achieved by a device for dissipating the water produced by air conditioning systems according to independent claim 1, and a conditioning system according to independent claim 9. Favourable embodiments are defined by the dependent claims 2-8.

[0008] According to a first aspect of the invention, a device for eliminating the water produced by air conditioning is provided, the device comprising a main housing provided with an electrical connection box, water intakes, water outlet pipes, water dissipating means and outlet holes for the dissipated water.

[0009] The water intake is connected to a flowing out water hose of an air conditioning apparatus and receives the water produced during its performance. Inside the housing of the device are located water dissipating means which evaporates the water and lets it out in such a state through outlet holes.

[0010] The outlet pipes consist at least in, an overflowing water outlet of the device which can be used in case of emergency like for example a lack of power supply, and a drain plug to be used also in similar emergency situations when the device is not working and the water contained in the device must be had out.

[0011] The device, in particular the electrical connection box, comprises the corresponding connections to the power supply means and to the dissipating means.

[0012] The device is provided with fixing means for fixing to the air conditioning apparatus which in turn is also provided with the corresponding fixing means.

[0013] Due to its properties the device of the invention solves perfectly the above mentioned problems of the conventional air conditioning installations.

[0014] A second aspect of the invention is to provide a conditioning system comprising at least a device for eliminating the water produced by air conditioning apparatus according to the invention.

[0015] These and other aspects of the invention will be apparent from and elucidated with reference to the embodiments described hereinafter.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] The invention will be better understood and its numerous objects and advantages will become more apparent to those skilled in the art by reference to the following drawings, in conjunction with the accompanying specification, in which:

Figure 1 is a perspective and front view of the device of the invention wherein the main elements of the device are shown and identified.

Figure 2 is a rear view of the device of the invention showing two holding metal bearings for installation of the device to the outer surface of an air conditioning system.

Figure 3 shows the distribution of the metallic electrodes located within the device of the invention which dissipates the water coming from the conditioning system.

DETAILED DESCRIPTION OF THE INVENTION

[0017] In figure 1 a device (1) for eliminating the water produced by air conditioning systems according to a preferred embodiment of the invention is shown. The elimination of the water produced by air conditioning systems is carried out by the heat produced by a dissipating means.

[0018] Said device (1) comprises a main housing provided with an electrical connection box (e), one water intake (a), two water outlet pipes (b, c), water dissipating means (g) and outlet holes (d) for the dissipated water.

[0019] The water intake (a) is connected to the flowing out water hose (not shown) of an air conditioning apparatus and receives the water produced during its performance. Inside the housing of the device (1) are located water dissipating means (g) which evaporates the water and lets it out in such a state through outlet holes (d) In a particular embodiment the water dissipating means consist in a group of metallic electrodes, as shown in figure 3.

[0020] Water outlet pipe (b) is an overflowing water outlet of the device (1) which can be used in case of

emergency like for example a lack of power supply. Also a hose can be connected to the water outlet pipe (b) for a proper output of the water in such cases. In turn, the water outlet pipe (c) is a drain plug to be used also in similar emergency situations when the device is not working and the water contained in the device (1) must be had out.

[0021] Electrical connection box (e) comprises the corresponding connections to the power supply means and to the dissipating means (f)..

[0022] Device (1) is provided with fixing means (f) to the air conditioning apparatus which in turn is also provided with the corresponding fixing means. In a particular embodiment fixing means (f) of the device consist in two holding metal bearings cooperating with metallic straps provided in the air conditioning apparatus.

[0023] Advantageously, the device for dissipating water of the invention is prepared to eliminate 1.5 litres of water per hour. In case of air conditioning apparatus producing more quantity of water, more than one device (1) of the invention can be installed in parallel.

[0024] In operation, when the air conditioning system is switched off, the device (1) keeps working for a short period of time until the water is totally eliminated, being subsequently the device (1) turned off automatically after a new short period of time.

Claims

1. A device for eliminating the water produced by air conditioning systems comprising a main housing provided with an electrical connection box (e), at least one water intake (a), at least two water outlet pipes (b, c), water dissipating means (g) and outlet holes (d) for the dissipated water.

2. A device according to claim 1, **characterized in that** the water intake (a) is connected to the flowing out water hose of an air conditioning apparatus.

3. A device according to claim 1, **characterized in that** the water dissipating means (g) are located inside the housing of the device (1).

4. A device according to claim 1 or 3, **characterized in that** the water dissipating means (g) are a group of metallic electrodes.

5. A device according to claim 1, **characterized in that** water outlet pipe (b) is an overflowing water outlet of the device (I).

6. A device according to claim 1, **characterized in that** water outlet pipe (c) is a drain plug for the draining of the device (1).

7. A device according to claim 1, **characterized in that** the electrical connection box (e) comprises connections to the power supply means and to the dissipating means (f).

8. A device according to claim 1, **characterized in that** the device (1) is provided with fixing means (f) to the air conditioning apparatus which in turn is also provided with the corresponding fixing means.

9. A device according to claim 8, **characterized in that** the fixing means (f) consist in two holding metal bearings cooperating with metallic straps provided in the air conditioning apparatus.

10. A device according to any of the preceding claims, **characterized in that** the device (1) eliminate 1.5 litres of water per hour.

11. A conditioning system comprising at least one device for dissipating water according to any of claims 1 to 8.

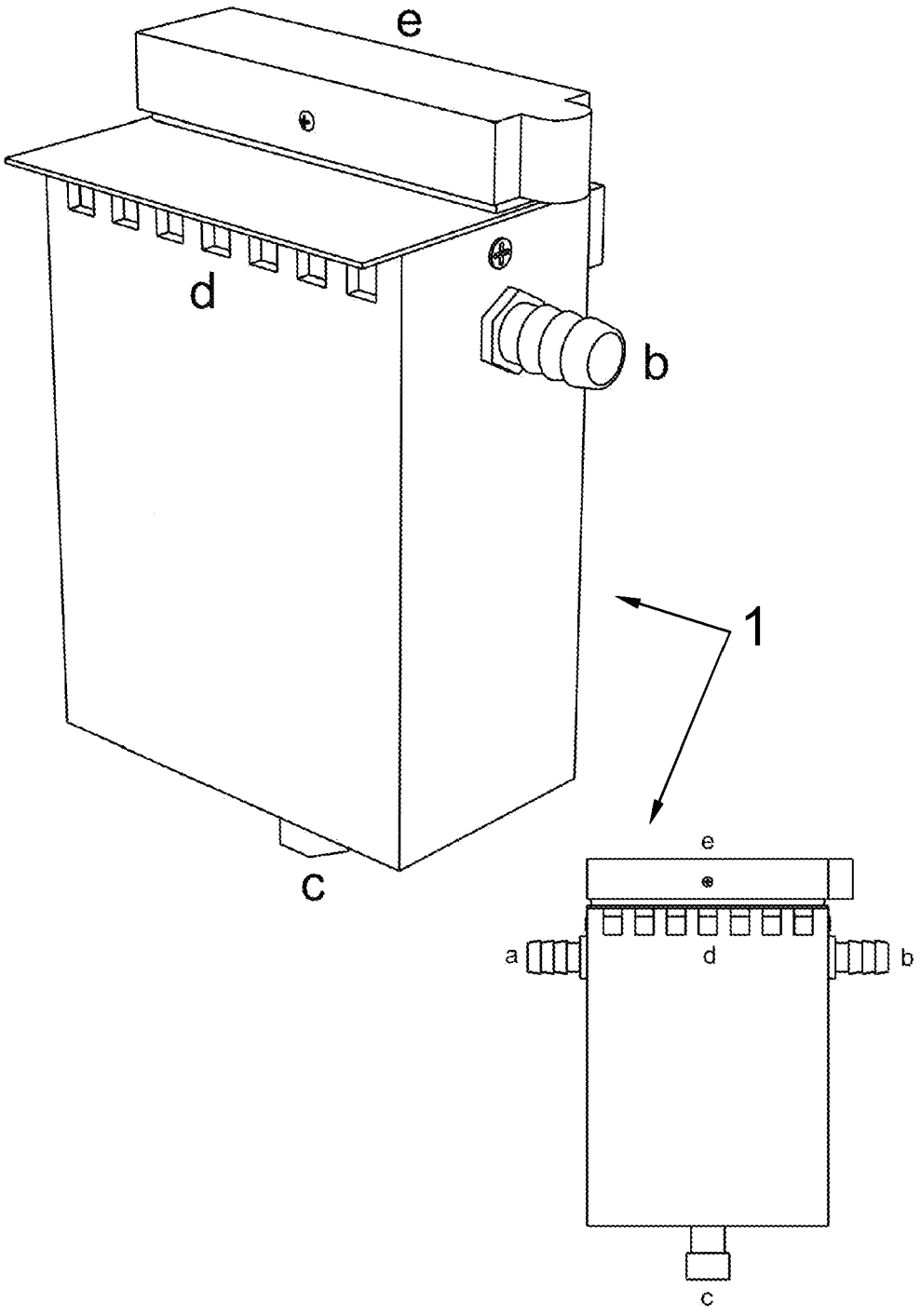

Fig.- 1

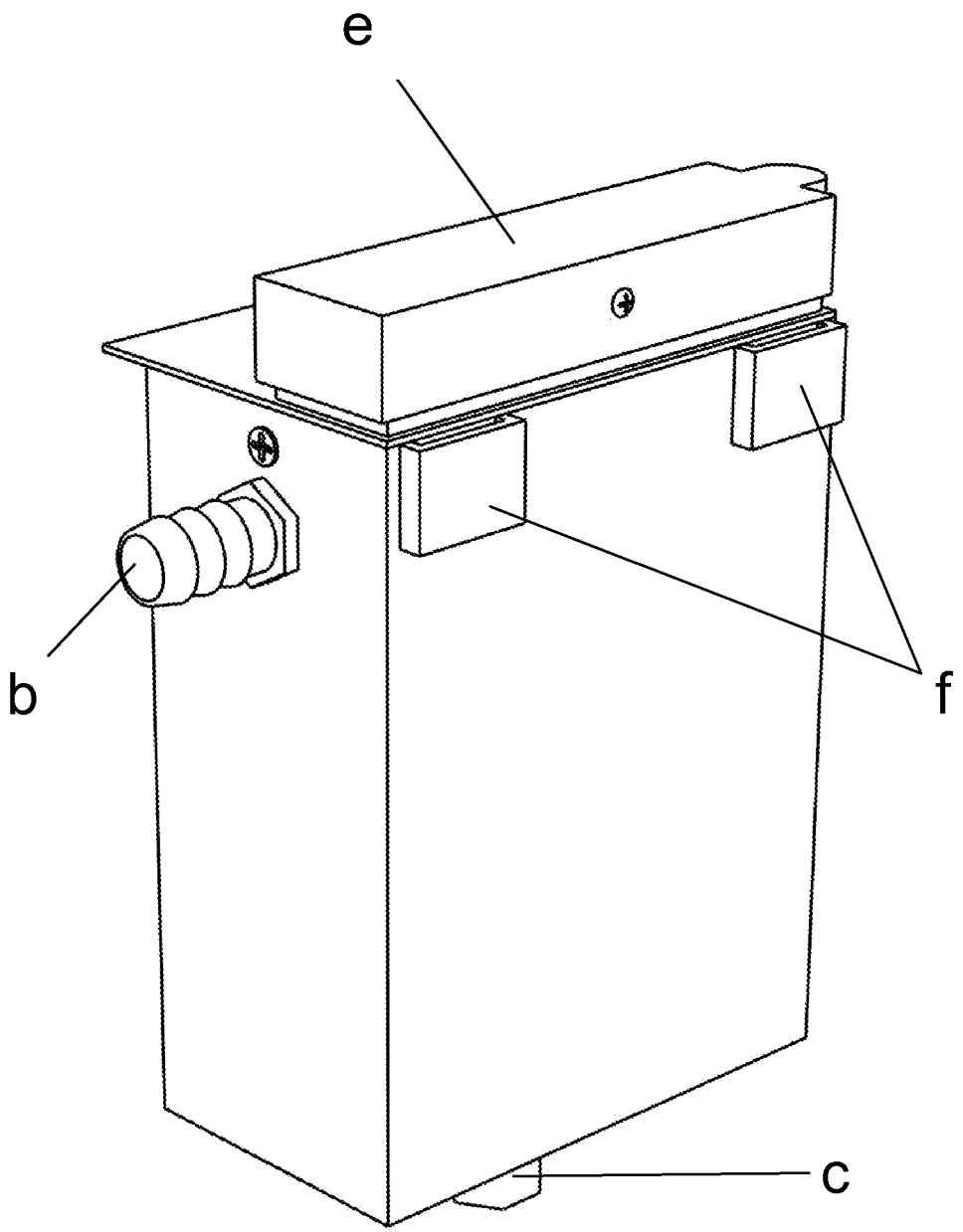

Fig.- 2

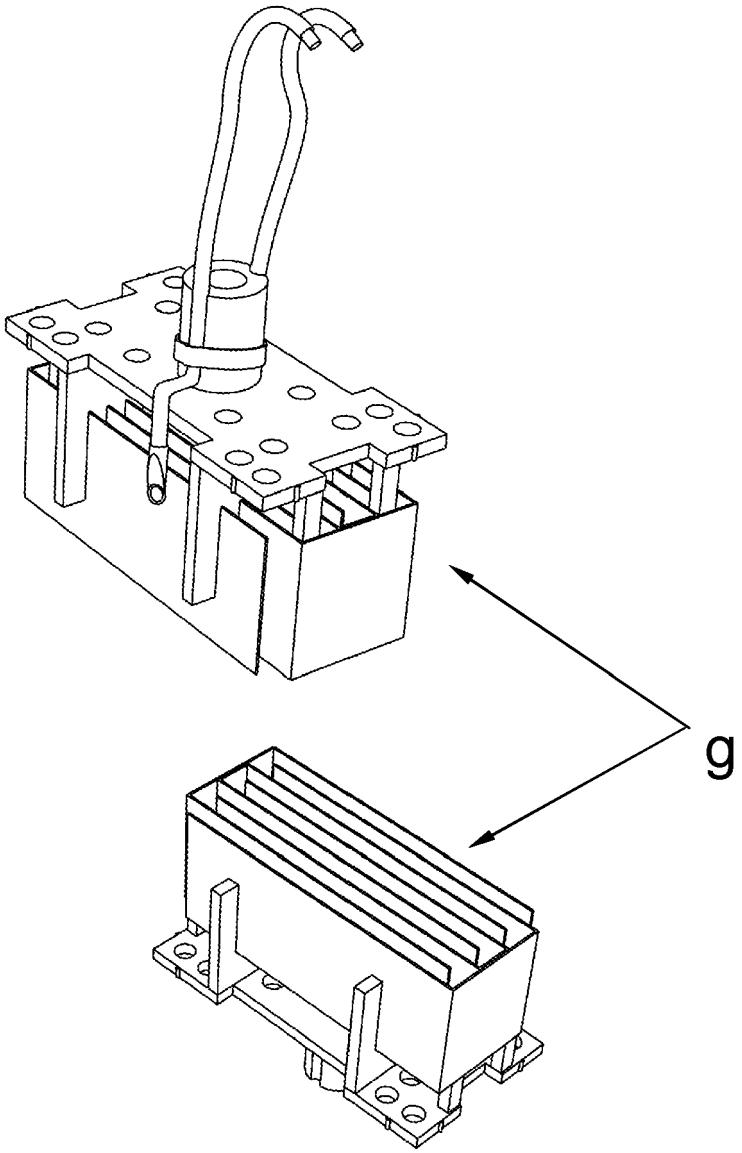

Fig.- 3

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EUROPEAN SEARCH REPORT

Application Number
EP 08 15 1468

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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TECHNICAL FIELDS SEARCHED (IPC)

F24F
F25D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	18 July 2008	Valenza, Davide

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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18-07-2008

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82