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S. L. SELLERS

1,926,114

WOVEN WIRE FABRIC

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Fig. 1.

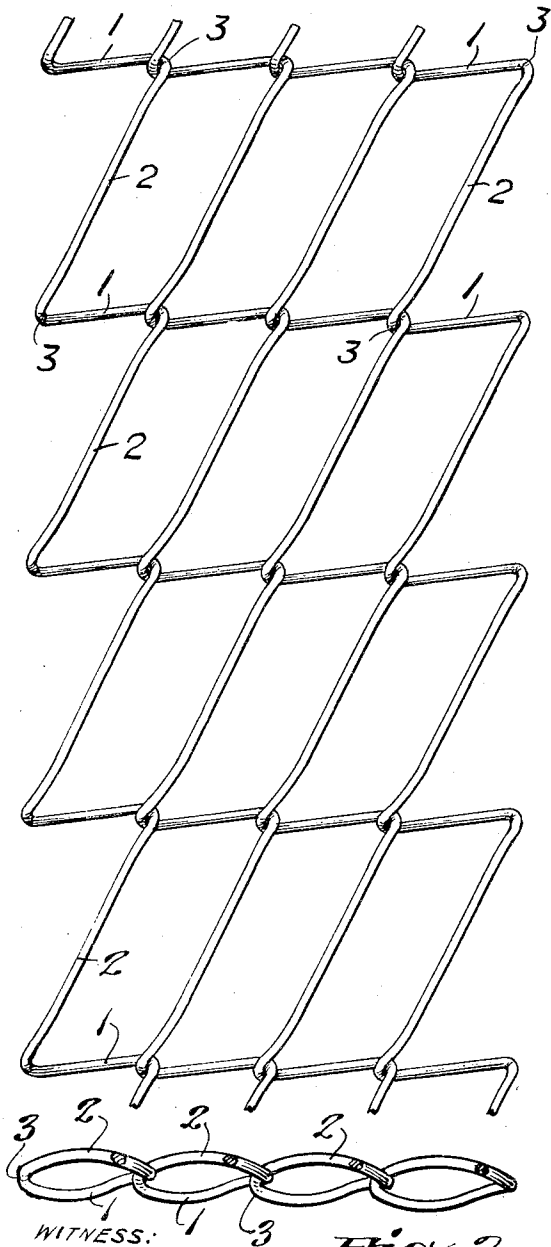


Fig. 2.

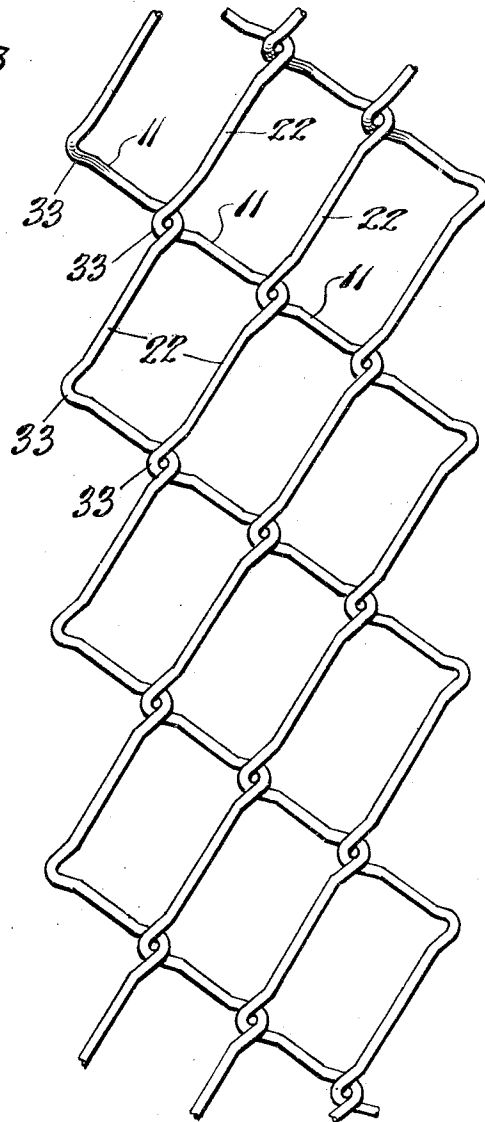


Fig. 3. Stanley L. Sellers
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UNITED STATES PATENT OFFICE

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WOVEN WIRE FABRIC

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Application November 10, 1931

Serial No. 574,131

2 Claims. (Cl. 245—6)

The subject of my invention is a flexible link woven wire fabric of novel design having advantages not possessed by the ordinary flat or round spiral wire mesh fabric known as chain link.

It is an important feature of my fabric that it is made of wires each shaped into a flat modified spiral. The spiral is made up of ribs of two different lengths each connected by a curved portion. These spirals are interwoven or linked to produce a flexible fabric.

One particularly advantageous modification of my device is called hereinafter Z-link and consists of wires shaped into a modified spiral having alternate long and short ribs. All the short ribs are substantially parallel and all lie substantially in one plane. All the long ribs are substantially parallel and all lie substantially in another plane. All the short ribs extend substantially perpendicular to the axis of the spiral so that in elevation the two nearest short ribs and the long rib between them form a Z in shape. These spirals may be woven or linked together to form a fabric whose mesh is either a parallelogram or a triangle in shape.

For a further exposition of my invention reference may be had to the annexed drawing and specification at the end whereof my invention will be specifically pointed out and claimed.

In the drawing,

Figure 1 represents a fabric woven of spirals of Z-link,

Figure 2 represents a fabric woven of spirals of another modified form, and Fig. 3 is a side or edge view of the fabric shown in Fig. 1.

In Figure 1 there is disclosed a fabric woven of spirals of Z-link which, at present, appears to be the preferred embodiment of my invention, although I nowise intend to limit myself to this modification. As shown, this fabric is interwoven or linked of a number of wires, rods or other shapes of small cross-section relative to the length. Each wire is formed into a flat modified spiral consisting of a plurality of short ribs 1 and a plurality of long or diagonal ribs 2. All the short ribs 1 lie substantially in the same plane and are substantially parallel. All the long ribs lie substantially in one plane different from the plane of the short ribs and are substantially parallel. The short ribs 1 and the long ribs 2 are connected together by curved portions 3 so that a spiral is formed with the short links and the long links alternating.

As will be seen in Figure 1, I may form a flexible wire fabric by interweaving or linking spirals

of Z-link so that the adjacent short ribs 1 are substantially in alignment while the adjacent long ribs 2 are substantially parallel. This produces a fabric having a mesh forming a parallelogram in shape. Such a fabric has two faces, one of which is formed by the short ribs 1 and the other of which is formed by the long ribs 2.

This fabric is useful for conveyor belting and may be placed with the short ribs 1 running parallel with the edge of the fabric and forming longitudinal ribs against the pulleys. There is then no tendency to crawl or run off the pulley as with chain link belting. Regular chain link requires the use of alternate sections of right and left weave, special connecting bars, and other arrangements to prevent this tendency to crawl. Z-link fabric requires no right and left weaves nor connecting bars and may be repaired or connected by simply engaging a new spiral to the two fabric ends. The straight ribs which form longitudinal ribs of this type of fabric, being in the line of strain, take directly all pull. There is no tendency to contract the fabric in width. Ordinary chain link, taking the pull entirely in diagonal ribs will contract in width under strain and usually does so under continuous use. This type of Z-link fabric is stronger than chain link for a given page of wire and mesh.

Z-link fabric of this type is also particularly advantageous for use as fencing. The long or diagonal ribs may form the front face of the fabric and, when turned out, present sharply sloping ribs that afford no foothold for climbing. The slope of the diagonal ribs may be varied to suit conditions. The mesh, being a parallelogram in shape, has an opening in a horizontal direction but little wider than the mesh size. The horizontal opening of chain link is 50% wider than the mesh size. Z-link fabric is therefore much more non-climbable than chain link. The short ribs may, if desired, be formed as horizontal ribs of the fabric and, being in the direct line of pull, permit stretching very taut without danger of contracting the fabric in width. This fabric will take heavier blows without distortion than will an equivalent chain mesh fabric.

In Figure 2 there is disclosed another modification of fabric woven of spirals of Z-link shape. These spirals consist of alternate long ribs 22 and short ribs 11. All the short ribs 11 are parallel and lie substantially in one plane. All the long ribs 22 are parallel and lie sub-

stantially in one plane different from the plane of the short ribs 11. Each spiral is formed of alternate short ribs 11 and long ribs 22 connected by curved portions 33. The short ribs 11 do not extend perpendicular to the axis of the spiral.

This forms a fabric of such spirals interwoven or linked so that the mesh of the fabric forms a parallelogram. In this fabric the short ribs 11 form one set of ribs diagonal of the fabric and the long ribs 22 form another set of ribs also diagonal of the fabric.

I do not intend to be limited in the practice of my invention save as the scope of the prior art and of the attached claims may require.

I claim:

1. A woven wire fabric whose longitudinal dimension is much greater than its lateral dimension, said fabric being made of links of spirals extending laterally across the fabric, said spirals each having a plurality of substantially short ribs of one length lying substantially in one plane, a plurality of substantially parallel long ribs of one length lying substantially in a second plane and curved portions of relatively acute curvature connecting said ribs, all of said short ribs lying substantially in one plane and forming ribs extending longitudinally of the fabric, and all of said long ribs lying substan-

tially in another plane and being parallel so that the mesh opening in elevation is substantially a parallelogram in shape, said curved portions all lying in single lines perpendicular to the lateral edges of the fabric to form hinges about which the fabric can be rolled up in its longitudinal dimension. 80

2. A woven wire fabric whose longitudinal dimension is much greater than its lateral dimension, said fabric being made of spirals extending laterally across the fabric and of Z-shape in side elevation having diverging ribs in side elevation, one set of corresponding ribs of adjacent spirals lying substantially in one plane and being substantially in alignment to form ribs extending longitudinally of the fabric, the other corresponding set of ribs of adjacent spirals lying substantially in another plane and being substantially parallel to form a mesh opening which is a parallelogram in shape, and curved portions of relatively acute curvature connecting said ribs, said curved portions all lying in single lines perpendicular to the lateral edges of the fabric to form hinges about which the fabric can be rolled up in its longitudinal dimension. 85 90 95 100

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