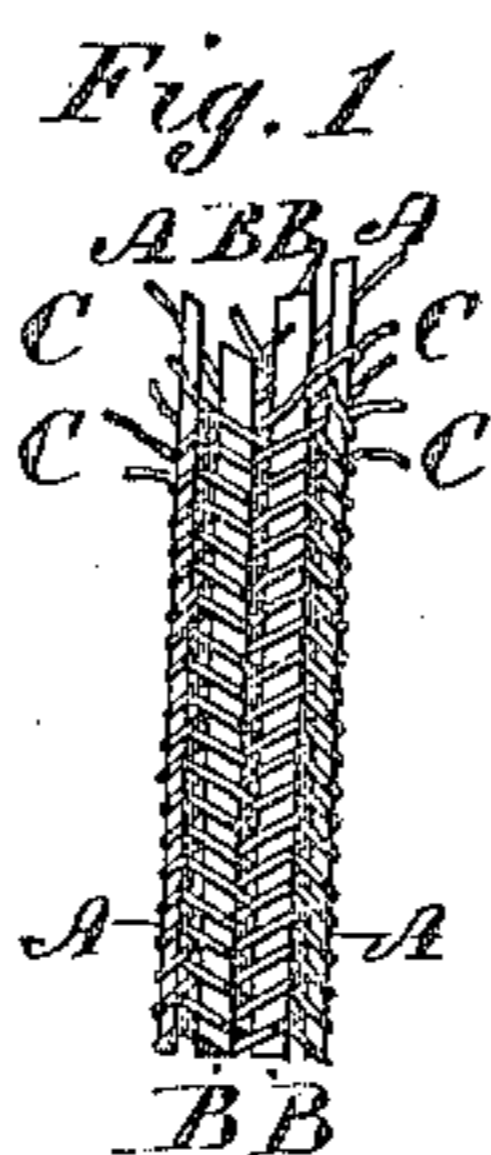


(No Model.)

T. KOHN.  
Wire Stiffening Ribbon.

No. 231,176.

Patented Aug. 17, 1880.



Witnesses

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# UNITED STATES PATENT OFFICE.

TOBIAS KOHN, OF HARTFORD, CONNECTICUT.

## WIRE STIFFENING-RIBBON.

SPECIFICATION forming part of Letters Patent No. 231,176, dated August 17, 1880.

Application filed April 15, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, TOBIAS KOHN, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Wire Stiffening-Ribbons; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My invention relates to stiffening-ribbons such as are commonly used for the purpose of forming the frames of bonnets or for giving them greater rigidity than they would otherwise possess.

Such stiffeners have commonly been made heretofore either of a wire wound and covered, or by weaving a ribbon which has such wires on its edges or at the edges and middle, the intervening parts being a woven fabric, which is necessarily of a very flimsy texture, owing to the difficulty of weaving a firm texture with the wires forming a part of the warp. It has been found impracticable to weave a close fabric with a full wire warp.

My invention has for its object the forming of a fabric which shall be firm and solid and have the longitudinal wires of any size and stiffness desired.

In the accompanying drawings, which illustrate my invention, Figure 1 shows a side view of my improved wire ribbon. Fig. 2 shows a top view of Fig. 1 with the ends of the braided filling left loose to show the construction better.

My improved wire ribbon is made upon an ordinary braiding-machine, having the wires run into the braid in the manner in which silk or other filling is commonly introduced, suitable

and stronger guides being used for the purpose; but the braiding is otherwise done in the customary manner.

A A and B B are wires, which are braided into the ribbon and run longitudinally through its length.

The outside wires, A, are shown round in the drawings, and the inside wires, B, are shown flat. Either form can, however, be used with my improved braided ribbon.

In making my improved ribbon any number of strands can be used to make braids of different widths, as is now commonly done. Any convenient number of wires can also be introduced into the braid. One can be placed between the meshes or between each two lines of intersections of the threads, or a fewer number can be used. In the latter case there will be some of the intersections forming a portion of ordinary braid between the wires.

In this way any width of ribbon can be made on a suitable braiding-machine, and any desired number of wires can be used to stiffen it. The whole fabric will be firm and solid, and not open and flimsy, as with the woven-wire ribbon ordinarily made.

By means of my invention a much better article of manufacture can be produced than has heretofore been known.

The wires used in my improved braid are intended to be wound and covered in the customary manner; but they can be used without.

What I claim as my invention is—

A braided ribbon containing longitudinal wires within the braid between the intersections of the threads, as a new article of manufacture, substantially as described.

TOBIAS KOHN.

Witnesses:

THEO. G. ELLIS,  
WILMOT HORTON.