

(No Model.)

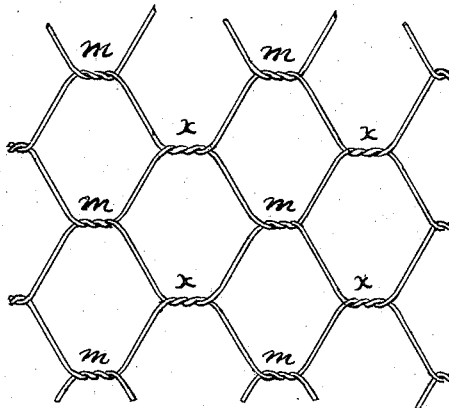
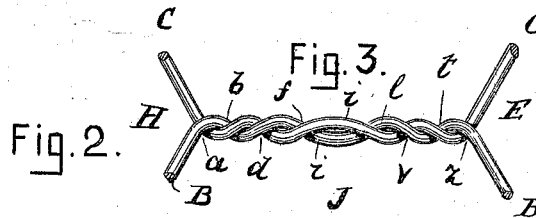
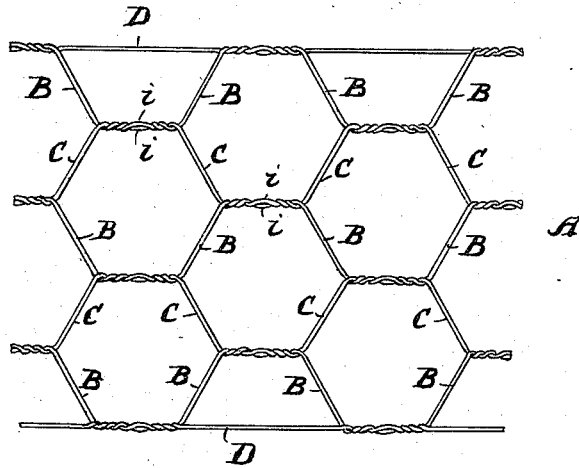
B. SCARLES.

WIRE NETTING.

No. 385,143.

Patented June 26, 1888.

Fig. 1.



Witnesses.

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UNITED STATES PATENT OFFICE.

BENJAMIN SCARLES, OF CLINTON, MASSACHUSETTS, ASSIGNOR TO THE
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WIRE-NETTING.

SPECIFICATION forming part of Letters Patent No. 385,143, dated June 26, 1888.

Application filed August 16, 1886. Serial No. 211,018. (No specimens.)

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 a certain new and useful Improvement 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—

Figure 1 is a side elevation of a web or piece of my improved wire-netting; Fig. 2, a like view of a piece of wire-netting constructed in the ordinary manner, and Fig. 3 an enlarged view showing the method of forming the "twist" or interlocking the wires.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

In ordinary wire-netting the wires of which the web is composed are united or interlocked by being twisted or coiled around each other at regular intervals, the untwisted portions of the wires being separated or opened outwardly to form the meshes, and every alternate row of twists made in an opposite direction—that is to say, the wires are first twisted to the left and then to the right, as shown in Fig. 2, the twists *m* being to the left and the twists *x* to the right. This form of construction is, however, objectionable in some respects, the fabric being too flexible for many purposes, and no means being afforded of enlarging the meshes when desired without cutting the wires.

My invention is designed to obviate these and other objections and produce a stronger and more desirable fabric; and to that end I make use of means which will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the web of netting, considered as a whole; B C, the wires of which the body of the web is composed, and D D the selvage-wires.

For convenience of reference I denominate the interlocked wires between either two of

the meshes the "twist," and divide each twist into three sections—viz., the right-hand section E, left-hand section H, and center section, J, the wires which form section E being twisted to the right, those forming section H to the left, and those forming section J curved or bent outwardly in opposite directions and pressed together.

The wires B C are united or interlocked at intervals by being twisted together, first to the right, as shown in section E, and then to the left, as shown in section H, in the same twist—that is to say, in each twist or twisted portion of the wires the two wires of which the twist is composed are first twisted to the right and then to the left, or vice versa, as best seen in Fig 3, in which the wire B, beginning at the left of said figure, passes to the left beneath C at *a*, then to the right over C at *b*, then to the left under C at *d*, and then to the right over C at *f*, the two wires being properly bent and wound around each other from *a* to *f* to form section H.

At *f* the direction of the wire B is changed, and it is turned to the left back over the wire C at *l*, then to the right under C at *v*, then to the left again over C at *t*, and finally under C at *z*, the two wires being properly bent and wound around each other from *l* to *z* to form the right-hand section E.

At the center of the twist, between *l* and *f*, the wires are curved outwardly in opposite directions and pressed closely together, thus rendering the twists much firmer or more rigid than in the ordinary fabric. The wires from *a* to *f* in section H being twisted to the left and from *l* to *z* in section E to the right, it will be obvious that any tendency of either section or half of the twist to uncoil or untwist will be counteracted by the other half or section, thus keeping the parts in proper position. The direction in which the wires forming sections H E are twisted may be respectively reversed, if desired.

When the netting is constructed in the ordinary manner, or as shown in Fig. 2, each of the wires composing the twist may be readily turned on or around its companion wire, like the two members of a hinge, thus rendering

the fabric more flexible than is sometimes desirable; but in my improved netting this is not only prevented by twisting the sections E H in opposite directions, but by the section J, consisting of the outwardly-curved portions *i i* at the center of the twist, which overlap and cannot be readily revolved or turned around each other, thus rendering the twist or joint very rigid, the rigidity being imparted to the entire fabric.

It is sometimes necessary in the use of ordinary wire-netting to enlarge one or more of the meshes in order to adapt it to receive a post, pin, spike, or rail which is larger than the mesh, and to do this the wires of which the web is composed have to be cut, thereby greatly weakening the fabric, and rendering it liable to unravel unless great care is used in securing the cut wires; but in my improved netting the meshes may be readily enlarged at any point by inserting a proper implement between the curved portions *i* of the central section, J, and adjusting or untwisting the wires, in a manner which will be readily obvious without a more explicit description.

The selvage-wires D are straight and are interlocked with the outer wires composing the body of the web in substantially the same manner as the wires B C.

It is preferable to take three turns in the wires composing each of the sections E H, as shown in Figs. 1 and 3; but I do not confine myself to any special number of turns or twists in the wires, as one or more may be taken, as desired. Neither do I confine myself to bending both of the wires composing section J

outwardly, as one may be bent and the other left straight, or both bent in the same direction, or both left straight, although I deem it preferable to bend both outwardly, as shown at *i i*.

I am aware that a wire-netting has heretofore been constructed in which the ordinary warp-wires are interlocked by twists, each twist comprising a right-hand turn and a left-hand turn, said netting being provided with a series of cross or weft wires passing through the twists between the opposite turns thereof, dividing the meshes and forming an integral part of the body of the netting. Such a netting requires more material and labor in its manufacture; it is not adapted to receive nails or pickets, and its meshes cannot be expanded at pleasure, as in netting constructed according to my invention, owing to the locking action of the crossing or weft wires.

What I claim is—

A wire-netting comprising straight selvage-wires and intermediate warp-wires, the intermediate warp-wires being interlocked at intervals by twists which severally comprise a right-hand turn, a left-hand turn, and an intermediate plain portion, one of said warp-wires on each side of the fabric being interlocked at intervals with the adjacent selvage-wire by twists which severally comprise a right-hand turn, a left-hand turn, and an intermediate plain portion, substantially as described.

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