No. 782,667. PATENTED FEB. 14, 1905.

P. KÜHNE.

METAL LATH.

APPLICATION FILED DEC. 6, 1904.

Fig: 1.

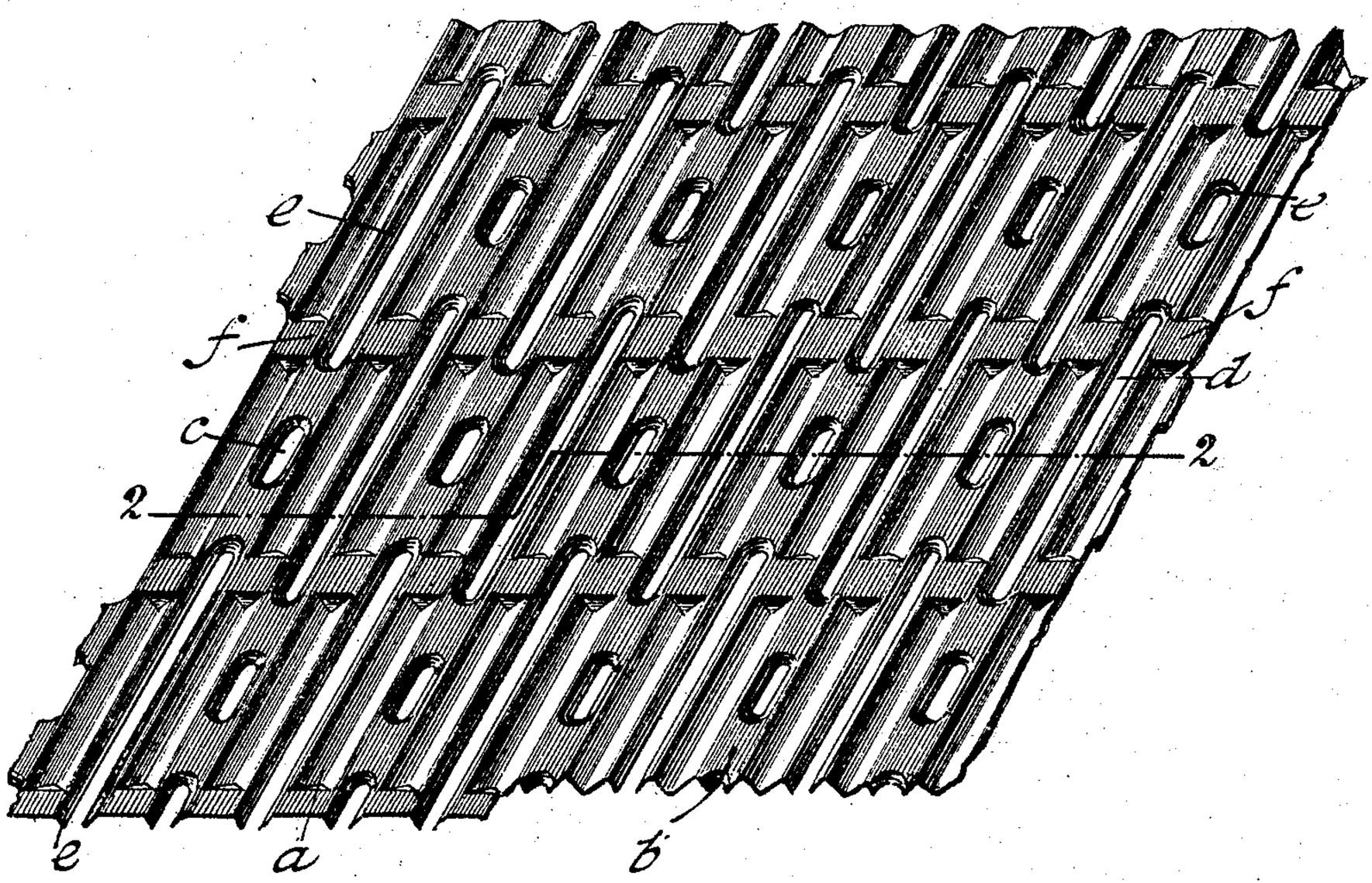

Fig: 2.

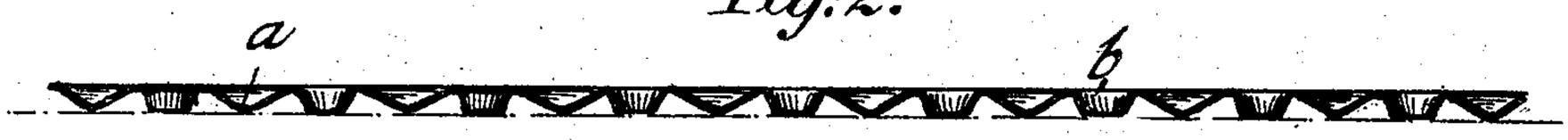

Fig: 3.

Witnesses
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UNITED STATES PATENT OFFICE.

PAUL KÜHNE, OF BROOKLYN, NEW YORK.

METAL LATH.

SPECIFICATION forming part of Letters Patent No. 782,667, dated February 14, 1905.

Application filed December 6, 1904. Serial No. 235,772.

To all whom it may concern:

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

The object of this invention is to provide a strong metal lath having a capacity for making an effective bond for the plaster, said lath to be made with economy of material, so that the lath produced from a sheet of given width is of approximately the same width as such original sheet. For this purpose the invention comprises a corrugated slitted sheet of metal lathing in which the corrugations are allowed for by a lateral expansion of the metal of the corrugations.

The invention consists, further, of a corrugated slitted sheet of metal lathing in which the corrugations are allowed for by the lateral expansion of said corrugations, the metal in said corrugations being thinner than the metal between said corrugations and of gradually-decreasing thickness toward the apex of the corrugations.

In the accompanying drawings, Figure 1 represents a perspective view of a sheet of metal lathing embodying the invention. Fig. 2 is a section on line 2 2, Fig. 1; and Fig. 3 is a section, on a larger scale, of a portion of the sheet shown in Fig. 1, said section illustrating in detail the construction of the lath.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, the improved lath, which is made of annealed sheet-steel or other metal, comprises corrugations *a* and web portions *b* between said corrugations *a*, said corrugations and web portions in the form of a lath being shown alternately in succession transversely of the sheet. *c* and *d* indicate slits made in the sheet. The metal of the sheet is for the purpose of forming said slits or openings bent in outward direction from the web portions of the sheet, as indicated by the dotted lines in Fig. 3, thereby forming between the corrugations depending flanges *e*, which afford a secure hold for the plaster. In order that said flanges and the web portions between the ends of the flanges may be of practically their original full strength, as supplied by the material of the sheet, said flanges are not drawn in direction laterally of the sheet; but the same are permitted to remain in substantially their original condition and of the original thickness and the expansion necessary to preserve the sheet at its full width, whereby economy of material is effected, is made in the corrugations *a*, in which the metal becomes thinner. There is thereby provided a plurality of parallel uniform expanded ridges lengthwise of the sheet alternating with a plurality of non-expanded slitted portions.

In order to provide maximum strength at or near the bent edge between the web portions and the corrugations, the metal is allowed to remain of its full thickness at said edge and is tapered in thickness therefrom—that is to say, formed of gradually-reduced thickness toward the apex of the corrugations—as clearly shown in Fig. 3, the point of greatest thinness being at or near said apex. The distribution of metal in this manner produces a lath of substantially uniform strength throughout its surface, while at the same time providing flanges and bases for the flanges of the full thickness of the original sheet.

In order to obviate any tendency to buckle, the slits or openings through the web portions *b* are preferably made of different lengths, as indicated in the drawings, in which *c* indicates openings of short length, which are arranged to alternate with openings *d* of greater length, said openings *d* also alternating transversely of the sheet with the shorter openings *c*. The flanges of varying length provide a superior bond for the plaster and facilitate the securing of the same at points difficult of access and where no adjacent support is available. The further securing rigidity of the sheet in a lateral direction are provided at those portions of the corrugations between openings bridge portions *f*. These portions are arranged at the same points in each corrugation and provide a continuous band of approximately the same height as the intervening web portions with which they are contiguous, extending laterally of the sheet and strengthening the same in that direction.

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

1. A corrugated slitted sheet of metal lathing in which the corrugations are allowed for by the lateral expansion of the metal in the corrugations themselves.

2. A corrugated slitted sheet of metal lathing having apertures therein, the metal at the edges of which is turned outwardly as a flange and the corrugations allowed for by the lateral expansion of the metal in said corrugations.

3. A corrugated slitted sheet of metal lathing comprising web portions provided with longitudinal openings surrounded by flanges turned up out of the metal of the web portions, and intermediate corrugations, the expansion of the sheet being allowed for by the expansion of the metal in said corrugations, and said web portions being of substantially the original thickness of the sheet.

4. A corrugated slitted sheet of metal lathing comprising web portions provided with longitudinal openings surrounded by flanges turned up out of the metal of the web portions, and intermediate corrugations, the expansion of the sheet being allowed for by the expansion of the metal in said corrugations, said corrugations being of gradually-decreasing thickness toward the apex of the same, and said web portions being of substantially the original thickness of the sheet.

5. A corrugated slitted sheet of metal lathing comprising web portions provided with longitudinal openings surrounded by flanges turned up out of the metal of the web portions, intermediate corrugations, and bridge portions extending laterally of the sheet in said corrugations, between the slots of the web portions, the expansion of the sheet being allowed for by the expansion of the metal in said corrugations, said corrugations being of gradually-decreasing thickness toward the apex of the sheet and said web portions being of substantially the original thickness of the sheet.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

PAUL KÜHNE.

Witnesses:

JOSEPH H. NILES,

HENRY J. SUHRBIER.