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(54) **Mounting bracket**

(57) A mounting bracket (10) for mounting a first component (20) onto a second component (22) comprises:
- a body member having a formation which is engageable with a corresponding formation on the second component (22) to which the first component (20) is to be at-

tached to;
- at least an attachment member (16) protruding from the body member, wherein the attachment member (16) is provided with resilient means (18) co-operable with a corresponding formation on the first component (20).

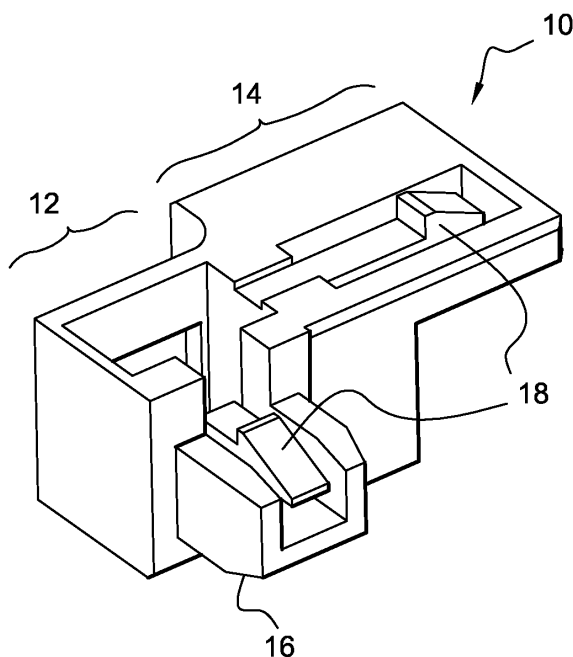


Fig. 1

Description

Technical field

[0001] The present invention relates to a mounting bracket, particularly, but not exclusively, a mounting bracket for mounting a first heat exchanging component to a second heat exchanging component in an automobile.

Background of the invention

[0002] It is necessary to ensure that heat exchanging components are mounted securely in their operative positions. This is a particular issue in automobile heat exchangers. The means for mounting the components must be such that it is resilient enough to withstand certain vibrations and impact forces, yet remains a relatively straightforward form of attachment.

Summary of the invention

[0003] According to the present invention, there is provided a mounting bracket for mounting a first component onto a second component, the mounting bracket comprising:

- a body member having a formation which is engageable with a corresponding formation on the second component to which the first component is to be attached to;
at least an attachment member protruding from the body member, wherein the attachment member is provided with resilient means co-operable with a corresponding formation on the first component.

[0004] Preferably, the body member is also provided with resilient means co-operable with a corresponding formation on the second component.

[0005] Preferably, the body member comprises a plastics block having a substantially rectangular aperture for receiving a corresponding rectangular protrusion on the second component.

[0006] Preferably, the attachment member comprises a rectangular protrusion having the resilient means mounted thereon. More preferably, the resilient means comprises a biased detent adapted to deform from an outward position to an inward position as it engages with the component and return back to its original position when the first and second components are mounted to one another.

[0007] Preferably, the first and second components are heat exchanger components for an automobile.

Brief description of the drawings

[0008] Embodiments of the present invention will now be described, with reference to the accompanying draw-

ings, in which:-

Fig 1 is a perspective view of the mounting bracket according to the present invention;

Fig. 2 is a perspective view of the mounting bracket of Fig. 1 in use when mounting a first heat exchanger component to a second heat exchanger component; and

Fig. 3 is a perspective view of a mounting hook, not in accordance with the present invention, located toward the bottom of the heat exchanger component.

Description of the preferred embodiment

[0009] With reference to Fig. 1, a mounting bracket 10 comprises a block moulded from a plastics material. At one side, the bracket 10 has an aperture 12 having a rectangular cross section for accepting a correspondingly shaped portion of a heat exchanger. An attachment member 16 projects from the body member of the bracket 10 and has a chamfered end in order to assist insertion into a recess in a bracket of the heat exchanger. At the opposite side the bracket 10 has a lip 14 for connection to a portion of the heat exchanger. Both the lip 14 and the attachment member 16 have resilient means in the form of biased detents 18.

[0010] In the embodiment shown, the mounting bracket 10 is used to mount a first heat exchanging component 20 onto a second heat exchanging component 22 of an automobile. The rectangular aperture 12 of the bracket 10 is placed over a corresponding formation on the second heat exchanger 22. At the same time, the detent 18 on the lip 14 snaps into engagement with a connection bracket 24 of the second heat exchanging component 22. This secures the mounting bracket 10 to the second heat exchanging component 22. In order to mount the first heat exchanging component onto the second heat exchanging component a connecting bracket 26 of the first exchanging component is brought towards the projecting attachment portion 16 until the chamfered portions of the attachment member 16 meets the bracket 26. At this point further movement of the first heat exchanging component towards the second heat exchanging component will cause the biased detent 18 to move inwardly and allow the attachment portion to pass into the bracket 26 of the first heat exchanging component 20. Once the attachment portion has been fully inserted into the bracket 26, the biased detent snaps outwardly to lock the first heat exchanging component to the second heat exchanging component.

[0011] Although only a single mounting bracket is shown in the figures, it will be appreciated that use of more than one mounting bracket may be desirable, for example it may be desirable to have mounting bracket at each of the four corners of the heat exchanging components. Alternatively, mounting hooks H may be used at selected corners, such as at the corners toward the bottom of the heat exchanger component, as shown in

Fig. 3.

[0012] The mounting bracket provides both a hanging function and a locating function for the heat exchanger component. This maximises the size of heat exchangers which can be used in a given application.

[0013] Other advantages of the mounting bracket of the present invention include:

- providing a secure and reliable bracket which requires a minimal amount of space;
- minimising the number of components required by minimising the need for screws and other fastening means; and
- allowing the components to be attached to one another very quickly and easily.

[0014] Modifications and improvements may be made to the foregoing without departing from the scope of the present invention, for example:-

Although, in the above description, the mounting bracket is used to mount a first heat exchanging component to a second heat exchanging component, it is clearly not limited to first and second components; it could be used to mount additional (third, fourth etc.) heat exchanging components to one another.

Claims

1. A mounting bracket (10) for mounting a first component (20) onto a second component (22), the mounting bracket (10) comprising:

- a body member having a formation which is engageable with a corresponding formation on the second component (22) to which the first component (20) is to be attached to;
- at least an attachment member (16) protruding from the body member, wherein the attachment member (16) is provided with resilient means co-operable with a corresponding formation on the first component (20).

2. The mounting bracket (10) according to claim 1, **characterized in that** the body member is also provided with resilient means co-operable with a corresponding formation on the second component (22).

3. The mounting bracket (10) according to claim 1 or 2, **characterized in that** the body member comprises a plastics block having a substantially rectangular aperture for receiving a corresponding rectangular protrusion on the second component (22).

4. The mounting bracket (10) according to anyone of claims 1 to 3, **characterized in that** the attachment member comprises a rectangular protrusion having

the resilient means mounted thereon.

5. The mounting bracket (10) according to anyone of claims 1 to 4, **characterized in that** the resilient means comprises a biased detent adapted to deform from an outward position to an inward position as it engages with the component and return back to its original position when the first and second components (20, 22) are mounted to one another.

6. The mounting bracket (10) according to anyone of claims 1 to 5, **characterized in that** the first and second components (20, 22) are heat exchanger components for an automobile.

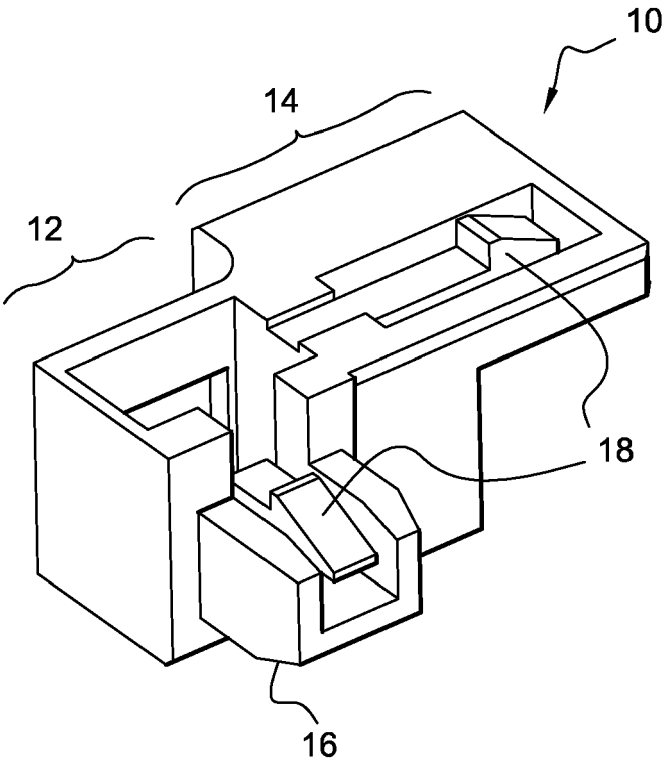


Fig. 1

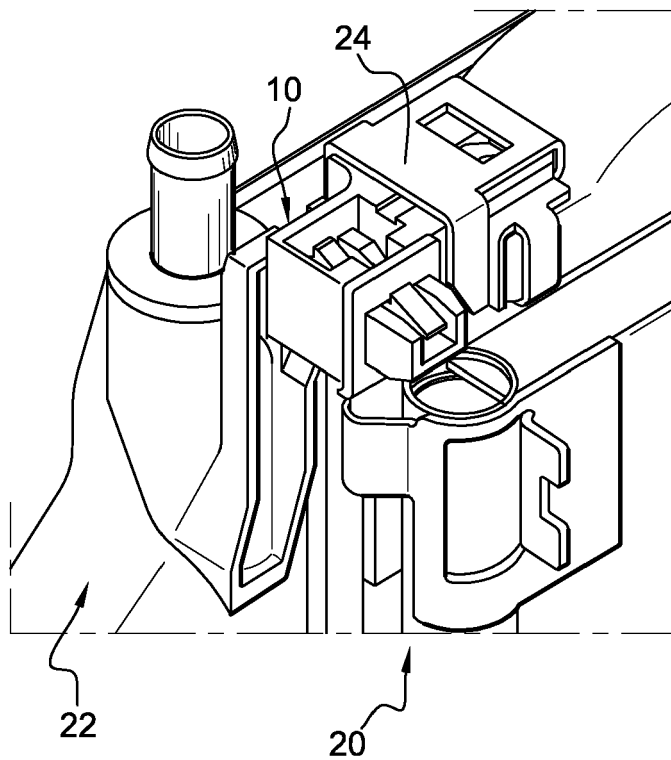


Fig. 2

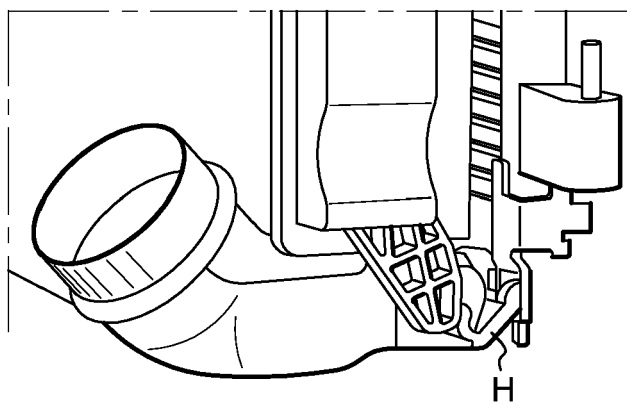


Fig. 3