

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 0 735 214 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
02.10.1996 Bulletin 1996/40

(51) Int Cl.⁶: **E04G 13/00, E04G 13/04**

(21) Application number: **96500029.2**

(22) Date of filing: **06.03.1996**

(84) Designated Contracting States:
DE FR GB GR IT PT

(30) Priority: **30.03.1995 ES 9500858 U**

(71) Applicants:
• **Lliteras Alzamora, Bartolome**
07570 Arta (Mallorca) (ES)
• **Massanet Ginard, Antonio**
07570 Arta (Mallorca) (ES)

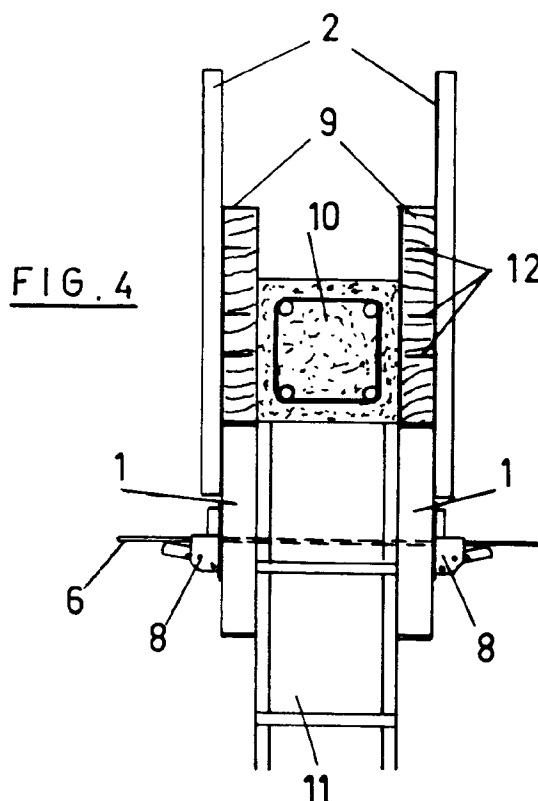
(72) Inventors:
• **Lliteras Alzamora, Bartolome**
07570 Arta (Mallorca) (ES)
• **Massanet Ginard, Antonio**
07570 Arta (Mallorca) (ES)

(74) Representative: **Urteaga Simarro, José Antonio**
Príncipe de Vergara, 31
28001 Madrid (ES)

(54) A device to facilitate the shuttering of concrete bands and lintels

(57) A device to facilitate the shuttering of concrete bands and lintels which is fitted directly on to the edge of the wall -11- and clamped to it on both sides, and comprising two identical matching elements formed by a tube -1- and a T-shaped section -2- which are welded

together. Said tubes -1- have a rod -6- through them secured by a clamp -8- on the outside and at both ends of said tubes. Said clamps can be adjusted so that the assembly is firmly installed on the wall -11-, allowing the shuttering for the bands -10- to be formed inside.



Description

The invention concerns a device to facilitate the shuttering of concrete bands and lintels which, as will be shown, significantly improves the state of the technology.

As is known, a very common structural system in a large number of works involves load-bearing walls as vertical strengthening components, with any type of masonry (concrete blocks, ceramics, ashlar, etc.), and frames with horizontal strengthening elements involving a series of pre-stressed or semi-stressed reinforced concrete beams supported by the former.

A standard operation in such cases is to use shuttering to make reinforced concrete bands to support or encastre the beams, as required, as well as simple bracing and coping of walls.

Further shuttering must also be used to finish the outside edge and compression layer of the frame if it is supported on the band.

Finally, this operation, required in virtually all works, both in load-bearing wall structures and in those using reinforced concrete piles and girders or rectangular frames, involves the shuttering of the reinforced lintels or load-bearers for the formation of openings in the enclosure wall, generally on the frontage.

These shuttering operations, while conceptually simple, are much more laborious using standard systems than would be desirable for such common jobs, involving economic conditions that would usually be favoured by any system facilitating their implementation, reducing the time taken and cutting costs, though without loss of quality in terms either of structure or of finish.

In order to relieve all these problems, the device in this invention was designed to meet the needs whereby the shuttering of reinforced concrete bands and lintels is made easy, calling on less manpower and fewer auxiliary materials.

The device consists fundamentally of two tubes to which two T-shaped sections are welded: said tubes are connected by a steel rod and have standard construction clamps on their outside.

A sheet of drawings is included with these specifications in illustration of this object which, by way of example, shows the following:

FIGURE ONE.- A perspective view of the device without the clamps.

FIGURE TWO.- A front elevation of the complete device.

FIGURE THREE.- A detail elevation and face view of said clamp.

FIGURE FOUR.- A detail of one of the multiple uses to which the device can be put, here for shuttering a wall capping band or frame support.

The following main components are referenced in said drawings:

1. The rectangular tube.
2. The T-shaped section.
3. The welding seam connecting the tube -1- and the section -2-.
4. The hole through tube -1-.
5. Three holes on one of the smaller sides of section -2-.
6. Corrugated steel rod.
7. Plastic trimming.
8. Securing clamps.
9. Planks.
10. Bands.
11. Masonry wall.
12. Steel spikes.

The device is constructed with two identical elements formed by a tube -1- and a section -2- which are welded together by two seams -3- along 10 cms on the edge of one of the shorter sides of the T-shaped section and with two edges of the tube, specifically those along one of its two smaller sides. This assembly receives a coat of protective paint and the ends are covered for protection by trimmings -7-.

The role of the device which is the subject of this invention is to support two wooden planks -9- used to shutter the reinforced concrete bands -10- and lintels without having to use awkward props that require a significant number of auxiliary elements and are more difficult and hazardous the further they are from the ground, in the majority of cases where frontage walls are being built.

The only requirement for the use of this device is that the walls -11- on which the band or lintel is to be constructed should be complete.

A pair of matched elements secured together with the rod -6- placed through them in the holes -4- and secured against the surface with two clamps -8- provide support to said planks which, with spikes or nails -12- of the type used for wooden shuttering, are fixed to the section -2- through the holes -5- in it, as shown in figure 4 of the attached drawings. No further elements are required.

The simplicity and versatility of the device leave the way open to the imagination of each user for its application.

Having thus sufficiently described the nature of the invention, it is hereby expressly stated that any modification of detail hereto is included within this protection, provided that it does not essentially alter or modify its characteristic use.

Claims

1. A device to facilitate the shuttering of concrete bands and lintels comprising essentially a pair of identical elements formed by a rectangular tube with transversal holes and, at the top, on the out-

side, a T-shaped section welded to the end, with three side holes that are vertically aligned. Both elements are connected and assembled on a corrugated steel rod running through them: attachment is by means of clamps installed where the rod emerges on both sides. This device is mounted on the masonry wall after the crossways installation of the rod: the wooden planks fit between its T-shaped profiles which are nailed in place and the band is placed between them.

5

10

2. A device to facilitate the shuttering of concrete bands and lintels as set forth in the previous claim, wherein the rectangular tubes have plastic caps covering their ends.

15

20

25

30

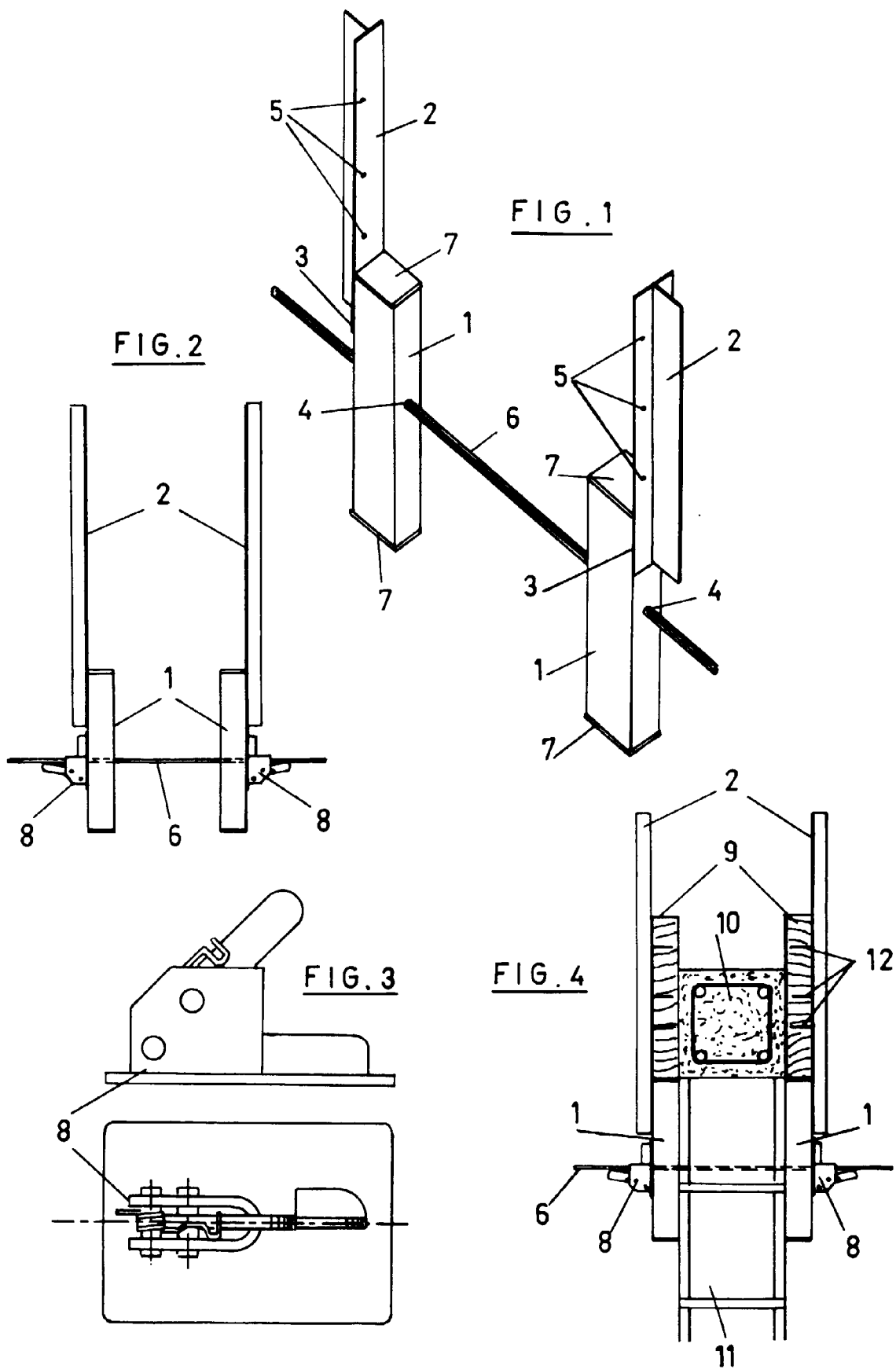
35

40

45

50

55





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 96 50 0029

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	FR-A-2 442 319 (POINEUF) * page 2, line 17 - page 5; figures *	1	E04G13/00 E04G13/04
A	CH-A-676 135 (SAVOY) * the whole document *	1	
A	DE-A-34 24 001 (BAUMANN)		
A	DE-A-38 41 023 (BAUMANN)		
A	DE-U-88 00 054 (MÖNTER)		
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			E04G
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27 June 1996	Examiner Vijverman, W
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			

EPO FORM 1503 01.82 (P04C01)