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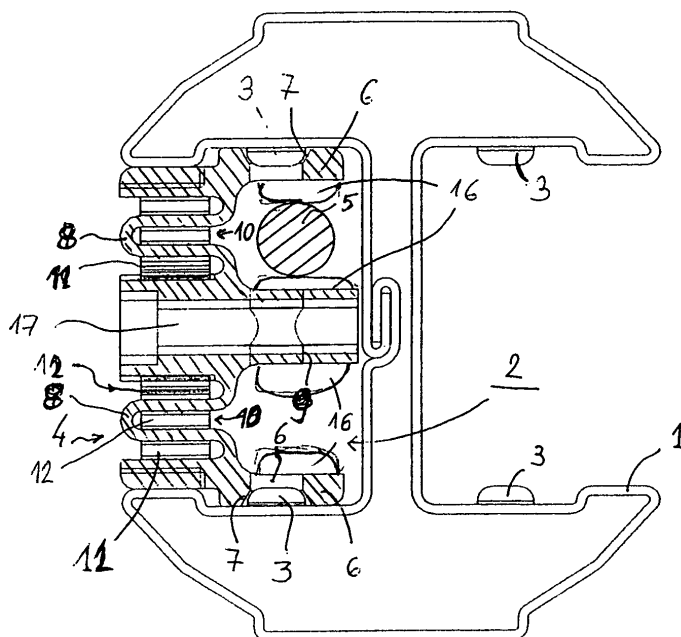
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(54) **Pole with a fastening element for a wire fence**

(57) Pole (1) with a fastening element (4) for a wire fence (5) is conceived in a way that said pole (1) comprises at least one longitudinal groove (2), on at least one lateral side of which there are equidistantly arranged projections (3), wherein in each groove (2) there is at least one fastening element (4) of an optional wire fence (5), wherein each fastening element (4) is formed as a profile having an approximate cross-section in the shape of the letter E and transversal legs (6) of said element (4) are intended to lean on lateral surfaces of said groove (2)

and are formed as bearings (7) complementarily arranged with projections (3) on lateral surfaces of said grooves (2) on said pole (1). At least one connecting leg (8) of each fastening element (4) connecting each one transversal leg (6) and said central transversal leg (9) is formed as a meander and with an elastic wall, so that in slots (10) in the area of said connecting leg (8) there is a latching insert (11) shaped like a comb that fills in said slots (10) with its free legs (12) and is intended to be removed only with an adequate means.



Sl. 2

Description

Subject of Invention

[0001] The subject of the present invention is a pole with a fastening element for a wire fence.

Technical Problem

[0002] A technical problem solved by the present invention is how to design such pole with a fastening element for a wire fence that would allow for a quick and simple arrangement of a wire fence, wherein the fastening element would compensate for relatively large expected tolerances in setting up poles with respect to the size of an individual wire fence element and for fastening by means of a special tool and a fixing element adapted to said tool with the aim that a lack of such tool would render it impossible to install and even more importantly disassemble individual wire fence elements without causing considerable and permanent damage on poles, fastening elements and fence elements.

Prior Art

[0003] Wire fences of the type with poles being of a simple, multiside, preferably rectangular shape, with wire fence elements consisting of upright, wire elements curved at several spots and of transversal wire sections running along vertical sections are known. Edge upright sections of fence elements are intended for a removable fastening on poles. If need may be, intermediate poles are also provided. All said connections share a common characteristic: they are of a screw type that need special large metal washers that partly embrace fence wires. Screws are conventional.

[0004] All solutions share a common disadvantage, namely all such screw connections may be disassembled by using a conventional hand tool, i.e. keys and/or screw drivers quickly and without any special skills. Such solution does not prevent unauthorised persons to destroy the fence with the purpose of unauthorised access and theft.

[0005] There is a need for a pole with a fastening element for a wire fence that would provide for an incomparably higher level of security and protection against access of unauthorised persons.

[0006] A further need is a quicker and simpler installation in order to meet a more favourable price on the market.

Solution to the Technical Problem

[0007] The described technical problem is solved by a pole with a fastening element for wire fences of the invention, the characteristic of which lies in that it comprises grooves with positioning projections and an optional number of fastening elements in said grooves, said fas-

tening elements being positioned at selected spots defined by positioning projections, wherein fastening elements comprise relatively large spaces for edge wire fence sections that allow for dimension deviations in setting up poles, and most importantly, said fastening elements comprise spaces for latching inserts that snap fit into fastening elements in selected locations including edge wire fence sections, wherein said latching inserts are insertable and removable only by a special tool. Each disassembly without use of a special tool causes damage on the elements of the assembly of the invention, often irreparable damage.

[0008] The invention will now be described in more detail in the continuation by way of an embodiment and the enclosed drawings, which show

Fig. 1 perspective view of a pole with a fastening element and part of a wire fence;

Fig. 2 cross-section of same along the line II-II from Fig. 1.

[0009] A pole **1** has an optional cross section having at least one longitudinal groove **2**, on at least one lateral side of which there are equidistantly arranged projections **3**. The number of longitudinal grooves **2** and their mutual angular arrangement within said pole **1** depends on the number of wire fences a pole should connect and on their mutual ground floor angular arrangement. Said projections **3** are preferably hemispheric.

[0010] Each groove **2** comprises at least one fastening element **4** of a wire fence **5** that is not subject of the present invention.

[0011] Said fastening element **4** is formed as a profile having an approximate cross-section in the shape of the letter E. Transversal legs **6** of said element **4** intended to lean on lateral surfaces of said groove **2** are formed as bearings **7** complementarily arranged with projections **3** on lateral surfaces of said grooves **2** on said pole **1**. In this way each fastening element **4** is positionable on an optional place within said groove **2** with respect to complementary co-operation of projections **3** and bearings **7**.

[0012] Connecting legs **8** of each fastening element **4** each connect one transversal leg **6** and the central transversal leg **9**. At least one connecting leg **8** is formed as a meander and with an elastic wall. The elasticity of the wall allows for the approximation of both transversal legs **6** in so much that said fastening element **4** is insertable into said groove **2** anywhere with respect to the positions of said projections **3** that are supposed to be in said bearings **7**, when said fastening element **4** is properly positioned. Each connecting leg **8** is preferably formed as a U-profile connected with said transversal leg **6** and said central transversal leg **9** with its free ends.

[0013] In slots **10** of a meander shaped connecting leg **8** there is a latching insert **11** shaped like a comb that fills in said slots **10** with its free legs **12**, with which said fastening element **4** is fixed in said groove **2**. Said free leg **12** of said latch insert **11** comprises at least one snap

fitting **13** engaging with said complementary element **14** on said fastening element **4** in a way that said snap fitting **13** cannot be removed in mutual snap position without use of a special tool and without damaging said fastening element **4** and said snap fitting **13**, wherein an act of vandalism would take much time and skill. Said free leg **12** lies opposite said snap fitting **13** and has a chamfering **15** so that a special tool may be used to elastically bend said free leg **12** in the area of said chamfering **15** so that said snap fitting **13** deflects from said complementary element **14**, which makes it possible to remove said latching insert **11** from said slot **10**. It goes without saying that said chamfering **15** is also/or made on the neighbouring connecting leg **8**. The mentioned special tool is not subject of the present invention.

[0014] Said snap fitting **13** and said complementary element **14** are preferably conceived as a tooth and a tooth bearing, wherein they are located both in said fastening element **4** and in said latching insert **11**, which makes them very difficult to reach with any inadequate means to release their connection.

[0015] As already described above, a special tool is intended to position and remove said snap fitting **12** from said fastening element **4**, said tool being only available for authorised persons.

[0016] On neighbouring surfaces of each transversal leg **6** and transversal leg **9** of said fastening element **4** there are elastic springs **16** to embrace said wire fence **5**, resulting in no backlash between the grip of said fence **5** in said fastening element **4** despite expected relatively large possible tolerances of the diameter of a pole of said wire fence **5**, extensions due to changes in temperature and assembling tolerances.

[0017] Said transversal leg **9** may have at least one central hole **17** for a possible screw connection of said element **4** directly to an optional background, e.g. to a wall and due to a smaller consumption of material.

[0018] Said pole **1** is preferably made of sheet metal into a hollow profile, wherein said fastening element **4** and said latching insert **11** are made of plastics by known technological methods.

[0019] It is understandable that the invention may be carried out in other embodiments not covered by the above description without circumventing the essence of the invention defined in the appended claims.

Claims

1. Pole (**1**) with a fastening element (**4**) for a wire fence, wherein said pole (**1**) is formed by an optional cross-section and comprises at least one longitudinal groove (**2**), **characterised in that** on at least one lateral side of said groove (**2**) there are equidistantly arranged projections (**3**), preferably hemispherical, wherein in each groove (**2**) there is at least one fastening element (**4**) of an optional wire fence (**5**), wherein each fastening element (**4**) is formed as a

profile having an approximate cross-section in the shape of the letter E and transversal legs (**6**) of said element (**4**) are intended to lean on lateral surfaces of said groove (**2**) and are formed as bearings (**7**) complementarily arranged with projections (**3**) on lateral surfaces of said grooves (**2**) on said pole (**1**), wherein at least one connecting leg (**8**) of each fastening element (**4**) connecting each one transversal leg (**5**) and said central transversal leg (**8**) is formed as a meander and with an elastic wall, so that in slots (**10**) in the area of said transversal leg (**9**) there is a latching insert (**11**) shaped like a comb that fills in said slots (**10**) with its free legs (**12**) and is intended to be removed only with an adequate means.

2. Pole (**1**) with a fastening element (**4**) for a wire fence as claimed in Claim 1, **characterised in that** the elasticity of the wall of said connecting legs (**8**) is such to allow for the approximation of both transversal legs (**6**) in so much that said fastening element (**4**) is insertable into said groove (**2**) anywhere with respect to the positions of said projections (**3**) that are supposed to be in said bearings (**7**), when said fastening element (**4**) is properly positioned.

3. Pole (**1**) with a fastening element (**4**) for a wire fence as claimed in Claims 1 and 2, **characterised in that** said connecting leg (**8**) is preferably shaped as a U-profile connected with said transversal leg (**6**) and said central transversal leg (**9**) with its free ends.

4. Pole (**1**) with a fastening element (**4**) for a wire fence as claimed in Claims 1 to 3, **characterised in that** at least one free leg (**12**) of a latch insert (**11**) comprises at least one snap fitting (**13**) engaging with said complementary element (**14**) on said fastening element (**4**) in a way that said snap fitting (**13**) cannot be removed in mutual snap position without use of a special tool and without damaging said fastening element (**4**) and said snap fitting (**13**).

5. Pole (**1**) with a fastening element (**4**) for a wire fence as claimed in Claims 1 to 4, **characterised in that** said snap fitting (**13**) and said complementary element (**14**) are preferably conceived as a tooth and a tooth bearing, wherein they are located both in said fastening element (**4**) and said latch insert (**11**), which makes them very difficult to reach with any inadequate means to release their connection.

6. Pole (**1**) with a fastening element (**4**) for a wire fence as claimed in Claims 1 to 5, **characterised in that** said free leg **12** lies opposite said snap fitting (**13**) and has a chamfering (**15**), or rather said chamfering (**15**) is also/or made on the neighbouring connecting leg (**8**).

7. Pole (**1**) with a fastening element (**4**) for a wire fence

as claimed in Claims 1 to 5, **characterised in that** on neighbouring surfaces of each transversal leg **(6)** and transversal leg **(9)** of said fastening element **(4)** there are elastic springs **(16)** to embrace said wire fence **(5)**.

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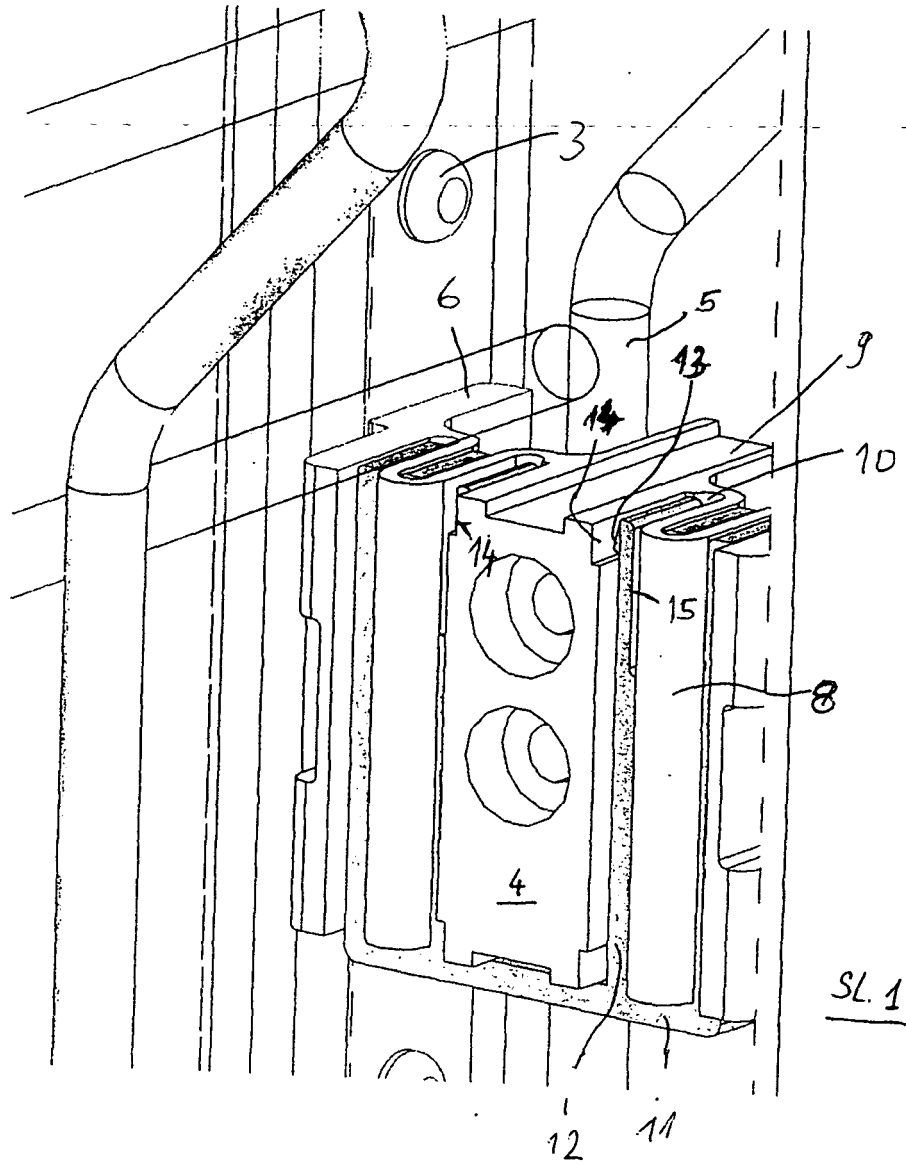
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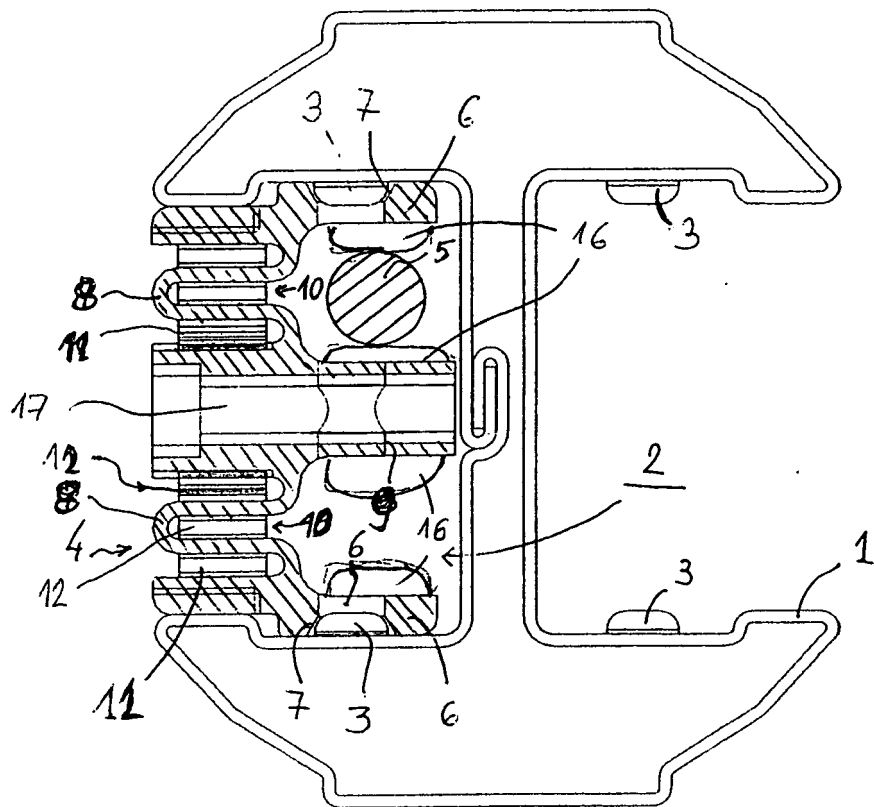
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EUROPEAN SEARCH REPORT

Application Number
EP 09 46 8003

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	GB 2 276 401 A (S M CERRAMIENTO [ES]) 28 September 1994 (1994-09-28) * page 6, line 18 - page 8, line 11; figures *	1	INV. E04H17/16
A	GB 2 414 034 A (FELL JOHN [GB]; FELL JOHN [GB]) 16 November 2005 (2005-11-16) * the whole document *	1	
A	GB 2 322 881 A (SGB SERVICES PLC [GB]) 9 September 1998 (1998-09-09) * the whole document *	1	
A	EP 0 443 441 A (ADERHOLD HERMANN ADRONIT WERK [DE] ADRONIT VERWALTUNGS GMBH & CO [DE]) 28 August 1991 (1991-08-28) * the whole document *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			E04H
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		28 September 2009	Hellberg, Jan
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
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 46 8003

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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28-09-2009

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2276401	A	28-09-1994	NONE	
GB 2414034	A	16-11-2005	NONE	
GB 2322881	A	09-09-1998	NONE	
EP 0443441	A	28-08-1991	AT 102680 T	15-03-1994
			DE 4005160 A1	22-08-1991
			DE 59101122 D1	14-04-1994
			DK 0443441 T3	05-04-1994
			ES 2050465 T3	16-05-1994