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(54) **Hidden self-supporting special base in hot rolled steel for wooden beams**

(57) The product "Hidden self-supporting special base in hot rolled steel for wooden arms" treat a J (Jey) profile steel base produced in many measures considering adjusted loads of resistance.

For the correct use of the support it is necessary to perform some millings on the main and secondary

beams.

Subsequently the support must be inserted in the milling of the secondary beam and then supported on the principal beam milling.

All is fixed through the screws preventing the axial movement offering great safety in comparison to the traditional connections among beams.

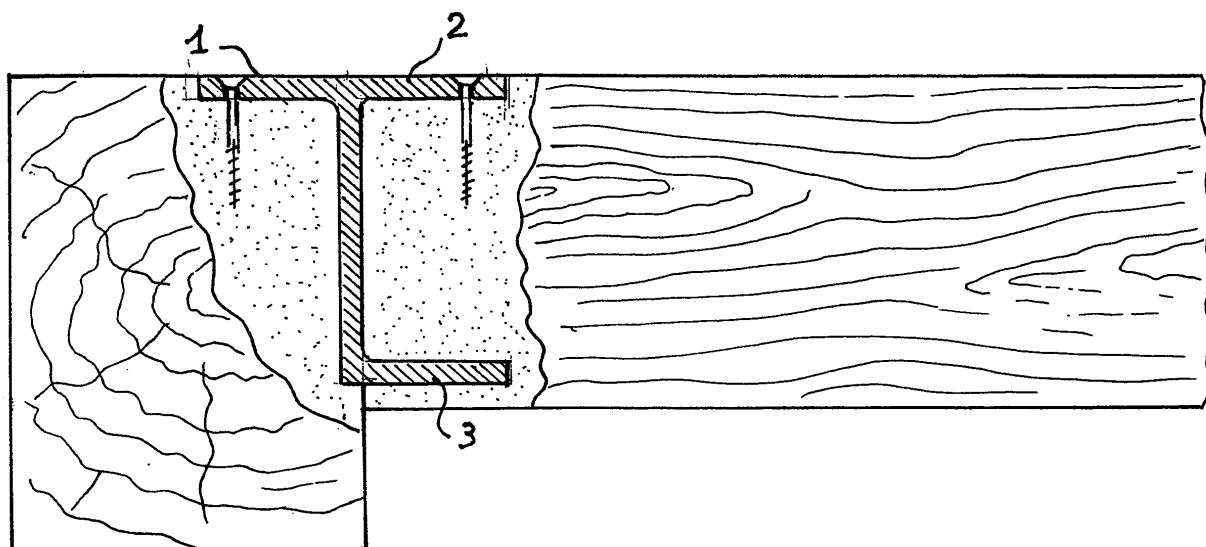


Fig. 2

Description

[0001] It has been studied and experimented with tests of load, to have more safety, offering an alternative to the traditional connections after having conducted a research and a careful analysis of existing products in commerce.

[0002] The special base in steel (momentarily for lack of industrial production) can be drawn by beam HEA-HEB-HEM with parallel wide wings cut and shaped considering the various measures that they satisfy the calculations of resistance to the traction, bending, twisting moment to establish the safety admissible load adding a hypothetical permanent and accidental overload.

[0003] To conclude the manufacturing product it needs to perforate the holes in the superior part of the special base as well visible in the sketch fig.1 and subsequently follows the treatment of zinc-coated.

[0004] To allow the correct connection it needs to perform some milling in the main beam and in the secondary beam so is possible insert the special base in the secondary beam and lean all on the main beam inserting the wooden screw in the special holes of the superior wings of the special base as in the sketch fig.2.

[0005] Through special template is possible to realize the milling of the beam in wood to permit the correct insertion of the fitting special base to fit the secondary beam in correspondence of the special place on the main beam so that result hidden between them, getting the so-called "disappeared".

[0006] One of the most fundamental characteristic of this special base is to be a hot rolled element so that has not internal tensions (es. weldings, folding with possible stretchings, nervelessness, cranny and incisions provoked by the folding machines).

[0007] Another important point in favor is the over-manned rays of link of the superior wings and of the inferior wing of the special base.

[0008] The innovation intends to reach important targets: great safety and more quality; if in the future the innovation had to have a breadth employment it could be proposed to some great industry or steelworks a production on well precise measures through heat lamination, or through forging or hot rolled of the pieces.

[0009] Two of the objectives reached with the new special base are to bring great loads and to guarantee great safety.

[0010] Making tests of load using two specimen special bases inserted in a secondary beam based and screwed in the milling of two primary beam, it has been possible to ascertain that increasing progressively the load, the derived endurance tests has overcome every expectation.

[0011] Still under load we have been removed the fixing screw and is been able to verify that the structure has not accused yielding, because the superior wing of the special base, on the secondary beam acted in compression, from here the name "Special bases to disappear-

ance self-supporting".

[0012] It is necessary use this special base on a square or rectangular section beam, in lamellar wood BS 11 and BS 14, double-lamellar, in timber and KWH beams.

[0013] The superior wing fig.2(1) of the special base offers a rest on the main beam like the inferior wing fig. 2(3) offers a rest in the slot of secondary beam, while the superior wing fig.2(2) it acts in compression in the milling of the secondary beam and under load it maintains the special base in line with the beam.

[0014] The special base can be used for the realization of intermediate floor, attics, suspended ceiling, and for the primary and secondary roof framework of the greatest part of the wood structures.

[0015] When the main beams are parallel each others and the structure to be realized is in square with them we have to use the square linear cut special bases as represented in draw fit. 1; otherwise when the beams are not parallel and the structure is not in square, it could be realized (always from the same "J" profile), left and right special bases as represented in top view in sketch fig.3, where the wing superior fig.3(1) is equal to the normal special base, while the wings fig.3(4) and (5) can be realized with inclined cut, so also the inferior wings of the special base.

Claims

1. The product
"Hidden special base self-supporting in hot rolled steel for wooden beams"
has been studied and experimented with tests of load, to have more safety, offering an alternative to the traditional connections after having conducted a research and a careful analysis of existing products in commerce.
The innovation bases its essential feature on displacement the anchor from overlapped to the wooden timber depth.
The superior wing fig.2(1) has the anchor on the top of the main beam and the inferior wing fig.2(3) inserted in the milling offers the anchor to the secondary beam, whereas the superior wing fig.2 (2), acting in compression on the secondary beam does not allow under load the releasing of the base.
2. The "Hidden special base self-supporting in hot rolled steel for wooden beams"
As claimed in claim 1), an important characteristic contained in the shape of the base, that displaces the anchor from overlapped to the wooden timber depth, is to have a "Z"(zed) profile.
Afterwards the special base is composed by the superior wing fig.2(1), the vertical coast and an inferior wing fig.2(3) as anchor.
Adding the superior wing fig.2(2) that acts in compression, in conclusion we get a "J"(Jey) profile as

showed in the sketch fig. e fig.2

3. The "Hidden special base self-supporting in hot rolled steel for wooden beams"

As claimed in claim 1 and 2, the innovation is **characterized by** a special base derived by hot working without inside tensions as the welding or the folding could give it.

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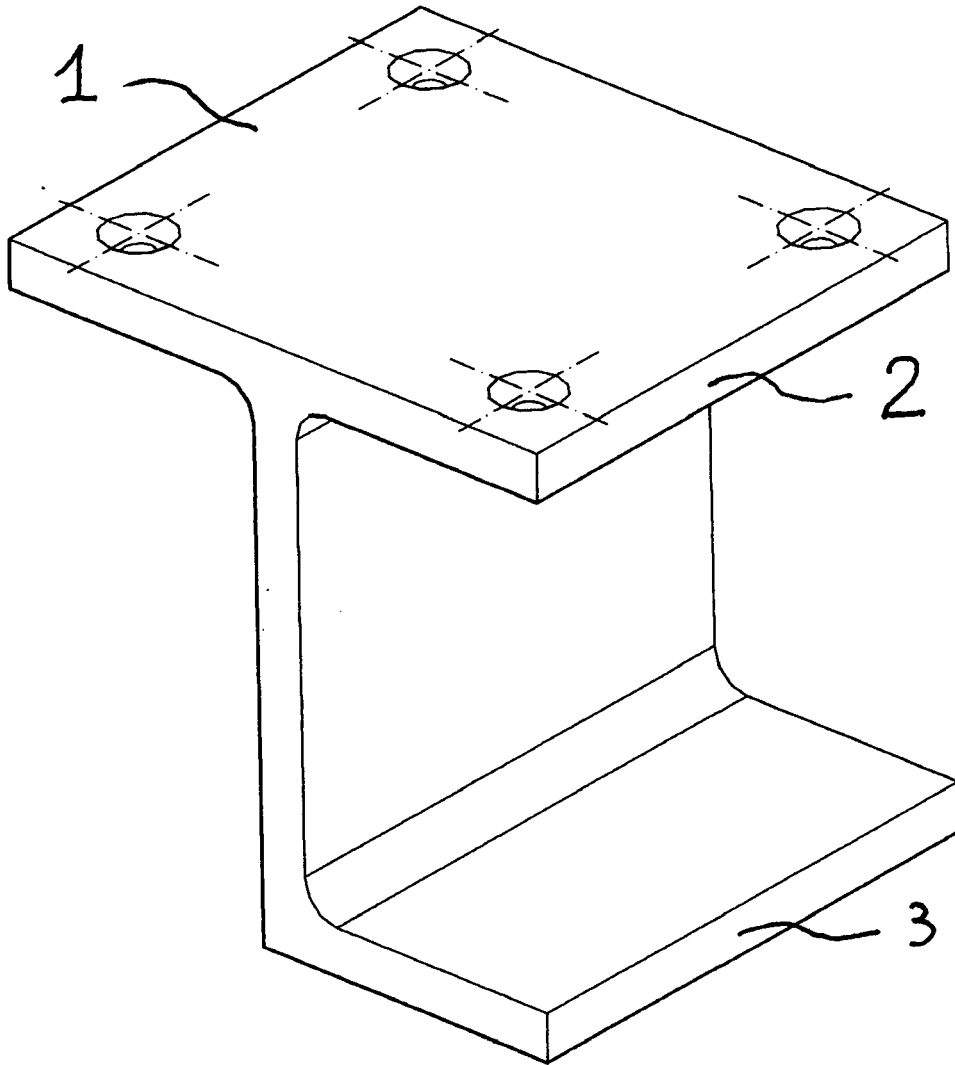


Fig. 1

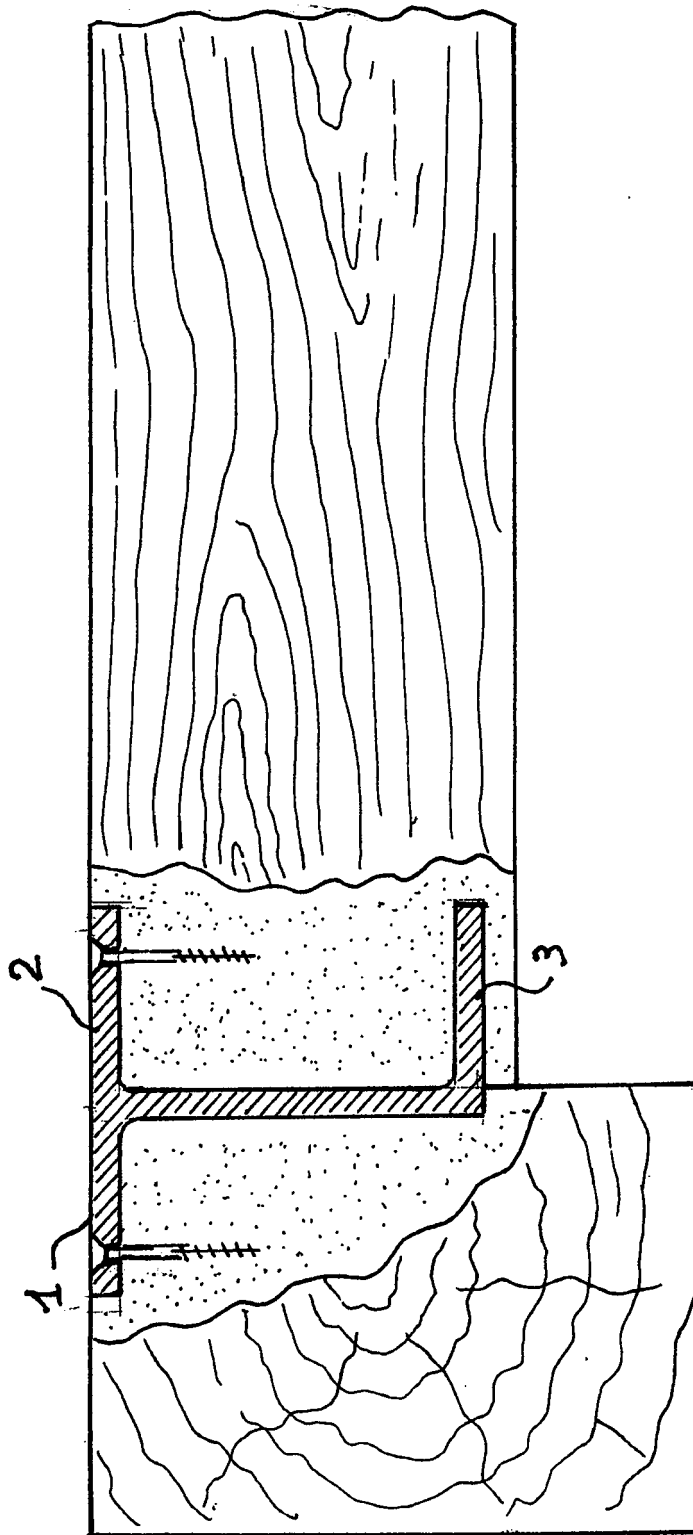


Fig. 2

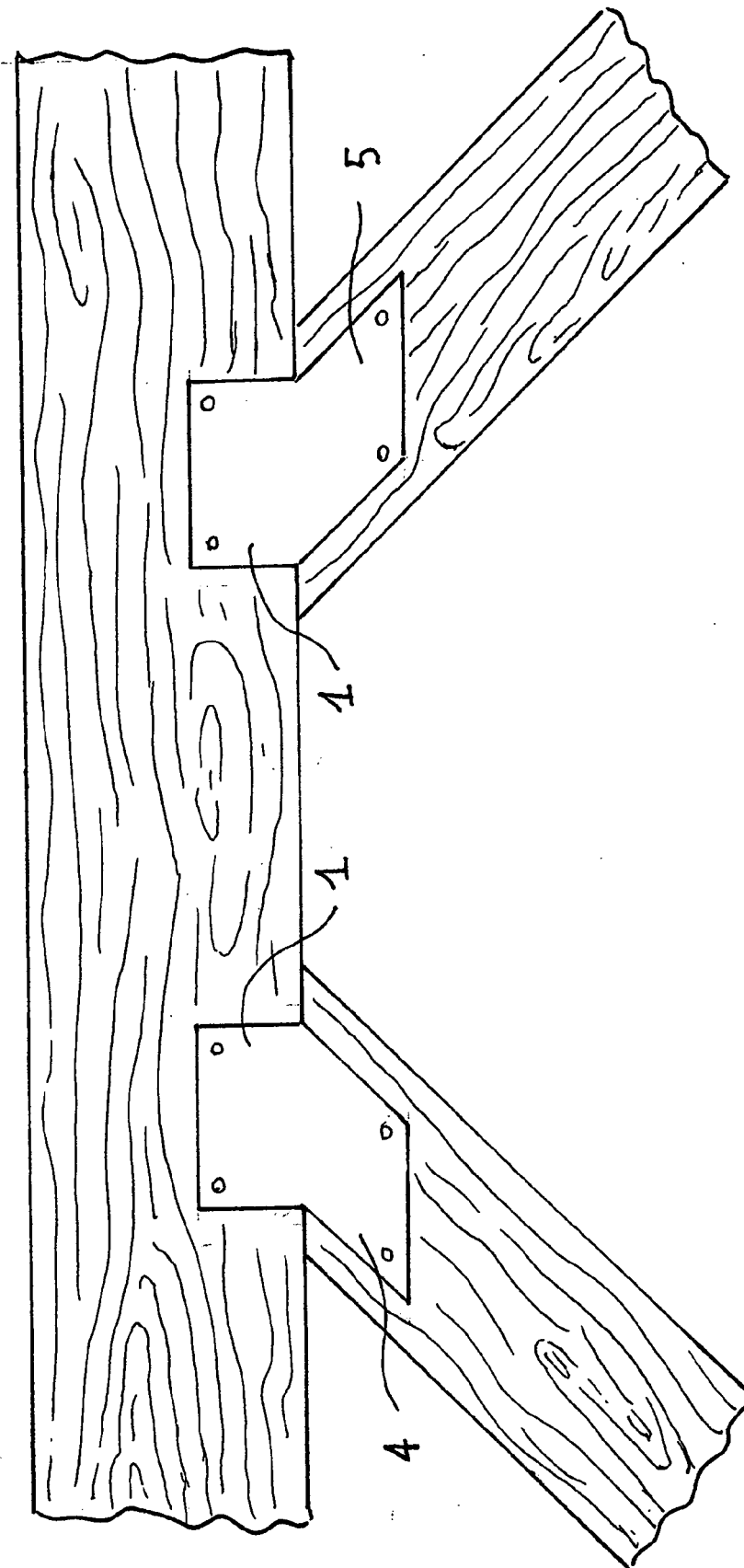


Fig. 3