

N. E. CLARK.  
EXPANDED METAL.  
APPLICATION FILED MAY 29, 1908.

948,414.

Patented Feb. 8, 1910.

Fig- 1.

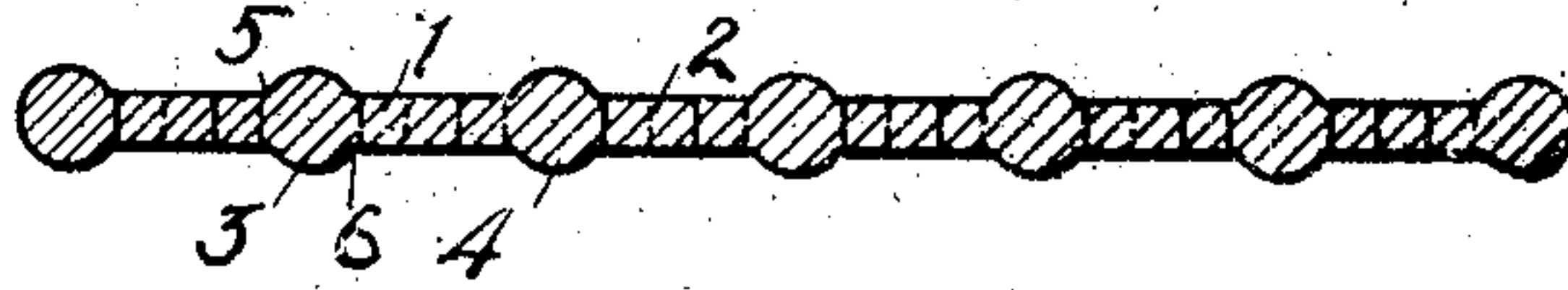


Fig- 2.

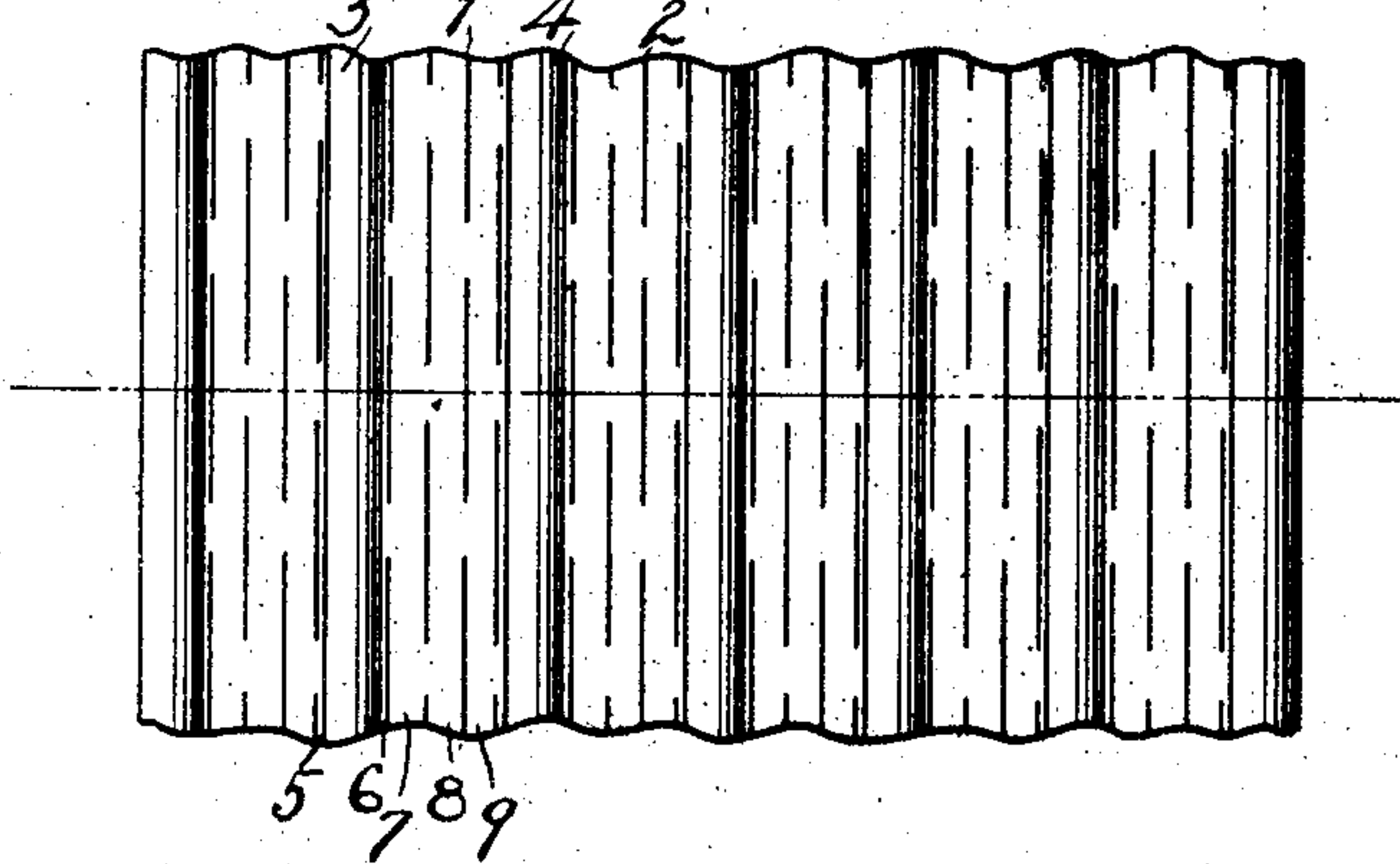
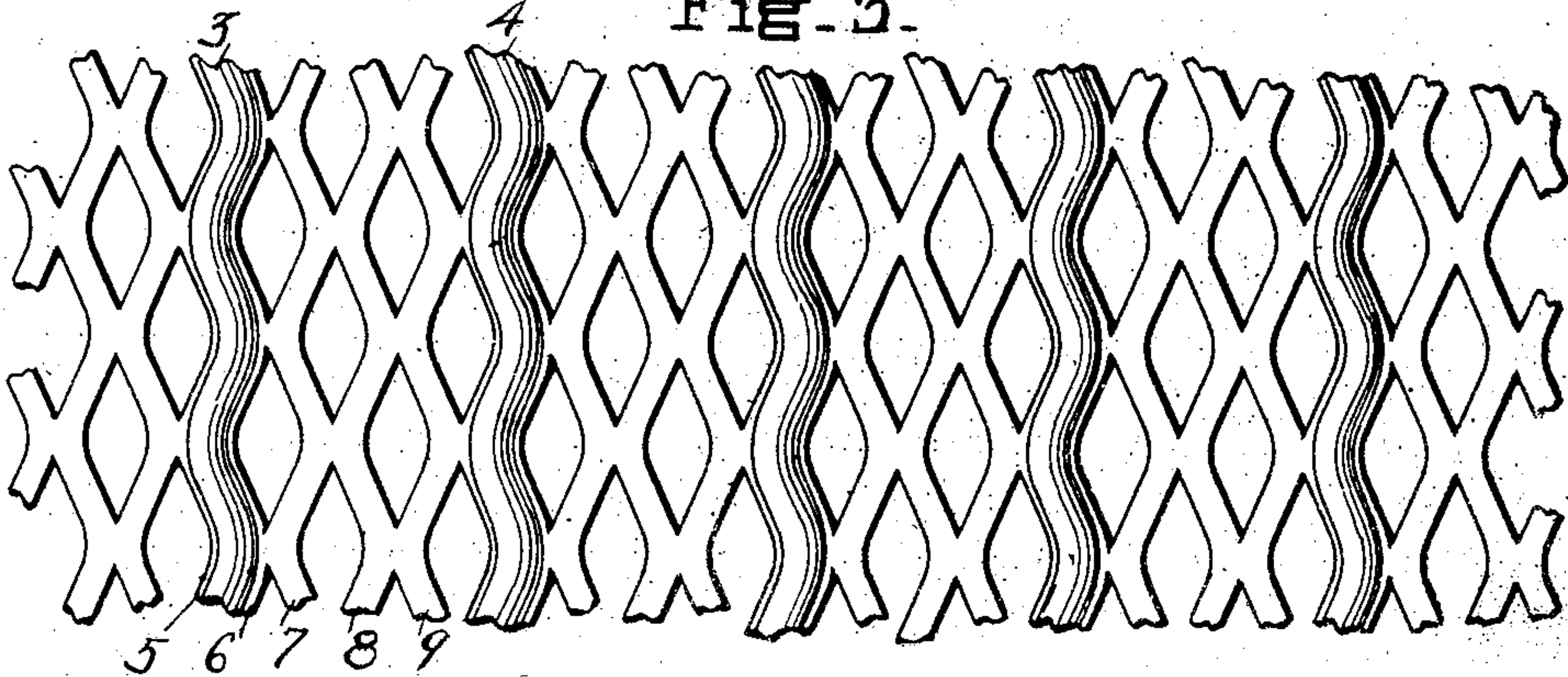


Fig- 3.



WITNESSES:

*E. Bradford*

*Fred V. Hollenbeck*

INVENTOR

*Norris Elmore Clark*

*[Signature]*  
ATTORNEY



# UNITED STATES PATENT OFFICE.

NORRIS ELMORE CLARK, OF PLAINVILLE, CONNECTICUT.

## EXPANDED METAL.

948,414.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed May 29, 1908. Serial No. 435,730.

*To all whom it may concern:*

Be it known that I, NORRIS ELMORE CLARK, a citizen of the United States, residing at 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.

One object of the invention is to provide a fabric which can be manufactured economically.

Another object is to give great strength to the fabric.

The accompanying single sheet of drawings illustrates one form of the invention. It will be found highly attractive in appearance. The fabric consists of bent strips connected at intervals in alternating arrangement, some of the strips being of greater cross sectional area than the others.

Figure 1, is a cross sectional view of a sheet of material slitted preparatory to expansion into my improved fabric. Fig. 2, is a plan view of the same. Fig. 3, is a plan view of the expanded metal fabric of my invention.

The fabric is formed by first slitting a sheet in staggered or alternating arrangement and then stretching or expanding it. Figs. 1 and 2 show the arrangement of slitting. The raw material is what is known as a rolled section consisting of webs such as 1 and 2 and ribs such as 3 and 4, of the desired cross sectional area and shape. In the form shown the ribs are round and project above and below the plane of the webs. Preferably the stock is slitted so that each rib such as 3 and the narrow flanges such as 5 and 6 constitute one of the strips. The other strips 7, 8 and 9 are formed from the web 1 by slitting in staggered arrangement by suitable cutters. Preferably no stock is removed in slitting but I wish it understood that I consider my invention to cover a product found as herein set forth even if some of the material is cut out by perforating or otherwise. When the stock has been slitted as described it is stretched or expanded by suitable mechanism. The form after expansion will depend somewhat upon the nature of the expansion process. Pref-

erably the strips 3, 7, 8, 9, 4 etc. extend in the general direction of length of the fabric. The larger strips such as 3 and 4 constitute longitudinal rods or bars and the lighter strips such as 7, 8 and 9 form reticulated connecting webs. The proportions of the ribs and webs may be varied and the slitting may be such as to produce a greater or smaller number of the web strips relative to the rib strips if desired. So also the relative length of the slits may be changed and the expansion carried to a greater or less extent. This will vary the size of the openings and the angle of the bends in the strips. The rib strips as shown are all parallel while the web strips zig-zag back and forth between.

Obviously the fabric as illustrated may be subsequently formed, curved or suitably treated for special purposes as arches, beams and columns.

What I claim is:

1. An expanded metal fabric consisting of longitudinal zig-zag strips connected in alternating arrangement, some of said strips being of greater cross sectional area than the others.

2. An expanded metal fabric consisting of longitudinal zig-zag strips integrally connected in alternating arrangement, some of the strips being of greater thickness than the others.

3. An expanded metal fabric consisting of longitudinal zig-zag strips integrally connected in alternating arrangement some of the strips being of greater thickness than the others, the intermediate strips all lying in the same plane.

4. An expanded metal fabric consisting of longitudinal zig-zag strips integrally connected in alternating arrangement some of the strips being of greater thickness than the others and rounded on at least one surface.

5. An expanded metal fabric consisting of longitudinal zig-zag strips integrally connected in alternating arrangement some of the strips being of greater thickness than the others and rounded on both surfaces.

6. An expanded metal fabric consisting of parallel zig-zag bent ribs and reticulated connecting webs of less thickness.

7. An expanded metal fabric consisting



of zig-zag bent ribs having side flanges of less thickness and connecting webs integrally connected thereto.

8. An expanded metal fabric comprising  
5 a plurality of longitudinal zig-zag bent strips and webs of less thickness connecting the strips.

9. An expanded metal fabric comprising

longitudinal zig-zag ribs bent back and forth in a common plane and webs of less 10 thickness integrally connecting the ribs.

NORRIS ELMORE CLARK.

Witnesses:

W. L. COOKE,  
D. G. CLARK.