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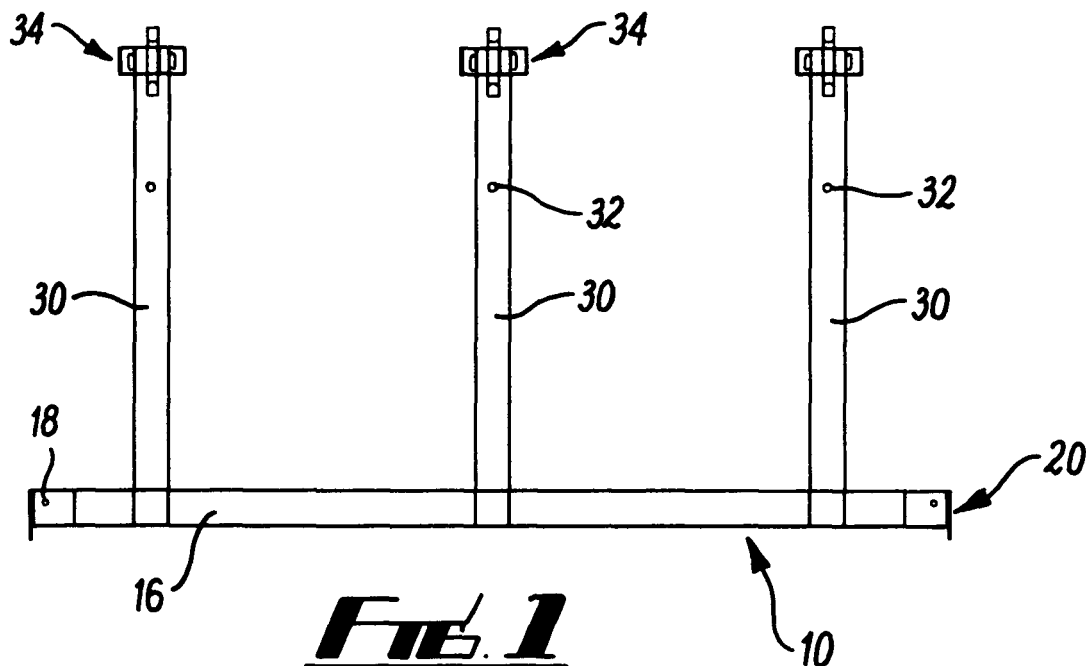
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(54) **Mounting assembly**

(57) A mounting assembly 10 for mounting a radiator 12 to be selectively pivoted forwards. The assembly including a transverse support part 16 mountable flush against a wall, with two or more longitudinal support parts 30 extending vertically

upwards from the part 16. Each part 30 mounts an engagement assembly 34 at its upper end which is selectively engageable with a top of a radiator. A bracket 20 is provided at each end of the strip 16, about which brackets 20 an end of a radiator 12 or a pipe connected thereto, can pivot.



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## Description

**[0001]** This invention concerns improvements in or relating to mounting assemblies, particularly but not exclusively mounting assemblies for central heating radiators, and also central heater radiator assemblies.

**[0002]** With central heating radiators, it is often required to remove a radiator from the wall to permit decoration therebehind. Rather than total removal, if possible it is generally preferable to pivot a radiator forwards so as to provide access therebehind.

**[0003]** According to the present invention there is provided a mounting assembly, the assembly including an elongate transverse support part mountable to a wall to extend substantially horizontally thereacross, a pair of support members provided on the transverse support part spaced from each other, each support member including a bracket member extending outwardly from the transverse support part and defining an arcuate upwardly open recess, which recess can supportingly rotatably receive any of an end of a central heating radiator, a connection to a central heating radiator, or a pipe connected to the end of a central heating radiator, the assembly also including at least two spaced elongate longitudinal support parts, each support part extending from the transverse support part, and being mountable to a wall to extend at least generally vertically upwards from the transverse support part, an engagement part being provided towards the upper end of each longitudinal support part, each engagement part being selectively engageable with a central heating radiator towards an upper part thereof, which radiator is supported by the bracket members, to retain the radiator in position adjacent the wall.

**[0004]** The engagement part may include an engagement member movable relative to the respective longitudinal support part, to be movable between a position engaging a radiator, and a position clear of the radiator to permit pivoting thereof. The engagement member may be slidably movable relative to the respective longitudinal support part.

**[0005]** The engagement part may also include a retention member extendable between a location towards the upper end of one of the longitudinal support parts, and a location towards an upper part of a central heating radiator to prevent pivoting of the radiator outwardly from a wall beyond a predetermined amount. The retention member may be in the form of a line means. The retention member may be selectively mountable to the longitudinal support part and/or the radiator, to enable selective unlimited pivoting of the radiator.

**[0006]** The transverse support part and/or longitudinal support parts may be formed of strips of material which are mountable substantially flush against a wall.

**[0007]** The longitudinal support parts may extend substantially perpendicularly relative to the transverse support parts. Two or three longitudinal support parts may be provided.

**[0008]** A lower end of each longitudinal support part

may be locatable in a channel defined by the elongate transverse support part.

**[0009]** The assembly may include a pair of mounting brackets which each mounting bracket defining a channel, with part of each of the bracket members locatable in the channel defined by a respective one of the mounting brackets. Ends of the transverse support part may each be locatable in the channel defined by a respective one of the mounting brackets.

**[0010]** The invention also provides a central heating radiator assembly, the assembly including a radiator and a mounting assembly according to any of the preceding seven paragraphs, with the mounting assembly being dimensioned to mount the radiator to a wall, with the bracket members receiving any of an end of the radiator, a connection to the radiator, or a pipe connected to the end of the radiator.

**[0011]** Embodiments of the present invention will now be described by way of example only with reference to the accompanying drawings in which: -

Fig 1 is a diagrammatic front view of a first mounting assembly according to the invention;

Fig 2 is a diagrammatic side view of the assembly of fig 1;

Fig 3 is a diagrammatic plan view of part of the assembly of fig 1;

Fig 4 is a diagrammatic front view of a further part of the assembly of fig 1;

Fig 5 is a side view of a component of the assembly of fig 1;

Fig 6 is a more detailed side view of an upper part of the assembly of fig 1 in use;

Fig 7 is a diagrammatic front view of a second mounting assembly according to the invention in use;

Fig 8 is a diagrammatic exploded front view of a third mounting assembly according to the invention;

Fig 9 is a diagrammatic front view of a part of the assembly of fig 8;

Fig 10 is a diagrammatic plan view of a further part of the assembly of fig 8; and

Fig 11 is a diagrammatic end view of a further part of the assembly of fig 8.

**[0012]** Figs 1 to 6 show a first mounting assembly 10 for mounting a radiator 12 against a wall 14, so as to permit the upper end of the radiator 12 to be selectively pivoted forwards when required, for instance during

cleaning or decorating.

**[0013]** The assembly 10 includes an elongate transverse support part in the form of a strip mountable substantially flush against a wall to extend horizontally thereacross. A plurality of holes 18 may be provided as required through the strip 16 to permit mounting on the wall.

**[0014]** A support member in the form of a bracket 20 is provided at each end of the strip 16. Each bracket 20 extends horizontally outwardly from the strip 16. Each bracket 20 includes a first spacer part 22 and a second shaped part 24 which defines a substantially arcuate upwardly open recess 26. The bracket 20 can support any of an end of the central heating radiator 12, a connection to the central heating radiator, or a pipe connected to the end of a central heating radiator 12.

**[0015]** Three longitudinal support parts in the form of strips 30 of metal extending upwardly from the horizontal strip 16 are provided. Holes 32 are provided through the strips 30 to permit mounting thereof flush against a wall 14. Any required pattern of holes 32 may be provided as appropriate.

**[0016]** An engagement assembly 34 is provided at the upper end of each strip 30. Each assembly 34 includes an engagement member 36 slidably movable in a vertically extending channel 38. The upper end of the engagement member 36 includes a horizontally extending finger 40 with a downwardly and outwardly pointing end 42, which end is selectively engageable with a bracket 44 on the back of the radiator 12 towards the top thereof, as is shown in fig 6. A smaller outwardly extending finger 46 is provided at the lower end of the engagement member 36 to prevent the member 36 being pulled out of the channel 38.

**[0017]** A hook member 48 is provided on a side end of each engagement assembly 34, and each member 48 defines an upwardly open recess 50. A retention member 52 in the form of a length of wire 53 with loops 54 at each end is engageable one loop 54 with the hook member 48 and the other loop 54 with a further hook member (not shown) on the radiator 12 adjacent the bracket 44. In normal usage the tension member 52 would extend between these two hook members, but the retention member 52 can be unhooked from either of these members if required.

**[0018]** Fig 7 shows a similar second mounting assembly 56 mounting a smaller radiator 58 on a wall. As the radiator 58 is smaller than the radiator 12, it is only necessary to provide two spaced vertical strips 30 extending from the strip 16, each strip 30 with a respective engagement assembly 34.

**[0019]** In use, the assemblies 10, 56 are provided, generally with a matching radiator of a corresponding size. The assemblies 10, 56 can be mounted to a wall as required using the holes 18, 38, and ensuring that the strip 16 is extending substantially horizontally.

**[0020]** A radiator can then be located in place with the radiator being supported by the brackets 20. The brackets 20 will engage with any of an end of the radiator 12,

58, a connection thereto, or a pipe connected to the end of all other radiators 12, 58. The radiator 12, 58 can be pivoted rearwardly and the engagement members 36 slid into position to engage with the brackets 44.

5 **[0021]** To gain access behind the radiators 12, 58, the engagement members 36 are slid upwardly, and the radiator 12, 58 can be pivoted forwards. The provision of the retention member 52 extending between the hook members 48 on the radiator and engagement assembly 34 prevent a radiator 12, 58 from pivoting forwards beyond a predetermined amount, thereby preventing the danger of the radiator 12, 58 falling on a person or against another object in the floor. If it is required to pivot the radiator further forwards, for instance to permit decoration or thorough cleaning, then the retention member 52 can readily be unhooked from one or both of the hook members.

10 **[0022]** Figs 8 to 11 show a further similar mounting assembly 60, with the assembly 60 being illustrated in a disassembled condition. The assembly 60 includes an elongate transverse support part 62, and two discrete longitudinal support parts 64. Two channels 66 are defined by respective raised portions in the transverse support part 62 as is best seen in Fig 10. In an assembled condition, a narrow lower end portion 68 of each longitudinal support part 64 locates in a respective one of the channels 66. An engagement assembly 70 is provided at the upper end of each longitudinal support part 64.

20 **[0023]** Each engagement assembly 70 includes an engagement member 72 slidably moveable in a horizontal direction indicated by the arrows X in a horizontally extending channel. The engagement member 72 is selectively engageable with a bracket on the back of the radiator 12.

30 **[0024]** A bracket 74 is provided for each end of the transverse support part 62. Each bracket 74 includes a shallow n shape member 76 extending from a mounting plate 78, to define a channel 80 therebetween. Each end of the support part 62 is welded in a respective one of the channels 80. A bracket member 20 can also be slid into each channel 80, as is shown by the arrows Y. Mounting holes 82 are provided through the support parts 62 and 64, and the mounting plate 78 to permit mounting of the assembly 60 to a wall.

40 **[0025]** The assembly 60 can thus be readily disassembled to permit compact packaging, and then assembled in location when required.

45 **[0026]** There are thus described mounting assemblies for a radiator which readily permit the radiator to be pivoted forwards as required. The arrangement of the horizontal strip with the vertical strips extending therefrom renders it a very straightforward task to fix assemblies according to the invention to a wall in a required position and to a correct alignment. Otherwise, with separate unconnected components it can be relatively difficult and time consuming to mount such an assembly with the different components in a correct relative position and alignment. With the present invention, radiators and mounting

assemblies can readily be supplied together such that a mounting assembly of a correct size and configuration is provided for the radiator.

**[0027]** Various other modifications may be made without departing from the scope of the invention. For instance the parts of the assembly mountable to the wall may take a different form, shape or size dependant on the radiator to be mounted. The engagement part may take a different form. It may not be necessary to provide a retention member, or this may take a different form. The engagement part could be movable other than by sliding.

**[0028]** Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinafter referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

### Claims

1. A mounting assembly (10), the assembly including an elongate transverse support part (16, 62) mountable to a wall to extend substantially horizontally thereacross, a pair of support members (20, 74) provided on the transverse support part spaced from each other, each support member including a bracket member (20) extending outwardly from the transverse support part and defining an arcuate upwardly open recess (26), which recess can supportingly rotatably receive any of an end of a central heating radiator (12, 58), a connection to a central heating radiator, or a pipe connected to the end of a central heating radiator, the assembly also including at least two spaced elongate longitudinal support parts (30, 64), each support part extending from the transverse support part (16, 62), and being mountable to a wall to extend at least generally vertically upwards from the transverse support part, an engagement part (34, 70) being provided towards the upper end of each longitudinal support part (30, 64), each engagement part (34, 70) being selectively engageable with a central heating radiator (12, 58) towards an upper part thereof, which radiator is supported by the bracket members (20), to retain the radiator (12, 58) in position adjacent the wall.
2. A mounting assembly according to claim 1, **characterised in that** the engagement part includes an engagement member (36, 72) movable relative to the respective longitudinal support part, to be movable between a position engaging a radiator, and a position clear of the radiator to permit pivoting thereof.
3. A mounting assembly according to claim 2, **characterised in that** the engagement member (36, 72) is slidably movable relative to the respective longitudinal support part.
4. A mounting assembly according to any of the preceding claims, **characterised in that** the engagement part (34, 70) also includes a retention member (52) extendable between a location towards the upper end of one of the longitudinal support parts (30, 64), and a location towards an upper part of a central heating radiator (12, 58) to prevent pivoting of the radiator outwardly from a wall beyond a predetermined amount.
5. A mounting assembly according to claim 4, **characterised in that** the retention member is in the form of a line means (53).
6. A mounting assembly according to claims 4 or 5, **characterised in that** the retention member (53) is selectively mountable to the longitudinal support part and/or the radiator, to enable selective unlimited pivoting of the radiator.
7. A mounting assembly according to any of the preceding claims, **characterised in that** the transverse support part (16, 62) and/or longitudinal support parts (30, 64) are formed of strips of material which are mountable substantially flush against a wall.
8. A mounting assembly according to any of the preceding claims, in which the longitudinal support parts (30, 64) extend substantially perpendicularly relative to the transverse support parts (16, 62).
9. A mounting assembly according to any of the preceding claims, **characterised in that** two longitudinal support parts are provided.
10. A mounting assembly according to any of claims 1 to 8, **characterised in that** three longitudinal support parts are provided.
11. A mounting assembly according to any of the preceding claims, **characterised in that** a lower end of each longitudinal support part is locatable in a channel (66) defined by the elongate transverse support part.
12. A mounting assembly according to any of the preceding claims **characterised in that** the assembly includes a pair of mounting brackets (74), with each bracket defining a channel (80) with part of each of the bracket members locatable in the channel defined by a respective one of the mounting brackets.
13. A mounting assembly according to claim 12, **characterised in that** ends of the transverse support part 62 are locatable in the channel (80) defined by a

respective one of the mounting brackets (74).

14. A central heating radiator assembly, the assembly including a radiator and a mounting assembly according to any of the preceding claims, with the mounting assembly being dimensioned to mount the radiator to a wall, with the bracket members receiving any of an end of the radiator, a connection to the radiator, or a pipe connected to the end of the radiator.

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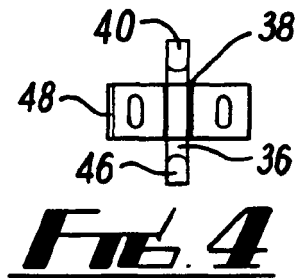
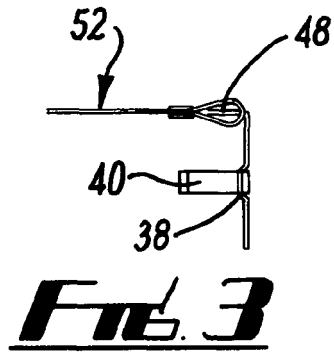
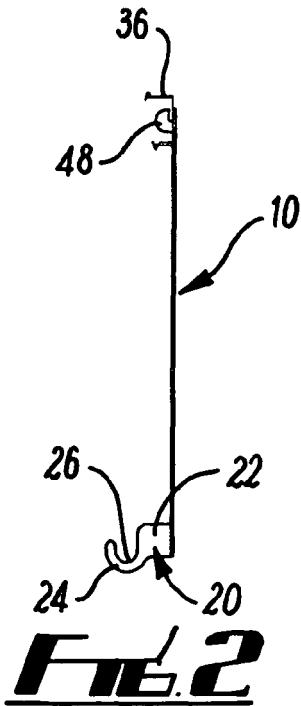
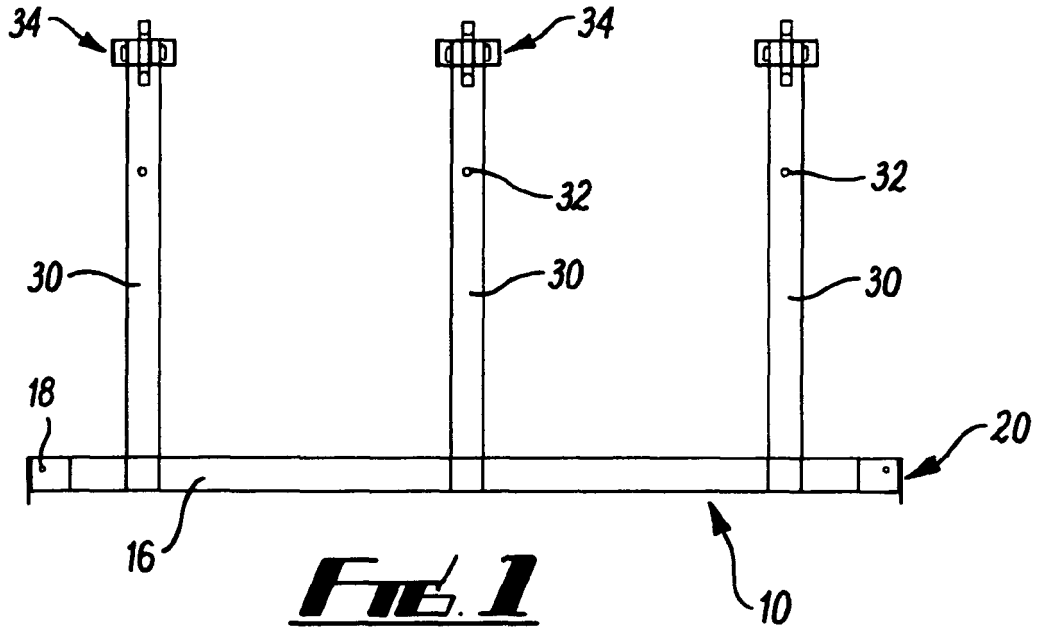
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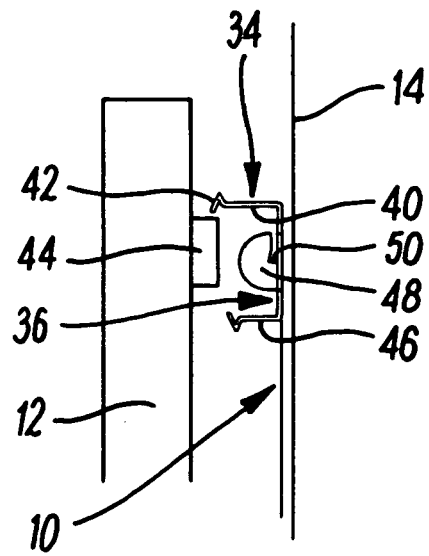
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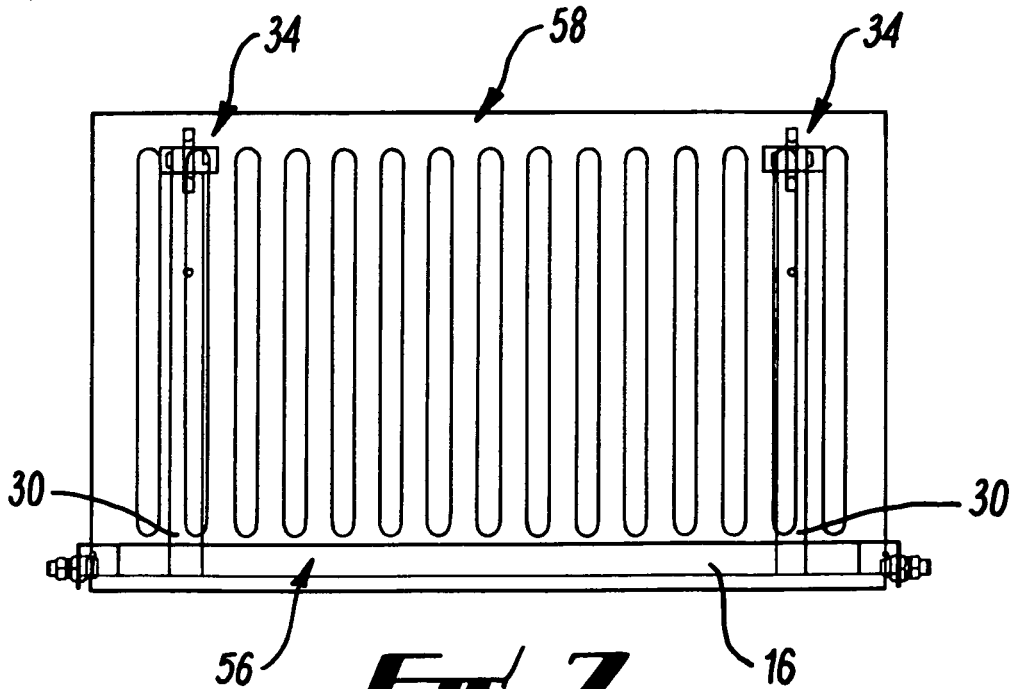
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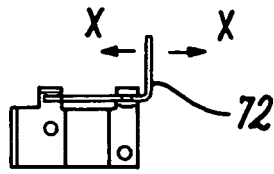


**FIG. 6**

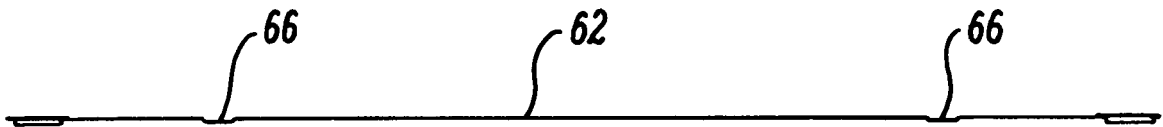


**FIG. 7**

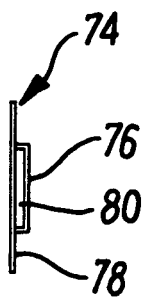




**FIG. 9**



**FIG. 10**



**FIG. 11**



EUROPEAN SEARCH REPORT

Application Number  
EP 09 25 0637

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	BE 837 585 A1 (D GREGOROVIC) 3 May 1976 (1976-05-03) * page 4 - page 7; figures 10-12 * -----	1	INV. F24D19/02
A	GB 2 404 165 A (EDWARDS JAMES [GB]) 26 January 2005 (2005-01-26) * the whole document * -----	1	
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A	GB 2 308 882 A (MASON WILLIAM [GB]) 9 July 1997 (1997-07-09) * the whole document * -----	4-6	
A	EP 1 010 950 A (TURAD B V [NL]) 21 June 2000 (2000-06-21) * the whole document * -----	4-6	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC) F24D
Place of search Munich		Date of completion of the search 10 July 2009	Examiner Arndt, Markus
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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