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(71) Applicant *(for all designated States except US):* PETIT-JEAN & COMPANY (UK) LIMITED [GB/GB]; Teesside Industrial Estate, Dukes Way, Thornaby, Cleveland TS17 9LT (GB).

(72) Inventor; and

(75) Inventor/Applicant *(for US only):* GOLAY, Paul, Albert [FR/GB]; Petitjean & Company Limited, Teesside Industrial Estate, Dukes Way, Thornaby, Cleveland TS17 9LT (GB).

(74) Agent: BROOKES & MARTIN; High Holborn House, 52/54 High Holborn, London WC1V 6SE (GB).

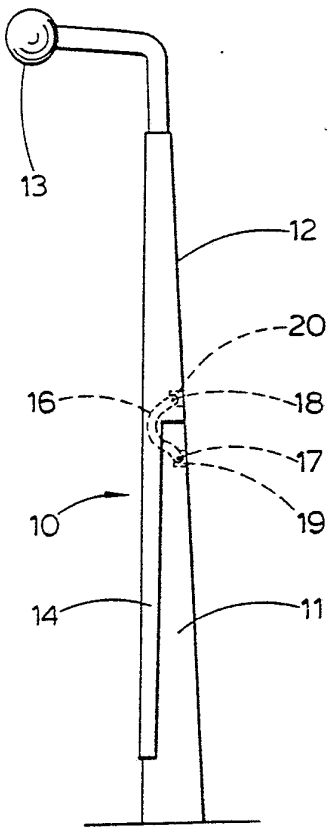
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(54) Title: COLUMNS

(57) Abstract

A column, for example, a lighting column (10) having a base section (11) and a tiltable section (12), the tiltable section being hinged adjacent the top of the base section by hinge means (16) within the base and tiltable section whereby, the tiltable section may be tilted from its normal upright position to a position whereby the upper end is adjacent the ground for maintenance of the lamp unit (13).



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TITLE: COLUMNS

The present invention relates to a column and particularly to that type of column having a base section and a tiltable section, the tiltable section being hinged adjacent the top of the base section. The provision of a tiltable section is normally for the purpose of facilitating the cleaning of the lamp or other unit carried at the top of the tiltable section. Such columns are particularly useful in situations where it would not be possible to clean the lamp or other unit at the top of the tiltable section by conventional means.

One of the problems with such columns has been that their appearance is not normally so elegant as normal columns which do not include a tiltable section.

The present invention provides a column having a base section and a tiltable section, the tiltable section being hinged adjacent the top of the base section

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intermediate its ends by hinge means whereby, when the tiltable section is in the normal upright position substantially colinear with the base section, the hinge means is entirely within the base and tiltable section.

Thus the hinge is not visible as in normal constructions and this makes for a more elegant column. Furthermore, the hinge will not be exposed to the weather and this further overcomes problems with the conventional hingeing arrangement.

The hinge means may preferably take the form of an arm member which is pivotally connected to the base section and pivotally connected to the tiltable section. The arm is preferably not straight. In a preferred arrangement there may be provided two similar arms arranged parallel to one another and side by side. This improves the structural integrity of the joint between the two sections.

The arm may take a form such that the tiltable section may be tilted from a position in which it is generally colinear with the base section in its normal position through approximately 180^{o} to a position in which it is parallel to and alongside the base section and upside down with respect to its normal position. Alternatively the arm may be arranged such that the tiltable section may be tilted from a position in which it is generally colinear with the base section in its normal

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position, and through an angle less than 180°, for example approximately 135° to a position in which the upper end of the tiltable section is adjacent the ground. In this case it is necessary to provide means for holding the tiltable section in such a position and this may be provided by means of a wire which extends from the lower end of the base section to the tiltable section.

When the tiltable section is upright in its normal position, the two sections preferably form a continuation of one another, that is, the two sections have the same cross section where they meet and, where applicable, have the same taper.

Preferred arrangements of the invention will now be described by way of example only and with reference to the accompanying drawings in which:

Figure 1 is a diagrammatic perspective view, partially in section, of a column according to the invention in its normal position,

Figure 2 is the column of Figure 1 shown in a second position in which the tiltable section has been pivoted through approximately 180°,

Figure 3 is an enlarged view of the joint between the base section and tiltable section of the column of Figure 1 with a modified arm, the position shown corresponding to Figure 1,

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Figure 4 is a view of the parts of Figure 3 but in a position corresponding to that of Figure 2, and,

Figure 5 is a diagrammatic perspective view of an alternative arrangement of column.

Referring to Figure 1 the column 10 comprises a base section 11 and a tiltable section 12. In the present embodiment the base section and tiltable section are each of the same cross section and are formed of folded sheet metal. The cross section is octagonal but other cross sections would of course be suitable.

The base section 11 is mounted uprightly in the ground and includes an access opening and door (not shown) including the normal control gear.

The tiltable section 12 carries adjacent its top end, in this case, a lamp unit 13 and downwardly depending from the joint between the base section 11 and tiltable section 12 is a tail section 14 of the tiltable section 12. The tail section 14 is of similar general cross section to the tiltable section 12 (although, of course, it is not complete) and is arranged to fit snugly alongside the base section 11 in the position shown in Figure 1. As the cross section is octagonal, the tail section 14 comprises five sides. The tail section 14 acts

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as a waterproof cover for part of the joint between the base section 11 and tiltable section 12, but where the joint is not covered by the tail section 14 the tiltable section 12 carries a weatherproof strip 20 of the same metal sheet welded thereto.

Adjacent the joint between the base section 11 and tiltable section 12, and within the two sections is mounted an arm 16 which is pivotally connected to both the base section 11 and tiltable section 12 by pivot pins 17, 18 mounted on suitable lugs 19,20 within the base section 11 and tiltable section 12 respectively. The arm 16 is not straight but curved as is clear from Figure 1.

The bottom end of the tail section 14 of the tiltable section 12 includes (not shown) means for mounting a wire 15 and means for locking this bottom end of the tail section 14 to the base section 11.

When it is desired to clean the lamp unit 13, the lower end of the tail section 14 is unlocked from the base section 11 and the tail section 14 is pulled away from the base section 11 thereby pivoting the tiltable section 12. Disengagement of the base section 11 and tiltable section 12 is facilitated by the strip 20 which acts as a pivot during the initial tilting. The tiltable section 12 is pivoted at a point, intermediate its ends, whereby it is generally counterbalanced but to control the pivotal

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movement of the tiltable section 12 the wire 15 is paid out. The pivoting of the tiltable section 12 continues until it reaches the position shown in Figure 2. It will be understood that to reach this position it is necessary for the arm 16 to pivot around the pin 17 in the base section 11 and for the tiltable section 12 to pivot around the pin 18. In this way the tiltable section is tilted to a position approximately 180° from its normal position whereby it is generally parallel to and alongside the base section 11 and upside down with respect to its normal position. The relative lengths of the parts are arranged such that in this position the lamp unit 13 is adjacent ground level and can be readily cleaned and serviced as required.

Moving the tiltable section 12 back to its normal position requires pulling on the wire 15 attached to the end of the tail section 14, the tiltable section 12 tilting about the pin 18 and the arm 16 pivoting about the pin 17 until the tiltable section 12 reaches the position shown in Figure 1.

It will be noticed that the hingeing arrangement is entirely enclosed within the base section 11 and the tiltable section 12 and this makes for a neat appearance. Furthermore, the pins and other parts of the hingeing arrangement are within the columns and therefore not subjected to weather and pollution which extends their life compared with the

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conventional arrangement of a simple pivot pin outside the two sections.

Figures 1 and 2 are generally diagrammatic and a generally similar arrangement is shown in Figure 3 and 4 in more detail. Figures 3 and 4 are vertical sections through the joint between the base section 11 and tiltable section 12. The same numbers have been used in Figures 3 and 4 for parts similar to those in Figures 1 and 2.

Thus the pins 17, 18 are mounted in the base and tiltable sections 11, 12 by means of support blocks 21, 22 welded to the inside of the respective sections and, although not clear from this drawing, the pivot pins 17, 18 protrude from each side of the support blocks 21, 22 thereby allowing the use of two identical parallel arms 16. This provides greater structural strength in the joint.

The arms 16 are a somewhat different shape to that shown in Figures 1 and 2 although still curved. The exact shape of the arm 16 is clear from the Figure.

It is also clear from Figures 3 and 4 that the upper end of the base section 11 is cut at an angle and there is a corresponding angle at the lower end of the tiltable section 12. Although not shown in this drawing there is provided an overlapping weather strip between the tiltable section and base section

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11 to prevent the ingress of water into the column. Figure 3 corresponds to the position shown in Figure 1 and Figure 4 corresponds to the position shown in Figure 2 (although they are of course mirror images of one another).

Figure 5 shows an alternative type of column. The hingeing arrangement is generally similar. The relative lengths of the base section 11 and tiltable section 12 are different (the base section 11 being shorter relative to that shown in Figures 1 and 2) so that it is not possible for the tiltable section 12 to rotate through approximately 180° without touching the ground. In this case the maximum pivoting of the tiltable section 12 is through approximately 135° and the tiltable section is restrained from further movement by the wire 15 which is fixed to the lower end of the base section 11. When not in use the wire 23 is retracted into a suitable aperture such as the aperture for the control gear in the base section 11 and is out of sight in normal use.

The invention is not restricted to the details of the foregoing example.

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CLAIMS

1. A column having a base section and a tiltable section, the tiltable section being hinged adjacent the top of the base section intermediate its ends by hinge means whereby, when the tiltable section is in the normal upright position substantially colinear with the base section, the hinge means is entirely within the base and tiltable section.

2. A column as claimed in claim 1 in which the hinge means comprises an arm member which is pivotally connected to the base section and pivotally connected to the tiltable section.

3. A column as claimed in claim 2 in which the arm member is not straight.

4. A column as claimed in claim 2 or claim 3 in which there are provided two arm members of similar construction arranged parallel to one another and side by side.

5. A column as claimed in any of claims 2 to 4 in which the arm member is of such a form that the tiltable section may be tilted from a position in which it is generally colinear with the base section in its normal position through approximately 180^{o} to a position in which it is parallel to and alongside the base section and upside down with respect to its normal position.

6. A column as claimed in any of claims 2 to 4 in which the arm member is arranged such that the tiltable section may be tilted from a position in

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which it is generally colinear with the base section in its normal position, and through an angle less than 180°, to a position in which the upper end of the tiltable section is adjacent the ground.

7. A column as claimed in claim 6 in which means is provided for holding the tiltable section in a position adjacent the ground.

8. A column as claimed in claim 7 in which the means for holding the tiltable section adjacent the ground comprises a wire which extends from the lower end of the base section to the tiltable section.

9. A column as claimed in any of claims 1 to 8 in which, when the tiltable section is upright in its normal position, the two sections form a continuation of one another whereby the two sections have the same cross-section where they meet.

10. A column as claimed in claim 1 substantially as hereinbefore described with reference to Figures 1 or 2 or as modified in accordance with Figure 3 and 4, or as modified in Figure 5.

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Fig. 2

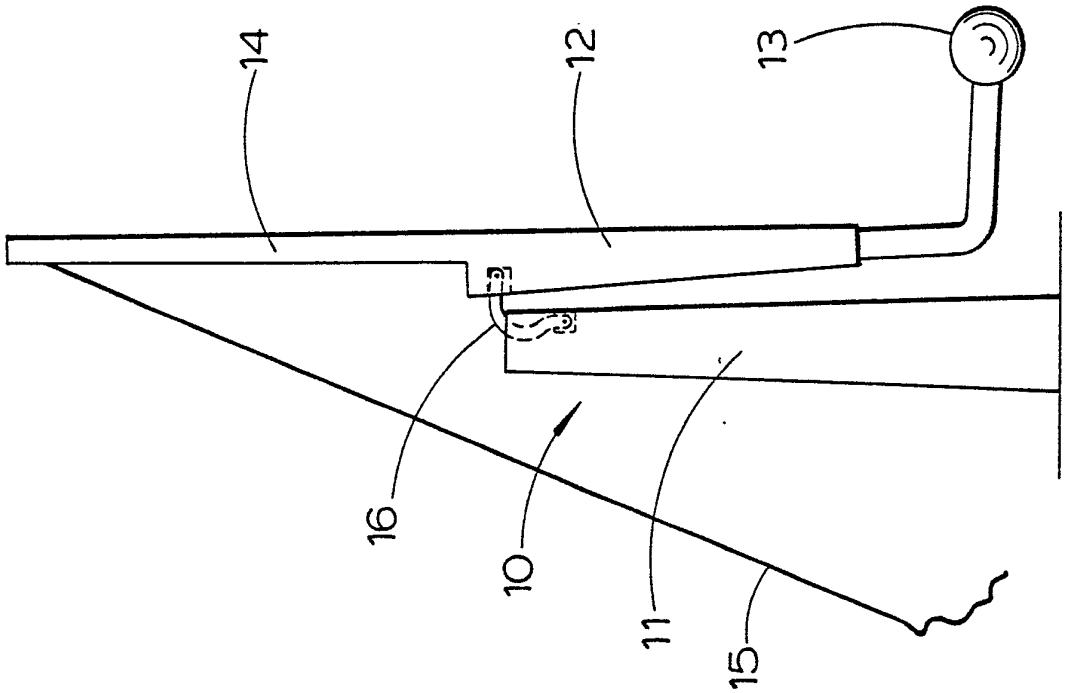
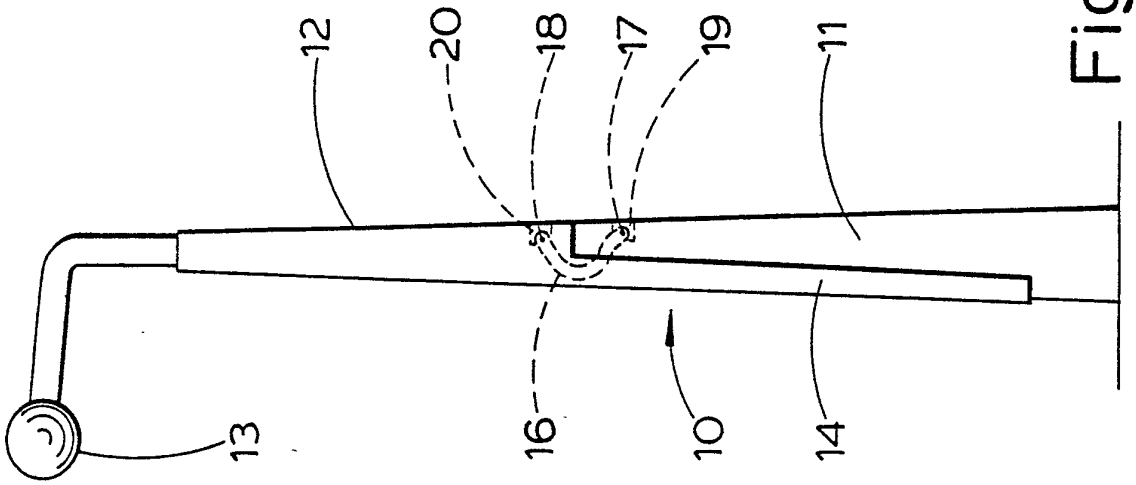


Fig. 1



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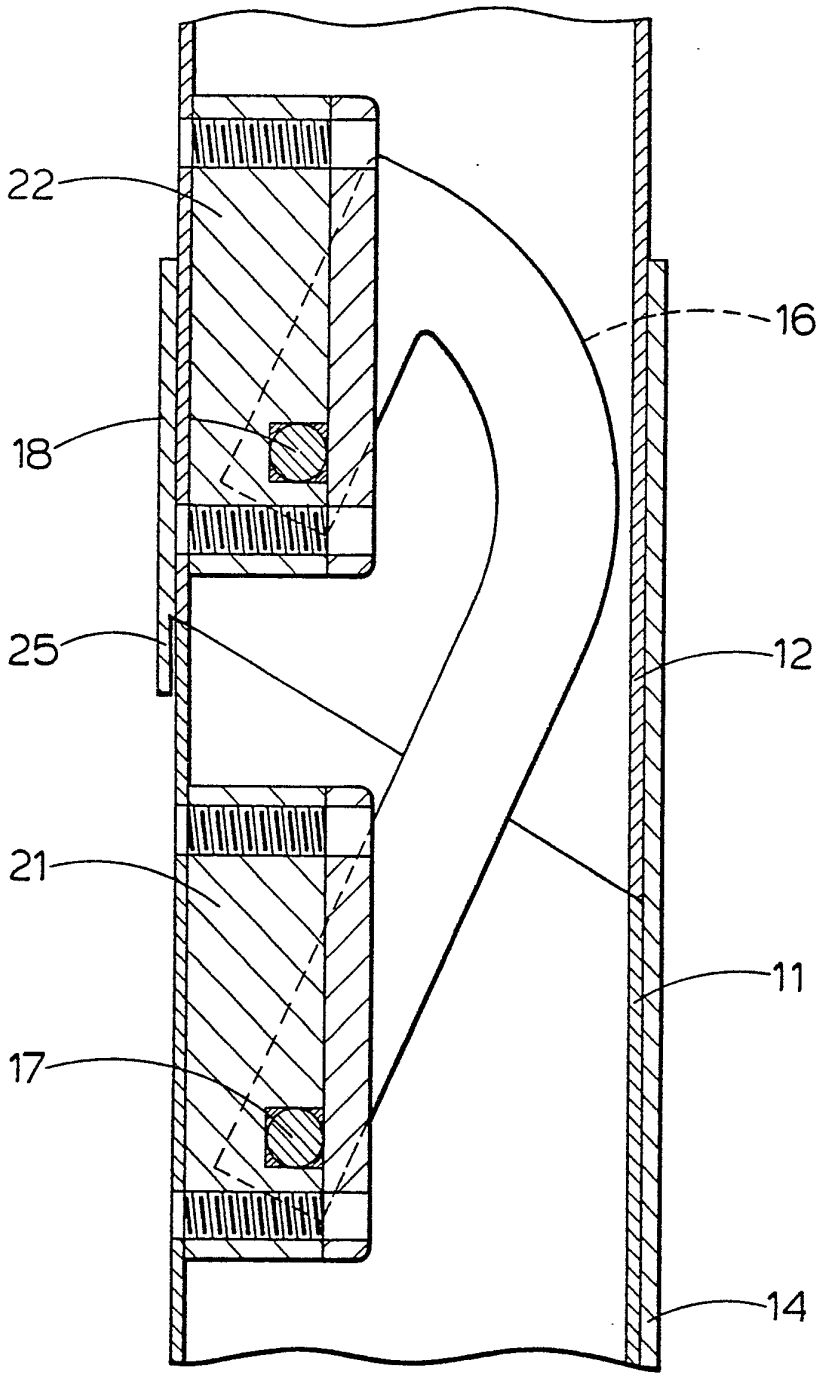


Fig. 3

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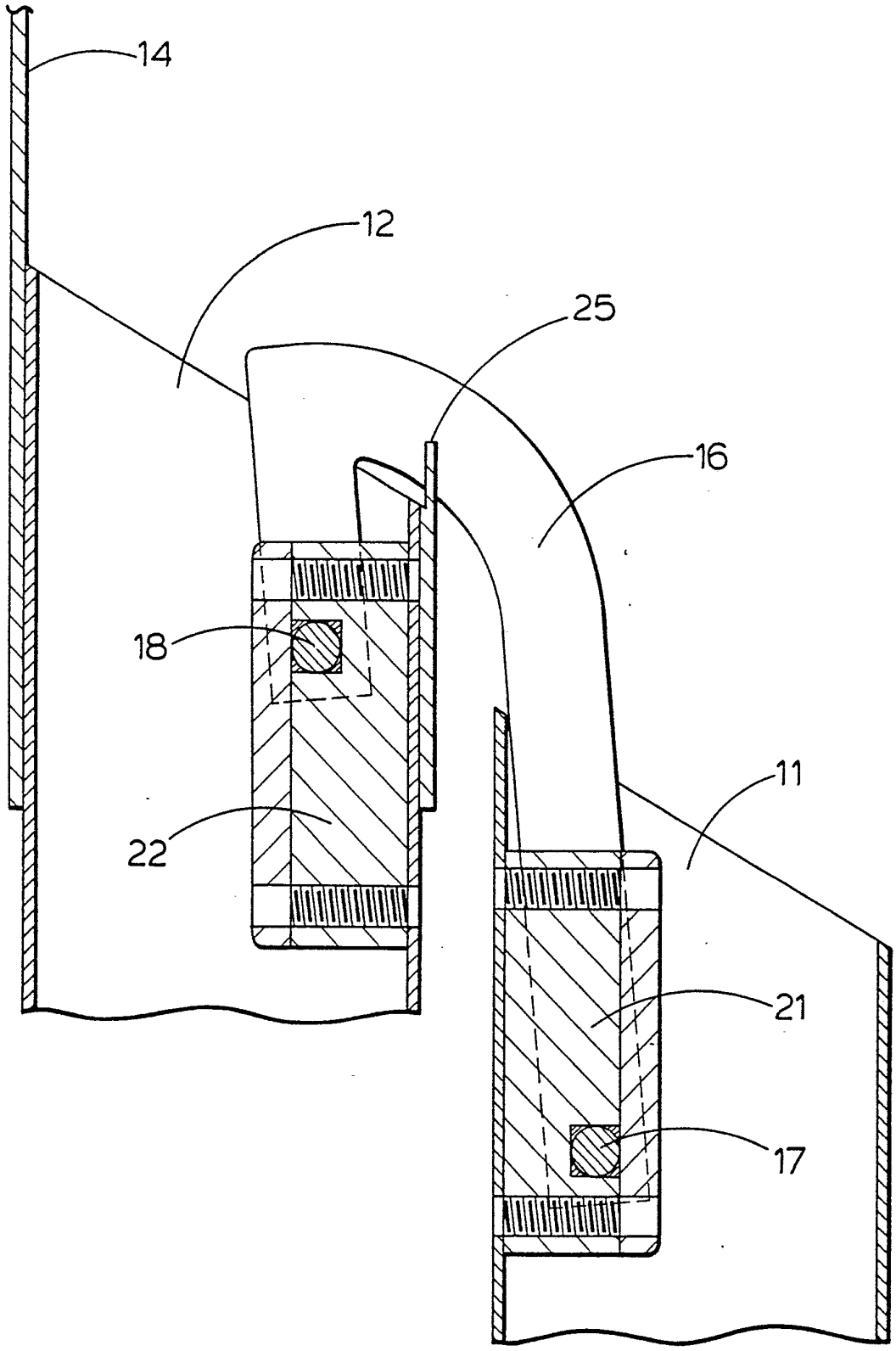


Fig. 4

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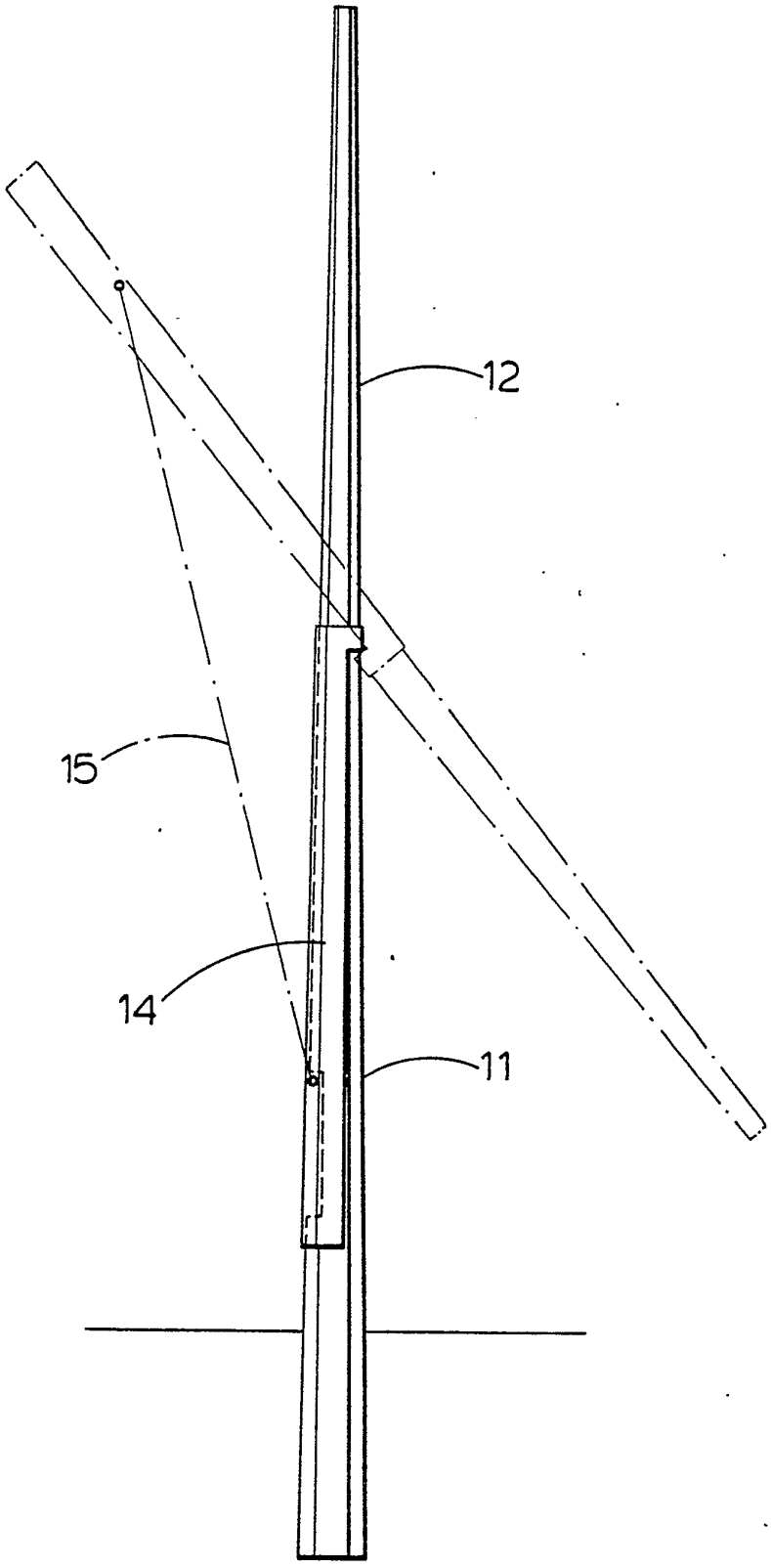


Fig. 5

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INTERNATIONAL SEARCH REPORT

International Application No PCT/GB 80/00146

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) [3]

According to International Patent Classification (IPC) or to both National Classification and IPC

Int. Cl.[3]: F 21 V 21/36; E 04 H 12/18; F 16 M 11/38

II. FIELDS SEARCHED

Minimum Documentation Searched [4]

Classification System	Classification Symbols
Int.Cl.[3]	E 04 H; F 21 V; A 45 F; F 16 M

Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched [5]

III. DOCUMENTS CONSIDERED TO SE RELEVANT [14]

Category *	Citation of Document, [16] with indication, where appropriate, of the relevant passages [17]	Relevant to Claim No. [18]
	US, A, 2645511, published July 14, 1953, see figures 1-3, Rutledge	1,6,7
	GB, A, 991963, published May 12, 1965, see figures 1,3, Holmes	1,2,5,9
	FR, A, 1250217, published November 28, 1960, see figure 6, S.E.R.U.R.	7,8

* Special categories of cited documents: [15]

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IV. CERTIFICATION

Date of the Actual Completion of the International Search [2]	Date of Mailing of this International Search Report [2]
December 15, 1980	December 23, 1980
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