

No. 885,158.

PATENTED APR. 21, 1908.

J. KAHN.
EXPANDED METAL.
APPLICATION FILED OCT. 24, 1907.

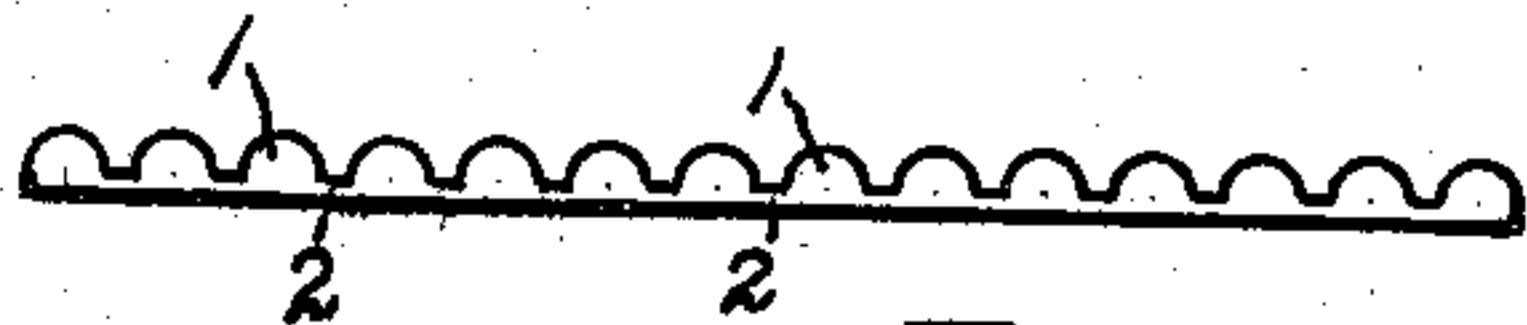


Fig. 1.

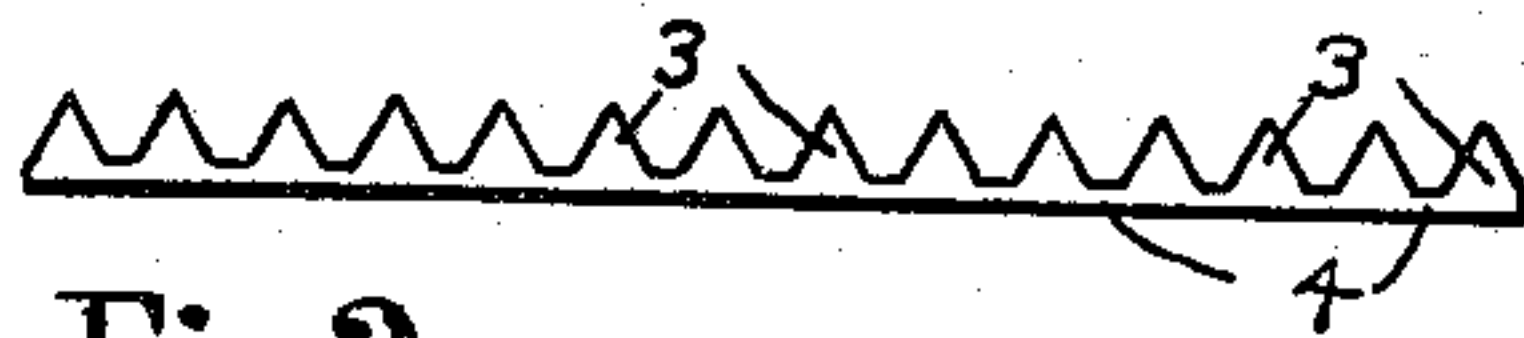


Fig. 2.

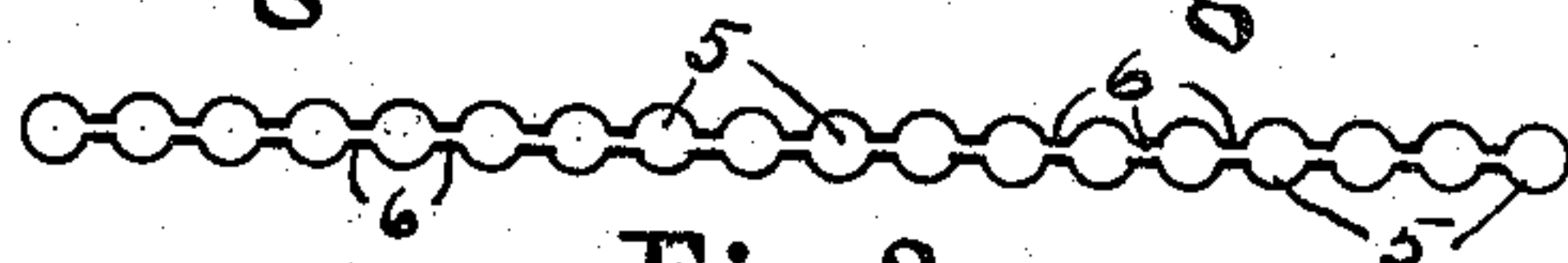


Fig. 3.

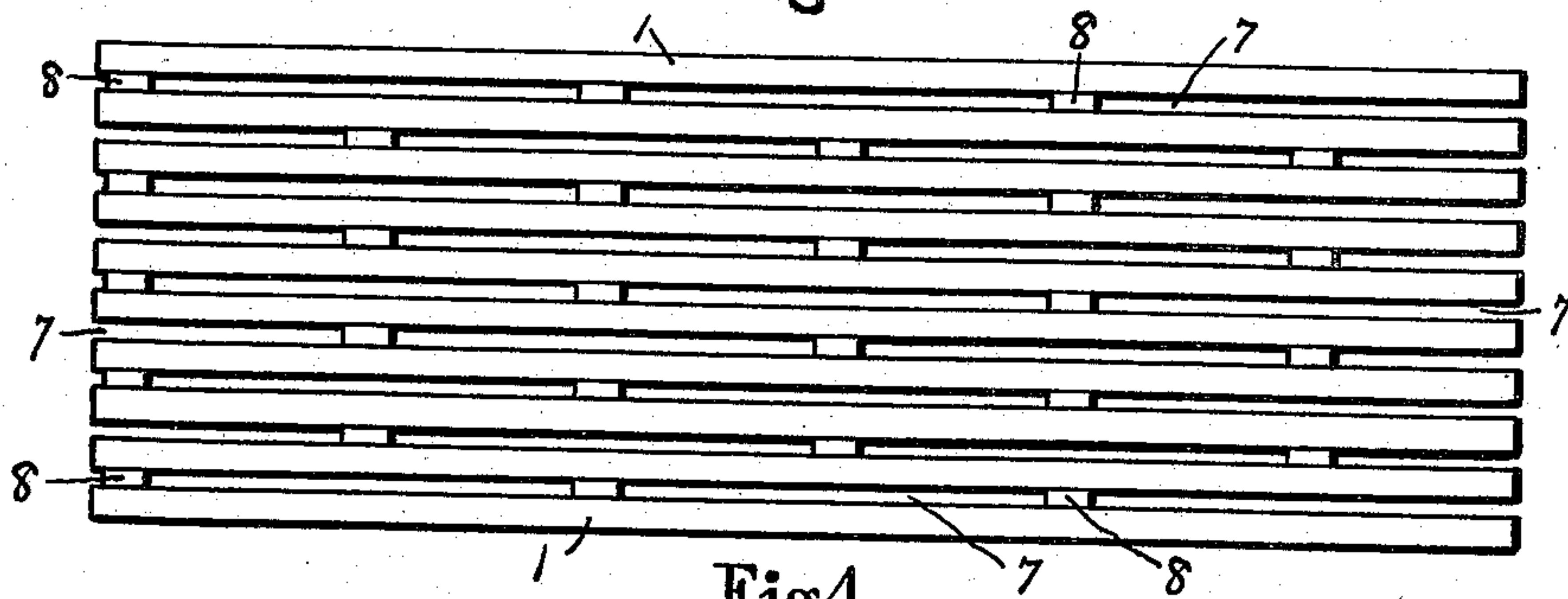


Fig. 4.

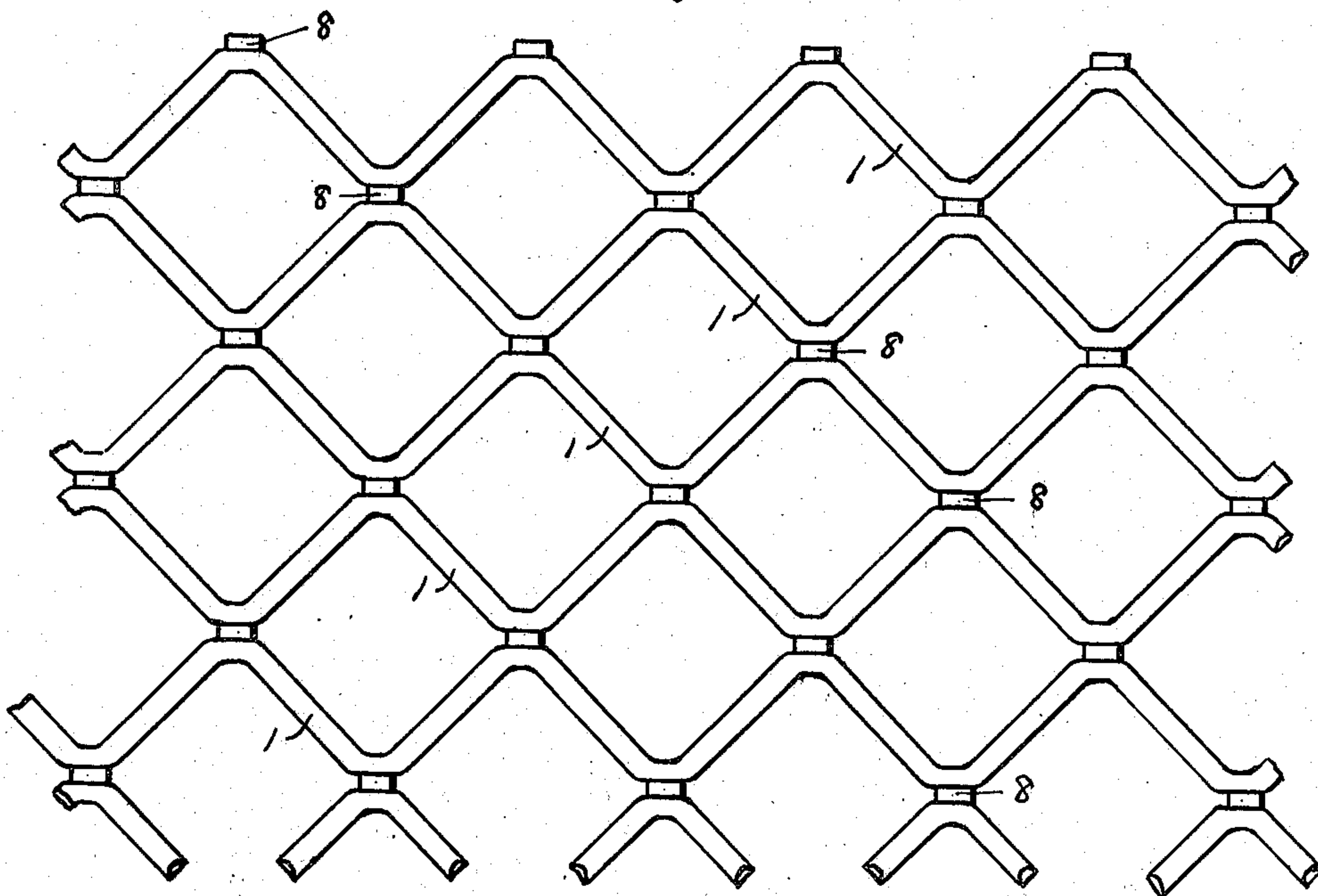


Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

JULIUS KAHN, OF DETROIT, MICHIGAN, ASSIGNOR TO TRUSSED CONCRETE STEEL COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

EXPANDED METAL.

No. 885,158.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed October 24, 1907. Serial No. 398,865.

To all whom it may concern:

Be it known that I, JULIUS KAHN, a citizen of the United States, and a resident of Detroit, in the county of Wayne and State of Michigan, have invented a new and Improved Expanded Metal, of which the following is a specification.

My invention relates to a reticulated metal sheet adapted for screens and for reinforcing concrete, and the object of my invention is to provide an expanded metal which shall have great strength and which shall be pleasing in appearance.

My invention consists in a series of rods generally parallel to each other, each of which rods is so bent that it approaches the adjacent rods alternately and is connected thereto, all the rods lying in the same plane.

In the accompanying drawings, Figures 1, 2, and 3 are end views of rolled bars adapted to be slotted and expanded. Fig. 4 is a plan of a section of one of these bars after it has been slotted. Fig. 5 is a plan of a portion of this bar after it has been expanded.

Similar reference characters refer to like parts throughout the several views.

In the drawings Fig. 1 shows the end of a rolled bar in the form of a flat sheet with longitudinal ribs. The ribs 1 are connected by webs 2 which webs are adapted to be sheared so as to form slots 7 and connecting tongues 8. It will be noticed that the center of each slot is opposite tongues 8 on the opposite sides of the adjacent bars. After the rolled bar has been slotted, it is placed in an expanding machine and the outside rods are separated until the net work shown in Fig. 5 is produced. It will be noticed that these rods 1 are generally parallel to each other but that each rod extends from a tongue 7 connecting it to a rod on one side, to the tongue 7 connecting it to the rod on the other side, and then back to a third tongue 7 connecting it to the first rod, and so on.

The rods 1 in Fig. 1 are semi-cylindrical on one side and flat on the other. The rods 3 in Fig. 2 are formed so that their tops are angular and their bases are connected by the web 4. In Fig. 3 the round rods 5 are connected by webs 6, which webs lie in the same plane as the center lines of the rods. The dimen-

sions of these various parts will vary according to the uses for which the web is intended. For prison and vault cages the rods may be as high as one-half inch in diameter and the meshes may measure three to four inches across. For grill work for office use and elevator cages, the rods will not be larger than $\frac{3}{16}$ of an inch in diameter and the meshes about two inches across. When used for reinforcing slabs in concrete, the size of the rods and the meshes will depend upon the load to be carried. The thickness of the web which forms the tongues 8 will vary according to circumstances but will generally be much less than that of the rods, although it will be observed that with this method of forming expanded metal, a flat sheet could be slotted, and then expanded. The only objection to this is that the tongues will be unnecessarily large and the work of the slotting be greater.

Having now explained my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A sheet of expanded metal consisting of a series of longitudinally extending rods, all in the same plane, each rod being bent to zig-zag between adjacent rods to which it is connected.

2. An expanded metal sheet comprising a series of rods and tongues connecting the same, the rods being so bent that a portion of each rod with its adjoining tongue will form a part of a practically continuous diagonal line across the sheet of expanded metal.

3. An expanded metal sheet, formed from a flat rolled section comprising rods and connecting webs, the webs being slotted to leave tongues connecting the rods, the tongues on one side of each rod being opposite the middle portion of the slot on the other, the sheet comprising a series of four sided meshes, all the parts of which are in one plane.

In testimony whereof, I have signed this application in the presence of two subscribing witnesses.

JULIUS KAHN.

Witnesses:

M. K. KENNEDY,
EDWARD N. PAGELSEN.