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### (54) Protector capsule for reinforcing rods

(57) Multidimensional and regulable protector capsule for civil construction iron rods, made from any pol-

ymers, used to cover iron rods in order to protect workers from body injuries, in accordance with international rules.

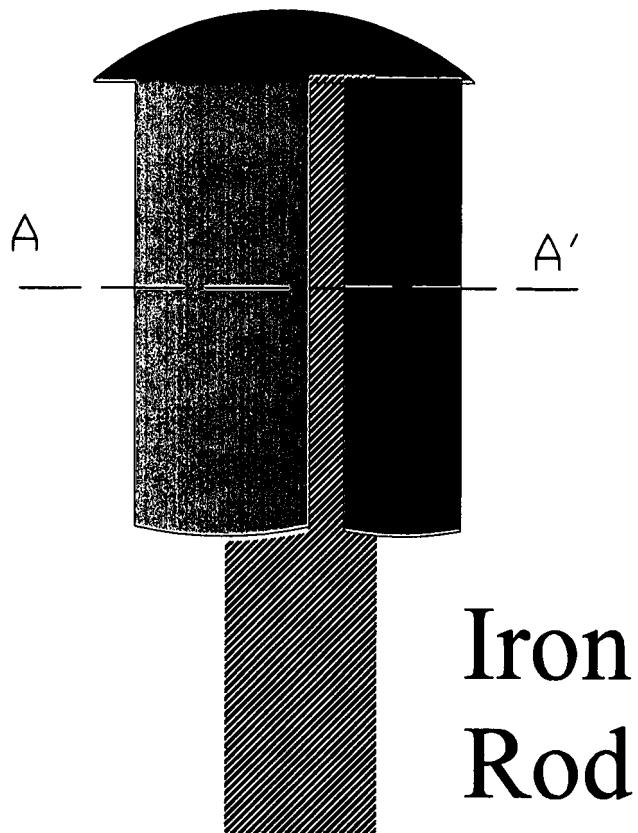


FIG 1

## Description

**[0001]** The iron rods components should, in accordance to the international rules, be maintained protected during all the period of construction against workers corporal injuries until the iron remains covered by the concrete.

**[0002]** That's why the most important international safety rules recommend and impose a protection which can, efficiently cover the iron rod.

**[0003]** To assure that protection it's usually to use protectors which are adaptable for no more that 3 or 4 diameters. When plastic parts are used they, are not universal and they don't respect all diameters measure.

**[0004]** With this invention we can use any kind of material (most plastic or recycled plastic) giving it the possibility of joining the parts(Fig 3 -4 -5) one to other with a single and light finger pressure giving to the parts joined the diameter we want adjustable to the iron rod( Fig 2). From those two pieces one is composed by a capsule with a cover form, and the other is only an involvement piece to fix the final capsule( Fig 1-3).

**[0005]** That way we can get with this invention a universal protection piece which can involve all the used iron diameters.

**[0006]** The dismantling and recuperation of this capsule (formed by the assembling of two pieces) is made pulling it by the top and afterwards the two pieces are pulled in opposite directions (Fig 6) in order to separate and recuperate them like is possible to check in the figure where the parts (after the first picture) are shown, for convenience, without the up round protection.

## Index

### [0007]

Fig 1 - Protector capsule in assembling phase

Fig 2 -Cut

Fig 3 - Protector capsule in assembling phase with  
two different pieces.

Fig 4 -Adjust phase

Fig 5 -Compressing phase

Fig 6 -Disassembling

Fig 7 -Aerial view

is **characterised in that** because they are formed from two pieces (Fig 1) which allow, because of his indented configuration (Fig 5 and 2), that only one capsule protector can be used for all rod iron diameters; because they are assembled from two pieces and because of his design they can be assembled and compressed in order to guarantee multidimensional keeping the iron rod protected, fixed and involving it to avoid injuries

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2. Protector capsule for iron civil construction **characterized** to be made of two different pieces which can be assembled one to the other by a finger compression (Fig 4) and because of his indented configuration to assume different diameters.

3. Protector capsule for iron civil construction **characterized** to be made in any plastic material - recycled or not- or in another appropriate material.

4. Protector capsule for iron civil construction **characterized** because it can be adapted to all iron rod diameters in consequence of his indented configuration and assembling ( Fig 4) in such a way that it is fixed and cant oscillate ( Fig 5) or extricate from the iron.

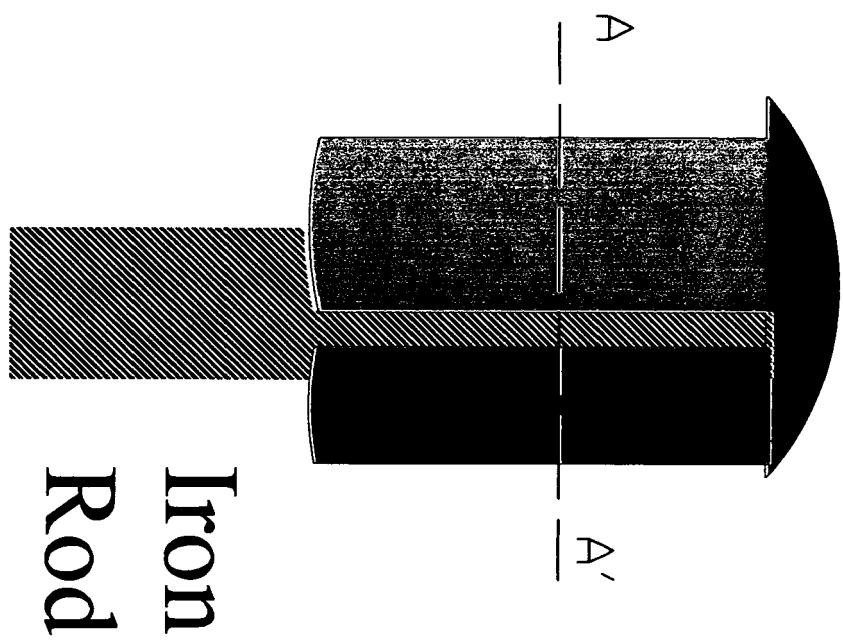
5. Protector capsule for iron civil construction **characterized** because it can be produced to have an interior design that allows an interior face to fix strongly and perfectly the capsule to the iron rod. (Fig 7)

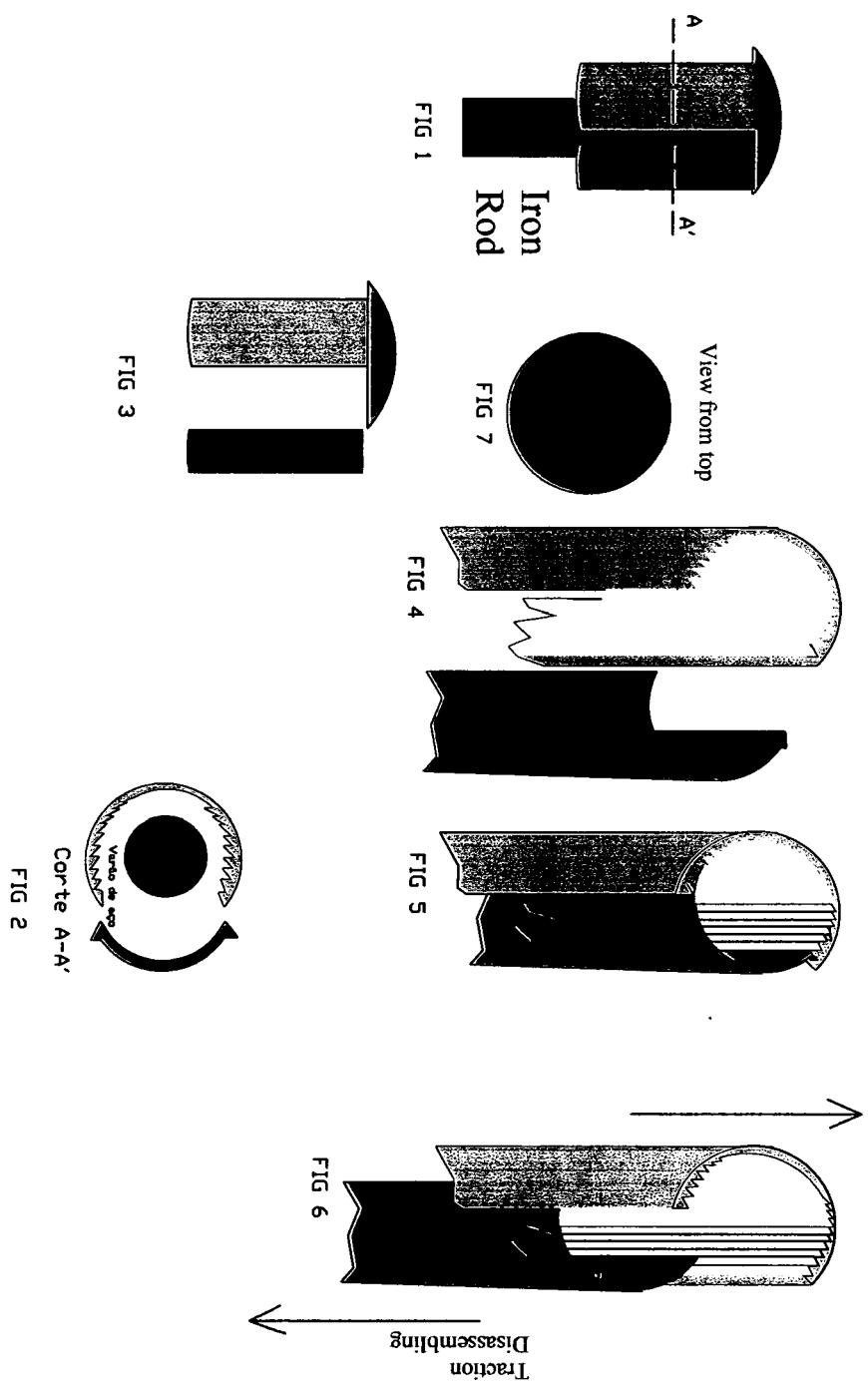
6. Protector capsule for iron civil construction **characterized** to be disassembled (Fig 6) and reusable pulling it in opposite direction and separating the indented two parts.

## Claims

1. In the state of art, protector capsule for iron civil construction rods are used to maintain covered the iron and, simultaneously, protect the workers from corporal injuries caused by the angles of cut in the top of the iron rods. The above mentioned iron rods must be protected to avoid possible worker injuries or corporal perforations. All the protector capsules known are limited to a few iron diameters and we need different pieces for different diameters. This invention

FIG 1







DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
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A	US 4 202 378 A (BUSH, LYMAN F ET AL) 13 May 1980 (1980-05-13) * abstract; figures * -----	1	
A	US 5 600 927 A (KENNON ET AL) 11 February 1997 (1997-02-11) * abstract; figure 1 * -----	1	
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A	WO 84/03348 A (LHOTEL, PATRICK) 30 August 1984 (1984-08-30) * abstract; figures * -----	1	TECHNICAL FIELDS SEARCHED (IPC)
			E04C E04G F16L B65D
The present search report has been drawn up for all claims			
4	Place of search	Date of completion of the search	Examiner
	Munich	30 January 2006	Vratsanou, V
CATEGORY OF CITED DOCUMENTS		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	
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			

ANNEX TO THE EUROPEAN SEARCH REPORT  
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
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30-01-2006

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