No. 751,094. PATENTED FEB. 2, 1904.

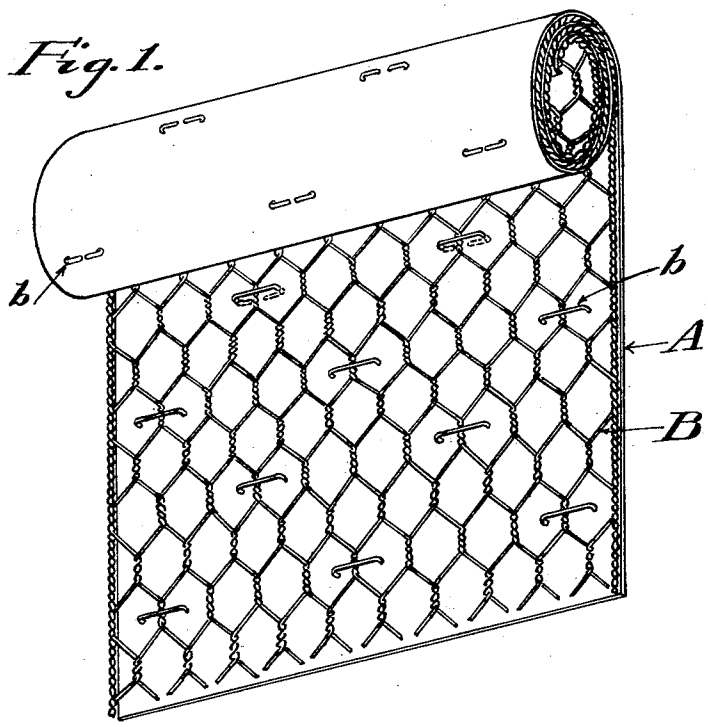
J. H. MURPHY & E. M. CAMP.

RETAINING MATERIAL FOR PLASTER OR THE LIKE.

APPLICATION FILED APR. 9, 1903.

NO MODEL. 4 SHEETS—SHEET 1.

Fig. 1.



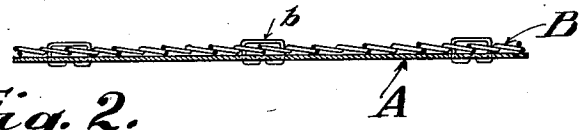


Fig. 2.

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NO MODEL. 4 SHEETS—SHEET 2.

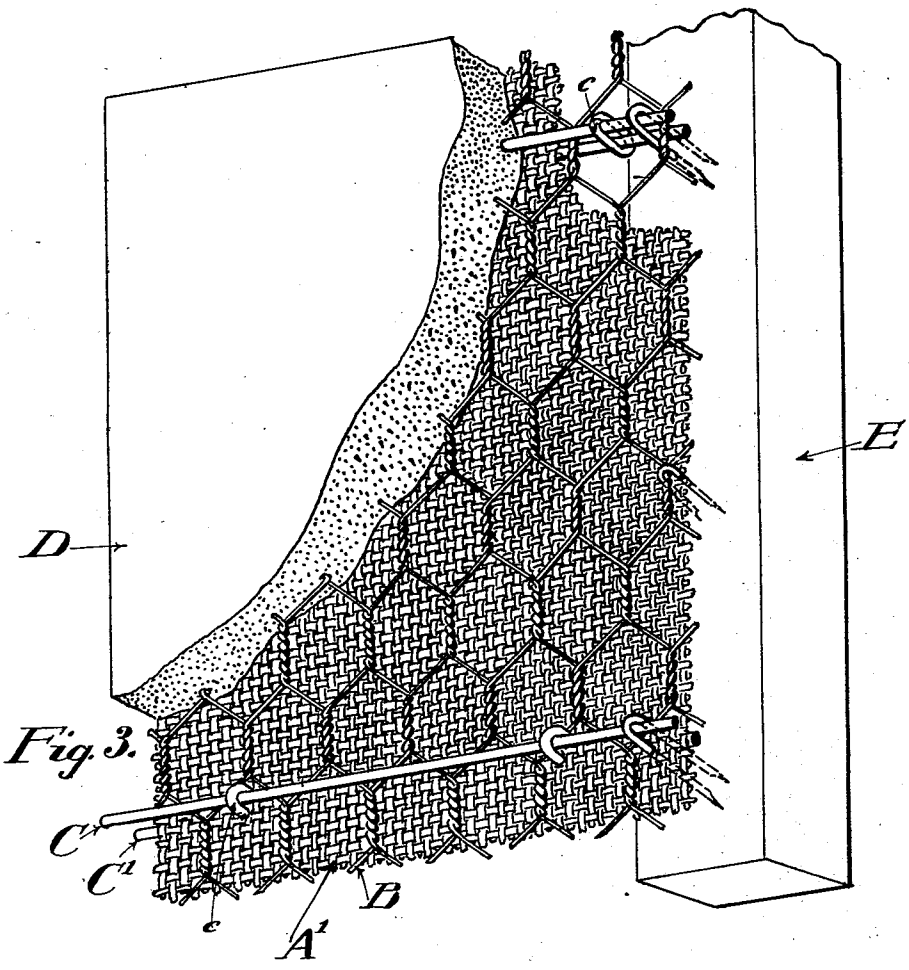

Fig. 3.

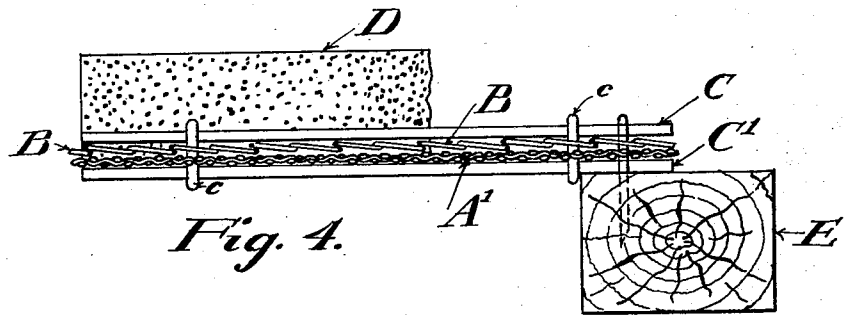

Fig. 4.

WITNESSES:

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NO MODEL. 4 SHEETS—SHEET 3.

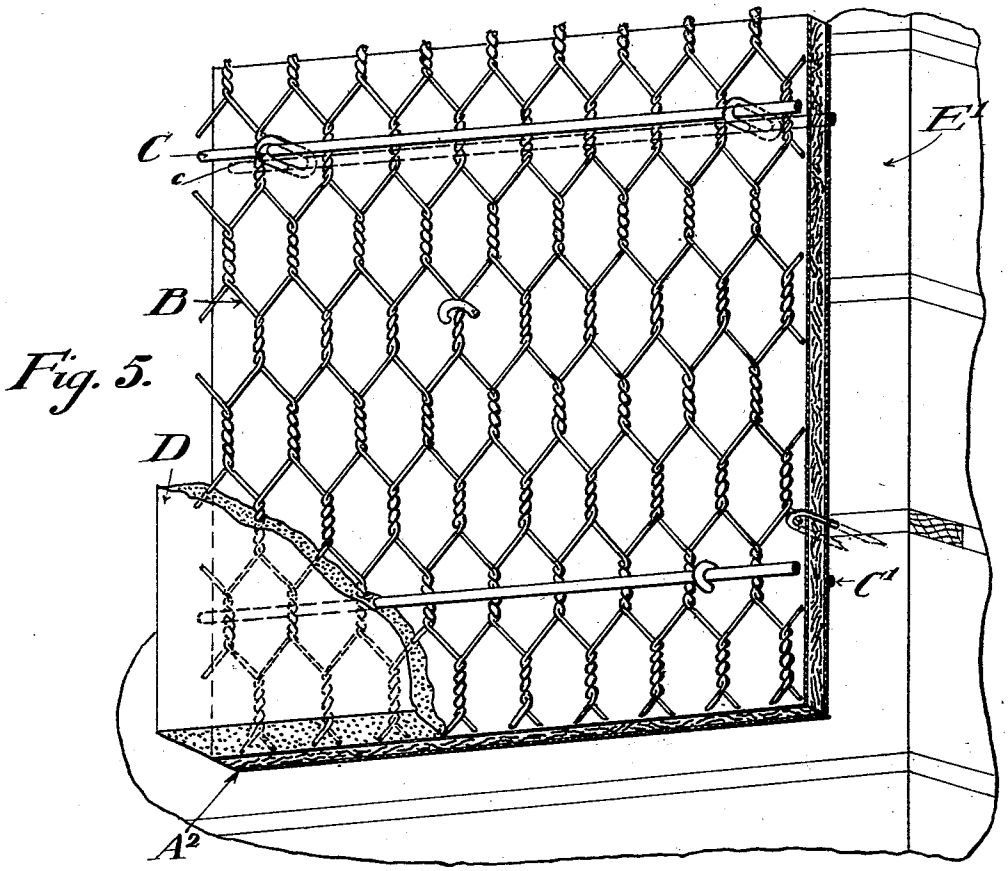

Fig. 5.

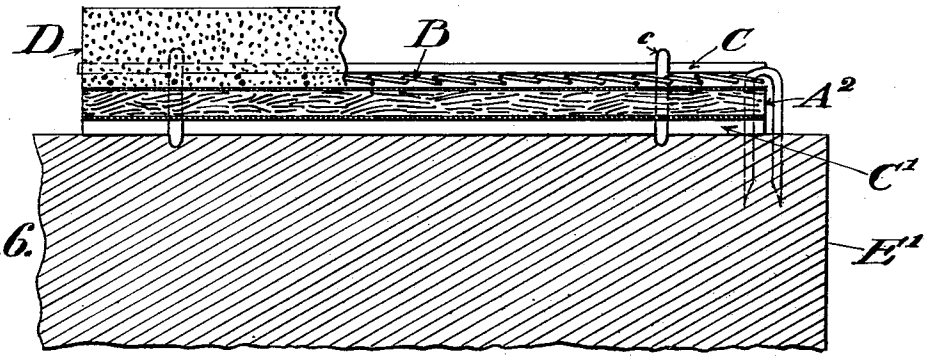

Fig. 6.

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APPLICATION FILED APR. 9, 1903.

NO MODEL. 4 SHEETS—SHEET 4.

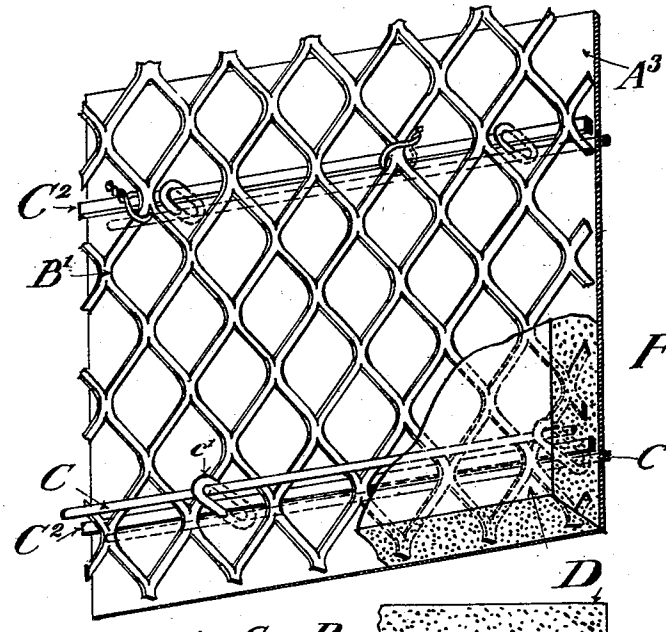

Fig. 9.

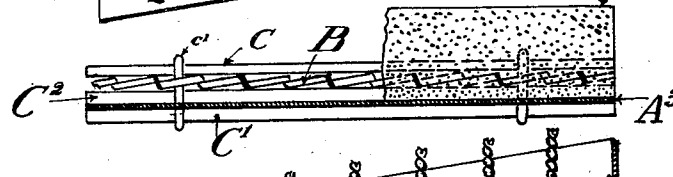

Fig. 10

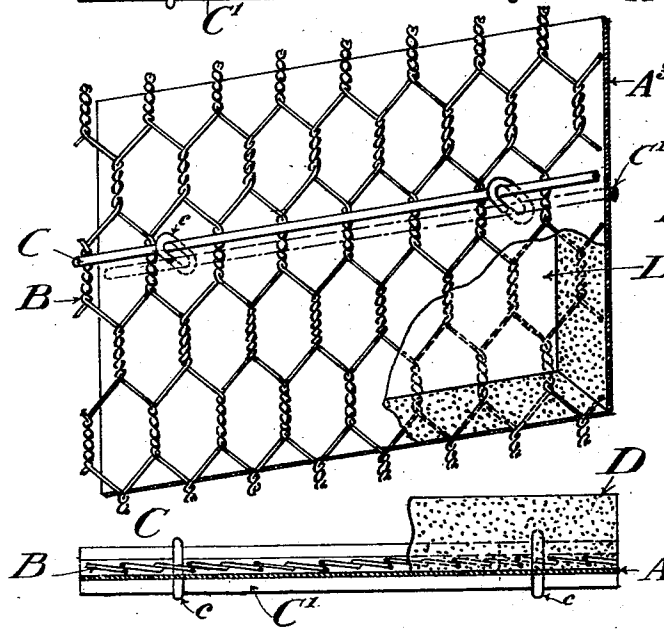

Fig. 7.

Fig. 8.

WITNESSES:

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No. 751,094. Patented February 2, 1904.

UNITED STATES PATENT OFFICE.

JOHN H. MURPHY AND ERVIN M. CAMP, OF CHICAGO, ILLINOIS.

RETAINING MATERIAL FOR PLASTER OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 751,094, dated February 2, 1904.

Application filed April 9, 1903. Serial No. 151,746. (No model.)

To all whom it may concern:

Be it known that we, JOHN H. MURPHY and ERVIN M. CAMP, citizens of the United States, and residents of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Retaining Material for Plaster or the Like; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates more particularly to a construction adapted to afford a plastering-surface. Heretofore for said purpose lath, either of wood or metal, has been used. If made of wood, the lath is subject to the objection of being non-fireproof and also to the objection of unequal swelling and shrinkage, loosening the key or clench of the plastic material. If of metal as ordinarily applied, a very large portion of the plaster, mortar, or other plastic material is forced through the meshes, falling therefrom to the bottom of the partition or wall, in some cases wasting approximately half the material applied, while unnecessarily increasing the weight of the wall. This is more particularly true of wire-net, which if used for lathing purposes is usually constructed with approximately half-inch meshes. It is also true that in all of the lathing materials heretofore described the clenches merely hook over the edges of the lath and are readily jarred therefrom by concussion, or even their own weight may be sufficient to break them away, thus loosening the plaster from the material intended to retain the same.

The object of this invention is to provide an improved retaining material for mortar or other plastic material cheaper than other forms of metallic lath and very much stronger, while entirely preventing waste or loss of any of the plastering material applied thereto, though reducing the thickness of the plaster applied thereto to approximately one-half that ordinarily applied on walls.

It is also an object of this invention to provide a backing-sheet or tension-sheet in such close relation with the wire-net as to effectually close the clenches behind the retaining material, thereby enabling the plastic material or plaster to thoroughly engage the same therein.

Another object of this invention is by using a backing-sheet of metal or other fireproof material, together with the reticulated material and plaster, a fireproof construction is produced at small expense.

The invention embraces many novel features and consists in the matters hereinafter described, and more fully pointed out and defined in the appended claims.

In the drawings, Figure 1 is a perspective view of material embodying our invention, showing the same partly rolled up. Fig. 2 is a transverse section of the unrolled portion thereof. Fig. 3 is a perspective view with the plaster broken away and showing a construction embodying our invention used for lathing purposes. Fig. 4 is a transverse section of the same. Fig. 5 is a view similar to Fig. 3, but illustrating a thermally-insulating backing-sheet which may conveniently be used against brick or stone walls. Fig. 6 is a transverse section of the same. Fig. 7 is a view, partly in section and partly broken away, illustrating our construction embodied with a plain sheet of metal. Fig. 8 is a transverse section of the same. Figs. 9 and 10 are views similar to Figs. 7 and 8, respectively, but illustrate the use of expanded metal in our invention and also the use of thin furring-strips.

As shown in said drawings, a flexible sheet of metal or of paper, cloth, or other desired fabric or material (which may be treated to render the same fireproof) is secured as a backing in close relation with and on one side of a sheet of reticulated material having open meshes, as poultry or fence netting constructed of wire. Said netting may be permanently fastened to said backing-sheet on one or both sides and in contact therewith in any preferred manner.

In the construction illustrated in Figs 1, 2, 3, 4, 5, and 6 said backing-sheet is flexible and may be of any desired character or fabric. As shown in Figs. 1 and 2, said backing comprises a sheet of the ordinary building or other

paper, (indicated by A.) Permanently secured or attached on one face thereof is the reticulated material, which, as shown, is poultry-netting B, having large open meshes. Said netting, with the paper secured thereto, may be manufactured and sold in rolls of any desired length and weight or otherwise put up in convenient form for ready application and use.

As illustrated in Figs. 3 and 4, ordinary burlap A′ or other strong fabric is secured, as before described, forming a backing for the reticulated material B, the same being secured thereto in any desired manner. Conveniently, however, rods or wires C C′ are laid transversely of the sheet above the reticulated material and behind the fabric, respectively, and secured each to each and through said fabric and reticulated material by links *c*. D indicates the plaster or other plastic material spread on the reticulated material, as shown in Fig. 3, and filling behind the same against the backing-sheet A or A′, which serves to effectually and entirely close the clench around the wires of the net, thereby firmly uniting the same thereto. Obviously the backing-sheet may be of almost any preferred material, the material varying with the purposes for which used. Any of the commercial insulating-blankets A^2, such as felt or the like, faced on each side with paper may be used as a backing-sheet. This construction is particularly advantageous in positions exposed more or less to moisture or dampness—such, for instance, as against brick or stone walls or the like. Where such insulating-blanket is used in connection with the wire-netting, as shown in Fig. 5, it is unnecessary to fur the wall E′ in the usual manner. Instead the blanket, with the net thereon, is stapled direct to the ground secured in the wall E′ in the usual manner.

Obviously it is not essential that the particular wire-net B should be used, inasmuch as any reticulated material may be employed, and, as shown in Figs. 9 and 10, expanded metal B′ is used. This is rigidly secured upon the backing-sheet (which in this instance is a metallic sheet A^4) in any desired manner. In said Figs. 9 and 10 a furring-strip c^2 is shown interposed transversely between the expanded metal B′ and the backing-sheet A^4, though obviously, if preferred, this may be omitted or, if desired, may be employed in connection with any of the other constructions heretofore described. If employed, however, said furring should be sufficiently thin to permit the plaster or other plastic material filling firmly against the backing-sheet, thereby entirely closing the clench of the plaster around the meshes of the reticulated material and thoroughly incorporating the same therein.

The operation is as follows: The backing-sheet of whatsoever kind or nature serves to receive all of the plastic material pressed through the meshes of the net and by resistance to said pressure acts to spread the material behind the net, entirely closing the clench around the wire. Though the meshes of the reticulated material are usually large, the backing-sheet serves to hold the material in position until it sets. In the event of using a metallic or other non-porous or nearly non-porous sheet said plastic material in its wet state when pressed thereon rigidly adheres thereto by suction until it sets, thus rendering it much easier to apply plaster or other plastic material thereto than to the ordinary surfaces prepared for such purposes. When a paper or fabric backing-sheet is used, the same absorbing the moisture from the plaster greatly facilitates the setting and adheres so rigidly and tightly to the plaster on the rear side of the mesh as to render said paper or fabric practically fireproof. It is obvious from the construction described that said backing-sheet of whatsoever material constructed serves as a tension member of great strength along the rear side of the plaster and rigidly adhering to said plaster very greatly increases the strength of the same, thus where the construction is used providing a much stronger wall, though one of much less thickness and weight and one in which a waste of material in construction is prevented.

While we have described our construction as employed with materials for plastering purposes, we do not desire to restrict or confine ourselves to the plaster finish for rooms or the like, as it is obvious that the construction is very useful and valuable for any purposes necessitating the molding or spreading of plastic material.

Obviously many details of construction may be varied without departing from the principles of this invention.

We claim as our invention—

1. A material for receiving and retaining plaster or the like comprising the combination with reticulated material, of a backing-sheet in close relation therewith and acting to close the clench of the plaster when applied.

2. An article of manufacture comprising open-mesh reticulated material permanently secured against a flexible backing-sheet in such close relation therewith that the entire front surface of said backing-sheet is engaged by the rear side of the plaster when applied to the net and acting to entirely close the clench of the plastic material when applied.

3. The combination with a flexible backing-sheet, of fabric, of reticulated material having open meshes of a size too great to readily support plastic material when used alone and secured flat against said sheet, means for permanently engaging said reticulated material on the sheet and a plastic material such as plaster applied to and entirely inclosing the reticulated material, and filling the front side of said flexible sheet.

4. The combination of a backing-sheet, of

furring-strips secured thereon, reticulated material connected with said furring, and plastering material spread on said reticulated material and filling against the backing-sheet, said backing-sheet acting to entirely close the clench of said plastic material around the reticulated material.

5. A supporting structure for material such as plaster, comprising a backing-sheet and reticulated material secured thereon in close contact therewith and having large open meshes of such size as not readily to support the plaster if said reticulated material is used alone.

In testimony whereof we have hereunto subscribed our names in the presence of two subscribing witnesses.

JOHN H. MURPHY.
ERVIN M. CAMP.

Witnesses:
C. W. HILLS,
A. C. ODELL.