(No Model.)

D. C. STOVER.

WIRE FABRIC.

No. 396,007. Patented Jan. 8, 1889.

Fig. 1.

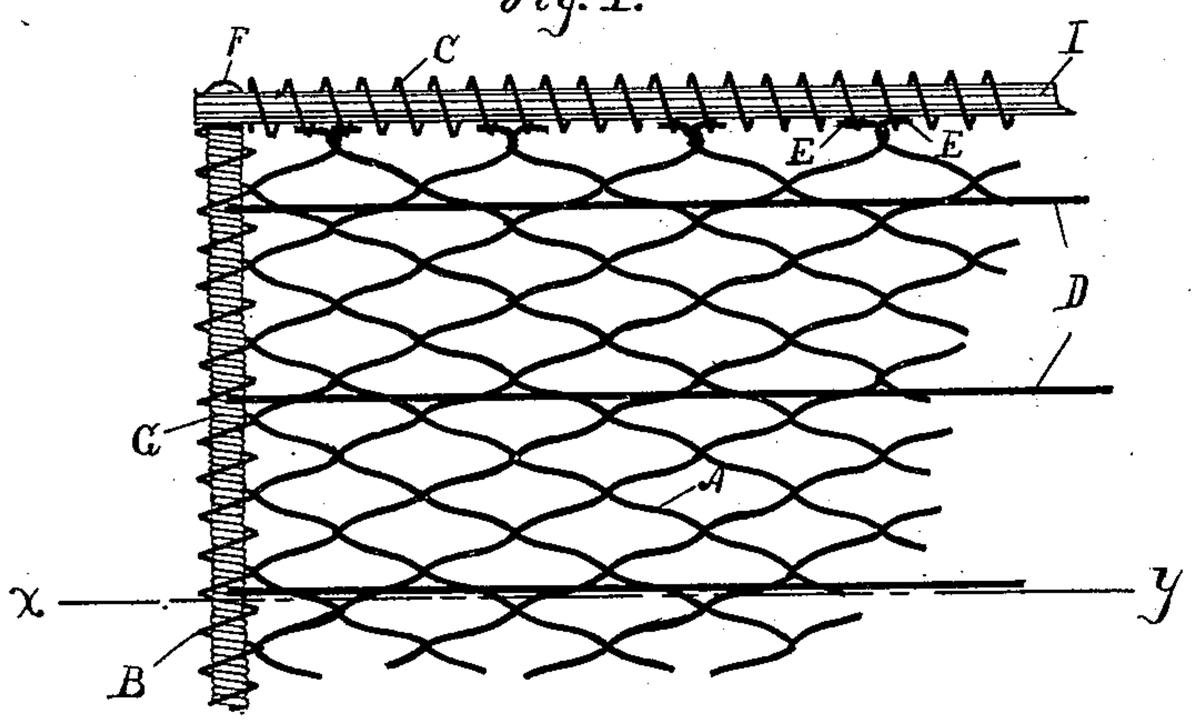

Fig. 2.

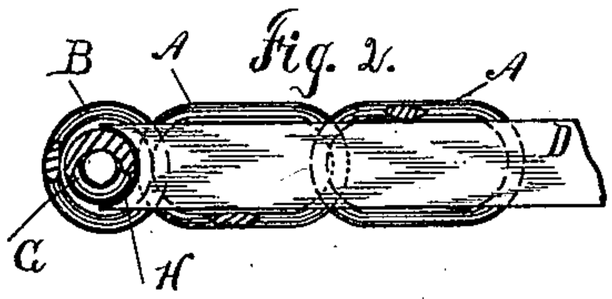

Fig. 3.

Fig. 4.

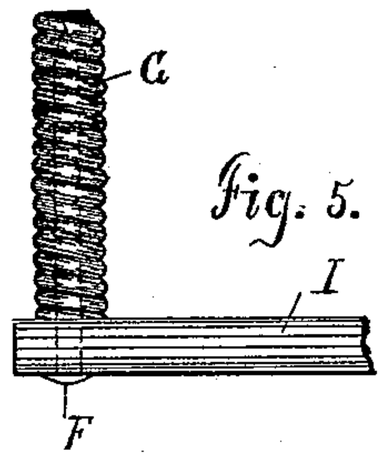

Fig. 5.

I

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UNITED STATES PATENT OFFICE.

DANIEL C. STOVER, OF FREEPORT, ILLINOIS.

WIRE FABRIC.

SPECIFICATION forming part of Letters Patent No. 396,007, dated January 8, 1889.

Application filed April 4, 1887. Serial No. 233,681. (No model.)

To all whom it may concern:

Be it known that I, DANIEL C. STOVER, a resident of Freeport, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Wire Fabrics; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention is fully illustrated in the accompanying drawings, wherein—

Figure 1 shows one corner of a plane fabric embodying my devices. Figs. 2, 3, 4, and 5 exhibit, upon a larger scale, various parts and details, which are hereinafter described.

In all the drawings, A A are wire coils interlocked and forming the body of the fabric, and B is a border-coil interlocking with one edge of said body. The ends E E of the coils A A interlock in pairs, and are inclosed by a border-coil, C, which, like the coil B, is equal in vertical diameter to the thickness of the body of the fabric. Within the coil B is placed a smaller coil, G, which is closely wound, so that successive turns are in contact, and the whole forms a practically continuous flexible bar. As indicated in Fig. 2, which is a section on the line $x\ y$, the diameter of the coil G, added to the diameter of the main coil-wire, equals, approximately, the horizontal inner diameter of the coil B; hence when all are in place, as shown, there is little or no lateral movement of the parts with reference to each other. Within the coil C is placed a nearly-rigid bar, I, whose horizontal diameter is enough less than the corresponding inner diameter of the coil to permit it to occupy the space within the coil in common with the ends E E of the main coils. This bar is preferably, but not necessarily, equal in vertical diameter to the inner vertical diameter of the coil, as in Fig. 3. When thus equal, vertical compression of the coil is impossible. The length of the bar I is equal to the entire length of the fabric or piece to be provided with a border, and its end is perforated, as at J, Fig. 4, in the axial line of the coil G. Through this perforation a nail, F, is driven into the end of the coil G, where, if it be slightly larger than the normal space within the coil, it is held more securely than if driven into the hardest wood.

A corner only of the fabric or mat is shown, its opposite sides or edges being precisely similar. It has, then, two opposite edges provided with the border-coil C and rod I, and two opposite edges each provided with the open coil B and close coil G. A series of practically incompressible bars, D, nearly equal in vertical thickness to the inner vertical diameter of the coils A, and at a short distance from each other, pass from coil G to coil G through the body and between the surfaces of the mat. Their concave ends, Fig. 2, fit the coils G G and maintain the distance between them, while the coils A and the interlocked inclosing-coil B prevent increase of this distance.

In forming the fabric with its borders, as described, one edge is completed with its coil G in position. The bars D are pushed into place from the opposite edge, each passing, as shown, Figs. 1 and 2, over the wire of one coil A and under the wire of the next. The other coil G is then inserted in its coil B, and the nails F are driven as described, firmly uniting the parts at each corner. The various members are now practically inseparable, and each maintains the others in position. By this construction I have a fabric or mat slightly flexible in directions transverse to two of its sides and highly flexible in directions transverse to its other two sides, and which maintains its general form, flatness, and thickness under the roughest usage.

The coils A are shown in the drawings as having plane upper and lower surfaces, and this form is of importance in this construction, as it affords a long and perfect bearing upon the bars D. The border-coils are shown as cylindrical and the bars I D as solid and of nearly rectangular cross-section; but these forms are of no importance. I have also used screw-nails and screws in place of the nails F, and have used a third coil within the coil G in cases where the outer coil was quite large; but these are believed to be such obvious modifications as require no illustration.

I have shown and described the entire construction of a fabric or mat; but many of the

features of the mat are either not of my invention or are embodied in my prior patents. Such features I do not claim.

What I claim is—

In a wire fabric, a helical coil passing along one margin thereof, a bar passing along the adjacent or intersecting margin of the fabric, and a rod engaging said bar and entering said coil axially, the greatest diameter of said rod being slightly greater than the normal interior diameter of the coil, whereby the marginal coil and the bar may be rigidly connected at the corner of the fabric.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

DANIEL C. STOVER.

Witnesses:

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