

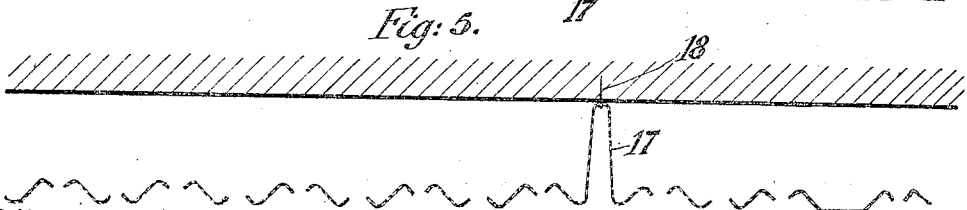
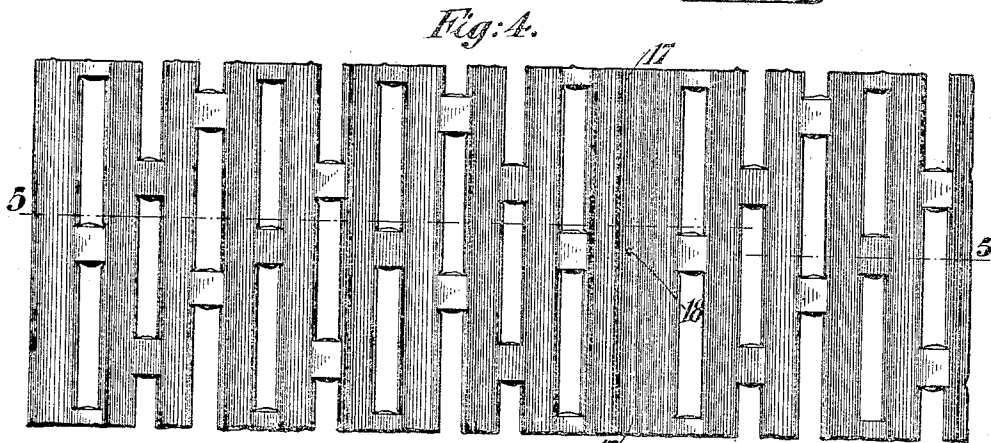
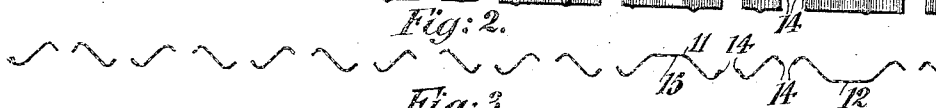
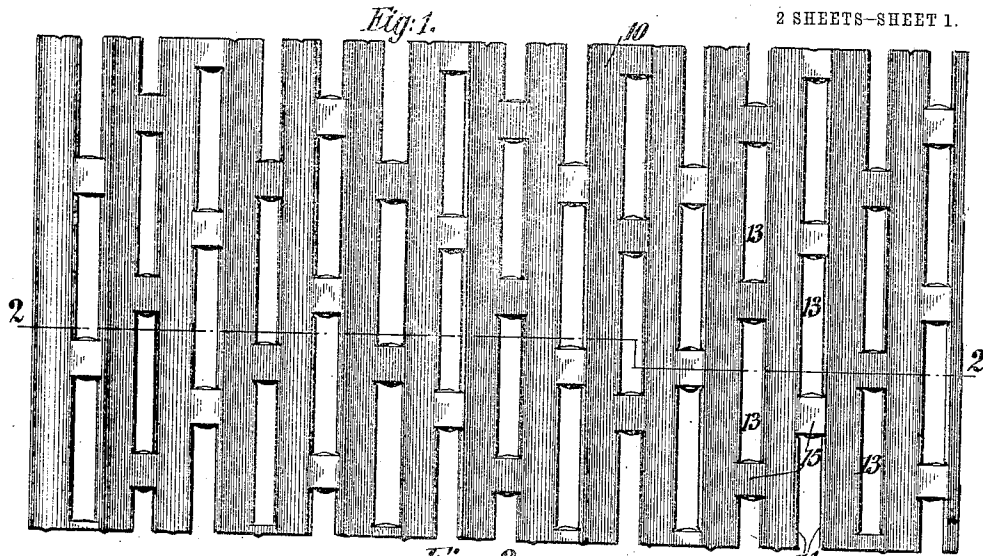
M. KÜHNE.
METAL LATH.

APPLICATION FILED MAY 11, 1911.

1,042,127.

Patented Oct. 22, 1912.

2 SHEETS—SHEET 1.



Witnesses:
John Murtagh
L. J. Murphy

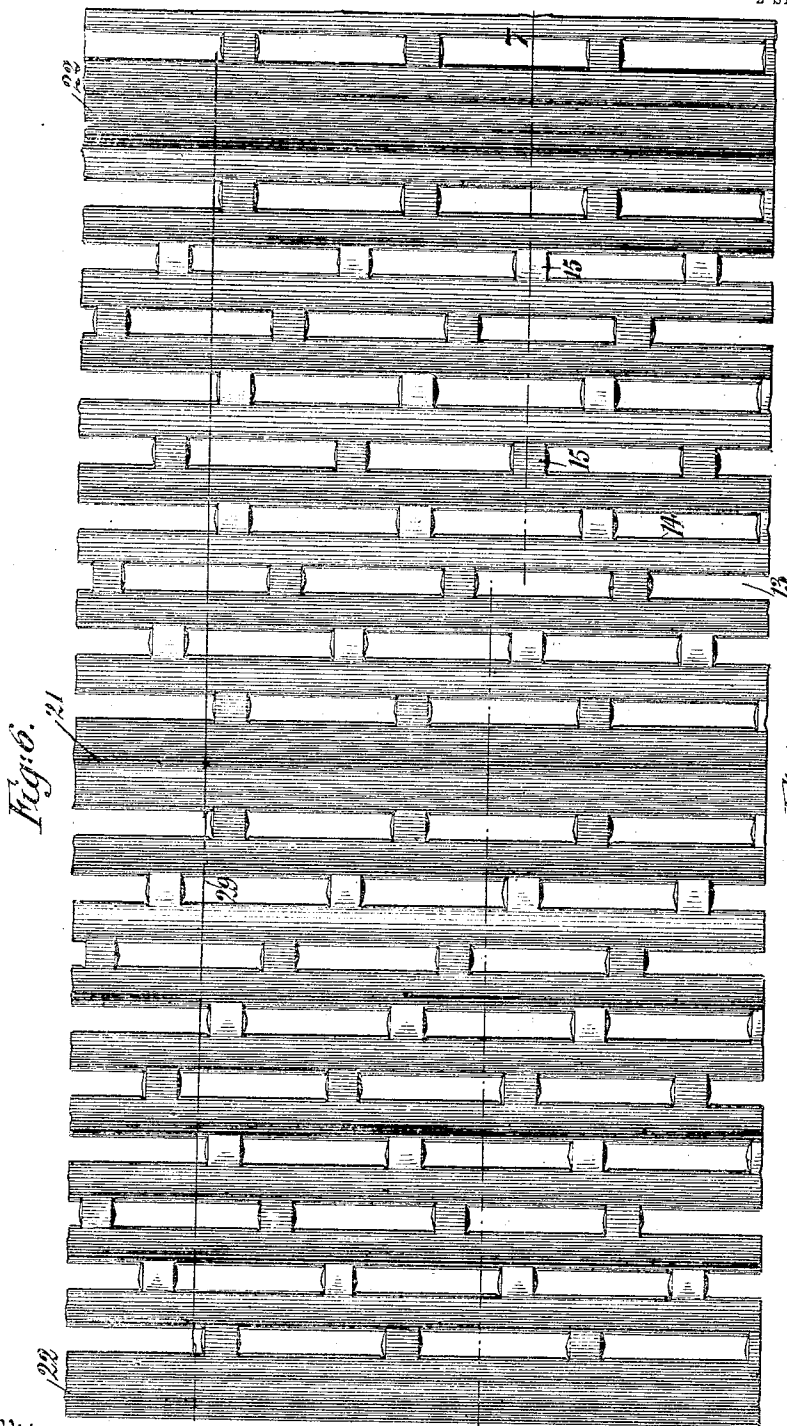
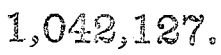
Inventor
Martin Kühne
By his Attorney
Goebel Goebel

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2 SHEETS—SHEET 2.



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L. J. Murphy

Inventor
Martin Kühne
By his Attorneys
Boeker & Greve

UNITED STATES PATENT OFFICE.

MARTIN KÜHNE, OF BROOKLYN, NEW YORK.

METAL LATH.

1,042,127.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed May 11, 1911. Serial No. 626,548.

To all whom it may concern:

Be it known that I, MARTIN KÜHNE, a citizen of the United States, and a resident of Brooklyn, in the county of Kings, State of New York, have invented certain new and useful Improvements in Metal Laths, of which the following is a specification.

This invention relates to metal laths which are provided with perforations through which the mortar passes and which serve to support the mortar in position. Hitherto in the sheet metal laths the openings served to permit the passage of the mortar there-through when such mortar was applied to one side of the lath but only comparatively little mortar passed through the openings whereby very poor sustaining qualities were obtained, the disadvantage being also that the rear side of the lath was provided with a comparatively thin lining of mortar, which would easily crack and otherwise not be as efficient as the front side.

My invention has for its object to provide a sheet metal lath which will act as a frame to the mortar and which by reason of its construction will cause the mortar applied to the front side of the lath to pass through the lath so as to distribute itself completely and evenly on the other side of the lath and form at that side a lining covering the entire rear side of the lath in a thick layer substantially the same as that of the front side.

The invention for this purpose consists of a sheet metal lath formed of a plate corrugated to form hills and valleys or alternately raised and depressed portions, with openings in the hills and valleys of said corrugations and with upturned lips inclined toward each other in the valleys and downturned lips inclined toward each other in the hills so arranged that when the mortar passes through the lath from the front side it will by reason of the inclined walls of the corrugations flow along the inclined portions at the rear of the lath and distribute itself on the rear side so as to form a lining. On the hardening of the mortar the front lining and the rear lining with the skeleton or sheet metal lath there-between will form substantially an integral

wall with equal thickness of mortar lining or approximately so.

My invention consists further in providing a sheet metal lath with alternate depressions and elevations forming strengthening ribs, arranged to form a truss, and then depressing each alternate rib whereby the parts forming the ribs increase in width, and permit thereby the sheet to assume a truss formation.

In the accompanying drawings, Figure 1 shows a plan-view of a portion of my improved metal lath, Fig. 2 is a vertical transverse section taken on line 2, 2, of Fig. 1, Fig. 3 is an enlarged view of part of Fig. 2, Fig. 4 is a plan-view of a lath like that shown in Fig. 1 combined with truss-shaped strengthening ribs, Fig. 5 is a vertical transverse section taken on line 5, 5, Fig. 4, showing the strengthening rib co-acting with the corrugated portion, Fig. 6 is a plan-view of a sheet metal lath showing raised and lowered portions thereof forming a truss-line, and Fig. 7 is a vertical transverse section taken on line 7, 7, of Fig. 6.

Similar letters of reference indicate corresponding parts.

Referring more particularly to Fig. 1, my improved lath is composed of a sheet metal piece 10 properly corrugated so as to form hills 11 and valleys 12 throughout the width of the lath, the corrugations running on lines parallel to each other in the longitudinal direction of the lath. Each of the corrugations, both the hills and valleys are provided with slots or openings 13 obtained by punching out in either direction the metal of the lath. The metal is punched at the valleys in upward direction and at the hills in downward direction, so as to cause the remaining metal forming lips 14 to be upset in opposite direction, said lips in both cases being inclined toward each other so that the remaining metal when looked at in vertical transverse section as shown in Figs. 2 and 3, will have a configuration substantially that of an S. The lips inclining toward each other from opposite sides of the fabric render the same reversible, that is the fabric is usable either side up with the same effect, namely the upturned lips inclined to-

ward each other stand approximately at right angles to the body of the fabric and permit the plaster pressed through the openings to engage the inner faces of said lips and form a firm hold against them. The web 15 between the ends of adjacent slots 13 is preferably straight.

The upset portion 14 forming the lips surrounds the entire slit both at the sides as also the ends of the same. The lips if bent back would form one continuous line with the body-portion of the lath and would fill the entire slot. When plaster is applied at one side of the piece 10 it will pass through the slots 13 and will flow along the inclined portions of the S by reason of its inclination and will distribute itself equally along this surface at the rear of the piece 10 and cover thereby the rear portion of the piece completely and form a complete rear lining. The upset portions or lips serve to facilitate the flow and also by reason of their upsetting serve to grip with the mortar securely. By thus applying the mortar on the front side of the lath, the rear side also becomes lined and by this a double-lined lath is obtained, giving thereby a comparatively thick mortar wall held in position by the lath which thus acts as a skeleton to the wall.

In order to give the desired and necessary stiffness to the lath, parts of the corrugations are omitted and the metal is formed into strengthening ribs 17. These ribs are disposed at intervals of considerable distance embracing a plurality of the hills and valleys and are integrally united with and gradually pass into the corrugations of the sheet metal piece and by reason of not being slotted and having also the cross sectional shape shown in Fig. 5 which is substantially that of a truss, great strengthening qualities are given to the lath. The ribs 17 serve furthermore very advantageously to enable the lath to be applied to the beams by wires and similar fastening means or by nails as shown at 18 in Figs. 4 and 5.

In Figs. 6 and 7 is shown another part of my invention in which a sheet of sheet-metal is provided at intervals with strengthening ribs 21 and 22 projecting alternately in opposite directions. Each of these ribs is in the form of a U-shaped bend of the fabric, the closed end forming the peaks of the rib and the open end the base thereof. In placing this lathing in position to form a wall or ceiling, the ribs are preferably somewhat depressed by spreading at their open ends, as shown in Fig. 7, the dotted lines 23 indicating the initial position and the full lines showing the normal position. The ribs 21 and 22 are of substantially truss-shape and add to the strength of the structure. The fabric between the ribs is in-

clined alternately in opposite directions and is connected at one side of the wall with the base of one rib and on the opposite side of the wall with the base of the other rib, the peak or apex 24 of each rib being in line with the base 25 of the adjacent ribs. The intermediate material thus assumes the shape of a truss. This again greatly adds to the resisting qualities of the structure and by filling in the space on either side a very strong wall is secured. It will be noticed that by reason of the construction proposed my improved lath enables a wall to be produced equally strong at either side.

The body of the lath between the elevations and depressions forms a truss and the embodiment shown in Fig. 7 is formed corrugated, similar to the forms shown in Figs. 1 to 5. It is clear, however, that this part of the invention may be applied to other forms of lath than the corrugated form. Wires hold the parts in position, the main wires 29 being at each side of the lath and wires 20 connecting the elevations and depressions with the main-wires. By this, the lath retains the truss line formation.

I have shown and described an embodiment of my invention, but changes may be made therein without departing from the spirit and scope of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A metallic lathing comprising a reversible corrugated sheet metal body having hills and valleys, the hills having plaster openings provided on their opposite sides with downturned lips inclined toward each other and the valleys being provided with plaster openings having on their opposite sides upturned lips inclined toward each other.

2. A metallic lathing comprising a reversible corrugated sheet metal body alike on either side and having hills and valleys, the hills being provided with plaster openings having on their opposite sides downturned lips inclined toward each other and the valleys being provided with plaster openings having on their opposite sides upturned lips inclined toward each other, the tops of the hills and the bottoms of the valleys being in straight parallel planes.

3. A sheet metal lath comprising a corrugated body having plaster openings in the hills and valleys and lips at the sides and ends of said openings, the lips of the hills being inclined downward and toward each other and the lips of the valleys being inclined upward and toward each other.

4. A sheet metal lath comprising a corrugated body having plaster openings in the hills and valleys and lips at the sides of said openings, the lips of the hills being

inclined downward and toward each other
and the lips of the valleys being inclined
upward and toward each other, and
strengthening ribs projecting in opposite
5 directions from said corrugated body and
forming a truss-like structure.

In testimony, that I claim the foregoing

as my invention, I have signed my name in
presence of two subscribing witnesses.

MARTIN KÜHNE.

Witnesses:

JOHN MURTAGH,
L. J. MURPHY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents.
Washington, D. C."