Aug. 2, 1927. 1,637,410

W. C. CORYELL

COATED METAL LATH

Filed Dec. 23. 1922

Fig. 1.

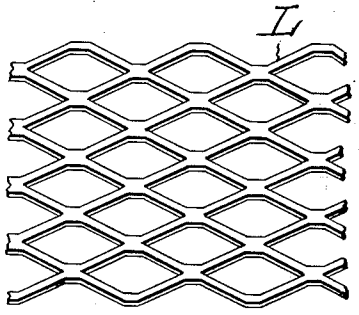


Fig. 4.

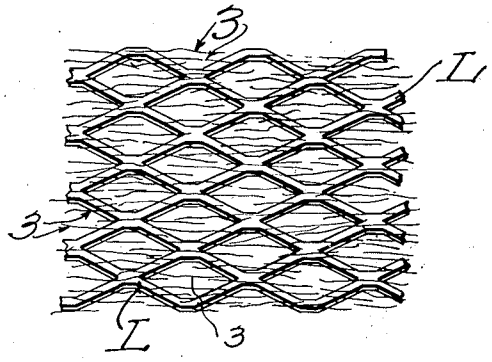


Fig. 2.

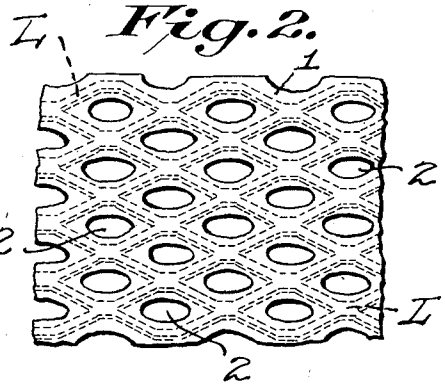


Fig. 5.

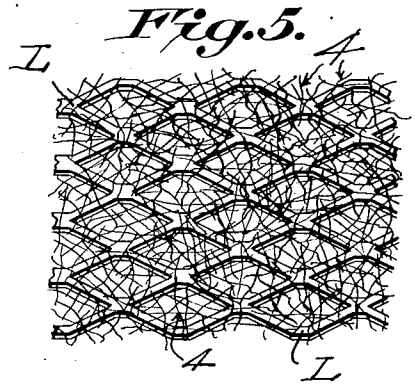


Fig. 3.

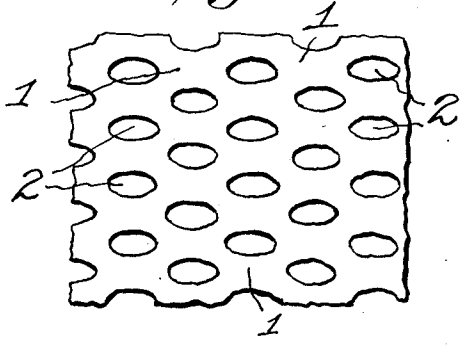
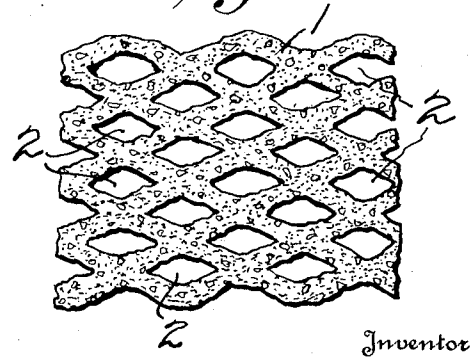


Fig. 6.



Inventor

Wm C. Coryell,

By D. P. Wolhaupter

Attorney

WITNESSES:-

Chas. L. Griesbauer.

Emmy L. Broff

Patented Aug. 2, 1927. 1,637,410

UNITED STATES PATENT OFFICE.

WILLIAM CLAYTON CORYELL, OF YOUNGSTOWN, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO TRUSCON STEEL COMPANY, OF YOUNGSTOWN, OHIO, A CORPORATION OF MICHIGAN.

COATED METAL LATH.

Application filed December 23, 1922. Serial No. 608,778.

This invention relates to the subject of metal lath manufacture, and primarily has in view a product of that kind possessing certain commercial and structural advantages, and obviating wastage of plaster in building operations.

Therefore, a principal object of the invention is to provide what may be termed a coated metal lath having as its distinctive characteristic a slow burning or non-burning substance constituting its exterior surface, and that substance is intended to completely cover and protect the strands and joints of the metal fabric, while at the same time materially decreasing the areas of the openings of the lath without entirely closing such openings. The desirable results obtained are to make the lath rust-resisting to a maximum degree and also preventing the great wastage of plaster which ordinarily falls through the openings of metal lath. This latter function of the new coated metal lath renders it unnecessary to apply to metal lath the usual preliminary coat of plaster.

With these and other objects in view as will be readily appreciated by those familiar with the art, the invention consists of the novel combination of elements hereinafter illustrated, described and claimed.

Though susceptible of embodiment in a variety of forms the invention may be exemplified by reference to the group of figures shown in the drawings in which

Figures 1, 2 and 3 are detail views illustrating the steps of the process in making one form of the product, and

Figures 4, 5 and 6 are similar views showing the steps of the process in making another form of the product.

Referring to these illustrations of the invention, Figure 1 illustrates a section of a reticulated metal structure designated by the reference letter L, and preferably consisting of what is commonly known as expanded metal lath, though an equivalent meshed metal fabric would answer the purpose. In carrying forward the invention the meshed fabric or lath L is given a substantial coat of a cementitious or plastic material designated by the numeral 1 which envelops the strands and the joints of the structure and that is repeated to the desired extent according to the thickness of coat desired, but the ultimate product as shown in Figure 3 represents an interior core of the expanded metal or meshed fabric and an envelope or matrix of the cementitious or plastic material which forms a web or surface for the finished product and only partly closes the meshes of the lath or metal fabric, leaving the key openings 2 for the plaster.

Additional features that may be resorted to are suggested in Figures 4, 5 and 6, in which Figure 4 shows the use of striated fibres 3 laid on the metal lath in substantially parallel order and staggered, preliminary to the coat of the plastic or cementitious material, or, as shown in Figure 5, a criss-cross arrangement 4 of fibres may be used preliminary to the application of the cementitious or plastic coating. And, as shown in Figure 6, the coating of the lath may be given a mineral or earthy characteristic by sprinkling or dusting a mineral powder thereon, such as fine grains of sand, blast furnace slag, asbestos fibre, pulverized limestone, or other equivalent substances, or as a matter of fact dessicated wood fibres might be employed for that purpose.

The cementitious or plastic material may be of a varied character. It may consist of an asphaltum compound containing vegetable or mineral fibres such as cotton threads, excelsior or other wood fibres for instance asbestos fibres or the like. The effect of the fibres is to reinforce the asphaltum at the edges of the openings. Also mineral pitch would be usable for the purpose, and linseed oil products mixed with earthy substances to produce a heavy thick adhesive substance may be employed.

According to the character of the coating compound it will be applied hot or cold, and in any case it is desirable that the adhesive or bonding material shall be sufficiently viscous that the surface tension of the fluid is sufficient to partially close-in the areas between the meshes of the metal structure. The introduction of the fibrous elements assists materially in preventing the viscous substance from entirely closing the openings or meshes of the metal framing or fabric. However, the closing of a negligible number of the openings or meshes would not interfere with the free and full functioning of the invention.

While the coating of the metal fabric may

be accomplished in any practical manner it is to be noted that it is desirable to use a combination of materials in the lath so as to give it flexibility. The material will not then chip off in shipping, handling, nor in bending about large corners when being applied to the job.

A wide selection of materials may be made in providing the plastic substance for covering the metal structure. These will include not only materials of a combustible or slowly combustible nature such as resin, rubber, linseed oil, glue, cellulose and even paper matte, but also materials of a non-combustible or fire resisting nature such as cement, plaster of Paris, silicate of soda, aluminum sulphate and other inorganic compounds. The available fibrous substances are likewise numerous such as hair, hemp, cotton, wood fibres, et cetera, which may be applied in any suitable manner to the side of the metal structure, thereby constituting the coating substance.

From the foregoing it is thought that the essentials of the invention will be fully understood without further description, and various minor details or changes may be resorted to without departing from the spirit or sacrificing the advantages thereof.

I claim:—

1. A coated metal lath including a meshed metal structure, and a plastic matrix with fibrous elements therein coating the metal structure.

2. A coated metal lath including a meshed metal structure, and a plastic matrix with fibrous elements therein coating the metal structure and having key openings.

3. A coated metal lath consisting of an expanded metal structure having fibres thereon and an adhesive coating with openings coinciding with the meshes of the metal structure.

In testimony whereof he hereunto affixes his signature.

WILLIAM CLAYTON CORYELL.