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54 **A corner protective means for walls, beams, columns etc.**

57 A corner protective means (1) for walls, beams, columns, etc. which has adequately formed bevel angles, rib strips (11), and bent tails (13) on its two wings (10) so that more powerful grip strength may be provided by it when it is buried into a cement

roughcast before the cement is dried. With this corner protective means, a faster and easier installation is available while smoother surface finish of wall corner may be achieved easily.

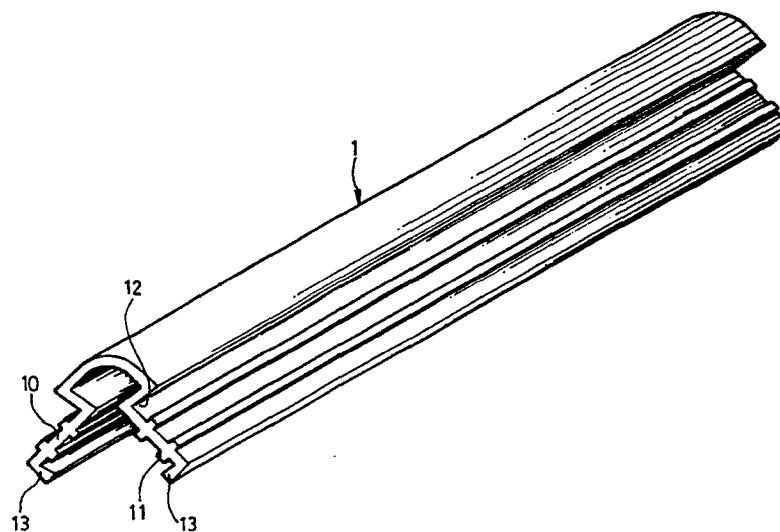


FIG 1

EP 0 462 315 A1

## Background of the Invention

In common construction of civil engineering, a lot of time is wasted in stuccoing and strengthening projected corners of walls, beams, columns, etc. Due to lack of proper corner protective means, defects such as insufficient strength of corner, inferior appearance, etc. also exists when the construction is completed. Although there are other commercially available simple corner protective means, most of them are inconvenient in installation, inferior quality, low performance, and becoming loose easily.

Therefore, it is tried by the applicant to develop a corner protective means for walls, beams, columns, etc. Which may eliminate the drawbacks existing in the prior art.

## Summary of Invention

It is a primary object of the present invention to provide a corner protective means which has a generally sectorial front and two wings extending outward from two edges of the sectorial front to form a generally right angle, and may be insert into the concrete before final finish of walls, beams, columns etc., so that it may firmly grip the concrete structure with many ribs, bent tails, and bevel angles formed on its two wings.

The structure, functions, and other advantages of the present invention may be readily understood by referring to the following description and accompanying drawings in which:-

## BRIEF DESCRIPTION OF THE DRAWINGS

Fig.1 is a three-dimensional perspective of the invention; and

Fig.2 illustrates a corner protective means of the invention having been installed to join with the concrete wall corner.

## DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

Please refer to Fig.1. The corner protective means 1 of the invention generally has a sectorial front and two wings 10 extending outward from two edges of the sectorial front. The wings 10 are generally symmetrically formed, so, description of one wing shall represent two wings in the specification. The wing 10 firstly bends inward at an edge of the sectorial front, then bends outward to form an angle about 30 or 40 degrees so that the whole sectorial portion of the corner protective means 1 looks like a dove tail. Furthermore, on both sides of the wing 10, a plurality of rib strips 11 are formed to increase the contact area of the wing 10 with

concrete structure and thereby strengthens the holding of wing 10 by the concrete.

A bent tail 13 is formed at the open end of the wing 10 to reinforce the grip capability of the wing 10. Please further refer to Fig.2, in which a corner protective means of the present invention having been installed and insert on a wall corner is illustrated. From this figure, a powerful joining strength provided by dovetail-shaped structure, rib strips 11, and bent tails 13 of the corner protective means 1 can be fully understood.

During construction, please refer to Fig.2 concrete walls, beams, columns, and their projected corners 14 formed by grouting usually have a surface which needs a first time cement coating to form a layer of roughcast 15. During the process of coating this roughcast 15, the corner protective means 1 of the invention is positioned over the projected corner 14 in a manner that the wings 10 are burried into the roughcast 15 before the same is dried. When the roughcast 15 is dried, the the corner protective means 1 shall be firmly inserted thereon. Then, a fine finish 16 formed by a second time cement coating shall provide a smooth wall surface which is flush with the edges of the sectorial front of the corner protective means 1.

It is to be understood that the form of the invention shown and disclosed is to be taken as a preferred embodiment of the invention and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the following claims.

The features disclosed in the foregoing description, in the claims and/or in the accompanying drawings may, both, separately and in any combination thereof, be material for realising the invention in diverse forms thereof.

## Claims

1. A corner protective means for walls, beams, columns etc comprising a sectorial front and two integrally formed wings; said wings extending outward from two edges of said sectorial front while they first bend inward at said edges of said sectorial front then bend outward to form an angle about 30-40 degrees thereat permitting the wings to extend in a direction substantially parallel to but slightly inclined to a wall surface over which said corner protective means is installed: said wings also having a plurality of rib strips formed on their both sides and an inward bent tail formed at their free ends each.

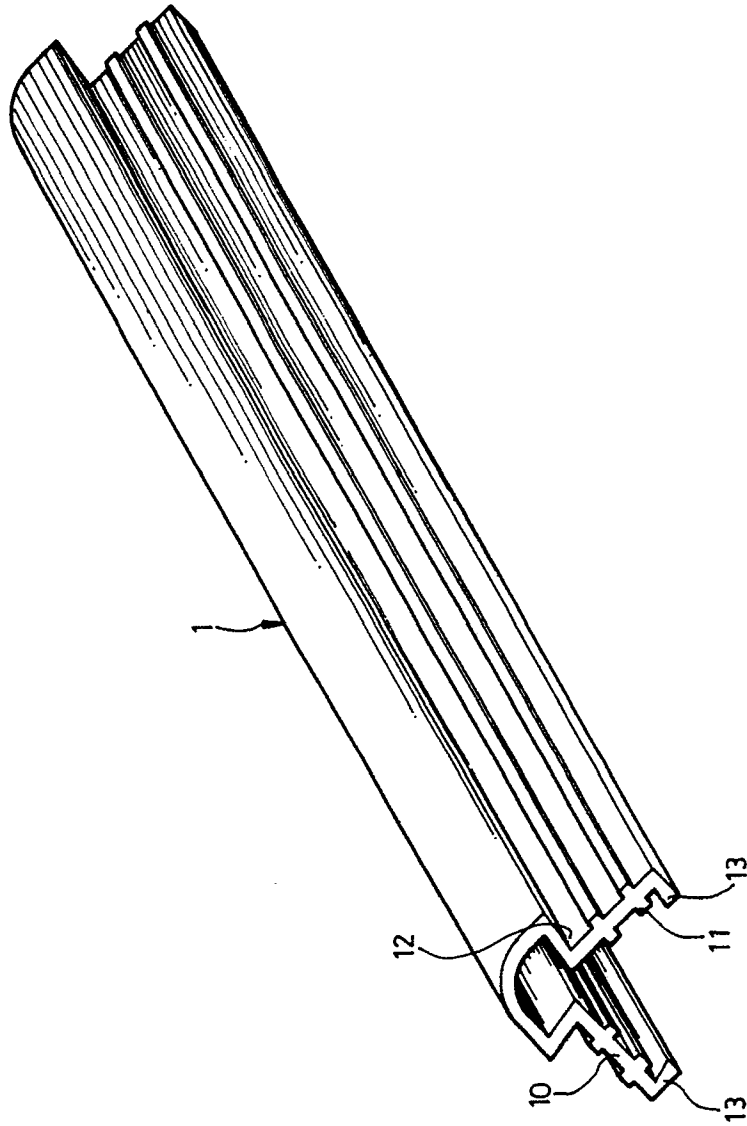


FIG 1

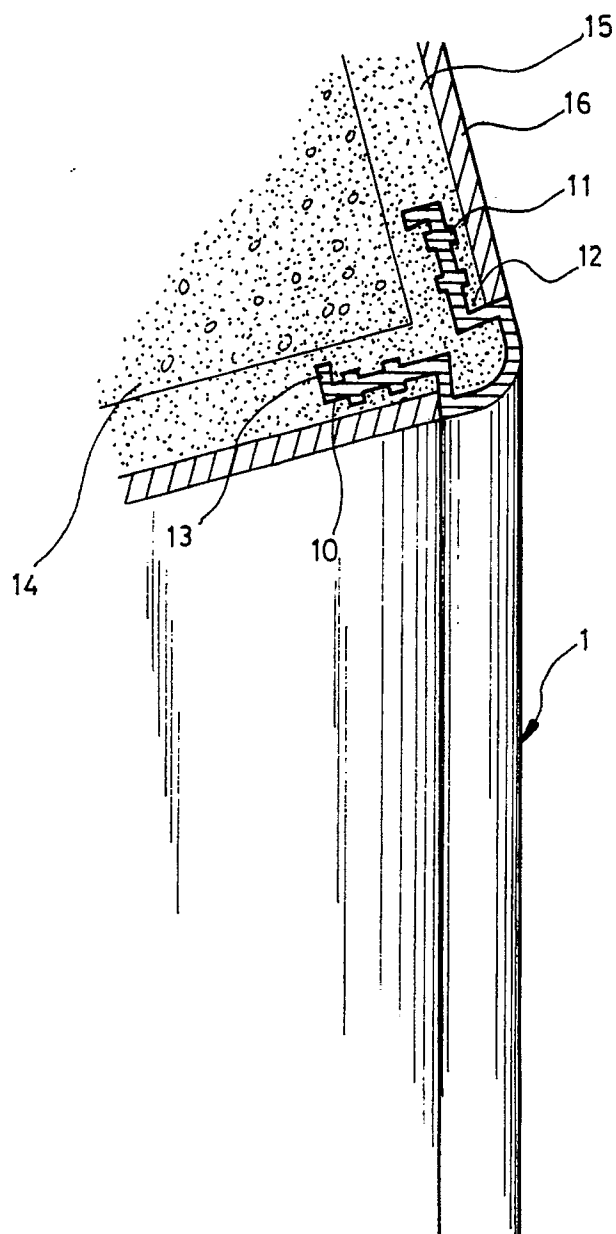


FIG 2



European  
Patent Office

## EUROPEAN SEARCH REPORT

Application Number

EP 90 12 0479

| 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.5) |
| P,X                                                                             | DE-U-9 006 110 (CHIANG, MU-LONG)<br>* whole document *                                       | 1                                                                      | E 04 F 13/06                                  |
| Y                                                                               | DE-U-1 776 547 (E. MÜLLER)<br>* pages 1-3; figures 1,2 *                                     | 1                                                                      |                                               |
| Y                                                                               | DE-U-7 933 290 (H. LUX)<br>* page 3; figures A,B *                                           | 1                                                                      |                                               |
| A                                                                               | DE-U-1 805 826 (BOLTA-WERK GMBH)<br>* pages 1-3; figures 1-3 *                               | 1                                                                      |                                               |
| A                                                                               | GB-A-2 056 523 (L. CASH)<br>* page 2, lines 23-54; figure 7 *                                | 1                                                                      |                                               |
| A                                                                               | GB-A-2 167 797 (GLIDEVALE BUILDING AND PRODUCTS LIMITED)<br>* page 3, lines 1-24; figure 6 * | 1                                                                      |                                               |
|                                                                                 |                                                                                              |                                                                        | TECHNICAL FIELDS SEARCHED (Int. Cl.5)         |
|                                                                                 |                                                                                              |                                                                        | E 04 F                                        |
| The present search report has been drawn up for all claims                      |                                                                                              |                                                                        |                                               |
| Place of search                                                                 |                                                                                              | Date of completion of search                                           | Examiner                                      |
| Berlin                                                                          |                                                                                              | 26 August 91                                                           | PAETZEL H-J                                   |
| <b>CATEGORY OF CITED DOCUMENTS</b>                                              |                                                                                              |                                                                        |                                               |
| X: particularly relevant if taken alone                                         |                                                                                              | E: earlier patent document, but published on, or after the filing date |                                               |
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| P: intermediate document                                                        |                                                                                              |                                                                        |                                               |
| T: theory or principle underlying the invention                                 |                                                                                              | &: member of the same patent family, corresponding document            |                                               |