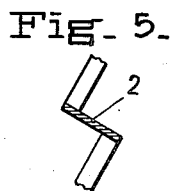
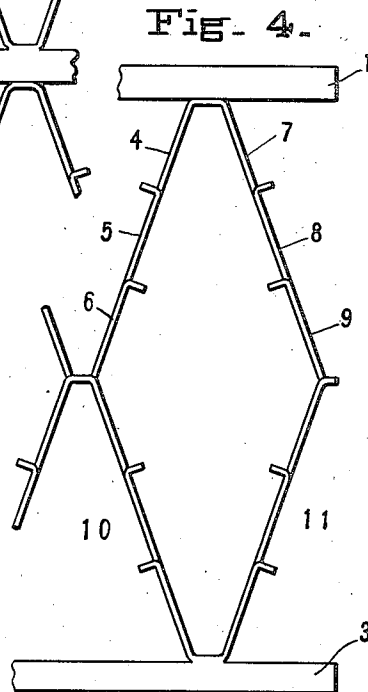
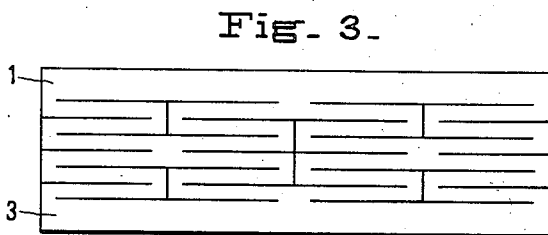
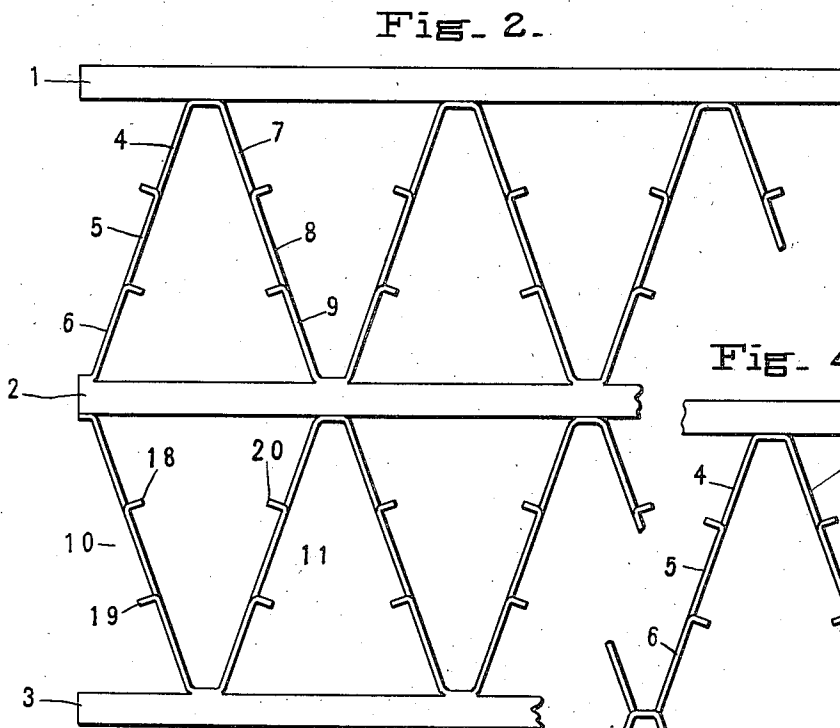
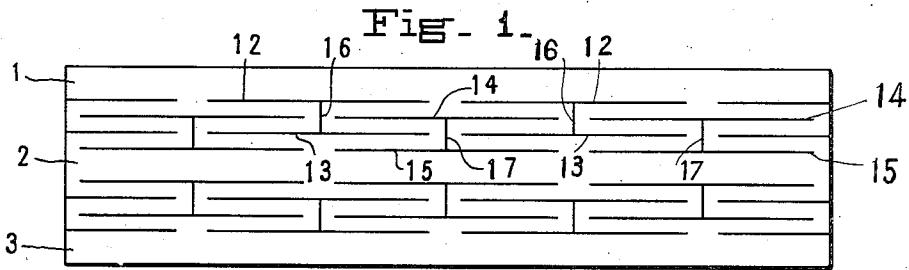


N. E. CLARK.
EXPANDED METAL.
APPLICATION FILED MAY 20, 1908.

1,086,027.

Patented Feb. 3, 1914.



WITNESSES:
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UNITED STATES PATENT OFFICE.

NORRIS ELMORE CLARK, OF PLAINVILLE, CONNECTICUT.

EXPANDED METAL.

1,086,027.

Specification of Letters Patent.

Patented Feb. 3, 1914.

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To all whom it may concern:

Be it known that I, NORRIS ELMORE CLARK, a citizen of the United States, and resident of Plainville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Expanded Metal, of which the following is a specification.

My invention relates to improvements in expanded metal fabrics.

The main object is to provide a strong fabric which can be manufactured economically. One of the principal uses of such a fabric is as concrete reinforcement.

One of my objects is to provide a fabric having longitudinal tension members connected by strands.

The accompanying single sheet of drawings illustrates two forms of the invention which will be more fully described and claimed hereinafter.

Figure 1, is a plan view of a piece of material showing the arrangement of slitting preparatory to expansion. Fig. 2, shows the same stretched or expanded. Fig. 3, shows a modification of slitting. Fig. 4, shows a portion of the stock of Fig. 3 expanded. Fig. 5, is a fragmentary sectional view of a bar and attached strands.

The fabric may be of any width and contain any number of bars, two or more such as 1, 2 and 3. These may be of any cross sectional shape and size.

Adjacent bars are integrally connected by a series of members each of which is made up of at least three strands such as 4, 5 and 6. The alternate connectors extend at opposite inclinations, the strands 7, 8 and 9 in the drawing being inclined upward and to the left while strands 4, 5 and 6 are inclined upward and to the right. The connectors 10 and 11 are arranged so as to form the remaining sides of a diamond which is divided across one diameter by the bar 2.

The slitting preparatory to expansion is along lines parallel to the bars and in staggered relation, the pairs of slits such as 12 and 13 alternating with slits such as 14 and 15. The bonds between the slits in the row of slits 14 are cut as at 16 and the bonds between the slits in the row of slits 13 are cut as at 17. The slitting between the bars 2 and 3 is symmetrical with the slitting between bars 1 and 2 so that the product shown

in Fig. 2 is symmetrical about the axis of bar 2.

The slitting of Fig. 3 omits the bar 2 so that the fabric of Fig. 4 results. Here the connectors form a diamond without any cross bar.

In the drawings I have shown the strands on edge relative to the plane of the fabric. The exact angle is unimportant. The bars may also be on edge or inclined as in Fig. 5 if desired.

The slitted stock may be stretched or expanded in any suitable manner. Preferably lugs such as 18, 19, 20 and 21 are left which serve as anchors to prevent transverse slipping in concrete when so used. The method of manufacture is simple and when properly conducted does not injure the material.

The strands being on edge give great stiffness to the fabric even when made of light gage stock.

What I claim is:

1. An expanded metal fabric consisting of parallel bars connected by ties, successive ties being spaced apart inclined in opposite directions and each tie consisting of three strands connected by anchor portions, the ties at the points of connection with the bars being bent at acute angles relative to the bars.

2. An expanded metal fabric consisting of substantially parallel bars and oppositely inclined integral connectors each comprising at least three strands arranged on edge and anchors at the points of connection of the strands, the ties at the points of connection with the bars being bent at acute angles relative to the bars.

3. An expanded metal fabric consisting of parallel bars connected by zig-zag ties, each tie being bent at an acute angle at its points of connection with the bars and consisting of at least three strands with anchors at the junction of the individual strands, some of the anchors pointing in one direction and others in the opposite direction.

4. An expanded metal fabric blank comprising longitudinally extending parallel bars and an integrally connecting slitted portion having a plurality of rows of longitudinal slits parallel to said bars and arranged in staggered relation, the metal between the ends of the slits in one row being substantially opposite the center of the slits in the adjacent rows and slitted transversely

relative to said portions mid-way between the longitudinal slits forming extensible zigzag strips connecting said bars.

5 5. An expanded metal fabric blank comprising longitudinally extending parallel bars and an integrally connecting slitted portion having four rows of longitudinal
10 slits parallel to said bars, the length of said slits being very materially greater than the distance between said slits and the slits in

successive rows being in relatively staggered arrangement and the metal between said bars being slitted transversely relative to said bars so as to form extensible zigzag strips connecting said bars, each strip consisting of three strands. 15

NORRIS ELMORE CLARK.

Witnesses:

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