No. 889,312. PATENTED JUNE 2, 1908.

J. KAHN.

EXPANDED METAL.

APPLICATION FILED DEC. 15, 1906. RENEWED FEB. 17, 1908.

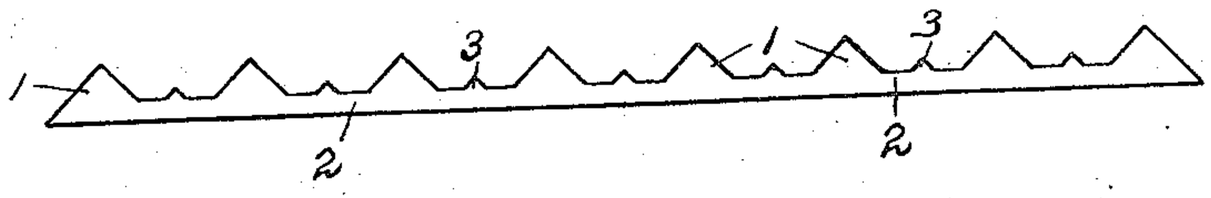

Fig. 1.

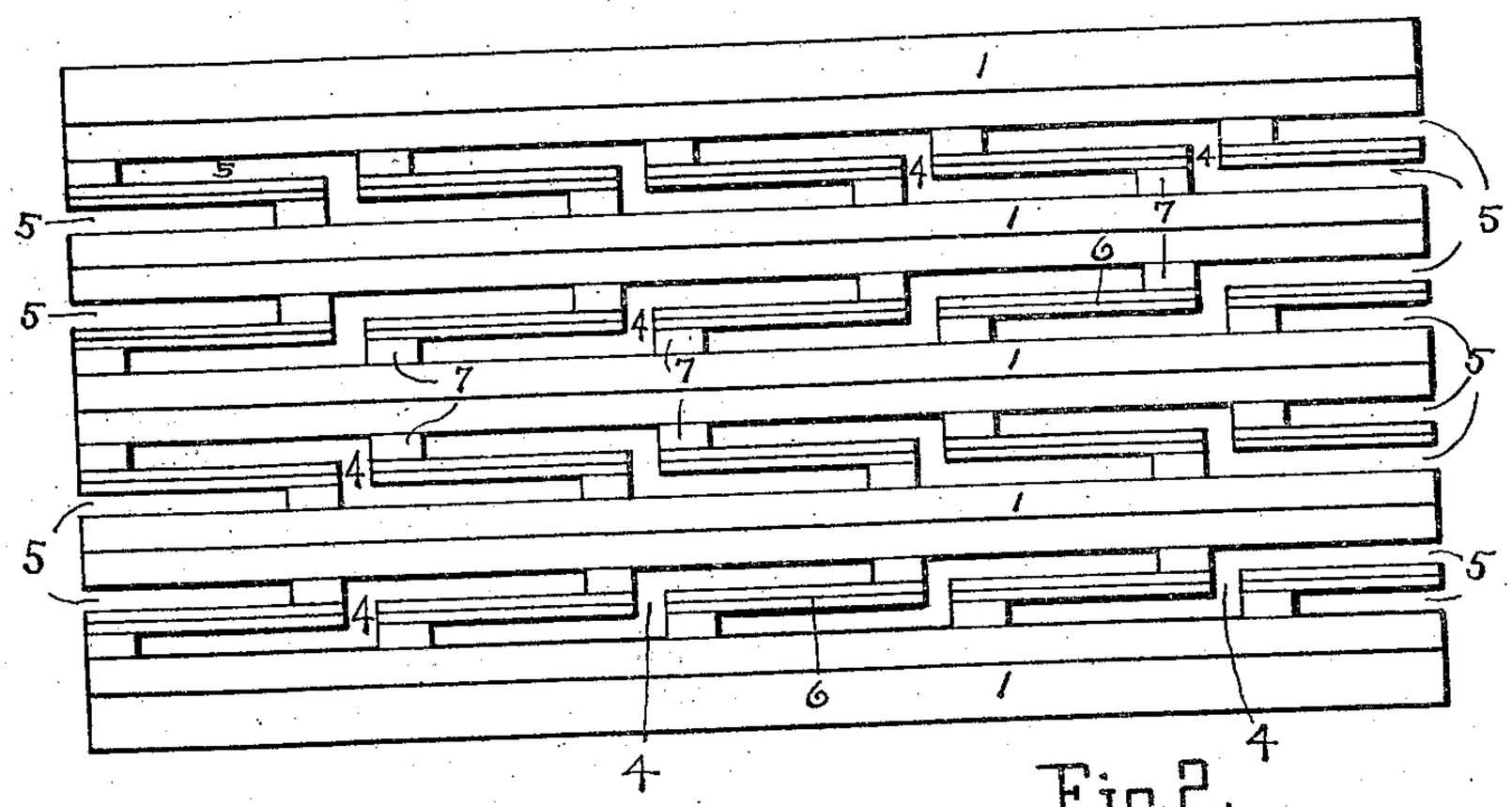

Fig. 2.

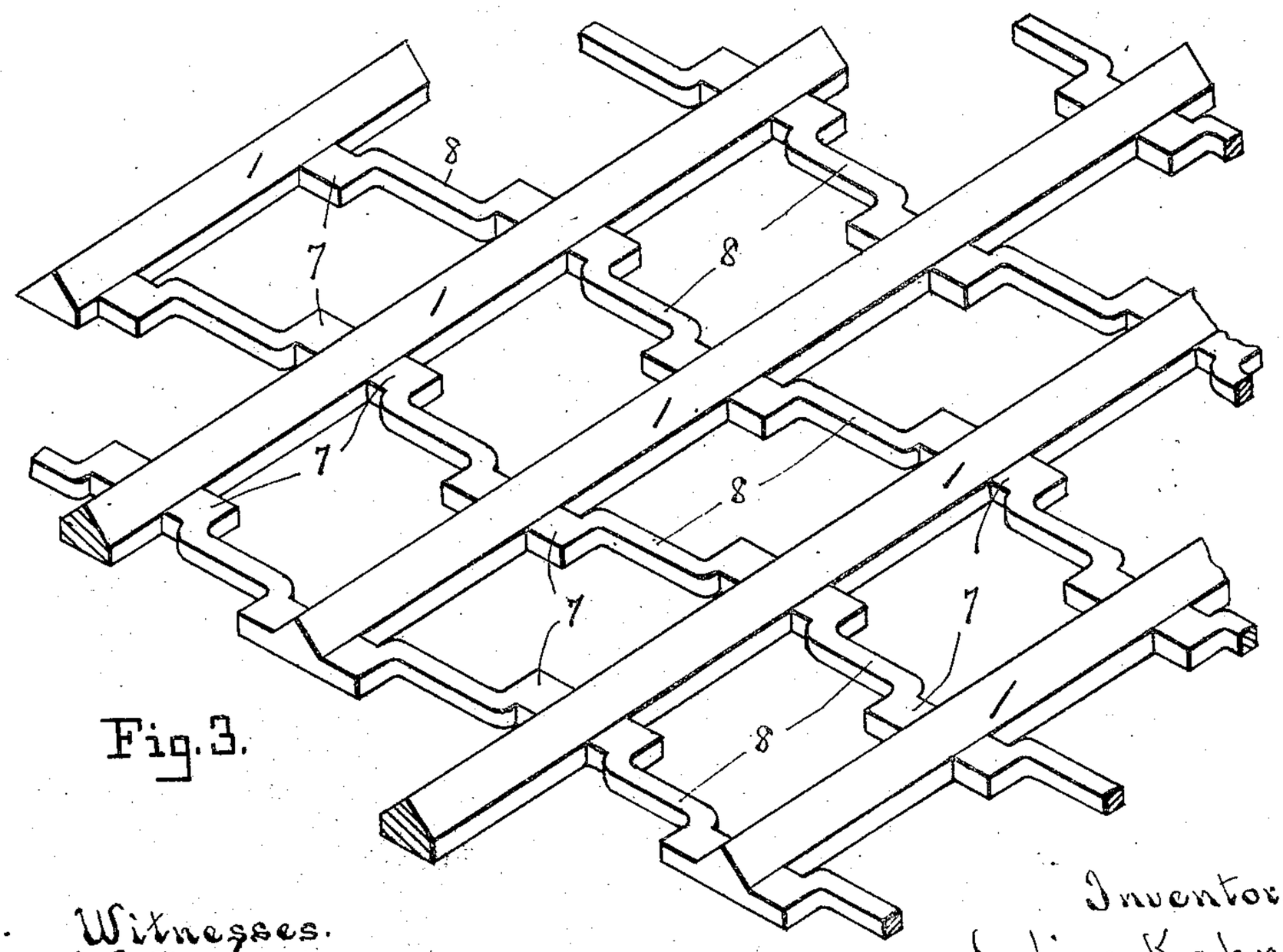

Fig. 3.

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. 889,312. Specification of Letters Patent. Patented June 2, 1908.

Application filed December 15, 1906, Serial No. 347,951. Renewed February 17, 1908. Serial No. 416,387.

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.

This invention relates to that type of expanded metal that is especially adapted for reinforcing concrete slabs of large areas, and the object of my improvement is,—to provide an article of this kind which shall have maximum strength for weight and which shall have comparatively large lateral tensional strength combined with great longitudinal tensional strength.

My invention consists of expanded metal formed of longitudinal rods connected by ties of smaller cross sectional area, the rods and ties being integral and so connected, that when expanded, all shall remain in the same plane in which they were rolled.

It further consists in an expanded metal in which all the members shall be in practically straight lines, and lie in the probable lines of stress.

In the accompanying drawings, Figure 1 is an end view of the bar from which my improved expanded metal may be formed. Fig. 2 is a plan of the same bar after it has been slotted. Fig. 3 is a perspective view of my improved expanded metal.

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

The expanded metal is formed from rolled bars consisting of rods connected by webs. In Figs. 1 and 2, the rods 1 are connected by webs 2, the central portions of the webs being slightly elevated as at 3 if desired. The bars are then slotted as shown in Fig. 2, by punching, the longitudinal slots 5 connected by short cross slots 4 forming ties 6 joined to the rods 1 by short connecting members 7. When the outside rods 1 are pulled apart, the metal will expand in the manner shown in Fig. 3. The ties 8 of this figure are not ribbed as are the ties 6 of Fig. 2. The main portions of the ties 8 are in line across the body of the finished material, and are all in the same plane, rendering the structure of great strength. When employed for reinforcing concrete, there is no tendency for any of the parts to turn in the concrete under stress.

The longitudinal rods may have any desired cross section and the members 7 may connect to them at any point, but the tie members should always be in the same plane.

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

1. Expanded metal comprising rods and ties connecting the same, the rods and ties being in one plane.

2. Expanded metal comprising parallel rods, and ties connecting the same, one face of all the parts being in one plane.

3. Expanded metal comprising rods and ties connecting the same, the rods and ties being in the same plane and integral, all the ties between adjacent rods being parallel to each other.

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

JULIUS KAHN.

Witnesses:
MAY BURLINGAME,
EDWARD N. PAGELSEN.