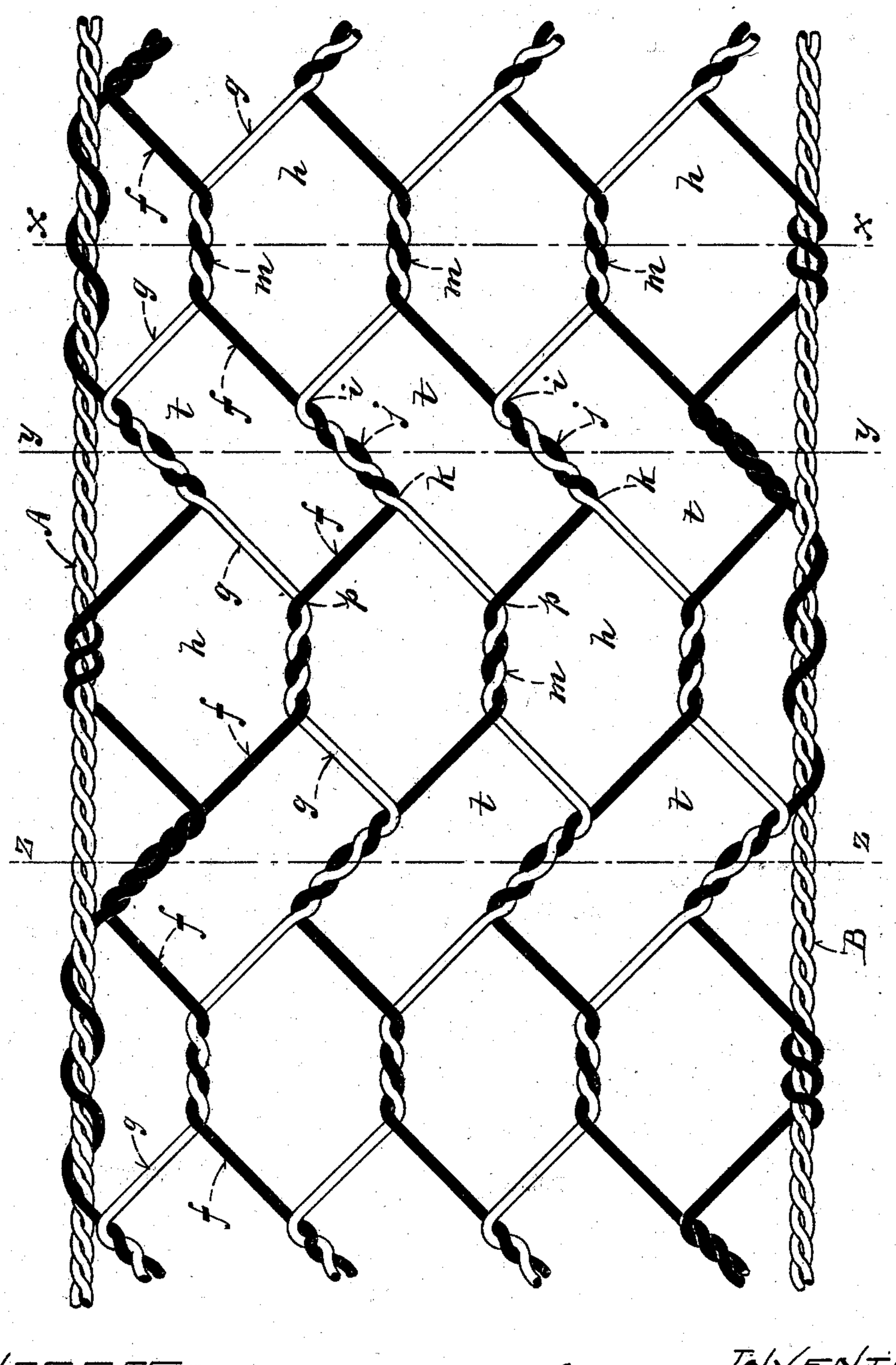
(No Model.)

B. J. SCARLES.

WIRE NETTING.

No. 502,470. Patented Aug. 1, 1893.



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BENJAMIN JOSEPH SCARLES, OF CLINTON, MASSACHUSETTS.

WIRE-NETTING.

SPECIFICATION forming part of Letters Patent No. 502,470, dated August 1, 1893.

Application filed November 19, 1892. Serial No. 452,511. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN JOSEPH 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 drawing, forming part of this specification, in which the figure is a plan view showing my improved wire-netting.

As at present constructed wire netting of this class is woven with an approximately hexagonal mesh the twisted portions of the wires forming said meshes running parallel with the selvage and longitudinally of the fabric. When employed for poultry fencing or similar uses where the fabric is supported in suitable position from posts, this form of mesh causes said fabric to readily yield or "draw in" and sag between the posts. In the event of a broken selvage-wire the twisted portions of the mesh-forming wires act pivotally and offer slight resistance to the vertical strain rendering the fabric of little use and necessitating frequent props or supports to keep it at its proper width. The meshes in the event of a broken selvage also draw together from the longitudinal strain. My improvement is designed especially to overcome these objections without materially increasing the cost of manufacture of the fabric and without the employment of vertical stiffening wires or other means ordinarily used.

In the drawing illustrating my improvement A B represent the selvage wires which are connected by the mesh-forming wires, *f*, *g*. As shown, the netting comprises vertical rows of hexagonal meshes as indicated by line, *x*, *x*, alternating with vertical rows of rectangular meshes as indicated by line, *y*, *y*.

The frames containing the twisting segments are operated in the ordinary manner to form the hexagonal meshes, *h*, and instead of being moved from right to left or in the opposite direction to engage with wires forming the next succeeding row of twists the frames and twisting segments are carried together in one direction for a determined distance as for example between the points marked, *i*, *k*. At the point, *j*, the twist is reversed for a determined distance as at *k*. The reversed twist thus formed runs diagonally of the selvage and at an angle to the twist, *m*, which forms the hexagonal mesh. One frame is then reversed causing it and its wire and segment to move laterally to a given position, as *p*, the other frame and its segment traveling on in alignment with the reversed twist where it meets the companion wire of an adjacent segment and forms the longitudinal twist of the next hexagonal mesh. This forms a row of elongated rectangular meshes, *t*, said meshes being arranged diagonally of the fabric. Alternate rows of rectangular meshes, *t*, run in opposite directions as for example on lines, *y*, *y*, and, *z*, *z*, with an interposed series of hexagonal meshes between. It will be seen that the smooth or untwisted portion of each approximately rectangular mesh, *t*, forms a side of the adjacent approximately hexagonal-mesh, *h*, while the reverse-twists of the rectangular meshes are parallel and form a portion of the sides of the adjacent rectangular mesh. Such combined forms of meshes enable the fabric to withstand the vertical strain, the diagonally arranged rows of rectangular meshes being alternately at an angle to each other and practically forming a truss between the selvages. This diagonal position of the reverse-twists as at, *j*, prevents their being readily pulled apart as the strain thereon comes in line with the twist instead of transversely thereof. The twists, *m*, forming the hexagonal meshes running parallel with the fabric the strain thereon is in line with said twisted portion.

I do not confine myself to alternating the series, *x*, *y*, of hexagonal and rectangular or parallelogrammic meshes as said series of rectangular meshes may be incorporated in the fabric at any desired distance apart, said fabric between such series of rectangular meshes being of the ordinary hexagonal form.

Only sufficient of the diagonally arranged rectangular meshes need be employed to impart the desired rigidity to the fabric and enable it to resist being drawn in when the selvage becomes accidentally broken.

Twists of any desired length may be employed and may be unequal, if desired, and the form or proportion of the meshes may be

varied in numerous manners by proper manipulation of the frames and segments. Nor is it essential that the alternating rows of meshes be formed with the ordinary or plain twist and the reversed twist, as they may be varied as desired.

Having thus explained my invention, what I claim is—

1. A wire-netting comprising wires twisted together to form approximately hexagonal meshes and parallelogrammic meshes running diagonally of the fabric, substantially as described.

2. A wire-netting comprising approximately hexagonal meshes with an interposed series of parallelogrammic meshes with reverse twists running diagonally of the fabric.

3. A wire-netting comprising approximately hexagonal meshes with interposed series of parallelogrammic meshes arranged diagonally of the fabric, the meshes of succeeding series being at an angle to those of the preceding series.

4. The herein described netting comprising the selvage wires and the mesh-forming wires, *f*, *g*, twisted to form the approximately hexagonal meshes, *h*, and alternating approximately rectangular meshes, *t*, arranged diagonally to said selvage wires.

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Witnesses:
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