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(54) **Improvements in the construction of flat structural members without girders**

(57) The structural members obtained in accordance with the improvements of the invention include bi-directional hollow lightening blocks (3), forming orthogonal ribs (4) and other shapes, this lightening being completed by a lower reinforcement (5) and another, upper reinforcement (6) based on unidirectional or bidirectional mesh in both cases, which, when duly concreted, form lower and upper slabs respectively, and separation

reinforcements (7) between them which define a reinforcement of the ribs which are formed in the positioning of the hollow lightening blocks (3). The structural member without girders obtained offers the same resistance to positive and negative moments, and the meshes which constitute the lower (5) and upper (6) reinforcements are simple meshes of conventional industrial fabrication.

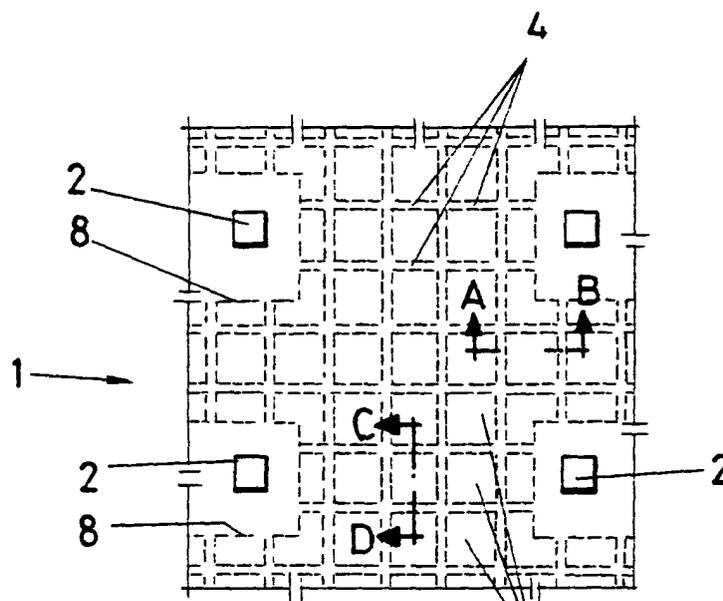
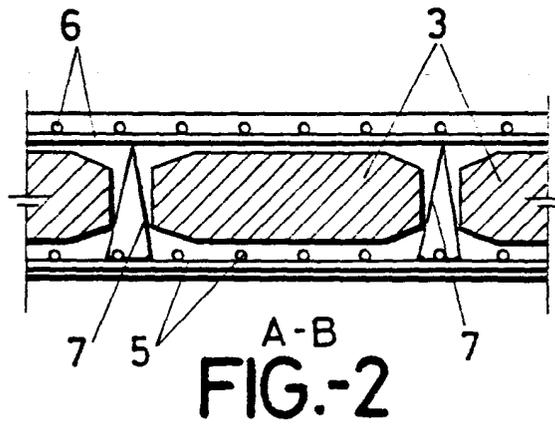


FIG.-1 3





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EUROPEAN SEARCH REPORT

Application Number
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| 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 | DE 12 22 643 B (MÜLLER) * the whole document * --- | 1 | E04B5/43 E04B5/14 E04B5/32 |
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| | | | TECHNICAL FIELDS SEARCHED (Int.Cl.6) |
| | | | E04B |
| The present search report has been drawn up for all claims | | | |
| Place of search THE HAGUE | | Date of completion of the search 1 September 1999 | Examiner Mysliwetz, W |
| 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 | |
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 98 50 0035

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01-09-1999

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82