Aug. 16, 1932. L. BRANDT 1,871,491

PLASTER AND STUCCO GROUND

Filed June 2, 1926

Fig. 1.

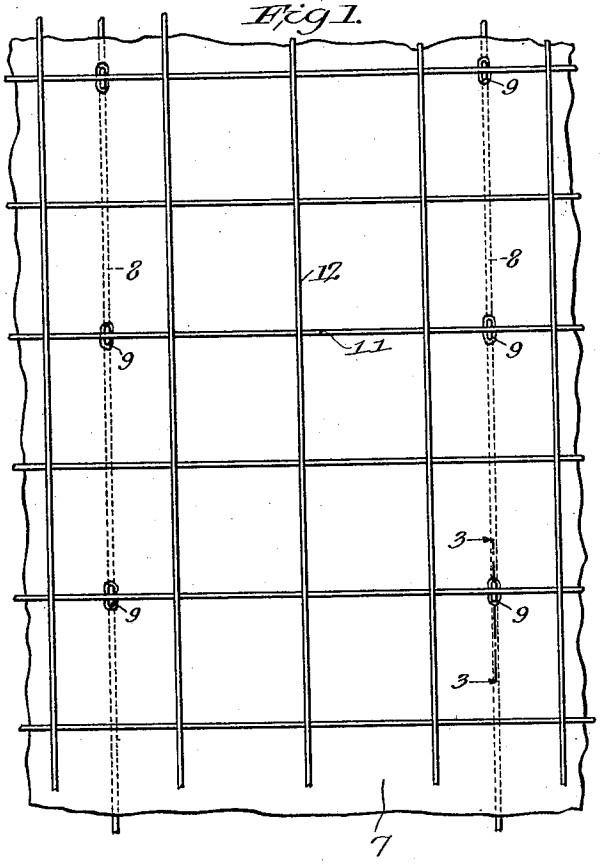


Fig. 2.

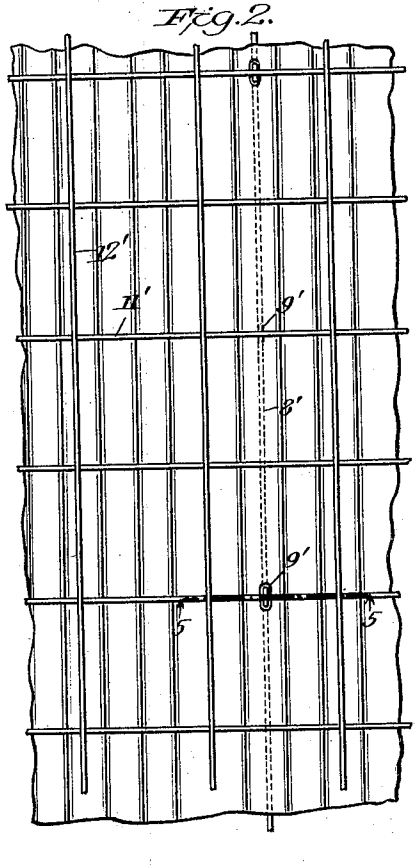


Fig. 3.

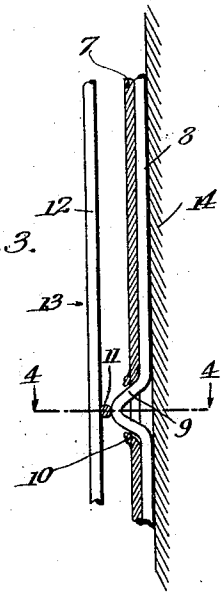
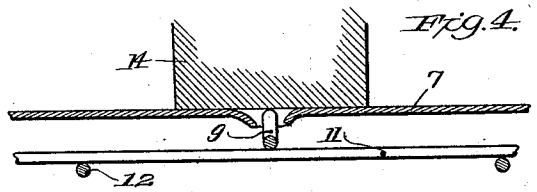


Fig. 4.



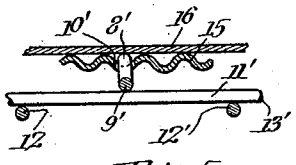


Fig. 5.

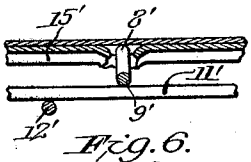


Fig. 6.

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UNITED STATES PATENT OFFICE

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PLASTER AND STUCCO GROUND

Application filed June 2, 1926. Serial No. 113,259.

This invention relates to new and useful improvements in plaster and stucco grounds or bases particularly adapted for use in constructing plaster ceilings and walls, stucco walls and "overcoating", tiled floors and walls, porch floors, and in fact for any kind of work requiring a base or reinforcement for cementitious material.

An important object of this invention resides in the provision of a device of the above character including continuous surface material and novel means for retaining reinforcing metallic fabric in spaced relation thereto in order that the cementitious material applied thereto will completely embed the metallic fabric and be securely keyed to the base.

Another important object of the invention is to provide stay or retaining elements which serve as stays or reinforcements for the continuous surface material and which are provided with means whereby they are substantially integrally joined with the metallic fabric which is in full tension or fully stretched whereby there will be absolutely no movement of the metallic fabric under expansion or contraction of the cementitious material applied thereto and whereby the metallic fabric will be rigidly spaced from the continuous surface material to insure its complete incorporation in the cementitious material and act as reinforcing means therefor.

Heretofore plaster bases have been advanced in which the metallic fabric has been soldered to portions of retaining elements which are exposed through the continuous surface material, but in these instances no provision is made for spacing the metallic fabric from the continuous surface material, since the exposed portions of the retaining elements do not project through said material and the cementitious material is prevented from completely embedding the metallic fabric by reason of the continuous surface material abutting the same, as a result of which this cementitious material in time becomes loose and drops from the metallic fabric. In such prior attempts to produce a practical plaster base, the wire fabric has been of a construction lacking the fully tensioned wires so that upon expansion or contraction of the cementitious material these wires become stretched or loosened so that they do not form serviceable plaster keying means.

In other attempts the metallic fabric has been attached to the retaining elements by staples, coils of wire and the like which permit relative movement of the metallic fabric and the retaining elements with obvious detrimental effects to the cementitious material applied thereto. In some of these cases, no paper backing has been used so that they are not adaptable for universal use, as for example in connection with plastering interior walls because of the excessive amount of cementitious material that would be used because of no backing for regulating the amount thereof applied to a given surface. With my invention, I have overcome all of these serious defects in previously known devices of this character and have provided a plaster or stucco base which is of extremely simple construction, easily manufactured and easily applied in building constructions.

Other objects and advantages of the invention will become apparent during the course of the following description.

In the drawing wherein like numerals are employed to designate like parts throughout the several views:

Figure 1 is a plan of a section of my improved stucco and plaster base in which the ordinary flat construction paper is incorporated.

Figure 2 is a similar view of the same in which corrugated board or paper is employed.

Figure 3 is an enlarged section of part of the base taken on the line 3—3 of Figure 1.

Figure 4 is an enlarged section taken on the line 4—4 of Figure 3.

Figure 5 is an enlarged section of the modification shown in Figure 2 taken on the line 5—5 of Figure 2.

Figure 6 is a similar section of the modification in which corrugated paper backing is employed with the corrugations thereof extending transversely of the retaining wires.

Referring now more particularly to the drawing, the numeral 7 designates a sheet of

continuous surface material, it being formed in the present instance and illustrated in Figures 1, 3 and 4 as a sheet of plain flat paper backing. This backing may consist of the ordinary construction paper in various grades or it may be suitably waterproofed or formed of any other suitable material. This paper backing is manufactured in suitable lengths and widths to facilitate easy transportation and installation, it usually being made in flat sheets, approximately fifty inches by fifty inches, or if desired it may be made in great lengths to be rolled for transportation.

On one side of this paper backing 7, retaining elements 8, preferably, but not necessarily, of galvanized wire, are attached at spaced intervals. These retaining wires 8 may be placed any suitable distance apart, but I find that they may be spaced reasonably far apart, as for example, the distance between upright studs in building constructions. At spaced intervals along the length of each retaining wire, an offset bend or crimp 9 is formed therein, it being observed from Figure 3 that these crimps have apices and are extended through punctures or perforations 10 in the paper backing 7 to extend a substantial distance beyond the front face of the backing 7.

To the exterior of the apices of the crimps on the side of the paper backing opposite that on which the retaining wires 8 are disposed, I integrally attach strand wires 11 of a metallic fabric 13, by spot-welding, soldering or the like. The stay wires 12 of the wire fabric 13 extend at right angles to the stay wires 11 and are preferably spot-welded to the same at their points of intersection.

It is to be noted that the strand and stay wires of the wire fabric 13 are in full tension, or in other words, are fully stretched during the manufacture of the fabric and are devoid of all bends and crimps so that this fabric will not stretch or contract under expansion or contraction of the cementitious material.

It is also to be particularly noted from Figure 3 that the wire fabric 13 is substantially integrally connected to the retaining wires 8 so that there will be no relative movement therebetween and in order that the wire fabric will be retained in substantially spaced relation to the paper backing 7 so that it will be completely embedded in the cementitious material to form a thoroughly rigid reinforcement therefor.

In Figures 3 and 4 I have illustrated the manner in which the retaining wires 8 will abut studding 14 when the plaster ground is employed for interior plastering, it being understood that portions of the paper backing adjacent the retaining wires will likewise find footing against the studding to additionally support the material during the application of the cementitious material. Due to the fact that the retaining wires 8 abut the studding, it will be apparent that the wire fabric 13 will be rigidly supported in spaced relation to the paper backing and studding. When the stucco base is used in exterior stucco work or overcoating, the retaining wires 8 as well as the paper backing will find footing against the sheathing in a manner well understood in the art.

In the modifications disclosed in Figures 2, 5 and 6, the only differences in the construction of the stucco and plaster base is that corrugated paper backing is employed instead of the smooth flat backing 7 as previously described in order to add rigidity to the plaster base.

In Figure 5 the corrugated paper backing is designated by the numeral 15 and the corrugations thereof extend longitudinally of the retaining wires 8′ which are identical to the retaining wires 8 of the previously described embodiment, and the strand and stay wires 11′ and 12′ of the wire fabric 13′ are identically the same as in the wire fabric 13. The retaining wires 8′ are arranged in the longitudinal grooves of the corrugations in back of the paper 15, as shown, with the offset bends or crimps 9′ extending through punctures or perforations 10′ arranged in the same manner as the perforations 10 of the hereinbefore described embodiment. If desired, an additional sheet of smooth flat paper backing 16 may be suitably secured to the back of the corrugated paper 15 to enclose the retaining wires 8′ within the corrugated sheet. Of course, the wire fabric 13′ is fully tensioned and is spot-welded to the apices of the retaining wire crimps 9′ as in the preceding embodiment.

In Figure 6, the corrugated paper backing 15′ is arranged so that its corrugations extend at right angles to the position of those shown in Figure 5, or in other words parallel with the strand wires 11′ of the wire fabric 13′. This modification is otherwise identically of the same construction as the forms disclosed in the other figures of the drawing, and therefore, a further detail description thereof is thought unnecessary.

It is to be understood that various changes in the size, shape, arrangement and construction of the various parts may be resorted to without departing from the spirit of the invention or the scope of the appended claims.

Having described my invention I claim:

1. Fabric structure comprising a backing sheet having a plurality of air passages and forming an insulating sheet, a wire fabric associated with said sheet and means for immovably retaining said wire fabric in complete spaced relation to said insulating sheet and in a plane substantially parallel to the plane of said backing sheet.

2. Fabric structure comprising a corrugated backing sheet, a plane flat sheet secured to the ridges of said corrugations to form an insulating sheet with air passages, a wire fabric associated with one face of said sheet, and means associated with the other face of said sheet and immovably connected to said fabric for retaining the same in spaced relation to said insulating sheet in a plane substantially parallel to the plane of said sheet.

3. Fabric structure comprising a backing sheet having a plurality of air passages extending in the plane of the sheet and forming an insulating sheet, retaining means carried by said sheet, and a wire fabric immovably secured to said retaining means and held in complete spaced relation to said backing sheet in a plane substantially parallel to the plane of said backing sheet.

4. A reenforcement foundation comprising a reticulated element, a furring element connected with the reticulated element and having portions spaced from the reticulated element, and a backing material having a member between the reticulated element and said portions and having another member on the outer-face of the furring element.

5. A reenforcement foundation comprising a reticulated element, a furring element connected with the reticulated element and having portions spaced from the reticulated element, and a backing material having a member between the reticulated element and said portions and having another member on the outer-face of the furring element connected with the above-mentioned member, said backing material being formed with means therein to give it insulating properties.

6. A reinforcement foundation comprising a reticulated member, a furring member connected with the reticulated member and provided with portions spaced from the reticulated member, and a backing having a corrugated member between said portions and the reticulated member and having another member on the outer side of the furring member secured to the corrugated member.

In testimony whereof I have hereunto set my hand.

LEWIS BRANDT.