March 6, 1928. 1,661,642

G. F. VOIGHT

METAL LATH

Filed March 2, 1925 3 Sheets-Sheet 1

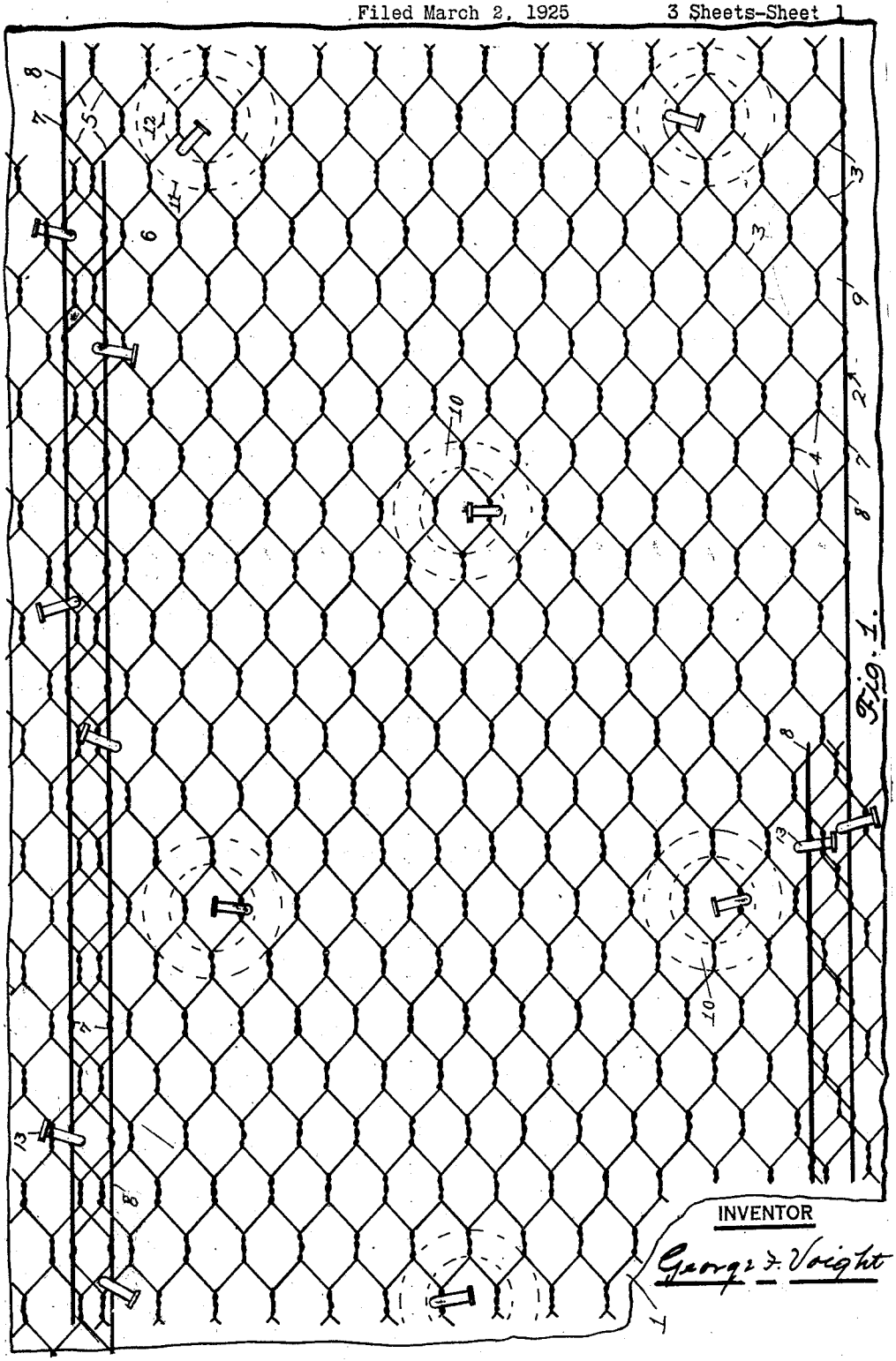


Fig. 1.

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Fig. 2.

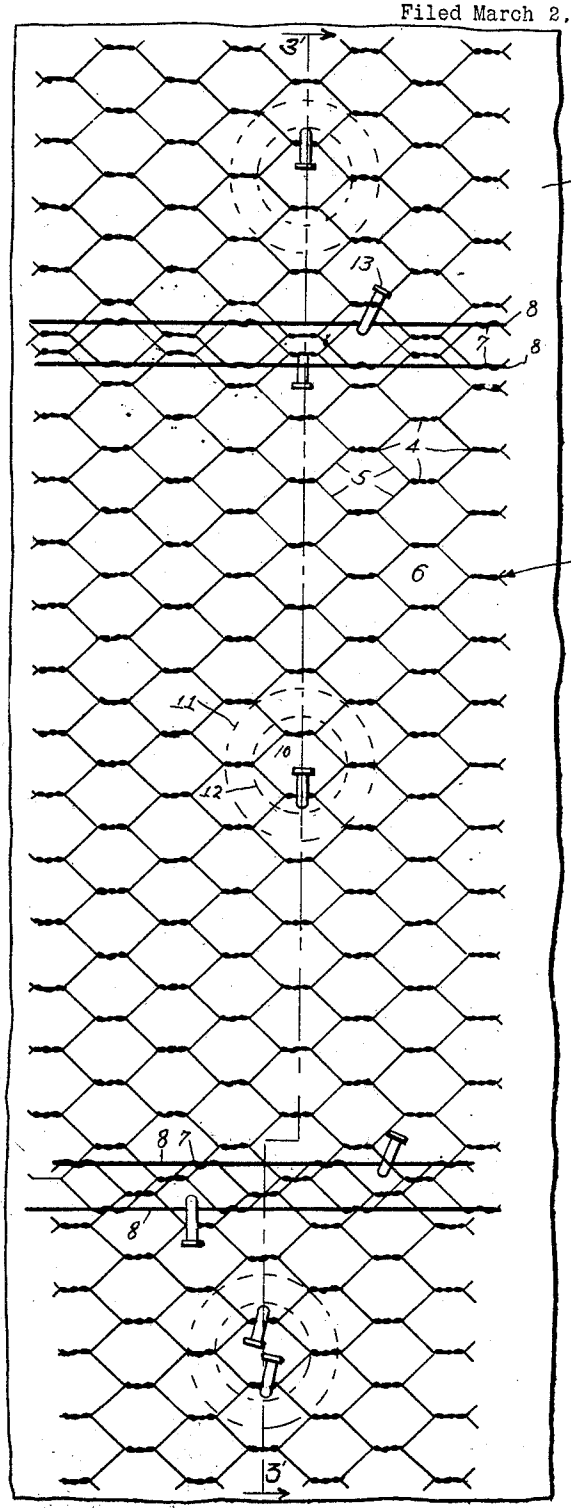
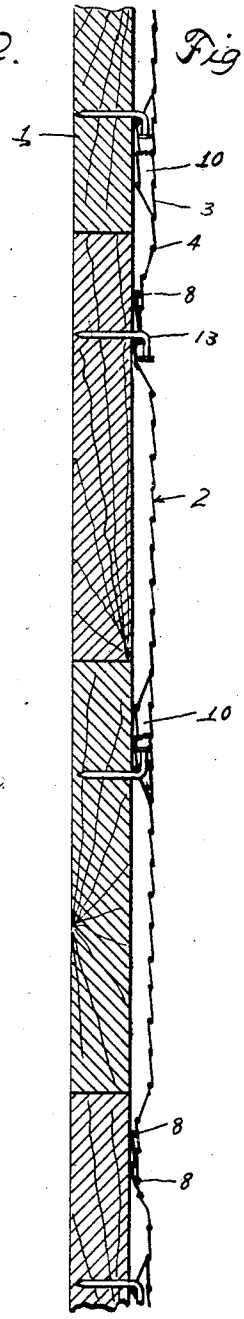


Fig. 3.



INVENTOR

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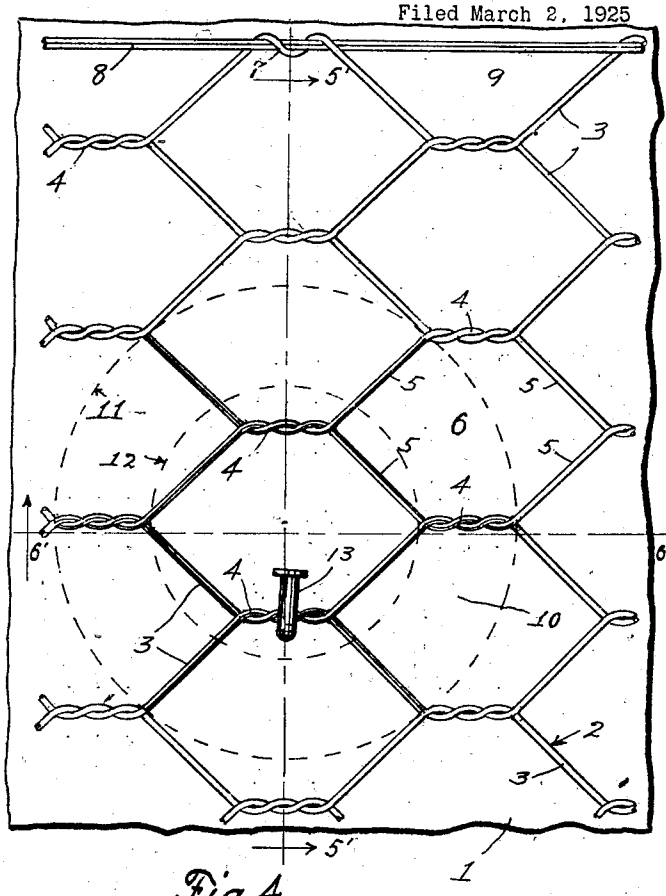


Fig. 4.

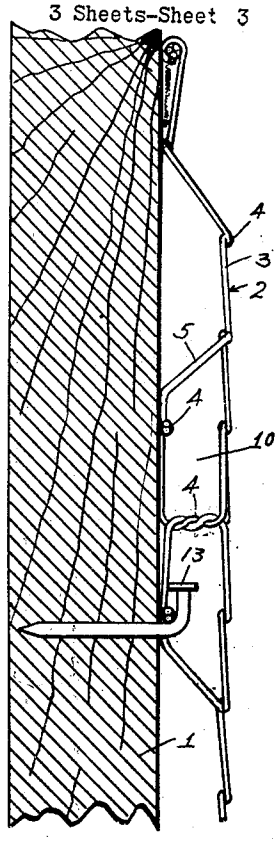


Fig. 5.

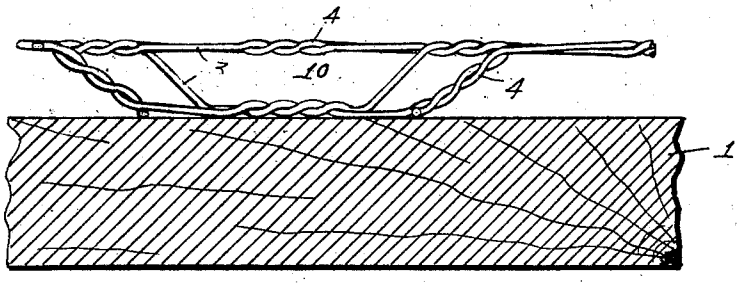


Fig. 6.

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UNITED STATES PATENT OFFICE.

GEORGE F. VOIGHT, OF OAKLAND, CALIFORNIA, ASSIGNOR TO ECONOMY PRODUCTS CORPORATION, A CORPORATION OF CALIFORNIA.

METAL LATH.

Application filed March 2, 1925. Serial No. 12,686.

My invention relates to improvements in metal lath adapted as reinforcement for stucco composition, particularly in the application of the latter to the exterior of frame structures provided with wall sheathing or other suitable backing for the stucco composition.

One of the objects of the present invention is the provision of metal lath embodying an intermediate or body portion comprising a plurality of wires having portions inter-twisted, thereby forming comparatively large hexagonal, diamond-shaped, meshes or interstices, and marginal cables inter-twisted with the opposite edges thereof, the said body portion provided with shallow, cup-shaped, indentations adapted to form means for holding the body portion in outstanding relation against the wall sheathing, or the like, of the structure to which the lath may be secured.

A further object is the provision of indentations pressed at intervals into the body portion of the lath, the bottom of which embodying one or more of said inter-twisted portions of the wires, said inter-twisted portions, or a division thereof, adapted to be secured to the wall sheathing, or the like, by suitable fastening means separately applied.

A still further object is to off-set the margins of the lath, whereby the marginal cables, and the immediate adjacent portions of the body portion, will be disposed in the plane of said indentations and parallel with the plane of said body portion, whereby said cables may be secured to the wall sheathing against which said indentations may be seated, without drawing said body portion out of alignment.

With the foregoing and still further objects and purposes in view which will appear as the description proceeds, my invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings—

Figure 1 is a view in elevation of a portion of a "strip" or "length" of the lath secured to the wall sheathing of a structure;

Figure 2 is a view in elevation of a portion of a "strip" of the lath, with its upper and lower edges over-lapping the edges of adjoining "strips", attached to a section of wall sheathing;

Figure 3 is a view approximately on line 3′—3′, Fig. 2;

Figure 4 is a "close-up" face view of a fragmental portion of the lath secured to a portion of the wall sheathing;

Figure 5 is a vertical sectional view on line 5′—5′, Fig. 4; and

Figure 6 is a horizontal sectional view on line 6′—6′, Fig. 4.

Referring to the drawings in detail, throughout which like reference characters designate like parts:

The numeral 1 designates the wall sheathing, which comprises a covering of boards adapted to be secured, preferably in "tight-jointed" order, across the face of the studding (not shown) of a stucco structure.

2 designates my improved lath, which I prefer to "make up" in "strips" or "lengths" of three feet or thereabout in width, and from fifty to one hundred and fifty feet in length, and which comprises a plurality of longitudinally extending wires 3, which are zig-zagged in the plane of the lath and have horizontally extending portions coiled around like portions of the adjoining wires, whereby are formed inter-twisted portions 4, and inclined or obliquely extending portions 5, thereby forming hexagonal, diamond-shaped, meshes or interstices 6, of which said inter-twisted portions 4 form opposed sides of the short diameter and the said inclined portions 5 form the converging sides of the meshes.

The marginal members of the wires 3, that is the upper and lower members or units thereof, have outer coiled portions 7 twisted around marginal cables 8, the latter extending the full length of the lath and in parallelism therewith.

9 designate semi-hexagonal meshes, of which the cables 8 form the outer or long side, inter-twisted portions 4 form the opposite sides, and inclined portions 5 form the obliquely extending sides.

The cables 8 comprise each, preferably, three parallel wires disposed in longitudinal engagement. However, if desired, the wires forming the cables may be twisted or coiled around each other; also, if preferred, a

single wire may be employed as a cable, or two wires may be used therefor. In the latter case they may be either twisted together or disposed in parallel engagement. In Figures 1 and 2 of the drawings, single heavy lines indicate the cables, which may comprise either one, two or three wires. In Figures 4 and 5, the cables are represented by three parallel wires, although only two are visible in Figure 4.

The object of the cables 8 is to provide a kind of "frame-work" for the lath, and to impart a certain amount of rigidity thereto. As a matter of economy, the wires 3 are preferably of light gauge, and the lath would be easily drawn out of shape when placed under tension as when applying it to the wall sheathing, if the cables were omitted.

Into the face side of the lath, intermediate the cables 8, are struck, at suitable spaced apart intervals, shallow, cup-shaped, indentations 10. Said indentations being indicated in Figures 1, 2 and 4, by the broken lines 11 and 12, of which the lines 11 indicate the upper margin and the lines 12 indicate the perimeter of the bottom. In Figure 4 the indentation is further indicated by the shading of the wires falling within the area thereof.

While I prefer to so locate the indentations on the lath, relative to the meshes 6, that the axes thereof will register approximately centrally with the meshes, however, if preferred, they may be otherwise arranged. It is one of the objects of the present invention, however, that the indentations be so arranged relative to the meshes 6, and to be large enough diametrically, so that at least one, and preferably two, of the inter-twisted portions 4 will seat lengthwise against the wall sheathing, whereby a nail or an equivalent fastening device may be readily driven along one side thereof part way into the wall sheathing and then bent over thereacross for binding it firmly against the sheathing.

It is a further object of the invention to provide a flat bottom for the indentations 10 and to dispose the bottoms in a plane extending parallel with the body portion of the lath, so that a hammer, or like driving tool, may engage the wires forming the bottom without engaging and distorting the walls of the indentations, when driving the nails 11 for securing the lath.

The side walls of the indentations 10 are provided with moderate inclines to facilitate forming them. If such walls were made with too abrupt inclines, the dies when forming the indentations might cause more or less injury to the wires.

The indentations 10 may be spaced apart along the lath at distances best suited to the work to be performed, consideration being given to the gauge of the wire and the size of the meshes. I have found in general practice that lath in which the indentations are spaced about eight inches from "center to center", nailed at each of said indentations, provides entirely satisfactory reenforcement for the stucco composition.

The lath is intended to be disposed horizontally across the face of the wall of the structure, and as several of the strips of lath disposed laterally are usually required to cover any wall, and as it is desirable that the adjacent margins of adjoining strips over-lap and be firmly secured to the wall sheathing, I have found it preferable to offset the margins of the strips in the plane of the bottoms of the indentations 10. The offsets to extend substantially the length of the strips, and to over-lap with the off-set of the adjoining strip, with nails 13 at suitable intervals driven part way into the wall sheathing, along the sides of the cables 8, and bent over across the latter to bind same firmly against said sheathing. Both of the cables 8 are preferably secured by nailing to the wall sheathing, independently of the other.

While I have shown in the drawings the meshes, forming the indentations, as retaining their normal outlines, it is to be understood that such meshes may be somewhat distorted and drawn out of normal alignment with the remaining meshes. Any such distortion thereof does not in the least effect the efficiency of the lath as reinforcement for the stucco composition.

To apply my improved lath it is simply necessary to stretch the same horizontally across the face of the wall sheathing, and to drive a nail, or the like, through each of said indentations along one side of one of the inter-twisted portions, and at suitable intervals along one side of the cables 8.

The lath is adapted to form outstanding reinforcement for stucco composition, the latter intended to be applied by spreading it through the lath onto the wall sheathing and on and around the reinforcement until a coating of suitable thickness is obtained.

I claim:

Metal lath comprising a fabric formed with relatively large meshes, the wires surrounding certain of said meshes bent into a plane offset from and parallel to the remaining meshes thereof, the wires connecting said offset meshes extending diagonally between said planes whereby said offset mesh-surrounding wires bear in toto against the supporting surface and any one of said offset wires may be secured to the supporting surface at will.

In testimony of the foregoing being my own, I have hereunto affixed my signature this 25th day of February, 1925.

GEORGE F. VOIGHT.