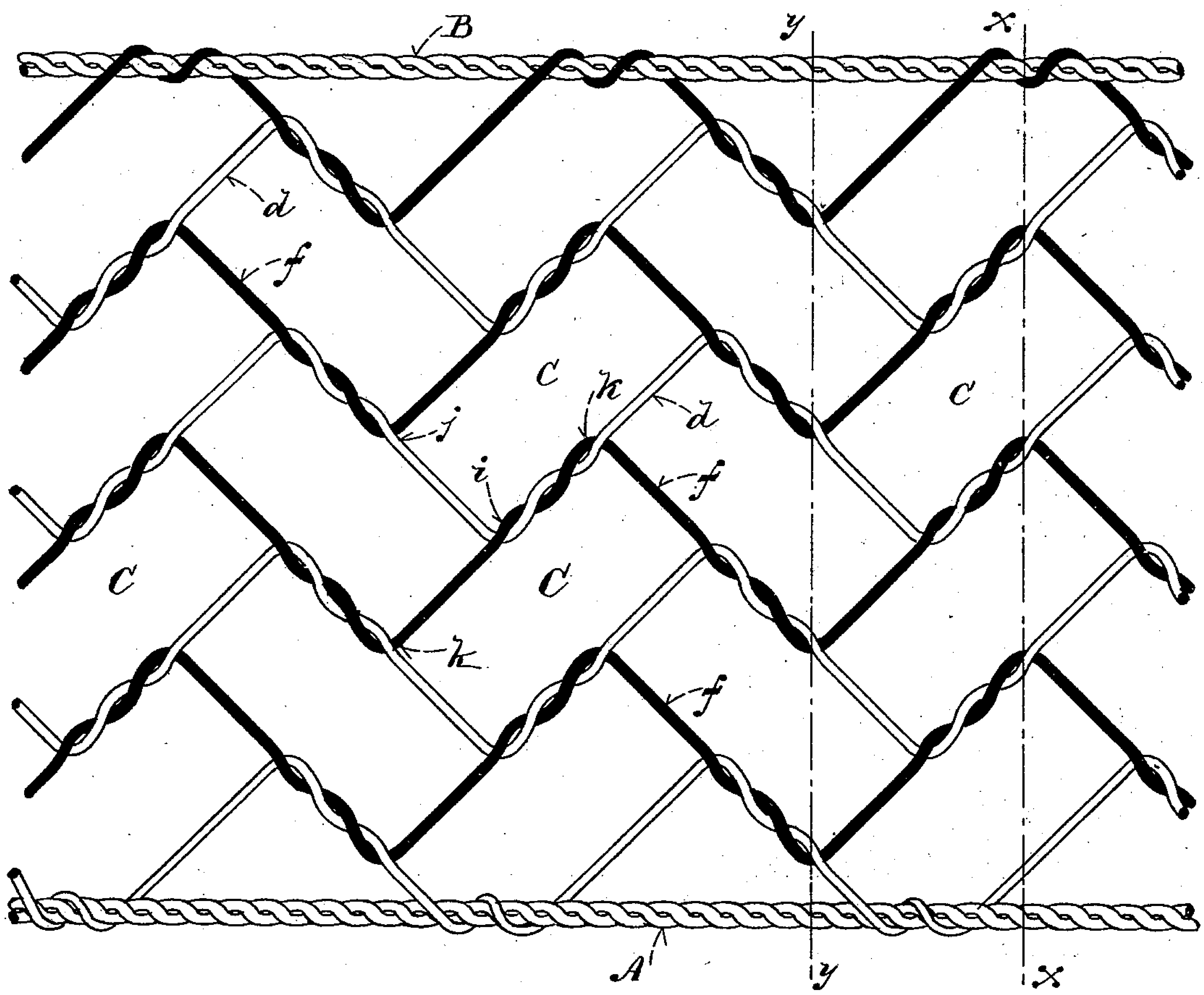
(No Model.)

B. SCARLES.

WIRE NETTING.

No. 488.032. Patented Dec. 13, 1892.



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UNITED STATES PATENT OFFICE.

BENJAMIN SCARLES, OF CLINTON, MASSACHUSETTS.

WIRE-NETTING.

SPECIFICATION forming part of Letters Patent No. 488,032, dated December 13, 1892.

Application filed July 11, 1892. Serial No. 439,615. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN SCARLES, of Clinton, in the county of Worcester, State of Massachusetts, have invented certain new and useful Improvements in Wire-Netting, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

The figure in the drawings is a plan view showing my improved wire-netting.

Nettings of this class as at present constructed are commonly woven with an approximately-diamond shaped mesh running longitudinally of the fabric. The twists connecting the wires in this form are parallel with each other and parallel with the selvage. This netting is commonly used for poultry-fencing and when attached to posts easily sags between them, owing to the position of the mesh. Meshes of this construction readily yield to the longitudinal strain between the posts, which contracts its width. Should one of the selvage-wires become broken, which is frequently the case in mounting the netting on posts, the twists act pivotally and afford little or no resistance to the vertical strain, permitting the netting to collapse. The longitudinal strain, moreover, when such break occurs in the selvage, causes the mesh at the point of fracture to draw together, rendering it practically useless as fencing, and requiring constant repairing, which becomes an item of considerable expense to large consumers.

Numerous methods have been employed to strengthen such netting against the vertical strain—as, for example, inserting vertical wires in the meshes, making the fabric from hard wire, and with reversed twists. All of these methods have numerous disadvantages in addition to greatly increasing the cost.

My improvement is designed particularly to provide a netting, which may be formed from fine gage-wire woven in such manner that it will support its own weight and not collapse from the vertical strain should the selvage break.

The fabric as produced by my improved method of weaving will not sag or become distorted, and is practically as rigid as a sheet of perforated metal, standing as much strain without being galvanized as any of the usual forms of nettings will after they have been so treated.

In the drawings, A B represent the selvage-wires with which the meshes formed by weaving the wires *d f* are connected.

In the common forms of netting above described the frames in the machines containing the twisting-segments are moved after forming the twist from the wires *d f* from right to left or in the opposite direction to engage with the wires that form the next row of twists, these twists always running longitudinally of the fabric.

In my improvement after the twisting of two wires *d f* has taken place I carry the frames and twisting-segments both together in one direction for a determined distance—as, for example, from the points marked *h* in the drawings to the point *i*, which is diagonally of the selvage. I then reverse one frame, causing it and its wire and segment to move laterally at an angle to the twist to a given position, as to *j*. At the same time the other frame and its segment and wire has traveled on in alignment with the twist to a given distance, as at *k*. At the points *j k* of movement the wires of the next adjacent meshes on either side are met and have come into position to form the next row of twists, which are carried diagonally in the opposite direction or at angle to the first-described twist, when the wires forming such succeeding twists are against spread by the reversing of the frame. This forms an elongated rectangular mesh C, which runs diagonally of the fabric. Alternate rows run in opposite directions. For example, all the meshes on the line *x x* in the drawings are in parallelism, while the succeeding vertical row of meshes, as on the line *y y*, while in parallelism with each other are at an angle to those of the first row. Longitudinally of the fabric each row of meshes has a zigzag form and stand in such position that they will receive the vertical strain without becoming distorted. The position of the twists arranged consecutively at an angle to each other resist such vertical pressure and practically form a series of trusses between the selvage-wires. This also prevents the doubling up lengthwise of the netting and forms a rigid fabric.

The length of the twist between the points *h i* may be as desired, that shown having two turns; but more or less may be employed. Neither is it essential that such twists shall be equal in length to the plain portion of each mesh, as is shown, as I can vary them in nuerous manners. The longer the twist, however, the more rigid will the fabric become.

Having thus explained my invention, what I claim is—

1. A wire-netting comprising mesh-forming wires twisted together, the twisted portion of each succeeding mesh being arranged at an angle to that of the preceding mesh, and such portions running diagonally of the fabric, substantially as described.

2. A wire-netting having the wires forming the same twisted to form parallelogrammic meshes running diagonally of the fabric, adjacent meshes being arranged at an angle to each other, substantially as set forth.

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