March 21, 1961 A. R. ILLINGWORTH 2,976,393

FLOOR COVERINGS, UNDERFELTS, UNDERLAYS AND THE LIKE

Filed Sept. 5, 1958

Fig. 1.

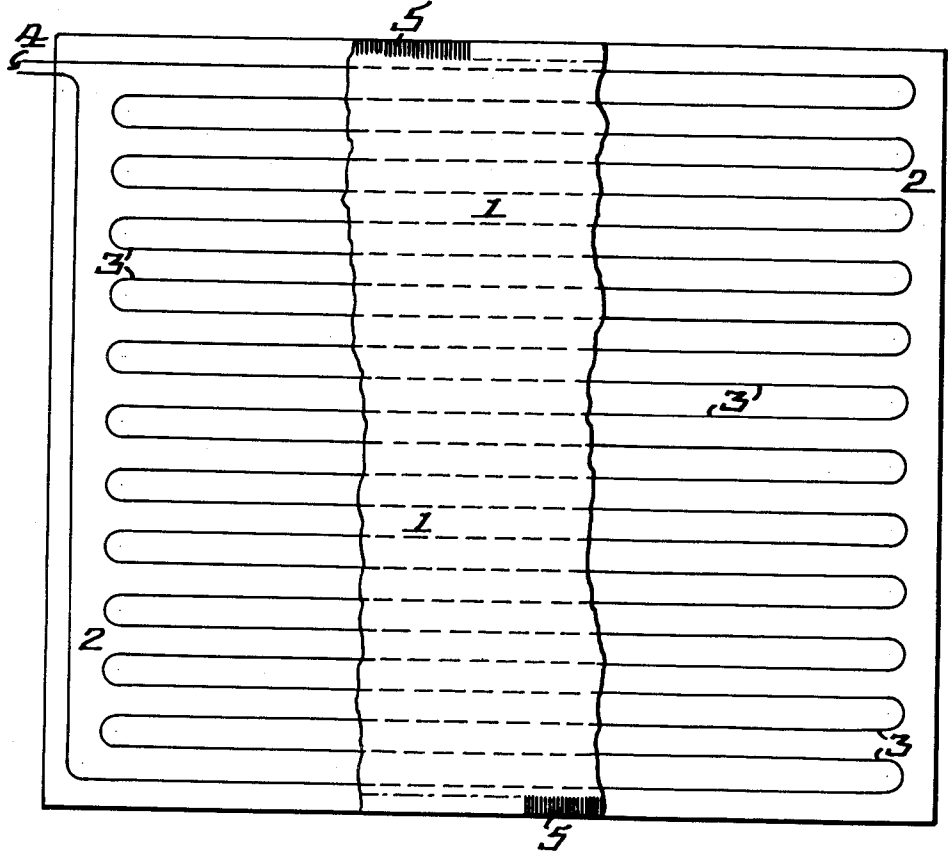


Fig. 2.

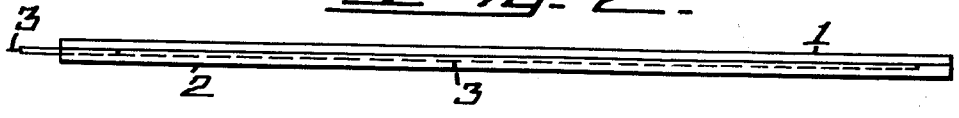
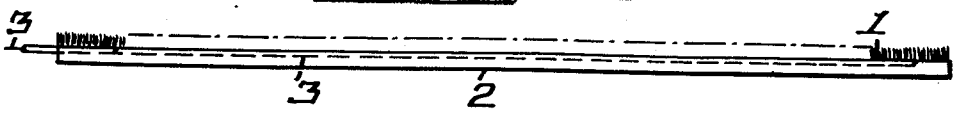


Fig. 3.



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FLOOR COVERINGS, UNDERFELTS, UNDERLAYS AND THE LIKE

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2 Claims. (Cl. 219—46)

This invention relates to floor coverings, underfelts and underlays and has for its object to provide a new or improved form of floor covering, underfelt or underlay, which can be used for space heating.

According to the invention it is proposed to secure between two layers of material a length of electrical conduit such as wire. The conduit or wire may be located between the material by the same means which secures the two layers of material together and one suitable means is an adhesive which is coated or formed on one or both of the adjacent faces of the two pieces of materials.

In order that the invention may be fully and clearly comprehended the same will now be described with reference to the accompanying drawings, in which:

Figure 1 is a plan view of a floor covering, underfelt or underly constructed according to the invention, part of the upper layer of material forming part of the article being shown cut away to reveal the interior.

Figure 2 is an elevation of Figure 1, the thickness of the article being somewhat exaggerated to more clearly define the invention.

Figure 3 is a similar view to Figure 2 of a modification of the invention.

The floor covering comprises two layers of felt **1** and **2** between which a heating wire **3** is laid out over the area of the lower felt **2** to a length determined by the electrical rating required, the wire being temporarily held in position by means of pins or in any other convenient manner.

The surface of the felt **2** upon which the wire **3** is laid is subsequently coated with an adhesive suitable to the material employed, as is also treated the adjacent face of the layer **1**. The pins or the like are then removed and the two layers—with the wire **3** between them—passed through rollers or otherwise subjected to pressure to cause adherence of the two layers and securely hold the heating wire between them in the required pattern. In the example of the invention illustrated in Figures 1 and **2** of the drawings the bottom layer of material is somewhat softer or resilient than the upper layer, consequently

on the application of pressure in the manner aforesaid the wire is pressed into the upper surface of the bottom layer. Alternatively the upper layer **1** may be softer, in which event the wire tends to be pressed into the lower face of the upper layer. In the case of layers of identical material the wire is pressed equally into both adjacent faces of the materials **1** and **2**.

In the modification of the invention shown at Figure 3, the uppermost layer **1** consists of a carpet and the lower layer **2** an underfelt or backing material for the uppermost layer or carpet.

If desired or necessary the layers of floor covering material may be treated with a suitable fire-proofing substance.

The ends of the wire **3** project from a suitable single point **4** at the edge of the carpet, underfelt or underlay material or substance for connection to an electric supply.

The heating wire is suitably insulated by means of a plastic covering or other insulating medium, and the perimeter of the article may be blanket-stitched or whipped **5** to reinforce the edge. Of the edge may be bound with tape or otherwise strengthened, if desired.

I claim:

1. A process for the production of a floor covering comprising a pair of upper and lowermost felt layers and an electrical heating conduit between said layers comprising positioning the heating conduit upon the lowermost of said layers with removable positioning pin means, one of said layers being softer than the other of said layers, maintaining said heating conduit in position with said positioning pin means, coating said lowermost layer and said conduit with adhesive, removing said positioning pin means, assembling with said lowermost layer and conduit an adhesive coated upper layer and passing the assembled layers through pressure rollers whereby said layers are caused to adhere and said heating conduit is pressed into the softer of said layers.

2. A process as recited in claim 1 wherein the softer of said layers is treated with a fire-proofing substance.

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