

A. P. WHITE.
LATHING.
APPLICATION FILED APR. 8, 1910.

1,049,629.

Patented Jan. 7, 1913.

Fig. 1.

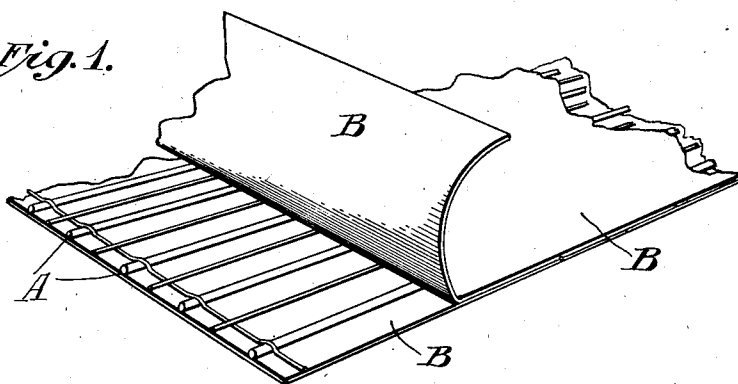


Fig. 2.

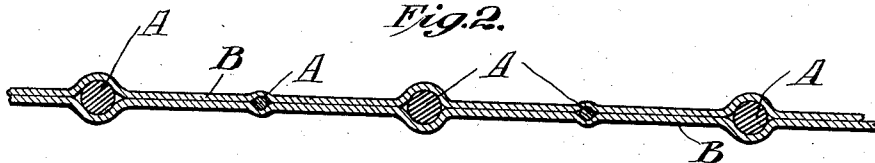


Fig. 3.

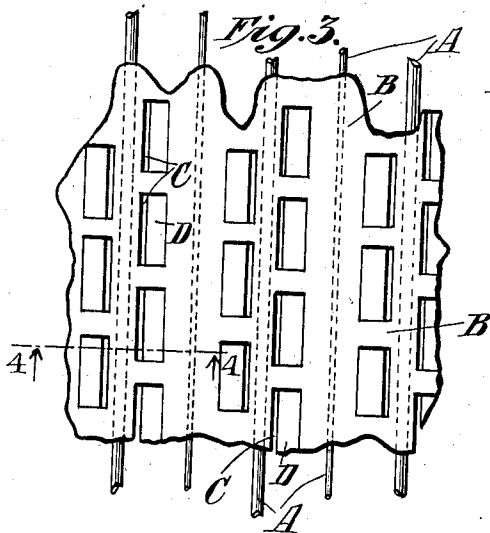


Fig. 4.

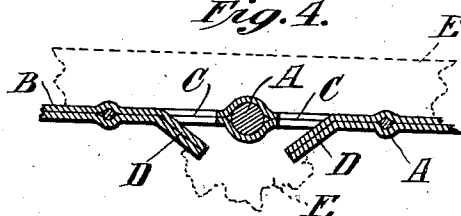
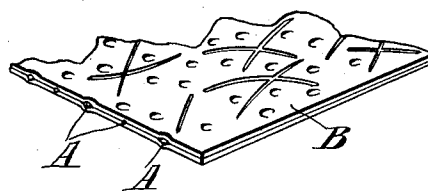


Fig. 5.



Attest:

Raymond Richardson

Inventor.

Alexander P. White

UNITED STATES PATENT OFFICE.

ALEXANDER P. WHITE, OF CALDWELL, NEW JERSEY.

LATHING.

1,049,629.

Specification of Letters Patent.

Patented Jan. 7, 1913.

Application filed April 8, 1910. Serial No. 554,168.

To all whom it may concern:

Be it known that I, ALEXANDER P. WHITE, a citizen of the United States, residing in Academy street, Caldwell, county of Essex, State of New Jersey, have invented a new and useful Improvement in Lathing, of which the following is a specification.

This invention relates to lathing for holding plaster on walls and ceilings and the object of it is to provide an improved article at a low cost, as will more clearly appear hereinafter.

Figure 1 is a perspective view of the improved lathing, indicating one method by which it is made. Fig. 2 is an enlarged cross section showing the metallic members embedded in the fibrous material. Fig. 3 is a plan view showing openings or holes forming "keys" for the plaster. Fig. 4 is a cross section on the line 4-4 of Fig. 3, showing depressed lip portions designed to incline the plaster to engage the wire members. The dotted lines in the figure indicate the plaster body. Fig. 5 is a view in perspective, showing a modification having a roughened surface to which the plaster can adhere.

Like reference letters refer to like parts in the different figures.

A represents the sustaining members; B the fibrous material; C the openings adapted to form a "key" for the plaster; D lips, formed by pressing down the portion of the fibrous sheet slitted to make the openings C, and E the plaster substance.

At the present time net like structures formed by weaving wires are largely used to hold plaster. Expanded metal made by slitting sheet metal and spreading open the slitted portions into net like fabrics is also extensively employed for the same purpose, but in the use of both these articles considerable trouble is experienced by reason of the tendency of the thin and narrow metallic strands to "cut" the mortar. To avoid undue waste when applied to them the mortar must therefore be of a heavy or thick consistency, and its application requires great care. Moreover, even with slow and cautious application, it frequently happens that the light metallic structure

will not sustain the burden of an ordinary first layer or coat of mortar, making it then necessary to create a foundation for the substantial body, by first applying a preliminary thin coating, which on setting prevents any movement of the metal and imparts the rigidity required. On account of the value of metal, and the difficulty of manipulation when the metal is heavy, it is not practical to make the aforementioned lath fabrics heavy. The strands must be near one another in order that the openings be of small dimensions, capable of holding the plaster. It will be seen presently that my invention, however, permits a more efficient distribution of the metal and provides a structure to which the plaster can be applied readily and quickly without particular care and skill, and without undue waste. It will be seen, too, that it provides also thorough protection against rust. The liability of these metallic lath fabrics to corrode when used in present forms, constitutes a serious objection. Many of the plaster preparations in common use, while excellent for making durable walls and ceilings, contain ingredients which cause rapid deterioration from rust, especially in spots exposed to the atmosphere. Another advantage of the new product which is peculiar to this novel type of lathing, is that it is possible with its use to protect the plaster wall itself as well as the metal from deterioration, due to the condensation of moisture. This result is effected by applying to the reverse side, *i. e.*, the side which does not receive the plaster, a coating of waterproofing compound of which there are a number well known, but it is not desirable to apply the compound on the side which receives the plaster, since it would interfere with the tendency of the plaster to adhere to the fibrous material.

In carrying out the invention, I prefer to form a grid, the wires being arranged at suitable distances apart to act as sustaining members for the plaster. I select a fibrous material, such as paper, and cover one surface of the same with silicate of soda, of the consistency of ordinary mucilage. Between layers of the paper I place the wires, and pass the paper and wires between mechani-

cal rolls, so as to cause the parts to adhere and consolidate, forming a strong, rigid sheet, as indicated by Fig. 1.

It is obvious that a paste made by boiling a mixture of rye flour and water, or numerous other adhesive preparations may be used, in lieu of silicate of soda.

The rolls or other instruments for pressing, can be adapted to roughen the surface of the lathing sheet so as to provide for the adhesion of the plaster. The roughening may consist of suitable indentations or depressions, or instead, the sheet may be perforated or punctured. The openings are preferable, and it is highly desirable to make the openings near, or adjacent the wire members, especially the heavier members, so as to permit the plaster to engage the wires as shown in Fig. 4. It is also desirable to make the openings with a lip as shown in Fig. 4, by slitting the paper, and pressing down the slitted portion instead of cutting it away. The lips are designed to cause the plaster to spread and increase the clench, as well as to cause the plaster to engage the wires when the openings are adjacent to the wires.

Since the fibrous material is thus designed to serve as a vehicle to carry the plaster until it "sets" and becomes fixed in place, it is obvious that not as much metal is required as in the present structures, and that a given quantity of metal can be disposed in thick strands or members in this combination imparting much greater strength, than if divided into a larger number of smaller members. I prefer to use at intervals of about seven inches, wires of 12 or 14 gage, U. S. standard, and to use lighter wires, about 20 gage, about one inch apart, intermediate the heavier ones. Crossed wires are placed at distances sufficient to hold the other wires in place, or the cross wires may be entirely omitted.

Although I have described a simple way of making the material of the invention, it can be made in other ways, as for instance, by wholly or partly embedding the wires in the fibrous product while the fibrous material is in a plastic state. In such case, it is also desirable to use silicate of soda which can be introduced by mixing it into the plastic mass, before it is rolled or pressed. This compound, (silicate of soda) serves not only to add greatly to the stiffness of the article but also to give it fire resisting qualities.

It is important to make the fibrous part of the composite lathing relatively thin so that it will not become a substantial portion of the wall body. The fibrous sheet should be no thicker than is necessary to perform the function of rigidly holding the plaster in place, because the wall body should be as nearly homogeneous as possible, instead of

consisting of different substances of different physical properties.

The function of the paper is not to become an integral or permanent part of the wall body, but to serve only temporarily to give form to the plaster and cooperate with the metal to hold the plaster in place, until it dries and hardens enough, to depend on the metal parts for permanent support. After the plaster is dry, the paper may be scraped off without impairing the wall body, but this of course, is not necessary and seldom possible except in partition walls.

It is well known that a wet body of plaster changes its physical conformation in drying; that the contraction with the departure of the moisture, however slight it may be, meets resistance when the wet mass is against a solid, inflexible or immovable surface, often causing the plaster to crack, but the paper, especially when of an absorbent character, will accommodate itself to these changes, after having, in its capacity as a mold, caused the plaster to take the form desired. I have, therefore, in the claims of this specification, employed the term "flexible" to distinguish the paper in my article from the inflexible slabs and boards which, after a finishing coat of plaster is applied to them, are intended to continue essential, permanent parts of the wall structure. It is of course understood that the paper must be substantial enough for its purpose, and it is desirable to break the paper surface with numerous perforations, so as to diminish liability on the part of the paper to warp, or prevent injury, in case there is any warping tendency.

Ordinary unbleached wood pulp is suitable for the purpose herein described, and wood pulp containing asbestos can be used.

What I claim and desire to secure by Letters Patent is:—

1. A structure for lathing consisting of a series of metal members embedded in a supporting body of fibrous material, the said fibrous material being depressed between the metal members, thus forming raised ribs or ridges which project beyond the plane of the lathing.

2. A structure for lathing consisting of a series of metallic members and a body of fibrous material in which the metallic members are embedded forming ribs, said body having openings therein, and the ribs being disposed adjacent the openings to permit the plaster to engage the ribs, and the parts of the said ribs in proximity to said openings being covered with a protective coating of fibrous material.

3. A structure for lathing consisting of a body of fibrous material having openings therein, primary and secondary reinforcing means embedded in said body and disposed adjacent the openings to permit the plaster

to engage said means, the parts of the said reinforcing means in proximity to said openings being covered with a protective coating of fibrous material.

5 4. A building form consisting of a series of metallic members and a supporting body therefor of fibrous material in which said metallic members are embedded forming ribs, said body having openings therein, and

the ribs being disposed adjacent the openings 10 to permit the plaster to become engaged with the ribs.

In witness whereof I have affixed my signature in the presence of two witnesses.

ALEXANDER P. WHITE.

Witnesses:

A. D. LEVEL,
J. B. DE WOLF.