



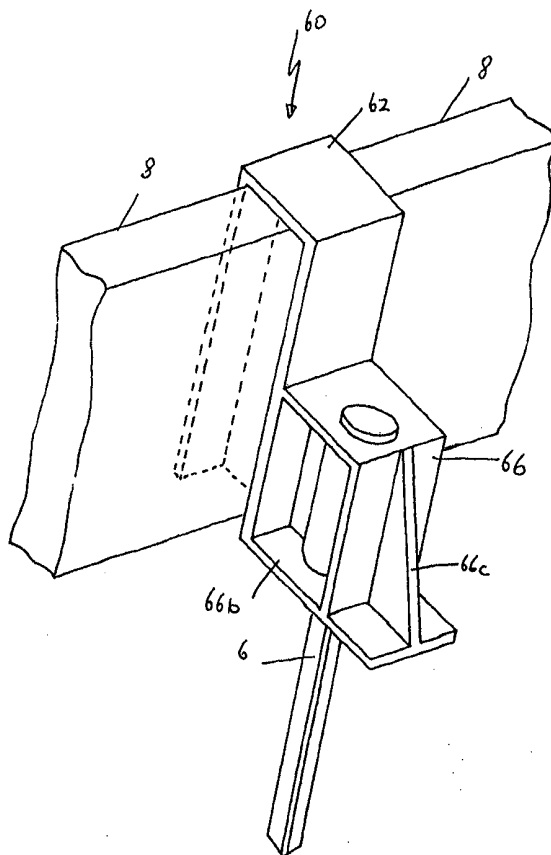
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(54) Title: EDGING SYSTEM

(57) Abstract

Edging for use between grass, garden beds and paths comprises rails (8, preferably of timber) and connectors (60, preferably extruded from metal or plastics) for joining adjacent ends of rails (8) and receiving stakes (6) driven therethrough into the ground. Connector (6) may be a post with a vertical passage for a stake, rails (8) being joined to the posts by slotting thereof and hammering connecting members into the slots. In this form the rails may also be slotted on their lower edges to receive a rib on a baseplate which also acts as a mowing strip. Alternatively connector (60) consists of inverted channel (62), the cavity of the channel being wider than the rails to permit angling thereof. One rail can be nailed to a vertical web dividing the cavity. Anchoring portion (66) for stake (6) is provided to the side of the channel (62).



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- 1 -

EDGING SYSTEM

The present invention relates to an edging system for forming a delineating edge between two adjacent areas on the ground, for example between a grassed area or garden bed
5 and an adjacent pathway. Such a system will hereinafter be referred to for simplicity as a "garden edging system".

Garden edging systems have conventionally comprised the use of railway sleepers or bricks or clay pavers which need to be set onto a specially prepared bed consisting of sand to
10 which is applied a cement mortar mix which is relatively time-consuming particularly when carried out by a non-skilled person. While railway sleepers can be laid more quickly than brick edging and require less skill, nevertheless they involve a considerable amount of physical labour and are also less versatile as they cannot follow curved paths. Other systems currently available include flexible plastics edging strips or edging strips consisting of split
15 wooden logs flexibly interconnected one to another, and while these are easy to install without the use of skilled labour, nevertheless they do not always provide the standard of finished appearance which may be required. Many of these prior systems do not provide a mower strip and result in difficult maintenance arising from weed growth.

20 According to the invention, there is provided a garden edging system comprising rails, and means for connecting the adjacent end portions of adjacent rails, said connecting means being adapted to receive a stake driven through the connecting means into the ground to hold the assembly of connecting means and rails to the ground.

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Further according to the present invention, there is provided a garden edging system comprising posts, rails, and connectors for connecting ends of the rails to adjacent posts, each post including an internal vertical passage for receiving a stake driven through the post into the ground to hold the assembly of posts and rails to the ground.

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In one form, the posts, rails, and connectors are separate components. However in

- 2 -

another form the posts and connectors can be integrally formed.

Advantageously, the system also includes an elongate base section adapted to rest on the ground, with the posts and rails resting on the base section and the stakes passing through
5 apertures in the base section.

Preferably, the base section has an upstanding longitudinal lip which co-operates with lower portions of the posts and rails to provide lateral location between the base section and the posts and rails and also to act as an impediment to passage of soil and weeds between the
10 base section and the undersides of the posts and rails.

In one particularly preferred form the longitudinal upstanding lip on the base section is adapted to engage within corresponding slots formed in the underside of the rails and posts.

15 Advantageously, the base section is wider than the rails and extends to one side of the rails to form a so-called "mower strip".

In a particularly preferred form of the invention opposite sides of each post are slotted to receive one limb of a connector which is inserted into the slot by a light hammering action.
20 The end edges of the rails may be similarly slotted to receive in a similar manner an opposite limb of the connector. In another form, the connector may provide a shape of channel section into which the end of the rail can fit.

Advantageously, a range of connectors is provided to facilitate connection of adjacent
25 rails via the post in rectilinear relationship or at an angle one relative to the other. Corresponding angled connectors may also be provided to couple adjacent parts of the base section.

Still further according to the invention, there is provided a garden edging system
30 comprising rails, and means for connecting the adjacent end portions of adjacent rails, said connecting means being adapted to receive a stake driven through the connecting means into

- 3 -

the ground to hold the assembly of connecting means and rails to the ground, wherein the connecting means comprises a connector portion having a cavity for receiving the adjacent end portions of two adjacent rails and an anchoring portion to one side of the connector portion for receiving a stake to hold the assembly of connecting means and rails to the ground.

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Preferably, the cavity in the connector portion is divided by a transverse web into two portions each of which receives a respective one of the end portions of the two rails whereby the web separates the ends of the two rails, said web being adapted to permit passage of fastening means into the end portion of one of said rails in said cavity whereby to permit
10 securement of the connector portion to said one rail prior to insertion of the end portion of the other rail into the cavity of the connector portion.

Preferably, the width of the cavity in the connecting portion is greater than the width of the rails received therein so as to permit adjustment of the relative angular orientation of
15 the two rails associated with the connecting means.

Preferably, the system further comprises an angle adapter for connection to said connecting means and having a cavity for receiving an end portion of one of said rails, the axis of said cavity of said adapter being at a predetermined angle relative to the longitudinal
20 axis of said cavity of said connector means.

Embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a schematic side view through part of a garden edging system in
25 accordance with a preferred embodiment of the invention;

Figure 2 is a section on line A-A of Figure 1;

Figure 3 is a section taken on line B-B of Figure 1;

Figure 4 is a section taken on line C-C of Figure 1 and showing connectors between the post and rails;

30 Figure 5 is an exploded perspective view showing a post and corresponding part of the base section of the system;

- 4 -

Figure 6 is a schematic section showing the relationship between the rail and base section of the system;

Figure 7 is a section corresponding to Figure 6 but showing an alternative form of base section;

5 Figure 8 is a cross-section of a preferred form of connector between a rail and post;

Figure 9 is a fragmentary perspective view illustrating the co-operation between a post and rail using a different form of connector to that illustrated in Figure 8; and

Figure 10 is a fragmentary perspective view of the main body of an anchoring stake used in the system;

10 Figure 11 is a schematic side view of the stake;

Figure 12 illustrates schematically the manner in which the stake may function to provide a locking effect within the ground;

Figure 13 is a schematic perspective view showing angle connectors for setting the system in a configuration in which adjacent rails are inclined one relative to another;

15 Figure 14 is a cross-section of an angle connector shown in Figure 13;

Figure 15 is a perspective view of an alternative form of post with integral connectors;

Figure 16 is a side view of a cap for use with the post of Figure 15; and

Figure 17 is a perspective view from above of the cap of Figure 16;

20 Figure 18 is a perspective view showing a connector and associated rails in accordance with another embodiment of the invention;

Figure 19 is an end view of the connector shown in Figure 18;

Figure 20 is a horizontal section illustrating how the connector of Figures 18 and 19 can be used to secure two adjacent rails at an angle one relative to the other;

25 Figure 21 is a perspective view showing the connector of Figure 18 in conjunction with a corner adapter;

Figure 22 is a horizontal section through the connector and associated corner adapter shown in Figure 21; and

Figure 23 is a perspective view showing a rail with an end portion formed to facilitate a 45° angle connection using the connector of Figures 18 and 19.

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In accordance with a preferred embodiment of the invention a garden edging system

- 5 -

comprises a shallow base section 2 which rests on the ground, posts 4 which are spaced along the base section 2 and which are anchored to the ground by stakes 6 which pass through the interior of the posts 4 and through holes in the base section 2, and rails 8 spanning, and coupled to, adjacent posts 4, the rails 8 being supported on the base section 2 and providing proper lateral location between the rails 8 and base section 2.

More particularly, the base section 2 is in the form of an extruded component preferably of plastics although it may alternatively be of other suitable material such as aluminium. At each side, the section 2 has depending side walls 2a (see Figures 5 and 6) and internally the section 2 has depending ribs 2b which rigidify the section to provide stable support for the posts 4 and rails 8. The upper surface of the section 2 is substantially flat apart from an upstanding longitudinal rib 2c which is adapted to engage within longitudinal slots 8a, 4a cut into the underside of the rails 8 and also the underside of the posts 4. The engagement of the rib 2c within the slots 8a, 4a of the rails 8 and posts 4 provides correct lateral alignment between these components and also has the effect of providing a labyrinth-type seal to prevent penetration of soil, grass, or weeds between the underside of the rails 8 and posts 4 and the base section 2.

In an alternative arrangement as shown in Figure 7 to achieve a similar effect, the upper surface of the section 2 is provided with two upstanding ribs 2d with the rails 8 being located between the ribs 2d. This arrangement avoids the need to form a slot in the underside of the rails but does not provide as attractive an external finish as does the earlier arrangement in which the single rib 2c is hidden from view; also with this alternative arrangement two slots would need to be cut in the underside of each post 4 when, as will usually be the case, the posts 4 are wider than the rails 8.

The base section 2 is also preferably provided along its length with pre-formed holes for passage of the stakes 6. The rails 2 will be produced in a range of different standard lengths with the holes appropriately positioned at regular intervals to ensure appropriate coincidence of a post 4 and hole 10 irrespective of which rail length or combination of rail lengths is used.

- 6 -

Each post 4 is preformed with a central vertical hole 12 for passage of the stake 6 and at each side a vertical slot 16 to receive a slide-in connector 18 projecting along the vertical end edge of an adjacent rail 8. In one form as shown in Figure 8 the connectors 18 are of cruciform cross-section with opposed limbs 18a one of which engages in the slot 16 in the side of the post and the other of which engages in a slot formed in the end edge of the rail 8. Preferably, the sides of these limbs are serrated or otherwise formed in order to provide a degree of locking between the connector and the post and rail so as to resist horizontal displacement between a post and rail. Preferably the connector 18 is in the form of an extruded section, for example of aluminium or a hard plastics, cut to a length corresponding to the depth of the rail.

In an alternative construction as shown in Figure 9, the connector 18 has a cross-section which provides two parallel lips 18b which locate either side of the end edge of the rail 8 to define a channel. This avoids the need to slot the end edge of the rail 8 but is less slightly as the two lips 18b are both exposed.

A suitable form of stake 8 is shown in Figures 10 to 12. Advantageously the stake 6 has a cross-sectional profile which acts to resist lateral displacement within the soil. This can be achieved by forming the stake 6 with a series of angularly-spaced limbs 6a, for example three or four such limbs. In the particular form shown the radially outer edge of each limb 6a of the stake 6 is formed with an enlargement 6b which has the effect of locking soil in the zone defined between two adjacent limbs to further enhance the stability of the fixing of the stake 6 within the ground. The stake 6 is principally formed by an extruded section, for example of aluminium, cut to a required length with a lateral flange or cap 6c attached at its upper end, for example by crimping or welding to engage the upper end of the post 4 and thereby to keep the assembly of post, rail, and base section firmly against the ground. Other means may alternatively provide to exert a hold-down effect between the stake 6 and post 4.

When the stake 6 has been driven into position into the ground through the holes 12, 10 in the post 4 and base section 2, an end cap 20 is applied to the top of the post 4 to conceal

- 7 -

the upper end of the stake 6 and also to prevent access of water to the upper edge of the post and into the vertical hole. The cap 20 may be a push-fit over the upper end of the post 4 and be retained by a few small nails or screws or, alternatively, a connector system may be incorporated between the cap 20 and post 4. In Figure 5, the post 4 is shown with two slots 5 22 formed in its upper end to receive ribs within the cap 20 to secure the cap 20 to the post 4.

It is to be noted that the diameter of the holes 12, 10 in the posts 4 and base section 2 are a little larger than the diameter of the stakes 6 so that there is some play between the 10 posts, rails, and base section in relation to the stakes 6 to permit some movement to take place, for example as a result of ground movement or slight swelling of the posts and rails (if made from timber) without putting the system under such stress that cracking or breakage of the connectors 18 may occur.

15 Appropriate connectors and adaptors can be used to couple adjacent lengths of rail at an angle one relative to the other rather than in direct rectilinear alignment. As shown in Figures 13 and 14 this may be achieved by using an angle connector 30 between the post 4 and rail 8 with the opposite limbs 30a of the connector 30 appropriately inclined to set the rail 8 at the required angle relative to the adjacent face of the post 4 and with the body 30b of the 20 connector 30 being wedge-shaped in cross-section in order to fill the angle thus formed between the rail 8 and post 4. The angle connector is preferably in the form of an extruded section with the wedge-shaped body 30b being either solid or hollow according to requirements. If hollow (as shown) the end of the connector is preferably closed against ingress of water and dirt by a cap 32. The base section 2 in the zone of two adjacent rails 25 which are inclined rather than in rectilinear alignment will need to be cut and joined by an appropriate angle connector 34 in the zone of the post. The angle connector 34 will include an upstanding rib, corresponding to the rib 2c to engage and locate within the slot in the underside of the post.

30 A range of angle connectors 30 and 34 will be provided to enable adjacent rails to be set at a range of different angles. In order to couple two adjacent rails at right angles one

- 8 -

relative to the other, all that is necessary is to provide a corner post which differs from the posts previously described in that the slots 16 are formed in two adjacent faces of the post rather than in two opposed faces of the post. The rails are then coupled to the post using connectors 18 as previously described. In the zone of a right angled connection, the two parts
5 of the base section can either be butt-jointed or mitre-jointed or, alternatively, a right angled connector for the two parts of the base section can be provided.

Preferably, the posts and rails are fabricated from timber and are supplied to the user already formed with appropriate holes and slots to receive the stakes and connectors.
10 Alternatively the posts and/or the rails could be in another material such as a plastics material. Also, although it is preferred that the base section is supplied preformed with the holes for passage of the stakes, alternatively the holes could be formed through the section by the user during installation.

15 In the embodiments just described, the system comprises separate posts, rails, and connectors. In Figure 15 there is shown a post 38 having integral connectors 39 for engagement in the slot formed in the end edge of the rail in the manner previously described. Internally, the post 38 is formed with longitudinal webs 40 which define a longitudinal passage for receiving the stake. The post 38 can be in the form of an extruded section of
20 suitable metal or plastics. Figures 16 and 17 show a cap 42 which can be applied over the post 38 when the stake is in place. Attachment of the cap 42 to the post 38 can be effected by flanges 44 on the underside of the cap 42 to engage within the interior of the post 38. The cap 42 may also incorporate at each end a flange 46 (see Figure 17) designed to overlie the connector 39. Posts with integral connectors can also be formed with the two connectors
25 positioned at right angles one to the other or at another appropriate angle to provide a right angled or other angular connection between two adjacent rails.

To install the system all that is necessary is to level the ground surface. The base section is then placed on the ground in the required position. The posts and rails are
30 connected by means of the straight or angled connectors, the connectors simply being tapped into place by light hammering with the connector moving along the length of the groove in

- 9 -

the post and rail. The assembly of posts and rails is then positioned on the base section and is secured in position by driving the stakes through the posts and base section into the ground. The assembly is then completed by placing the caps on the posts to provide an aesthetic finish and to protect the end grain of the timber posts from weather damage. If desired appropriate
5 cover plates may also be applied over the connectors.

The height of the base section enables assembly on top of the natural soil levels so that subsequent installation of turf, top soil, or path materials such as gravel, can finish neatly adjacent the upper surface of the base section. The base section is itself wider than the rail
10 and projects at least to one side of the rail so as to form a "mower strip". This, in conjunction with the seal formed between the bottom of the rail and the base section greatly facilitates maintenance.

Although the posts and rails of the edging system particularly described are designed
15 for use with the base section which is intended to be placed on the soil, the posts and rails together with the appropriate connectors between these components can be applied directly to a paved surface of, for example, brick or concrete, with holes for the stakes being drilled into the paving surface after assembly.

20 In an alternative embodiment of a garden edging system as shown in Figures 18 to 22, the posts and associated connectors of the embodiments discussed previously are replaced by an integral connector 60 which acts to connect adjacent rails 8 and also to receive a stake for anchoring the connector and rails to the ground. More particularly, as shown in Figures 18 to 20, the connector 60 comprises a main connector portion 62 of inverted channel shape to
25 define a cavity into which the adjacent ends of two adjacent rails 8 are accommodated. Preferably, the connector portion 62 includes a central transverse web 62a which divides the cavity into two separate parts each for receiving an end portion of one of the rails 8 whereby the end face of each rail abuts against the adjacent surface of the web 62a. The web 62a is formed with two or more holes for receiving screws or nails 64 to enable the connector 60 to
30 be fastened to one of the two rails 8 by passage of the screws or nails 64 through the web 62a into the end of the rail 8 on the opposite side prior to insertion of the end of the other rail 8

- 10 -

into the connector portion 62. An anchoring bracket 66 extends from one side of the connector portion 62. The anchoring bracket 66 includes a body extending part-way along the height of the connector portion 62 with a vertical passage 66a for receiving a stake 6. The body of the anchoring bracket 66 is formed with a substantially flat base 66b to provide
5 stability relative to the ground surface, the base 66b being apertured to permit passage of the stake 6 through the base 66b and into the ground. Advantageously, for increased stability of anchorage, the base 66b extends by a substantial distance outwardly relative to the stake 6, the projecting portion of the base 66b being buttressed relative to the body of the anchoring
10 bracket by means of a gusset 66c to rigidify the projecting portion of the base 66b against deflection. It is to be noted that as the body of the anchoring bracket 66 extends part-way along the height of the connector portion 62 whereby the head of the stake 6 when contacting the top of the anchoring bracket is retained a significant distance above the base of the connector, it is ensured that the connector is stably supported above the ground.

15 The entire connector 60 including connector portion 62 and anchoring bracket 66 can be fabricated in one piece as a single plastics moulding.

The stake 6 used to anchor the connector 60 to the ground can be of the form previously described.

20

The use of a connector 60 as just described which provides in a single component the necessary means to connect adjacent rails 8 and to provide a firm anchorage to the ground by staking facilitates erection of the edging system and avoids the need for several separate components. Preferably, and as shown, the cavity in the connector portion 62 for receiving
25 the ends of the rails 8 is open-bottomed and this ensures that the rails 8 can be held securely against the ground, or against a mower strip interposed between the underside of the rails and the ground if required.

Preferably, to facilitate connection of two adjacent rails 8 at an angle one relative to
30 the other rather than in rectilinear alignment, the width of the cavity in the connector portion 62 is somewhat greater than the width (thickness) of the rails 8. In this manner an angle

- 11 -

connection can be set up between two adjacent rails by inclining the second rail in its part of the cavity in the manner shown in Figure 20. As shown in this Figure, the second rail (designated 8a) is retained in its inclined configuration within the cavity by an insert 70 of rubber-like or other resiliently compressible material wedged between the adjacent faces of the rail and wall of the cavity. In the embodiment shown, the insert 70 consists of strip material of circular cross-section.

As shown in Figures 21 and 22, in order to form a 90° connection between two adjacent rails, an additional connector element 72 which forms a corner adapter is used. The corner adapter 72 co-operates with the main connector 60 by fitting into an end portion of the cavity in the main connector 60. As shown the corner adaptor 72 is coupled to the connector 60 by screws 76 which pass through the adapter 72 and web 62a of the connector into the end of the adjacent rail whereby the screws 76 not only secure the corner adapter 72 to the connector 60 but also serve to fasten the connector 60 to the rail 8. The corner adapter 72 is itself formed with a cavity for receiving the end portion of the second rail orientated at right angles to the first rail, this cavity also advantageously being open at its lower end to permit that rail to be held firmly against the ground. Advantageously, the cavity of the corner adapter 72 is also of a width greater than the width (thickness) of the rail 8 to permit adjustment of the inclination of the two rails to an angle of other than 90° in a similar manner to that illustrated in Figure 20.

Although the connector 60 will enable some angular variation between the two rails with respect to strict rectilinear alignment and, likewise, the corner adapter 72 will permit some angular variation from 90°, to permit a full range of angular variation from rectilinear through to 90° it is envisaged that a second adapter may be required, similar to the corner adapter but with the cavity of the adapter inclined at an angle of, say, 45° to the cavity of the connector 60. This further adapter will itself have a cavity of greater width than the width (thickness) of the rail so as to provide a range of angular adjustment either side of 45°.

Figure 23 shows how the end portion of a rail may be shaped so that it can be fitted into the connector 60 to form a 45° connection between two adjacent rails. In this form, the

- 12 -

end of the rail is cut to form faces 82, 84 each inclined at 45° to the side face of the rail so that the two faces 82, 84 form a right angled corner which can fit into an internal corner of the connector 60 with the rail extending diagonally across the interior of the connector. A notch 86 formed in the side face of the rail receives the adjacent forward edge of the
5 connector and thereby enables the rail to extend diagonally across the connector so that the side face of the rail subtends an angle of 45° with reference to the web 62a of the connector 60. By using two such rails inserted into the opposite sides of the connector 60, a 90° connection can readily be formed. The faces 82, 84 and the notch 86 can easily be cut into a wooden rail using conventional woodworking techniques.

10

Throughout this specification and claims which follow, unless the context requires otherwise, the word "comprise", and variations such as "comprises" or "comprising", will be understood to imply the inclusion of a stated integer or group of integers or steps but not the exclusion of any other integer or group of integers.

15

The embodiment has been described by way of example only and modifications are possible within the scope of the invention.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A garden edging system comprising rails, and means for connecting the adjacent end portions of adjacent rails, said connecting means being adapted to receive a stake driven through the connecting means into the ground to hold the assembly of connecting means and rails to the ground.
2. A garden edging system according to claim 1, wherein the connecting means comprises posts and connectors for connecting adjacent ends of adjacent rails to a said post interposed between said rails, each post including an internal vertical passage for receiving a stake driven through the post into the ground to hold the assembly of posts and rails to the ground.
3. A garden edging system according to claim 1, wherein the connecting means comprises a connector portion having a cavity for receiving the adjacent end portions of two adjacent rails and an anchoring portion to one side of the connector portion for receiving a stake to hold the assembly of connecting means and rails to the ground.
4. A garden edging system according to claim 3, wherein the connector portion is substantially of inverted channel section open at its lower end.
5. A garden edging system according to claim 3 or claim 4, wherein the cavity in the connector portion is divided by a transverse web into two portions each of which receives a respective one of the end portions of the two rails whereby the web separates the ends of the two rails, said web being adapted to permit passage of fastening means into the end portion of one of said rails in said cavity whereby to permit securement of the connector portion to said one rail prior to insertion of the end portion of the other rail into the cavity of the connector portion.
6. A garden edging system according to any one of claims 3 to 5, wherein the anchoring portion extends at least partially along the height of the connector portion whereby a head of

- 14 -

the stake is retained by the anchoring portion at a predetermined height above the base of the connector portion.

7. A garden edging system according to any one of claims 3 to 6, wherein the anchoring portion has a substantially flat base adapted to engage the ground.

8. A garden edging system according to claim 7, wherein the flat base extends outwardly relative to the connector portion to a position beyond the stake.

9. A garden edging system according to any one of claims 3 to 8, wherein the width of the cavity in the connector portion is greater than the width of the rails received therein so as to permit adjustment of the relative angular orientation of the two rails associated with the connecting means.

10. A garden edging system according to claim 9, further comprising a resiliently compressible insert adapted to be interposed between an end portion of one of said rails and an internal wall of the cavity whereby to retain said rail at a selected angular orientation relative to the longitudinal axis of the cavity.

11. A garden edging system according to any one of claims 3 to 10, further comprising an angle adapter adapted for connection to said connecting means and having a cavity for receiving an end portion of one of said rails, the axis of said cavity of said adapter being at a predetermined angle relative to the longitudinal axis of said cavity of said connecting means.

12. A garden edging system according to claim 11, wherein said angle is substantially 90°.

13. A garden edging system according to claim 11, wherein said angle is approximately 45°.

14. A garden edging system according to any one of claims 11 to 13, wherein the width of the cavity of the angle adapter is greater than the width of the rail whereby to permit

- 15 -

variation in the inclination of the axis of said rail relative to the axis of the cavity of the angle adapter.

15. A connector for use as the connecting means of a garden edging system according to any one of claims 3 to 14, said connector comprising a connector portion having a cavity for receiving the adjacent end portions of two adjacent rails and an anchoring portion to one side of the connector portion for receiving a stake to hold the assembly of connecting means and rails to the ground.

16. A connector according to claim 15, wherein the connector portion and anchoring portion are integrally formed as a single moulded component.

17. A connector according to claim 15 or claim 16 in combination with an angle adapter, said adapter being arranged for connection to said connecting means and having a cavity for receiving an end portion of one of said rails, the axis of said cavity of said adapter being at a predetermined angle relative to the longitudinal axis of said cavity of said connector means.

18. A stake for use in a garden edging system according to any one of the preceding claims, said stake having a cross-sectional profile which acts to resist lateral displacement of the stake within the soil.

19. A stake according to claim 18, wherein the cross-sectional profile of the stake is defined by a series of angularly-spaced limbs having a radially outer edge portion of enlarged form.

20. A garden edging system according to claim 2, wherein the opposite sides of each post are slotted to receive one limb of a connector which is inserted into the slot by hammering.

21. A garden edging system according to claim 20, wherein the end edges of the rails are slotted to receive an opposite limb of the connector.

- 16 -

22. A garden edging system according to claim 20, wherein the connector includes a recess of channel section into which an end portion of a rail can fit.

23. A garden edging system according to any one of claims 2, 20, 21 or 22, having a series of said connectors configured to permit connection of adjacent rails in rectilinear relationship or in relatively inclined relationship.

24. A garden edging system according to any one of claims 3 to 9, wherein an end portion of at least one of the rails is shaped for co-operation with the connector portion to enable said end portion to extend diagonally across the cavity in the connector portion.

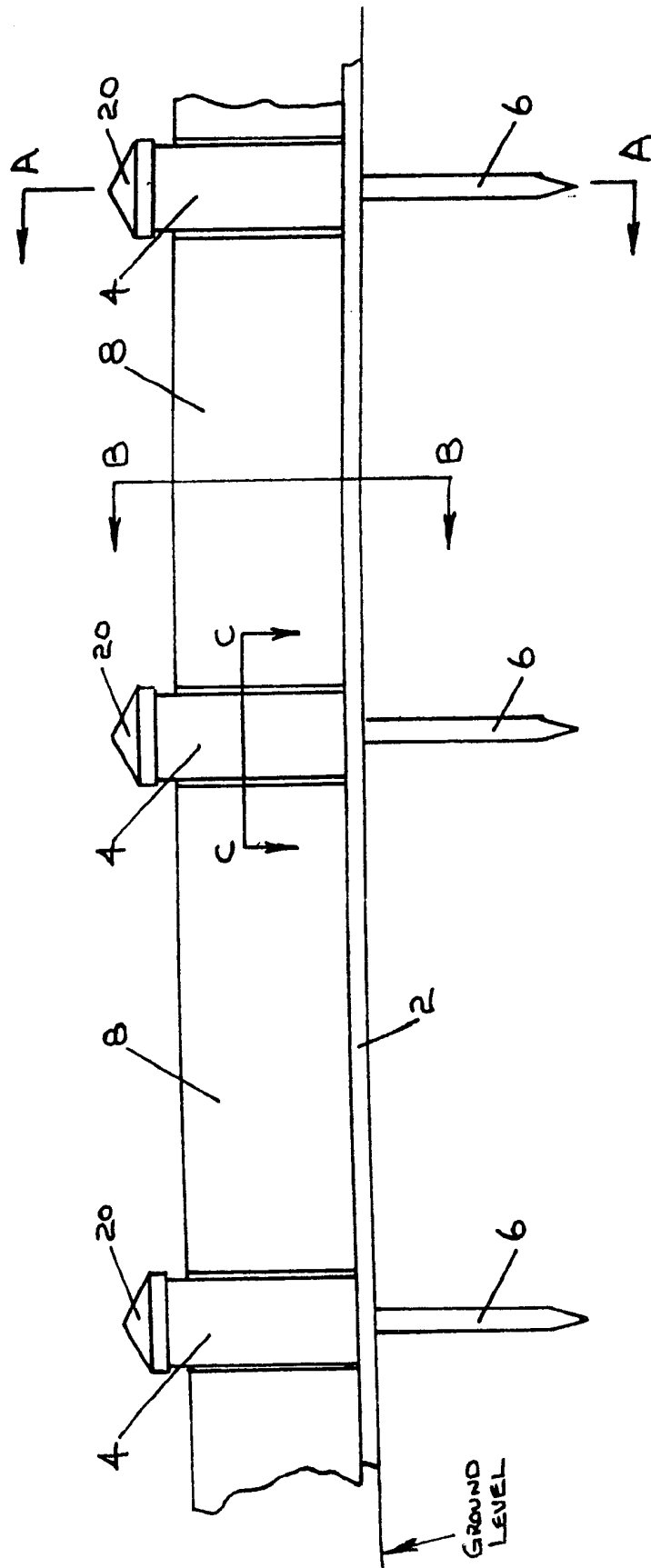


FIG. 1

SECTION VIEW A-A

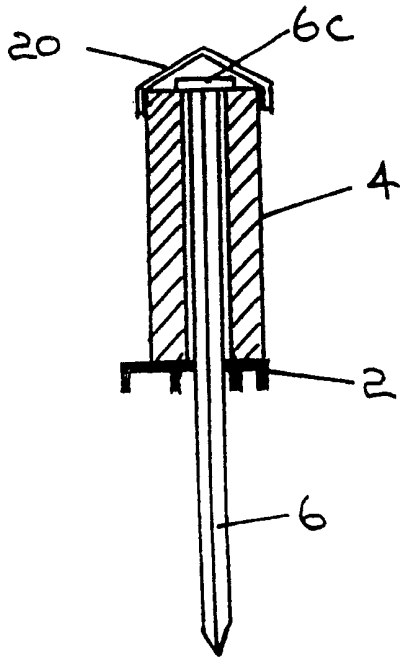


FIG. 2

SECTION VIEW C-C

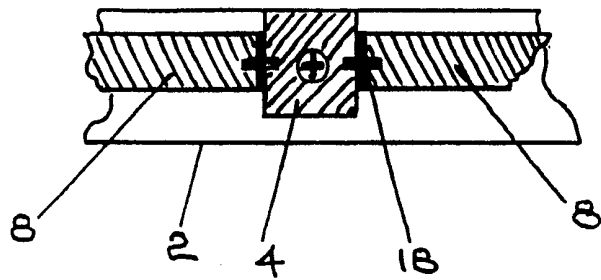


FIG. 4

SECTION VIEW B-B

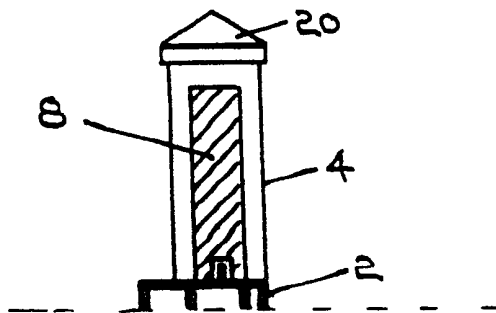


FIG. 3

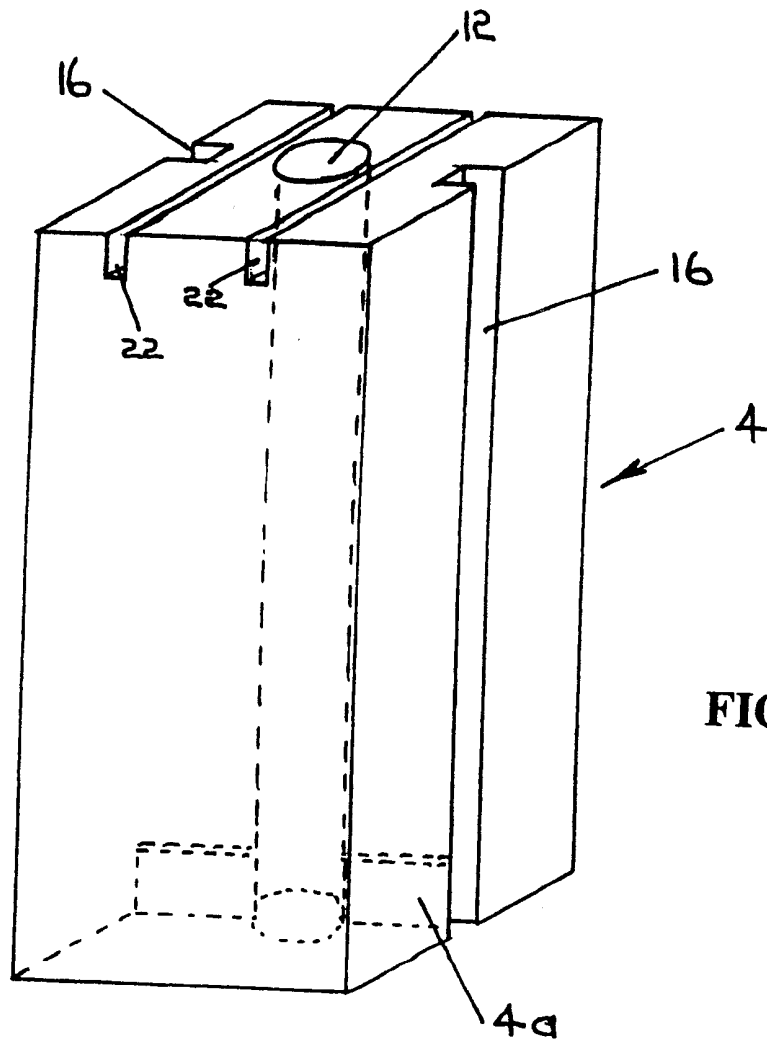
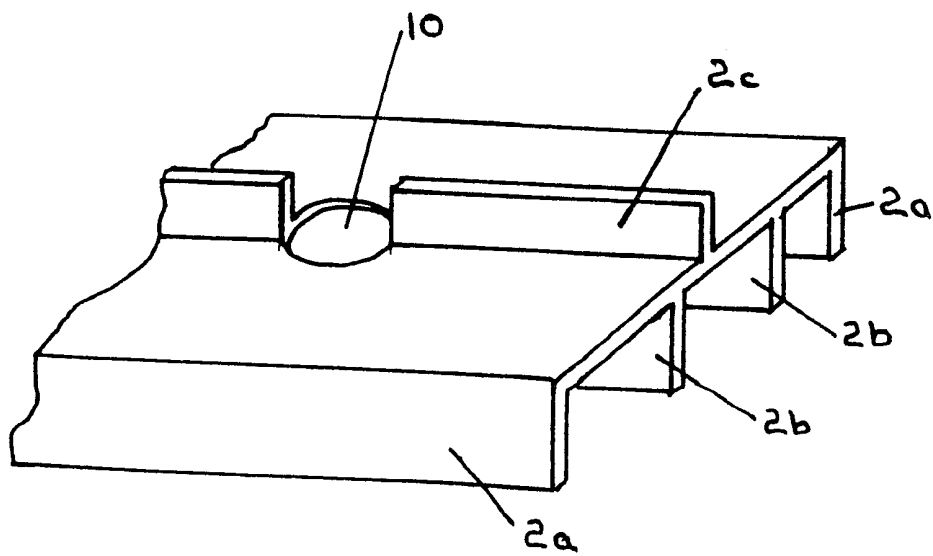
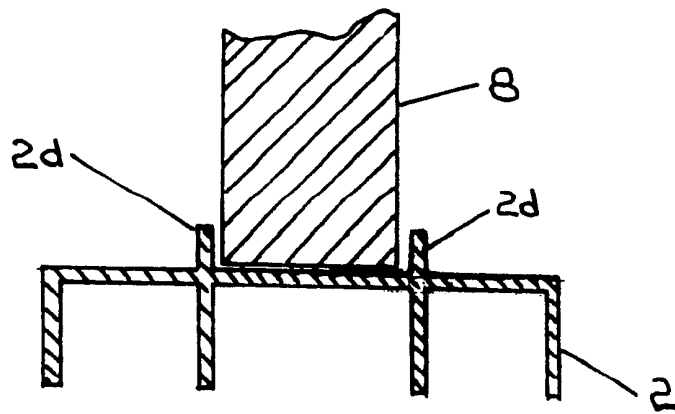
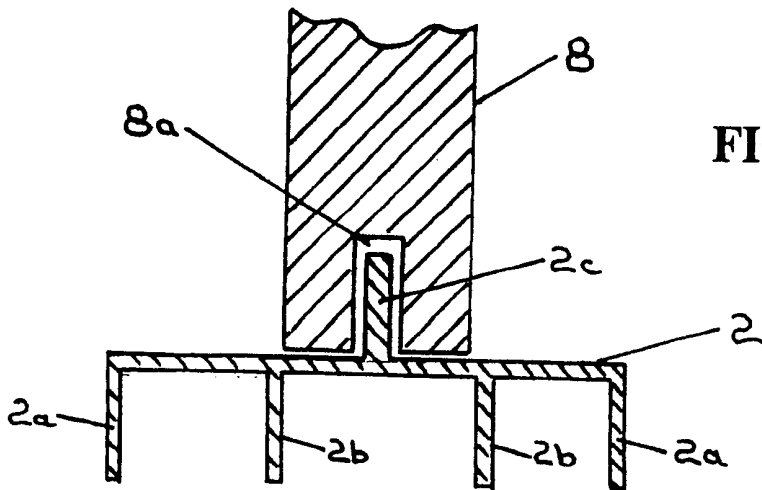


FIG. 5





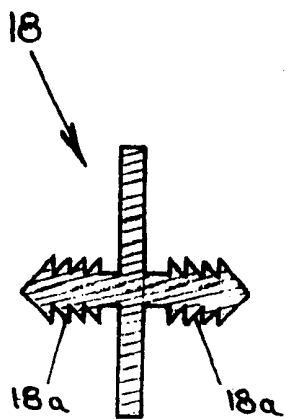


FIG. 8

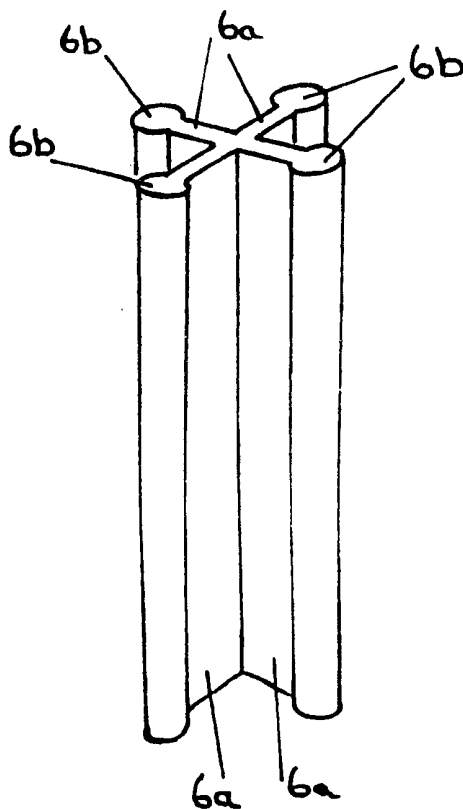


FIG. 10

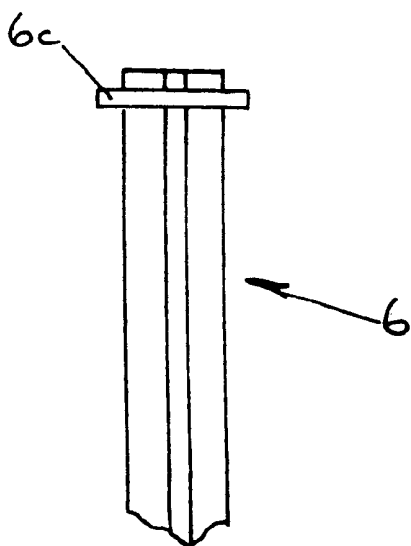


FIG. 11

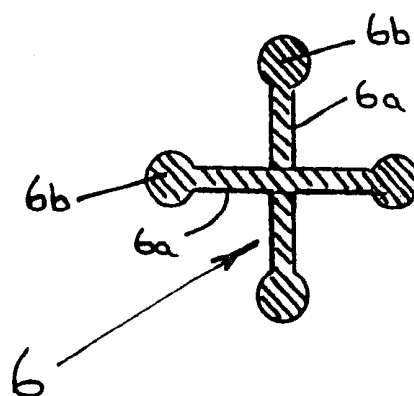


FIG. 12

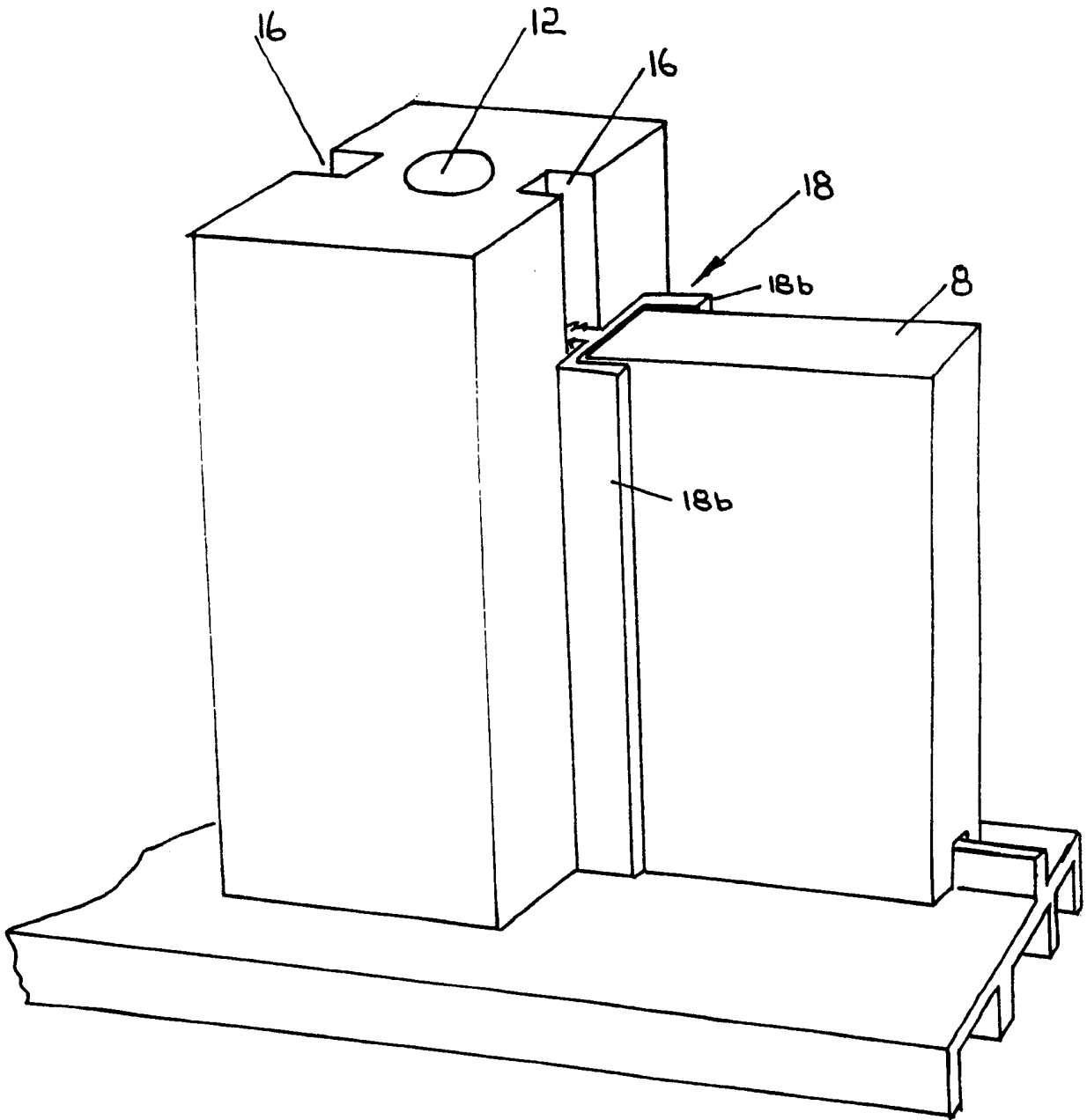


FIG. 9

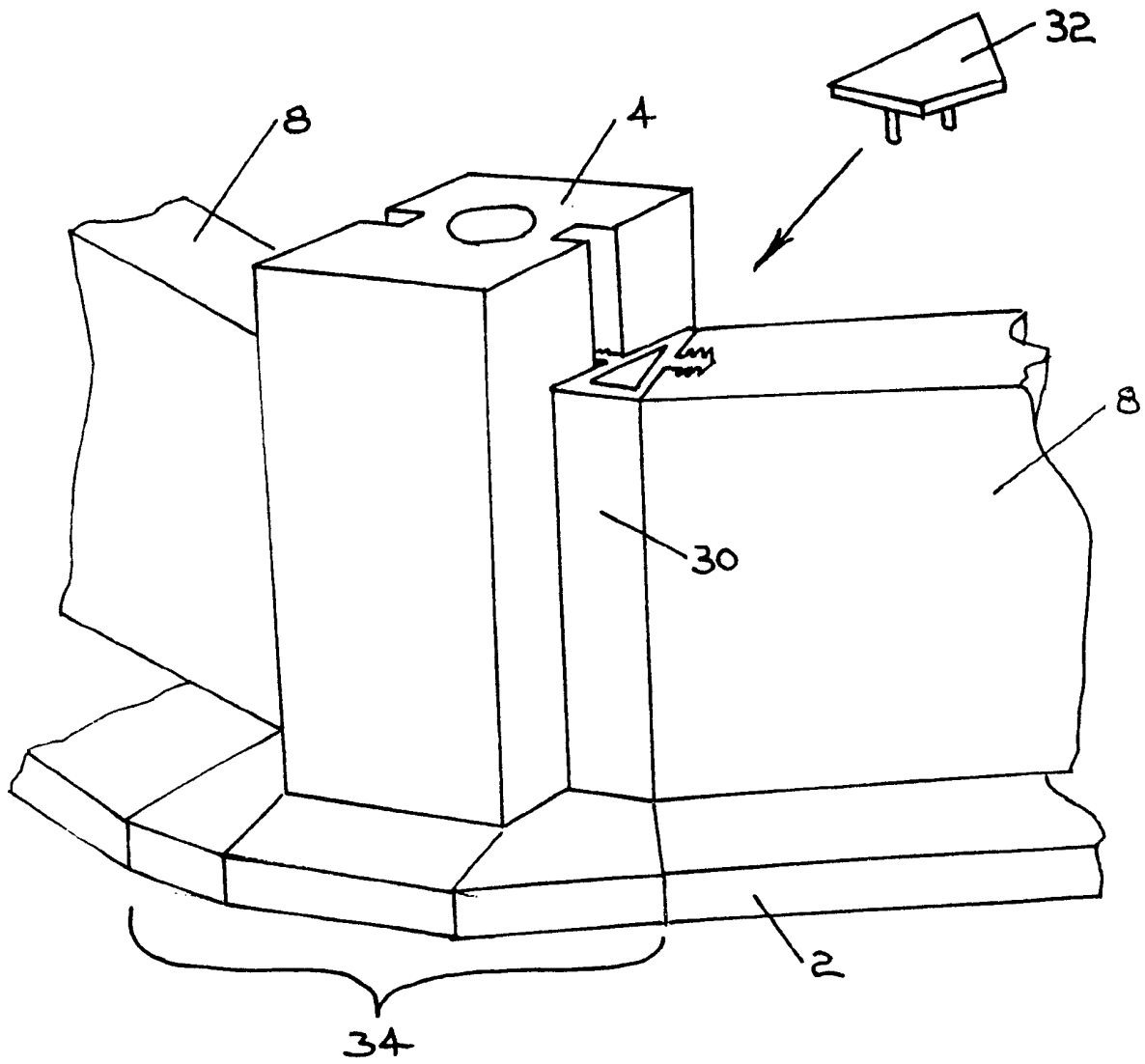


FIG. 13

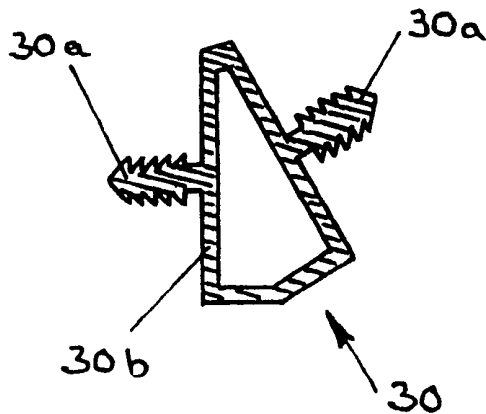


FIG. 14

9/15

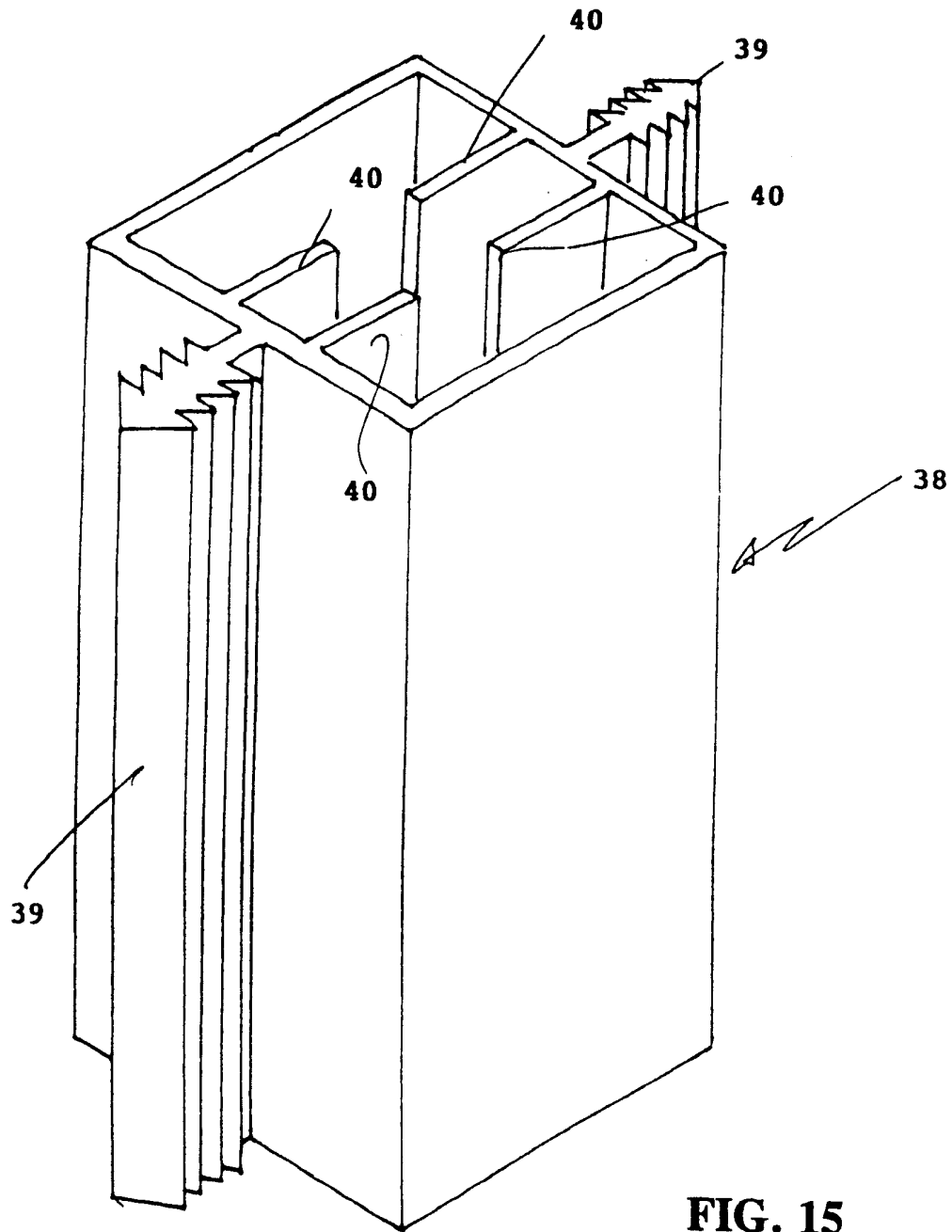


FIG. 15

10/15

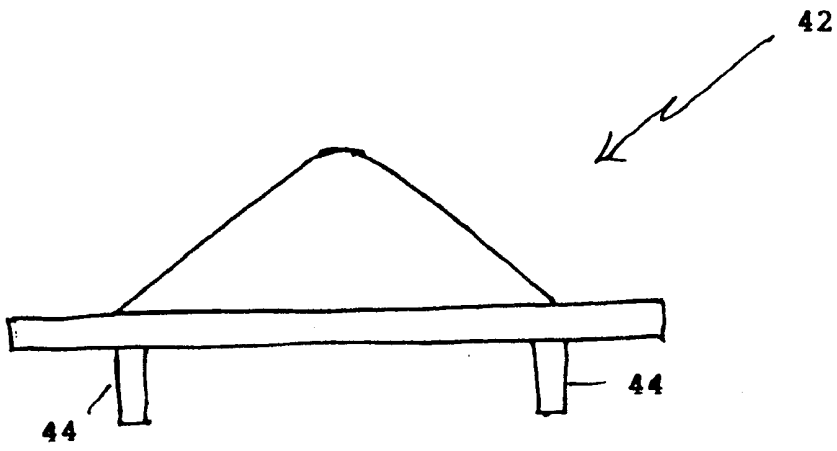


FIG. 16

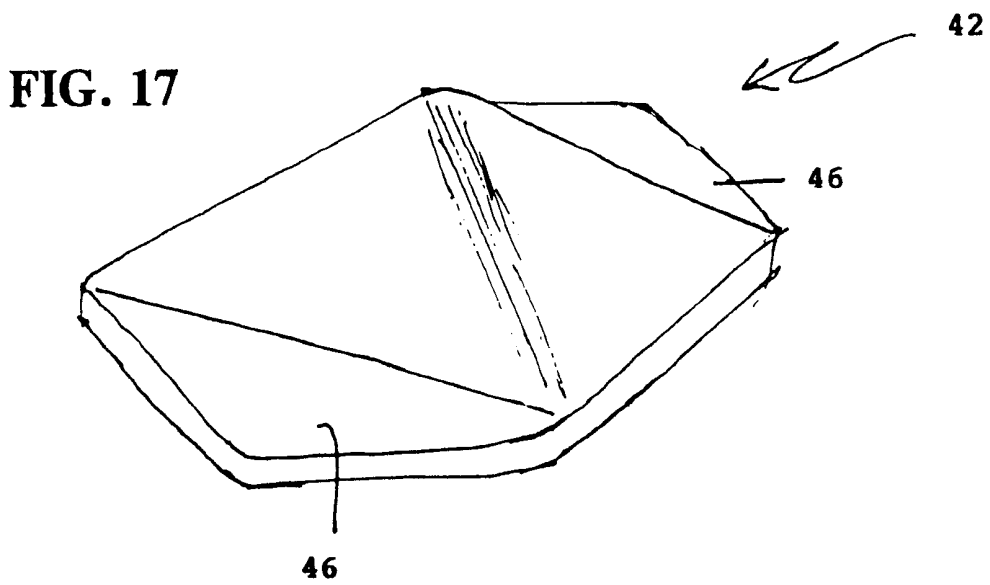


FIG. 17

11/15

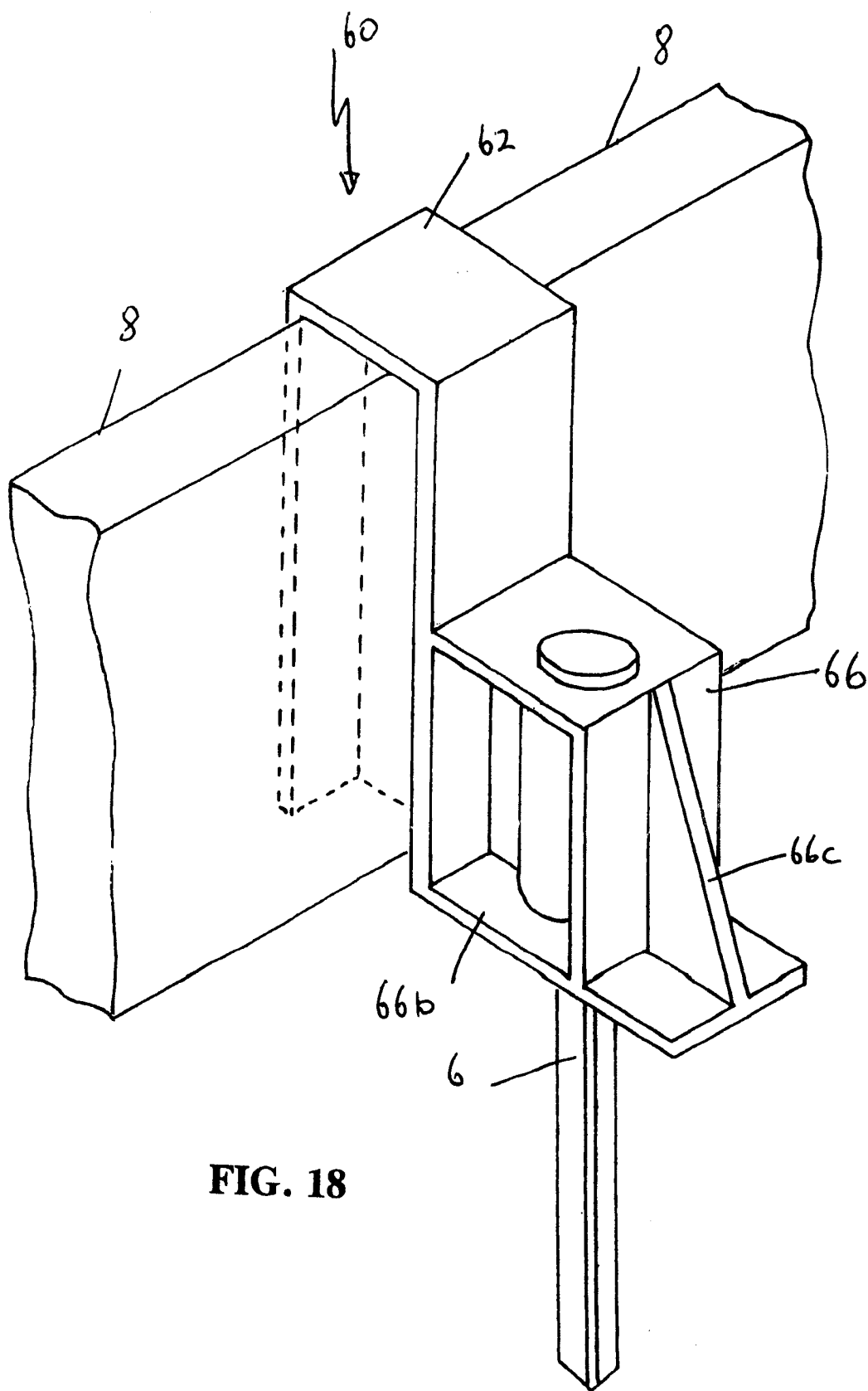


FIG. 18

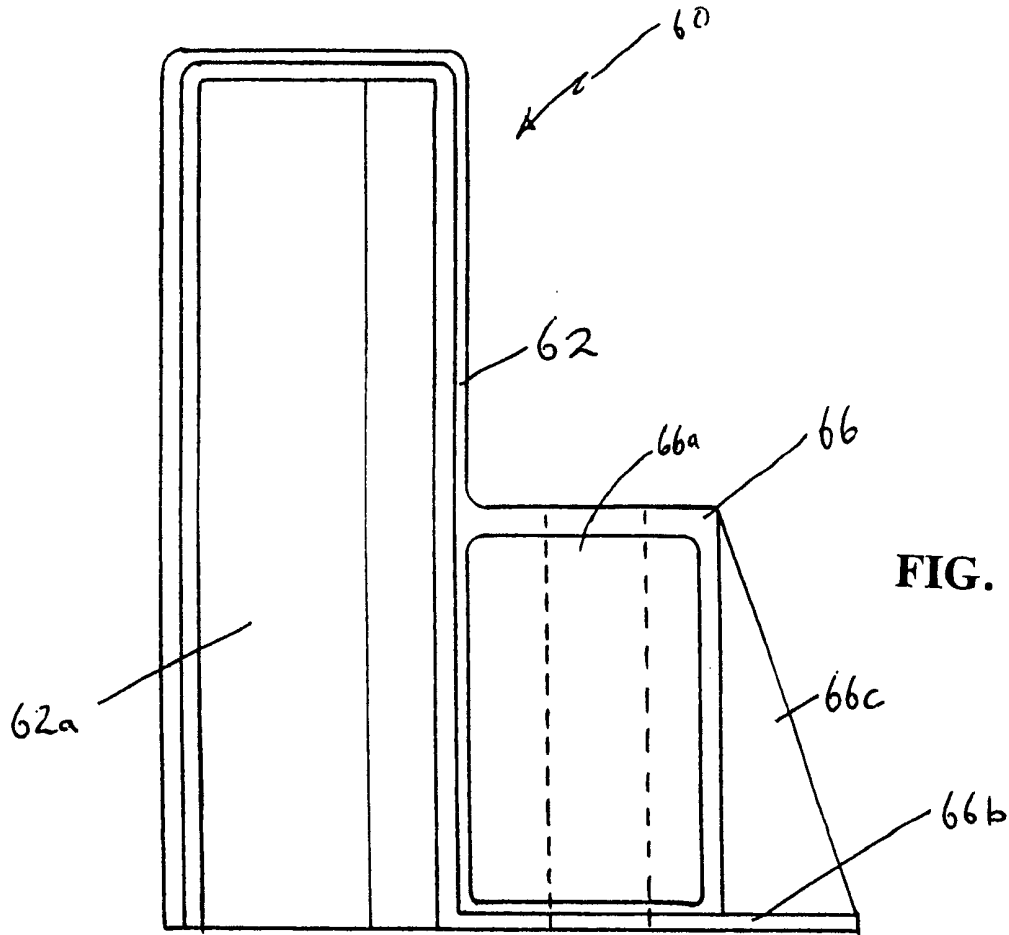


FIG. 19

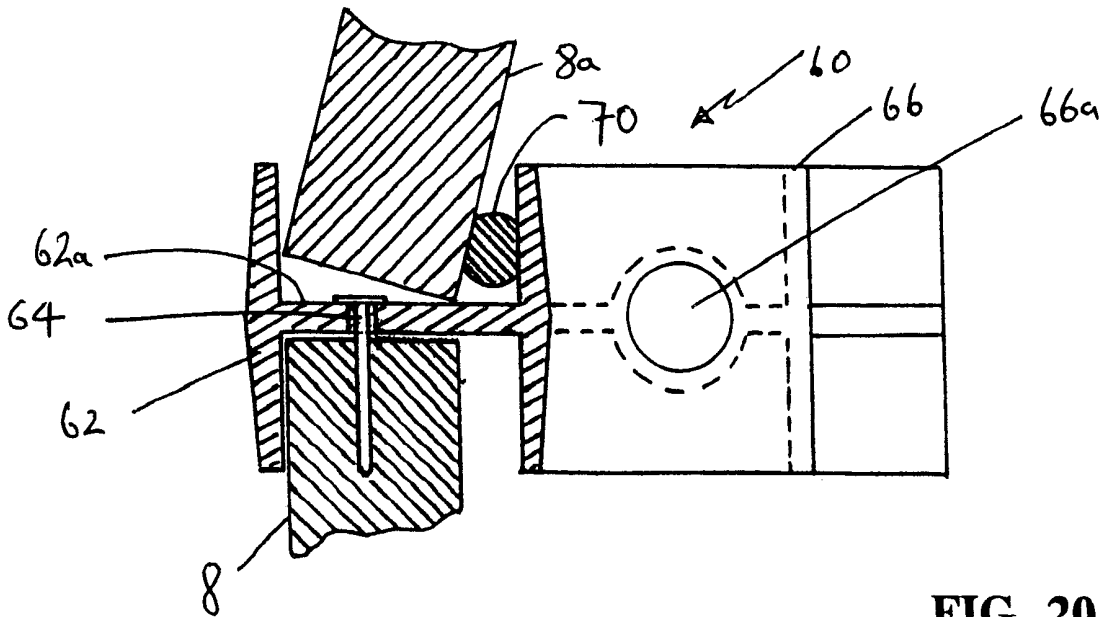


FIG. 20

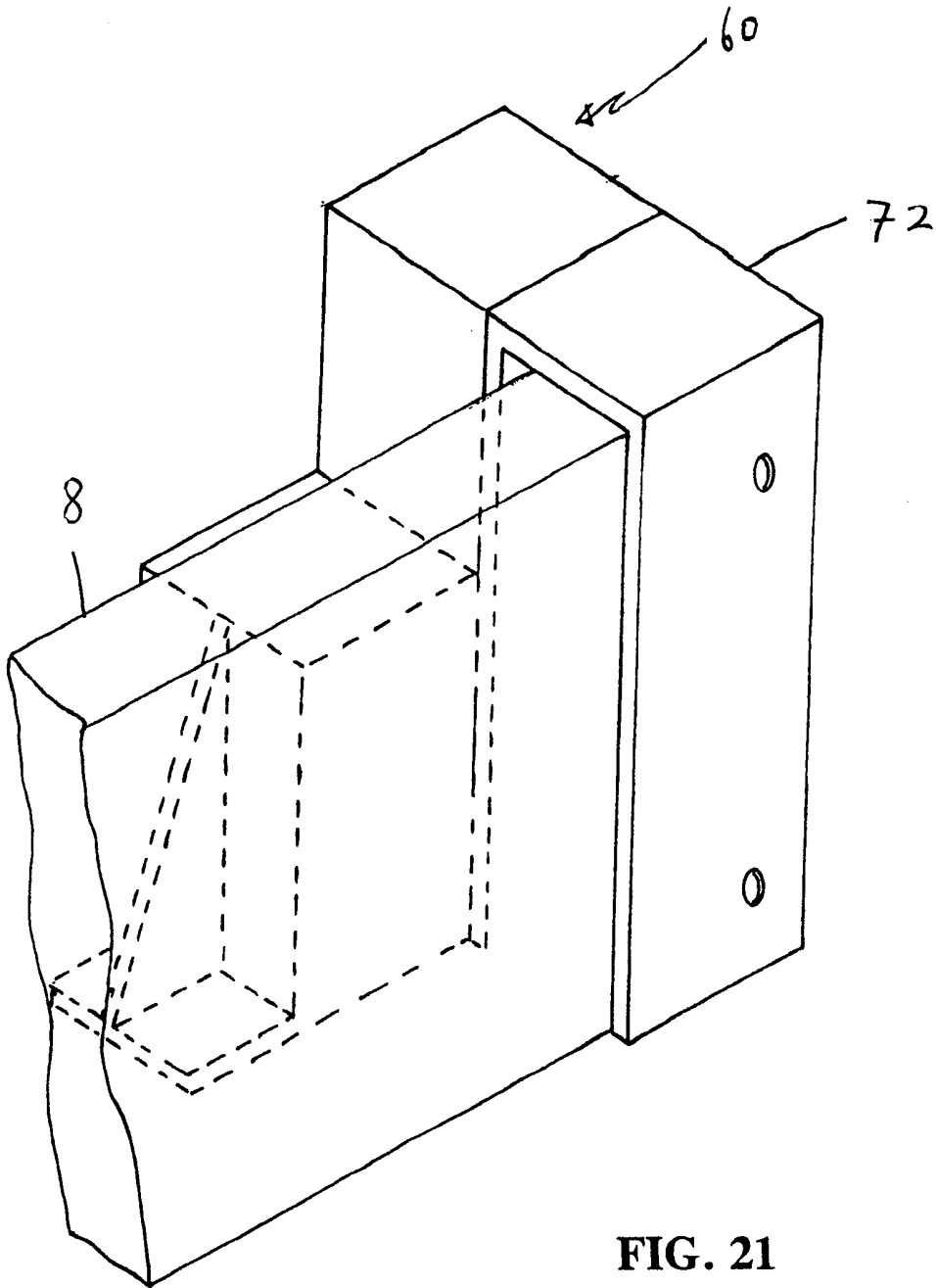


FIG. 21

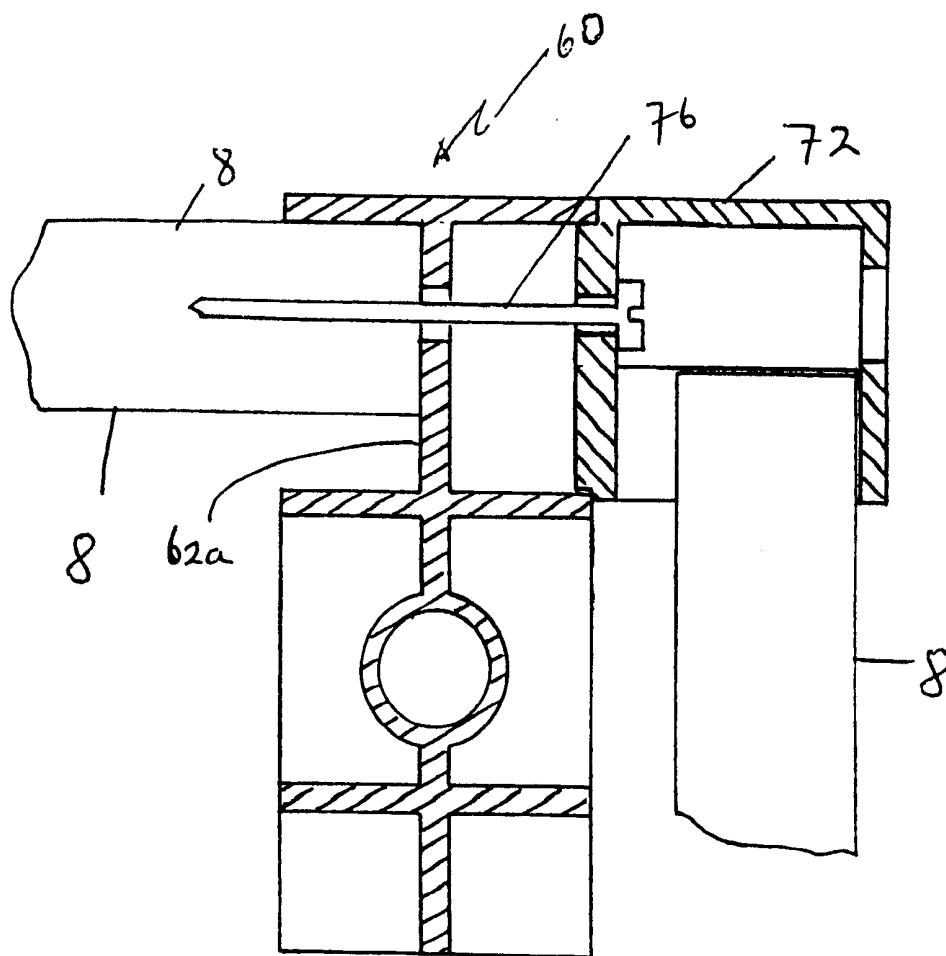


FIG. 22

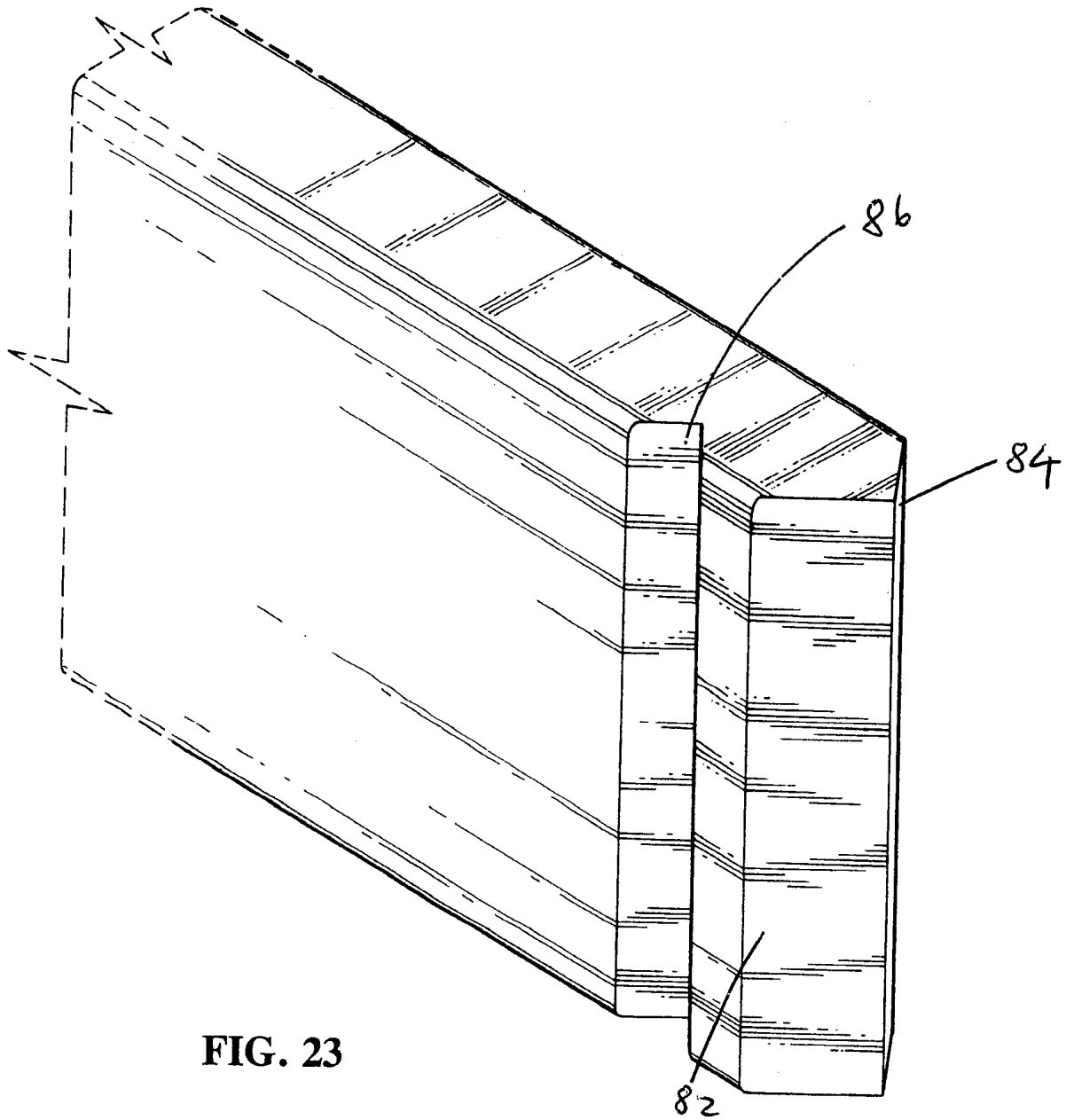


FIG. 23

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU00/00162

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. ⁷ : A01G 1/08, E02D 29/02		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) A01G, E02D, E04B, E04H by keyword search		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched AU: A01G, E02D		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPAT: keyword search: (EDG+ OR BORDER+ OR SURROUND+) AND (GARDEN+ OR GRASS+ OR LAWN+ OR BED? OR PATH+ OR LANDSCAP+) AND (STAK+ OR SPIK+ OR PEG+)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4867420 A (ANDERSON) 19 September 1989 See whole document.	1, 3, 7-9, 15-16
X	US 5671584 A (MUELLER) 30 September 1997 See whole document.	1-2
X	AU 27444/92 A (THOMPSON INDUSTRIES, INC) 13 May 1993 See whole document.	1
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
* Special categories of cited documents:		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 19 April 2000	Date of mailing of the international search report -4 MAY 2000	
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized officer I.A. KILBEY Telephone No : (02) 6283 2115	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU00/00162

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,L,P	AU 20380/99 A (LORENZ PTY LTD) 21 October 1999 See whole document. This document may throw doubt on the priority claim in that it casts doubt as to the date of the first disclosure of the invention.	1-17, 20-24

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU00/00162

Box 1 Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos :
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos :
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos :
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. Claims 1-17 and 20-24 directed to a garden edging system,
 2. Claims 18-19 directed to a stake,
- as reasoned on the extra sheet.
1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims
 2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
 3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

 4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-17, 20-24.

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

Supplemental Box

(To be used when the space in any of Boxes I to VIII is not sufficient)

Continuation of Box No:

The two different inventions are:

1. Claims 1-17 and 20-24 directed to a garden edging system (or to a connector for use with such an edging system) including rails and means for connecting adjacent end portions of adjacent rails, which means is adapted to receive (any sort of) stake driven through it to hold the system to the ground.
2. Claims 18-19 directed to a stake having a cross-sectional profile which acts to resist lateral displacement of the stake within the soil.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU00/00162

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
AU	27444/92	US	5168678	BE	1007177	FR	2683577
		DE	4237188	GB	2261236	JP	6197634
END OF ANNEX							