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

(11) EP 1 719 951 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
08.11.2006 Bulletin 2006/45

(51) Int Cl.:
F24B 1/193 *(2006.01)*

(21) Application number: **05112267.9**

(22) Date of filing: **15.12.2005**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(30) Priority: **03.05.2005 IT RM20050210**

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(54) Structure for the positioning of wood logs within a fireplace

(57) A structure (1) for the positioning of wood logs (200) within a fireplace (100), comprising a load bearing frame (2); and a plurality of support elements (3) for supporting the wood logs (200).

The support elements (3), hinged on the frame (2), are shaped so as to hold up the wood logs (200).

The configuration of the structure (1) is such that, in a non-operative condition, the support elements (3) can be folded in the frame (2) so as not to interfere with the normal operation of the fireplace (100).

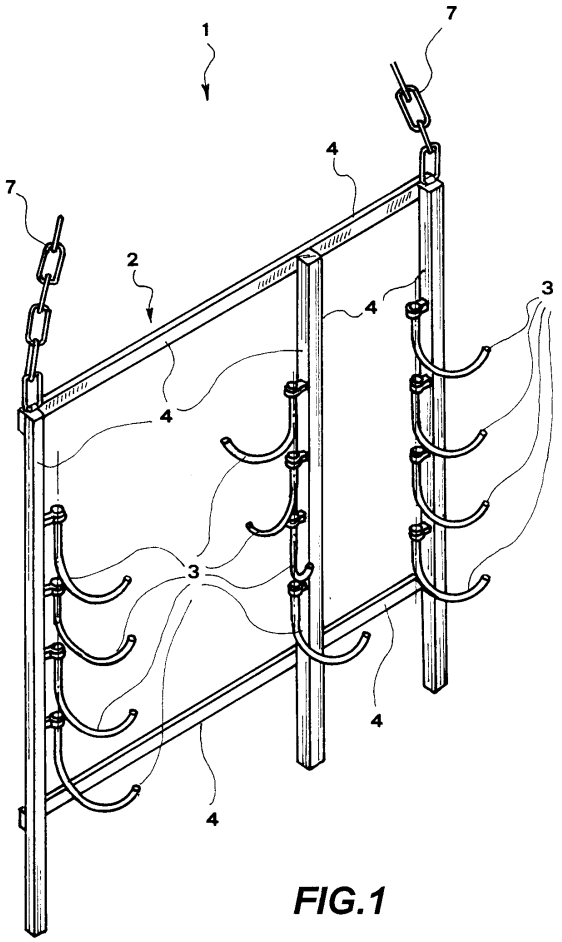

FIG.1

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Description

[0001] The present invention refers to a structure for the positioning of wood logs within a combustion chamber in general, and in particular for the positioning of wood logs in fireplaces.

[0002] Such a structure finds application in the field of the manufacturing of fireplace accessories, tools and components.

[0003] Hereinafter, by the terms hearth or combustion chamber of a fireplace it will be meant the space where the flame is made to develop and burn.

[0004] In the state of the art, the positioning of wood logs within the hearth or the combustion chamber of a fireplace is carried out by resorting to accessories such as a grate and andirons.

[0005] In particular, the grate serves to hold up the wood logs within the fireplace, and traditionally it possesses a structure with spaced metal elements such as to provide a rise apt to foster the passage of air between the logs and therefore to feed the combustion.

[0006] The andirons, usually in wrought or cast iron, are elements placed in direct contact with the flame, serving to laterally hold up the bigger wood logs and equally facilitate their combustion.

[0007] To reload the fireplace with wood logs, it is common practice for a user to draw the latter from a log caddy positioned externally to the active portion of the fireplace structure.

[0008] The known art is not aware of a single accessory allowing to tidily position wood logs within a fireplace, increasing - combustion chamber volumes being equal - its loading capacity beyond that allowed by the dimensions of the surface portion of the combustion chamber intended for housing combustible material.

[0009] The grate allows to load each time a limited quantity of wood that, given the increase of the combustion rate induced thereby, bums rather quickly, forcing a user to again inlet combustible material with uncomfortable frequency.

[0010] Even when using the fireplace without a grate, space for stacking the wood logs is physically limited by the surface of the plane in the combustion chamber.

[0011] However, said available space should be exploited with due precautions, carefully avoiding the risk of any firebrand and spark coming out therefrom and hazardously settling on the furniture of the room in which the fireplace is set.

[0012] For a fireplace to diffuse a greater quantity of heat for a longer time, it would be useful not merely to increase the load of combustible material, but also to position the latter so as to facilitate the absorption of the produced heat by the fireplace lining.

[0013] In fact, the refractory material of the lining, characterized by a high thermal inertia, upon being continually heated for a certain lapse of time tends to irradiate absorbed and stored heat into the surrounding environment, thereby constituting a source of thermal energy with gradual and prolonged release.

[0014] Hence, it would be useful to bring the combustible material as close as possible to the rear wall of the hearth, so as to optimally exploit said feature of the refractory material commonly used for the lining of fireplace hearths.

[0015] In the configuration usually adopted in the known art, such a positioning against the rear wall of the hearth cannot be optimally carried out.

[0016] To date, there are no fireplace accessories or contrivances associable to fireplaces providing an effective solution to the problem of increasing the heating power of a fireplace, as well as to that of lengthening the useful heat supply time between distinct loads of combustible material, and concomitantly emerging as of simple conception and easy installation, in respect of the pre-existing structure of the fireplace itself

[0017] Hence, object of the present invention is to solve said problems by proposing a structure as defined in claim 1.

[0018] The structure for the positioning of wood logs within a fireplace according to the present invention is of convenient use and easy installation.

[0019] Thanks to its versatility, the structure according to the present invention may advantageously be adapted to any fireplace shape and typology, entailing no significant modification to the original fireplace construction for its installation.

[0020] The structure for the positioning of wood logs within a fireplace according to the present invention allows to increase the load of wood logs that can be positioned at one time in the combustion chamber of a fireplace, with the entailed increase in the heating power of the fireplace.

[0021] The positioning of the wood logs onto the structure according to the present invention allows to attain, by virtue of the peculiar configuration thereof, an increase of the useful heat supply time between subsequent loads of combustible material, as well as a lengthening of the overall time of heat release, even after the dying out of the flame.

[0022] The structure according to the present invention optimally exploits the space provided by the combustion chamber of a fireplace.

[0023] Moreover, it provides a valid instrument for carrying out an effective drying of logs of wood not well-seasoned and still incorporating a certain consistent moisture percentage.

[0024] Usually, such a wood is deemed unsuitable for the feeding of a good flame in fireplaces.

[0025] A structure as the one disclosed herein, thanks to its peculiar configuration and its arrangement, enables a gradual expulsion of moisture from the wood positioned therewithin, until the logs have attained conditions optimal for the combustion.

[0026] Advantageously, the adoption of a structure according to the present invention allows a user to comfortably enjoy the heat given off by the fireplace without hav-

ing to worry, at the frequency at which otherwise he or she would be forced, about supplying the fireplace with wood for feeding the flame.

[0027] In addition, the structure according to the present invention allows the advantageous forming of a greater quantity of embers with respect to the case of a fireplace with a traditional arrangement of the wood logs, without however having said embers coming out of the hearth plane region intended for its use, e.g. for food cooking.

[0028] Further advantages, as well as the features and the operation modes of the present invention will be made apparent from the following detailed description of a preferred embodiment thereof, given by way of a non-limiting example, making reference to the figures of the annexed drawings, wherein:

- figure 1 is a side perspective view of a preferred embodiment of the structure for the positioning of wood logs within a fireplace according to the present invention;
- figure 2 is a top view of the structure of figure 1;
- figure 3 is a partially sectional perspective view of a detail of means for the fastening of the structure of figure 1 to the fireplace;
- figure 4 is a partially sectional perspective view of a detail of the connection between support elements and a frame of the structure of figure 1; and
- figure 5 is a perspective view illustrating the operation of the structure of figure 1 when mounted within a fireplace in the operative condition.

[0029] To describe the present invention, hereinafter reference will be made to the above indicated figures.

[0030] A structure 1 for the positioning of wood logs 200 within a fireplace 100 comprises a load bearing frame 2 and a plurality of support elements 3 for supporting the wood logs 200.

[0031] The support elements 3 are hinged to the load bearing frame 2, and their shape is such as to ensure a steady holding up of the wood logs 200.

[0032] With reference to the embodiment described herein and depicted in figures 1 and 5, the support elements 3 are preferably curved and substantially hook-shaped.

[0033] The configuration of the structure 1 is such that, in a non-operative condition, the support elements 3 can be folded at the plane of the frame 2, in a position substantially parallel thereto, so as not to interfere with the normal operation of the fireplace 100.

[0034] In the operative condition, the support elements 3 are shifted from such a position and deployed in a direction substantially perpendicular to the plane of the frame 2.

[0035] In particular, in figure 2 two positions of a support element 3, initial in the non-operative condition and intermediate, respectively, are depicted with a broken line; instead, the configuration assumed by the support elements 3 when in the operative condition is exemplified with an unbroken line.

[0036] The load bearing frame 2 comprises one or more vertical and/or horizontal frame members 4.

[0037] To said frame members 4 it is connected a plurality of hinge seats 5.

[0038] In figure 4 it is illustrated a hinging mode of the support elements 3 to the hinge seats 5.

[0039] In this case, each of the support elements 3, having a basically circular section in the embodiment at issue, is hinged in a respective hinge seat 5 and incorporates on one of the ends thereof a respective stop head 6.

[0040] Said stop head 6 is apt to abut against the respective hinge seat 5, so as to prevent a slipping off of the support element 3.

[0041] As it can be seen in figures 1 or 5, the support elements 3 are organized in a plurality of adjacent vertical rows, having multiple tiers or levels.

[0042] The configuration of the structure 1 according to the present invention is such that each wood log 200 is held up by means of the cooperation of at least two support elements 3 of the same tier.

[0043] With regard to the embodiment at issue, the support elements 3 incorporate, beside a curved portion, a substantially rectilinear end section at the stop head 6.

[0044] Thus, each of said support elements 3 of a given tier is allowed to translate vertically within the related hinge seat 5, for a length at least corresponding to that of said rectilinear end section.

[0045] The traverse of such a translation is anyhow such as to allow the arrangement without interference, on a support element 3 of a tier lower with respect to said given tier, of a respective wood log 200 of variable dimensions and/or thickness.

[0046] Thus, thanks to the advantageous adaptability of the structure 1 according to the present invention, it is possible to arrange wood logs 200 with different shapes and thicknesses onto the supports 3.

[0047] The mounting of the structure 1 according to the present invention within the fireplace provides the use of means 7, preferably removable, for the fastening of the structure to the fireplace 100.

[0048] In figures 1, 3 and 5 it is illustrated an installation mode of the structure 1 according to the present invention within the fireplace 100, with preferably metallic ring chains 7.

[0049] The structure 1 is substantially hung to the rear wall 9 of the hearth, e.g. to suitable hooks, so that its installation and its removal prove particularly easy.

[0050] A correct positioning of said fastening means 7 allows a balancing and an optimal balance of the structure 1, regardless of a contact of the frame 2 with the plane 8 of the hearth.

[0051] The present invention has hereto been described according to a preferred embodiment thereof, given by way of a non-limiting example.

[0052] To the above-described structure 1 for the po-

sitioning of wood logs 200 within a fireplace 100, a person skilled in the art, in order to satisfy further and contingent needs, could effect several further modifications and variants, all however encompassed by the protective scope of the present invention, as defined by the appended claims.

Claims

1. A structure(1) for the positioning of wood logs (200) within a fireplace (100), comprising:

- a load bearing frame (2); and
- a plurality of support elements (3) for supporting said wood logs (200), hinged on said frame (2), shaped so as to hold up said wood logs (200);

the configuration being such that, in a non-operative condition, said support elements (3) can be folded in said frame (2) so as not to interfere with the normal operation of the fireplace (100).

2. The structure (1) according to claim 1, wherein said load bearing frame (2) comprises one or more frame members (4).

3. The structure (1) according to claim 2, comprising a plurality of hinge seats (5) connected to said frame members (4), said support elements (3) being apt to be hinged in said hinge seats (5).

4. The structure (1) according to one of the claims 1 to 3, wherein said support elements (3) are curved and substantially hook-shaped.

5. The structure (1) according to one of the claims 1 to 4, wherein said support elements (3) are organized in a plurality of vertical adjacent rows having multiple tiers, the configuration being such that each wood log is held up by means of the cooperation of at least two support elements of the same tier.

6. The structure according to claim 4 or 5 when dependent from claim 3, wherein each of said support elements (3) of a given tier can translate vertically within said hinge seats (5), the traverse of said translation being such as to allow the arrangement without interference, on a support element of a tier lower with respect to said given tier, of a respective wood log of variable dimensions and/or thickness.

7. The structure (1) according to the preceding claim, wherein each of said support elements (3) incorporates on one of the ends thereof a respective stop head (6) apt to abut against a respective hinge seat (5) so as to stop the travel of said support elements (3).

8. The structure (1) according to one of the claims 1 to 7, comprising means (7) for the removable fastening of said structure to said fireplace (100).

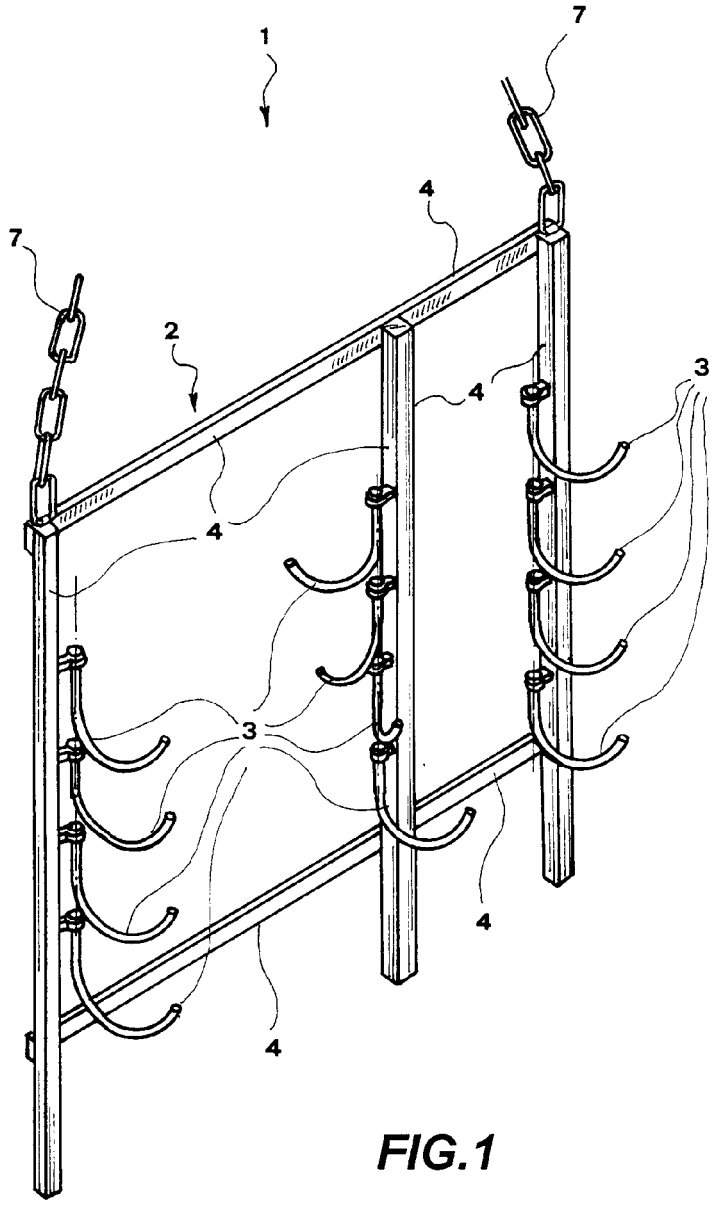

FIG.1

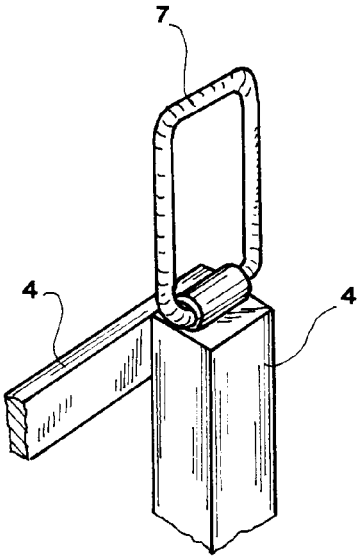

FIG.3

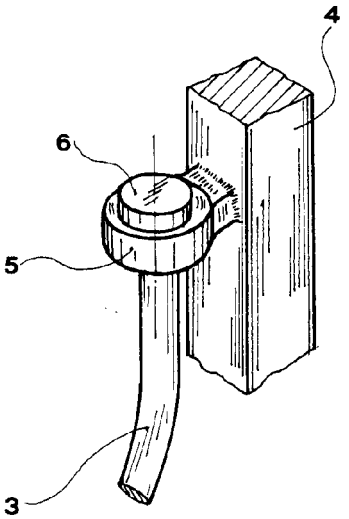

FIG.4

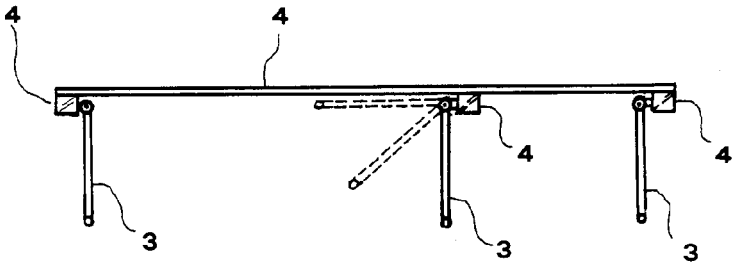

FIG.2

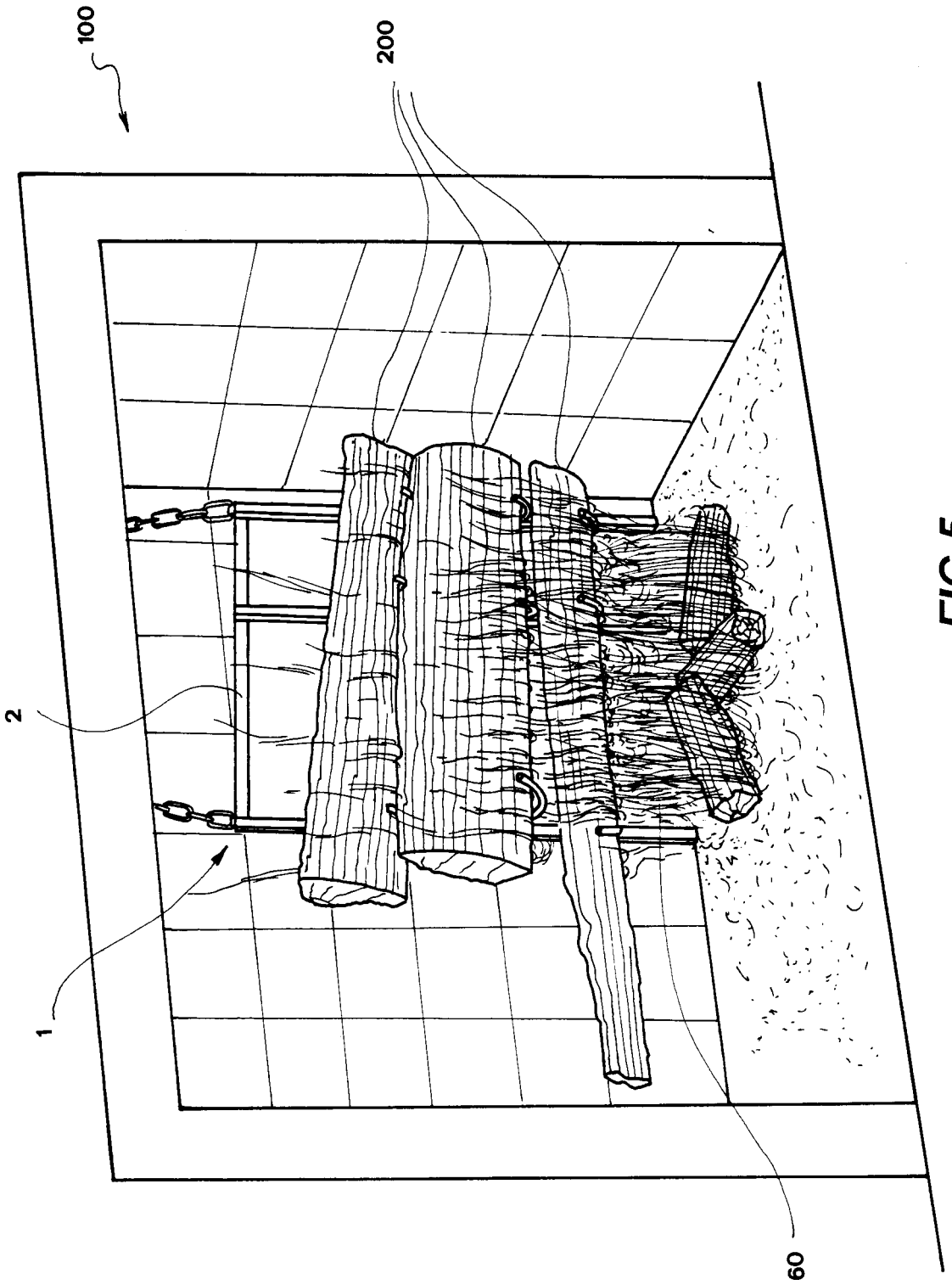

FIG.5