The control device for an electrically heated sauna room includes a liquid filled temperature sensing body located inside the sauna room and communicating with the control device properly located outside the room. The sensing body is made of elastically deformable material and may, in case of accident, be compressed by means of a lever, thus bringing about an immediate action upon the control device for breaking the current supply.
SAFETY DEVICE FOR SAUNA ROOMS

BACKGROUND OF THE INVENTION

There have been a number of accidents at electrically heated sauna rooms, when persons have been locked in, as it has not been possible to open the door to the sauna room from the inside. At such occasions there has been no possibility to shut off the current supply to the electric heating unit. A way to prevent such accidents would be to provide an emergency switch for the heating unit inside the very sauna room, but there exists today no switch, which the authorities would approve for use in a sauna room, where the changes in temperature and moisture are so high.

SUMMARY OF THE INVENTION

The purpose of the invention is to make it possible to shut off the heating unit from inside the sauna room with the aid of uncomplicated means and without the need of electric control apparatus or connections inside the sauna room. The invention relates to a safety device for sauna rooms provided with an electric heating unit having a thermostatically governed power control including a liquid-filled sensing body located inside the sauna room and communicating with a pressure bellows located outside said room for acting upon the power control. The invention is characterized in that the sensing body is elastically deformable, and that a manually operated member is fitted for mechanically compressing the sensing body.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a schematic view of a power control and a safety device according to the invention cooperating therewith, when the safety device is at normal working conditions, and

FIG. 2 is a corresponding view when the safety device has been operated to cut out the heating unit.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In the drawings there is schematically shown a power control 10 having two contacts 11 and 12, which are connected to the current circuit (25) leading to an electric heating unit (26). One of the contacts 12 is a movable element, and it is operated by means of a pressure bellows 13, which through a capillary tube 14 of suitable length communicates with an elongated tubular sensing body 15 of elastically deformable material, which is fitted inside the sauna room, to be exposed to the temperature therein. The power control 10 proper shall be located outside the sauna room. The pressure bellows 13, the capillary tube 14 and the sensing body 15 together form a communicating system, which is filled with a liquid. When the temperature in the sauna room rises, which rise is sensed by the sensing body, this liquid expands whereby the pressure bellows 13 is influenced and in turn acts on the movable contact 12, pushing this away from the contact 11 and breaking the current circuit to the heating unit. This is a common arrangement at sauna rooms with electric heating units. For simplicity's sake the drawing shows one pair of contacts only, but in practice there are generally arranged three current lines, and three pairs of contacts for three-phase connection of the heating unit. This circumstance, however, does not alter anything regarding the principle for the safety device according to the invention.

The sensing body 15 is retained in its position between a bar 16 fitted to a plate 17, which may be attached to the sauna room wall, and a jaw 18, which is pivotally fitted to the plate 17 by means of a journal 19 and is provided with a lever 20. Normally the jaw 18 and the lever 20 have the position shown in FIG. 1, and they may be retained in this position by means of any kind of spring lock, or an easily breakable stop, e.g. a sealed wire. The sensing body 15, which is located between bar 16 and jaw 18 thereby acts in a way to control the opening and the closing of the movable contact 12 in relation to the temperature conditions in the sauna room, and thereby also the expansion and the contraction, respectively, of the liquid in the communicating system 13, 14 and 15.

If an emergency situation arises and it is necessary to shut off the electric heating unit from inside the sauna room, the lever 20 is turned in the direction of arrow 21 to the position shown in FIG. 2, whereby jaw 18 presses a central portion of the sensing body 15 against bar 16, which acts as a fixed counter-jaw during deformation of the sensing body. Hereby liquid is pressed from the sensing body according to arrow 22, through the capillary tube 14 and into the communicating system 13. This will expand due to the increasing liquid pressure therein and acts on the movable contact 12, with a breaking of the current circuit to the heating unit as a result, all in accordance with what is shown in FIG. 2.

The safety device shown and described is very simple and useful and is easily operated also for a technically unskilled person. The device requires no electric control component in the sauna room, but works through the already present sensing body and the associated capillary tube as a transforming member between the sauna room and the power control, which is located outside this room. The device further acts as a holder for the sensing body, which is an additional advantage. It is of course, possible to give the jaw-arrangement another design, and the invention may therefore in no way be considered as limited to the embodiment shown here.

What I claim is:

1. A safety device for sauna rooms provided with an electric heating unit having a thermostatically governed power control including a liquid-filled sensing body located inside the sauna room and a communicating with a pressure bellows located outside said room for acting upon the power control, the improvement comprising: the sensing body being comprised of an elastically deformable material and a manually operated means is fitted for mechanically compressing of the sensing body.

2. The safety device according to claim 1, in which the manually operated means includes a pivoted lever having a jaw for pressing the sensing body against a fixed counter-jaw.

3. The safety device according to claim 1, in which the manually operated means includes a pivoted lever and is journaled on a plate carrying a counter-jaw.

4. The safety device according to claim 3, in which the sensing body includes an elongated tubular member which is fitted to the plate between the lever and the counter-jaw, which together act as a holder for the sensing body.

5. The safety device according to claim 1, in which said means includes a pivoted lever, which lever has a jaw adjustable towards a central portion of the sensing body for pressing this portion against a straight bar acting as counter-jaw.