(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 January 2008 (10.01.2008)

PCT

(10) International Publication Number
WO 2008/004953 A1

(51) International Patent Classification:
E04H 15/38 (2006.01) *E04H 15/24* (2006.01)
A47K 3/28 (2006.01)

(21) International Application Number:
PCT/SE2007/000663

(22) International Filing Date: 5 July 2007 (05.07.2007)

(25) Filing Language: Swedish

(26) Publication Language: English

(30) Priority Data:
0601479-9 5 July 2006 (05.07.2006) SE

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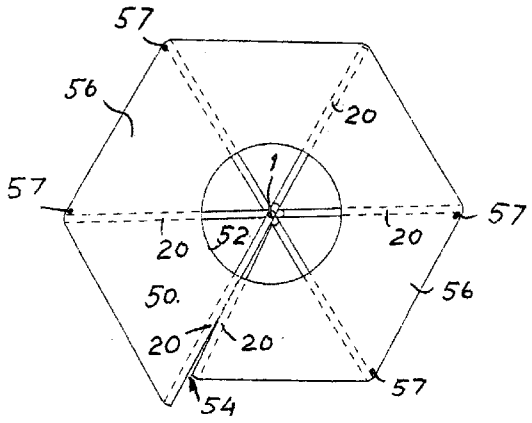
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(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

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(54) **Title:** A TENT, ESPECIALLY INTENDED TO BE USED FOR SANITATION PURPOSES



(57) **Abstract:** The invention refers to a tent especially intended to be used for sanitation purposes and comprising a frame consisting of a number of frame elements (20) connected to each other and a flexible tent cloth (50) associated with the frame, said frame elements (20) are mutually essentially equal and at one of their ends (23) situated at the upper portion of the tent pivotably connected to each other by aid of a pivoting means (40) admitting a mutually pivoting of the frame elements (20) from a first position, in which they are mutually parallel, congruent and adjacent to a second position, in which they are mainly equally separated around a vertical, central tent axis (1) and said tent cloth (50) has at least one vertical slit (54) over it's entire height and at least one entrance or exit opening in the form of releasable tent portions (56) from the tent cloth (50) situated between two after each other separated frame elements (20) in the vertical portion of the tent cloth (50). Two of said frame elements (20) are in their second position or the tent's erected position situated adjacent to each other in constituting a sealing frame work at the same time as the vertical slit (54) of the tent cloth extends between said adjacent frame elements in permitting that the frame elements are to be brought together in a common plane together with free portions of the tent cloth (50) attached to said frame elements in closing said slit (54) in connection with the erecting of said tent.

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A tent, especially intended to be used for sanitation purposes

The present invention refers to a tent especially intended to be used for sanitation purposes and is of the type, which is evident from the preamble of claim 1 enclosed.

The invention refers to a tent of the type comprising a frame consisting of a number of frame elements connected to each other and a flexible tent cloth associated with the frame. The tent can be used generally but can especially be used for sanitation purposes. The tent has a structure or design, which permits the tent forming parts to be stored and transported in a condition, in which the tent does not require large space, in which the same is erectable.

A problem in previously known tent structures is that the work in erecting the tent from the storage condition and to transfer the erected tent to storage condition/transport condition respectively, is relatively complicated operations.

One object of the present invention is therefore to provide a tent, which in a simple way can be erected and be transmitted into storage condition, respectively. A further object is to provide a tent, which has structural details, which are especially adapted to the use of the tent for sanitation purposes.

The objects are partly or totally reached within the invention. The invention is stated in the claim 1 enclosed. Embodiment examples of the invention are stated in the independent claims enclosed.

In one embodiment example of the invention the frame elements of the tent are mutually mainly identical and the cupola formed tent cloth of the tent has at least one vertical slit over it's entire height. The frame elements are at one of their ends, situated at the upper portion of the tent, pivotably connected to each other by aid of a pivoting means admitting a mutually pivoting of the frame elements from a first position, in which they are mutually parallel, congruent and adjacent to a second position, in which they are mainly equally separated around a vertical, central tent axis.

Preferably, the pivoting means is formed to permit a mutually pivoting of the frame elements mainly around said central tent axis.

The slit of the tent cloth has belonging sealing means, which admit the slit edges of the tent cloth to preferably tightly connect to each other. Preferably, the frame has a frame element adjacent to respective edge of the slit, so that these frame elements can be placed close to each other in the erected condition of the tent.

In certain embodiment examples at least one of the frame elements can be formed by a tube, which is connected to a liquid source/water source at the same time as the upper end of the tube is connected to a shower nozzle. The water supplying tube can be connected to another tube formed frame element in the tent, which also has one or more shower nozzles. A water supplying connection between the frame elements can have the form of a flexible hose, so that the tent easily can be folded and/or be erected without that a special respect must be taken to said connection.

The fame elements are preferably simple curved e.g. commonly L-formed, so that the lower L-legs is vertically orientated, and defines the wall of the tent at the same time as the shorter leg defines the roof of the tent, said shorter frame element leg can be provided to lean upwards and inwards towards the central axis of the tent.

The tent cloth is preferably firmly connected to the frame elements in such a way that the tent cloth is stretched in circumference direction between adjacent frame elements in the erected condition of the tent, so that the frame elements in a circumference direction have mainly equal angle distance.

The tent cloth can be vertically cut with a slit near each of two adjacent frame elements in direction of circumference, along their vertical portions, so that the slits are preferably bridged over by burdock joint, zip fastener or similar fastening means, which admit the tent cloth portion between the pair of adjacent frame elements to be released from the rest of the tent cloth and be lifted upwards and attached to the bridging portion of the tent between wall and roof, so that the tent receive a corresponding entrance/exit opening. In preferable embodiment examples the erected tent has a two opposite, such wall portions to admit a number of tent to be placed in series one after the other for passage of persons, animals or objects, which shall in series be exposed to a sanitation step along such a row of tents in a way known per se.

The invention is described below by aid of a form of embodiment example with reference to the enclosed drawing, in which

Fig. 1 shows a schematic view from above of a tent according to the present invention,

Fig. 2 shows a schematic cross section through the tent illustrated in fig. 1,

Fig. 3 shows another embodiment example of a tent, in a view corresponding to fig. 2,

Fig. 4 shows a schematic view through the tent according to fig. 3,

Fig. 5 shows a part section view through the tent in fig. 4,

Fig. 6 shows the tent illustrated in fig. 1 and 2 in a store condition, and

Fig. 7 shows the tent illustrated in fig. 4 and 5 in a store transporting condition.

In fig. 1 a cupola tent 10 is illustrated, which is mainly symmetrically formed around a central vertical axis 1. The tent 10 comprises a number of mainly simple curved, essentially L-formed frame elements 20 having a mainly vertical leg 21 and a mainly horizontal leg 22, which in this example however is leaning somewhat inwards and upwards towards the axis 1. The free end portion 23 of the shorter leg 22 has a bore 24, which receive a vertical pivoting bearing shaft 30, which is coaxial to the axis 1.

The upper and lower ends 31,32 of the shaft 30 are enlarged in order to contain between the same the end portions 23 of the frame elements 20, so that they mutually can be close to each only to the axis 1 between a storage condition (fig.6), in which the single curved frame elements 20 are lying congruent and in parallel to each other in a common plane. The tent cloth 50 is cupola formed and extends in a stretched condition over the mutually equal around the axis 1 separated frame elements 20 in the erected condition of the tent, so that the tent cloth extends from the lower ends of the legs 21 of the frame elements up t near the leg ends 23, said tent cloth 50 having a central opening 52, which is over bridged and covered by the

upper end disc 31 of the axis shaft, so that a screened off ventilation opening is achieved in the roof of the tent.

From fig. 1 can also be seen that the tent cloth 50 in its vertical portion in the area between two adjacent frame elements 20 comprises a zip fastener 57 near respective frame element 20, so that the intermediate tent portion 56 can be released from below and collected e.g. in that intermediate area between the legs 21,22 in constituting an entrance/exit opening in the tent.

A corresponding arrangement 56,57 can be achieved e.g. at the opposite side of the tent.

Further you can see from fig. 1 that in the erected condition of the tent two frame elements 20 are situated close to each other, so that a vertical tent slit is located between the pair of adjacent frame elements to allow the frame elements 20 to be folded into a common plane together with the intermediate, to the same attached, flexible portions of the tent cloth 50.

Fig. 3 illustrates a tent, in which the pivoting bearing means 40', which connects the frame elements 20, has another design than the embodiment example according to fig. 1 and 2. From fig. 4 can be seen that the pivoting bearing means 40 comprises a chain 41 of links 42, the mutually pivoting bearing axes 43 of which are in their middle central area firmly fixed to the ends 23 of the upper legs 22 of the frame elements 20. The chain 41 can be bent to a round form around the axis 1, so that the links 42 are mutually pivotable around the intermediate pivot bearing axes 43 axes, which are mutually parallel and vertical. The pivot bearing axes 43 are pivoted supporting link tongues belonging to respective adjacent pair of links 42.

Like in the embodiment example according to fig. 1 the erected frame has two frame elements 20 close to each other, so that the tightly tensioned tent cloth over the frame has a vertical slit extending between the pair close to each other located frame elements in order to allow that the tent can be folded to a transporting condition (fig. 7). The slit can be bridged over by a burdock joint, zip fastener or the like so that it easily can be opened/closed.

In fig. 4 is illustrated that a frame element 20A can be formed like a tube, so that the lower end portion can be connected to a water/liquid source while the upper end portion of the frame elements 20A can be connected to a hand shower or a shower nozzle or an adjustable fittings, which admits a selectable water supply of either the hand shower or the shower

nozzle. Further the frame element eventually can be connected to a flexible hose 71, the other end of which is coupled to a further frame element 20, which also is tube formed and provided with a shower nozzle 72 and/or a hand shower or a connecting fittings, which admits a changing between a hand shower and a permanent shower nozzle. Thanks to the flexibility of the hose 71 the tent can without problems be erected and folded together with maintained fluid communication between two liquid supplying frame elements.

Claims

1. A tent especially intended to be used for sanitation purposes and comprising a frame consisting of a number of frame elements (20) connected to each other and a flexible tent cloth (50) associated with the frame, said frame elements (20) are mutually essentially equal and at one of their ends (23) situated at the upper portion of the tent pivotably connected to each other by aid of a pivoting means (40) admitting a mutually pivoting of the frame elements (20) from a first position, in which they are mutually parallel, congruent and adjacent to a second position, in which they are mainly equally separated around a vertical, central tent axis (1) and said tent cloth (50) has at least one vertical slit (54) over it's entire height and at least one entrance or exit opening in the form of releasable tent portions (56) from the tent cloth (50) situated between two after each other separated frame elements (20) in the vertical portion of the tent cloth (50), **characterized in** that two of said frame elements (20) are in their second position or the tent's erected position situated adjacent to each other in constituting a sealing frame work at the same time as the vertical slit (54) of the tent cloth extends between said adjacent frame elements in permitting that the frame elements are to be brought together in a common plane together with free portions of the tent cloth (50) attached to said frame elements in closing said slit (54) in connection with the erecting of said tent.

2. A tent according to claim 1, **characterized in** that the vertical slit (54) is bridged over by a burdock joint, zip fastener or similar fastening means in allowing of a simple opening and closing procedure.

3. A tent according to claim 1, **characterized in** that at least one of said frame elements (20A) is tube formed and connectable to a fluid source at the same time as at least one frame element (20) is connectable to a shower nozzle (72).

4. A tent according to claim 1, **characterized in** that the pivoting means (40) comprises a chain (41) of links (42), the mutually flexible axes (43) of which are in their middle area position via link tongues pivotably connected to the ends (23) of the upper legs (22) of said frame elements (20), said chain (41) is curved to a round formation around the tent axis (1) at the same time as the links (42) are mutually pivotable around the intermediate flexible axes (43), which are mutually parallel and vertical.

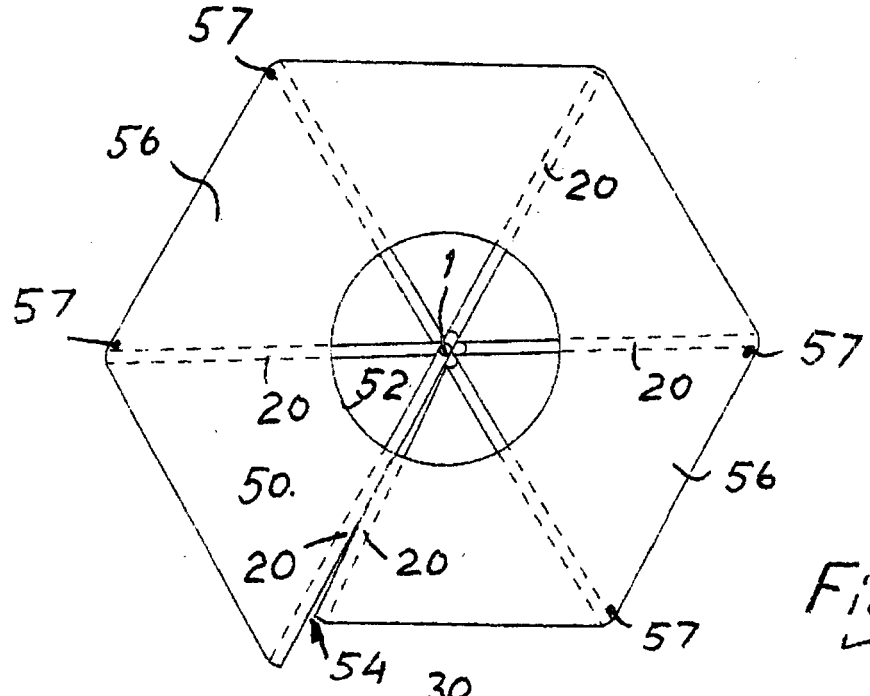

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Fig. 1

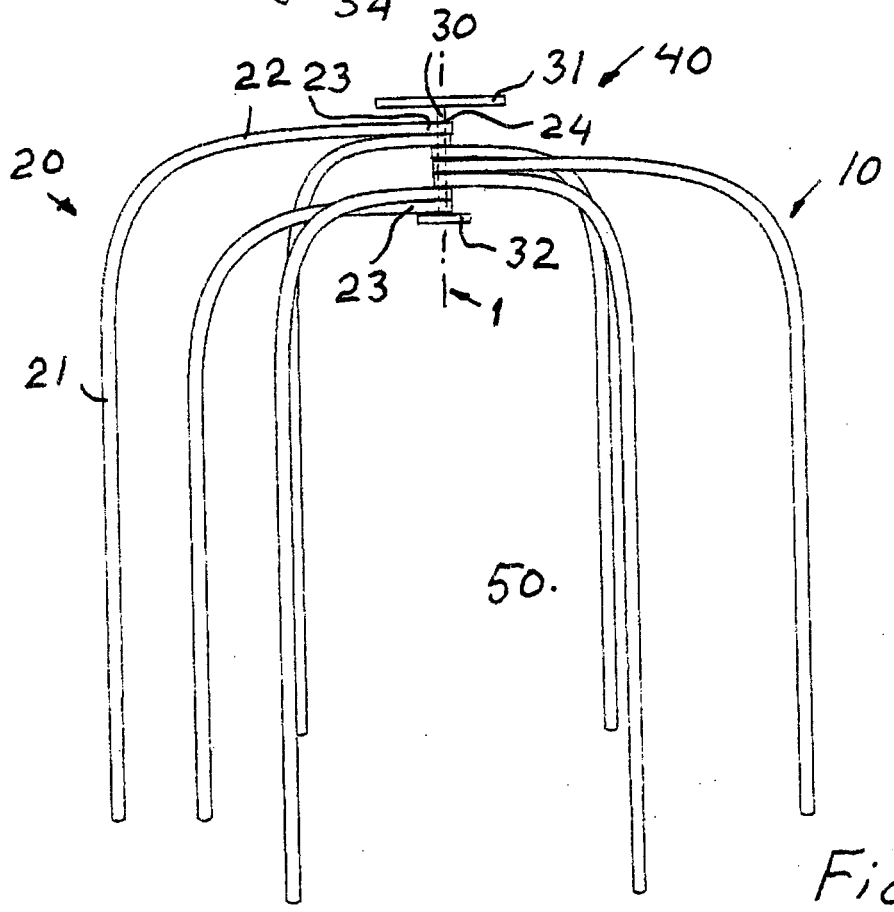

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Fig. 2

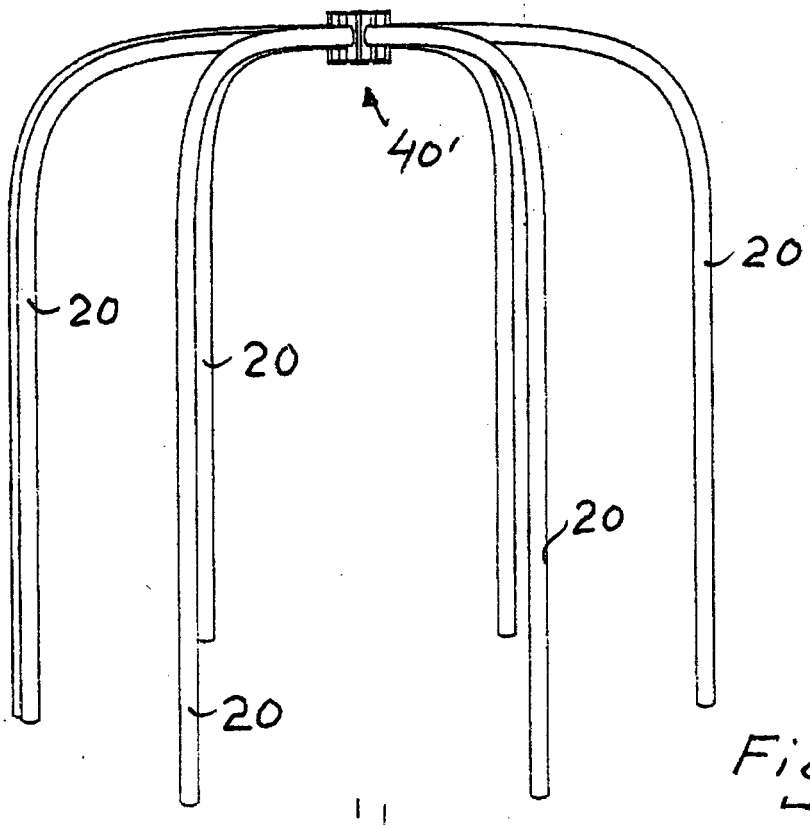


Fig. 3

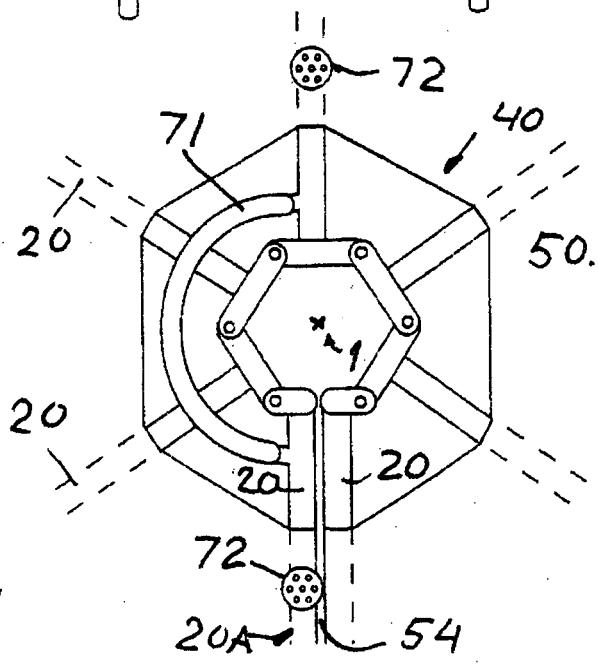


Fig. 4

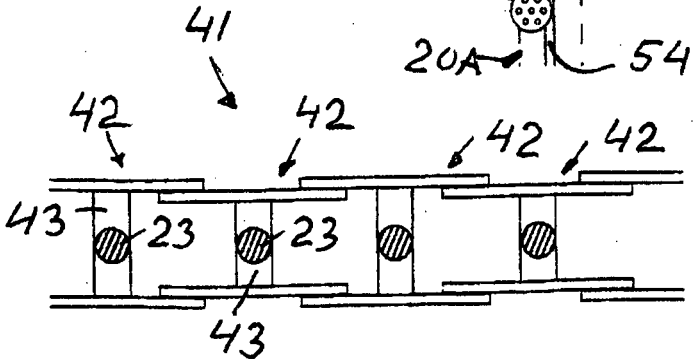


Fig. 5

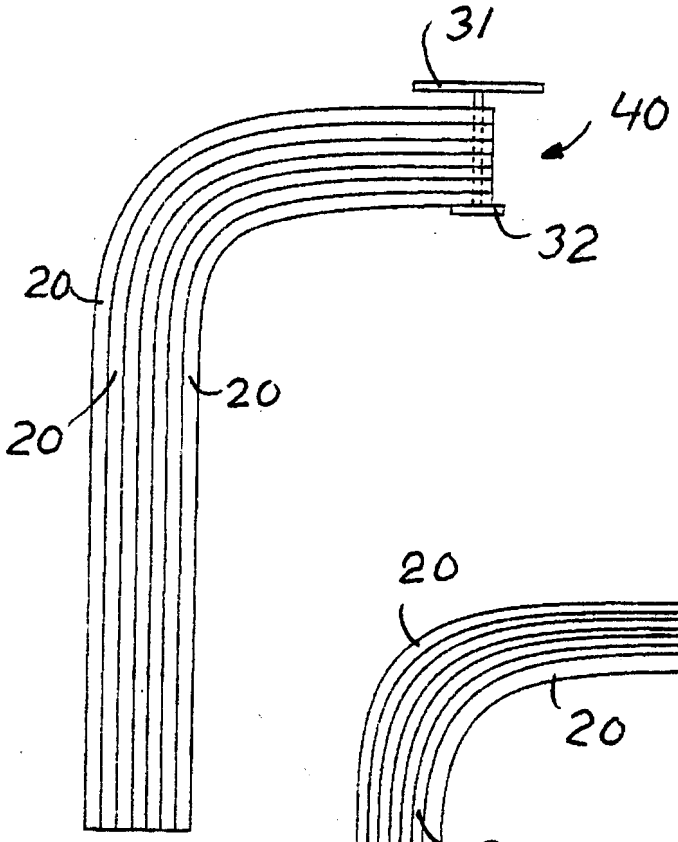


Fig. 6

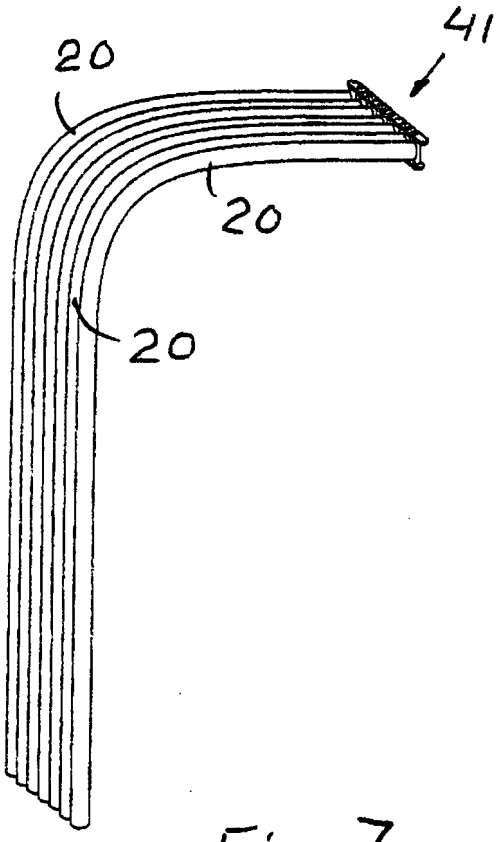


Fig. 7

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE2007/000663

A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet
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: E04H, A47K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CA 2211964 A (KRIVOSHEIN, M.), 29 January 1999 (29.01.1999), page 1, line 3 - line 6, figures 3,4, abstract, detail 14,16,40	1,2,4
A	DE 2449119 A1 (ODENWALDWERKE RITTERSBACH KERN & GROSSKINSKY GMBH), 29 April 1976 (29.04.1976), figure 1, detail 30	1-4
A	CA 1281607 C (FOURNIER, A.J.), 19 March 1991 (19.03.1991), figure 1, detail 12,14	1,2,4

[X] Further documents are listed in the continuation of Box C. [X] See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
22 October 2007	23-10-2007
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INTERNATIONAL SEARCH REPORT

International application No.
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1445400 A1 (MANIFOLD, C.D.), 11 August 2004 (11.08.2004), figures 4,8, abstract, details 103, 104 --	1,2,4
A	US 20030163867 A1 (R. ZHOU), 4 Sept 2003 (04.09.2003), figure 1, abstract, details 14,16 -- --------	3

International patent classification (IPC)

E04H 15/38 (2006.01)
A47K 3/28 (2006.01)
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