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(54) **End closure member of a radiator**

(57) The present invention relates to an end closure member of a radiator, comprising a side trim member (3) and a cap (1), the cap (1) having a first end for being coupled to a radiator member (2) and a second end for being coupled to the side trim member (3), said second end of the cap (1) being coupled in a specific housing (4) in said side trim member (3). The present invention therefore provides a reliable, safe and aesthetic securing of a side trim member with a radiator member by means of a cap, said cap being concealed by the side member once the assembly is put together.

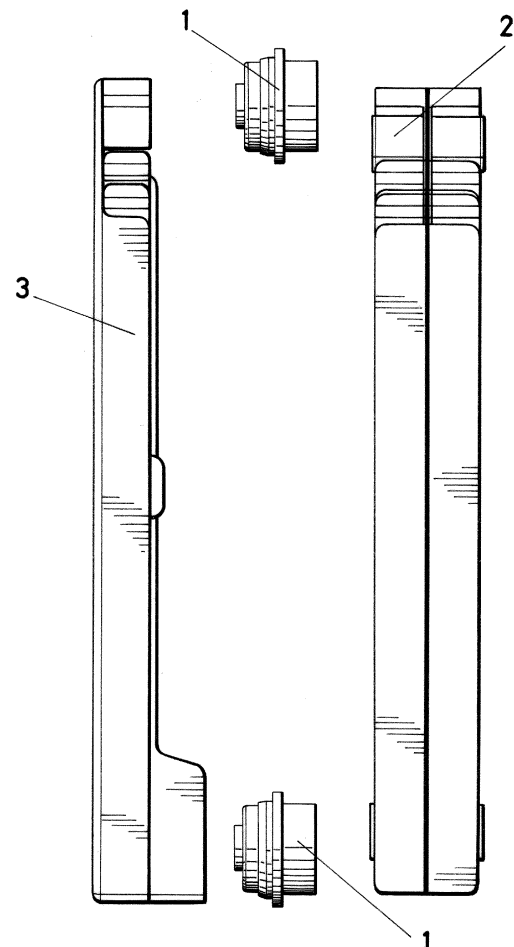


FIG.3

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Description

Field of the Invention

[0001] The present invention generally relates to the field of radiators, and more specifically to an end closure member of a radiator.

State of the Art

[0002] A wide variety of radiators is known in the art, each one having a design that is specifically suited for specific situations. Typical radiators generally have a modular design, being formed by various radiator members which are assembled one after the other until obtaining the desired radiator length depending on the heating requirements in the room in which they are installed. However, the aesthetic result of such modular radiators, specifically at their end members, is not entirely satisfactory for the end user.

[0003] One-piece radiators generally made of aluminum with a rectangular prismatic shape are also known. This design has a more aesthetic uniform final shape, but it lacks the modular character of the preceding radiators.

[0004] Therefore, there continues to be a need in the art for a member that allows closing an end of a radiator, attaching it in a fixed and reliable manner to a side trim member, such that an aesthetic and safe finish is provided while at the same time the advantages of a modular radiator system are maintained.

Summary of the Invention

[0005] The present invention relates to an end closure member of a radiator. Said closure member comprises a side trim member and a cap, the cap having a first end for being coupled to the radiator member and a second end for being coupled to the side trim member, said second end of the cap being coupled in a specific housing in said side trim member.

[0006] The present invention therefore provides a reliable, safe and aesthetic securing of a side trim member with a radiator member by means of a cap, said cap being concealed by the side member once the assembly is put together.

Brief Description of the Drawings

[0007] The present invention will be better understood in reference to the following drawings which illustrate a preferred embodiment of the invention provided by way of example and which must in no way be interpreted as limiting the invention.

Figures 1A and 1B show front and rear perspective views, respectively, of a cap according to the preferred embodiment of the invention.

Figure 2 shows a perspective view of the inside of a side trim member according to the preferred embodiment of the invention.

Figure 3 shows an organized exploded view of the various parts of the closure member according to the preferred embodiment of the invention.

Figure 4 shows a rear perspective view of a closure member according to the preferred embodiment of the invention with the various members already assembled.

Detailed Description of the Preferred Embodiment

[0008] In reference to both Figures 1A and 1B, a cap (1) for closing a radiator member (2) with a side trim member (3) can be observed. Said cap (1) has a first end (Figure 1A) for being coupled to the radiator member (2) and a second end (Figure 1B) for being coupled to a specific housing (4) in the side trim member (3).

[0009] The cap (1) could be coupled with the radiator member (2) and with the side trim member (3) by means of any suitable coupling type known in the art. However, according to the preferred embodiment of the invention, the cap (1) is coupled with the radiator member (2) by means of threading, whereas the cap (1) is coupled with the side trim member (3) by means of snap-fitting.

[0010] Figure 2 shows the inside of a side trim member (3) according to the preferred embodiment of the present invention. As can be seen, said side trim member (3) has a housing (4) suitable for receiving a cap (1) as described above by means of snap-fitting. Furthermore, according to this preferred embodiment, the housing (4) has a first threaded hole (5) on one side arranged to correspond with a second threaded hole (not shown) on one side of the cap (1) introduced therein. The securing of the cap (1) to the side trim member (3) can therefore be secured additionally by means of introducing a set screw (not shown) through said corresponding threaded holes.

[0011] Figure 3 schematically shows the closure member of a radiator member (2) with a side trim member (3) according to the preferred embodiment of the invention. In this case, two caps (1) are used to close the radiator member (2) with the side trim member (3). Therefore, the inner part of the side trim member (3) will have a housing (4) like the one described above in reference to Figure 2.

[0012] The result of assembling these members is shown in Figure 4. According to the preferred embodiment, once the members are assembled, the cap (1) will be completely concealed out of sight in the front part, thereby providing the aesthetic result required by the invention. However, said cap (1) and housing (4) can preferably be accessed from the rear part of the final assembly, as shown in this Figure 4. It is therefore possible to introduce a set screw in the first hole (5) of the housing (4) and in the second hole of the cap (1), thereby additionally securing the various members for greater safety.

[0013] Although the present invention has been described in reference to a specific embodiment, persons

skilled in the art will be able to apply different variations and modifications within the scope of the present invention.

[0014] For example, although a preferred embodiment that uses two caps for closing an end of a radiator with a side trim member has been shown, the person skilled in the art will understand that a single cap or a higher number of caps could be used in other embodiments of the invention. 5

[0015] According to the preferred embodiment of the invention, the cap is made of steel. The radiator member is in turn preferably an aluminum member, whereas the side trim member is preferably made of aluminum or plastic. However, it is understood that any other material can be used to manufacture these members without departing from the scope of the present invention. 10 15

Claims

1. End closure member of a radiator, comprising a side trim member (3) and a cap (1), the cap (1) having a first end for being coupled to a radiator member (2) and a second end for being coupled to the side trim member (3), said second end of the cap (1) being coupled in a specific housing (4) in said side trim member (3). 20 25
2. End closure member of a radiator according to claim 1, **characterized in that** the cap (1) is coupled to the radiator member (2) by means of threading. 30
3. End closure member of a radiator according to any of the preceding claims, **characterized in that** the cap (1) is coupled to the side trim member (3) by means of snap-fitting. 35
4. End closure member of a radiator according to any of the preceding claims, **characterized in that** the housing (4) of the side trim member (3) has a first threaded hole (5) on one side arranged to correspond with a second threaded hole on one side of the cap (1) introduced therein, suitable for introducing a set screw through said threaded holes. 40 45
5. End closure member of a radiator according to any of the preceding claims, **characterized in that** the cap (1) is made of steel. 50

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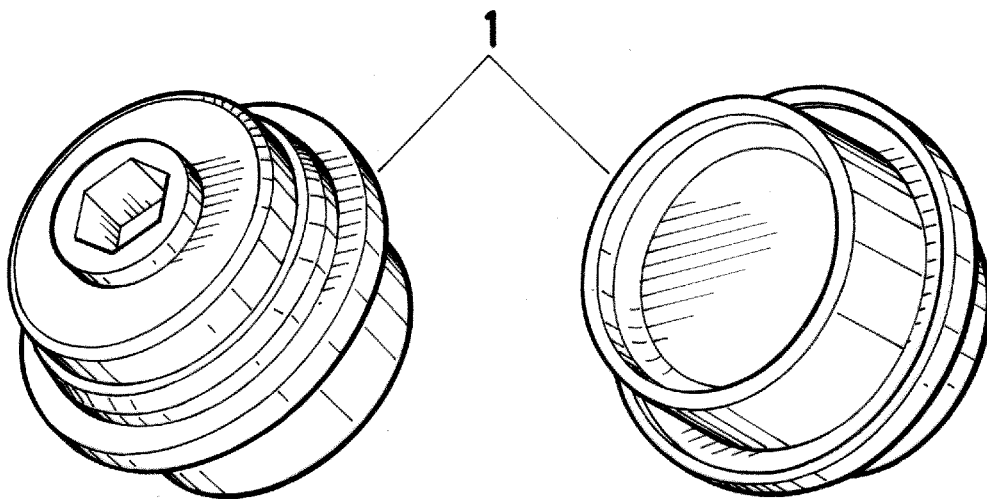


FIG.1A

FIG.1B

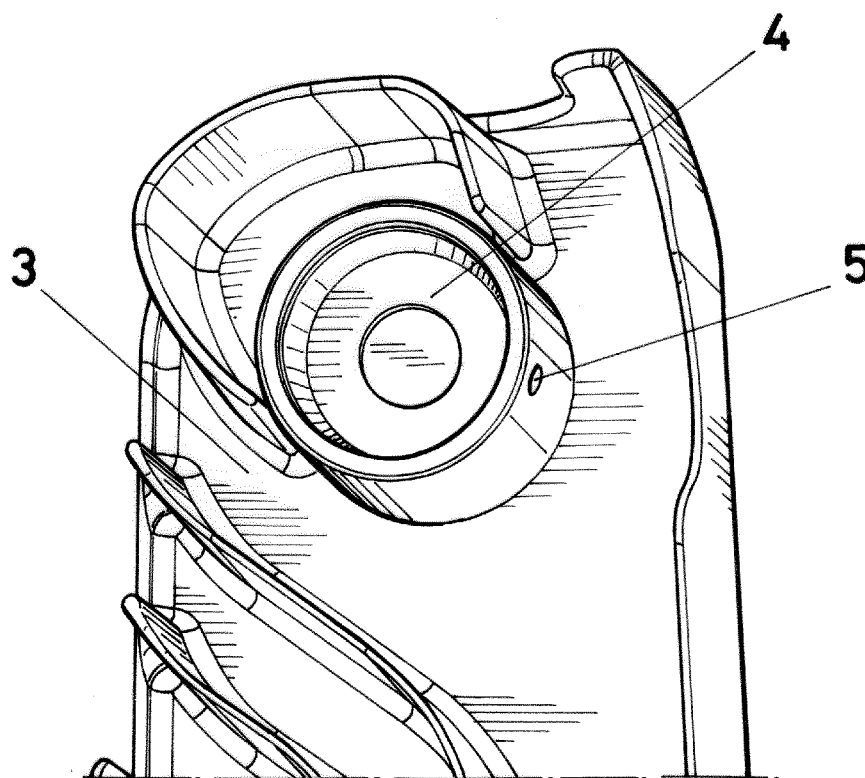


FIG.2

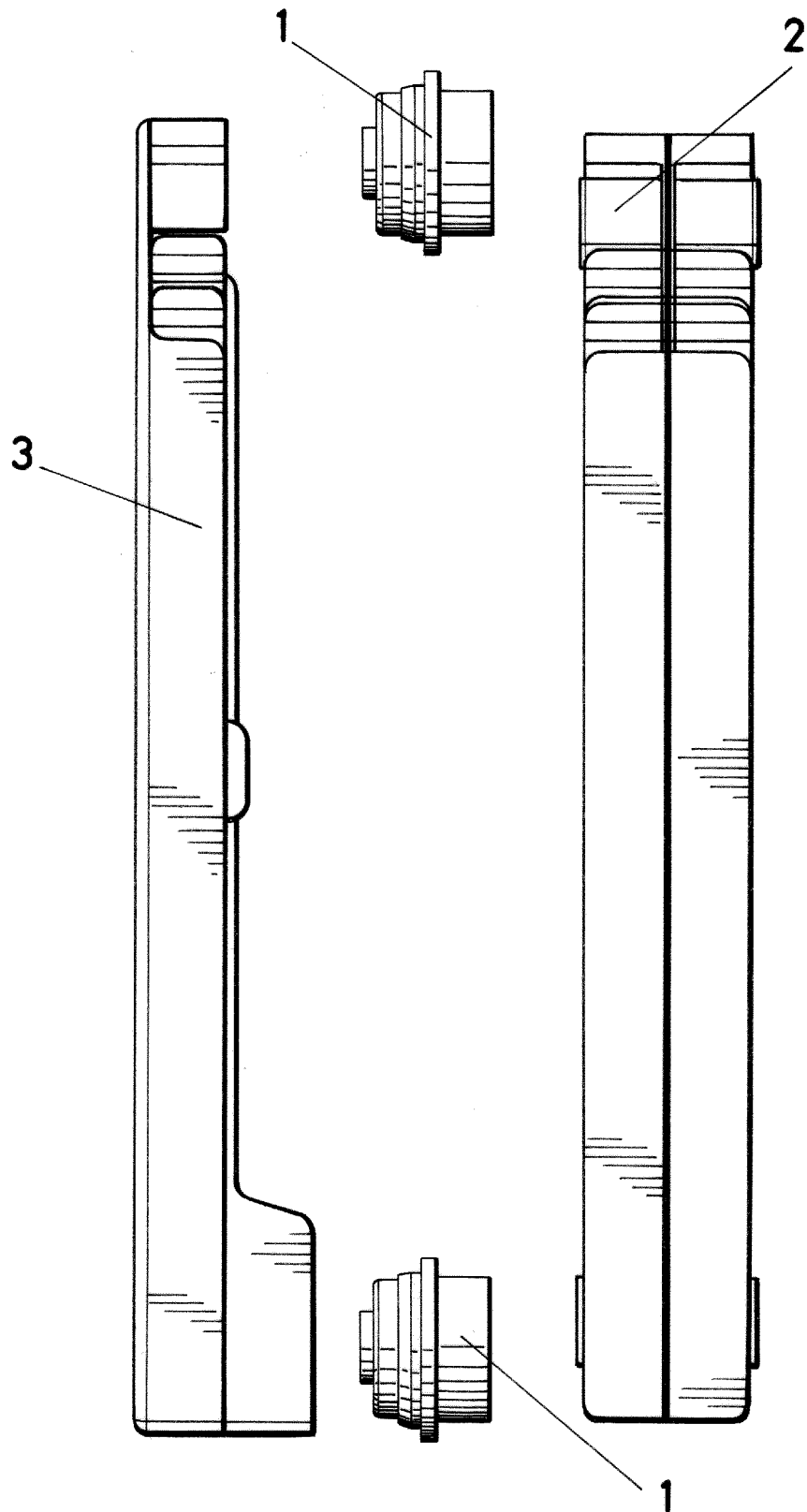


FIG.3

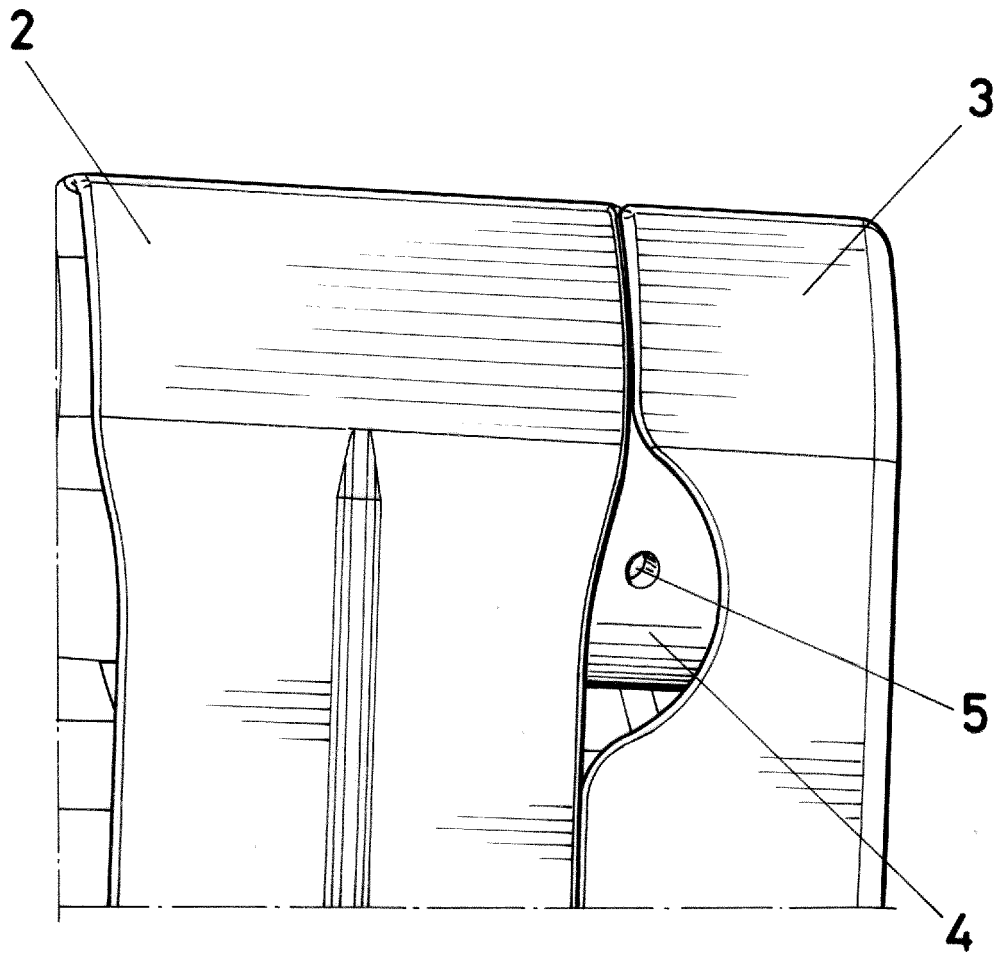


FIG.4