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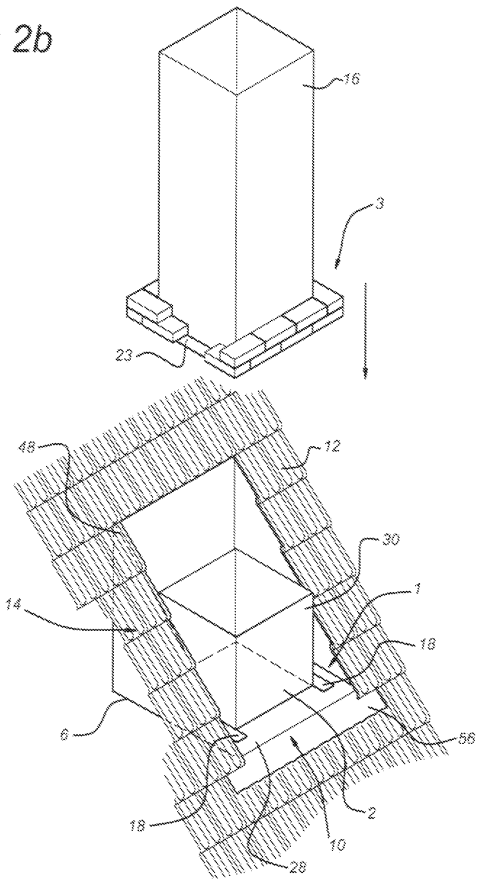
(54) Closure plate for a roof passage and method for the placing in a sloping roof of a closure plate and a chimney

(57) A closure plate for a roof passage, comprising a watertight base for the supporting thereon of a chimney which comprises an lower face and is made from a stone-type material, which base comprises an opening for the passage of gases, an inner wall which extends from the base and is connected to the base in a watertight manner, extends along the circumference of the opening and is surrounded during use by the stone-type material of the chimney, the closure plate being configured for the prevention of leakage and the supporting of a chimney made from a stone-type material having a relatively high mass, and also an assembly of a closure plate and chimney, a roof comprising a closure plate, and a method.

Fig 2b



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Description

[0001] The invention relates to a closure plate according to the preamble of claim 1. A closure plate for a roof passage for a chimney having a low mass is known from FR 2500872. A drawback of this known closure plate is that it is not suitable for use in chimneys made from a stone-type material having a relatively high mass.

[0002] For years, houses have been provided with chimneys made from a stone-type material and having a relatively high mass, such as brick chimneys. A drawback of these chimneys is that they often eventually, and in some cases from the outset, start to leak as a result of the fact that it is extremely difficult to obtain a watertight connection between the chimney and the roof on which said chimney is placed. According to estimates, 25 % of these chimneys leak within half a year of delivery of the relevant construction and 50 % start to leak within the first ten years.

[0003] An aim of the invention is to provide a closure plate which prevents leakage and may be used for a chimney made from a stone-type material having a relatively high mass. This problem is solved by a closure plate having the characteristics of Claims 1 and 4.

[0004] Preferably, the closure plate according to the invention is positioned on and/or in a roof in such a way that the weight of the chimney is transferred to the joists, or if appropriate possibly to other support elements, in the roof. As a result of the fact that the upright inner wall is connected to the base in a watertight manner, water located on the base is unable to flow into the opening. The base extends substantially horizontally, as a result of which gravity will cause the water located on the base to flow from the base. As a result of the fact that the chimney in the use position thereof is positioned on the base in such a way that said chimney surrounds the inner wall, gravity will cause water with which the chimney enters into contact to be guided toward the base and then to flow away from said base. A watertight closure plate for the supporting of a chimney made from a stone-type material is thus obtained.

[0005] The inner wall may be formed in such a way that said wall extends over a small distance from the base, for example over 5 cm. If the inner wall has sufficient rigidity and strength and extends in use along a substantial portion of the length of the chimney, the advantageous situation arises that the inner wall prevents tilting movements of the chimney. For this purpose, the inner wall preferably extends at least from the lower face to the centre of gravity of the chimney.

[0006] In addition, the closure plate according to the invention eliminates the need for a large number of complex operations for the placing on a roof of a chimney made from a stone-type material, allowing the chimney to be placed much more quickly and therefore also more economically. The placement is even simplified in such a way that the closure plate is suitable for sale to the general public.

[0007] In an embodiment, the closure plate comprises an edge, which edge is connected to the base in a watertight manner and extends along at least a portion of the external circumference of the base in such a way that the edge defines a water outlet for the drainage of water. In the use position, the edge of the closure plate is positioned adjacent to the roof in such a way that rainwater is unable to infiltrate any space left between the edge and the roof. This edge may also be connected to the roof in a watertight manner. Excess water is thus efficiently drained away through the water outlet. The edge may extend from the upper side of the base. This embodiment is advantageous in the situation that the closure plate is placed in its entirety or in part, in a roof. The edge may extend from the lower side of the base. This embodiment is advantageous in the situation that the closure plate is placed in its entirety on a roof.

[0008] In an embodiment, the base is positioned in the use position, relative to the horizontal, at an angle of between 0° and 5°. In this position, gravity is able to guide the water more effectively from the base. This positioning comes under the positioning in which the base extends substantially horizontally.

[0009] The base of the closure plate may be positioned in use, relative to the horizontal, at an angle in such a way that the portion of said base adjacent to the water outlet is located closest to the fixed base. Gravity is thus able to guide the water located on the base more effectively toward the water outlet. In an advantageous embodiment, at least a portion of the edge extends, relative to the upper side of the base, at an angle of more than 90° from said base and the water outlet is located, relative to said portion of the edge, on the opposite side of the base. This is advantageous if the closure plate according to the invention is placed in part in a sloping roof. In this situation, the closure plate is placed in the sloping roof in such a way that the relevant portion of the edge is located, relative to the remaining portion of said edge, adjacent to the highest portion of the sloping roof. By positioning this portion of the edge in such a way that said portion extends vertically, the base is located at an angle relative to the horizontal. As a result of the fact that the water outlet is located substantially on the opposite side of the base, gravity causes water located on said base to flow toward the water outlet. Water is thus effectively drained away from the base.

[0010] In an embodiment, the closure plate comprises at least one support member for the supporting of the chimney in such a way that the lower face of the chimney is located at a distance from the base. This allows water to flow freely from the base without unnecessary obstructions. In addition, the condensed moisture which accumulates below the lower face of the chimney may be removed more effectively.

[0011] The closure plate according to the invention may comprise a chimney support comprising a second opening and a second lower side, which chimney support is attached in use to the chimney in such a way that the

lower side forms the lower face of the chimney. The chimney support may be attached to the lower side of a prefabricated chimney in order to form the lower face of the relevant chimney. It is also possible that after the placing in and/or on a roof of a portion of the closure plate, the lower side of the chimney support is placed firstly in the use position, the chimney support surrounding the opening of the base, and the chimney is then placed on the chimney support. It is possible for a chimney to be built on site on the chimney support. By providing the closure plate according to the invention with the chimney support, there is provided in a simple manner an lower face for the chimney in which the closure plate functions optimally.

[0012] In an embodiment, the chimney support comprises an upright second inner wall connected thereto in a watertight manner, which second inner wall extends along the circumference of the second opening. As a result of the difference in temperature between the chimney and the gases, moisture from the gases will condense in use on the second inner wall. In use, the chimney support is positioned in such a way that the second inner walls surrounds the inner wall of the base. The second inner wall is accordingly located above the base, as a result of which gravity guides the water condensed on the second inner wall toward the base, where it arrives and is drained away through the water outlet. This second inner wall is also advantageous in the building on site of the chimney. It simplifies the building process, since during building (some of) the bricks may be positioned against the inner wall in order to place said bricks in the desired position.

[0013] The chimney support may further comprise fastening means for the fastening thereto of hoisting means. A chimney made from a stone-type material, such as a brick chimney, may not be subjected to tensile forces, since the cement would then loosen, causing the chimney to break. By placing the chimney made from a stone-type material on the chimney support in such a way that the lower side of the chimney support forms the lower face of the chimney, the chimney may be hoisted via the fastening means without the chimney being subjected to tensile forces. This allows the chimney to be hoisted to the desired position on the roof in a simple manner. These fastening means may also be used to fix the chimney support to the joists or, if appropriate, possibly to other support elements.

[0014] In an embodiment, the edge comprises an end and the closure plate comprises a water guide for the guiding of water, which water guide extends in use along and over at least a portion of the end. The water guides are usually positioned during use on the roof in such a way that the water guides overlap the region in which the end of the edge and the roof meet. The end may be connected to the roof in a watertight manner. The aforementioned region is one of the regions in which leakage is most likely to occur during use. The water guides guide water from the roof, over the relevant region and toward the base in order then to be drained away through the water outlet. This measure has a positive effect on reducing the risk of leakage in the relevant region.

[0015] The water guide may comprise a flap having a second end, which flap extends in use past the end of the edge in such a way that the flap makes contact with the chimney in such a way that the second end is positioned in a direction toward the base. Waste, such as leaves, may impair the functioning of the closure plate according to the invention, especially if the waste obstructs the flow of water into the closure plate. As a result of the fact that the flap makes contact with the chimney, waste of this type is prevented from infiltrating the space between the edge and the chimney. The contact of the flap with the chimney allows water to pass through, so water is guided toward the base as a result of the specific positioning of the flap. The flap may comprise manually deformable material, so the flap is easy to place in the desired position. The material of the flap may also be selected on the basis of its resilient characteristics. This allows contact to be produced between the flap and the chimney, the elasticity determining the resilient compressive force of the flap against the chimney. The flap may comprise the material "Wakaflex". It is also possible to connect the second end of the flap to the chimney in a watertight manner, for example by an adhesive connection.

[0016] In an embodiment, the closure plate comprises a second water guide for the guiding of water, which second water guide is positioned adjacent during use to at least a portion of the water outlet. As a result of the fact that the second water guides is positioned adjacent to the water outlet, said second water guides overlap the region in which the water guide and the roof meet. The risk of leakage in this region is thus reduced in the same way as soon as water is drained away for the first time.

[0017] The inner wall may comprise chimney guiding means for the guiding of the chimney. This simplifies the positioning of the chimney in the correct position, regardless of whether or not the chimney comprises a chimney support. This is important in view of the fact that the weight of the chimney (between 600 and 800 kg) makes it difficult to position.

[0018] In an embodiment according to the invention, the inner wall has a tapered shape. This shape is advantageous for the guiding of the chimney in the correct position and capillary action of water between the chimney, or possibly the second inner wall, and the inner wall is prevented in this way. Said capillary action may also be counteracted by reducing the external circumference of the inner wall, and therefore the surface area of the hole in the base.

[0019] In an embodiment, the edge comprises insulating material. By placing the insulating material on the side of the edge facing away from the plate, this edge does not contain any cold bridges.

[0020] The invention further relates to a method for placing a closure plate for a roof passage and a chimney

in a sloping roof, including the steps of:

- providing a chimney which comprises a lower face and is made from a stone-type material,
- placing a closure plate according to the invention in a sloping roof, and
- placing the chimney in the use position in such a way that said chimney is supported by the base and the stone-type material of the chimney surrounds the inner wall. This method may include the step of placing the closure plate in a sloping roof in such a way that the edge is located below the roof.

[0021] The invention also relates to a method for the placing a closure plate for a roof passage and a chimney in a sloping roof, including the steps of:

- providing a chimney which comprises a lower face and is made from a stone-type material,
- placing a closure plate according to the invention in a sloping roof,
- attaching the chimney support to the chimney in such a way that the lower side forms the lower face of the chimney, and
- placing the chimney in the use position in such a way that said chimney is supported by the

[0022] base and the stone-type material of the chimney surrounds the inner wall. This method may include the step of building the chimney on the chimney support.

[0023] During the placing in the use position of the chimney, said chimney may be positioned on support members in such a way that the lower face of the chimney is located at a distance from the base. When the base is provided, said base may be positioned, relative to the horizontal, at an angle of between 0° and 5°. After the placing in the use position of the chimney, a water guide may be placed around at least a portion of the chimney for the guiding of water to the chimney and a second water guide be placed along at least a portion of the water outlet for the guiding of water from the chimney.

[0024] The invention also relates to an assembly of a chimney made from a stone-type material and a closure plate according to the invention. The invention further relates to a roof comprising a closure plate according to the invention. In this roof comprising a closure plate, the edge may extend from the upper side of the base in such a way that, in the use position in which the closure plate is placed in a sloping roof, the edge is located below the roof.

[0025] The invention will be described hereinafter with reference to various embodiments illustrated in the drawings, in which:

Fig. 1a shows an embodiment of the closure plate according to the invention,
Fig. 1b shows the closure plate of Fig. 1a, which is placed in a sloping roof,
Fig. 1c shows the closure plate of Fig. 1a, which is placed in a sloping roof and wherein a chimney made from a stone-type material is placed in the use position thereof,
Fig. 2a shows a subsequent embodiment of the closure plate according to the invention,
Fig. 2b shows the closure plate of Fig. 2a, wherein a portion of the closure plate is placed in a sloping roof and a portion of the chimney made from a stone-type material is placed on the chimney support,
Fig. 2c shows the closure plate of Fig. 2a, wherein the closure plate is placed in a sloping roof and a chimney made from a stone-type material and placed on the chimney support is placed in the use position thereof,
Fig. 3a is a plan view of the closure plate of Fig. 2c, wherein the closure plate also comprises water guides,
Fig. 3b is a view in cross section along the line I-I of Fig. 3a, and
Fig. 4 shows a further embodiment of the closure plate according to the invention.

[0026] Fig. 1a shows an embodiment of a closure plate according to the invention. The closure plate comprises a watertight base 101 having an opening 102 for the passage of gases and an upper side 128. The base 101 comprises aluminium plate material, since this material meets the requirements for durable building. It is also possible for the base 101 to comprise any other suitable material, such as plastics material and stainless steel. The closure plate further comprises an upright inner wall 130 for the guiding of water, which inner wall 130 is connected to the base 101 in a watertight manner and extends from the base 101 and along the entire circumference of the opening 102. The closure plate further comprises an edge 114 for the guiding of water, which edge 114 is connected to the base 101 in a watertight manner and extends along a portion of the external circumference 106 of the base 101 in such a way that the edge 114 defines a water outlet 110 for the drainage of water. The edge 114 has an end 148. The inner wall 130 and the edge 114 comprise aluminium plate material and are fastened to the base 101 by means of a welding process. It is possible for the inner wall 130 and the edge 114 to comprise any other suitable material, such as plastics material. The inner wall 130 and the edge 114 may be connected to the base 101 in a watertight manner in any other suitable way or be formed integrally with the base 101. The base 101 further comprises, on the upper side 128, two support members 118 for the supporting of the lower face of the chimney. The support members 118 extend from the base 101 in such a way that the lower face of the chimney is located, in the use position thereof, at a distance from the base 101. The support members 118 are rectangular, comprise aluminium, are attached to the plate material of the base 101 by a welding process and extend 5 mm from the base 101. The support mem-

bers 118 may comprise any other suitable material. If the base 101 has low strength and rigidity, the support members 118 should be formed in such a way and made from a material such that the support members 118 may transfer the weight of the chimney entirely automatically to the joists in the roof. In this situation, support members made from steel are preferred. The closure plate according to the invention may be manufactured in its entirety by means of the injection-moulding of plastics material. In this situation, the support members may have a thickness of 2 cm.

[0027] Fig. 1b shows the closure plate of Fig. 1a, which is placed in a sloping roof 112. In this use position, the stone-type material surrounds the upright wall (130 of Fig. 1b). The edge 114 is located below the roof 112. This is advantageous both for the guiding of the water in the correct direction and for the placing of the closure plate in the roof 112. In practice, the inclination of the roof 112 always differs from the design drawings. This may give rise to the situation in which, in the use position, the distance between the end 148 of the edge 114 is not in all places at the same distance from the roof 112. In this situation, too, if the edge 114 is located below the roof 112, no water will be able to enter below the roof in the event of rainfall. Fig. 1c shows the closure plate of Fig. 1b, a chimney 113 being placed in the use position thereof.

[0028] Fig. 2a shows a subsequent embodiment of the closure plate according to the invention. The closure plate comprises a watertight base 1 having an opening 2 for the passage of gases and an upper side 28. The base 1 further comprises an upright inner wall 30 for the guiding of water, which inner wall 30 is connected to the base 1 in a watertight manner and extends along the entire circumference of the opening 2. The closure plate further comprises an edge 14 for the guiding of water, which edge 14 extends along a portion of the external circumference 6 in such a way that the edge 14 defines a water outlet 10 for the drainage of water away from the base 1. The closure plate further comprises a second water guide 56 connecting to the water outlet 10 for the guiding of water. This second water guide 56 is detachably connected to the closure plate. The edge has an end 48. The base 1 further comprises, on the upper side 28 thereof, two support members 18 for the supporting of the lower face of the chimney. The support members 18 extend from the base 1 in such a way that the lower face of the chimney is located, in the use position thereof, at a distance from the base 1. The closure plate further comprises a chimney support 3 having a second opening 4 and an lower side 23. The chimney support 3 is attached in use to the chimney in such a way that the lower side 23 forms the lower face of the chimney. The chimney support 3 comprises an upright second inner wall 16 for the guiding of water, which second inner wall 16 extends along the entire circumference of the second opening 4. The chimney support 3 may comprise any suitable material and is preferably made from steel having a thickness of between 3 and 15 mm. This steel chimney support is preferably galvanised and/or coated with a powder coating.

[0029] Fig. 2b shows the closure plate of Fig. 2a, a portion of the closure plate according to the invention being placed in a sloping roof 12 and a portion of a chimney being built on the chimney support 3. The lower side 23 of the chimney support 3 forms, in this connection, the lower face of the chimney to be built. For the placing in the use position of said chimney still to be produced, the lower side 23 is placed on the support members 18 in such a way that the second inner wall 16 surrounds the inner wall 30. In order to reach this position, in the situation shown in Fig. 2b, the chimney support 3 has merely to be moved in the direction of the illustrated arrows. The inner wall 30 has a tapered shape, and this is advantageous for the guiding of the chimney support 3 to the desired use position.

[0030] Fig. 2c shows the closure plate of Fig. 2b, a chimney made from a stone-type material being placed in the use position thereof on the chimney support 3. In this use position, the stone-type material of the chimney 13 surrounds the upright wall (30 of Fig. 2b).

[0031] Fig. 3a is a plan view of the closure plate of Fig. 2c, wherein the closure plate also comprises water guides. Fig. 3b is a view in cross section along the line I-I of Fig. 3a, wherein a chimney pot 25 (see Fig. 3b) is also shown. The closure plate comprises water guides 24 for the guiding of water, which water guides 24 extend along and over a portion of the end 48 of the edge 14. The water guides 24 comprise flaps 50, which flaps 50 extend past the end 48 in such a way that the flaps 50 make contact with the chimney 13 and wherein the free tips 51 of the flaps 50 are positioned in a direction toward the base 1.

[0032] Fig. 4 shows a subsequent embodiment of the closure plate according to the invention. The closure plate is placed on a sloping roof 712, a chimney 713 being positioned on the chimney support 703 in the use position thereof. The second inner wall 716 of the chimney support 703 extends over the entire length of the chimney 713. The closure plate comprises a watertight base 701 having an opening 702 for the passage of gases. The closure plate further comprises an upright inner wall 730 for the guiding of water, which inner wall 730 is connected to the base 701 in a watertight manner and extends from the base 701 and along the entire circumference of the opening 702. The closure plate further comprises an edge 714 for the guiding of water, which edge 714 is connected to the base 701 in a watertight manner and extends along the entire external circumference 706 of the base 701 in such a way that the edge 714 defines a water outlet 710 for the drainage of water. The edge 714 extends from the lower side of the base 701. The base 701 further comprises, on the upper side 728, two support members 718 (one of which is partially visible) for the supporting of the lower face of the chimney. The support members 718 extend from the base 701 in such a way

that the lower face of the chimney is located, in the use position thereof, at a distance from the base 701.

[0033] In addition to the above-described advantages, the closure plate according to the invention provides various other advantages. The weight of a chimney placed with the closure plate according to the invention is substantially less than in the case of conventional brick chimneys. This last advantage is due partly to the fact that conventional chimneys are usually double-walled and partly to the fact that, in particular in the case of prefabricated chimneys, the often-used heavy concrete foot of the chimney may be replaced by the chimney support. The closure plate according to the invention may be used in many different types of roofs, for example in domed and pointed roofs. In addition, the closure plate may be used for the placing of chimneys in a roof region in which a plurality of different shaped roof parts meet. If the opening in the base is sufficiently large for a person to stand in it, the closure plate according to the invention may be placed without the person placing it having to climb up onto the roof, thus reducing the risk of injury to said person.

[0034] It will be clear to a person skilled in the art that there are many conceivable variations of the closure plate according to the invention encompassed within the scope of protection defined in the claims. In addition, the term "plastics material" shall be taken to include any thermosetting plastics, thermoplastics and elastomers.

[0035] The invention may be defined according to any of the following clauses.

1. Closure plate for a roofpassage, comprising a watertight base (1, 101) for the supporting thereon of a chimney which comprises an lower face and is made from a stone-type material, which base (1, 101) comprises an opening (2, 102) for the passage of gases, an inner wall (30, 130) which extends from the base (1, 101) and is connected to the base (1, 101) in a watertight manner, extends along the circumference of the opening (2, 102) and is in use surrounded by the stone-type material of the chimney, characterised in that the base (1, 101) is embodied to extend, in the use position, substantially horizontally and in that the closure plate comprises an edge (14, 114), said edge (14, 114) being connected to the base (1, 101) in a watertight manner and extends along a portion of the external circumference (6, 106) of the base (1, 101) in such a way that the edge (14, 114) defines a water outlet (10, 110) for the drainage of water, wherein the edge (14, 114) extends from the upper side (28, 128) of the base (1, 101).

2. Closure plate according to the preceding clause, wherein the edge (14, 114) extends from the upper side (28, 128) of the base (1, 101) in such a way that, in the use position in which the closure plate is placed in a sloping roof, the edge (14, 114) is located below the roof.

3. Closure plate according to one of the preceding clauses, comprising a chimney support (3) according to one of clauses 4 to 6.

4. Closure plate for a roof passage, comprising a watertight base (1, 101, 701) for the supporting thereon of a chimney which comprises an lower face and is made from a stone-type material, which base (1, 101, 701) comprises an opening (2, 102, 702) for the passage of gases, an inner wall (30, 130, 730) which extends from the base (1, 101, 701) and is connected to the base (1, 101, 701) in a watertight manner, extends along the circumference of the opening (2, 102, 702) and is in use surrounded by the stone-type material of the chimney, characterised in that the base (1, 101, 701) is embodied to extend in the use position substantially horizontally and in that the closure plate comprises a chimney support (3) comprising a second opening (4) and a second lower side (23), which chimney support (3) is in use attached to the chimney in such a way that the lower side (23) forms the lower face of the chimney.

5. Closure plate according to the preceding clause, wherein the chimney support (3) comprises an upright second wall (16) connected thereto in a watertight manner, which second inner wall (16) extends along the circumference of the second opening (4).

6. Closure plate according to clause 4 or 5, wherein the chimney support (3) comprises fastening means for the fastening thereto of hoisting means.

7. Closure plate according to one of clauses 4 to 6, wherein the edge (714) extends from the lower side of the base (701).

8. Closure plate according to one of clauses 1 to 6, wherein at least a portion of the edge (14, 114) extends, relative to the upper side (28, 128) of the base (1, 101), at an angle of more than 90° and the water outlet (10, 110) is, relative to said portion of said edge (14, 114), located on the opposite side of said base (1, 101).

9. Closure plate according to one of the preceding clauses, wherein, in the use position, the base (1, 101, 701) is positioned, relative to the horizontal, at an angle of between 0° and 5°.

10. Closure plate according to one of the preceding clauses, comprising at least one support member (18, 118, 718) for the supporting of the chimney in such a way that the lower face of the chimney is located at a distance from the base (1, 101, 701).

11. Closure plate according to one of the preceding clauses, wherein the edge (14) comprises an end

(48) and the closure plate comprises a water guide (24) for the guiding of water, which water guide in use extends along and over at least a portion of the end (48).

12. Closure plate according to clause 11, wherein the water guide (24) comprises a flap (50) comprising a second end (51), which flap (50) in use extends past the end (48) of the edge (14) in such a way that the flap (50) makes contact with the chimney in such a way that the second end (51) is positioned in a direction toward the base (1).

13. Closure plate according to one of the preceding clauses, comprising a second water guide (56) for the guiding of water, which second water guide (56) in use is positioned adjacent to at least a portion of the water outlet (10).

14. Closure plate according to one of the preceding clauses, wherein the inner wall (30) has a tapered shape.

15. Assembly of a chimney made from a stone-type material and a closure plate according to one of the preceding clauses.

16. Sloping roof comprising a closure plate for a roof passage, which closure plate comprises a watertight base (1, 101) for the supporting thereon of a chimney which comprises an lower face and is made from a stone-type material, which base (1, 101) comprises an opening (2, 102) for the passage of gases, an inner wall (30, 130) which extends from the base (1, 101) and is connected to the base (1, 101) in a watertight manner, extends along the circumference of the opening (2, 102) and is surrounded during use by the stone-type material of the chimney, wherein the base (1, 101) is embodied to extend, in the use position, substantially horizontally and the closure plate comprises an edge (14, 114), said edge (14, 114) being connected to the base (1, 101) in a watertight manner and extends along a portion of the external circumference (6, 106) of the base (1, 101) in such a way that the edge (14, 114) defines a water outlet (10, 110) for the drainage of water, wherein the edge (14, 114) extends from the upper side (28, 128) of the base (1, 101).

17. Sloping roof according to clause 16, wherein the edge (14, 114) extends from the upper side (28, 128) of the base (1, 101) in such a way that the edge (14, 114) is located below the roof.

18. Sloping roof comprising a closure plate for a roof passage, which closure plate comprises a watertight base (1, 101, 701) for the supporting thereon of a chimney which comprises an lower face and is made from a stone-type material, which base (1, 101, 701) comprises an opening (2, 102, 702) for the passage of gases, an inner wall (30, 130, 730) which extends from the base (1, 101, 701) and is connected to the base (1, 101, 701) in a watertight manner, extends along the circumference of the opening (2, 102, 702) and is surrounded during use by the stone-type material of the chimney, wherein the base (1, 101, 701) is embodied to extend, in the use position, substantially horizontally and the closure plate comprises a chimney support (3) having a second opening (4) and a second lower side (23), which chimney support (3) is in use attached to the chimney in such a way that the lower side (23) forms the lower face of the chimney.

19. Sloping roof comprising a closure plate according to one of clauses 3 and 5 to 14.

20. Method for placing a closure plate for a roof passage and a chimney in a sloping roof, including the steps of:

- providing a chimney which comprises a lower face and is made from a stone-type material,
- placing a closure plate according to one of clauses 1 to 3 and 8 to 14 in a sloping roof, and
- placing the chimney in the use position in such a way that said chimney is supported by the base (1, 101) and the stone-type material of the chimney surrounds the inner wall (30, 130).

21. Method according to clause 20, including the step of the placing the closure plate in a sloping roof in such a way that the edge (14, 114) is located below the roof.

22. Method for placing a closure plate for a roof passage and a chimney in a sloping roof, including the steps of:

- providing a chimney which comprises a lower face and is made from a stone-type material,
- placing a closure plate according to one of Clauses 3 to 14 in a sloping roof,
- attaching the chimney support (3) to the chimney in such a way that the lower side (23) forms the lower face of the chimney, and
- placing the chimney in the use position in such a way that said chimney is supported by the base (1, 101, 701) and the stone-type material of the chimney surrounds the inner wall (30, 130, 730).

23. Method according to clause 22, including the step of the building of the chimney on the chimney support (3).

24. Method according to one of clauses 20 to 23,

wherein in the placing in the use position of the chimney, said chimney is positioned on support members in such a way that the lower face of the chimney is located at a distance from the base (1, 101, 701).

25. Method according to one of clauses 20 to 24, wherein during the placing in the sloping roof of the closure plate, the base (1, 101, 701) is positioned relative to the horizontal at an angle of between 0° and 5°.

26. Method according to one of clauses 20 to 25, wherein after the placing in the use position of the chimney, a water guide (24) is placed around at least a portion of the chimney for the guiding of water to the chimney and a second water guide (56) is placed along at least a portion of the water outlet for the guiding of water from the chimney.

Claims

1. Closure plate for a roof passage, comprising a watertight base (1, 101, 701) for the supporting thereon of a chimney which comprises an lower face and is made from a stone-type material, which base (1, 101, 701) comprises an opening (2, 102, 702) for the passage of gases, an inner wall (30, 130, 730) which extends from the base (1, 101, 701) and is connected to the base (1, 101, 701) in a watertight manner, extends along the circumference of the opening (2, 102, 702) and is in use surrounded by the stone-type material of the chimney, **characterised in that** the base (1, 101, 701) is embodied to extend in the use position substantially horizontally and **in that** the closure plate comprises a chimney support (3) comprising a second opening (4) and a second lower side (23), which chimney support (3) is in use attached to the chimney in such a way that the lower side (23) forms the lower face of the chimney.

2. Closure plate according to the preceding claim, wherein the chimney support (3) comprises an upright second wall (16) connected thereto in a watertight manner, which second inner wall (16) extends along the circumference of the second opening (4).

3. Closure plate according to claim 1 or 2, wherein the chimney support (3) comprises fastening means for the fastening thereto of hoisting means.

4. Closure plate according to one of the preceding claims, wherein the closure plate comprises an edge (14, 114), said edge (14, 114) being connected to the base (1, 101) in a watertight manner and extends along a portion of the external circumference (6, 106) of the base (1, 101) in such a way that the edge (14, 114) defines a water outlet (10, 110) for the drainage of water, wherein the edge (14, 114) extends from the upper side (28, 128) of the base (1, 101).

5. Closure plate according to the preceding claim, wherein the edge (14, 114) extends from the upper side (28, 128) of the base (1, 101) in such a way that, in the use position in which the closure plate is placed in a sloping roof, the edge (14, 114) is located below the roof.

6. Closure plate according to one of claims 1 to 3, wherein the closure plate comprises an edge (14, 114), said edge (14, 114) being connected to the base (1, 101) in a watertight manner and extends along a portion of the external circumference (6, 106) of the base (1, 101) in such a way that the edge (14, 114) defines a water outlet (10, 110) for the drainage of water, and wherein the edge (714) extends from the lower side of the base (701).

7. Closure plate according to one of claims 1 to 5, wherein at least a portion of the edge (14, 114) extends, relative to the upper side (28, 128) of the base (1, 101), at an angle of more than 90° and the water outlet (10, 110) is, relative to said portion of said edge (14, 114), located on the opposite side of said base (1, 101).

8. Closure plate according to one of the preceding claims, wherein, in the use position, the base (1, 101, 701) is positioned, relative to the horizontal, at an angle of between 0° and 5°.

9. Closure plate according to one of the preceding claims, comprising at least one support member (18, 118, 718) for the supporting of the chimney in such a way that the lower face of the chimney is located at a distance from the base (1, 101, 701).

10. Closure plate according to one of the preceding claims, wherein the edge (14) comprises an end (48) and the closure plate comprises a water guide (24) for the guiding of water, which water guide in use extends along and over at least a portion of the end (48).

11. Assembly of a chimney made from a stone-type material and a closure plate according to one of the preceding claims.

12. Sloping roof comprising a closure plate for a roof passage, which closure plate comprises a watertight base (1, 101, 701) for the supporting thereon of a chimney which comprises an lower face and is made from a stone-type material, which base (1, 101, 701) comprises an opening (2, 102, 702) for the passage of gases, an inner wall (30, 130, 730) which extends from the base (1, 101, 701) and is connected to the

base (1, 101, 701) in a watertight manner, extends along the circumference of the opening (2, 102, 702) and is surrounded during use by the stone-type material of the chimney, wherein the base (1, 101, 701) is embodied to extend, in the use position, substantially horizontally and the closure plate comprises a chimney support (3) having a second opening (4) and a second lower side (23), which chimney support (3) is in use attached to the chimney in such a way that the lower side (23) forms the lower face of the chimney.

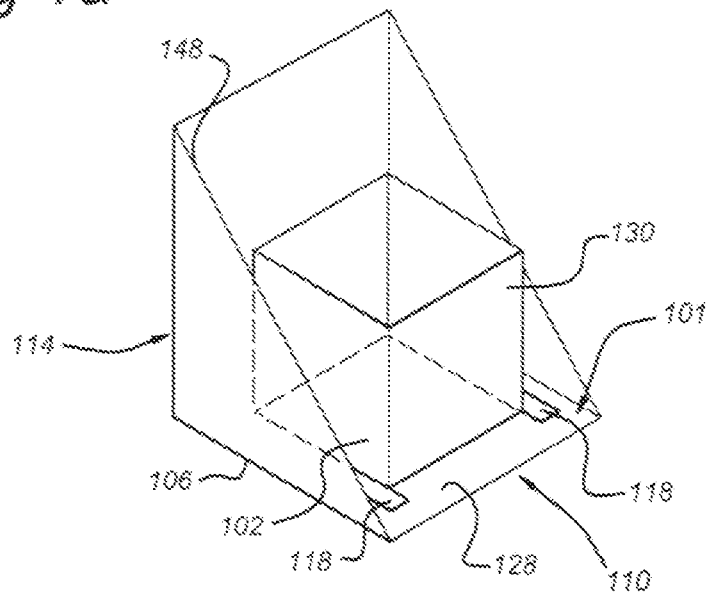
13. Sloping roof comprising a closure plate according to one of claims 2 to 10.

14. Method for placing a closure plate for a roof passage and a chimney in a sloping roof, including the steps of:

- providing a chimney which comprises a lower face and is made from a stone-type material,
- placing a closure plate according to one of Claims 1 to 10 in a sloping roof,
- attaching the chimney support (3) to the chimney in such a way that the lower side (23) forms the lower face of the chimney, and
- placing the chimney in the use position in such a way that said chimney is supported by the base (1, 101, 701) and the stone-type material of the chimney surrounds the inner wall (30, 130, 730).

15. Method according to claim 14, including the step of the building of the chimney on the chimney support (3).

Fig 1a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130
101
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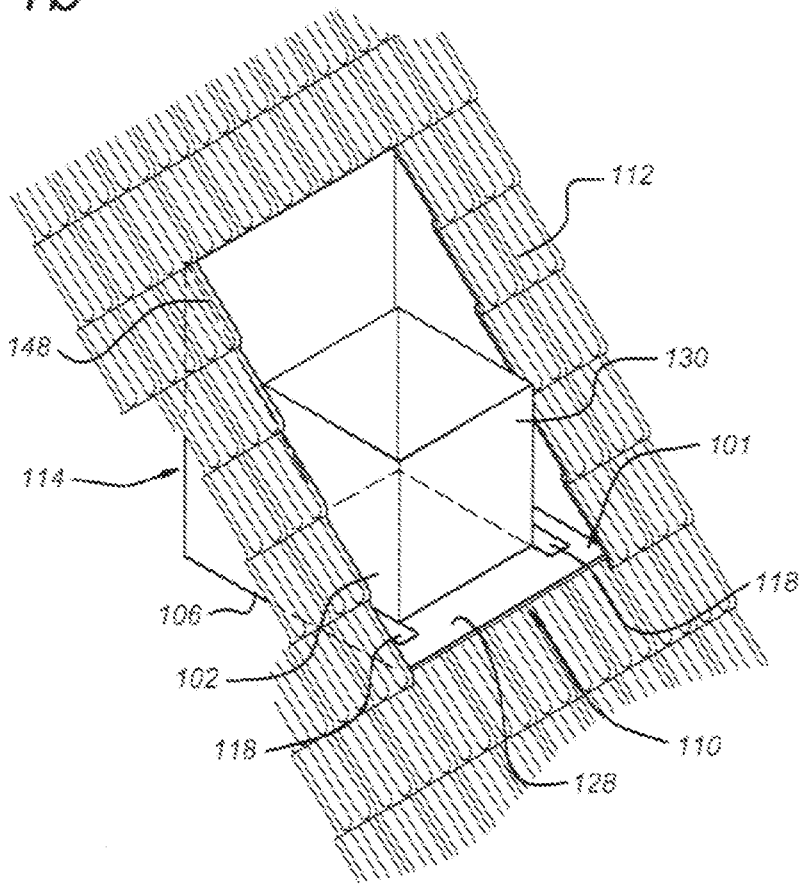
128
110

Fig 1b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128

Fig 1c

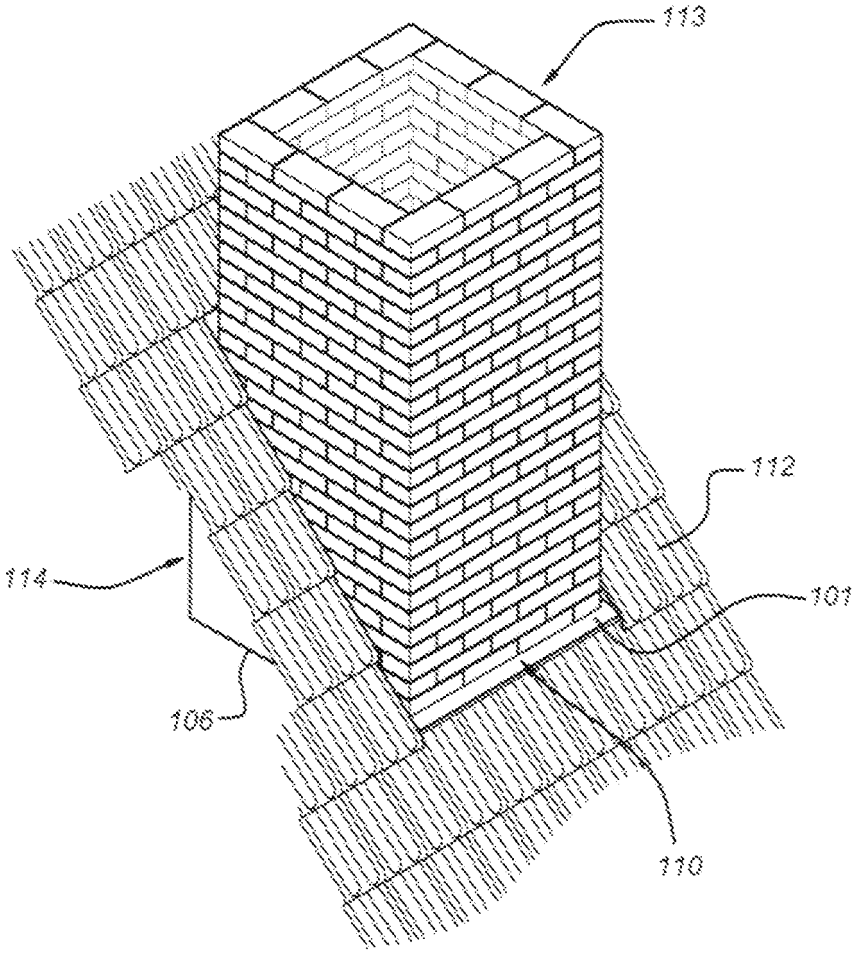


Fig 2a

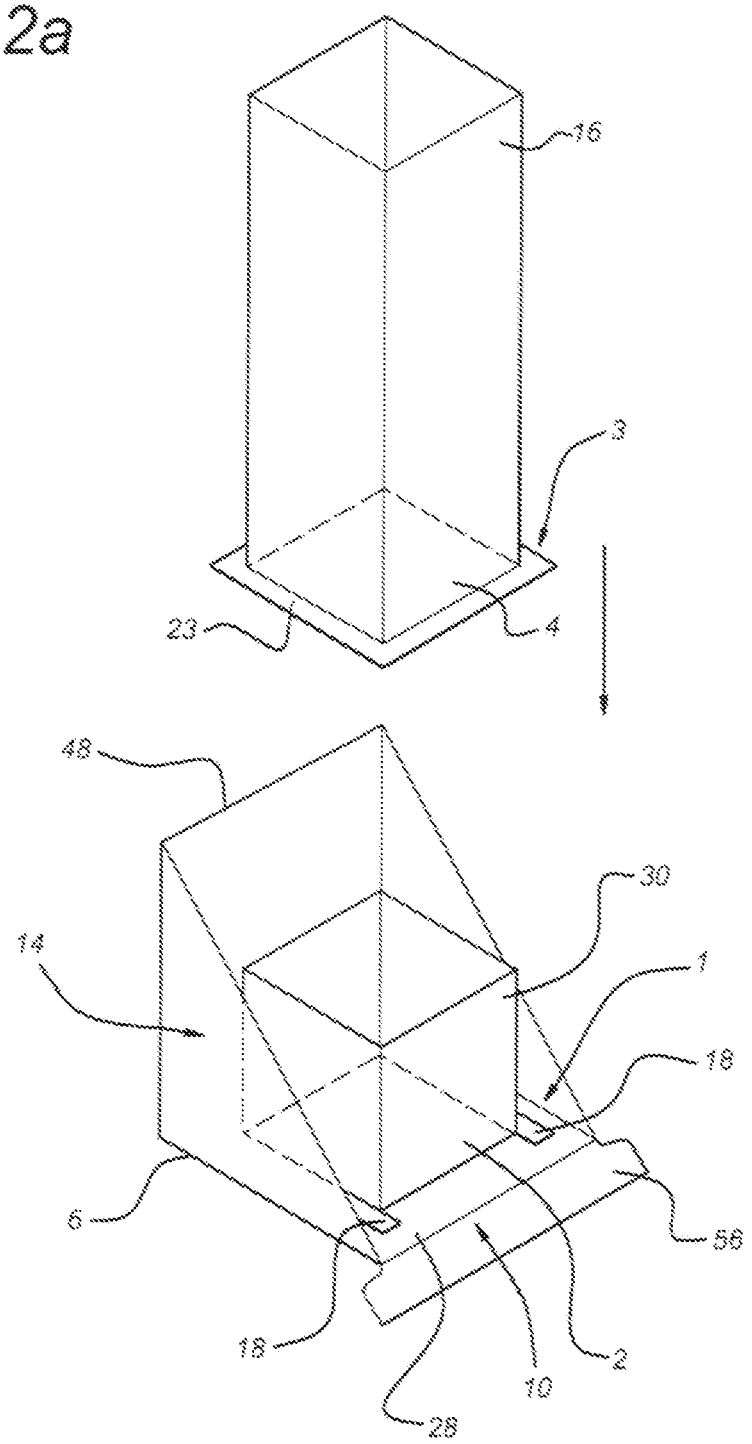


Fig 2b

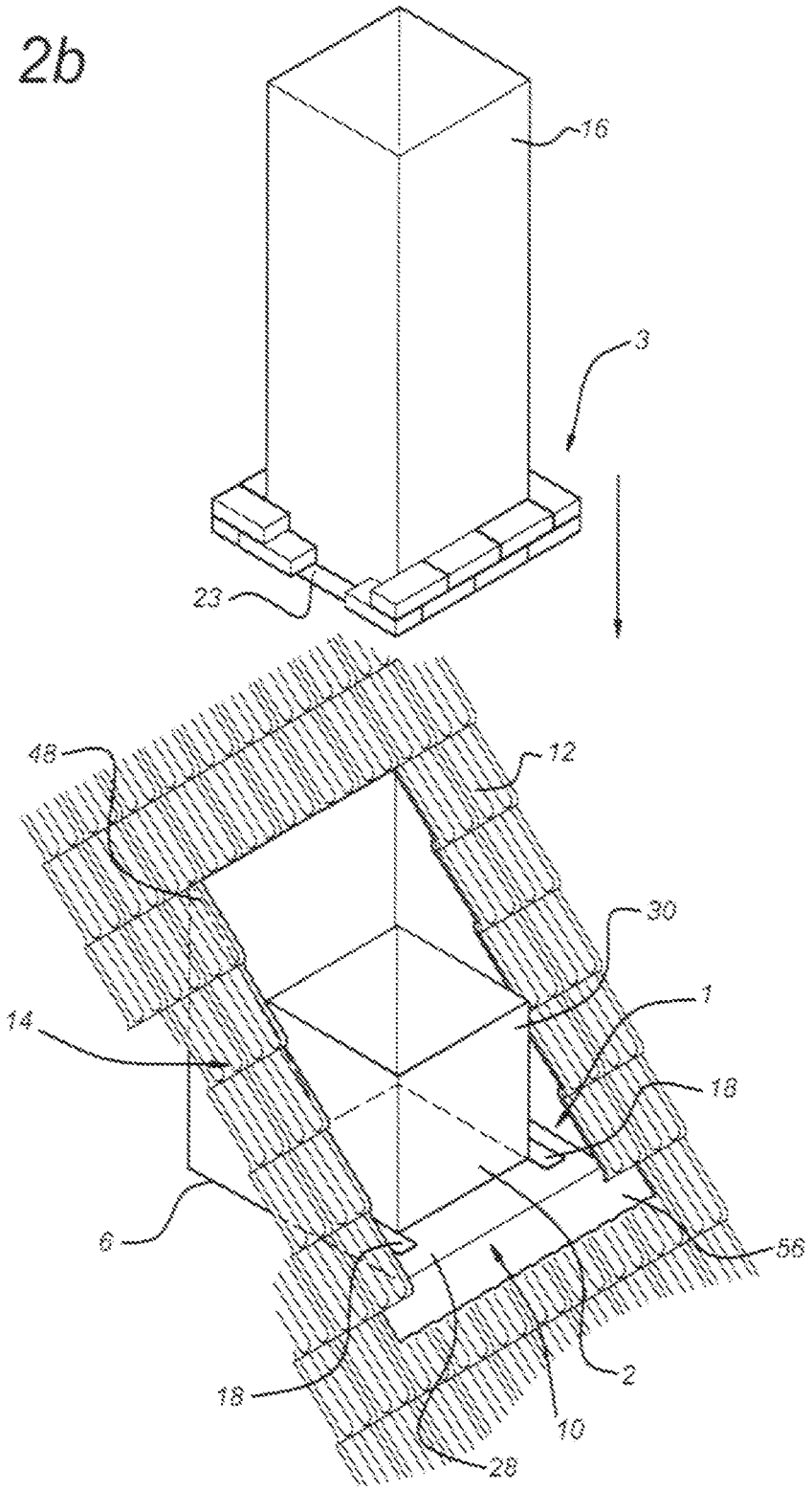


Fig 2c

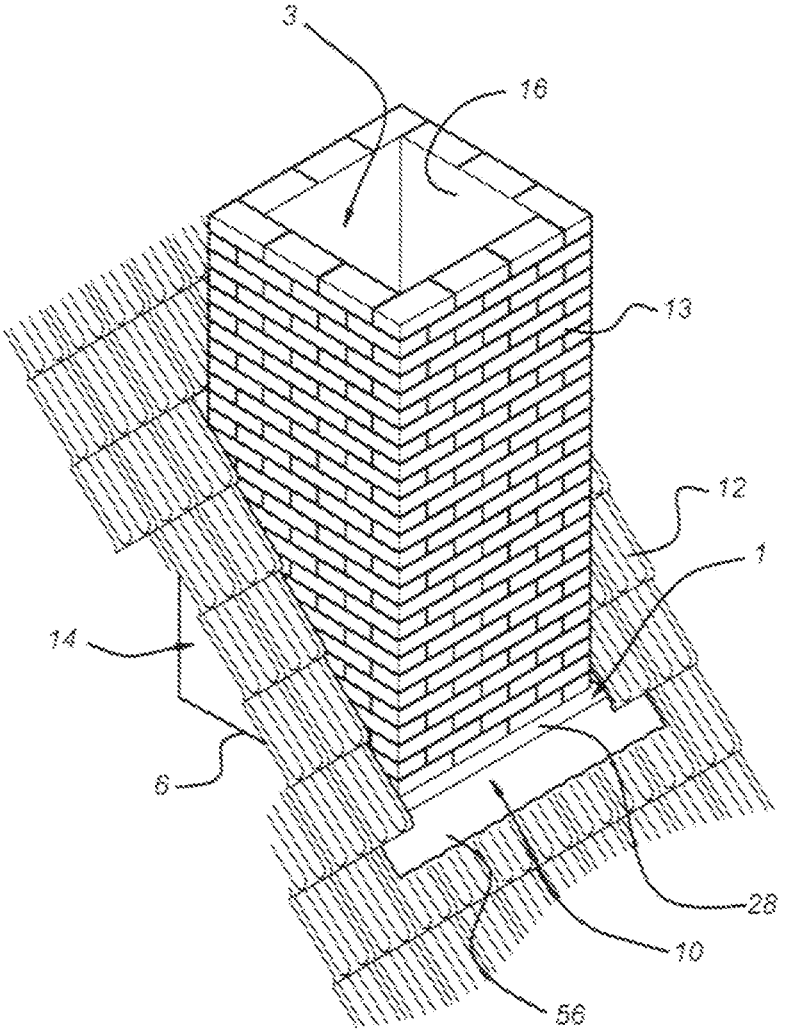


Fig 3a

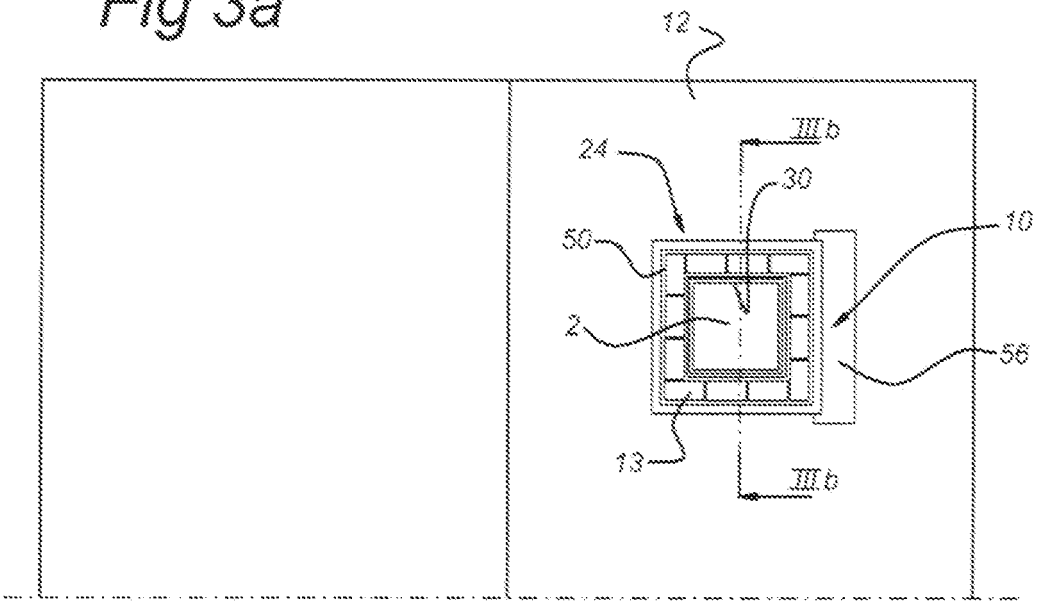
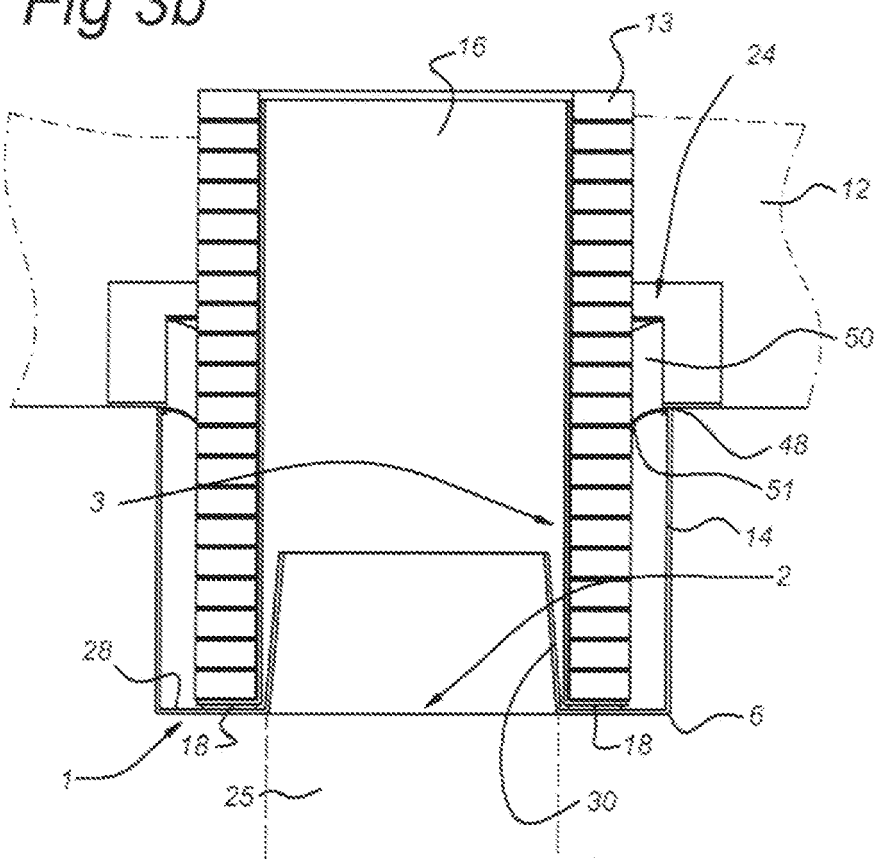

12
III b
24
30
50
10
2
56
13
III b

Fig 3b


16
13
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12
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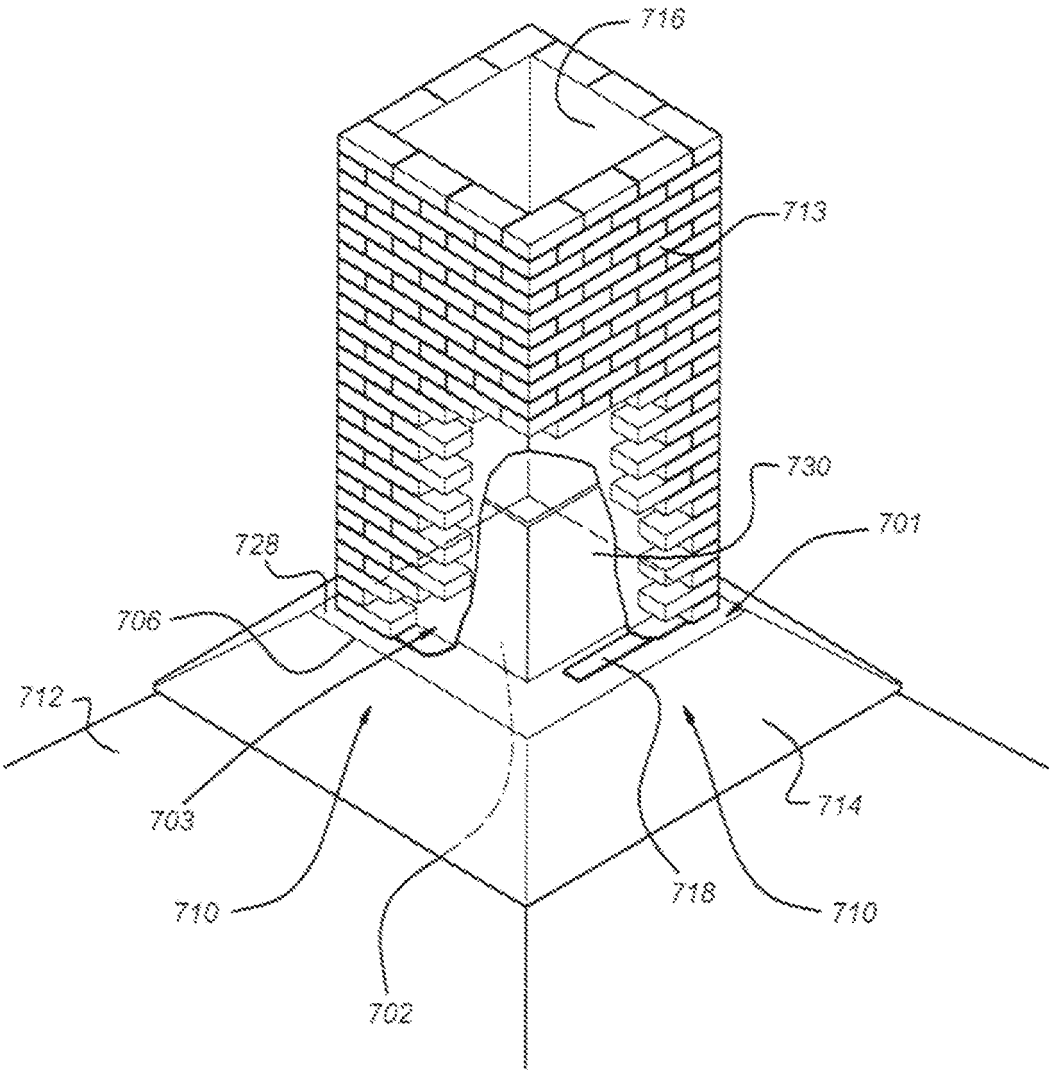
48
51
3
14
2
28
6
1
16
18
25
30

Fig 4



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EUROPEAN SEARCH REPORT

Application Number
EP 10 17 8325

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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X,D	FR 2 500 872 A (URION DANIEL) 3 September 1982 (1982-09-03) * figures 2-4,6,7 * -----	1,14	

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E04D
E04F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	8 November 2010	Demeester, Jan

CATEGORY OF CITED DOCUMENTS

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REFERENCES CITED IN THE DESCRIPTION

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