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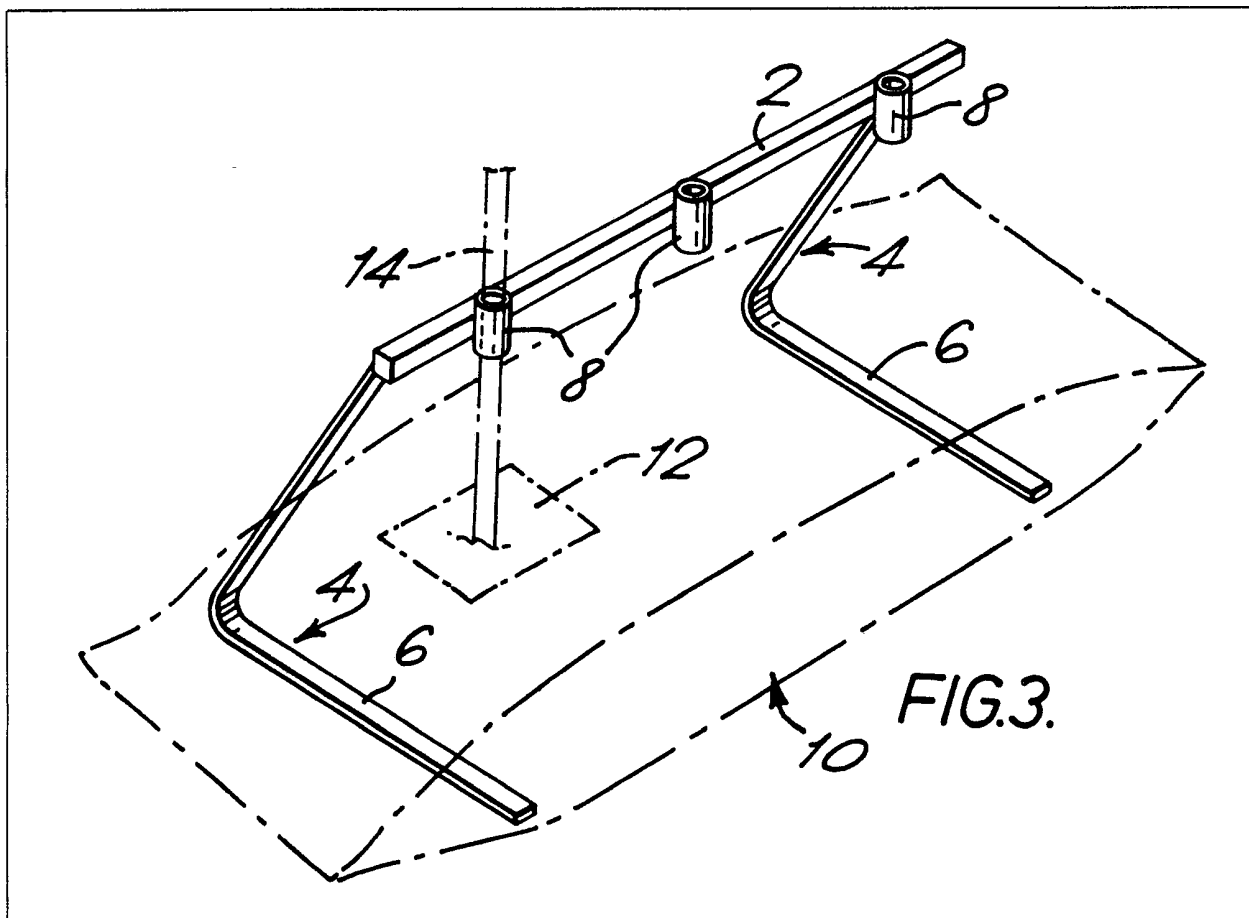
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(54) A device for stabilizing support members for plants

(57) Support members (14) in the form of poles for supporting plants growing in a pre-packed bag (10) of growing medium are held upright by a device comprising supporting elements (8) for the poles (14), which are mounted on a cross-bar (2) extending between limbs (4) which terminate in feet (6). The feet (6) lie between the bag (10) and the ground, so firmly anchoring the device, and hence the poles (14).



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FIG.1.

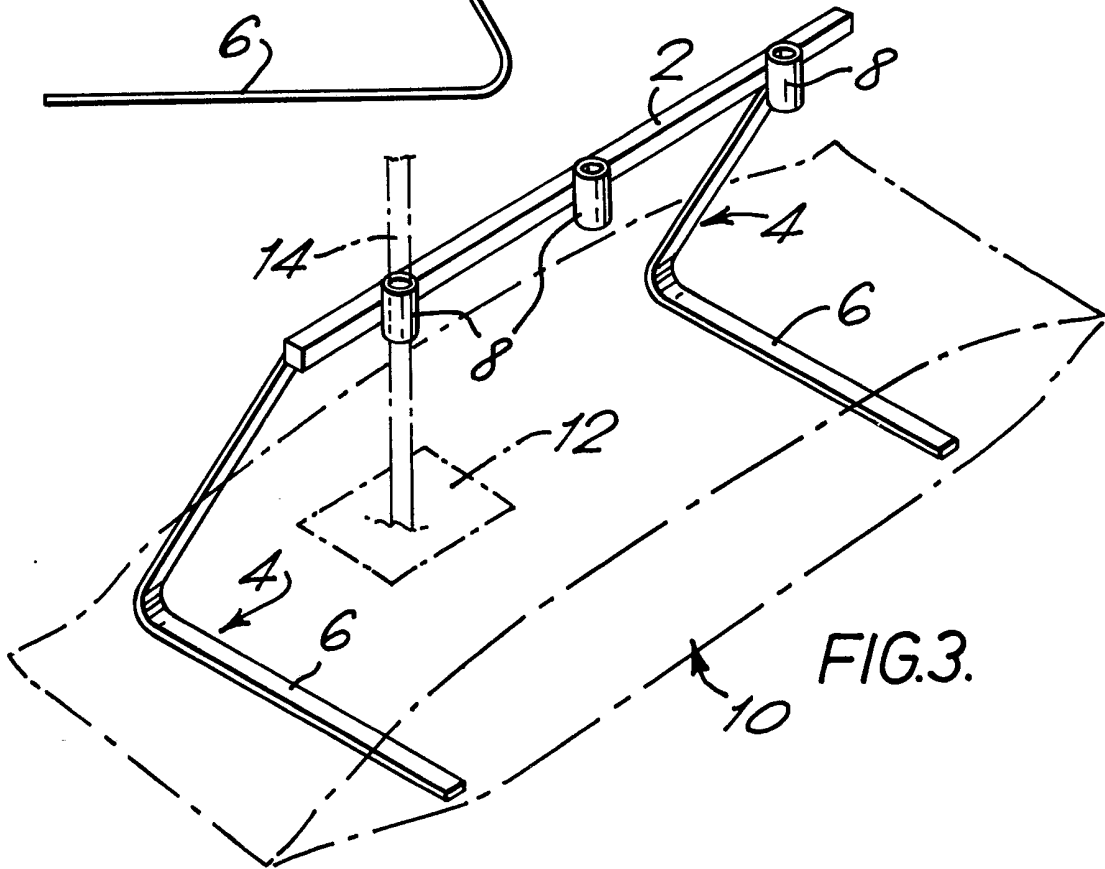
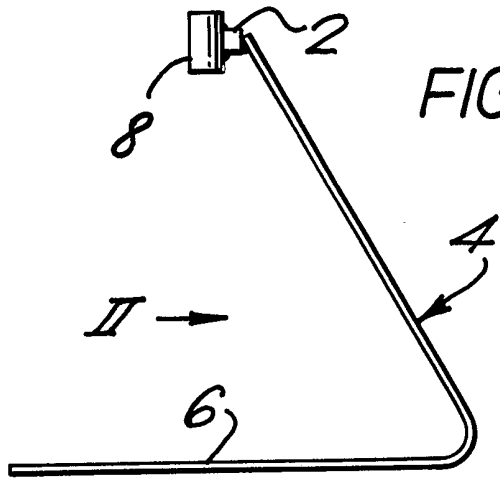
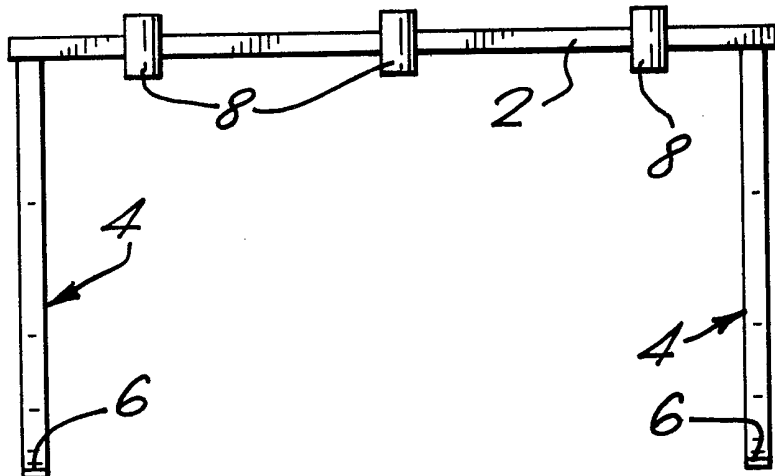


FIG.3.

FIG.2.



SPECIFICATION

A device for stabilising support members for plants

5 This invention relates to a device for stabilising support members for plants.

It has become very common for some plants, such as tomatoes, to be cultivated in a specially prepared growing medium confined in an elongate bag of plastics material. In use, part of the bag is torn away, exposing one or more areas of the growing medium into which, for example, a row of tomato seedlings is planted. An example of such a bag is available under the name "GRO-BAG".

Some varieties of tomato grow to considerable heights, and they need to be supported to prevent them from collapsing under their own weight. A frequently used technique is to support the plants by means of string suspended from hooks screwed into the structural members of a greenhouse in which the plants are cultivated. However, the weight of several tomato plants bearing fruit can be considerable, and consequently unacceptably high loads can be applied to the frame members of the greenhouse, causing them to sag or even break. Another technique is to support the plant by means of poles embedded in the growing medium. However, the specially prepared growing medium commonly used lacks firmness and the bags are shallow, with the consequence that supporting poles are not held sufficiently rigidly to support what may be a heavy plant.

According to the present invention, there is provided a device for stabilising support members for plants, the device comprising a base, adapted to be disposed between a container containing a growing medium and a surface on which the container rests, and retaining means connected to the base and disposed in use above the growing medium, the retaining means being adapted to receive a support member for supporting a plant growing in the growing medium.

When the device is intended to be used with a pre-packed growing medium confined in an elongate bag, there are preferably several retaining means mounted on a cross-bar extending parallel to and above the bag. The cross-bar is supported by limbs which terminate in horizontal feet, providing the base. Consequently, in a preferred assembly employing the present invention there is:

- i) the pre-packed growing medium;
- ii) a device as defined in the last paragraph, comprising a cross-bar extending parallel to and above the bag and provided with the retaining means, the cross-bar being supported on upwardly extending limbs which terminate in feet which constitute the base and are disposed between the bag and the surface

on which it rests; and

- iii) at least one support pole which is embedded in the growing medium and engaged by the retaining means to support it in an upright position.

70 The retaining means may comprise a cylindrical sleeve welded to the cross-bar. Alternatively, the retaining means may comprise openings provided in the cross-bar, in which case the cross-bar may comprise a channel-section disposed, in use, with the web vertical and the flanges disposed one above the other, the holes being provided in the flanges.

75 For a better understanding of the present invention, and to show how it may be carried into effect, reference will now be made, by way of example, to the accompanying drawings, in which:

80 *Figure 1* is a side view of a device for stabilising support members for plants;

85 *Figure 2* is a view taken in the direction of the arrow II in Fig. 1; and

Figure 3 is a perspective view of the device.

As shown in the Figures, the device comprises a cross-bar 2 which is supported at its ends by limbs 4 which terminate in feet 6. Retaining means in the form of cylindrical sleeves 8 are welded to the cross-bar 2.

Each limb 4, including its foot 6, is made from a continuous length of strip steel. The limbs 4 slope upwardly from the feet 6 such that the sleeves 8, when the feet 6 rest on horizontal ground, lie in a vertical plane which passes through, or close to, the mid-point of each foot 6.

In use, as shown in Fig. 3, an elongate bag 10 of pre-packed growing medium is laid over the feet 6. The distance between the feet 6 is slightly shorter than the length of the bag 10, so that the feet are disposed towards the ends of the bag 10. Portions of the top covering of the bag 10 are torn away leaving exposed areas of growing medium 12 in which, for example, seedlings can be planted. As shown in Fig. 3, a support pole 14 is embedded in the growing medium and passes through one of the sleeves 8. Although not shown, further support poles are similarly provided in the other two sleeves 8.

115 The weight of the growing medium in the bag 10 and, later, the weight of the plants growing in the growing medium hold the device very firmly. As a result, the sleeves 8 provide stable support for the support poles 14 and hence the cultivated plants. If desired, the sleeves 8 can be mounted adjustably on the cross-bar 2 so that they can be adapted to different spacings between plants. Furthermore, the sleeves 8 may be removably connected to the cross-bar 2 so that a number of sleeves appropriate to the number of required support poles 14 can be used.

CLAIMS

130 1. A device for stabilizing support mem-

bers for plants, the device comprising a base, adapted to be disposed between a container containing a growing medium and a surface on which the container rests, and supporting means connected to the base and disposed in use above the growing medium, the supporting means being adapted to engage a support member for supporting a plant growing in the growing medium.

10 2. A device as claimed in claim 1, in which the base comprises two spaced feet, in which a respective limb extends upwardly, in use, from each foot, the supporting means being connected to the upper ends of the
15 limbs.

3. A device as claimed in claim 2, in which the limbs are interconnected at their upper ends by a cross-bar on which the supporting means is mounted.

20 4. A device as claimed in claim 3, in which the supporting means comprises a plurality of supporting elements mounted on the cross-bar.

25 5. A device as claimed in claim 4, in which each supporting element has an aperture suitable for receiving a support member in the form of a pole.

30 6. A device as claimed in claim 5, in which each supporting element is a cylindrical sleeve.

35 7. A device as claimed in any one of claims 2 to 6, in which each limb and its respective foot are formed from a single length of material which is bent at the junction between the foot and the limb.

40 8. A device as claimed in claim 7, in which each limb and its respective foot are inclined to each other by an acute angle, whereby, in use, the supporting means is disposed perpendicularly above a line extending between respective points midway, or substantially midway, along the length of each foot.

45 9. A device as claimed in any one of the preceding claims in which the supporting means is displaceable with respect to and/or removable from the remainder of the device.

50 10. In combination, a container containing a growing medium, at least one support member for a plant growing in the growing medium, and a device in accordance with any one of the preceding claims, the base of the device lying between the container and a surface on which the container rests, and the
55 support member being engaged by the supporting means.

60 11. A combination as claimed in claim 10, in which the support member comprises a substantially upright pole, the lower end of which is embedded in the growing medium.

65 12. A combination as claimed in claim 10 or 11, in which the container comprises an elongate bag, and in which the base of the device comprises a pair of spaced feet disposed beneath the bag, one at each end

region of the bag.

70 13. A combination as claimed in claim 11, in which there is a plurality of support members embedded in the growing medium and independently engaged by the supporting means.

75 14. A device for stabilizing support members for plants substantially as described herein with reference to, and as shown in, the accompanying drawings.

80 15. In combination, a bag of growing medium, a plurality of support poles, and a stabilizing device substantially as described with reference to, and as shown in, the accompanying drawings.

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