

(No Model.)

J. HORROCKS.
METAL MAT OR LIKE STRUCTURE.

No. 501,788.

Patented July 18, 1893.

Fig. 1.

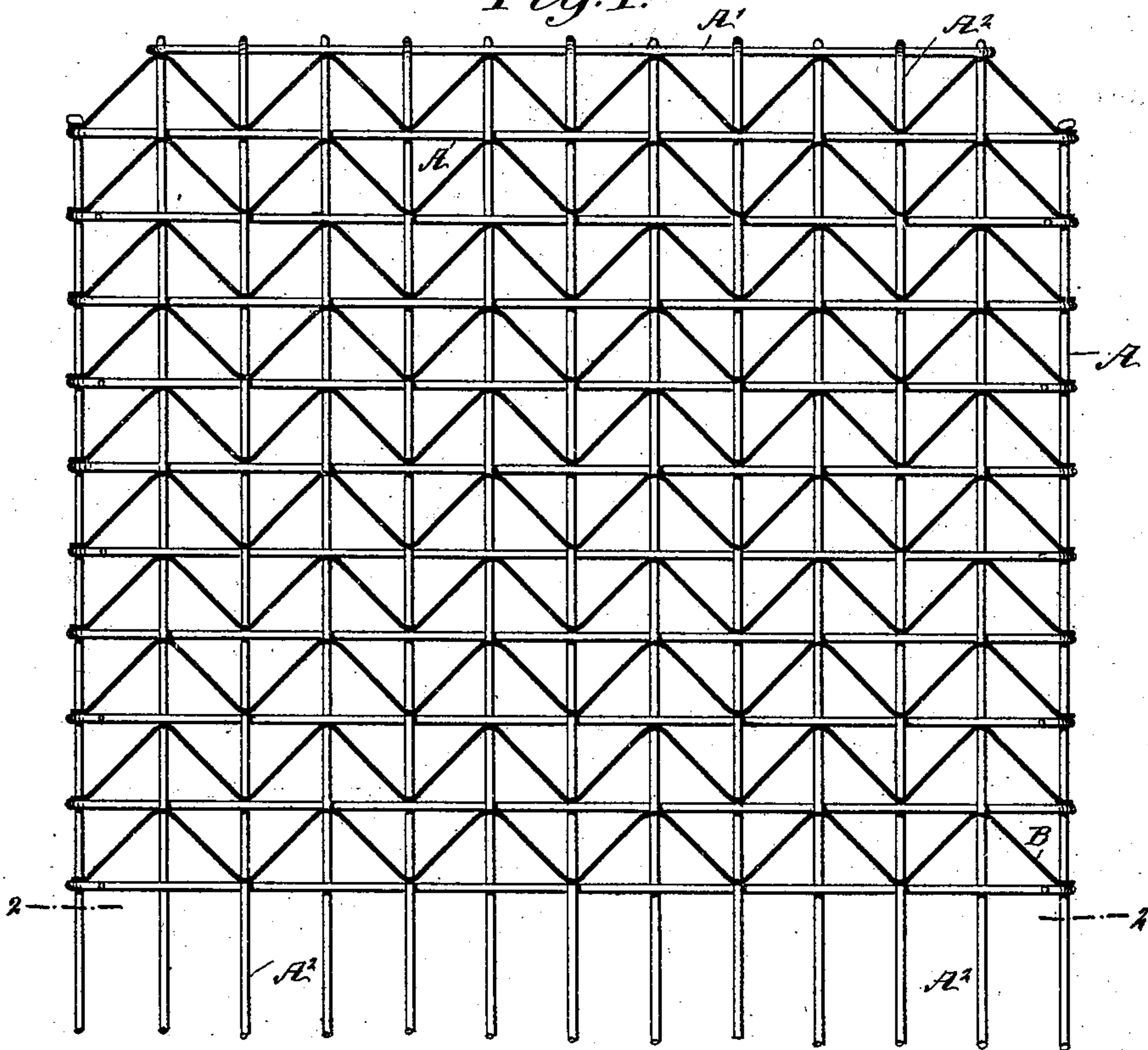


Fig. 2.

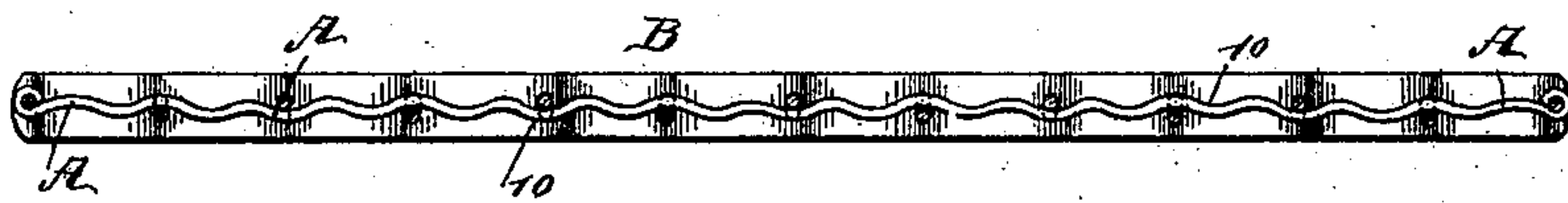
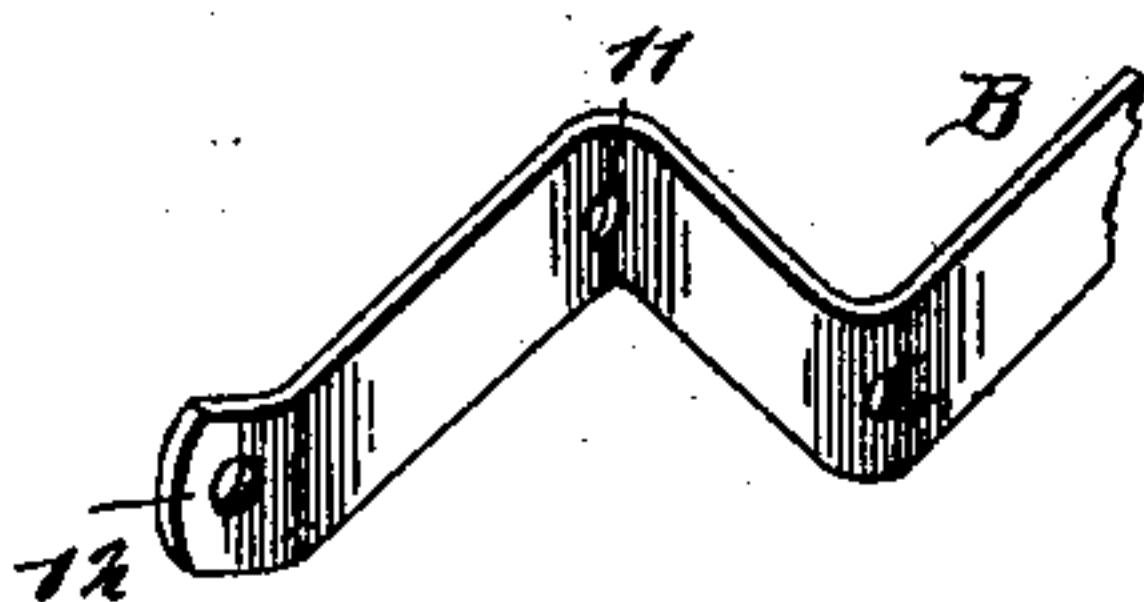


Fig. 3.



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JOSHUA HORROCKS, OF BROOKLYN, NEW YORK.

METAL MAT OR LIKE STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 501,788, dated July 18, 1893.

Application filed March 21, 1893. Serial No. 466,988. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA HORROCKS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Metal Mats or Like Structures, of which the following is a full, clear, and exact description.

My invention relates to an improvement in the formation of wire structures, such as mats, gratings, fencings, panels and the like, and it has for its object especially to provide a wire netting which will be braced in all directions, and in which the wire meshes will be crossed by continuous metal strips, whose edges will extend beyond opposite sides of the meshes, thereby providing a rigid structure, and also providing an article especially adapted for use as a mat, as the metal strips crossing the meshes are of a serpentine or zig-zag construction, and their edges will face upward and downward, thus presenting surfaces capable of removing particles of foreign matter adhering to the articles drawn over a mat, for instance, and in contact with the strips.

Another feature of the invention is to provide a mat or like structure which will not only be exceedingly durable and simple, but which will also be economic in its construction.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of a mat or panel constructed in accordance with my invention. Fig. 2 is a vertical section taken practically on the line 2—2 of Fig. 1; and Fig. 3 is a detail perspective view of a portion of one of the metal strips.

The wire structure is made up of strands A of wire, and metal strips or plates B. The wire A, is cut in suitable lengths, and the wire is crimped or corrugated throughout its length, the corrugations being shown at 10 in the drawings. The metal plates or strips are made preferably rectangular in cross section, and they are made in any desired length and width. The metal strips or plates are bent

longitudinally to zig-zag or serpentine shape, presenting a scalloped or waved appearance, and at the point of each scallop an aperture 11, is made, as shown in Fig. 3, extending through from face to face, and an aperture 12, is likewise made at each end of the strip, the ends being made substantially straight.

In building up a panel or mat, one of the corrugated wires is laid in position to form, for example, one end of the mat, this particular wire being designated in the drawings as A', and next a series of wires, which may be designated as A², is secured in any suitable or approved manner to the wire first laid. The wires A², are arranged at predetermined intervals apart, and extend outward from the first wire at a right angle thereto. One of the serpentine or zig-zag metal strips or plates B, is now presented to the series of wires A², and the intermediate wires are passed one through each of the intermediate apertures 11 in the plate, and the end wires A², are passed through the end apertures 12 of the plate. The plate is forced along the wires A² until it engages at the points of its scallops with the cross wire A' first laid. A second corrugated cross wire is then interlaced through the longitudinal series of wires A², and alternately over and under all of the intermediate wires of the same class, the cross wire A' being also attached to the end wires A²; and as all of the wires are corrugated the wires are so placed together that they contact at their depressed surfaces. Thus each wire is held locked in place. The second cross wire A', is then made to engage with the inner points of the scallops of the metal plate or strip B first laid, and this method of construction is repeated until a mat or panel of the proper size has been produced. The mat or panel will then consist of a wire interwoven to form meshes, and zig-zag or waved plates located between the wires, running in one direction and crossing over meshes formed by the waving of the wires, the edges of the plates facing upward and downward, or in direction of the sides of the panel or mat. As the plates are much wider than the wire used to form the meshes, and as the wire is passed through the central portions of the plates, when the structure is utilized as a mat it will rest upon one edge of all the plates, the opposite edges of the plates

being presented to whatever object they are intended to support or to assist in cleaning. All of the wear will be sustained by the plates or strips, as the wire, which is the weakest part of the structure, is protected by the plates.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A mat or like metal structure, the same consisting of a wire mesh, and plates longitudinally waved and provided with apertures at their points or angular portions, the plates crossing the meshes, and the wires of the mesh passing through the apertures in the plates, as and for the purpose specified.

2. As an improved article of manufacture, a mat, panel or like structure, the same consisting of crimped or corrugated wire woven in meshes, and metal plates of serpentine or zig-zag construction located between parallel strands of the wire forming the mesh, the

other wire strands being passed through the metal plates, as and for the purpose specified.

3. As an improved article of manufacture, a mat, panel, or like article, consisting of strands of wire corrugated or crimped and arranged in longitudinal and transverse strands, forming meshes, the strands of wire being interlocked, a series of metal strips or plates of zig-zag or serpentine form, said plates being located between each two parallel strands of wire, running in one direction, the edges of the plates facing the sides of the structure, the cross strands being passed through apertures made in the points or angular portions of the plates and at their ends, substantially as and for the purpose set forth.

JOSHUA HORROCKS.

Witnesses:

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