Oct. 17, 1933. W. F. SCHULZ 1,930,984

PLASTER BASE

Filed Nov. 11, 1930 2 Sheets-Sheet 1

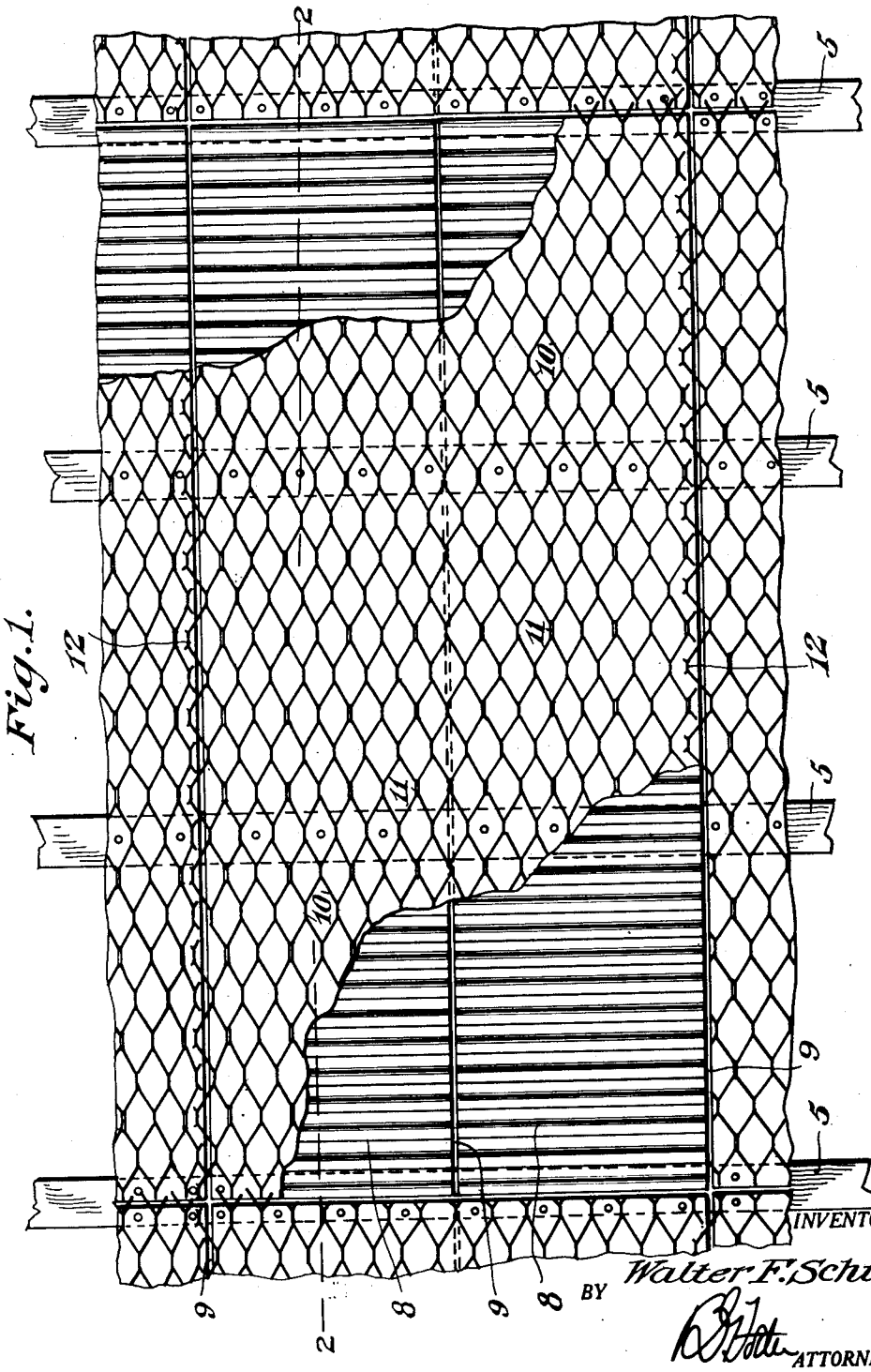


Fig. 1.

INVENTOR.
Walter F. Schulz,
BY
ATTORNEY.

Oct. 17, 1933. W. F. SCHULZ 1,930,984

PLASTER BASE

Filed Nov. 11, 1930 2 Sheets-Sheet 2

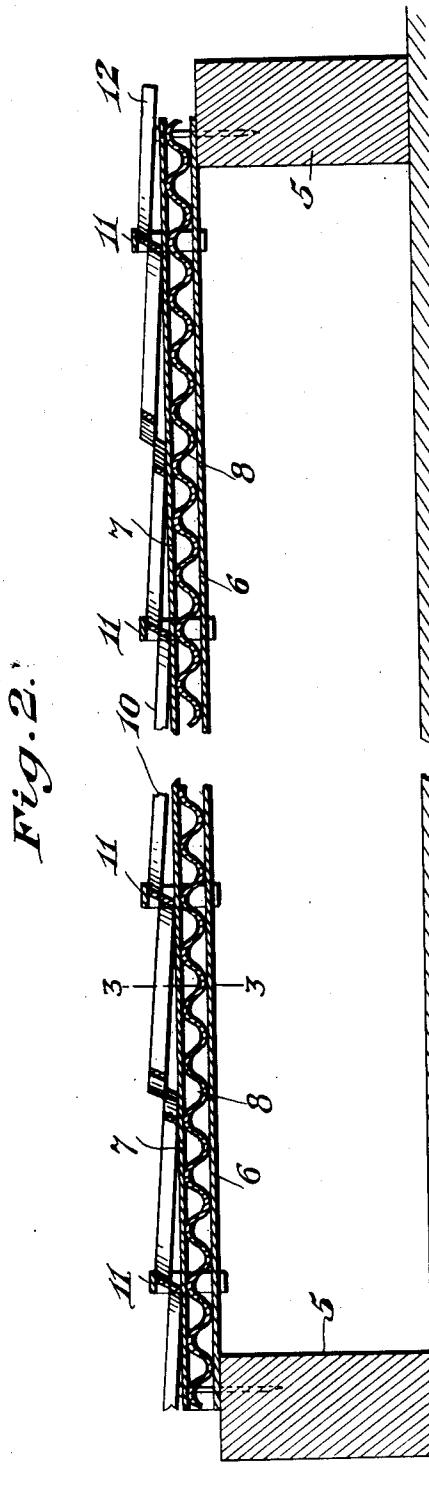


Fig. 2.

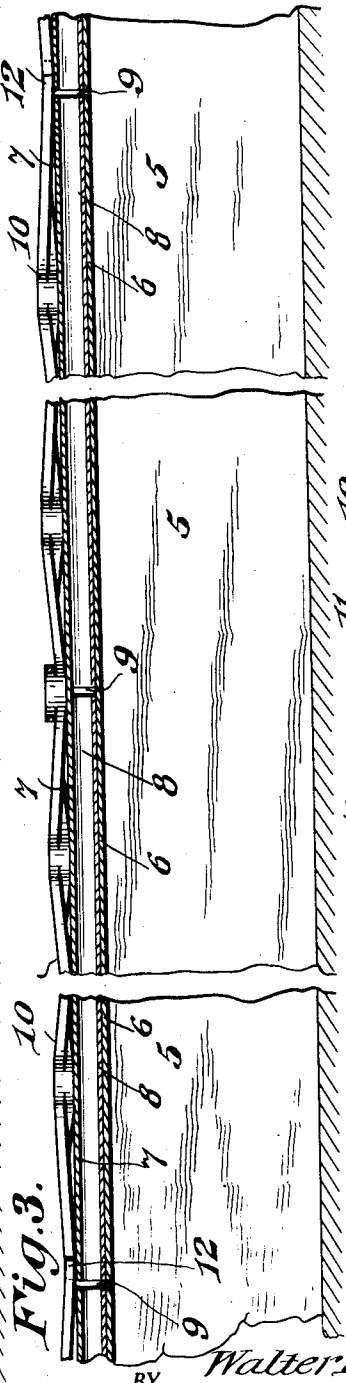


Fig. 3.

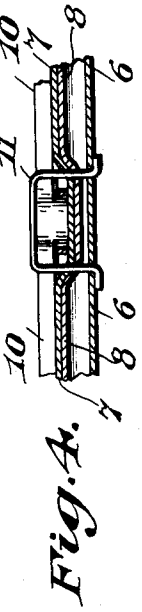


Fig. 4.

INVENTOR.

Walter F. Schulz,

BY

ATTORNEY.

Patented Oct. 17, 1933 1,930,984

UNITED STATES PATENT OFFICE

1,930,984

PLASTER BASE

Walter F. Schulz, Youngstown, Ohio., assignor to Truscon Steel Company, Youngstown, Ohio, a corporation of Michigan

Application November 11, 1930
Serial No. 494,967

12 Claims. (Cl. 72—116)

The object of the present invention is to provide novel, simple and practical means for more satisfactorily meeting certain requirements in the art of bases for plaster as hereinafter explained.

I have discovered that by using slightly separated sections of the corrugated portions of the paper backing, where otherwise continuous or where different sections would otherwise directly abut on a line substantially at right angles to the corrugations (the separations not being sufficient to permit substantial passage of plaster but of width and spacing as required with the composition of the paper backing), the length of the corrugations after the application of the plaster will be taken up in the spaces resulting from such separation and the buckling or distortion of the backing and the attached metallic plaster base be avoided. Such separation improves the utility of paper backing consisting of a corrugated sheet with a single flat sheet attached; but I prefer to use flat sheets on both sides of the corrugated sheet for the reasons above stated.

It is however more economical in production to use said corrugated portions in longer sections, and I have further discovered that by so disposing the corrugations of a paper sheet between flat paper sheets waterproofed to the extent obtainable at an available commercial cost, that when in place on structural supports, the corrugations will be substantially parallel to the structural supports, a substantially even finished surface will result from the customary application of wet plaster. This appears to be due to the expansion of the paper as moistened, being sufficiently taken up by a folding together of the corrugations along the direct line between the structural supports. Moreover when so arranged the structure forms a truss across the space between adjacent supports, with the facing sheets acting respectively as tension and compression members and the interposed corrugated sheet as a web between the two. They thus resist the pressure of the plasterer's trowel when the plaster is applied.

Any sections of backing continuous and in line with the corrugations should be placed adjacent but with slightly intervening spaces to allow for expansion as above explained; and where the width of the combined plaster base and backing parallel with the structural supports (determining the length of the corrugations) requires protection against expansion in the direction of the length of the corrugated portions, the latter should be made of separated sections as above explained.

By the use of paper backing of the type described, one is enabled to use a metallic plaster support with much larger openings than otherwise commercially possible, thereby permitting a large saving in the amount of material required for metallic plaster support of equivalent strength.

In the following drawings there is shown a particular type of metallic plaster support, but the invention is not limited to any type of metallic plaster support otherwise available in the practice of my invention.

In the accompanying drawings:

Figure 1 is a side elevation of a portion of a wall structure employing the novel plaster base, and showing certain portions broken away.

Figure 2 is a longitudinal sectional view on an enlarged scale and on the line 2—2 of Figure 1.

Figure 3 is a sectional view on the line 3—3 of Figure 2.

Figure 4 is a detail sectional view through the structure, showing a means for fastening the metal to the backing board.

In the embodiment disclosed, a plurality of spaced supports 5 are shown, which may be studding, joists or the like. To these are secured the plaster base. This base consists of backing boards nailed or otherwise fastened to the supports 5 and carrying metallic lathing, preferably of expanded metal.

Each board is preferably rectangular and elongated, so that it will extend across a plurality of the supports 5. It comprises flat face sheets 6 and 7 preferably of paper and having interposed between them corrugated sheets 8 also of paper, the three sheets being suitably secured together in a manner well understood. All three sheets 6, 7 and 8 are preferably substantially waterproof and in any event, the outer face sheet 7 is thus waterproofed. As will be clear by reference to Figures 1 and 3, each board has one facing sheet 6 and one facing sheet 7 but the interposed corrugated core is preferably made up of two sheets 8, their corrugations extending transversely to the length of the board. The sheets 8 moreover are slightly spaced apart, as shown at 9.

The metal lathing is designated 10, and is stapled as shown at 11 to the backing board, though it may be otherwise fastened. This metal lathing not only extends over the entire surface of the backing board, but may project beyond two of the edges of the same, as illustrated at 12.

In applying these plaster bases to the studding as above explained, they are preferably arranged so that they run crosswise of several of the sup-

ports 5. As a consequence the corrugations of the interposed sheet 8 extends parallel to said supports as illustrated in Figure 1. Preferably the boards are slightly spaced apart, as shown, but when the metal lathing extends beyond the edges, as already explained, these extensions bridge the spaces.

With this structure, it has been found that when wet plaster is applied to the exposed face the tendency of the backing board to warp and become wavy by reason of the absorption of even a small portion of the moisture, is practically overcome and that the surface of the plaster coating when it has dried, will be in a smooth even plane. As already explained, this appears to be due to the fact that the backing board by reason of its two facing sheets and its interposed corrugated sheet, becomes a truss, as will be clear by reference to Figure 2, that initially resists the pressure of the plastering tools and moreover the corrugations being parallel to the studding, have somewhat of the action of an accordion so that they will expand and contract without materially injuring the maintenance of the necessary plane of the structure. The swelling of these interposed corrugated sheets longitudinally of the corrugations is allowed for by the sectional character of said interposed sheets.

In the drawings and as already explained, the metallic lath is shown as extending beyond the area of the paper backing. In order to give continuity to the metallic lath structure and increase the rigidity of the final lath support over a given area, it has long been known to be desirable to overlap the lath where edges of the lath sheets come together. The paper backing could cover the entire lath and the lap be made with both the lath and the paper backing. But obviously, it would be a waste of material to have paper backing where not required. It is accordingly preferred to omit the paper backing from the area desired for the overlap and so show the same but do not herein claim invention in respect thereto.

It will be understood that various changes in the size, shape, proportion and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim, is:

1. In combination, a metallic plaster base and a substantially waterproofed paper backing, consisting of corrugated sheets and flat sheets attached on each side thereof, the corrugated sheets having their adjacent edges that are at right angles to the length of the corrugations, spaced apart.

2. In combination, a metallic plaster base and a substantially waterproofed paper backing consisting of corrugated sheets and a flat sheet attached on one side thereof, the corrugated sheets having their adjacent edges that are at right angles to the length of the corrugations, spaced apart.

3. In combination, a metallic plaster base and a substantially water-proofed paper backing, such backing consisting of a corrugated sheet and flat sheets attached on each side thereof, the corrugations arranged upon the lath substantially at right angles to the length of the lath sheet, and the plaster base being attached to the backing.

4. In combination, a metallic plaster base and a substantially water-proofed paper backing, consisting of corrugated sheets and flat sheets attached on each side thereof, the corrugated sheets being spaced apart at right angles to the length of the corrugations and between the flat sheets, and the plaster base being attached to the backing.

5. In combination, a backing board comprising a plurality of corrugated sheets located side by side and spaced apart, a facing sheet secured to each side of the corrugated sheet and extending across the space between them, and a foraminous metallic plaster base secured over one of the facing sheets, the sheet that is overlaid by the plaster base being substantially waterproof.

6. In combination, a backing board of elongated form comprising a plurality of corrugated sheets located side by side and spaced apart, a facing sheet secured to each side of the corrugated sheet and extending across the space between them, the corrugations of the interposed sheets extending transversely of the length of the facing sheets, and a foraminous metallic plaster base secured over one of the facing sheets, the sheet that is overlaid by the plaster base being substantially waterproof.

7. In combination with spaced supports, a backing board secured to the supports and extending across the space between them, said backing board comprising facing sheets, and a plurality of corrugated sheets interposed between the facing sheets and having their sides spaced apart, and a foraminous metal plaster base secured over the outer face of the outer sheet.

8. In combination with spaced supports, a backing board secured to the supports and extending across the space between them, said backing board comprising facing sheets, and a plurality of corrugated sheets interposed between the facing sheets and having their sides spaced apart, the corrugations of the interposed sheets being disposed substantially parallel to the supports and transversely to the joint between said corrugated sheets, and a foraminous metal plaster base secured over the outer face of the outer sheet, the said outer sheet being substantially waterproof.

9. In combination, a backing board of elongated form comprising a corrugated sheet and facing sheets secured to opposite sides of the corrugated sheets, the corrugations of the interposed sheet extending transversely of the board, and a foraminous metallic plaster base secured over and immediately backed by one of the facing sheets, the sheet that is overlaid by the plaster base being substantially waterproof.

10. In combination, an elongated backing comprising a corrugated sheet and flat sheets attached to the opposite sides thereof, the corrugations of the interposed sheets extending transversly of the length of the paper backing, and a metallic plaster base secured to the backing and covering and being immediately backed by the outer side of one of the flat sheets.

11. A plaster base including spaced facing sheets and a corrugated sheet interposed between the facing sheets and secured thereto, the corrugations extending transversely of the sheets and the base being adapted for securement to spaced supports with the corrugations disposed longitudinally of said supports, the facing sheets and corrugated sheet constituting a truss structure between the supports and acting as a means for preventing material distortion due to absorption of moisture and constituting substantial resistance to pressure on the application of the plaster.

12. In combination with spaced supports, a

plaster base extending between and secured to said supports, said base comprising spaced facing sheets and a corrugated sheet interposed between and secured to the facing sheets, the corrugations of said interposed sheet extending substantially parallel to the supports and said corrugated and facing sheets cooperating to prevent distortion due to absorption of moisture and acting as a truss structure between the supports that resists the pressure due to the application of plaster thereagainst.

WALTER F. SCHULZ.