Sept. 25, 1934. W. L. STEFFENS 1,974,519

HEAT INSULATING AND SOUND DEADENING MATERIAL

Filed July 5, 1929

Fig. 1.

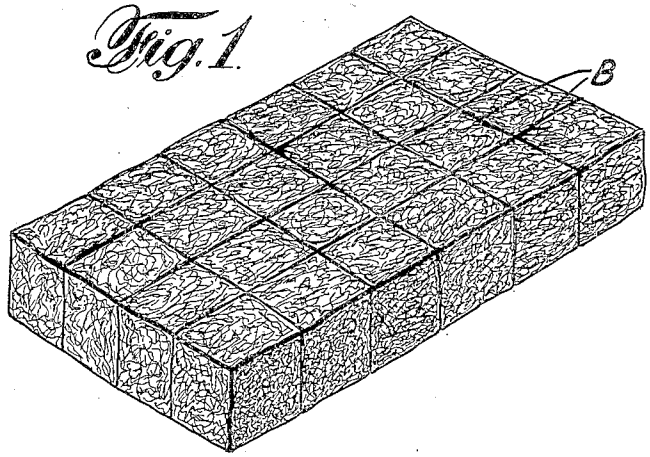


Fig. 2.

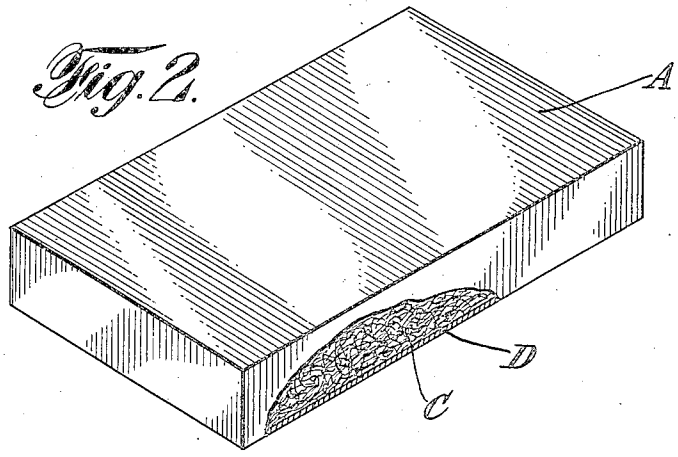
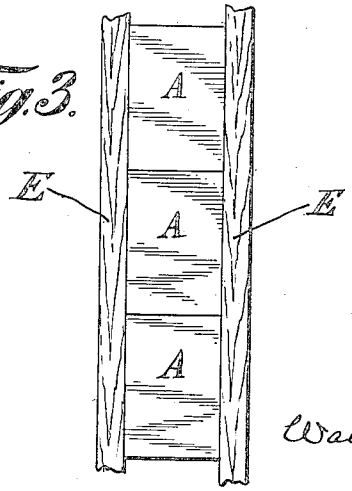


Fig. 3.



Walter L. Steffens INVENTOR

BY

ATTORNEY

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HEAT INSULATING AND SOUND DEADENING MATERIAL

Walter L. Steffens, Wyoming, Ohio, assignor to The Philip Carey Manufacturing Company, a corporation of Ohio

Application July 5, 1929, Serial No. 376,059

8 Claims. (Cl. 154—44)

My invention relates to insulation for buildings and other construction and is particularly addressed to insulation to be placed between walls, or ceilings and floors and similar places in buildings where it is desired to provide heat insulation and sound deadening qualities.

By my invention I have provided heat insulation and sound deadening unit members which are fire resistant and vermin proof while retaining in each unit the desirable comparatively even distribution of cells throughout the unit.

In the drawing, Fig. 1 shows one form of my invention and Fig. 2 is a modification thereof. Fig. 3 shows my units in place in a structure.

In the drawing, A illustrates a unit of insulating material which may be of any desirable length, breadth or thickness but I prefer to make it of a width that will be appropriate to fit between the studs or joists in a building where it is to be used, and it may be of any desirable length although to facilitate handling two or three feet long would be a convenient length. The thickness is dependent upon the space between the walls or the ceilng and the floor or other space that is to be filled by my insulating units. The units shown in Fig. 1 consist preferably of a quantity of ribbons, shreds or strands or irregularly shaped pieces of preferably asbestos paper, although other materials could be used if desired. These ribbons, shreds, strands or irregularly shaped pieces of asbestos paper are all mixed together and then baled in the form shown in Fig. 1 and held in that form by wire strands B passing around the material C, or by wire stitching passing through the material or in any other suitable manner. As will be readily seen the amount of unfilled space in such a unit or mat will be broken up by the strands or irregular strips C thereby providing a very satisfactory insulating and sound deadening unit. If desired this unit A could have applied to the surface a film of waterproof material or as shown in Fig. 2 the insulating material strands C could be placed in an envelope or wrapper D whch would hold the insulating material C in a unit of the desired form. This wrapper D can be of any suitable material such as a paper, or fabric, either coated or uncoated. For the coating or saturating of the paper or fabric a bituminous coating such as asphalt is preferably used or any other suitable waterproofing or a fire resisting coating or saturating material could be used. In Fig. 3, E, E represent the studs or joists between which are placed my heat insulating and sound deadening units A. In this figure I have shown the type of unit shown in Fig. 2. In Fig 2, D is a waterproof saturated paper which forms the enclosure for the insulating material C. The enclosure is filled with the insulating material. This wrapper D could if desired be placed around the unit shown in Fig. 1 in addition to the wire B or other suitable means used to hold the insulating material C in the desired form. If desired the ribbon like strips C could be coated or saturated with any desirable waterproof or vermin-proof material. These strips could also be formed from asbestos paper cut in ribbons but a very satisfactory product can be produced by using cuttings and trimmings, which ordinarily form waste, produced in manufacture of other asbestos paper products.

I claim:—

1. In a heat insulating unit composed of flexible ribbons of suitable felted material assembled in an intermixed tangled mass to form a unit containing irregular broken up spaces and non-adhesive stitching means holding said insulating unit in desired form.

2. In a heat insulating unit composed of independent inter-mixed pieces of flexible felted material and stitching means holding said material in the desired bale form so as to provide within said unit irregular broken up spaces.

3. In a heat insulating unit composed of intermixed pieces of flexible felted material, non-adhesive means for holding said material in the desired form so as to provide in said unit irregular broken up spaces and a waterproof covering for same.

4. In a heat insulating unit composed of a bale of independent non-attached inter-mixed pieces of flexible felted material, non-adhesive means for holding said material in the desired bale form so as to provide in said unit irregular broken up spaces and a vermin proof covering for same.

5. In a heat insulating unit composed of a bale of independent non-attached pieces of asbestos paper composed of felted fibrous material, said pieces inter-mixed and held together to form a unit having within it irregular shaped spaces and means for holding said asbestos paper together.

6. In a heat insulating unit composed of intermixed pieces of flexible felted asbestos paper, non-adhesive means for holding said material in the desired form so as to provide in said unit irregular broken up spaces and a vermin proof cover for said unit retaining the asbestos paper inter-mixed so as to form a unit of desired shape.

7. In a heat insulating unit composed of intermixed pieces of waste flexible felted fibrous material and non-adhesive means for holding said material in the desired form so as to provide in said unit irregular broken up spaces.

8. A heat insulating construction composed of independent pieces of sheet material intermixed to form a multiplicity of irregular spaces, said sheet material containing asbestos fibers felted together to form said material, and non-adhesive means for holding said pieces of sheet material together to form said spaces.

WALTER L. STEFFENS.