S. J. POTTER.

PLASTER SUPPORT FOR WALLS.

APPLICATION FILED MAR. 11, 1921.

1,423,879. Patented July 25, 1922.

2 SHEETS—SHEET 1.

Fig. 1

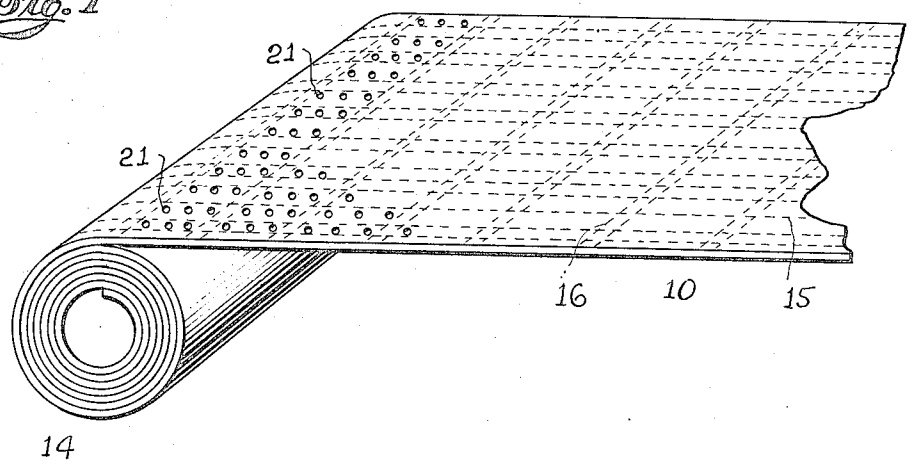
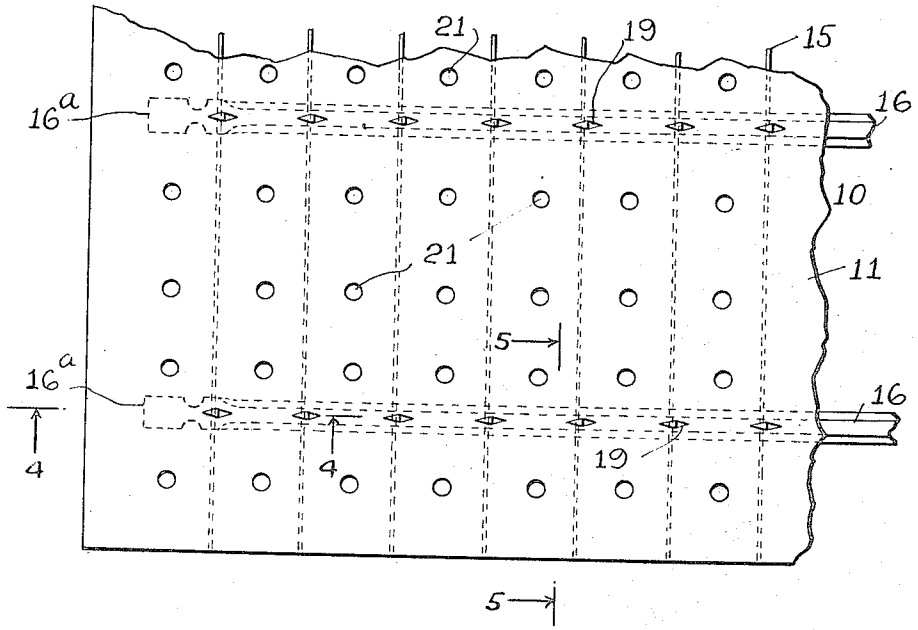


Fig. 2



Stephen J. Potter, Inventor

By his Attorney

W. B. Hutchinson,

S. J. POTTER.

PLASTER SUPPORT FOR WALLS.

APPLICATION FILED MAR. 11, 1921.

1,423,879. Patented July 25, 1922.

2 SHEETS—SHEET 2.

Fig. 3

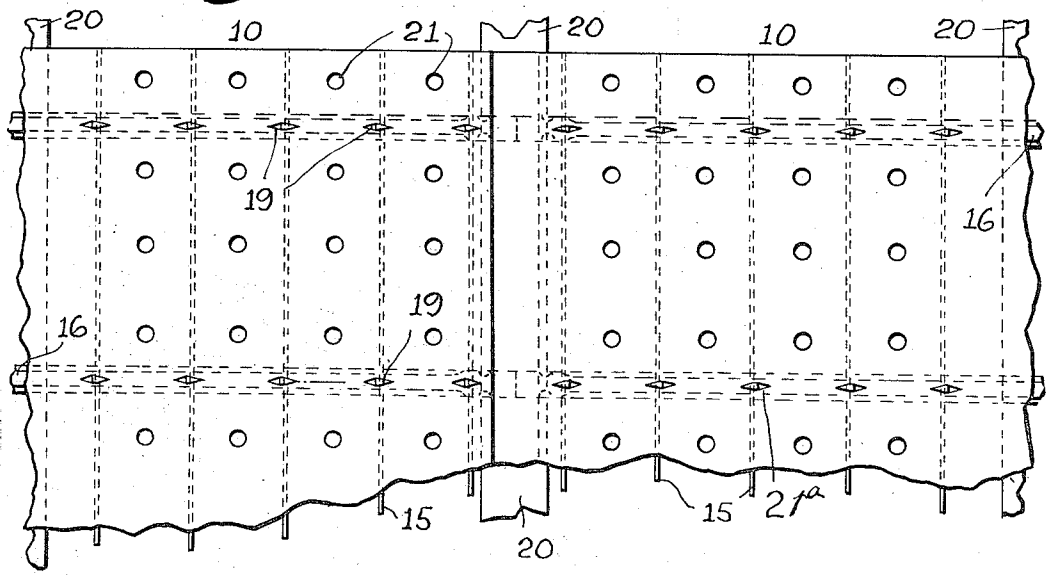


Fig. 4

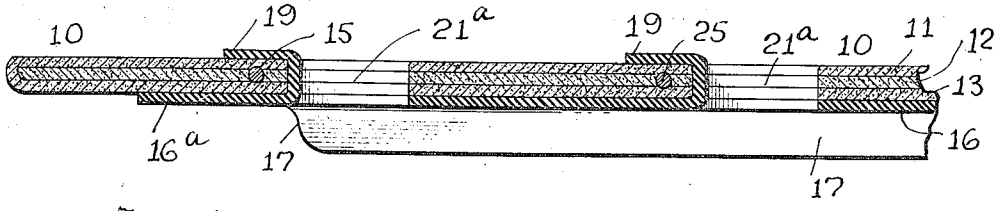
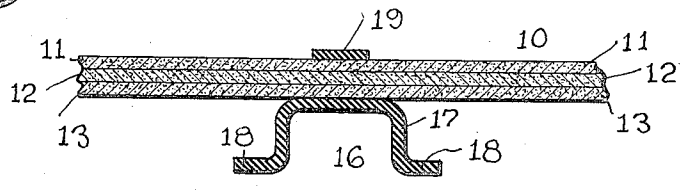


Fig. 5



Stephen J. Potter, Inventor,

By his Attorney,

W. B. Hutchinson.

UNITED STATES PATENT OFFICE.

STEPHEN J. POTTER, OF SYRACUSE, NEW YORK, ASSIGNOR TO SHEET LATHING CORPORATION, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

PLASTER SUPPORT FOR WALLS.

1,423,879. Specification of Letters Patent. Patented July 25, 1922.

Application filed March 11, 1921. Serial No. 451,624.

To all whom it may concern:

Be it known that I, STEPHEN J. POTTER, a citizen of the United States, and a resident of the city of Syracuse, Onondaga County, New York, have invented a new and useful Improvement in Plaster Supports for Walls, of which the following is a full, clear, and exact description.

My invention relates to improvements in wall coverings which can also be used as a support for a plaster coating, and more particularly to improvements in that class of plaster support for walls in which paper, either in single or laminated sheets, is used with transverse reinforcements, and with strands running lengthwise of the paper, to give comparatively thin layers the necessary strength and stiffness. Such wall boards are usually made of laminated papers, and the strengthening strands are run longitudinally through them, while transverse strengthening ribs are used to increase the stiffness of the supporting body. In structures of this kind which have been successful, there are some objections which it is the object of my invention to overcome. I have found, for instance, that transverse strengthening ribs are highly desirable and work out very nicely; but I have improved the construction of such ribs so that they can be made of very thin material and still be as strong as those heretofore used, and can also be easily utilized to fasten the layers of paper together. An object of my invention is also to construct the ends of the ribs so that they will taper off into a flat formation at the edge of the sheet, so that adjacent sheets can be conveniently overlapped on the wall studding without effecting any undue bulging of the support. Another difficulty in supports of this kind heretofore made is that the strengthening strands, which are usually fine wire, are likely to become displaced so that they will not be uniformly spaced, and consequently there may be weak spots in the fabric. To prevent this I utilize the clips of the transverse strengthening ribs in such a way that they serve as a medium for not only holding the paper laminations together, but for fastening the strengthening strands so that the latter shall not be displaced. My invention is also intended to produce a fabric wall support, preferably of laminated sheets of paper, which has the advantages above noted, and which can be conveniently rolled up for shipping and handling.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar reference characters indicate corresponding parts in all the views.

Figure 1 is a broken perspective view of my improved plaster support and wall board partly rolled up.

Figure 2 is a broken plan view of a part of a sheet.

Figure 3 is a broken front elevation showing how the plaster support is applied to a wall.

Figure 4 is a broken transverse section very much enlarged, on the line 4—4 of Figure 2, showing one of the strengthening ribs in longitudinal section, and

Figure 5 is a broken enlarged longitudinal section on the line 5—5 of Figure 2, showing one of the strengthening ribs in cross section.

My improved plaster support can be made of a single sheet, but preferably of a plurality of sheets of paper of a width to span a certain definite number of wall studs as usually arranged, and so that the sheet can be rolled up for convenience in handling and shipping. The sheet 10 is as stated preferably composed of long strips 11, 12 and 13 of paper, and the paper coming in contact with the plaster coating should be of a cheap but reasonably strong and porous structure. In practice I have used chipboard paper for one of the outer layers, coal tar pitch paper for the middle layer, and felt paper for the outer layer, and while this makes a good combination of materials, any suitable sheets can be used for making up the laminated board, and as stated, a greater or less number of layers can be used, and pitch or other material used between the layers if desired.

The laminated sheet thus formed is adapted to be rolled up as shown at 14 in Figure 1, for convenience in handling, and when applied the sheet is unrolled until a strip sufficient to extend the height of the

room or other place where it is to be applied is had, when the paper is cut off and the operation repeated.

The material is strengthened by longitudinal strands 15, preferably of fine wire, and these, which are used to prevent the material from sagging and to give it the necessary strength, are not new, but as stated they are likely, in the ordinary structures of commerce, to be displaced. This I prevent by means of the clips on the transverse strengthening ribs 16. These ribs are spaced apart at necessary intervals, and do not interfere with rolling up the fabric. Each rib is preferably formed into an arch which is generally rectangular in cross section as shown at 17 in Figure 5, and has edge flanges 18 lying parallel with the paper surface. The arch when in this form leaves a flat surface to abut with the paper, as the drawing shows, and it makes a very strong brace to keep the paper stiff. The strengthening rib and the paper are fastened together in a manner analogous to that shown in Letters Patent of the United States No. 1,003,754, dated September 19th, 1911, and the wires or strands are used in a manner similar to that shown in Letters Patent of the United States No. 1,103,362, dated July 14th, 1914, but it will be observed that the rib in my invention is of different formation, and further that the clips 19 on the strengthing ribs 16 which extend through the laminated fabric, are located with reference to the wires 15 so that when a clip after being punched through the fabric, is turned over and pressed against the opposite surface of the fabric, it will overlap a strand 15, as shown clearly in Figure 4, thus serving the double purpose of securing the rib firmly to the fabric and of forming a keeper which will bind the strand 15 in place and prevent its displacement. By reference to Figures 3 and 4 it will be seen that the strands 15 run one way of the fabric, while the ribs 16 run at right angles thereto, and it is a simple matter to arrange the clips 19 and the strands 15 so that the clips shall come adjacent to the strands and be doubled over upon them, or at least opposite them, in the manner stated. In carrying out my invention it is not absolutely necessary that there should be a clip for every strand, but there should be enough of the strands and clips in the combination stated, to keep the main body of the strands in their right relative positions.

A further improvement in the ribs lies in their end construction. If the ribs were carried out to the full edge of the paper, with the arch effect extending to said edge, there would be a little difficulty in making the adjacent sheets of paper meet properly, for if they overlap they would bulge too much; but in my improved construction the arch 17 does not extend quite to the ends of the rib, but the flat part 16^a is extended beyond the arch, and the flat parts do not extend quite to the edges of the paper, so that while the body of the paper is strengthened by the ribs, the edges are left relatively thin and flat so that they may easily be overlapped and secured to the studding. When this is done, the material 16^a is thin enough so that a nail may be driven readily through it.

In Figure 3 I have shown the application of the paper to a wall, and it will be noticed that the sheets extend parallel with the studding 20 to which they are attached, and they can easily be made of a width to span a definite number of studs. The paper can be applied either side out, but I preferably use it as shown, with the comparatively plain surface of the paper next the plaster which is applied thereto. In this connection I have shown the paper provided with perforations 21 into which the plaster may enter and lock, and there are also likely to be holes 21^a where the clips 19 pass through the laminated sheet.

From the foregoing description it will be seen that I have improved the details of paper plaster supports so that while the flexibility of the paper is not interfered with so far as rolling and handling is concerned, the support is made much more rigid, and its strengthening strands are permanently placed.

In the foregoing specification I have referred to my invention as a plaster support, but it will be understood of course that it can be used as a support for any plastic or cementitious substance, and I use the word plaster in a general sense as including all things of a similar nature.

I claim:—

1 A paper wall board comprising a strip of paper of laminated structure having transverse strengthening ribs spaced apart thereon and attached thereto, each rib being formed transversely into an arch through the greater part of its length, but flattened at the ends.

2. A paper wall board comprising a strip of paper of laminated structure having transverse strengthening ribs attached thereto and spaced apart thereon, each rib being formed transversely into an arch for the greater part of its length but flattened at the ends, and of such length that the rib will leave a margin of paper at the edges of the sheet and between said edges and the ends of the rib.

3. A plaster support for walls comprising a strip of paper having transverse strengthening ribs thereon, these ribs having a longitudinally extending offset central portion and being suitably spaced and thinned at their end portions thereby making the sheet essentially flat near the edges, and the ribs

being of such length that the paper edges will project slightly beyond the end portions of the ribs.

4. A paper plaster support comprising a strip of paper having transverse strengthening ribs thereon, each rib being formed into an arch of generally rectangular shape, and with terminal flanges generally parallel with the paper body.

STEPHEN J. POTTER.

Witnesses:
W. S. REMINGTON,
THOS. B. CAMPBELL.