

(Model.)

B. SCARLES.
WIRE MAT.

No. 452,923.

Patented May 26, 1891.

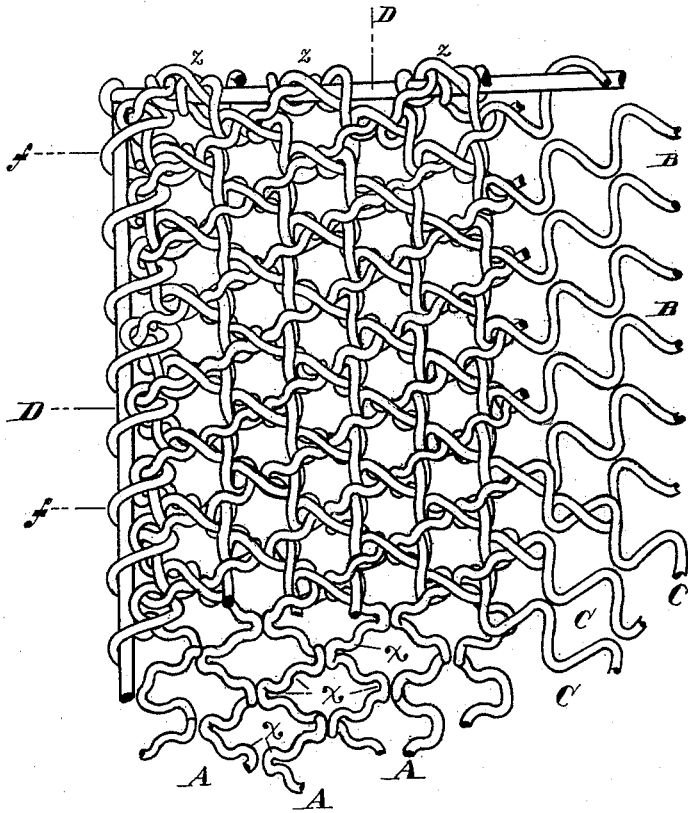


Fig. 1.

Fig. 2.

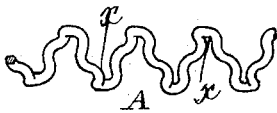


Fig. 3.



Witnesses:
Robt W. Matthews
E. L. Sawyer.

Inventor:
Benjamin Scarles,
per C. A. Shaw & Co.
Attys.

UNITED STATES PATENT OFFICE.

BENJAMIN SCARLES, OF CLINTON, MASSACHUSETTS, ASSIGNOR TO THE
CLINTON WIRE CLOTH COMPANY, OF SAME PLACE.

WIRE MAT.

SPECIFICATION forming part of Letters Patent No. 452,923, dated May 26, 1891.

Application filed July 18, 1887. Serial No. 244,580. (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 Floor-Mats, 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 top plan view of a piece of my improved floor-mat; Fig. 2, a side elevation of a portion of one of the corrugated warp-wires, and Fig. 3 a side elevation of one of the filling-wires.

Like letters of reference indicate corresponding parts in the drawings.

My invention relates to that class of floor-mats the bodies of which are composed of wire; and it consists in a novel construction and arrangement of parts, as hereinafter more fully set forth and claimed, the object being to produce a more effective and otherwise desirable article of this character than is now in ordinary use.

The nature of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A represents the warp-wires; B C, the filling-wires, and D the frame or border.

The warp-wires are each twisted spirally and corrugated transversely and are constructed by running a piece of plain wire of suitable length between fluted rollers, or pressing it between fluted dies to produce the corrugations *a*, and then twisting the wires so corrugated into spirals on a mandrel in a lathe or in any other suitable manner. A series of the warp-wires are then arranged in parallelism and held in that position by any convenient and suitable means and the filling-wires inserted. The filling-wires are arranged diagonally to the warp-wires and are inserted by turning them in from the edge of the fabric one at a time. They are arranged in parallelism with each other, and after the wires B have been inserted the wires C are inserted

in like manner, but approximately at right angles to the wires B, this method of construction giving great firmness or rigidity to the fabric.

The border or frame D is made of metal, and all of its parts may be formed integral, or it may be composed of one or more rods or pieces, as desired.

The body of the mat is secured to the side of the frame by a spiral binding-wire *f*, which embraces the side of the frame and also the adjacent warp-wire, and to the end of the frame by the ends of the warp-wires, and also by the ends of the filling-wires, as shown at *z*.

It will be obvious that by corrugating the warp-wires, as shown and described, the abrading or "scraping" surface of the fabric composing the body of the mat is greatly enhanced, and that by using two sets of filling-wires arranged at right angles to each other and diagonally to the warp-wires and corrugating the warp-wires the fabric will be braced or stayed in all directions and rendered much more effective for the purpose to which it is applied than a plain fabric having its filling-wires inserted at right angles to the warp.

I do not confine myself to any special method of securing the body of the mat to its frame or border, as any suitable means for that purpose may be employed. Neither do I confine myself to using two sets of filling-wires, or to arranging them diagonally to the warp-wires, as one set may be used, which may be arranged either at right angles or diagonally to the warp-wires, as desired. I however deem it preferable to use two sets and to arrange them as shown and described.

Having thus explained my invention, what I claim is—

1. A spirally-coiled wire for a wire fabric, provided with transverse corrugations.
2. A wire fabric having spirally-coiled wires provided with transverse corrugations.
3. A woven-wire fabric consisting of spirally-coiled warp-wires and spirally-coiled weft-wires, the warp-wires being bent to form projections or corrugations at short intervals.
4. A wire fabric comprising a series of spirally-coiled corrugated warp-wires and two sets of spirally-coiled weft-wires, the weft-

wires being arranged diagonally to the warp-wires and one set of the weft-wires being approximately at right angles to the other set.

5. A wire mat consisting of a body composed of spirally-coiled transversely-corrugated warp-wires, spirally-coiled weft-wires, a frame, and a binder uniting said frame with said body.

6. A wire mat consisting of a body com-

posed of spirally-coiled transversely-corrugated warp-wires, spirally-coiled weft-wires, a frame, and spirally-coiled wires uniting said frame with said body.

BENJAMIN SCARLES.

Witnesses:

JOHN F. PHILBIN,
HERBERT PARKER.