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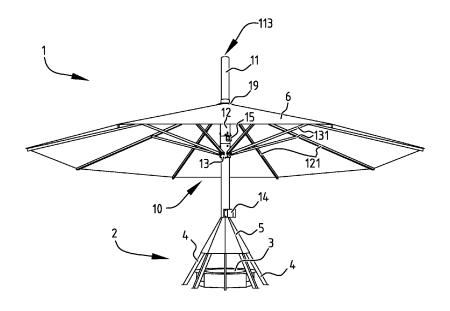
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## (54) CANOPY DEVICE FOR SUPPORTING A FOLDABLE SCREEN

(57) Canopy device for supporting a foldable screen, wherein the canopy device comprises: a hollow column, provided with a top opening, a bottom opening and a gas passage extending from the bottom opening to the top opening for conveying smoke through the hollow column; a support system for supporting the foldable screen around the column, wherein the support system is arranged around the column between the top opening and the bottom opening, and wherein the support system is

movable between an extended position, in which the support system is arranged to support the screen extended around the column, and a collapsed position, in which the support system is arranged to hold the screen in a folded state to drape along the column; and an actuation system, arranged for moving the support system between the extended position and the collapsed position, wherein the actuation system is separated from the gas passage.



<u>FIG. 1</u>

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**[0001]** The present invention relates to a canopy device for supporting a foldable screen and to a fireplace comprising a fire pit and such a canopy device.

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**[0002]** Outdoor fireplaces often comprise, in addition to a firepit where fuel is to be combusted, a chimney or other flue for conveying smoke away from the fire pit. While outdoor fireplaces are usually used for cooking, an outdoor fireplace can also allow people to enjoy the warmth of a fire.

**[0003]** An outdoor fireplace is generally less enjoyable in rainy or snowy weather conditions. In a previous design, an outdoor fireplace had been proposed wherein the fireplace is integrated with a parasol or a like canopy by arranging a screen around the chimney of the fireplace. Such an integrated fireplace provides cover from precipitation and therewith allows the fireplace to be enjoyed throughout the year. The screen is supported by a number of ribs extending radially outwards from the chimney. To bring the screen into a folded state, the ribs can be lowered by operating a winch.

[0004] A drawback of the prior fireplace parasol is that collapsing the screen or opening the screen is inconvenient while using the fireplace, i.e., when the chimney is hot. The ribs, the parasol screen or the components of the mechanism for raising and lowering the ribs may come into contact with the hot pipe discharging smoke.

[0005] It is an object of the present invention, amongst other objects, to provide an improved canopy system wherein, in particular, collapsing or setting up the screen around a hot chimney is facilitated.

[0006] Thereto, a canopy device for supporting a foldable screen is provided, wherein the canopy device comprises a hollow column, provided with a top opening, a bottom opening and a gas passage extending from the bottom opening to the top opening for conveying smoke through the hollow column, and a support system for supporting the foldable screen around the column, wherein the support system is arranged around the column between the top opening and the bottom opening, and wherein the support system is movable between an extended position, in which the support system is arranged to support the screen extended around the column, and a collapsed position, in which the support system is arranged to hold the screen in a folded state to drape along the column, wherein the canopy device further comprises an actuation system, arranged for moving the support system between the extended position and the collapsed position, wherein the actuation system is separated from the gas passage.

[0007] The hollow column of the canopy device can be installed with its bottom opening above a fire pit to convey smoke away from the fire pit through the gas passage and out of its top opening. As such, the hollow column may function as a chimney to form a fireplace together with the fire pit. The canopy device can then support a foldable screen extended over the fire pit to provide cover

from precipitation or sunlight. To both withstand the heat of the smoke and support the weight of the support system and the screen effectively, the hollow column is preferably made of steel, more preferably stainless steel.

**[0008]** The support system may comprise a number of ribs extending radially outwards from the column and arranged for supporting the foldable screen around the column. The ribs may for instance be lowerable to bring the screen into a folded state.

**[0009]** The actuation system may for instance comprise a manually operable winch, at least one pulley arranged stationary relative to the column, and an elongated drive element guided by the pulley and connected to the winch and to the support system for moving the support system between the extended and the collapsed position upon operation of the winch. Preferably, each component of the actuation system is separated from the gas passage, such that no component of the actuation system extends in the gas passage.

**[0010]** The actuation system, in particular the drive means, may be partially provided inside the hollow column and isolated from the gas passage by a separating member that is arranged in the hollow column and extends along the part of the actuation system that is inside the hollow column. Nonetheless, it is preferred if the actuation system is provided outside of the hollow column or at least at a distance from the gas passage. This way, the actuation system can be efficiently separated from the gas passage. In contrast, in known parasols with a hollow support pole, components of the mechanism for raising and lowering the ribs, such as the cable that is driven by the winch, are accommodated inside the hollow pole.

[0011] Particularly when the hollow column is hot due to its use as a chimney for a fireplace, collapsing or setting up the screen around the hollow column can be facilitated by separating the actuation system from the gas passage. As such, an improved canopy system is provided. [0012] A preferred embodiment of the canopy device further comprises the foldable screen, wherein the support system is arranged to support the screen around the column. The screen is preferably fire-retarding. For instance, the screen may be provided with a fire-retardant or may be made of a fire-retarding material.

[0013] According to a preferred embodiment of the canopy device, the support system comprises a sleeve arranged around the column, preferably concentrically. Via the sleeve, the support system may be supported by the hollow column. The sleeve is for instance annular or tubular. Furthermore, the sleeve may be particularly elongated. Although the foldable screen may be provided with a fire-retardant, it is nonetheless preferred if the folded screen does not directly contact the column which may be hot during use. To that end, the sleeve is preferably arranged between the column and the folded screen in the collapsed position of the support system, such that the folded screen is separated from the column by the sleeve. To reduce heating of the sleeve by the column,

the sleeve is preferably spaced radially from the column such that the support system does not directly contact the column. Thereto, the sleeve may be provided with one or more spacers arranged to radially space the sleeve from the column. For instance, the one or more spacers may be arranged between the sleeve and the column. In the case of more than one spacer, the multiple spacers are preferably spaced tangentially with respect to each other for stability.

[0014] The support system may further comprise a first plurality of elongated support elements arranged around the column for supporting the foldable screen. The support elements may be supporting ribs similar to the aforementioned ribs. Preferably, the support elements or ribs are pivotably connected to the sleeve, preferably by hinges, for moving the support system between the extended position, in which the support elements extend traverse to and radially away or outwards from the column, and the collapsed position, in which the support elements extend along the column. The elongated support elements can be arranged to tension the screen in the extended position. In the collapsed position, the elongated support elements may be suspended downwards from the sleeve. The elongated support elements are preferably made of aluminium or steel, more preferably stainless steel. This way, they can be conveniently moved from the collapsed to the extended position, while effectively supporting the screen in both positions such that heating of the screen by the chimney is reduced.

[0015] According to a further preferred embodiment, the actuation system is arranged for moving the sleeve along the column to move the support system between the extended and the collapsed position. As noted above, the actuation system may comprise a manually operable winch, at least one pulley arranged stationary relative to the column, and an elongated drive element guided by the pulley. The elongated drive element is preferably connected to the winch and the sleeve. As such, the actuation system is arranged for moving the support system between the extended position and the collapsed position. More specifically, upon operating the winch, the drive element moves the sleeve along the column and moves the support system between the extended and the collapsed position. Preferably, the winch is of the self-locking type. For instance, the winch may include a brake system, comprising a worm gear, which is arranged to maintain any position of the support system, such that the support system is only moved upon operating the crank of the winch.

**[0016]** To enhance the movement of the sleeve along the column, the sleeve is preferably provided with one or more guide bearings arranged to guide the sleeve along the column. The guide bearings are preferably ball or roller bearings. In the case of multiple guide bearings, it is preferred if the guide bearings are tangentially spaced with respect to each other. The guide bearings may be additionally arranged to radially space the sleeve from the column. Accordingly, the guide bearings may form

the aforementioned spacers. To efficiently accommodate the bearings, the sleeve is preferably provided with tangentially spaced recesses, wherein the guide bearings are respectively arranged in the recesses.

[0017] The support system may further comprise a collar arranged around the sleeve, preferably in a watertight manner. The collar can be arranged as a baffle above the screen, such that rainwater is prevented from running along the column through an opening between the column and the screen, and instead flows along the screen to the periphery of the screen. Such collars can also be referred to as storm collars. More specifically, the collar is preferably arranged above the location where the first plurality of elongated support elements is connected to the sleeve, which may be at the aforementioned hinges. As the collar is arranged around the sleeve, the collar is movable together with the sleeve such that the collar is effectively positioned irrespective of the position of the sleeve. Preferably, the collar is made of steel, more preferably stainless steel.

[0018] The sleeve may be referred to as a first sleeve, as the support system preferably further comprises a second sleeve that is arranged around the column below the first sleeve. The first and the second sleeve may thus also be referred to as the upper and the lower sleeve. The lower sleeve may be similar to the upper sleeve in material and shape, although the upper sleeve may be particularly elongated, and the lower sleeve may be arranged relative to the column in a similar manner. For instance, the lower sleeve may be similarly provided with spacers, or guide bearings. Specifically, it is preferred if the second sleeve is provided with tangentially spaced guide bearings arranged to guide the second sleeve along the column and radially space the second sleeve from the column. The support system may then further comprise a second plurality of elongated support elements pivotably connected to the second sleeve and arranged to support the first plurality of support elements in the extended position. These support elements of the second plurality, or lower ribs, may be shorter than or equally long as the respective upper elongated support elements. At its radially outer end, opposite to the end connected to the lower sleeve, each second support element is pivotably connected to a corresponding first support element at a distance from the upper sleeve.

**[0019]** The actuation system may be further arranged for moving the second sleeve along the column to move the support system between the extended and the collapsed position. As aforenoted, at least one of the first and the second sleeve may be movable along the hollow column. As such, the distance between the sleeves is adjusted when moving the support system between the extended and the collapsed position.

**[0020]** In case the support system comprises an upper and a lower sleeve, as described above, it is possible that only the lower sleeve is moved by the actuation system. The elongated drive element is then guided by the pulley and connected to the lower sleeve. For instance,

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to collapse the support system, the winch is operated to lower the lower sleeve, which moves the elongated support elements towards the hollow column.

[0021] According to a preferred embodiment of the canopy device, a position of the first sleeve along the column in the extended position of the support system is below a position of the first sleeve in the collapsed position of the support system. In known parasols, a top notch is stationary relative to the pole and is provided with pivotably connected support ribs extending radially therefrom. In the collapsed position, these support ribs may be suspended downwards all the way to the ground. The radius of the parasol screen, which corresponds to the length of the support ribs, is thus limited by the length of the pole. To increase the radius of the parasol screen, the length of the pole is increased accordingly. As the top notch in the known parasols is stationary, the screen may be too high above the ground in the extended position. If, in the case of the present canopy device which is for instance to be arranged on top of a firebox, the upper sleeve is arranged stationary relative to the hollow column, the screen would be extended even higher above the ground. It is therefore preferred to lower the upper sleeve into the extended position and, correspondingly, to raise the upper sleeve into the collapsed position of the support system. By doing so, the canopy device can be arranged above a firebox and support the screen at a desired height in the extended position, while allowing the screen to be fully folded in the collapsed position of the support system.

[0022] In case both sleeves are movable, the support system is preferably moved from the collapsed to the extended position, or vice versa, by first moving one of the sleeves and subsequently the other. According to a preferred embodiment of the canopy device, the distance between the sleeves is maximal in the collapsed position. Preferably, to extend the screen, the upper sleeve is first moved downward, for instance under the influence of gravity, to a position that corresponds to the position of the upper sleeve in the extended position of the support system. As the distance between the sleeves is reduced, the ribs are pivoted away from the hollow column and the support system is in a semi-extended position. Secondly, the lower sleeve is moved upward to its position in the extended position of the support system. As the distance between the sleeves is further reduced, the ribs are pivoted further away from the hollow column and the support system is in the fully extended position. To collapse the support system, the sleeves are moved back in reverse order. That is, first the lower sleeve is moved downward to move the support system into the semiextended position, after which the upper sleeve is moved upward, for instance by manually moving the elongated support elements further towards the hollow column and using the pivotably connected support elements as lever means, to move the support system into the fully collapsed position. Due to the two-step set-up and collapse of the support system, collapsing or setting up the screen

around the hollow column, which may be hot during use, is facilitated.

[0023] As such, according to another aspect of the present invention, a canopy device for supporting a foldable screen is provided, preferably according to any of the above embodiments, wherein the canopy device comprises a hollow column, provided with a top opening, a bottom opening and a gas passage extending from the bottom opening to the top opening for conveying smoke through the hollow column, and a support system for supporting the foldable screen around the column, wherein the support system is arranged around the column between the top opening and the bottom opening, and wherein the support system is movable between an extended position, in which the support system is arranged to support the screen extended around the column, and a collapsed position, in which the support system is arranged to hold the screen in a folded state to drape along the column, wherein the support system comprises an upper sleeve and a lower sleeve, arranged around and movable along the column, wherein the support system further comprises a plurality of upper elongated support elements, arranged around the column for supporting the foldable screen, and a plurality of lower elongated support elements arranged to support the plurality of upper support elements in the extended position, wherein the upper support elements and the lower support elements are pivotably connected to respectively the upper sleeve and the lower sleeve for moving the support system between the extended position, in which the support elements extend traverse to and radially away from the column, and the collapsed position, in which the support elements extend along the column.

**[0024]** Preferably, a position of the upper sleeve along the column in the extended position of the support system is below a position of the upper sleeve in the collapsed position of the support system. It is then further preferred if a position of the lower sleeve along the column in the extended position of the support system is above a position of the lower sleeve in the collapsed position of the support system.

**[0025]** Accordingly, a convenient two-step set-up and collapse of the support system, as described above, can be achieved such that collapsing or setting up the screen around the possibly hot column is facilitated.

**[0026]** To maintain the upper or the lower sleeve in its respective position in the extended or the collapsed position of the support system, the sleeve and the column may be provided with mutually cooperating locking means arranged for selectively fixing a position of the sleeve relative to the column. The respective sleeve and the column may each be provided with an opening, wherein the respective openings are aligned when the sleeve is in its selected position such that a pin can be inserted through both openings to prevent movement of the sleeve along the column.

[0027] Specifically, the upper sleeve may be provided with at least one extension member extending down-

wards along the hollow column. The at least one extension member is preferably provided with at least one locking opening for receiving a locking pin. The hollow column is then preferably provided with at least one locking hole that corresponds with the locking opening such that, when the locking hole and opening are aligned, the locking pin can be inserted and pass through the locking opening and the locking hole. Due to the extension member, the locking means can be arranged relatively close to the ground for a convenient locking and unlocking of the upper sleeve.

**[0028]** Furthermore, in the extended position of the support system, the extension member of the upper sleeve may extend downwards also along the lower sleeve. More specifically, the locking opening in the extension member may be arranged to receive the locking pin for fixing the position of the lower sleeve, in addition to the upper sleeve, in the extended position. This way, the system can be locked into, and unlocked from, the extended position using a single locking pin.

**[0029]** Further provided is a fireplace comprising a fire pit and a canopy device according to any of the above embodiments, wherein the hollow column of the canopy device is arranged for conveying smoke away from the fire pit, and wherein the canopy device is arranged for supporting the foldable screen extended over the fire pit in the extended position of the support system. The fireplace may comprise a firebox in which fuel is to be combusted and on top of which the hollow column of the canopy device may be installed such that the canopy device is supported by the firebox.

**[0030]** The present invention is hereinafter further elucidated with reference to the attached drawings, wherein:

- Figure 1 shows a fireplace provided with a canopy device;
- Figure 2 represents a close-up view of the support system of the canopy device;
- Figure 3 represents a top view of a sleeve of the support system;
- Figure 4 represents a close-up view of the top of the firebox of the fireplace;
- Figures 5A-C respectively represent the fireplace in the collapsed, semi-extended and extended position of the support system of the canopy device;
- Figure 6 represents a side view of the upper sleeve of the support system;
- Figures 7A-B illustrate an alternative locking mechanism for respectively the upper and the lower sleeve of the support system in the semi-extended position;
- Figure 8 illustrates the locking mechanism shown in Figures 7A-B in the extended position of the support system.

**[0031]** In Figure 1, a fireplace 1 is shown that comprises a base 2 with a firepit 3 formed therein, where fuel is to be combusted. The base 2 comprises a plurality of support legs 4 surrounding the firepit 3 and converging

upwards. At the apex of the plurality of support legs 4, a hood 5 is provided around the support legs 4 and above the fire pit 3, as shown in more detail in Figure 4.

[0032] The fireplace 1 further comprises a hollow column 11 of stainless steel that is supported by, and extends upwards from, the apex of the plurality of support legs 4. The hollow column 11 forms a chimney for conveying smoke away from the fire pit 3. To that end, the chimney 11 has a smoke channel 111 extending from a bottom opening 112, which faces the fire pit 3, to a top opening 113 that is directed towards the sky.

[0033] Around and concentric with the chimney 11, an upper elongated tubular sleeve 12 and a lower tubular sleeve 13 are arranged above one another, as shown in more detail in Figure 2. Upper supporting ribs 121, connected to the upper sleeve 12 by hinges 120, extend radially outwards from the upper sleeve 12 to support a fire-retarding foldable screen 6 extended around the chimney 11. The screen 6 and the upper supporting ribs 121 may be provided with mutually cooperating fastening means arranged to fasten the screen 6 to the upper ribs 121. For instance, each upper rib 121 may be provided at both ends with a bolt 61, shown in Figure 6, for coupling with respective eyelets provided in the screen 6 at corresponding locations, i.e., at the periphery and at the centre of the screen 6. Lower supporting ribs 131, connected to the lower sleeve 13 by hinges 130, extend radially outwards from the lower sleeve 13 and are pivotably connected to the centre section of a respective upper supporting rib 121 for supporting the upper supporting rib 121 in the extended position as shown in Figures 1 and 2, in which the ribs 121 support the screen 6 extended around the chimney 11. The sleeves 12, 13 are made of stainless steel, whereas the ribs 121, 131 are made of aluminium or stainless steel.

**[0034]** The chimney 11, the sleeves 12, 13, the ribs 121, 131 and the foldable screen 6 together form part of a canopy device 10 for supporting the foldable screen 6 extended over the fire pit 3, in particular the area around the fire pit 3, in order to provide cover from precipitation and therewith allow the fireplace 1 to be enjoyed throughout the year.

[0035] Figure 3 represents a top view of the upper sleeve 12 as well as of the lower sleeve 13, which is similar to the upper sleeve 12 when seen from above. Each hinge 120, 130 is formed by a bracket 120a, 130a mounted to the sleeve 12, 13, and an aluminium or stainless-steel pin 120b, 130b coupled to the bracket 120a, 130a, wherein the pin 120b, 130b passes through the connected end of the respective rib 121, 131 such that the rib 121, 131 is rotatable about the pin 120b, 130b. [0036] Each sleeve 12, 13 is provided with two sets of tangentially spaced recesses 122, 132, one set above the other, and corresponding sets of deep groove ball bearings 123, 133 accommodated respectively by the recesses 122, 132 and arranged to guide the respective sleeve 12, 13 along the chimney 11 and radially space the sleeve 12, 13 from the chimney 11. The respective

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sets of bearings 123, 133 are located above one another for stability while guiding the respective sleeve 12, 13. The distance d between the sleeve 12, 13 and the chimney 11 may be at least 1 millimetre, preferably between 3 and 10 millimetres.

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[0037] The canopy device 10 further comprises a manually operable winch 14 and two stainless steel pulleys 15, all mounted to the chimney 11, and additionally two cables (not shown) respectively guided by the two pulleys 15 and each connected to the winch 14 and to the lower sleeve 13 for moving the sleeve 13 along the chimney 11. The lower sleeve 13 is connected to the winch 14 via two cables for safety in case one cable breaks and for the purpose of enabling that the lower sleeve 13 can be connected on opposite sides of the chimney 11 for a smooth movement of the lower sleeve 13 along the chimney 11 upon operation of the winch 14 in order to fold or set up the screen 6 as described as follows with reference to Figures 5A-C.

[0038] In Figure 5A, the canopy device 10 is shown (without screen for illustration) in the collapsed position. In the collapsed position, the upper sleeve 12 is raised, the upper supporting ribs 121 are suspended downwards along the chimney 11, the lower sleeve 13 is lowered, and the lower supporting ribs 131 extend along the chimney 11. To move the canopy device 10 to the extended position, firstly the upper sleeve 12 is moved downwards along the chimney 11, for instance by manually pivoting the ribs 121 away from the chimney 11 and using the pivotably connected ribs 121, 131 as lever means. That is, due to the pivot connections between the ribs 121, 131 and the sleeves 12, 13, simultaneously the upper sleeve 12 moves downwards as the ribs 121, 131 pivot away from the chimney 11 and into a semi-extended position as shown in Figure 5B. Conveniently, the upper sleeve 12 may be moved downward by, in part, its own weight. A further downward movement of the upper sleeve 12 may be prevented by the pulleys 15 mounted to the exterior of the chimney 11, on which the upper sleeve 12 can rest, as shown in Figure 2. To lock the upper sleeve 12 relative to the chimney 11, a locking pin 16 is inserted through respective holes 17 in the sleeve 12 and the chimney 11, which holes are mutually aligned when the sleeve 12 is in that position. By mounting the pulleys 15 to the chimney 11 at the appropriate height, mutual alignment of the holes for locking the sleeve 12 relative to the chimney 11 is facilitated. A downward movement of the upper sleeve 12 in the collapsed position may be prevented by tying a strap around the folded screen 6 to hold the ribs 121, 131 together.

[0039] From the semi-extended position as shown in Figure 5B, the lower sleeve 13 is subsequently moved upwards by operating the winch 14 such that, due to the pivot connections of the ribs 121, 131, the ribs 121, 131 pivot further away from the chimney 11 into the fully extended position as shown in Figure 5C. As shown in Figure 2, a locking pin 18 is inserted into a hole in the chimney 11 such that the lower sleeve 13 can rest on the locking

pin 18 to maintain the fully extended position.

[0040] To, in turn, collapse the canopy device 10, first the lower sleeve 13 is moved downward, by operating the winch 14, to move the ribs 121, 131 into the semiextended position, after which the upper sleeve 12 is moved upward by moving the ribs 121, 131 manually into the fully collapsed position.

[0041] As shown in Figure 6, a stainless-steel storm collar 19 is clamped around an upper region of the upper sleeve 12, in particular directly above the hinges 120, such that rainwater is prevented from passing between the chimney 11 and the screen 6.

[0042] A possible drawback of the locking means 16, 17, 18 shown in Figures 2 and 6 is that particularly the locking means 16, 17 for the upper sleeve 12 are located relatively high above the ground, such that (un)locking the upper sleeve 12 may be inconvenient. Thereto, Figures 7A-B and 8 illustrate an alternative locking system, as described further on. The manually operable winch 14 is shown in Figure 7A. Two cables 7 are each connected at one end to the winch 14. Figures 7B and 8 show the two stainless steel pulleys 15 that respectively guide the two cables 7, which are each connected at the other end to the lower sleeve 13 for moving the sleeve 13 along the chimney 11 upon operation of the winch 14. [0043] Figure 7A shows the upper sleeve 12, lowered and resting on the pulleys 15, with the ribs 121 in the semi-extended position. The upper sleeve 12 is provided with one or more extension members 22 extending downwards therefrom, along the chimney 11. In the illustrated case, two strips 22 extend downwards from the upper sleeve 12 along opposite sides of the chimney 11. The at least one extension member 22 is provided with one or more locking openings 27 which, when aligned with corresponding locking holes in the chimney 11, are arranged to receive a removable locking pin 26 passing through the chimney 11 and the extension members 22, specifically the locking holes and the locking openings 27 therein. The locking pin 26 is provided with a handle 261, preferably made of a heat-insulating material, such as wood. Due to the extension members 22, the locking means 26, 27 can be arranged relatively close to the ground, particularly below the pulleys 15, for a convenient locking and unlocking of the upper sleeve 12.

[0044] Figure 7B shows the lower sleeve 13, lowered, with the ribs 131 in the semi-extended position. Just above the sleeve 13, a removable locking pin 28, provided with a handle 281, may be inserted through locking holes 29 provided in the chimney 11, to block an upward movement of the lower sleeve 13. Before the lower sleeve 13 can be moved upwards using the winch 14, the locking pin 28 is removed.

[0045] Figure 8 shows the sleeves 12, 13 in the fully extended position of the ribs 121, 131. In order to move the lower sleeve 13 into the position as shown in Figure 8, the upper locking pin 26 is first removed. Once the lower sleeve 13 is fully raised and the ribs 121, 131 are in the extended position, the extension members 22 ex-

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tend downwards beyond the lower sleeve 13. More specifically, the lower sleeve 13 is located between the upper sleeve 12 and the locking openings 27 in the extension members 22. In this position, the locking pin 26 can be inserted again and pass through the openings 27 in the extension members 22 and the locking holes in the chimney 11 just below the lower sleeve 13, and the lower sleeve 13 may rest on the inserted locking pin 26. This way, the system can be locked into, and unlocked from, the fully extended position using a single locking pin 26. As such, an efficient and convenient locking system is provided.

**[0046]** The figures and the above description serve to illustrate specific embodiments of the invention and do not limit the scope of protection defined by the following claims.

#### Claims

- **1.** Canopy device for supporting a foldable screen, wherein the canopy device comprises:
  - a hollow column, provided with a top opening, a bottom opening and a gas passage extending from the bottom opening to the top opening for conveying smoke through the hollow column;
  - a support system for supporting the foldable screen around the column, wherein the support system is arranged around the column between the top opening and the bottom opening, and wherein the support system is movable between an extended position, in which the support system is arranged to support the screen extended around the column, and a collapsed position, in which the support system is arranged to hold the screen in a folded state to drape along the column:
  - an actuation system, arranged for moving the support system between the extended position and the collapsed position, wherein the actuation system is separated from the gas passage.
- Canopy device according to claim 1, wherein the actuation system is provided outside of the hollow column.
- 3. Canopy device according to claim 1 or 2, wherein the support system comprises a sleeve arranged around the column, wherein the actuation system is arranged for moving the sleeve along the column to move the support system between the extended and the collapsed position, wherein the sleeve is provided with tangentially spaced guide bearings arranged to guide the sleeve along the column and radially space the sleeve from the column.
- 4. Canopy device according to claim 3, wherein the

- sleeve is provided with tangentially spaced recesses, wherein the guide bearings are respectively arranged in the recesses.
- 5. Canopy device according to claim 3 or 4, wherein the sleeve and the column are provided with mutually cooperating locking means arranged for selectively fixing a position of the sleeve relative to the column.
- 6. Canopy device according to claim 3, 4 or 5, wherein a position of the sleeve along the column in the extended position of the support system is below a position of the sleeve in the collapsed position of the support system.
  - Canopy device according to at least claim 3, wherein
    the sleeve is elongated, wherein the elongated
    sleeve is arranged between the column and the folded screen in the collapsed position of the support
    system.
  - 8. Canopy device according to at least claim 3, wherein the support system further comprises a first plurality of elongated support elements arranged around the column for supporting the foldable screen, wherein the support elements are pivotably connected to the sleeve for moving the support system between the extended position, in which the support elements extend traverse to and radially away from the column, and the collapsed position, in which the support elements extend along the column, wherein the elongated support elements are preferably made of stainless steel.
- 9. Canopy device according to claim 8, wherein the support elements are pivotably connected to the sleeve by hinges, wherein the support system further comprises a collar arranged around the sleeve above the hinges, wherein the collar is preferably made of steel, more preferably stainless steel.
  - 10. Canopy device according to claim 8 or 9, wherein said sleeve is a first sleeve, wherein the support system further comprises a second sleeve, arranged around the column below the first sleeve, and a second plurality of elongated support elements pivotably connected to the second sleeve and arranged to support the first plurality of support elements in the extended position, wherein the actuation system is further arranged for moving the second sleeve along the column to move the support system between the extended and the collapsed position, wherein the second sleeve is provided with tangentially spaced guide bearings arranged to guide the second sleeve along the column and radially space the second sleeve from the column.
  - 11. Canopy device according to at least claim 3, wherein

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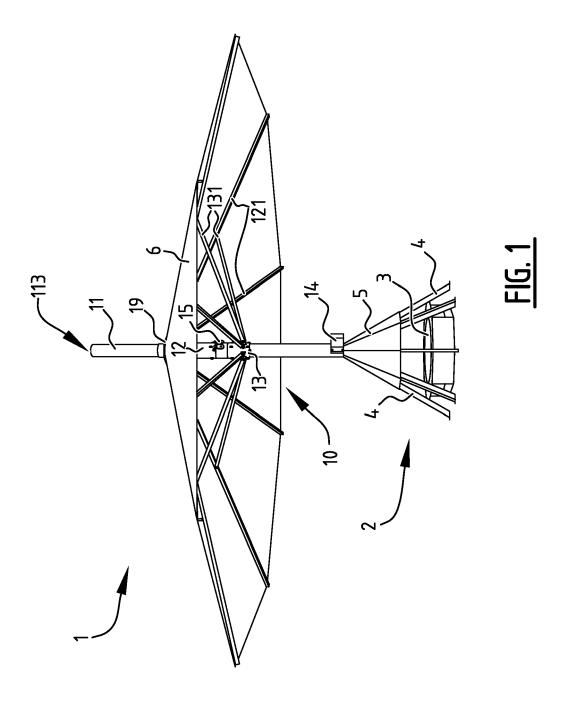
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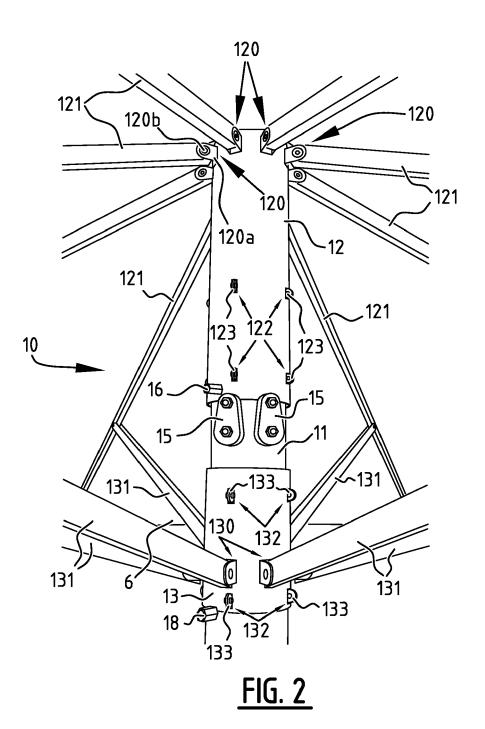
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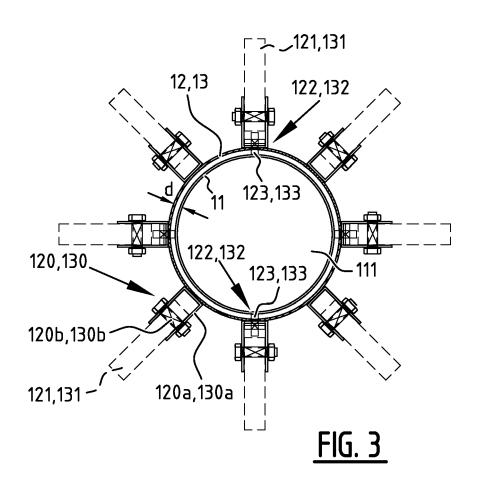
the actuation system comprises a manually operable winch, at least one pulley arranged stationary relative to the column, and an elongated drive element guided by the pulley and connected to the winch and the sleeve, wherein the actuation system is arranged for moving the support system between the extended position and the collapsed position upon operation of the winch.

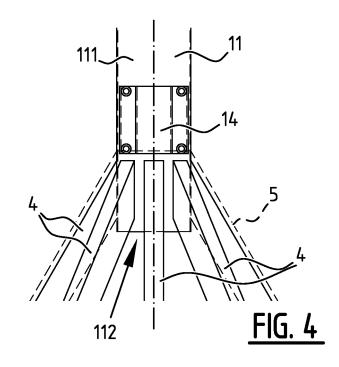
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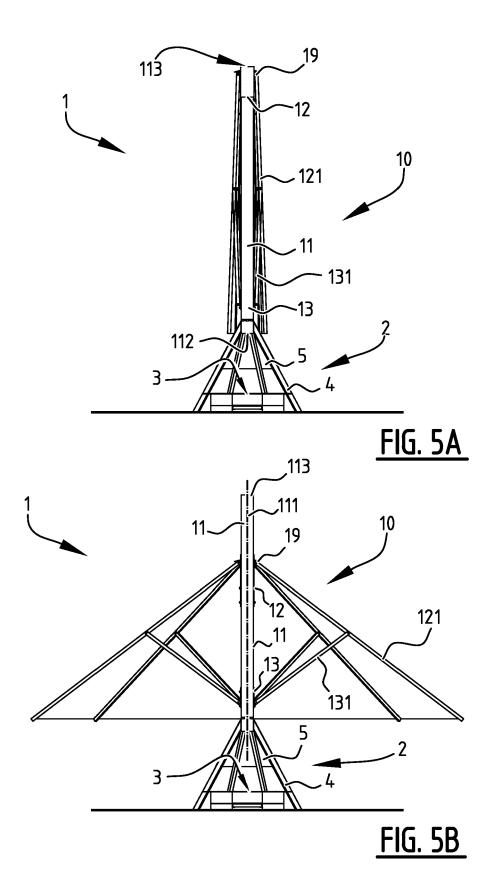
- 12. Canopy device according to any of the preceding claims, wherein the hollow column is made of steel, preferably stainless steel.
- 13. Canopy device according to any of the preceding claims, further comprising a foldable fire-retarding screen, wherein the support system is arranged to support the screen around the column.
- 14. Fireplace comprising a fire pit and a canopy device according to any of the preceding claims, wherein the hollow column of the canopy device is arranged for conveying smoke away from the fire pit, wherein the canopy device is arranged for supporting the foldable screen extended over the fire pit in the extended position of the support system.

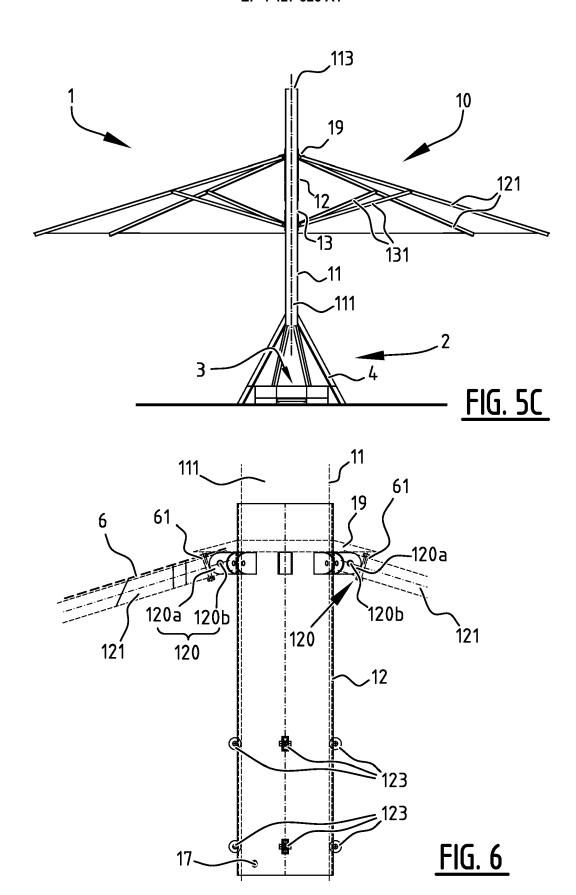


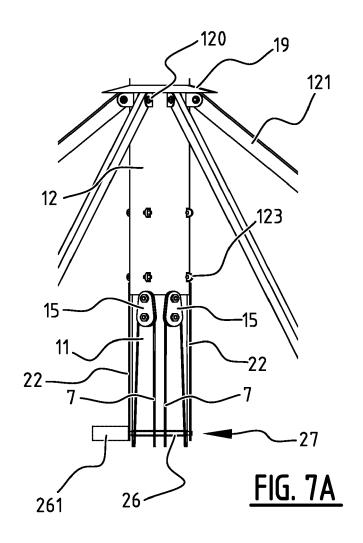


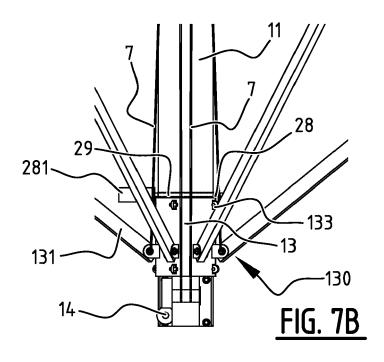


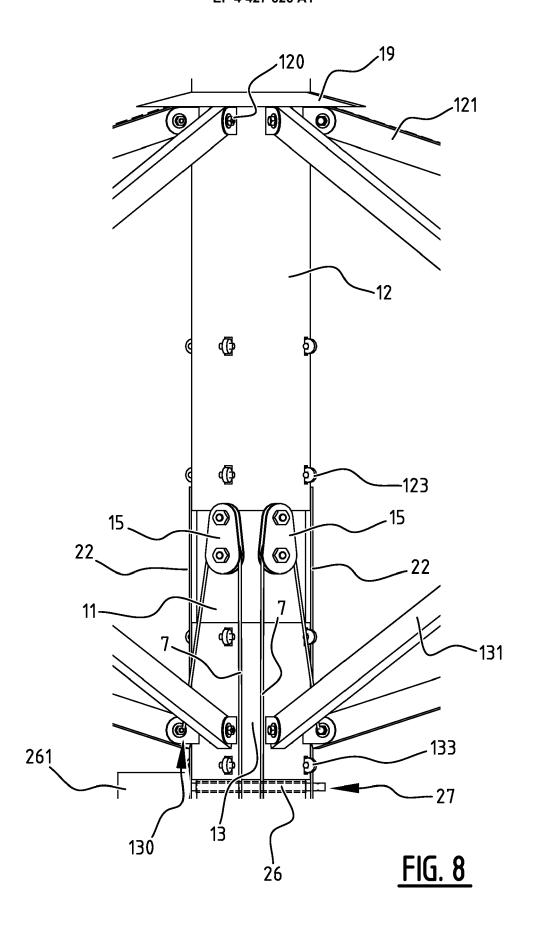












**DOCUMENTS CONSIDERED TO BE RELEVANT** 

US 5 964 233 A (CLARK WALTER B [US] ET AL)

AU 2020 202 951 A1 (LITTLEJOHN JACK [AU])

Citation of document with indication, where appropriate,

of relevant passages

\* column 4, line 24 - line 36 \*

26 November 2020 (2020-11-26)

31 May 2007 (2007-05-31)

DK 2005 01692 A (IDEEN APS [DK])

The present search report has been drawn up for all claims

12 October 1999 (1999-10-12)

\* abstract \*

\* figures \*

\* abstract \* \* figures 1, 2 \*

\* abstract \* \* figures \*



Category

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## **EUROPEAN SEARCH REPORT**

**Application Number** 

EP 23 16 0485

CLASSIFICATION OF THE APPLICATION (IPC)

INV.

ADD. A45B23/00

A45B25/00

A45B25/14

F24B3/00

TECHNICAL FIELDS SEARCHED (IPC)

A45B F24B F24C

Relevant

to claim

1,2,12

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1,13

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15	
20	
25	
30	
35	
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45	

Place of search	
The Hague	
CATEGORY OF CITED DOCUMENTS	;
X : particularly relevant if taken alone     Y : particularly relevant if combined with ano     document of the same category     A : technological background     O : non-written disclosure     P : intermediate document	ther

Date of completion of the search			Examine	er
26 July 2023		Zet	zsche,	Brigitta

T: theory or principle underlying the invention
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# EP 4 427 626 A1

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

EP 23 16 0485

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

26-07-2023

	Patent document ed in search report		Publication date		Patent family member(s)		Publication date
US	5964233	A	12-10-1999	AT	259169	т	15-02-200
•	3704233	••	12 10 1333	AU	5473099		06-03-200
				CA	2338583		24-02-200
				DE	69914771		25-11-200
				EP	1105014		13-06-200
				US	5964233		12-10-199
				WO	0008965		24-02-200
AU	2020202951	A1	26-11-2020	NONE			
DK	200501692	 А	31-05-2007	NONE			
			ficial Journal of the Eur				