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(54) **Panel-like skirting-type air room heater**

(57) The present invention relates to a panel-like skirting-type air room heater for heating or cooling rooms by means of the agent which is air. Inside the skirting board, there is a recess 1 that forms a longitudinal duct

for transporting the agent, occurred so as a result of combination of the three-sided heating panel 2 and the thermal insulating board 3 by means of a groove 6 and tongue 7 acting as a lock and key.

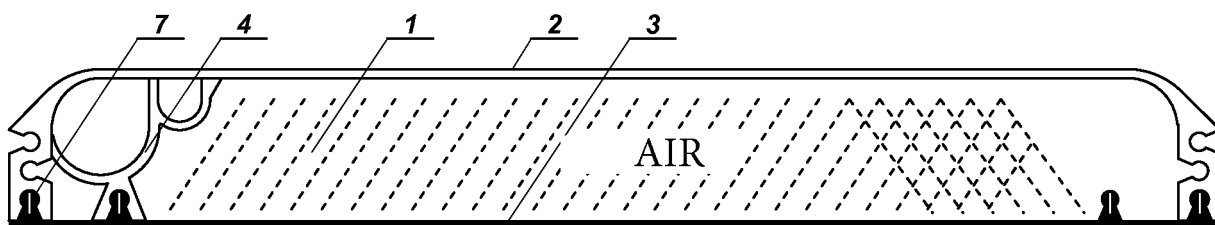


Fig.1

Description

Technical field

[0001] The present invention relates to a panel-like skirting-type air room heater for heating or cooling rooms by means of air and other media.

Background Art

[0002] Known from Polish description of the invention PL336019 are skirting boards with a pipe fitting placed inside, between the heat-conducting panel and the thermal insulation panel, that the externally heated or cooled medium flows through.

[0003] Known from Polish description of the invention PL341914 are multi-functional skirting boards in which pipings and electrical heating conductors are installed on their narrow edge. In their construction and combination in the area of both the wall and floor, both these solutions may only use the working agent, which is a medium and current or both. Moreover, in case of any outage of the working agent both these solutions become useless, which gives rise to a new aim of their application using another agent.

Disclosure of Invention

[0004] The essence of the invention is that inside the skirting board there is a free space, a recess with the insulation and work function, occurred as a result of combination of the three-sided heating panel and the thermal insulation panel, which forms a closed tunnel for transportation of internally or externally heated or cooled air as a new agent.

[0005] It is beneficially for the invention when one or two beds for the pipings and electrical heating conductors are placed in the internal zone of the skirting board edge, between the three-sided heat-conducting panel and the thermal insulation panel, so that their combination and mounting to the thermal insulation panel, which forms the basis and fastening frame for them, creates closed laggings for these conductors. It is beneficially for the invention when the three-sided heat-conducting panel has at its base two lock-like grooves for joining and mounting it to the thermal insulating board equipped with the appropriate tongues - keys for combining them.

[0006] It is beneficially for the invention when the bed for conductors has at its base a lock-like groove for joining and mounting it to thermal insulating board. This solution allows the skirting board to use the working agent that is not only a liquid medium and current resistance but also the air as a temperature carrier, which makes the board extremely efficient under any conditions, considering that air itself heated or cooled to whatever temperature is an air barrier and curtain for walls and floors of the room lined with the skirting boards according to the invention.

[0007] Moreover, their construction and structure al-

lows their quick and reverse dismantling from the carrier and thermal-insulating board, mounted to the floor on a permanent basis, which in case of a failure to conductors or a need to replace the three-sided heating boards or their covers is not without significance from the point of view of the current economic and consumer model of living and environmental protection as the materials used here are recyclable.

[0008] Thus, the invention creates a new way of mounting and dismantling the skirting boards, panels and modules, whether of the wall, floor or ceiling-type, as it can work both vertically and horizontally or at any selected angle of mounting it to the floor.

15 Brief Description of Drawings

[0009] The subject of the invention is shown in the drawings where Fig.1 presents the skirting board in vertical section across the skirting with visible area of the recess and air, Fig.2 - the skirting board in combination with the edge strip box in vertical section along the skirting and direction of air transportation, Fig.3 - cross-section of the left bed for conductors, and Fig.4 - cross-section of a fragment of the three-sided heating panel and bed combined into a whole, with conductors as well as their carrier and thermal insulating board.

Best Mode for Carrying out the Invention

[0010] The recess of the tunnel 1 for transporting air along the skirting board occurred so as a result of combination of the three-sided heating panel 2 with and on the thermal insulating board 3 inside which one or two beds 4 for fastening conductors are mounted creates a new area with the insulation and work function, sectioned off in it to work at a preset angle. The combination of these three basic parts into a complete whole is possible by using the lock and key system consisting of grooves 6 and tongues 7 that allow assembling and dismantling the parts in any place and at any time and then combining them into the complex and complete area of wall, floor or ceiling connected so to one of the bottom and/or top edge strip boxes 5 through which air can be transported and its movement and circulation can be forced inside the room finished like this. The skirting boards according to this invention can be used for lining the entire surfaces of walls, floors, ceilings or their parts depending on the climatic requirements and thermal needs of their potential users, in place of or in addition to the existing heating and cooling systems to obtain the extra finish effect of the rooms. This invention contributes to and creates the new ways of assembling, mounting and changing covers of the panel unit or module in the form of a wall or floor skirting board and also has the task of supporting and developing the "new technology for production of innovative wall and floor heating and cooling panel-type linings" named POLPANEL.

Claims

1. The panel-like skirting-type air room heater containing the pipings for carrying the heating and cooling agent and the electrical heating conductors situated inside or outside **characterised in that** there is a recess 1 inside the skirting board with the insulation and work function, occurred as a result of combination of the three-sided heating panel 2 and the thermal insulation panel 3, which forms a closed tunnel for transportation of internally or externally heated or cooled air as the additional agent. 5 10
2. The panel-like skirting-type air room heater, according to claim 1, **characterised in that** inside the recess 1 between the edge or edges of the three-sided heating board 2 and the thermal insulation panel 3 one or two beds 4 for the heating and cooling pipings and the electric heating conductors are mounted so that they can form, in combination with the three-sided heating panel 2, laggings for these conductors. 15 20
3. The panel-like skirting-type air room heater, according to claim 1, **characterised in that** the three-sided heating panel 2 has at its base two lock-like grooves 6 for joining and mounting it onto the tongues 7 of the thermal insulating board 3. 25
4. The panel-like skirting-type air room heater, according to claim 1, **characterised in that** the bed 4 has at its base a lock-like groove 6 for joining and mounting it onto the tongues 7 of the thermal insulating board 3. 30

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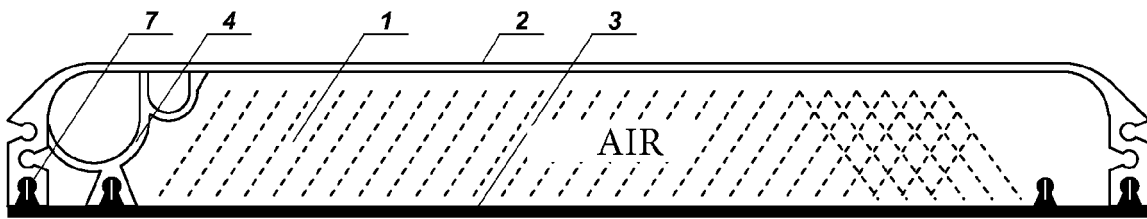


Fig.1

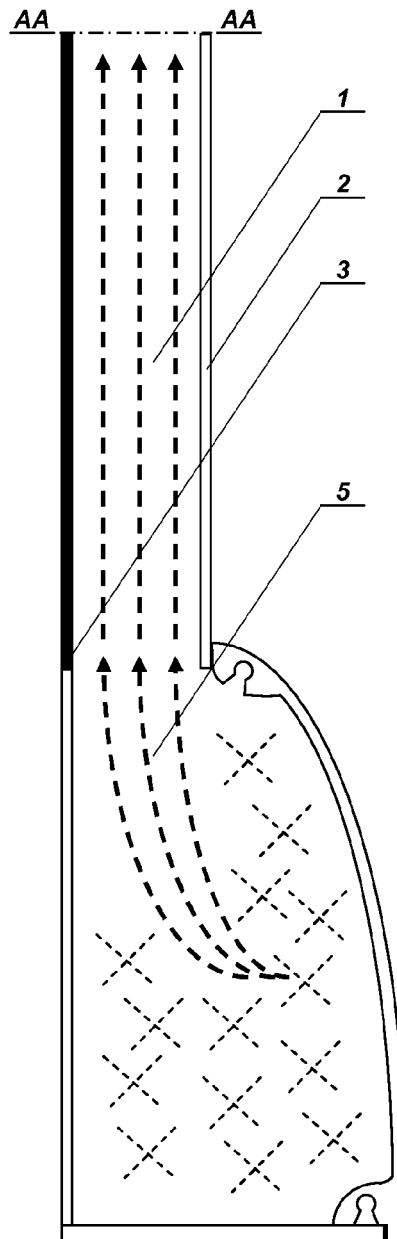


Fig.2

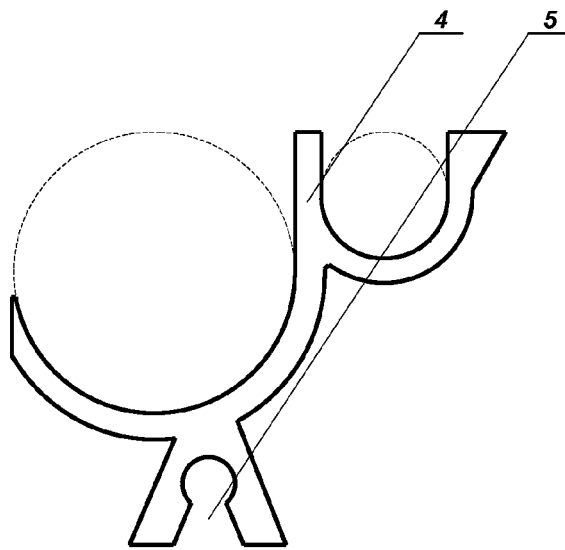


Fig.3

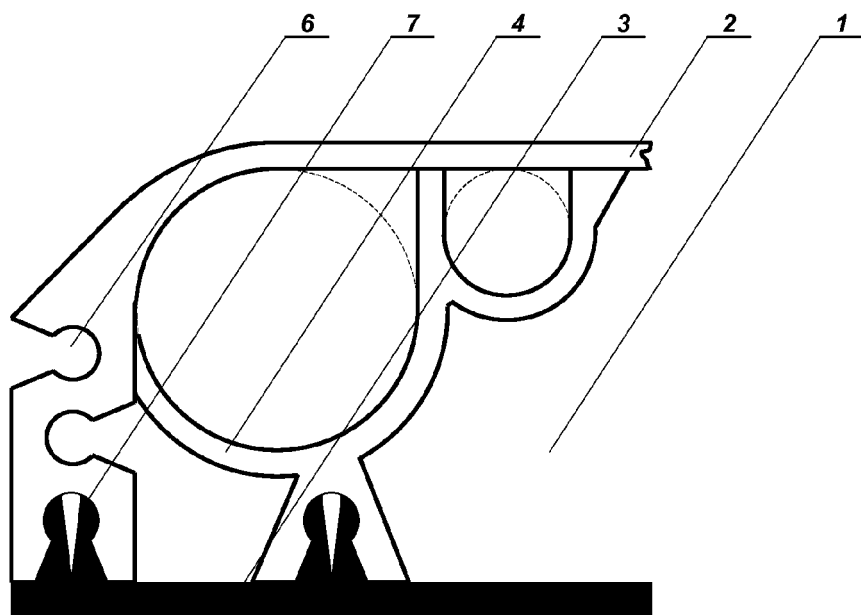


Fig.4

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- PL 336019 [0002]
- PL 341914 [0003]