

W. B. FOSTER.

HAT FRAME.

APPLICATION FILED JULY 5, 1910.

1,056,018.

Patented Mar. 18, 1913.

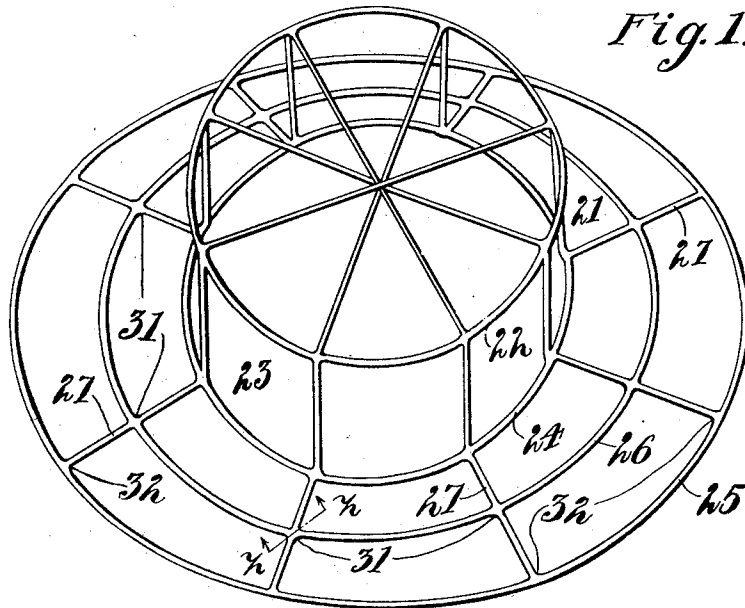


Fig. 1.

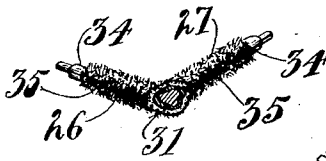


Fig. 3.

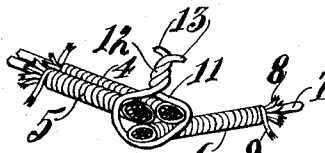


Fig. 5.

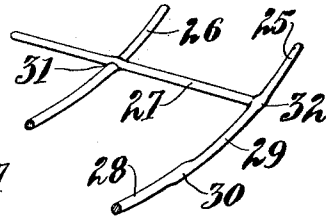


Fig. 2.

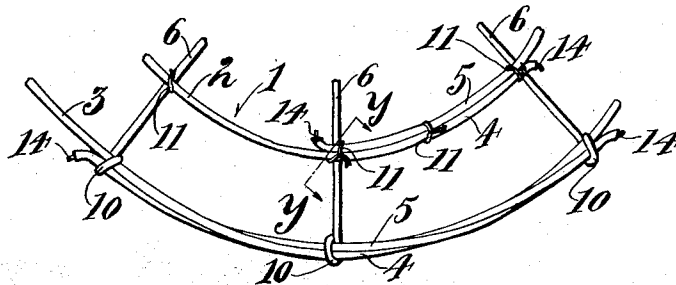


Fig. 4.

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UNITED STATES PATENT OFFICE.

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HAT-FRAME.

1,056,018.

Specification of Letters Patent.

Patented Mar. 18, 1913.

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To all whom it may concern:

Be it known that I, WILLIAM B. FOSTER, a citizen of the United States, residing at Norwood, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Hat-Frames, of which the following is a specification.

My invention relates to hat-frames of the character of those employed as a frame-work in the construction of women's and misses' hats. Hat-frames of this character as heretofore in general use have been constructed of wire provided with a covering consisting of a layer of threads extending longitudinally of the wire and arranged side by side about said wire, with spirally wound threads received about said layer of longitudinal threads. This thread-covered wire was bent to form and comprised stretches which crossed each other, the thread-covered wire at the crossing points of the stretches being secured together by tie-loops of wire received about the collective covered stretches at the crossing points, the ends of the tie-loops being twisted so as to bind the crossed stretches together at their crossing points, forming joints however which were capable of yielding or shifting. The building up of a hat-frame in this manner has proven to be tedious, difficult and expensive, and the ends of the wire, especially of the tie-loops, being exposed in practice as heretofore constructed, have caused injury to the goods or fabric drawn about the hat-frame in the making of the hat, and have also resulted in injury to the operator, as the exposed ends of the wires were in practice sharp, owing to the fact that they were cut or clipped by a cutting instrument, and frequently caused cutting of the fingers, hands, wrists and arms of the operator, causing bleeding, the blood in turn causing damage to the goods or fabric drawn about the hat-frame, this goods or fabric in practice being often expensive material of delicate shades, the result being not only injury to the operator, but loss in material. I avoid these objections in my invention by providing a hat-frame constructed of wire, the intersecting stretches of which are welded together for forming rigid metallic joints between the intersecting stretches, and thereby also providing a rigid hat-frame. I provide the hat-frame thus welded together with a sizing coating, to which I apply a coating of flock or finely di-

vided fibrous material which adheres to the sizing coating. I provide a hat-frame in which not only the stretches of wire but also all the joints are provided with a fibrous coating, and all exposed ends of wire are avoided, the wire tie-loops at the joints between the wire-stretches being also dispensed with. I further avoid the necessity of employing wire which is wound with a thread covering, and am enabled to construct my improved hat-frame with wire which is materially less expensive than that heretofore in general use and to provide a hat-frame which is stronger and is less expensive to make, than the hat-frame mentioned as heretofore in general use.

In the drawings: Figure 1 is a perspective view of my improved hat-frame in finished condition. Fig. 2 is a perspective view of a detail of the uncovered stretches of wire of my improved hat-frame shown welded together. Fig. 3 is a cross-sectional detail on the line $z-z$ of Fig. 1. Fig. 4 is a plan view of a portion of a hat-frame showing a construction heretofore in general use; and, Fig. 5 is a cross-section of the same on the line $y-y$ of Fig. 4.

For proper understanding of my invention it may be well to first describe the manner of constructing the hat-frames mentioned as heretofore in general use.

Referring to Figs. 4 and 5, 1 represents the brim of the hat-frame, partly broken away, and comprises the loop-stretches 2 and 3. It will be noted that the ends 4, 5 of these loop-stretches overlap each other to considerable extent, this overlapping being required in practice in order to provide sufficient rigidity to prevent collapse of the loops at the points of connection of the ends of the loop-stretches. 6, 6 represent the cross-stretches of the wire. Each of the stretches of wire is formed of a wire core which is surrounded by a layer of threads 8 arranged longitudinally of the wire core, about which a thread or threads 9 is spirally wound in order to cover the longitudinal threads and wire. At the point of connection of the cross-stretch with the outer loop-stretch of the brim, the cross-stretch is wrapped about the outer loop as shown at 10, forming a prominent knob at that point. At their points of intersection inside the outer loop, the thread-covered stretches of wire are connected by wire tie-loops 11, the ends of which are twisted as shown at 12, and then cut off

with a sharp instrument, resulting in sharp points or ends as shown at 13. The ends of the thread-covered stretches of wire are also cut in practice by a sharp instrument, thereby not only cutting the wire but also the thread-covering, the thread-covering immediately unraveling and exposing the bare end of the wire as shown at 14. These exposed ends of the wire and tie-loops have resulted in material direct damage to the fabric with which the hat-frame is afterward provided, and, as heretofore stated, also resulted in injury to the operator and consequent damage to the fabric provided for the hat-frame in making the hat. In my improved device, these objections are avoided, and a hat-frame provided in which the ends of the wire stretches as well as the joints are coated and a rigid and cheap construction is obtained, the tie-loops being dispensed with. Thus 21 represents my improved hat-frame which in practice usually comprises a loop 22 at the top of the crown 23, and a plurality of loops for forming the brim, three such loops being shown in the present instance, one of which is the loop 24 at the base of the crown and inner edge of the brim, another loop 25 forming the outer edge of the brim, and a loop 26 being an intermediate loop between the loops 24 and 25. 27, 27 are cross-stretches of wire which cross the respective loops for locating the loops and imparting shape and height of crown to the hat-frame. The ends 28, 29 of the respective stretches of wire forming the respective loops are connected by a welded joint 30, and the loop-stretches and the cross-stretches of the wire are connected at their points of intersection by welded joints 31. These joints are preferably formed by electric welding, which is instantly accomplished and binds the cross-stretches and the loop-stretches together as an integral piece, forming close metallic union between the stretches of wire at their points of intersection. This construction forms a rigid frame in contra-distinction to the shifting form of frame formed by previous constructions employing tie-wires. The joints at the intersections of the cross-stretches with the outer loop of the brim are

similarly formed, as shown at 32, thus avoiding the wrapping of the cross-stretches about the outer loop.

The welded frame is provided with a coating 34 of sizing substance. This coating may be provided by dipping the welded frame in the sizing composition. This sizing composition is preferably of viscous material, and while still in tacky condition, it is provided with a covering 35 of flock or finely divided fibrous material, which adheres to the sizing coating, the sizing coating being permitted to dry with the flock coating thereon for providing the frame with a fibrous covering. In my improved device the joints between the stretches of wire are also provided with the sizing coating and the fibrous covering in finely divided state, thereby covering the joints of the hat-frame also with a fibrous coating and in its finished form providing a hat-frame which has a fibrous coating of uniform character throughout and in which exposed ends of wires are avoided.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

A hat frame comprising a plurality of wire crown and brim loops, the ends of said respective loops welded together for forming welded joints 30 and thereby forming closed loops formed solely of said wire, and crossing stretches of wire which cross said respective loops for locating said loops and are welded to said loops at the crossing points for forming welded joints 32 formed solely of said wires, the said loops, crossing stretches and joints provided with a continuous coating 34 of sizing substance, and a continuous coating 35 of flock secured to said loops, crossing stretches and joints by said coating of sizing substance, substantially as described.

In testimony whereof, I have signed my name hereto in the presence of two subscribing witnesses.

WILLIAM B. FOSTER.

Witnesses:

COLEMAN AVERY,
LILLIAN BURNETT.