

(No Model.)

2 Sheets—Sheet 1.

D. B. HILTON.
METAL LATH.

No. 538,040.

Patented Apr. 23, 1895.

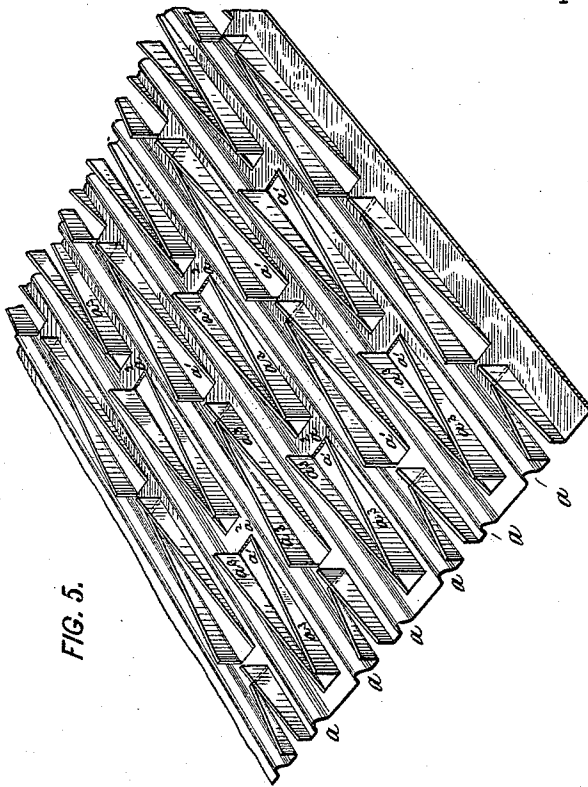


FIG. 5.

FIG. 1.

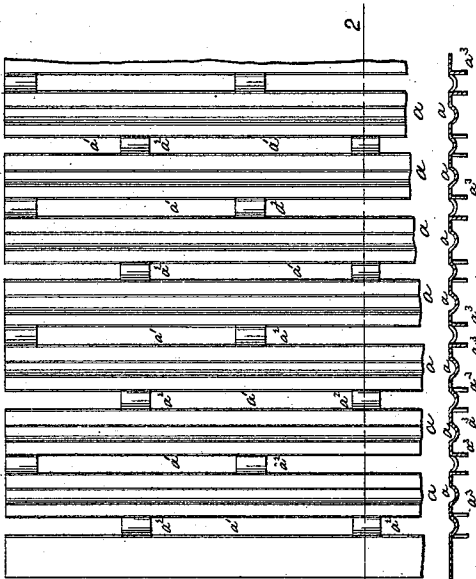


FIG. 2.

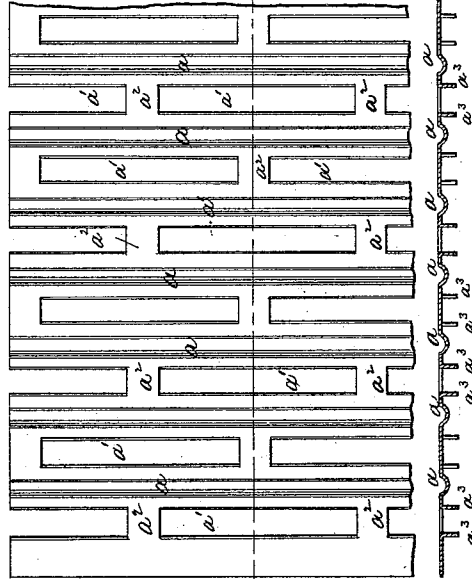


FIG. 3.

FIG. 4.



Witnesses:
John Becker
Theodore Becker.

Inventor:
Dawson B. Hilton
by his attorneys
Boeder & Briesen

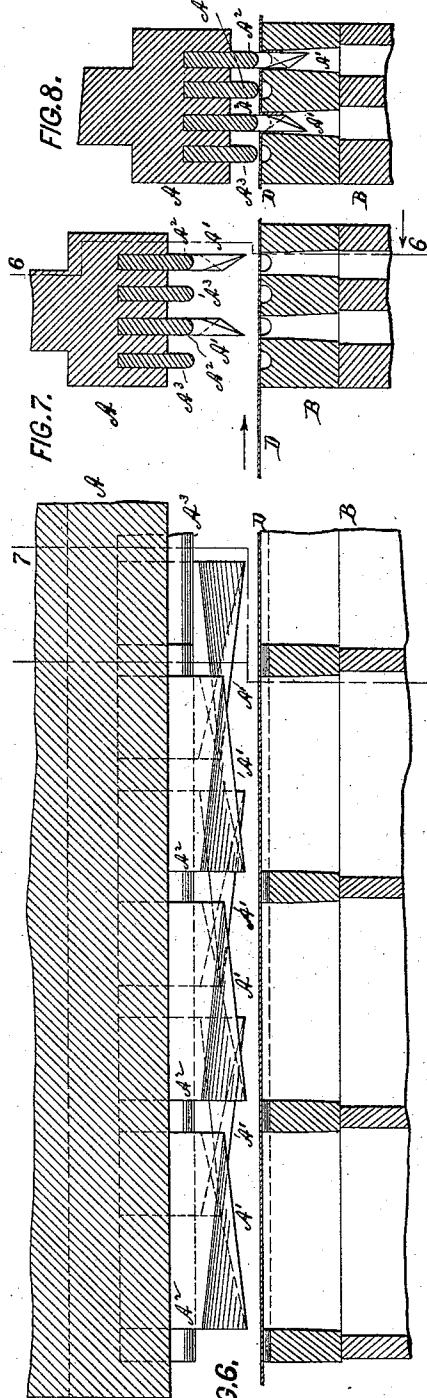
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2 Sheets—Sheet 2.

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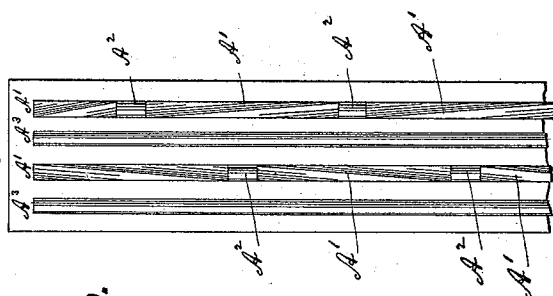


FIG. 9.

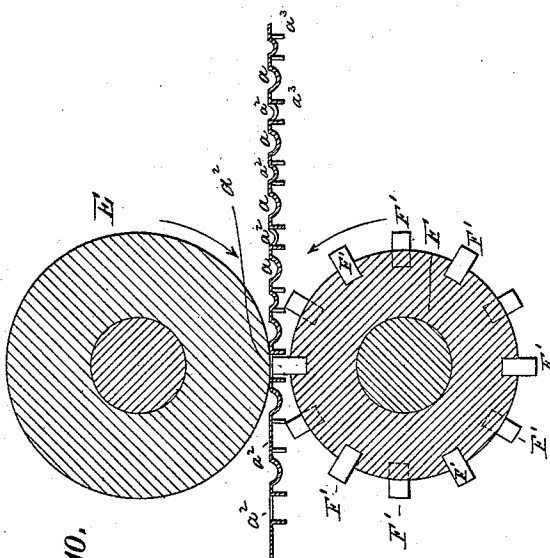


FIG. 10.

Inventor:
Dawson B. Hilton
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UNITED STATES PATENT OFFICE.

DAWSON B. HILTON, OF BROOKLYN, NEW YORK.

METAL LATH.

SPECIFICATION forming part of Letters Patent No. 538,040, dated April 23, 1895.

Application filed March 11, 1895. Serial No. 541,255. (No model.)

To all whom it may concern:

Be it known that I, DAWSON B. HILTON, of Brooklyn, New York, have invented an Improved Metal Lath, of which the following is a specification.

This invention relates to an improved metal lath which is composed of alternating grooved and slotted sections. The slotted sections are provided with cross pieces or bridges which are stretched and lengthened in the process of manufacture, so that a given sheet of metal produces a considerably wider metal lath. This is of course a very important advantage of construction, as it lightens the lath and economizes raw material.

In the accompanying drawings: Figure 1 is a face view of my improved metal lath showing it partly finished. Fig. 2 is a cross section on line 2, 2, Fig. 1. Fig. 3 is a face view of the lath showing it finished; Fig. 4, a cross section on line 4, 4, Fig. 3; Fig. 5, a perspective view of the finished lath, showing its under face. Fig. 6 is a longitudinal section of the perforating and bending punch and die on line 6, 6, Fig. 7; Fig. 7, a section on line 7, 7, Fig. 6, showing the punch raised. Fig. 8 is a similar section showing the punch lowered. Fig. 9 is an inverted plan of the plunger, and Fig. 10 is a cross section through the stretching rolls.

The metal lath to be produced is illustrated in Figs. 3, 4 and 5. It consists of a number of parallel grooved sections a , and of intervening slotted sections a' . The slots are formed by the cross pieces or bridges a^2 , which are arranged to break line and which connect the grooved sections a . The metal which is punched out of the slots is turned down at right angles to form the triangular flaps a^3 .

It will be seen that the slots and bridges form a very large portion of the surface of the lath and that when the bridges are stretched the lath will be materially widened. I propose to first bend and stretch these bridges during the process of manufacture by suitable punches and to then straighten the same, whereby their length and consequently the width of the entire lath is considerably increased. To accomplish this re-

sult I employ a drag punch A, and a die B, as illustrated in Figs. 6 to 9. The punch A, is provided with the beveled cutters A' , (for forming the slots a'), the short dies A^2 , in line therewith (for bending the bridges a^2), and the intermediate long dies A^3 , (for forming the grooved sections a .) As the punch A, descends upon the blank D, placed upon the die B, the cutters A' , will first reach the blank to cut and bend the triangular flaps a^3 . The blank is then attacked by the dies A^3 , which form the grooved sections a , and tightly hold the blank in position. At the same time the blank is attacked by the short dies A^2 , which will curve and simultaneously stretch the bridges a^2 , because the metal has to give somewhere and these bridges offer the least resistance to the pressure. After the plunger is raised and the blank removed, it will have assumed the shape shown in Figs. 1 and 2 in which the bridges a^2 , are shown to be curved and expanded. The blank thus prepared is next passed between a pair of rolls E, F, Fig. 10, of which the roll E, is plain, while the roll F, is provided with flat radial projections F' . These projections engage the curved bridges a^2 , and flatten them against the roll E, so that when the blank leaves the rolls, all the bridges a^2 , will have been straightened and the blank will have assumed the finished forms shown in Figs. 3 to 5.

What I claim is—

1. A metal lath composed of grooved sections and of expanded bridges that connect such sections, substantially as specified.
2. A metal lath composed of grooved sections, expanded bridges that connect such sections and of downwardly bent triangular flaps, substantially as specified.
3. The process of making a metal lath which consists of punching out slots from a blank, curving and stretching the intervening bridges, and then straightening such bridges, substantially as specified.

DAWSON B. HILTON.

Witnesses:

F. V. BRIESEN,
WILLIAM SCHULZ.