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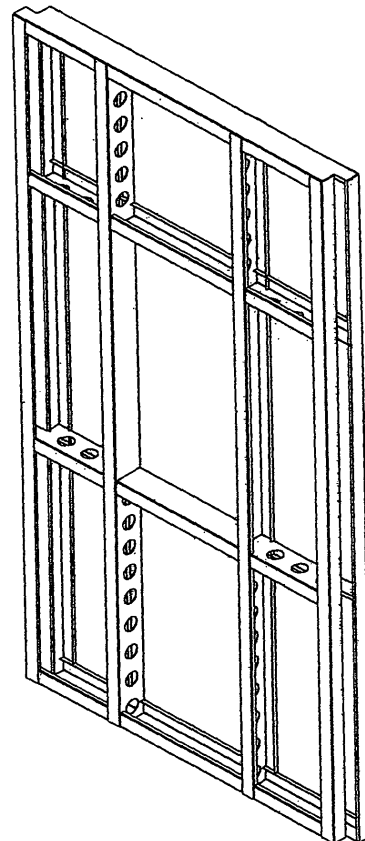
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AL BA HR MK RS(30) Priority: **13.12.2006 TR 200607093**(71) Applicant: **Akya Yapi Insaat Sanayi ve Ticaret Limited Sirketi****Yeni Çamlıca Mah Mithatpasa Cad
Erkan Sok. No. 2 Ümraniye
İstanbul (TR)**(72) Inventor: **Metozade, Mahmut Nedim
İstanbul (TR)**(74) Representative: **Koral Binyildiz, Figen
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Danismanlik Ltd. Sti
Yildizposta Caddesi
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TR-34349 Istanbul-Gayrettepe (TR)**(54) **Sound and heat isolated decorative bearing panel**

(57) The trunk framed with bearing U profiles and corner beads is a sound and heat isolated bearing decorative wall panel formed with compression of polystyrene or polyurethane raw materials which can be dilated within a mold with coating and jamb patterns to the external.

**FIGURE 7****EP 2 039 843 A2**

Description

[0001] The trunk framed with bearing U profiles and corner beads is a sound and heat isolated bearing decorative wall panel formed with compression of polystyrene or polyurethane raw materials which can be dilated within a mold with coating and jamb patterns to the external.

[0002] The current condition in the technical area related to the invention:

[0003] In the current prefabricated systems, the two bearing profiles are filled in with the isolation material between, and coated with a cement-based chip panel. Besides, additional cost and workmanship are necessary to shape the façade.

[0004] The current prefabricated system passes the roof through frame systems, which cause higher workmanship and loss of time.

[0005] The invention eliminates the cost of a decorative façade coating to be made afterwards as a result of mono-block acquisition of the decorative façade the bearing body part.

[0006] Since the polystyrene or polyurethane raw material fills within the frame entirely in a compressed manner, a panel with high impact resistance, water, heat and sound isolation is formed.

[0007] Since adjoining of the panels and their installation becomes lighter due to the trunk filler, and since the bearing becomes lighter due to the frame, it ensures ease in installation and transportation.

[0008] Because it is a mono-block body, it does not operate due to hot-cold difference. It is resistant to ultra-violet beams. The mono-block panel does not catch fire and is water resistant. Thanks to the construction consisting of galvanized steel profiles, it is not only resistant to external impacts, but also has bearing features. The weight of an average panel (1250mm X 2400mm) is 25 kg.

Figure 1: Front-View

Figure 2: A-A Cross - Section

Figure 3: B-B Cross - Section

Figure 4: +50 Elevation Plan

Figure 5: +150 Elevation Plan

Figure 6: Panel External Perspective

Figure 7: Panel Construction Perspective

[0009] The parts in the Figure are numbered, and their equivalents are given below.

- 1) Trunk
- 2) Pattern Jamb
- 3) Ground Connection U profile
- 4) Side Installation Projection
- 5) Bearing U profile
- 6) Bearing L corner bead
- 7) Coating Pattern
- 8) Roof Connection U Profile

9) Window Opening

[0010] The construction consisting of bearing U profile (5) and roof connection U profiles and corner beads (6) brings a bearing characteristic to the panel. Upon filling with polystyrene or polyurethane raw material of the bearing (5), roof connection (8) profiles and side installation projection (4) by dilating, the pattern jamb (2) within the mold, and the façade decorative patterns in the form of coating pattern (7) constitute a whole with the trunk (1). Tack welding or screwing is made between the bearing U profiles (5), bearing L corner beads (6) and ground connection U profile (3) and roof connection U profiles (8) to constitute window opening (9). Bearing L corner beads (6), ground connection U profile (3) and roof connection U profiles (8) are tack welded or screwed to constitute the side installation projection (4), and such projection ensures that at the time of adjoining of the panels, the integration surfaces overlap completely to provide ease of installation.

[0011] A window opening(9) at desired dimensions is left within the Trunk (1) with bearing U profile (5) and roof connection U profiles (8), and by making projections (4) with L corner beads, the bearing construction is formed by using methods such as tack welding, screwing, riveting with corner L profiles (6) and bearing (5) and roof connection U profiles (8). The construction is placed within the mold where coating pattern (7) and jamb (2) patterns are embroidered, under heat and pressure, the material made of polystyrene or polyurethane raw material is filled to ensure perfect integration of the raw material and construction. Trunk(1) is connected to the ground by screwing of the bearing U profile (5) into the ground connection U profile (3), and to the roof by screwing of the roof connection U profile (8) to the roof.

Claims

1. The invention is a decorative panel with sound and heat isolation, featuring; production of a galvanized steel construction consisting of bearing U profile(5), bearing L corner bead (6) and roof connection U profiles (8) by injection of polystyrene or polyurethane substances which can dilate within a mold, onto the construction under heat and pressure.
2. It is the forming of different decorative surfaces with different patterns on the mold surfaces where the produced panels are to be placed into the steel construction according to Claim 1.
3. It is to ensure that each panel has bearing features due to the steel construction within the decorative panels formed according to Claim 2.
4. It is to ensure production of prefabricated walls, façade curtain panels and roof panels with roof tile

appearance with that bearing construction and molding system according to Claim 3.

5. It is ensuring high sound isolation of internal walls further to high heat insulation with building casing in patterned façade curtains mentioned, according to Claim 4. 5
6. It is easy carriage and installation of panels because of their being light, according to Claim 5. 10
7. Bearing decorative panels with water, sound and heat isolation with approximately 10 kg square meter weight make the building resistant to earthquake loads, according to claim 6. 15

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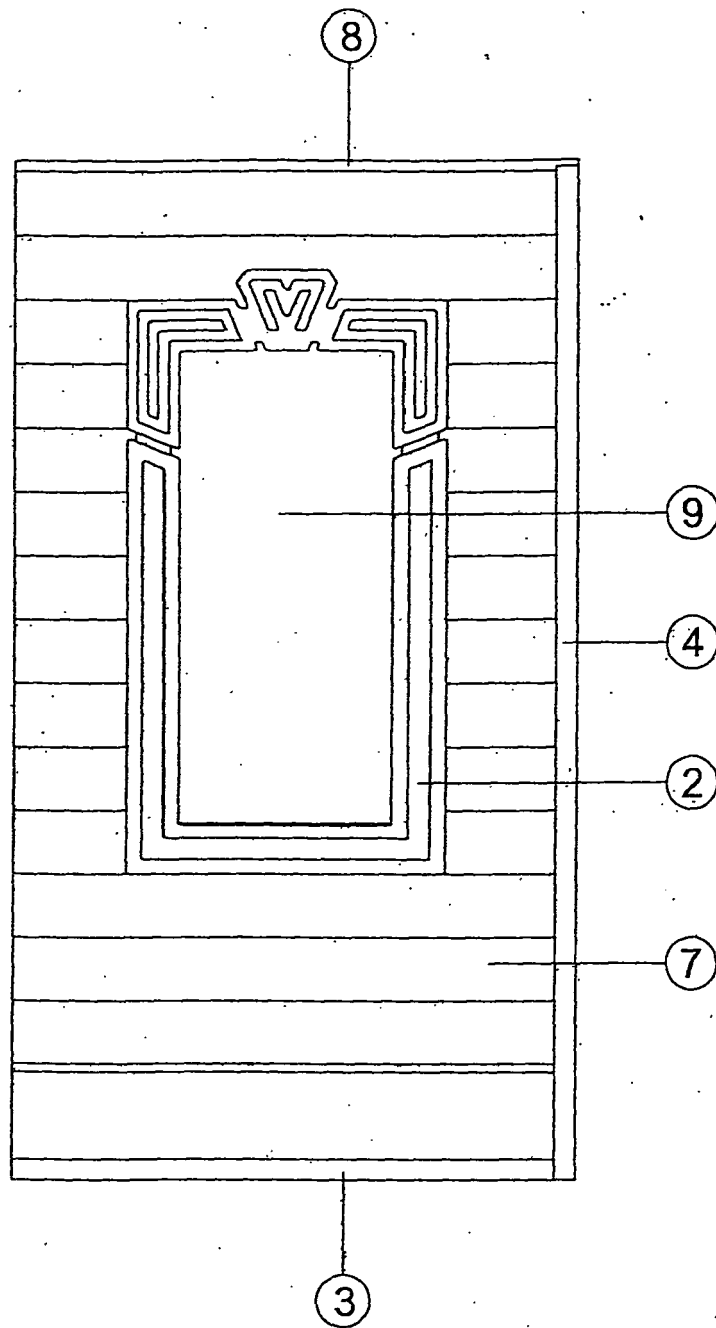


FIGURE 1

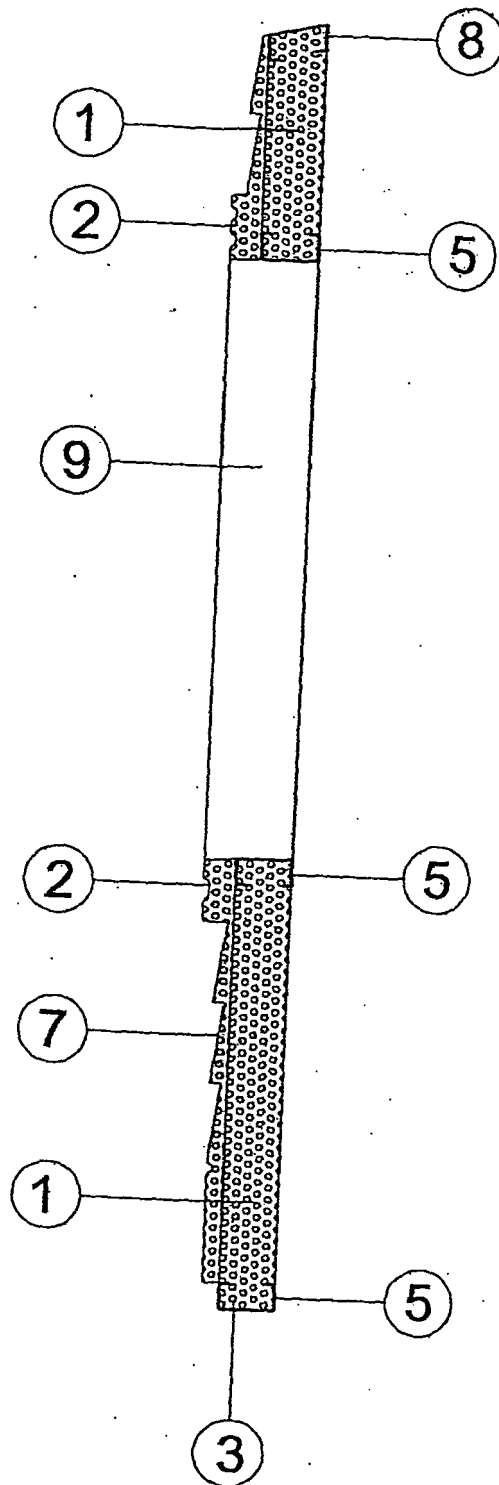


FIGURE 2

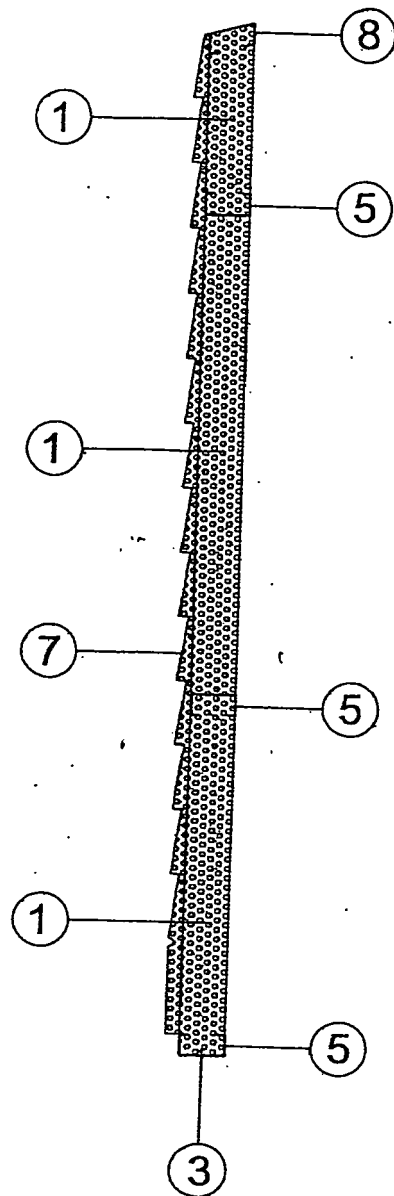


FIGURE 3

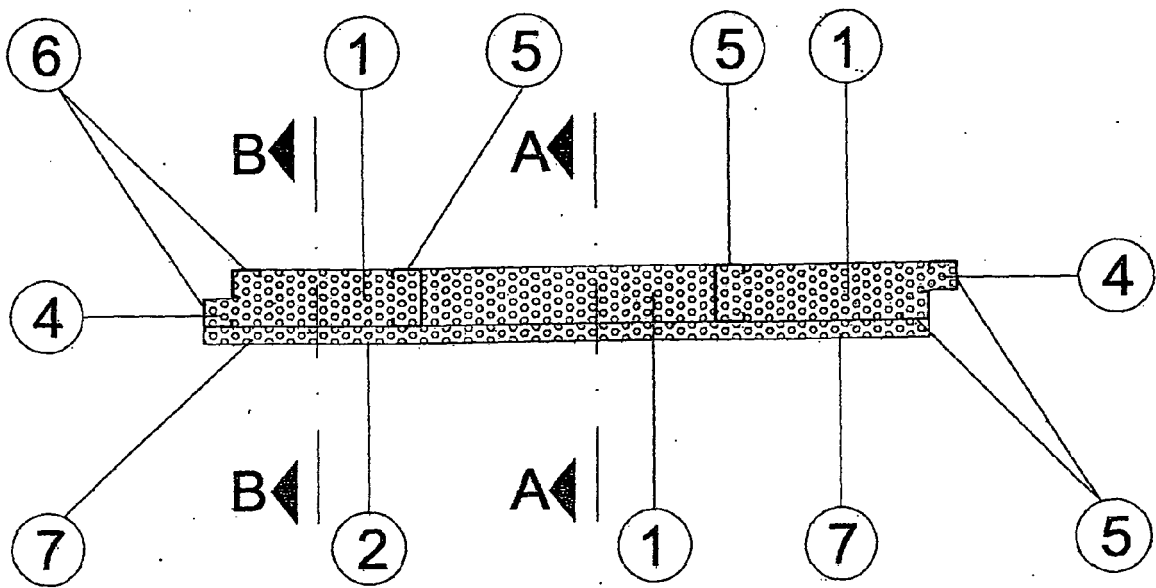


FIGURE 4

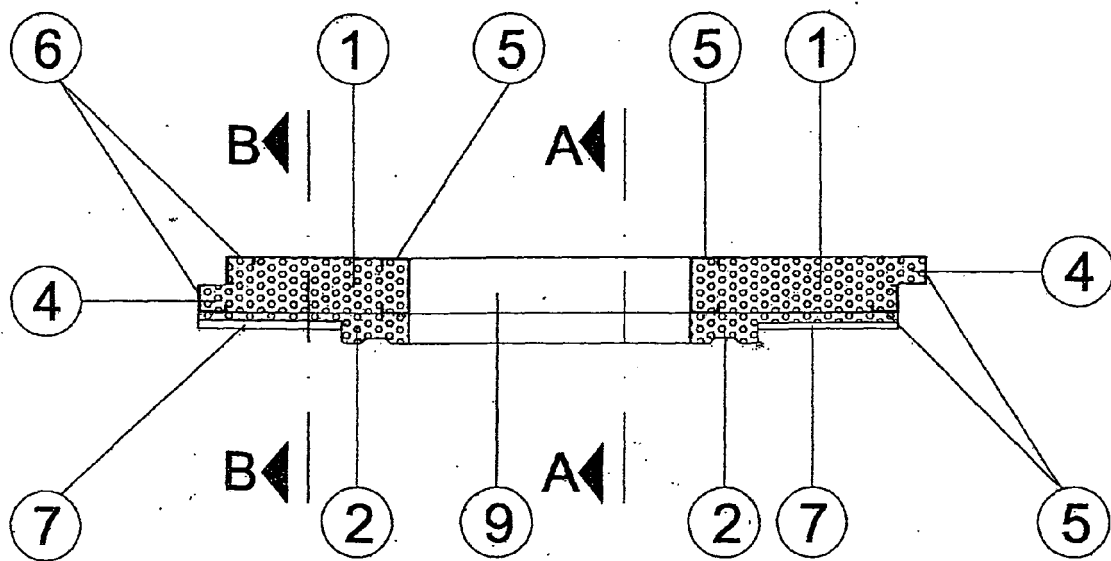


FIGURE 5

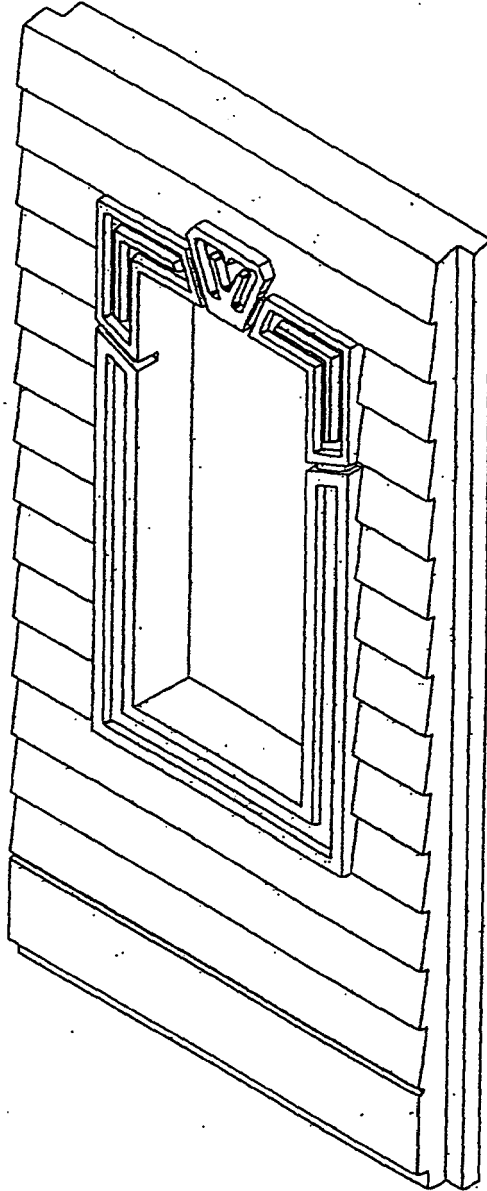


FIGURE 6

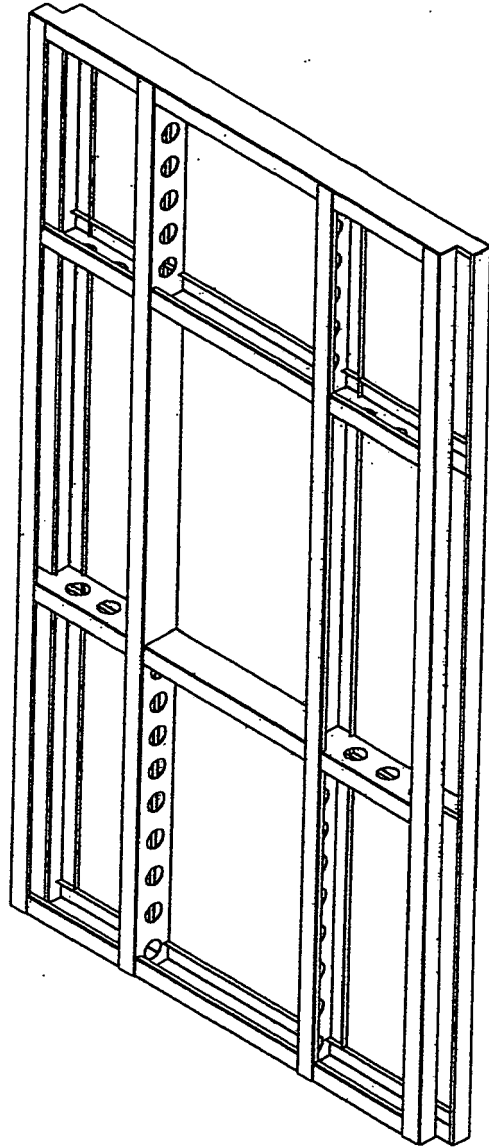


FIGURE 7