Feb. 25, 1930. R. E. BRADSHAW 1,748,861

BUILDING MATERIAL

Filed Sept. 4, 1928

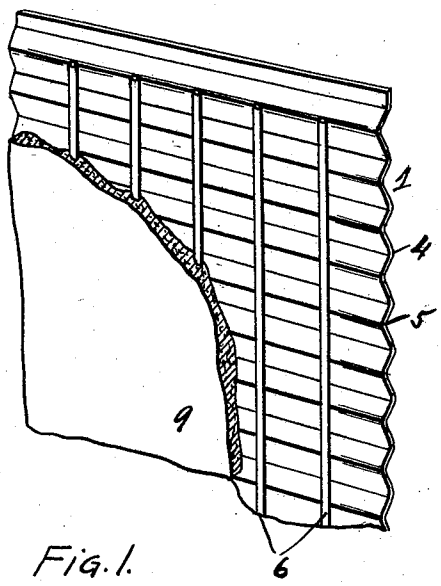


Fig. 1.



Fig. 2.

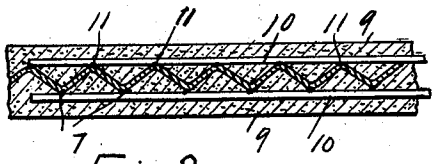


Fig. 3.

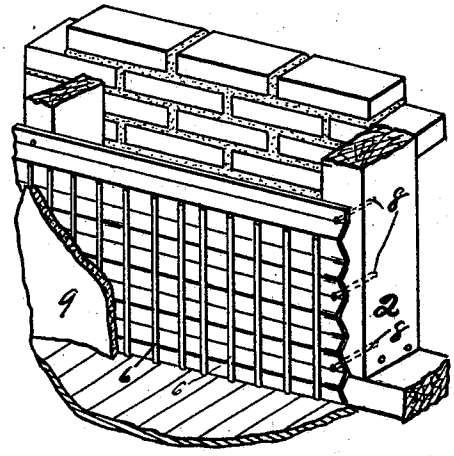


Fig. 4.

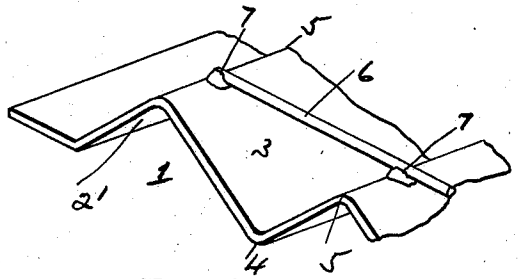


Fig. 5.

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UNITED STATES PATENT OFFICE

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BUILDING MATERIAL

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This invention relates to improvements in building material.

The present invention has for its objects, among others, to provide a covering or key base to be used for walls of buildings to which cement, concrete, or other plastic material may be directly applied, and which shall be strong, durable and of general utility.

My improved building material is well adapted for outside walls as well as partition walls, inside walls, a reinforce for concrete floors, and in fact for all purposes where it may be desired to employ a fire-proof, water-proof, strong base for a substitute for wood or metal lathing, sheathing, as a base for concrete floors, and many other purposes. It will save the necessity of thick and heavy plastering, can be easily and quickly installed and applied, will afford the maximum of strength, with minimum weight, and it will prevent buckling or springing of the wall and at the same time insures against buckling at right angles. It will save the cracks so often found at the corners of a room as its use will insure strong end pressure where secured at an angle.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention, in its preferred form, is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification and in which

Figure 1 is a fragmentary perspective view of a portion of building material constructed in accordance with my present invention, showing a coating of plaster or the like applied on a portion of such material.

Figure 2 is a sectional view on the line 2—2 of Figure 1.

Figure 3 is a view similar to Figure 2, but showing the plastic material applied to both sides of a modified form of the material of the character shown in Figures 1 and 2.

Figure 4 is a fragmentary perspective view showing the manner of applying the material to a brick veneer wall.

Figure 5 is an enlarged perspective detail of a portion of my improved building material.

Like numerals of reference indicate like parts throughout the several views.

Referring to the drawings:

1 designates a backing, or foundation, member of metal, made without perforations, slits or openings, this member being designed to be secured, in any suitable manner, directly to the studding or other support 2, in Figure 4, and this member is, by any suitable means, given the zig-zag shape seen in all of the views of the drawings. It is to be noted that this member 1 is not corrugated, that is, it is formed with zig-zag back and front faces as seen at 2′ and 3, the apices 4 and 5 being comparatively sharp, substantially right angles as seen best in Figure 5. I have found that this provides a better joint or depression for the holding of the cement or other cementitious material that may be used in connection therewith.

To give greater strength to the material I provide members 6, in the present instance shown as wires of sufficient diameter, the said members being securely affixed to the apices of the member 1 in suitable manner as by electric welding as shown at 7. I deem it essential that these strengthening members be attached in such a manner as to avoid the presence of perforations or slits for the reception of the wires and that the wires be fixedly attached in position on the member 1 as this insures greater strength and rigidity and hence increases the endwise resistance to buckle in use, as well as keeping the material in its original condition so as not to be in any wise deformed in handling.

Although my material avoids the necessity of the employment of felt, tar-paper or the like, it is to be understood that such may be employed in connection therewith whenever deemed advisable.

I dispense with the employment of wood or metal lathing or the like, and in the use of my material I combine the various processes of stiffening, weather-proofing and lathing, all in the one operation.

For the outside of a building, in case stucco or other plastic surface is desired I place the

studding in position, then a complete layer of my building material is placed in position, securing the ends thereof to the studding 2, or other support, by any suitable means as by nails or the like 8, see Figure 4, the material being laid with the wired apices of the material toward the outside, then I place thereon the coating of cementitious material as seen at 9 which enters and fully fills the depressions between the apices as seen in Figures 1 and 2. There is no waste of plaster as is usual with wood or wire lathing, as there is none of it forced through the foundation upon which it is placed, as is the usual result, less plaster will be required and the cling is much stronger. The plastic material is not only better retained in the zig-zag depressions, but the rods afford a better hold therefor, with the result that cracking of the plaster is entirely prevented and a better job is assured. Furthermore, it requires less time with a much better and evener surface as a result. Furthermore, I eliminate cracking at the corners as well as elsewhere, there being no shrinkage resulting, and the resistance to end pressure is greatly increased.

I provide a sealed wall impervious to wind, heat, cold, water, dampness and the like and dispense with the necessity of clinging of the plastic mass behind the foundation upon which the plastic material is placed.

In the use of the material for inside walls, for partitions where both sides are to be plastered, I employ brace members as wires 10, upon both sides of the foundation member 1 as seen in Figure 3, securely attached as by electric welding or the like, as seen at 11 in Figure 3, one set upon each side of the foundation material 1, as shown, and then place upon each side thereof the requisite coating of plastic material of whatever nature may be desired. This makes a very strong, not liable to buckle upon either side, form of wall, in which the plastic material will be securely retained within the substantially right-angled cavities in the member 1. This will be readily understood upon reference to Figure 3. Such a wall has great strength and capacity for preventing shrinkage or warping, or cracking at the corners, so that less uprights are required than where wood or metal lathing is employed upon opposite sides of uprights.

The one-surface side only of the member 1 being wired and plastered is particularly adapted for use as inside walls, and interior application such as for brick work, for brick veneered walls, or for stone outside surface, roofs and the like. The two-surfaced side finishing of the body is more particularly adapted for use on outside walls, partition walls, and the like.

In view of my invention and disclosure, variations and modifications to meet individual whim or particular need will doubtless become evident to others skilled in the arts, to obtain part or all of the benefits of my invention without copying the structure shown, and I therefore claim all such in so far as they fall within the reasonable spirit and scope of my invention.

What is claimed as new is:—

1. As an improved article of manufacture, a metallic building member of sheet material corrugated and having its opposite faces provided with alternating cavities and bearing points for a reinforcing means, and members disposed at substantially right angles to said cavities and secured to the apices of both sides of the walls of such cavities.

2. As an improved article of manufacture, a metallic building member of sheet metal corrugated and formed upon its opposite faces with alternating angled formations, and strengthening and connecting members upon opposite faces thereof and secured to the apices of such angled portions.

In testimony whereof I affix my signature.

RICHARD E. BRADSHAW.