H. R. VAN EPS.

WIRE FABRIC.

No. 189,529. Patented April 10, 1877.

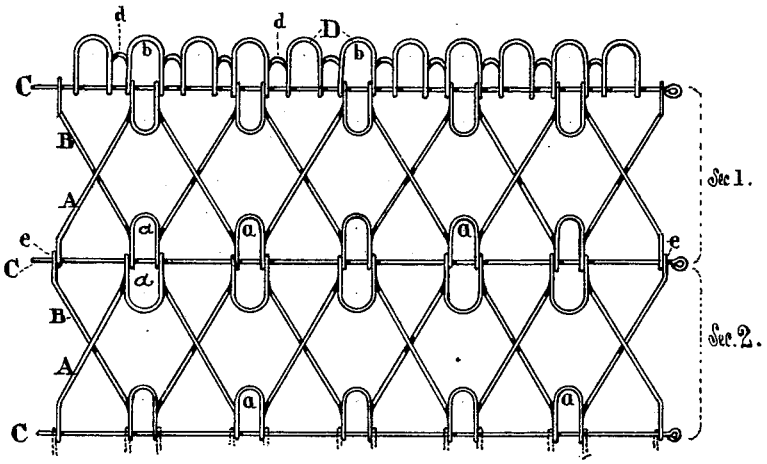

Fig. 1.

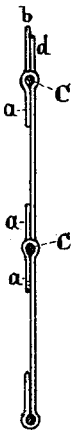

Fig. 2.

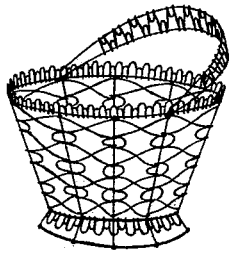

Fig. 3.

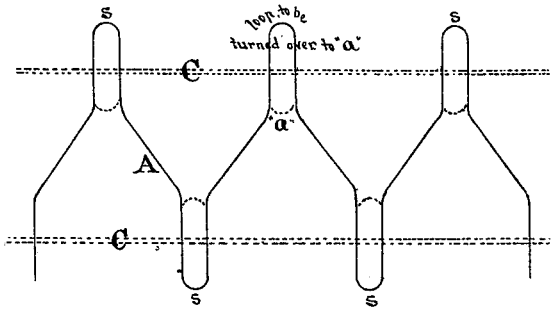

Fig. 4.

Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY R. VAN EPS, OF PEORIA, ILLINOIS.

IMPROVEMENT IN WIRE FABRICS.

Specification forming part of Letters Patent No. **189,529**, dated April 10, 1877; application filed February 20, 1877.

To all whom it may concern:

Be it known that I, HENRY R. VAN EPS, of the city of Peoria, in the county of Peoria, in the State of Illinois, have invented an Improvement in the Construction of Wire Fabrics, such as Baskets, Crates, Fences, &c.; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a plan of two divisions of the fabric, showing the manner of uniting them; Fig. 2, a side or end view of the same; Fig. 3, diagram of a basket made on this plan, (in tapering divisions to form the flare;) Fig. 4, a single section of bent wire—A or B of Fig. 1—before the loops *a* are turned down upon the connecting-wire C.

This invention has for its object to construct wire fabrics, such as fences, crates, baskets, vases, and other articles, by forming separate divisions by zigzagging the wire from side to side, whereby a loop is formed at each turn of the wire, which forms the means of uniting each division to an intermediate wire, which passes through some or all of the loops of adjoining divisions. This wire is straight if the fabric composes a flat article, or an article having flat sides or parts, and is circular or curved, according to the contour of the fabric, when a flat or plane fabric is departed from. For instance, the wire is bent in continuous divisions back and forth in the same plane in a zigzag or Vandyke form, the points at each bend being in a line with those on each side. These are then turned back, so as to preserve an eye, or, rather, a double eye, through which the wire-connecting rods, which unite each adjoining division, are afterward passed permanently to form the article into the complete object. The loops are all folded back into the plane of the so-formed net-work, and help to fill the spaces between the reticulations, besides being ornamental.

The zigzag or Vandyked divisions may be imposed, one or more, on top of the first, with its loops alternately attached to said connecting-wire, so as to make the reticulations smaller, if desired.

In the drawings, which illustrate one of the forms in which I construct this fabric, Fig. 1 represents two of the divisions united by straight wires. A A B B are separate zigzag sections, having loops *a* at the point of each bend, turned over and punched down over the wire C, the connecting-wire being common to the adjoining divisions A B, section 1, A B, section 2. The zigzag divisions may be extended to any length, according to the requirements of the article to be made, the ends of the wire being formed into a small eye, *e*, to receive said wire C.

It will be seen in this diagram that one section, A, overlies the other, B, forming a net-work, and that the loops *a* of each section are alternated upon the uniting-wire C. The different sections A B are prevented from sliding along said wire C by placing them inside or outside, and in contact with adjoining loops on the opposite divisions on the other side of the connecting-wire C.

Fig. 4 is a wire section, bent ready to be looped by turning the points S back over the wire C, where they are stamped or pressed down close to the said wire to form an eye, to prevent the escape of said wire, except in a longitudinal direction.

For forming a vase or basket the sections A B are made wider at one end than at the other, each zigzag being successively shortened in bending it, in such a manner that the sections, when united into a basket, form, together, the flaring contour or shape necessary, as seen in Fig. 3. Again, barrel and globular shaped articles are easily formed on this plan by making the zigzag sections taper to either end. Of course the connecting-wires C must be curved to suit the contour of such shape or article.

To insure a pleasing effect the sides of each loop should be parallel, which is best done before their eyes are formed, and is easily done on a proper former, and the crossing wires have the best effect when they appear to be continuous or follow each other lineally throughout the different divisions.

D, Fig. 1, represents an appropriate edging for some of the articles mentioned, which is formed on the same plan—*i. e.*, in a zigzag or serpentine shape—and afterward bent to form

the small loops *d* for attachment to the wire C, leaving the larger loop *b* extended to form an edging. I also construct the same or similar articles with but one continuous zigzag wire, A, between each connecting wire or rod C, leaving B out, or dispensing with it, as in Fig. 4.

What I claim as my invention is—

1. A fabric made of wire, in which the separate zigzag divisions which form the article are united to a continuous wire by turning the loops or points of each bend or zigzag over said continuous rod or wire, the common bond of union between each adjoining zigzag division, substantially as and for the purposes described.

2. The wire sections A, (or A and B,) of a zigzag form, united to wires C by turning over the loops *a*, or the points of the zigzag sections A B, to form, with several such sections or divisions and rods C, a flat article, or an article made up of curves, substantially as and for the purposes set forth.

3. The combination, in a wire fabric, of the divisional connecting-loops *a* and the uniting-wire C, substantially as and for the purposes described.

In testimony that I claim the foregoing improvement in wire fabrics I have hereunto set my hand this 14th day of February, A. D. 1877.

HENRY R. VAN EPS.

Witnesses:
CLARENCE THURLOW,
HENRY W. WELLS.