

No. 772,203.

PATENTED OCT. 11, 1904.

H. J. BELLMAN.
HAIR FELT INSULATING COVERING.
APPLICATION FILED JUNE 18, 1904.

NO MODEL.

Fig. 2.

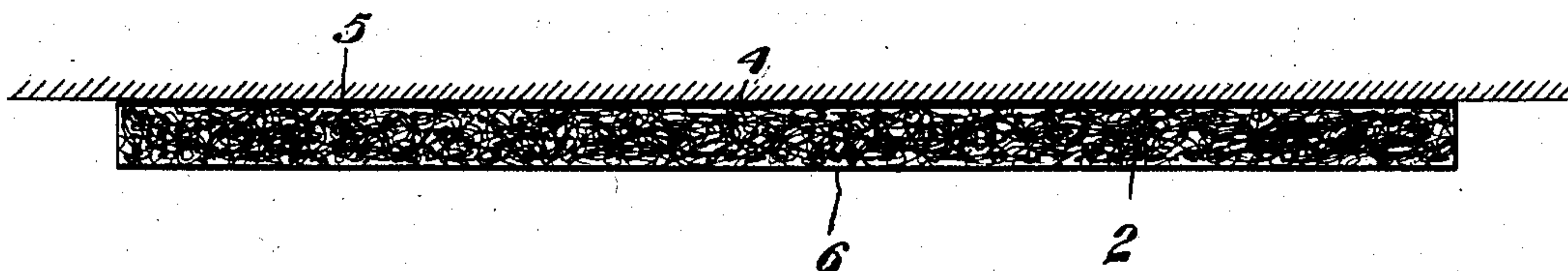
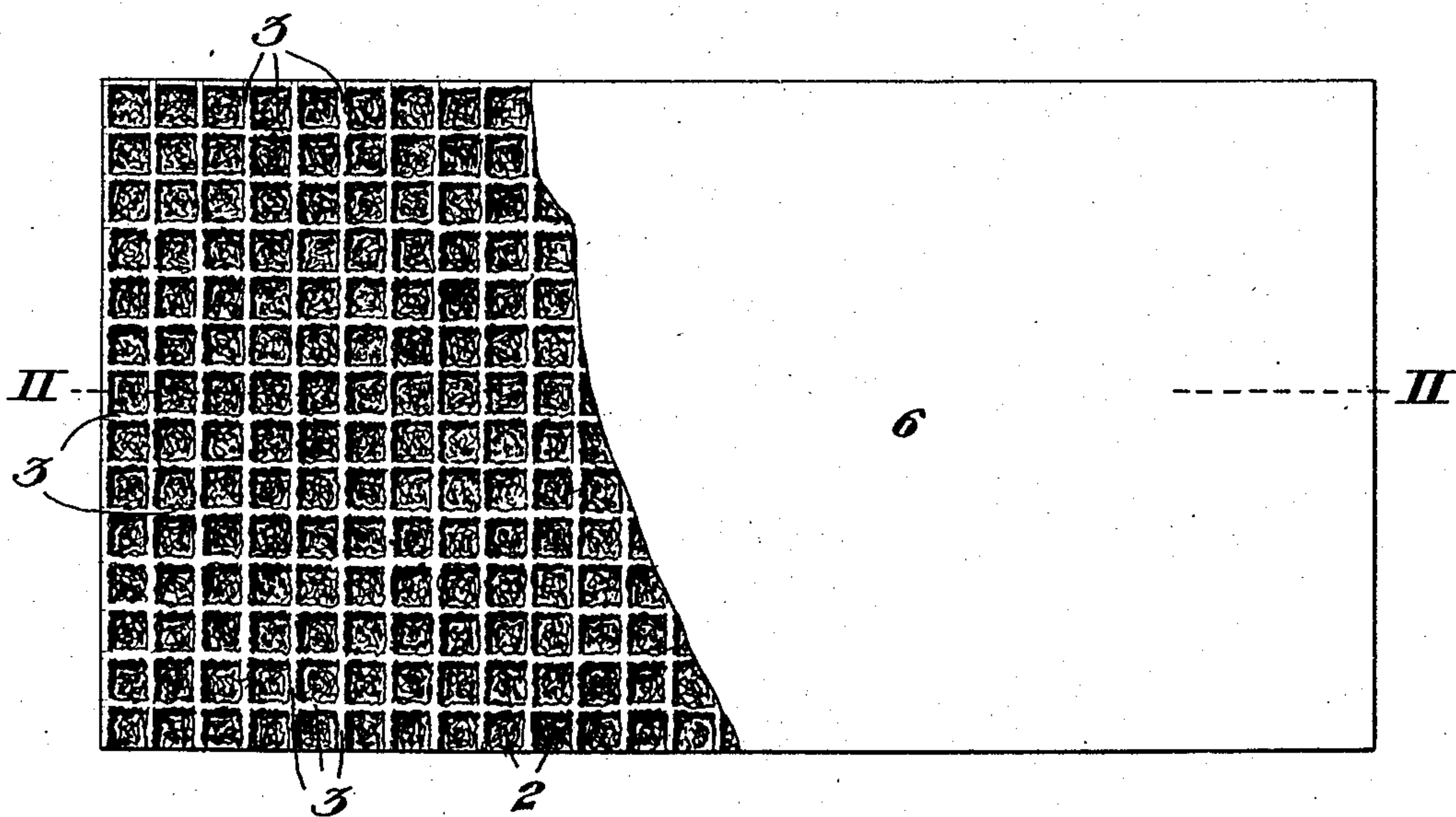


Fig. 1.



Witnesses:

Edw. V. MacKenzie
Chas. S. Sepley

Inventor:

Henry J. Bellman
by C. M. Clarke
his attorney

UNITED STATES PATENT OFFICE.

HENRY J. BELLMAN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
THE PITTSBURGH HAIR FELT COMPANY, OF SHARPSBURG, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

HAIR-FELT INSULATING-COVERING.

SPECIFICATION forming part of Letters Patent No. 772,203, dated October 11, 1904.

Application filed June 18, 1904. Serial No. 213,089. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. BELLMAN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Hair-Felt Insulating-Covering, of which the following is a specification, reference being had therein to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a face view of a section of my improved felt packing, the covering-layer being partly broken away. Fig. 2 is a sectional view on the line II II of Fig. 1.

My invention refers to improvements in felt packing for refrigerators, cars, buildings, &c., wherever it is desired to use packing of this nature for the purpose of preventing or excluding a circulation of air.

Ordinarily felt packing is applied to wall or other surfaces in sections by tacking or nailing or by other suitable securing means, and the difficulty heretofore has been to make an impervious air-sealing coating of such material in an efficient manner by this means. Packing of this nature has sometimes been loosely secured between outer layers of covering material by stitching; but the stitching operation results in numerous holes, which allow the air to pass through, thereby greatly reducing and in fact destroying the necessary air-tight character of an efficient covering. Owing to the nature of the material used—to wit, hair felt—it is very porous unless confined between air-tight inclosing walls, and when so inclosed the dead air confined within and throughout the felt, in combination with the felt itself, forms a highly-efficient air-barrier well adapted for the purposes in view.

My invention has for its objects to provide hair-felt packing with an inclosing or confining wall by which it is better adapted to application to wall or other surfaces, and by reason of the particular manner of combining these elements with the hair felt I accomplish the objects in view in a highly satisfactory, novel, and successful manner.

Referring now to the drawings illustrating the invention, 2 represents the body of felt, which is ordinarily made in rectangular shape or sections of a proper width and combined with any suitable anchoring, connecting, or cementing medium, as glue, turpentine, &c. For the purpose of strengthening the felt the outer layer at one or both sides is preferably woven in the form of crossed meshed filaments 3, constituting interlocking web and woof members in the manner of ribbed network, which extends entirely across the area of the felt. To one or both sides of the felt as thus prepared are applied layers 4 of thin fibrous material, dense paper, or other suitable material having a hard smooth body portion impervious to air or moisture and adapted to provide a dense, thin, and strong armor for the felt. This layer, as stated, may be applied to one or both sides, and it is connected therewith by an intervening cement or glue of any suitable nature or consistency adapted to combine the felt and the armor together. By reason of the ribbed network 3 this cementing operation is facilitated, the cement forming in pockets, and as the filaments of the network are of a somewhat denser or more finely corded nature than the body portion of the felt they become embedded in the cement and adhere to the outer sheet 4, while retaining their natural bonding connection with the felt itself. When made with a single layer 4, the felt is applied by tacking or otherwise, said layer being laid next to the wall-surface 5. I then apply an outer layer 6 of material similar to the sheet 4, securing the same against the felt by gluing, cementing, or tacking, thus inclosing the entire intervening body of felt, as will be readily understood. If desired, however, the layer 4 may be originally applied to both sides and secured thereto in the manner already described, the confining-felt and outer coating then being attached in sections to the wall-surface in any suitable manner.

It will be observed that the thickness of the felt may be varied or the dimensions other-

wise made to suit the requirements of application or it may be made in standard sizes for the market.

The advantages of the invention will be readily appreciated by all those familiar with material of this nature, and various changes and modifications may be made by the skilled mechanic from the exact construction shown and described. I do not therefore desire to be limited thereto, but to include all such changes and variations as within the scope of the following claim.

What I claim is—

The combination with a layer of felt pro-

vided with an external webbing of felt strands in the form of open network, formed in the body of the felt on its surface, of a thin sheet of impervious material constituting an airtight covering therefor, with an intervening cementing substance, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY J. BELLMAN.

Witnesses:

C. M. CLARKE,

JAMES McC. MILLER.