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

(11) EP 2 360 331 A1

# (12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
**24.08.2011 Bulletin 2011/34**

(51) Int Cl.:
***E04H 12/22*** *(2006.01)*

(21) Application number: **10153735.5**

(22) Date of filing: **16.02.2010**

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

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## (54) Movable ground support

(57) The present invention relates to a movable ground support (20) for supporting upwardly extending objects. The ground support can be quickly secured to and released from the ground by means of a number of securing rods (24) having a ground engaging portion (38) and a support engaging portion (40). The movable ground support comprises a body (22) having a support surface (44) adapted to be placed in facial contact with and on top of a flat ground surface, a first recess (28) for supporting an upward extending object under a horizontal load and intersected by a first vertical plane dividing the body in a first and a second part, a first passage (26) through the body having a first inlet aperture on the first part and a first outlet aperture on the lower surface and adapted for guiding the ground engaging portion of one of the number of securing rods (24) through itself to intersect the first vertical plane, and a second passage (26) through the body having a second inlet aperture on the second part and a second outlet aperture on the lower surface and adapted for guiding the ground engaging portion of one of the number of securing rods through itself to intersect the first vertical plane.

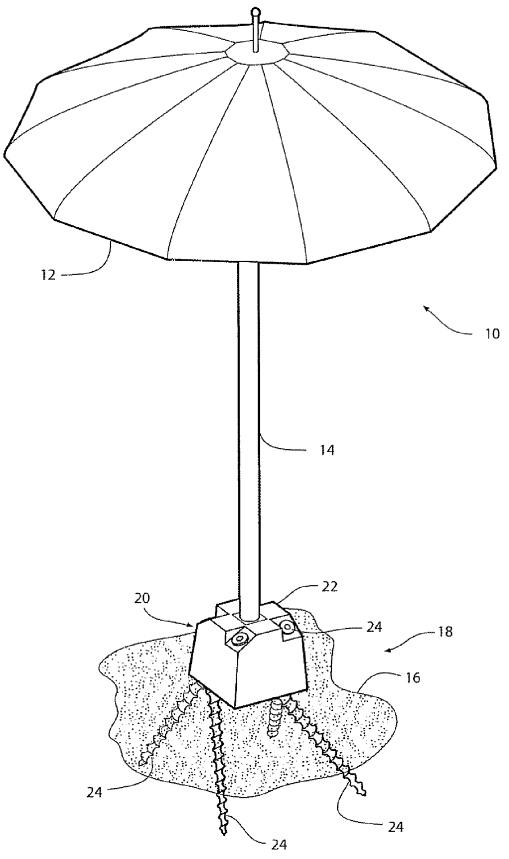


FIG 1

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## Description

**[0001]** The present invention generally relates to ground supports that are easily movable. More specifically, the present invention relates to ground supports for supporting upwardly extending objects, such as parasols. In particular, the present invention relates to ground supports for a quick securing and release from the ground.

**[0002]** There are numerous foundations for anchoring objects to the ground. Some are based on a hub directing spikes into the ground, where the hub does not rest on the ground, but is held in an elevated position by the spikes, see e.g. US 1,808,633 and US 5,243,795. These foundations are suitable for anchoring against upward and sideways acting forces, but not downward acting forces, since these could bend the spikes or drive the spikes further into the ground and cause a misalignment of the support. Other foundations are positioned partly below the surface of the ground, see e.g. US 5,039,256 and US 5,395,184. These are not suitable as movable supports, since they require holes to be dug when secured to the ground, which takes time and damages the ground surface. There are also foundations that have a hollow or plate-like structure, through which the spikes pass into the ground, see e.g. US 1,898,833 and US 5,395,184. These have the disadvantage that the spikes are not guided through the foundations, whereby precision is required when passing the spikes through the foundations. There are also foundations having protruding sections through which the spikes are inserted into the ground, see e.g. US 5,873,679 and US 6,735,911, which are hazardous, since a person can trip on the spikes or protruding sections. Further, there are also foundations where the spikes exit through the sides and are passed through air before entering the ground, see e.g. US 5,039,256 and US 5,395,184, which are also hazardous since a person can trip on the spikes or drive the spike through the foot when anchoring.

**[0003]** It is an object of the present invention to provide a movable ground support that is safe and easy to handle, e.g. during transport or anchoring. It is a particular feature of the present invention that the movable ground support can be secured to the ground by securing rods going through its body from an upward facing top surface to a downward facing bottom surface. This has the advantage of allowing for a compact ground support that is safe to anchor and has excellent support capabilities with respect to horizontal loads acting on the supported object.

**[0004]** In addition to the above object, the above feature and the above advantage, numerous other objects, advantages and features will be evident from the descriptions given below. The objects, advantages and features are according to a first aspect of the present invention obtained by a movable ground support for being secured to the ground by a number of securing rods, each securing rod having a ground-engaging portion for being inserted into the ground and a support-engaging portion for engaging the movable ground support, the movable ground support comprising a solid body having a bottom surface, a top surface, and a number of side surfaces interconnecting the bottom and top surfaces, the bottom surface being adapted to be placed in facial contact with and on top of a flat ground surface, the number of side surfaces defining a lower circumferential edge or edge portion at the transition to the bottom surface and an upper circumferential edge or edge portion at the transition to the top surface, a support recess in the top surface for providing support for an upwardly extending object under a load being parallel to said flat ground surface, and a plurality of bores going through the solid body, each bore of the plurality of bores having an inlet aperture positioned on the top surface and at the upper circumferential edge and an outlet aperture positioned on the bottom surface and at the lower circumferential edge, each bore of the plurality of bores being skew, non-converging and non-diverging with respect to the support recess and the other bores of the plurality of bores and further being adapted for guiding the ground-engaging portion of one of the number of securing rods into the ground.

**[0005]** In the present context, skew is to be understood as no bore being parallel or perpendicular with respect to another bore or to the extension direction of the support recess into the solid body. Non-converging and non-diverging in the present context is to be understood as no bore is extending along a line that crosses a similar line of another bore or of the support recess. This allows for the use of securing rods of any length that are inserted in any order or simultaneously. The fact that the body is solid allows for it to be heavy even though it is compact. This has the advantage that the movable ground support can provide some small temporary support without first anchoring it to the ground by securing rods. The securing rods are elongated, e.g. smooth-sided spikes, flanged screws, or helical screws, and secure the movable ground support by engaging both the solid body and the ground.

**[0006]** The bottom surface of the body may be flat. This, in combination with the lower and upper circumferential edges or edge portions, allows according to the first aspect of the present invention for a number of the compact movable ground supports to be stacked on top and/or beside each other. Examples of upwardly extending objects are a support pole of a parasol, a flag pole, a pole supporting a windscreen, a badminton net-post, and a beach-volleyball net-post. Further, the specified positioning of the inlet and outlet apertures of the plurality of bores allows for a compact solid body of the movable ground support.

**[0007]** Each bore of the plurality of bores may define an angle to the flat ground surface in the range of approximately 45 to approximately 75 degrees, in the range of approximately 55 to approximately 65 degrees, or of approximately 60 degrees. These specified angles are favourable for securing the movable ground support to the ground, in particular to a lawn if screw-threaded se-

curing rods are employed.

**[0008]** The support recess may go through the solid body from the top surface to the bottom surface. This allows for a tight fitting between the support surface and an object, e.g. the upwardly extending object or an insert for providing support for an upwardly extending object. However, a tight fitting may result in the object getting stuck in the support recess, in particular if the object is subjected to significant horizontal loads. The object may then be loosened by tapping on it from the direction of the bottom side. The support recess may have a circular, triangular, or square cross section. Further, the support recess may be frustoconical and each bore of the plurality of bores may define a cylinder. This allows for a stable and releasable support of an upwardly extending object or an insert that is received in the support recess. A through-going support recess is particularly advantageous if the support recess is frustoconical, as with this particular geometric shape the tendency to get stuck in the support recess is much larger than if the support recess is cylindrical.

**[0009]** All bores of the plurality of bores may have the same length. Further, all bores of the plurality of bores may define approximately the same angle to the flat ground surface. Further, the plurality of bores may define a rotational symmetry with respect to the support recess. This allows for a symmetric insertion of securing rods into the ground, making the secured movable ground support stable against loads from different and varying directions.

**[0010]** Each bore of the plurality of bores may have a widening portion at its outlet aperture for receiving material from the ground. This has the effect that the bottom surface may remain in facial contact with the flat ground surface, even though material from the ground is released backwards when inserting the securing rods into the ground. This has the advantage that the movable ground support will stand on a stable footing upon the ground after anchoring.

**[0011]** The top surface may define a plurality of flat surface portions. Each bore of the plurality of bores may extend perpendicularly to and have its inlet aperture located on a flat surface portion of the plurality of flat surface portions. This allows for a nondestructive and releasable engagement between the securing rods and the movable ground support, in particular if the securing rods have flanges for cooperating facially with the flat surface portions.

**[0012]** The support recess may be intersected by a first geometric plane perpendicular to the flat ground surface and dividing the solid body in a first and a second part. The plurality of bores may comprise a first bore having its inlet aperture on the first part and its outlet aperture on, or at least partly on, the second part, and a second bore having its inlet aperture on the second part and its outlet aperture on, or at least partly on, the first part. This allows for the movable ground support to provide a support particularly favourable against loads in a direction perpendicular to the first geometric plane.

**[0013]** The support recess may be intersected by a second geometric plane perpendicular to the flat ground surface and perpendicular to the first geometric vertical plane and dividing the solid body in a third and a fourth part. The first bore may have its inlet aperture and its outlet aperture on the third part, and the second bore may have its inlet aperture and its outlet aperture on the fourth part This allows for the movable ground support to provide a support against loads in a direction perpendicular to the second geometric plane.

**[0014]** The plurality of bores may comprise a third bore having its inlet aperture on the third part and its outlet aperture on, or at least partly on, the fourth part. This allows for the movable ground support to provide a support particularly favourable against loads in a direction perpendicular to the second geometric plane. The plurality of bores may comprise a fourth bore having its inlet aperture on the fourth part and its outlet aperture on, or at least partly on, the third part. This also allows for the movable ground support to provide support particularly favourable against loads in a direction perpendicular to the second geometric plane.

**[0015]** The third bore may have its inlet aperture and its outlet aperture on the second part, and the fourth bore may have its inlet aperture and its outlet aperture on the first part. This allows for the movable ground support to provide a support against loads in a direction perpendicular to the first geometric plane.

**[0016]** The objects, advantages and features are according to a second aspect of the present invention obtained by a movable ground support system comprising a movable ground support according to the first aspect of the present invention and a number of securing rods, each securing rod of the number of securing rods having a ground-engaging portion for being inserted into the ground and a support-engaging portion for engaging the movable ground support. The second aspect of the present invention may have all the features and advantages of the first aspect of the present invention.

**[0017]** The ground-engaging portion of each securing rod of the number of securing rods may have an external screw-thread for inserting it into the ground by rotation. This allows for a stable securing of the movable ground support, even in loose soil or in sand. It also allows for the plurality of bores to have a narrow angle with respect to the flat ground surface. Further, it allows for the use of electrical screwdrivers, or the like, to be used for inserting the securing rods into the ground, which requires less effort than when hammering spikes into the ground.

**[0018]** The support-engaging portion of each securing rod of the number of securing rods may have a circular cross-section and no external screw-thread. The support-engaging portion of each securing rod of the number of securing rods may have a flange for engaging a flat surface portion of the plurality of flat surface portions. This allows for the prevention of the securing rods to damage the solid body of the movable ground support, in

particular if the ground-engaging portions of the securing rods have external screw-threads by which the movable ground support is tightened to the ground. Further, the flange of the securing rod, in combination with a ground-engaging portion with an external screw-thread or a helical screw shape, allows for the solid body to be tightened to the ground, which in turn allows a finely adjustable alignment of the movable ground support, e.g. to put the upwardly extending object in a vertical orientation, by tightening or loosening the securing rods,

**[0019]** The movable ground support system according to the second aspect of the present invention may further comprise an insert for being received in and supported by the support recess of the movable ground support, the insert having an insert recess for providing support for an upwardly extending object under a load being parallel to the flat ground surface. This allows for the movable ground support to be adapted for use with different upwardly extending objects.

## Brief description of the drawings

**[0020]** A multitude of embodiments of the different aspects of the present invention are depicted below, where:

Figure 1 illustrates a parasol being supported by a movable ground support system according to a preferred embodiment of the present invention,

Figure 2A illustrates the movable ground support system of Figure 1 in a partly exploded view,

Figure 2B illustrates the movable ground support system of Figure 2A fully assembled and secured to the ground by four securing rods,

Figure 3A is a side view of the movable ground support of Figure 1,

Figure 3B is a bottom view of the movable ground support of Figure 1,

Figure 3C is a top view of the movable ground support of Figure 1,

Figure 3D is a perspective view of the movable ground support of Figure 1,

Figure 4A is a side view of the securing rod of the movable ground support system of Figure 1,

Figure 4B is a top view of the securing rod of the movable ground support system of Figure 1,

Figure 5A is the same top view of the movable ground support as in Figure 3D, and

Figure 5B is the same bottom view of the movable ground support as in Figure 3B.

**[0021]** In all of the figures, the same index numbering is used for indicating the same features.

## Detailed description

**[0022]** Fig. 1 depicts a parasol 10, where the screen 12 and the central pole 14 are held in an upright position by a movable ground support system 18. The movable ground support system 18 is secured to the ground 16 by four securing rods 24. The movable ground support 20 of the system 18 comprises a solid body 22 at which centre the central pole 14 of the parasol 10 is supported and held in an upright position. The system 18 comprises the movable ground support 20 and the four securing rods 24. The movable ground support 20 supports the parasol 10 against horizontal loads acting upon it. In the preferred embodiment, the movable ground support 20 only provides a support against vertical loads that are directed downward, In an alternative embodiment, the movable ground support 20 is fitted with a fastener or catch that engages and secures the central pole 14 of the parasol 10, thereby providing a support against vertical loads that are directed upward. It should be pointed out that the parasol is only given as an example of an upwardly extending object that can be supported by the movable ground support system 18. Examples of other upwardly extending objects are flag poles, poles supporting windscreens, badminton net-posts, and beach-volleyball net-posts.

**[0023]** Fig. 2A shows an exploded view of the movable ground support system 18. The anchoring of the solid body 22 of the movable ground support 20 to the ground 16 is here shown in greater detail than in the previous Fig. 1. The securing rods 24 go through the body 22 via four bores 26. The rods have a ground-engaging portion 38 and a support-engaging portion 40. The ground-engaging portion 38 goes through the solid body 22 and into the ground 16 when securing the movable ground support 20 to the ground 16. When anchored, most of the support-engaging portion 40 is positioned within the bore 26, only the flange 60 and the head 58 are outside of the bore. The securing rods 24 enter the bore 26 along an insertion direction 41 defined by the bores 26. The bores 26 have a circular cross-section with the same diameter throughout their lengths.

**[0024]** The movable ground support 20 has a support recess 28 going through the solid body 22. The movable ground support system 18 further has an insert 30 adapted to be received by and cooperate with the support recess 28 along the extension direction 31 of the support recess 28. The extension direction 31 in the presently preferred embodiment is vertical if the movable ground support 20 is placed on a horizontal, flat ground surface 16. The insert 30 has an insert recess 32 for receiving the central pole 14 of the parasol shown in Fig. 1, The insert 30 can be replaced by another insert 34 having a

different insert recess 36 for receiving a central pole of a larger diameter. The support recess 28 and the inserts 30 and 34 are frustoconical with a square cross-section.

**[0025]** Fig. 2B depicts the fully assembled movable ground support system 18. The movable ground support 20 is secured to the ground 16 by four securing rods 24. The bores through the solid body 22 are skew, non-converging and non-diverging with respect to one another and the extension direction 31 of the insert recess 36. This means that the securing rods 24 will not intersect each other or a central pole 14 supported by the support recess 28, neither above nor below ground, when anchoring.

**[0026]** Figs. 3A, 3C, 3E, and 3F are side views of the movable ground support of the preferred embodiment of the invention. The bottom surface 44 is planar and on the opposite side of the solid body 22 from the top surface 46. The bottom surface 44 and the top surface 46 are interconnected by four side surfaces 48. The transition between the side surfaces 48 and the bottom surface 44 defines a lower circumferential edge 50. Similarly, the transition between the side surfaces 48 and the top surface 46 defines an upper circumferential edge 52. The top surface 46 defines four flat surface portions 54, where each of the four bores 26 extends perpendicularly from one of the flat surface portions 54 downward and has its inlet aperture located on the flat surface portion 54.

**[0027]** Fig. 3B is a bottom view of the movable ground support according to the preferred embodiment of the present invention. The bottom surface 44 defines a square shape, which means that the lower circumferential edge 50 traces a closed polygon having four segments of equal lengths and at right angles with respect to one another. The support recess 28 goes through the solid body 22 of the movable ground support 20. Further, each of the four bores 26 has a widening portion 42 at the bottom surface 44. The widening portions 42 can receive material from the ground that is released when the movable ground support 20 is anchored by securing rods 24 as shown in the previous Figs. 2A and 2B.

**[0028]** Fig. 3D shows the movable ground support 20 from the top side. The transition between the top surface 46 and the side surfaces 48 defines the upper circumferential edge 52. When viewed from above, the upper circumferential edge 52 lies within the lower circumferential edge 50 due to the inclined side surfaces 48. Each of the bores 26 has its inlet aperture located on the flat surface portion 54 of the top surface 46 of the movable ground support 20.

**[0029]** Fig. 3G is a perspective view of the movable ground support 20. Each of the four side surfaces 48 is inclined so that the solid body 22 is narrowing from the lower circumferential edge 50 to the upper circumferential edge 52. Due to the four flat surface portions 54 of the top surface 46 and the four side surfaces 48, the upper circumferential edge 52 defines a polygon having sixteen segments. The top surface 46 has horizontal surface portions between each pair of neighbouring flat surface portions 54. The movable ground support 20 in Fig. 3G has no insert in the support recess 28, as in the previous Fig. 2B. Further, there are no securing rods in the bores 26.

**[0030]** Fig. 4A shows a securing rod 24 from its side. The securing rod has a ground-engaging portion 38 with an external screw-thread for engaging the ground. At one side of the ground-engaging portion 38 is a sharp tip 56, while on the other side there is a support-engaging portion 40 without any external screw-thread for engaging the movable ground support shown in the previous figures. The support-engaging portion 40 ends in a head 58, at which a flange 60 extends outwards. The support-engaging portion 40 has a circular cross-section with a diameter slightly smaller than the diameters of the circular bores 26 shown in the previous figures. The flange 60 has a diameter that is larger than the diameter of the bores 26, whereby it facially engages the flat surface portions of the previously described movable grounds support 20. The head 58 is hexagonal in shape, by which it can be engaged by a hollow key or socket wrench. In Fig. 4B the securing rod 24 is shown from the direction of its head 58.

**[0031]** In figure 5A, a top view of the movable ground support 20 of the preferred embodiment of the present invention is shown. A first geometric plane 70, perpendicular to a flat ground surface upon which the bottom surface 44 of the solid body 22 rests, divides the solid body 22 in a first and a second part. In Figure 5A the first part is below the dashed line 70 representing the first geometric plane, while the second part is located above the dashed line 70. A second geometric plane 72, perpendicular to a flat ground surface upon which the bottom surface 44 of the solid body 22 rests and to the first geometric plane 70, divides the solid body in a third and a fourth part. In Figure 5A the third part is to the right of the dashed line 72 representing the second geometric plane, while the fourth part is located to the left of the dashed line 72.

**[0032]** In figure 5B, a top view of the movable ground support 20 of the preferred embodiment of the present invention is shown. This particular view is obtained by a 180 degree rotation the solid body 22 in Figure 5A around the dashed line 70. Thus the first part of the solid body 22 is located above the dashed line 70 in Figure 5B, while the second part is located below the dashed line 70. The third and fourth parts are still on the right and left sides, respectively, of the dashed line 72. A first bore has its inlet aperture 74' positioned on the first part and its outlet aperture 74" positioned on the second part. Both the inlet aperture 74' and the outlet aperture 74" of the first bore are positioned on the third part, i.e. to the right of the dashed line 72. A second bore has its inlet aperture 76' positioned on the second part and its outlet aperture 76" positioned on the first part. Both the inlet aperture 76' and the outlet aperture 76" of the second bore are positioned on the third part, i.e. to the left of the dashed line 72. A third bore has its inlet aperture 78' positioned

on the third part and its outlet aperture 78" positioned on the fourth part. Both the inlet aperture 78' and the outlet aperture 78" of the third bore are positioned on the second part. A fourth bore has its inlet aperture 80' positioned on the fourth part and its outlet aperture 80" positioned on the third part. Both the inlet aperture 80' and the outlet aperture 80" of the fourth bore are positioned on the first part. All of the inlet apertures 74'-80' are located on the top surface 46, while all of the outlet apertures 74"-80" are located on the bottom surface 44.

**[0033]** In the preferred embodiment, the solid body 22 of the movable ground support 20 is manufactured of pine wood, the insert 34 of the movable ground support system 18 is also manufactured of pine wood, while the plurality of securing rods 24 is manufactured from a solid piece of aluminium. Each of the four segments of the lower circumferential edge 50, or the width of the solid body 22 at the bottom surface 44, is 0.21 m in length. The width of the solid body 22 at the top surface 46 is 0.19 m. The length of the through-going support recess 28, or the height of the solid body 22, is 0.18 m. The square cross-section of the support recess 28 has a side of 0.080 m at the top surface 46 and of 0.075 m at the bottom surface 44. The diameters of the bores 26 is 0.035 m, while the widening portions have are elliptical shape, due to the sloping bores 26, with the smallest width of 0.050 m and the largest width of 0.060 m at the bottom surface 44. The lower side of each bore has a length of 0.19 m and defines an angle to the bottom surface 44 of 60 degrees. The flat surface portions are rectangular with sides of lengths of 0.055 m and 0.065 m. The insert recess 36 has a circular cross-section with a diameter of 0.060 m. The insert recess 36 has the same height as the support recess, i.e. 0.18 m.

**Item list**

**[0034]**

10 parasol

12 screen

14 central pole

16 ground

18 movable ground support system

20 movable ground support

22 solid body

24 securing rod

26 bore

28 support recess

30 insert

31 extension direction

32 insert recess

34 insert

36 insert recess

38 ground-engaging portion

40 support-engaging portion

41 insertion direction

42 widening portion

44 bottom surface

46 top surface

48 side surface

50 lower circumferential edge

52 upper circumferential edge

54 flat surface portion

56 tip

58 head

60 flange

70 first geometric plane

72 second geometric plane

74' inlet aperture of first bore

74" outlet aperture of first bore

76' inlet aperture of second bore

76" outlet aperture of second bore

78' inlet aperture of third bore

78" outlet aperture of third bore

80' inlet aperture of fourth bore

80" outlet aperture of fourth bore

## Claims

1. A movable ground support for being secured to the ground by a number of securing rods, each securing rod having a ground-engaging portion for being inserted into the ground and a support-engaging portion for engaging said movable ground support, said movable ground support comprising:

   a solid body having a bottom surface, a top surface, and a number of side surfaces interconnecting said bottom and top surfaces, said bottom surface being adapted to be placed in facial contact with and on top of a flat ground surface, said number of side surfaces defining a lower circumferential edge or edge portion at the transition to said bottom surface and an upper circumferential edge or edge portion at the transition to said top surface,
   a support recess in said top surface for providing support for an upwardly extending object under a load being parallel to said flat ground surface, and
   a plurality of bores going through said solid body, each bore of said plurality of bores having an inlet aperture positioned on said top surface and at said upper circumferential edge and an outlet aperture positioned on said bottom surface and at said lower circumferential edge, each bore of said plurality of bores being skew, non-converging, and non-diverging with respect to said support recess and to the other bores of said plurality of bores and further being adapted for guiding the ground-engaging portion of one of the said number of securing rods into the ground.

2. The movable ground support according to claim 1, **characterized by** each bore of said plurality of bores defining an angle to said flat ground surface in the range of approximately 45 to approximately 75 degrees, in the range of approximately 55 to approximately 65 degrees, or of approximately 60 degrees.

3. The movable ground support according to any of the claims 1-2, **characterized by** said support recess going through said solid body from said top surface to said bottom surface.

4. The movable ground support according to any of the claims 1-3, **characterized by** each bore of said plurality of bores having a widening portion at its outlet aperture for receiving material from the ground.

5. The movable ground support according to any of the claims 1-4, **characterized by** said top surface defining a plurality of flat surface portions, and each bore of said plurality of bores extending perpendicularly to and having its inlet aperture located on a flat surface portion of said plurality of flat surface portions.

6. The movable ground support according to any of the claims 1-5, **characterized by** said support recess being intersected by a first geometric plane perpendicular to said flat ground surface and dividing said solid body in a first and a second part, said plurality of bores comprising:

   a first bore having its inlet aperture on said first part and its outlet aperture on, or at least partly on, said second part, and
   a second bore having its inlet aperture on said second part and its outlet aperture on, or at least partly on, said first part.

7. The movable ground support according claim 6, **characterized by** said support recess being intersected by a second geometric plane perpendicular to said flat ground surface and perpendicular to said first geometric vertical plane and dividing said solid body in a third and a fourth part, said first bore having its inlet aperture and its outlet aperture on said third part, and said second bore having its inlet aperture and its outlet aperture on said fourth part.

8. The movable ground support according to claim 7, **characterized by** said plurality of bores comprising:

   a third bore having its inlet aperture on said third part and its outlet aperture on, or at least partly on, said fourth part.

9. The movable ground support according to claim 8, **characterized by** said plurality of bores comprising:

   a fourth bore having its inlet aperture on said fourth part and its outlet aperture on, or at least partly on, said third part.

10. The movable ground support according to claim 9, **characterized by** said third bore having its inlet aperture and its outlet aperture on said second part, and said fourth bore having its inlet aperture and its outlet aperture on said first part.

11. A movable ground support system comprising a movable ground support according to any of the claims 1-10 and a number of securing rods, each securing rod of said number of securing rods having a ground-engaging portion for being inserted into the ground and a support-engaging portion for engaging said movable ground support.

12. The movable ground support system according to claim 11, **characterized by** said ground-engaging portion of each securing rod of said number of se-

curing rods having an external screw-thread for inserting it into the ground by rotation.

**13.** The movable ground support system according to any of the claims 11-12, **characterized by** said support-engaging portion of each securing rod of said number of securing rods having a circular cross-section and no external screw-thread.

**14.** The movable ground support system according to any of the claims 11-13, **characterized by** said support-engaging portion of each securing rod of said number of securing rods having a flange for engaging a flat surface portion of said plurality of flat surface portions.

**15.** The movable ground support system according to any of the claims 11-14, **characterized by** further comprising:

an insert for being received in and supported by said support recess of said movable ground support, said insert having:
an insert recess for providing support for an upwardly extending object under a load being parallel to said flat ground surface.

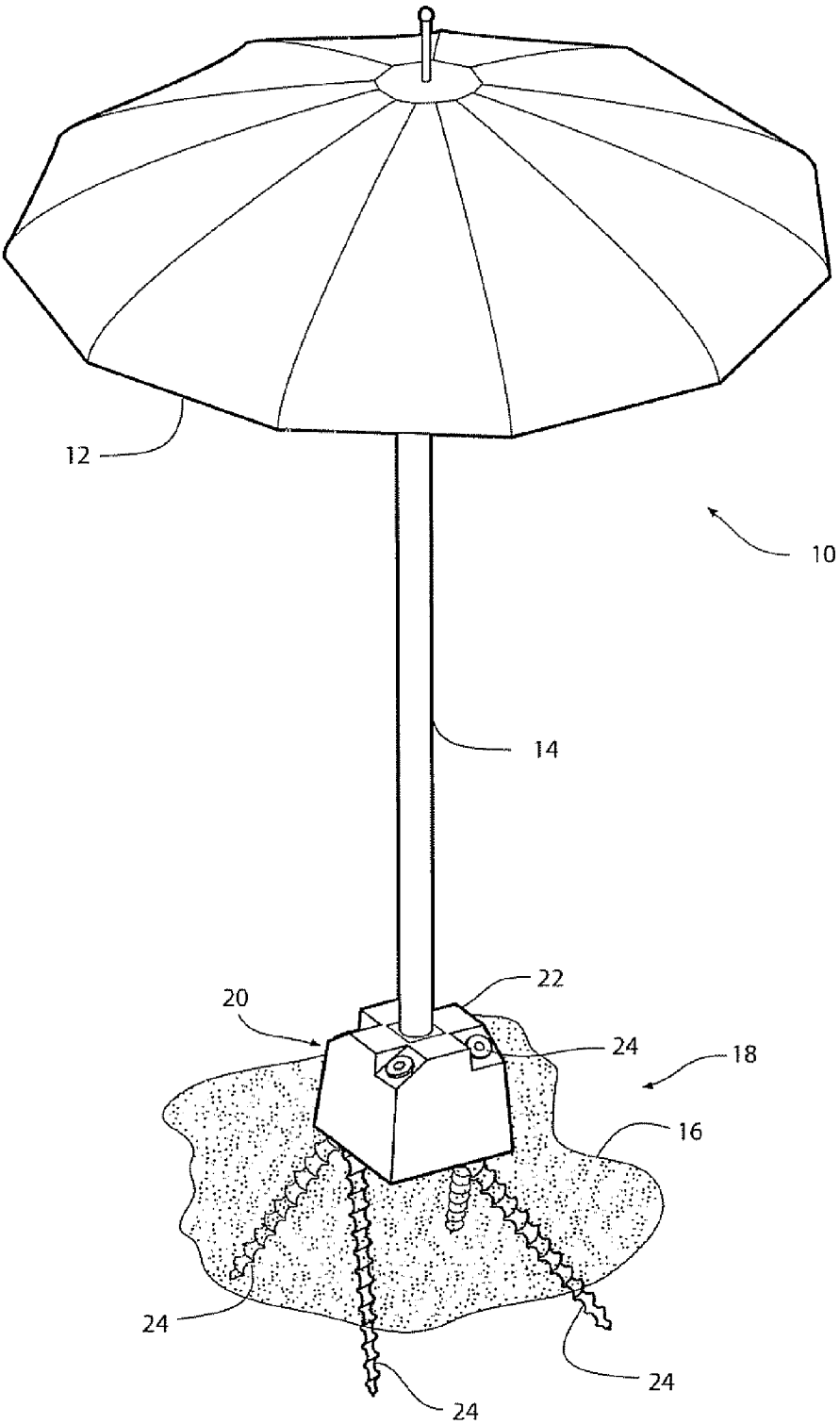


FIG 1

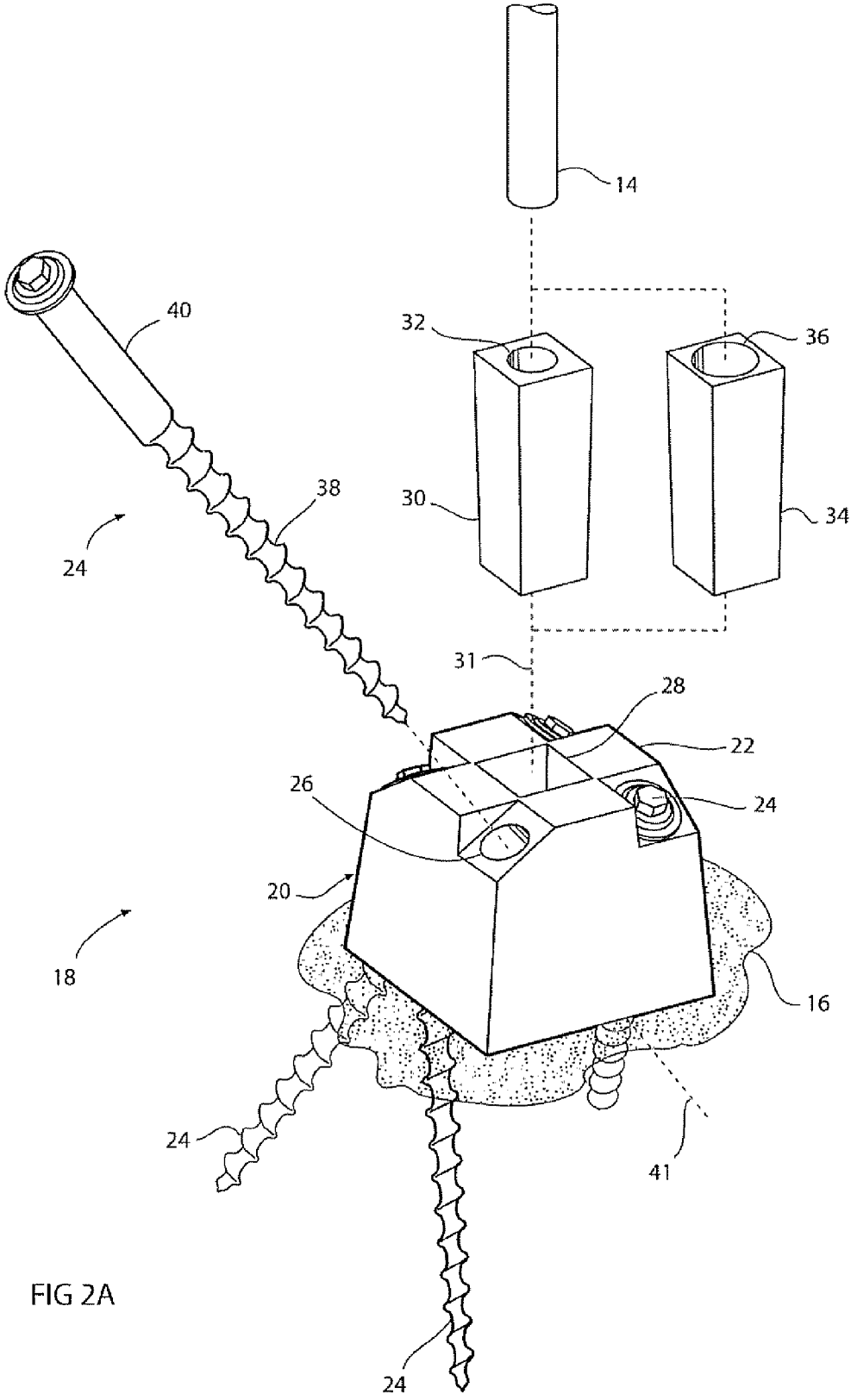


FIG 2A

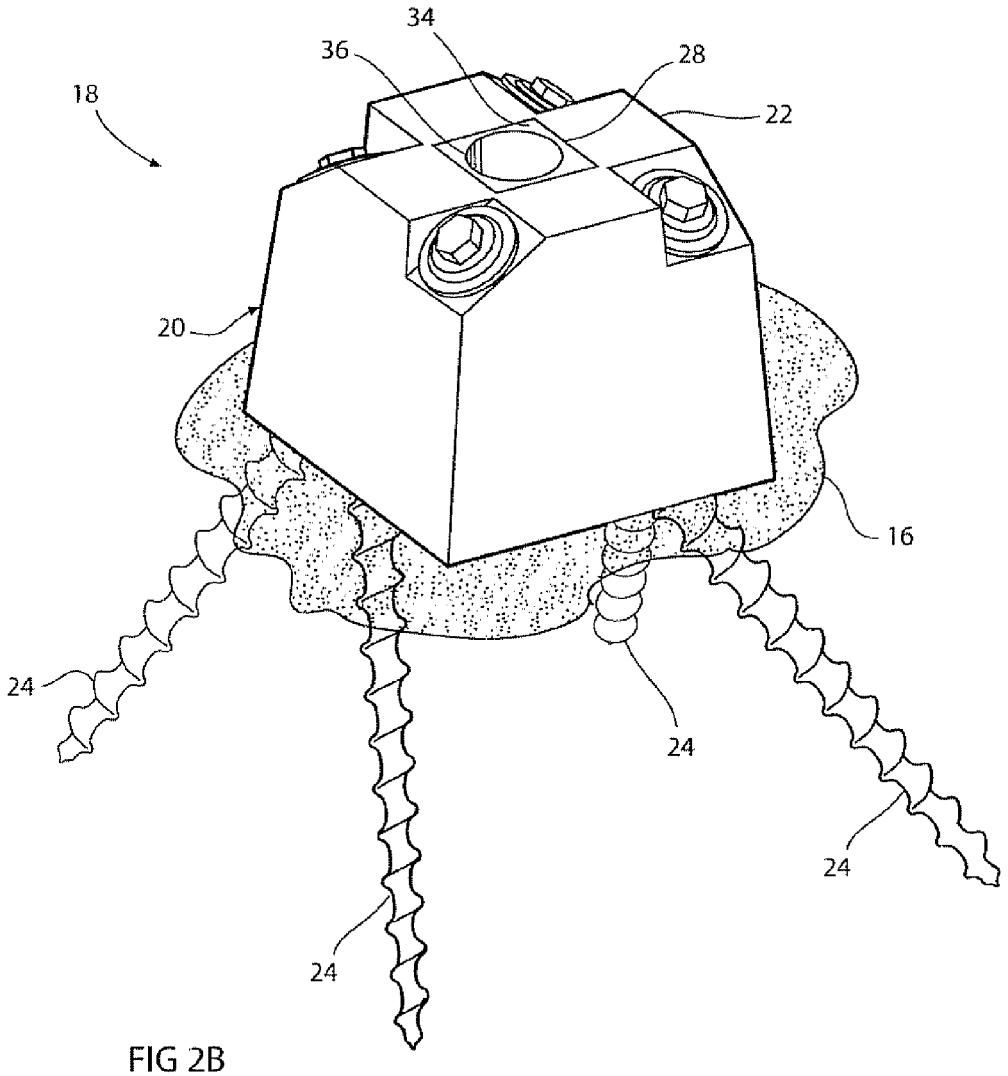


FIG 2B

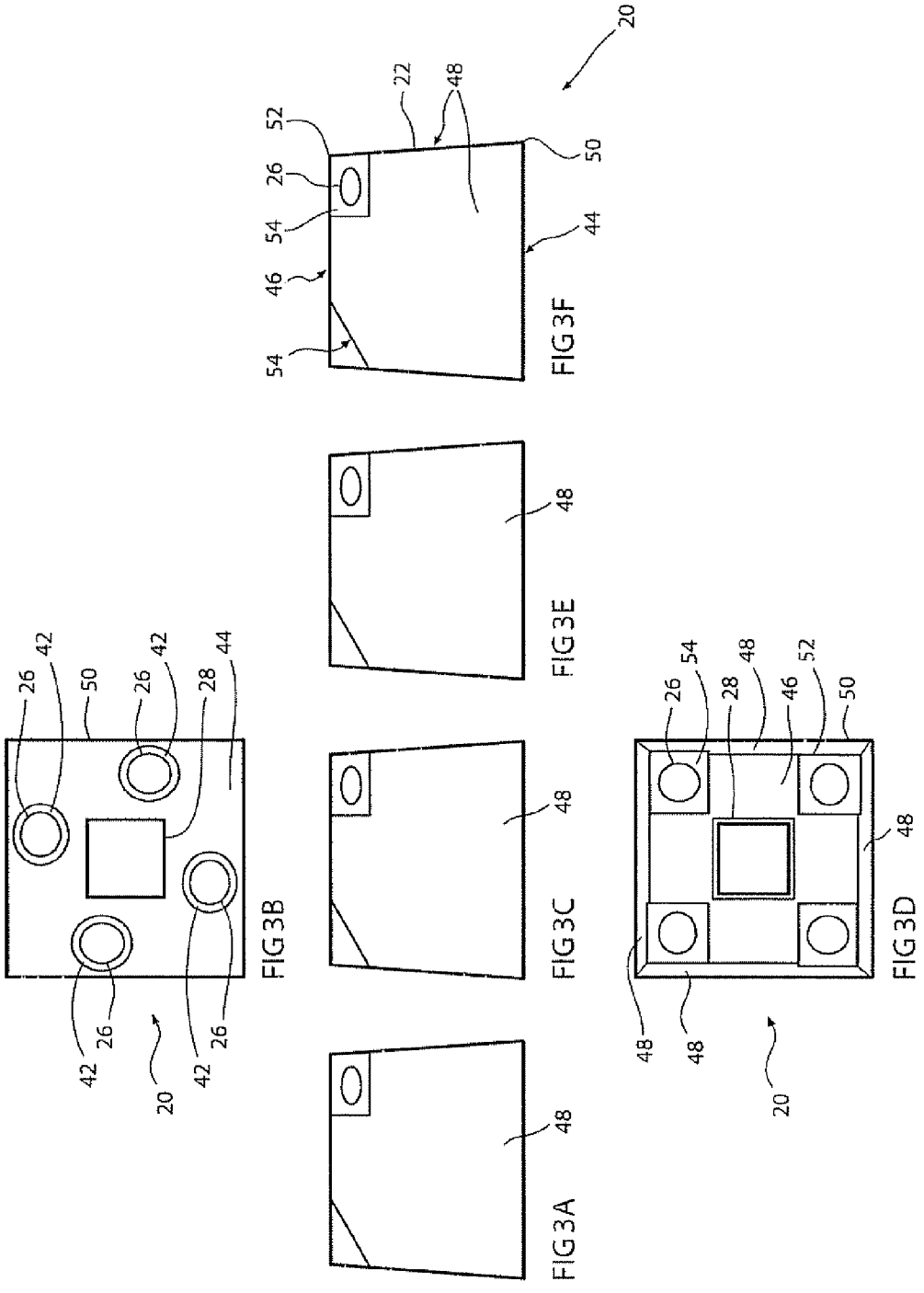


FIG 3F

FIG 3E

FIG 3C

FIG 3A

FIG 3B

FIG 3D

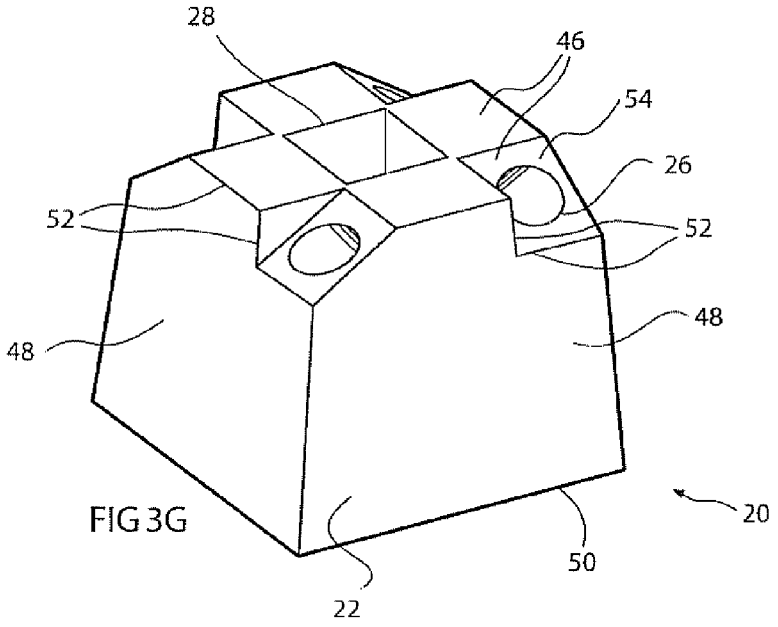


FIG 3G

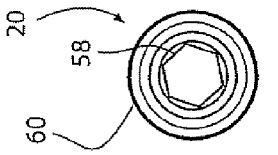


FIG 4B

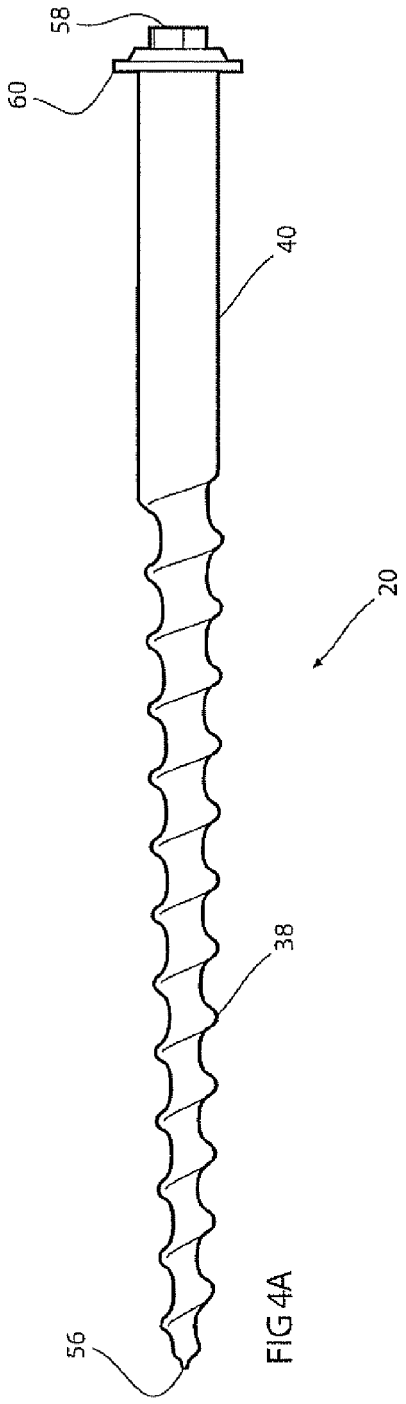


FIG 4A

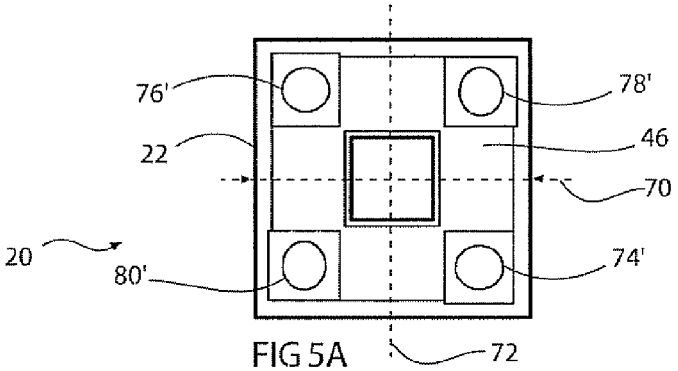


FIG 5A

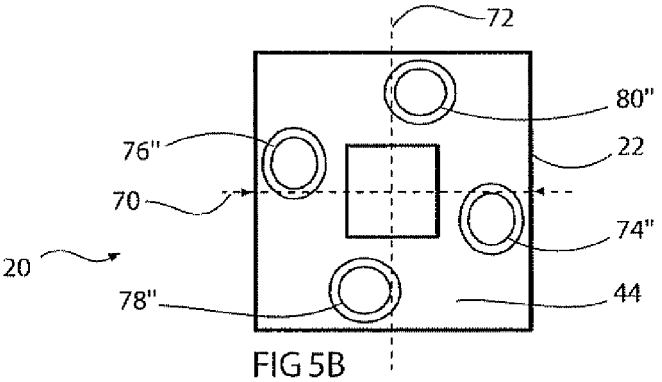


FIG 5B

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# EUROPEAN SEARCH REPORT

Application Number
EP 10 15 3735

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| The Hague | 14 July 2010 | Leroux, Corentine |

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1

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