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## EUROPEAN PATENT SPECIFICATION

④⑤ Date of publication of patent specification :  
**28.08.91 Bulletin 91/35**

⑤① Int. Cl.<sup>5</sup> : **E04H 12/22**

②① Application number : **88202893.9**

②② Date of filing : **14.12.88**

⑤④ Anchor block.

③⑦ Priority : **21.12.87 NL 8703090**

④③ Date of publication of application :  
**28.06.89 Bulletin 89/26**

④⑤ Publication of the grant of the patent :  
**28.08.91 Bulletin 91/35**

⑧④ Designated Contracting States :  
**AT BE CH DE ES FR GB IT LI LU NL**

⑤⑥ References cited :  
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**EP 0 322 039 B1**

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## Description

The invention relates to an anchor base for the supporting of e.g. an exterior lighting fitting, a traffic sign or other construction, said anchor base comprising :

mounting means for the connection of the construction to be supported to the anchor base ;  
an upper surface with a plurality of mounting slots, which extend from the centre of said surface in substantially radial direction for fastening the construction to be supported with screwed connections ; and  
a first group of mounting slots extending at angles of approximately 90° to each other.

Such an anchor base is known from EP-A-0101984. It is a purpose of the invention to design an anchor base in such a way that far most commercially available constructions, such as exterior lighting-fittings and the like, can be fixed on the anchor base without the necessity of changing the base or parts thereof in cases where it is necessary to replace a once fixed construction by another construction.

In view thereof the anchor base according to the invention is characterized by a second group of mounting slots which are arranged at angles of approximately 120° to each other, the two groups of mounting slots having one mounting slot in common.

In order to allow the average length of the mounting slots to be as long as possible in a preferred embodiment the anchor base is characterized in that the upper surface is substantially square and that a slot extends in a diagonal direction.

Ease of mounting is ensured by an embodiment, in which the mounting slots narrow towards the top so that the head of a bolt can be accommodated and prevented from passing through a slot.

E.g. the base may be characterized in that the mounting slots are open only towards the upper surface.

In a preferred embodiment the anchor base is characterized in that the upper surface forms part of a detachable plate.

In this case advantageously the plate can be located in a recessed position.

In an advantageous embodiment the anchor base according to the invention is characterized in that the anchor base consists of optionally reinforced plastic, for example polyester. A great strength is ensured by an embodiment provided with struts extending between flat parts of the anchor base which are disposed approximately perpendicular to one another.

A very secure anchoring in the ground is ensured by an embodiment provided with an outward-extending flange at the bottom.

Preferably the anchor block has a through holed aperture present in the upper surface for the receiving of a junction box for electrical wiring.

To this end the anchor base according to the invention may advantageously be characterized by a flange member situated in the through holed aperture for defining the lowest position of the junction box in said aperture. As an alternative, or in combination with the above, an embodiment can be adopted which is characterized in that the junction box can display a gripping co-action with the wall of the aperture.

The invention further relates to an anchor base provided with a junction box comprising a casing with a cover cable passage means situated in the bottom of said casing for example at least one break-away port, and cable passage means situated in said cover for example a through hole with a rubber grommet.

Such a junction box can with advantage be provided with an external flange member for cooperation with the flange member situated in the through holed aperture of the anchor base.

It should be noted that the anchor base according to the invention is not limited to a block-shaped massive construction, but also encompasses other supporting structures which are able to carry a mounting plate. As an example reference may be made to the use of e.g. two interconnected metal plates connected in general cross-arrangement and carrying together the supporting plate.

The invention will now be explained with reference to the drawing of a number of embodiments, to which the invention is not limited. In the drawing :

Figure 1 shows an exploded view, partially broken away of a preferred embodiment of the anchor base according to the invention ;  
figure 2 shows a perspective view partly broken away of the upper side of the anchor base shown in figure 1, upon which a construction is mounted ;  
figure 3 shows another embodiment ;  
figure 4 shows a cross-section of a detail of the anchor base according to figure 3 ; and  
figure 5 shows a view corresponding to figure 4 of the anchor base shown in figures 1 and 2.

Figure 1 shows an anchor block 1 made of reinforced polyester. It comprises four upright walls 2, a plate 3 situated between them, a circumferential flange 4 extending outwards around the bottom of the walls 2, struts 5 which are arranged externally between the upright walls 2 and the flange 4, and struts 6 which are arranged internally between the walls 2 and the plate 3. The plate 3 has a central polygonal aperture 7 in addition to four relatively small through holes 8.

The plate 3 is mounted in a recessed position with respect to the upper edge 9 of the upright walls 2, which taper towards one another to a certain extent. An enclosed platform is thus obtained, upon which a separate cast-iron mounting plate 10 can be placed, in such manner that it can be held in a recessed position on the top of the block 1. This plate 10 has a hole 11 corresponding to the central hole 7, out from which

a number of mounting slots extend. These mounting slots are arranged in a first group comprising the slots 12, 13, 14 and 15, which slots are disposed at a mutual angular interval of 90°, and a second group, consisting of the slots 12, 16, 17 which are disposed at a mutual angular interval of 120°. It will be apparent that the slot 12 is common to both groups.

The plate 10 is square and the slots 12-15 are disposed in a diagonal direction, so that their length can be as great as possible. It will thus also be apparent that the slots 16 and 17 are somewhat shorter than the other slots.

The plate 10 has four holes 18, which are placed such that they can be positioned in accurate register with the holes 8. Thus the plate 10 can be fastened onto the plate 3 using bolts 19. For reasons to be discussed below, the bolts 19 can be placed in a recessed situation with respect to the top surface of the plate 10. This is not shown in figure 1; reference is made to figure 2, to be discussed below.

Using the configuration of mounting slots described above, a large measure of freedom is guaranteed in the dimensioning and in the type of the mounting members of the construction which is to be supported. Not only can mounting members with three-fold or four-fold attachment points be used, but also the dimensioning and even the relative positioning with respect to the top surface of the anchor block can, within certain limits, be chosen freely.

The form of the apertures 7 and 11 is such that a junction box 20 for electrical leads can be received therein. Such a junction box has been specially designed with a view to its use together with the anchor block according to the invention. In consideration of the statutory requirements, the junction box together with the anchor block has been submitted to a Dutch government inspection institute. Official approval has in the meantime been obtained. The junction box functions as a replacement for the considerably more expensive and complicated known underground connector sleeves, with which electrical branching or connection is realized according to the known art. Moreover the junction box according to the invention has the advantage that it lends itself to installation by untrained personnel, while the known underground connector sleeves should preferably be installed by qualified technicians.

More specific reference is now made to figure 2, in which a number of details of figure 1 are shown on a somewhat enlarged scale.

The slots 12-17 are made in a stepped form, such that they are wider on the underside facing towards the plate 3 than on the upper side open to the top. As will be apparent from figure 2, the dimensioning of the grooves is such that the heads of bolts 21, which heads have a hexagonal shape, fit into them, whereby locking against rotation is obtained. The bolts 21 serve for the mounting of a construction 23, for

example a lamp post, by means of holes present in a flange 22. It will be apparent that correct positioning of each bolt with respect to a hole in the flange 22 can be obtained through the sliding of the bolts 21, which can enter the requisite slots from the hole 12. After the positioning of the construction 23, the nuts 24 can be tightened, so that the construction 23 is firmly mounted on the block 1.

In the case of a device requiring electrical connection, such as a lamp post, the electrical connection will have to be provided for first, before the above mounting takes place. To that end the following procedure, now to be described briefly, is followed.

The electrical wiring is carried from a source through a previously dug trench in the ground to the place where the anchor block has to be placed. At that position the ground is also dug out to the required depth. The electrical wiring is now carried upward in such manner that the anchor block 1 can slide with the apertures 7 and 11 over the wiring, whereby the anchor block can be brought into its position. The junction box 20 is then coupled to the wiring, while if required wiring which continues to subsequent constructions can also be connected in the relevant box 20. The electrical wiring of the construction 23 can also be connected with the junction box 20. The junction box 20 is placed into the apertures 7, 11, whereafter the construction 23 can be mounted in the manner described with reference to figure 2. By refilling the hole made for the placement of the anchor block 1 and the trench for laying the cable or cables with ground material, the construction is completed.

Figure 3 shows a concrete anchor block 25, in the top surface 26 of which metal groove members are embedded. Here too these groove members are grouped in respectively a first group 27, 28, 29, 30 with a mutual angular interval of 90°, and a second group 27, 31, 32 with a mutual angular interval of 120°, in complete analogy with the embodiment according to figures 1 and 2. The groove members 27-32 are metal, more or less U-shaped sections which narrow towards the top, for the holding of bolt heads.

The groove members 27-32 are held in the concrete.

The disadvantage of the variant shown in figure 3 is that the concrete construction is relatively heavy and is thus also relatively more difficult to handle, particularly in the case of larger anchor blocks. The embodiment according to figures 1 and 2 is considerably lighter while nevertheless ensuring an excellent anchoring in the ground owing partly to the presence of the flange 4.

After the description of the manner in which anchor block 1 is placed, the installation of the anchor block 25 will not be discussed. This is substantially the same as that of anchor block 1.

Figures 4 and 5 show the manner of placing the junction box 20 in, respectively, the aperture 34 in the

top surface of the anchor block 25, and the aperture 7, 11 in the top surface of the anchor block 1. As figures 4 and 5 show, the junction box 20 is provided with a flange members 35 for cooperation with a corresponding flange member 36 — i.e. an edge on the aperture 34 in the case of figure 4, and the peripheral edge of the aperture 7 in the plate 3 in the case of figure 5. As will be apparent without explanation, the flange member 35 can in both cases rest on a protruding edge. Moreover the measurements of the junction box 20 on the one hand and the aperture 34 ; 11,7 on the other are such that the junction box can be mounted with gripping effect in the aperture concerned.

The junction box 20 comprises a casing 37 with a cover 38 which can be mounted by means of a gasket 39 for gripping and sealing on the casing.

The bottom of the casing 37 has a cable passage means, in this case a hole 40, which is made by the puncturing of a break-away port. A gland nut 41 is arranged in the hole.

A through hole 42, in which a rubber grommet 43 is placed, is present in the cover 38.

The embodiment is such that the top of the grommet 42 lies in approximately the same plane as the top surface 26, or, respectively, the top surface of the plate 10.

It will be apparent that the invention is not restricted to the embodiments illustrated and described. Various modifications to the design defined in the appended claims are possible.

## Claims

1. Anchor base (1) for the supporting of e.g. an exterior lighting fitting, a traffic sign or other construction, said anchor base (1) comprising :

mounting means for the connection of the construction to be supported to the anchor base ;  
an upper surface with a plurality of mounting slots, which extend from the centre of said surface in substantially radial direction for fastening the construction to be supported with screwed connections ; and

a first group of mounting slots (27, 28, 29, 30) extending at angles of approximately 90° to each other ;

characterized by

a second group of mounting slots (27, 31, 32) which are arranged at angles of approximately 120° to each other, the two groups of mounting slots having one mounting slot (27) in common.

2. Anchor as claimed in claim 1, characterized in that the upper surface (26) is substantially square and that a slot (27, 28, 29, 30) extends in a diagonal direction.

3. Anchor base as claimed in any of the preceding claims, characterized in that the mounting slots (27-

32) narrow towards the top so that the head (21) of a bolt can be accommodated and prevented from passing through a slot (27-32).

4. Anchor base as claimed in claim 7, characterized in that the mounting slots (27-32) are open only towards the upper surface.

5. Anchor base as claimed in any of the preceding claims, characterized in that the upper surface (26) forms part of a detachable plate (3).

6. Anchor base as claimed in claim 5, characterized in that the plate (3) can be located in a recessed position.

7. Anchor base as claimed in any of the preceding claims, characterized in that the anchor base (1) consists of optionally reinforced plastic, for example polyester.

8. Anchor base as claimed in claim 7, characterized by struts (5, 6) extending between flat parts (2, 3, 4) of the anchor base (1) which are disposed approximately perpendicular to one another.

9. Anchor base as claimed in one of the claims 7 and 8, characterized by an outward-extending flange (4) at the bottom.

10. Anchor base as claimed in any of the preceding claims, characterized by a through holed aperture (7) present in the upper surface (26) for the receiving of a junction box (20) for electrical wiring.

11. Anchor base as claimed in claim 10, characterized by a flange member (36) situated in the through holed aperture (7) for defining the lowest position of the junction box (20) in said aperture (7).

12. Anchor base as claimed in claim 10 or 11, characterized in that the junction box (20) can display a gripping co-action with the wall of the aperture (7).

13. Anchor base as claimed in any of the preceding claims, provided with a junction box (20) comprising a casing (37) with a cover (38), cable passage means (40, 41) situated in the bottom of said casing (37) for example at least one break-away port, and cable passage means (42, 43) situated in said cover (38), for example a through hole (42) with a rubber grommet (43).

14. Anchor base with a junction box (20) as defined in claim 13, characterized by an external flange member (35) for cooperation with a flange member (36) situated in a through holed aperture (7) of the anchor base (1).

## Patentansprüche

1. Verankerungssockel (1) zum Halten z.B. einer Außenbeleuchtungsarmatur, eines Verkehrsschildes oder anderer Konstruktionen, wobei der Verankerungssockel (1) Befestigungsmittel für die Verbindung der zu haltenden Konstruktion mit dem Verankerungssockel, eine obere Fläche mit einer Vielzahl von Befestigungsnuten, die sich von der

Mitte der Fläche im wesentlichen in radialer Richtung erstrecken, zum Befestigen der zu haltenden Konstruktion mit Schraubverbindung, und eine erste Gruppe von Befestigungsnuten (27, 28, 29, 30) aufweist, die sich in einem Winkel von etwa 90° zueinander erstrecken, gekennzeichnet durch eine zweite Gruppe von Befestigungsnuten (27, 31, 32), die in einem Winkel von etwa 120° zueinander angeordnet sind, wobei den beiden Gruppen von Befestigungsnuten eine Befestigungsnut (27) gemeinsam ist.

2. Verankerungssockel nach Anspruch 1, dadurch gekennzeichnet, daß die obere Fläche (26) im wesentlichen rechteckig ist und daß eine Nut (27, 28, 29, 30) sich in Diagonalrichtung erstreckt.

3. Verankerungssockel nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß die Befestigungsnuten (27-32) sich nach oben verjüngen, so daß der Kopf (21) eines Gewindebolzens von diesen aufgenommen und dessen Herausfallen aus der Nut (27-32) verhindert werden kann.

4. Verankerungssockel nach Anspruch 3, dadurch gekennzeichnet, daß die Befestigungsnuten (27-32) nur in Richtung zu der oberen Fläche offen sind.

5. Verankerungssockel nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß die obere Fläche (26) einen Teil einer ausbaubaren Platte (3) bildet.

6. Verankerungssockel nach Anspruch 5, dadurch gekennzeichnet, daß die Platte (3) in einer versenkten Lage angeordnet werden kann.

7. Verankerungssockel nach einem der vorstehenden Ansprüche, dadurch gekennzeichnet, daß der Verankerungssockel (1) aus einem eventuell verstärkten Kunststoff, z.B. aus Polyester besteht.

8. Verankerungssockel nach Anspruch 7, gekennzeichnet durch Versteifungen (5, 6), die sich zwischen den zueinander annähernd senkrecht angeordneten ebenen Teilen (2, 3, 4) des Verankerungssockels (1) erstrecken.

9. Verankerungssockel nach einem der Ansprüche 7 und 8, gekennzeichnet durch einen an dem Boden sich nach außen erstreckenden Flansch (4).

10. Verankerungssockel nach einem der vorstehenden Ansprüche, gekennzeichnet durch eine in der oberen Fläche (26) ausgebildete durchgehende Öffnung (7) zum Aufnehmen eines Anschlußkastens (20) für die elektrische Drahtverbindung.

11. Verankerungssockel nach Anspruch 10, gekennzeichnet durch einen Schulterteil (36), der in der durchgehenden Öffnung (7) zum Bestimmen der tiefsten Lage des Anschlußkastens (20) in der Öffnung (7) angeordnet ist.

12. Verankerungssockel nach Anspruch 10 oder 11, dadurch gekennzeichnet, daß der Anschlußkasten (20) mit der Wand der Öffnung (7) verspannend zusammenwirkt.

13. Verankerungssockel nach einem der vorste-

henden Ansprüche, wobei der Verankerungssockel mit einem Anschlußkasten (20) versehen ist, der ein Gehäuse (37) mit einem Deckel (38), in dem Boden des Gehäuses (37) ausgebildete Kabeldurchführungsmittel (40, 41), z.B. wenigstens einen Sollbruchdurchgang, und in dem Deckel (38) ausgebildete Kabeldurchführungsmittel (42, 43), z.B. eine durchgehende Öffnung (42) mit einer Durchführungshülse (43) aus Gummi aufweist.

14. Verankerungssockel mit einem Anschlußkasten (20) nach Anspruch 13, gekennzeichnet durch einen äußeren Randteil (35), der mit einem in einer durchgehenden Öffnung (7) des Verankerungssockel (7) angeordneten Schulterteil (36) zusammenwirkt.

## Revendications

1. Bloc d'ancrage (1) pour le support, par exemple, d'un luminaire extérieur, d'un panneau de signalisation, ou de toute autre construction, ledit bloc d'ancrage (1) comprenant :

un moyen de fixation pour le raccordement au bloc d'ancrage de la construction à supporter ;

une surface supérieure présentant une pluralité de fentes de fixation, qui s'étendent depuis le centre de ladite surface dans un sens sensiblement radial pour maintenir la construction à supporter par des raccords vissés ; et

un premier groupe de fentes de fixation (27, 28, 29, 30) s'étendant de manière à former entre elles un angle de 90° approximativement ;

caractérisé par

un deuxième groupe de fentes de fixation (27, 31, 32) qui sont disposées de manière à former entre elles un angle de 120° approximativement, les deux groupes de fentes de fixation ayant une fente de fixation (27) en commun.

2. Bloc d'ancrage selon la revendication 1, caractérisé en ce que la surface supérieure (26) est sensiblement carrée et en ce qu'une fente (27, 28, 29, 30) s'étend dans un sens diagonal.

3. Bloc d'ancrage selon l'une quelconque des revendications précédentes, caractérisé en ce que les fentes de fixation (27-32) se rétrécissent vers le haut de sorte que la tête (21) d'un boulon peut être logée dans une fente (27-32) mais ne peut pas passer à travers cette dernière.

4. Bloc d'ancrage selon la revendication 7, caractérisé en ce que les fentes de fixation (27-32) ne sont ouvertes que vers la surface supérieure.

5. Bloc d'ancrage selon l'une quelconque des revendications précédentes, caractérisé en ce que la surface supérieure (26) fait partie d'une plaque détachable (3).

6. Bloc d'ancrage selon la revendication 5, caractérisé en ce que la plaque (3) peut être positionnée en retrait.

7. Bloc d'ancrage selon l'une quelconque des revendications, caractérisé en ce que le bloc d'ancrage (1) se compose de matière plastique renforcée de manière optionnelle, par exemple, du polyester.

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8. Bloc d'ancrage selon la revendication 7, caractérisé par des étais (5, 6) s'étendant entre les parties plates (2, 3, 4) du bloc d'ancrage (1) qui sont disposées de manière approximativement perpendiculaire les unes par rapport aux autres.

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9. Bloc d'ancrage selon les revendications 7 et 8, caractérisé par un rebord s'étendant vers l'extérieur (4) au niveau de sa partie inférieure.

10. Bloc d'ancrage selon l'une quelconque des revendications précédentes, caractérisé par une ouverture formant trou débouchant (7) pratiquée dans la surface supérieure (26) pour recevoir une boîte de dérivation (20) pour le raccordement électrique.

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11. Bloc d'ancrage selon la revendication 10, caractérisé par un organe formant rebord (36) situé dans l'ouverture formant trou débouchant (7) pour définir la position inférieure de la boîte de dérivation (20) dans ladite ouverture (7).

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12. Bloc d'ancrage selon la revendication 10 ou 11, caractérisée en ce que la boîte de dérivation (20) peut exercer une action conjointe de fixation avec la paroi de l'ouverture (7).

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13. Bloc d'ancrage selon l'une quelconque des revendications, pourvu d'une boîte de dérivation (20) comprenant un boîtier (37) avec un couvercle (38), des moyens pour le passage du câble (40, 41) situés dans la partie inférieure dudit boîtier (37) par exemple, au moins un orifice traversant, et des moyens prévus pour le passage du câble (42, 43) situés dans ledit couvercle (38), par exemple, un trou débouchant (42) avec un passe-fil en caoutchouc (43).

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14. Bloc d'ancrage avec une boîte de dérivation (20) selon la revendication 13, caractérisé par un organe formant support externe (35) prévu pour coopérer avec un organe formant support (36) situé dans l'ouverture formant trou débouchant (7) du bloc d'ancrage (1).

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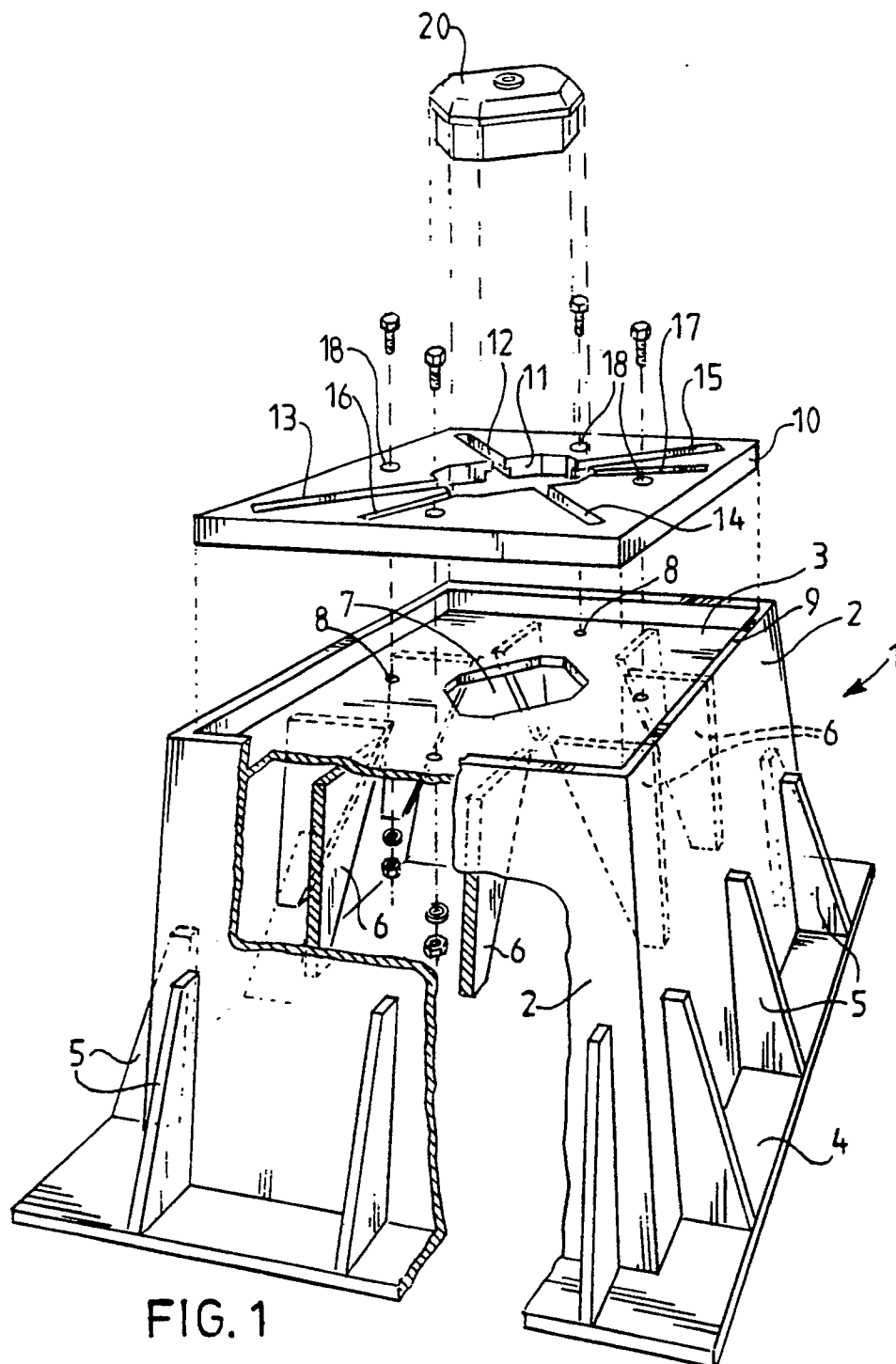


FIG. 1

