CLAIMS

1. A heating element cover component comprising:

a hollow outer shell portion of a required length, having required rigidity and thermal conductivity;

a substantially half-pipe shaped abutting portion formed with a required thickness at a required site of the outside of the outer shell portion in parallel with a longitudinal direction of the outer shell portion, having flexibility and thermal conductivity, and with a slit penetrating in a thickness direction formed over the entire length in parallel with the longitudinal direction;

a connecting portion having flexibility and thermal conductivity, connecting opposed edges of the abutting portion parallel to the longitudinal direction with the outer shell portion; and

an engaging portion constituted by engaging elements that are disposed at line-symmetrical positions using a longitudinal straight line located at a widthwise middle of the abutting portion as an axis of symmetry to form a pair structured to be engageable with each other; wherein the slit is formed in a shape that gradually narrows from a side of a hollow region in the outer shell body to a direction of an outer surface of

the abutting portion.

2. The heating element cover component according to claim 1, wherein the outer shell portion, the abutting portion, the connecting portion, and the engaging portion are made of aluminum or made of an aluminum alloy, and an alumite processing is applied to an outer surface of the outer shell portion, the abutting portion, the connecting portion, and the engaging portion and an inner surface of the outer shell portion.

3. The heating element cover component according to claim 1, wherein one of the engaging elements is a projecting piece that projects in a direction opposite to the outer shell portion and is formed with a latching pawl, and the other of the engaging elements is a projecting piece inserting portion that is set to a size capable of receiving the projecting piece and is capable of latching the latching pawl.

4. A heating element cover having a structure of a pair of heating element cover components according to claim 1, of which the engaging elements mutually paired are engaged with each other in a manner joining the abutting portions together with the engaging elements made face to face with each other.

5. A radiant cooling and heating apparatus comprising:

a support frame;

a heating element which is disposed in an in-between region sandwiched by the support frame or surrounded by the support frame, inside of which a flowable heating medium can flow through, and which consists of a plurality of tubular parts laid thereacross at an interval; and

a heating element cover having a structure of a pair of heating element cover components according to claim 1 installed for each of the tubular parts of the heating element, of which the abutting portions are made mutually face to face with each other to sandwich each tubular part of the heating element therebetween, and the engaging elements mutually paired are engaged with each other with the engaging elements made face to face with each other.

6. An air conditioning system comprising:

a radiant cooling and heating apparatus according to claim 5; and

an air conditioner to be operated in combination with the radiant cooling and heating apparatus, including a refrigerant circuit in which a compressor, an expansion valve,

a flow path switching valve, an indoor side heat exchanger, and an outdoor side heat exchanger are connected by piping to circulate a refrigerant to perform a refrigeration cycle, said radiant cooling and heating apparatus being incorporated in said refrigerant circuit, and supplying air that has undergone heat exchange with the refrigerant by the indoor side heat exchanger to an indoor space by a fan.