

(No Model.)

C. S. ANDREWS.

HAT WIRE.

No. 334,923.

Patented Jan. 26, 1886.

Fig. 1.

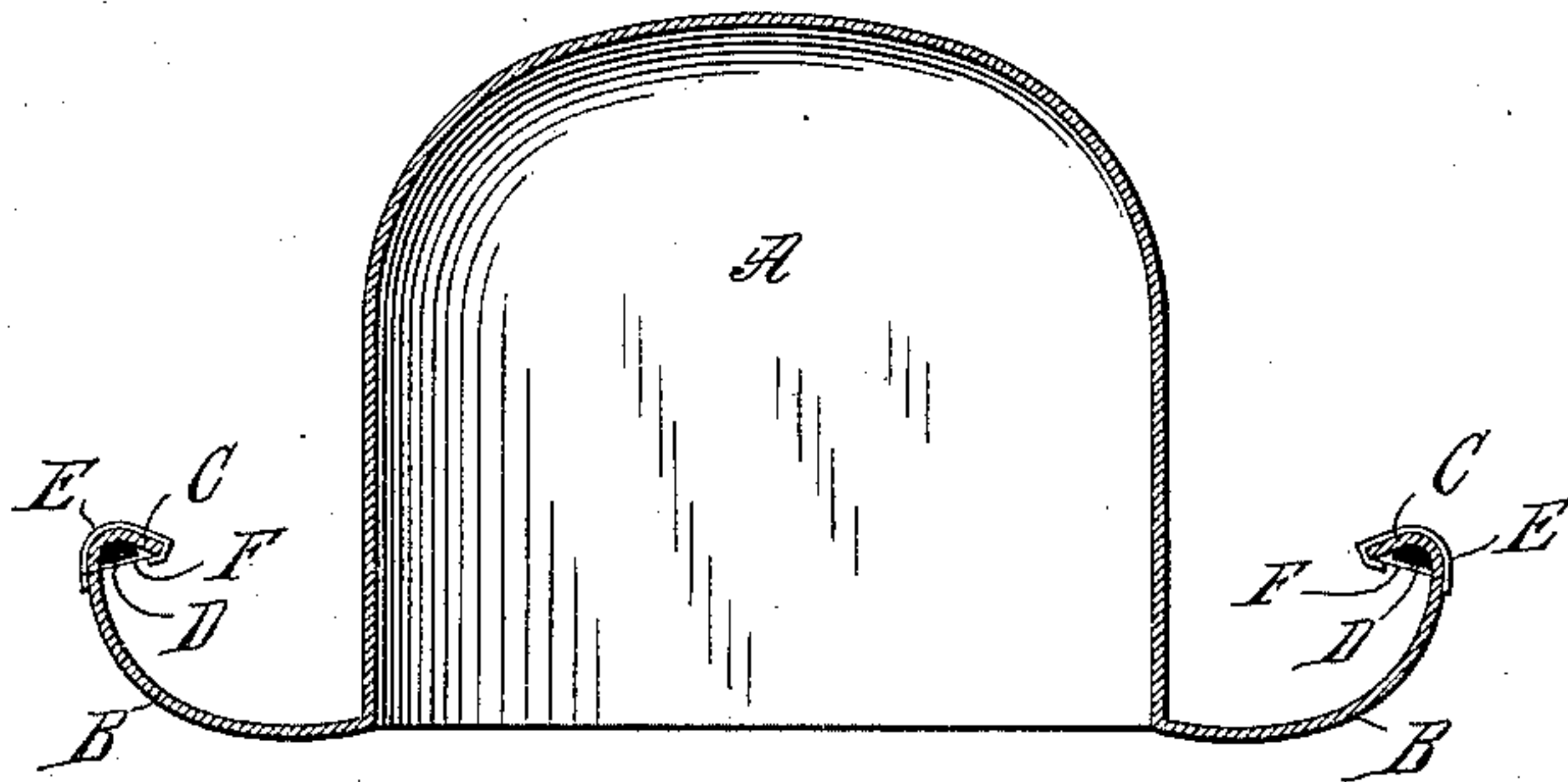


Fig. 3.

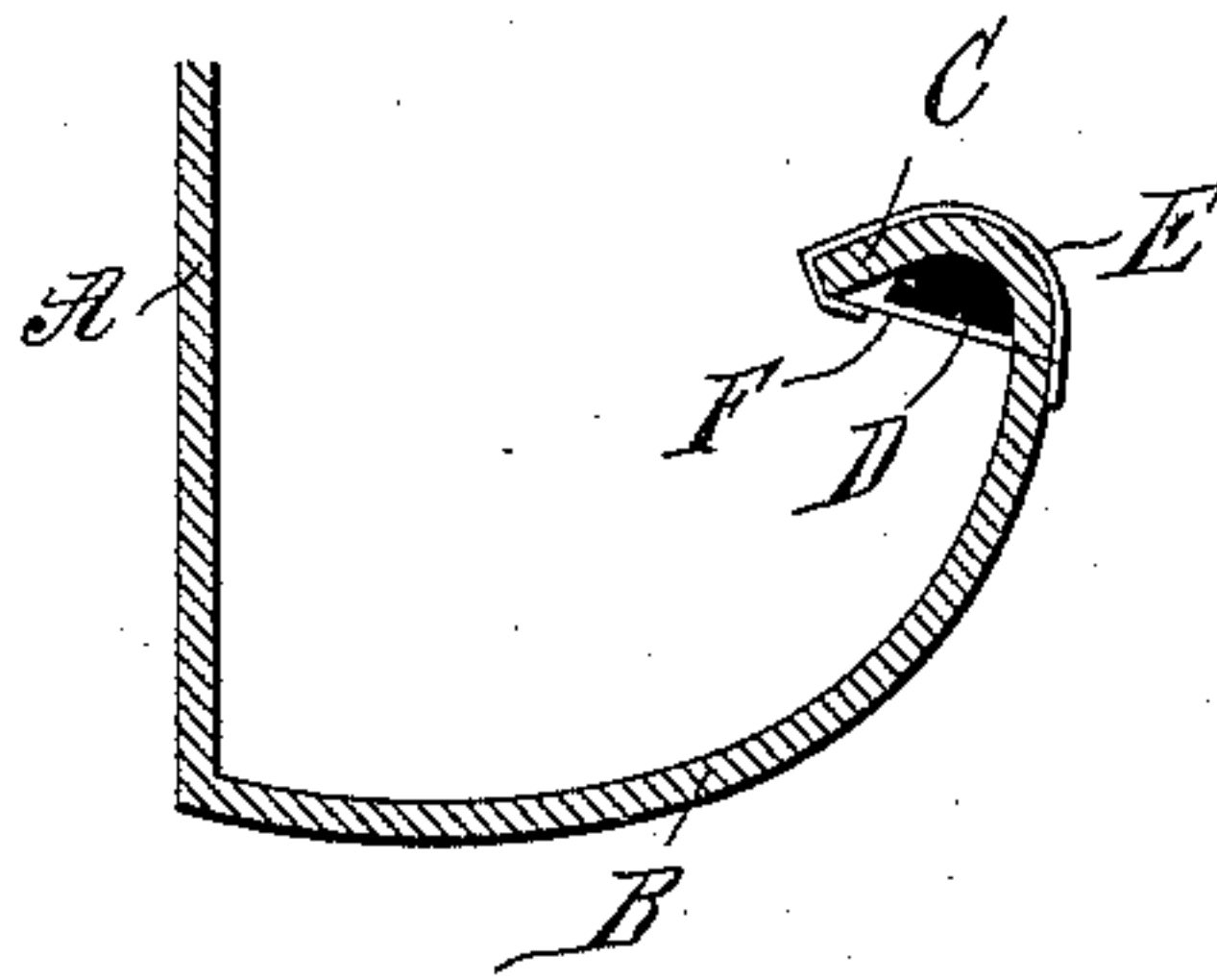


Fig. 2.

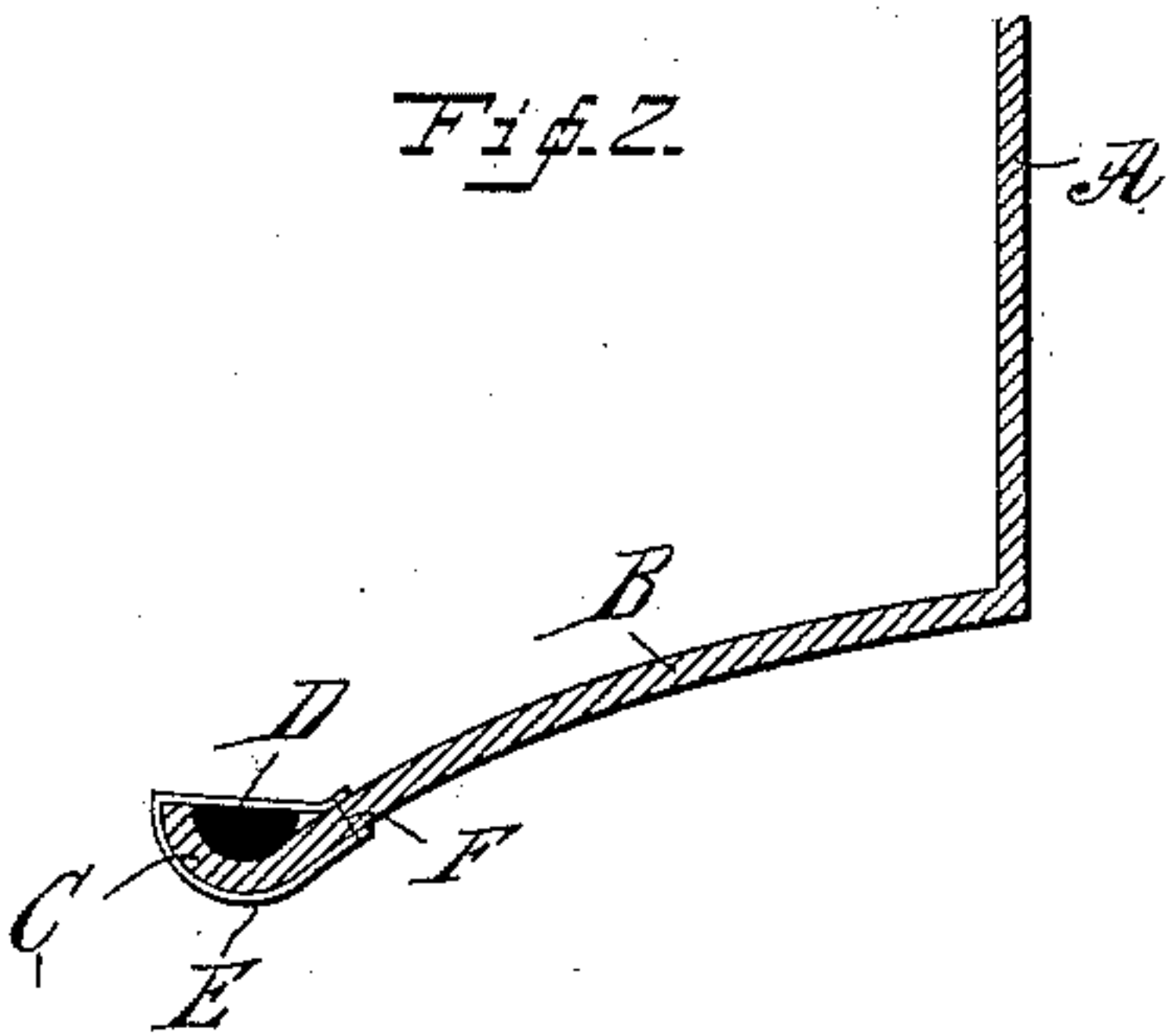


Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.



Witnesses,

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UNITED STATES PATENT OFFICE.

CHARLES S. ANDREWS, OF DANBURY, CONNECTICUT, ASSIGNOR TO THE
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HAT-WIRE.

SPECIFICATION forming part of Letters Patent No. 334,923, dated January 26, 1886.

Application filed September 26, 1885. Serial No. 178,251. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. ANDREWS, a citizen of the United States, residing at Danbury, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Hat-Wires; 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 appertains to make and use the same.

My invention has for its object to produce a hat-wire which, while possessing the maximum bulk and rigidity possible with a given weight of metal, shall at the same time be so formed as to present at all times a curved surface toward the brim and a flat or concave surface toward the stitching, it being of course well understood that the pressure at the side of the brim is upward, and at the front downward. At the same time I secure a very important result never heretofore accomplished in the manufacture of hats, in that I present the edge of the wire to the angle of the curl, so that the sides of the curl may be pressed close together at the sides of the hat, and at the front of the hat very much less curl of the brim is required to hold the wire in place, thus greatly improving the appearance of the finished hat, while the wire itself possesses much greater rigidity than heretofore without increase in weight, and its form enables the stitching by which the binding is attached to pass close under the edge of the brim without danger of the needle coming in contact with the wire whether the stitching is done by hand or by machine.

I am well aware of the use of both flat and round wires in the manufacture of hats, but my present construction differs radically from both. In use the flat wire by getting edgewise prevents a neat flat curl, and, moreover, the constant pressure of the flat wire against the brim tends to shape the latter to the surface of the wire, so that when bent or flexed the brim fails to move freely over the wire, while the wire itself is too flexible for its purpose unless made quite heavy.

My present construction enables me to obtain a great increase in rigidity over both flat and round wire, to produce a much flatter curl of the brim, and, moreover, to avoid the dull-

ing of the needle in stitching on the binding which has heretofore been a serious inconvenience.

In order that my invention may be clearly understood, I will describe the same in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a cross-section of a hat showing my improved wire in place under the curl upon both sides of the brim; Fig. 2, an enlarged section of the brim and a portion of the body of a hat at the front; Fig. 3, a similar section taken at the side of a hat. Figs. 4 and 5 illustrate slight modifications in the shape of the wire, which do not, however, depart from the general principle of my invention; and Figs. 6 and 7 illustrate the two forms of hat-wire now in common use, these being, in fact, the only styles used to any extent in the manufacture of hats prior to my invention.

Hat-wires made from the style of wire illustrated in Fig. 6 are usually formed without torsion of the wire. In this form of wire the metal is so distributed as to produce a compact rather than a bulky wire, which is found to be a disadvantage, while if the wire is made sufficiently large to overcome this objection the expense, as well as the weight, is increased and serious trouble results from the needle coming in contact with the wire when the binding is stitched on.

Hat-wires formed from the style of wire illustrated in Fig. 7 are brought to their proper form by torsion. This form of hat-wire cannot be made to fit closely under the curl, and is ruinous to needles in the stitching on of the binding.

In practice, owing to the relative thinness of the wire in one direction, it has been necessary to make the wire quite large to secure the necessary rigidity.

I have found as a result of long continued experiments that by using a partially-cylindrical wire, flat or concaved on one side, I am enabled to produce a hat-wire which wholly overcomes the objections heretofore made to the different styles in use.

The exact shape of the wire is not an essential feature of my invention. My preferred form, as illustrated in Figs. 1, 2, and 3, is a half-round wire. If a greater curvature is

desired for the bearing-surface of the wire without increase in weight or decrease in rigidity, I use a wire concaved more or less upon its inner side, as illustrated in Fig. 4, thus retaining all of the advantages of a half-round wire. In Fig. 5 I have illustrated a form in which the lesser diameter is perceptibly more than half of the greater diameter.

In practice I preferably form my improved hat-wire by torsion of the wire, the result being that I produce in the simplest possible manner a hat-wire that always presents a rounded surface in the direction in which pressure is desired, which will fit closely in the angle of the curl and will permit a very flat curl, as the edge of the wire is toward the angle, and which will present a flat or concaved side toward the stitching, so that the stitching may be placed close to the edge of the brim on the outer side, and will lie close under the curl, without danger of dulling the needle, whether done by hand or by machine.

In the drawings, A illustrates the body of the hat; B, the brim; C, the curl; D, the wire; E, the binding, and F the stitching by which the binding is held in place and which passes closely over the flat or concaved side of the wire.

Having thus described my invention, I claim—

As a new article of manufacture, a wire for hat-brims, having a curved portion which bears against the brim, and a flat or concaved portion over which the stitching passes, as described, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES S. ANDREWS.

Witnesses:

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