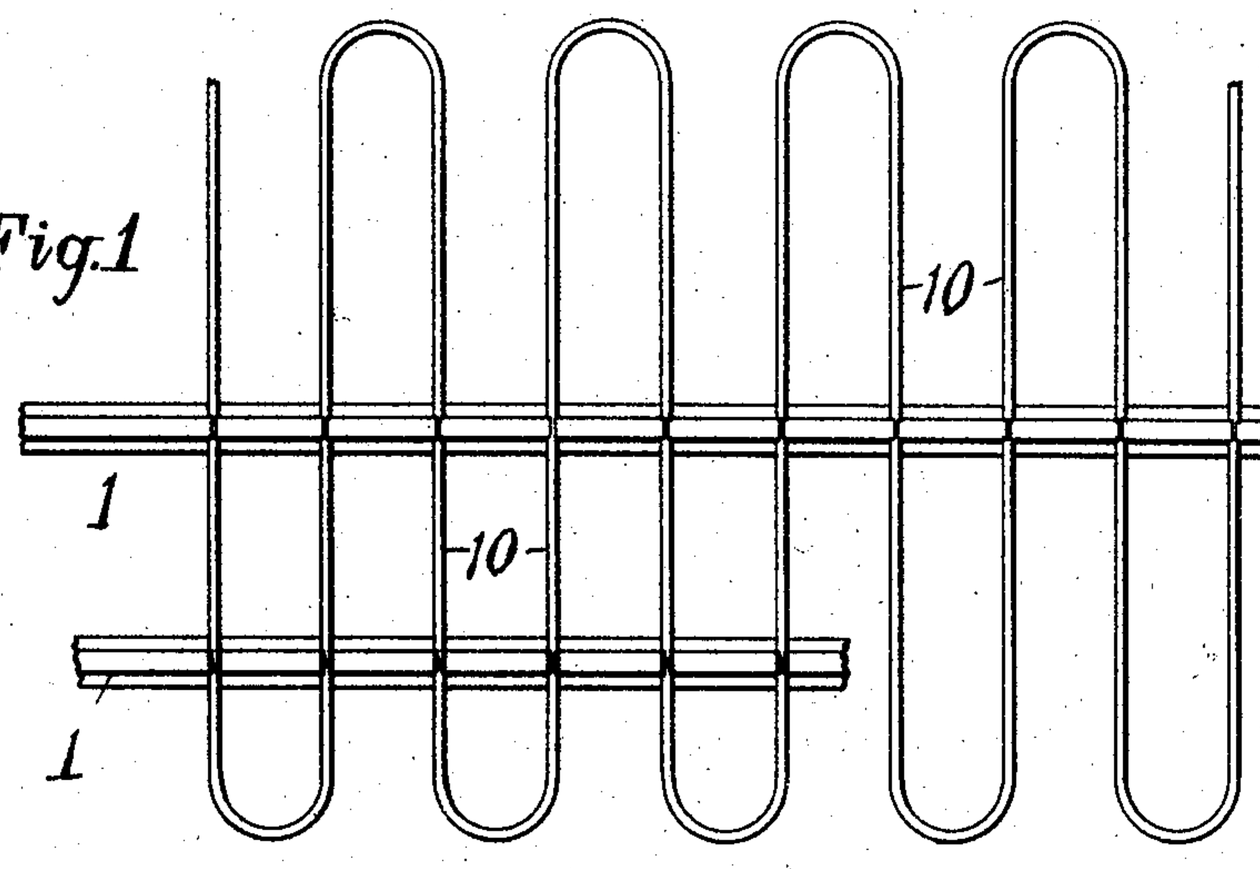
No. 780,586. PATENTED JAN. 24, 1905.

C. H. THURSTON.

WIRE FABRIC.

APPLICATION FILED JUNE 26, 1902.

Fig. 1



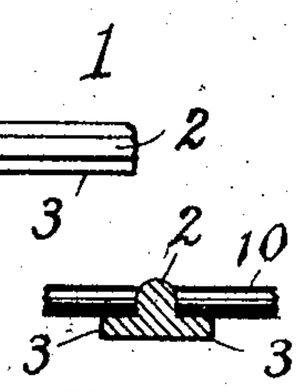


Fig. 5

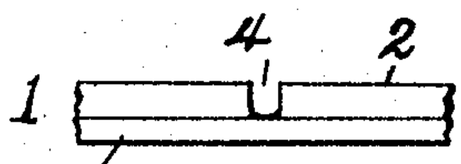


Fig. 2

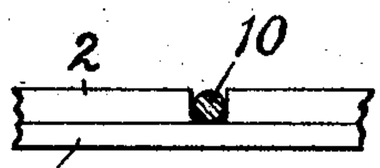


Fig. 3

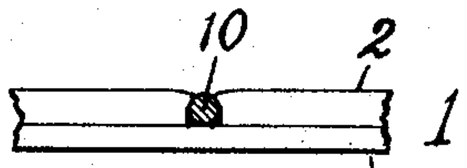


Fig. 4

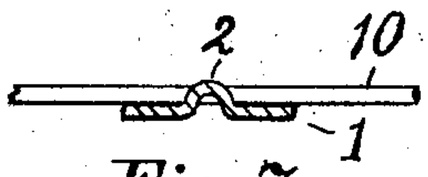


Fig. 7

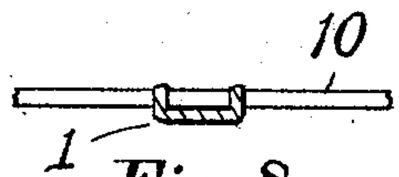


Fig. 8

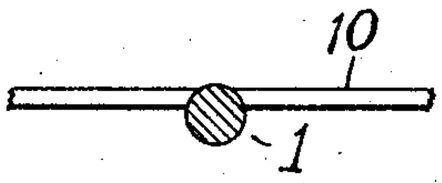


Fig. 9

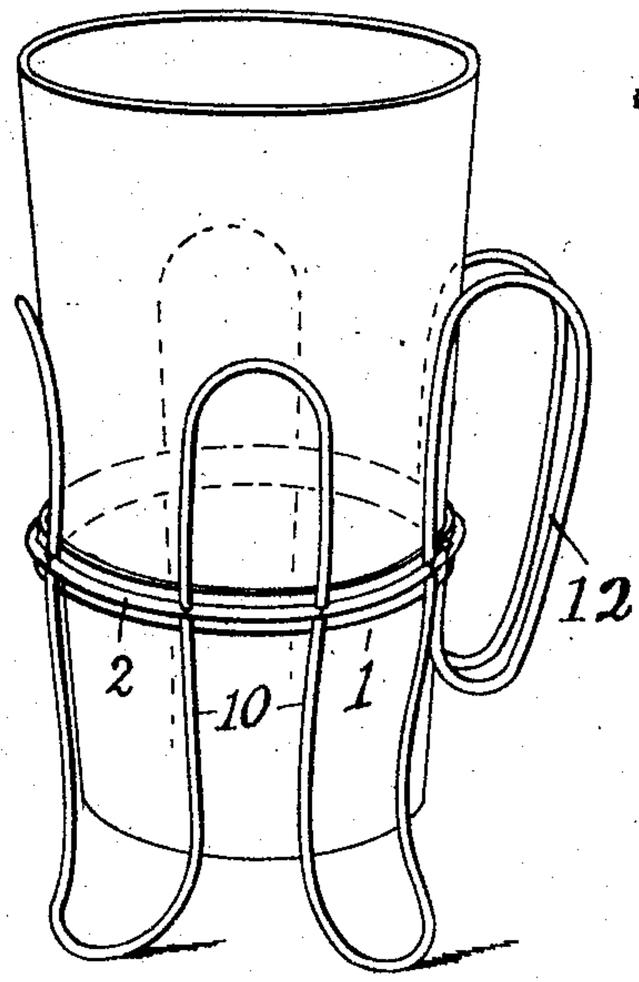


Fig. 6

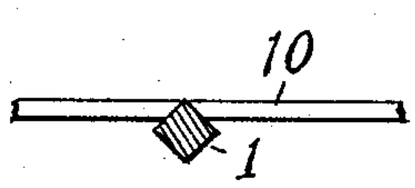


Fig. 10

Witnesses;

J. E. Gray—

E. R. Scott.

Inventor,

Charles H. Thurston;

By A. B. Lufsham,

His Attorney.

No. 780,586. Patented January 24, 1905.

UNITED STATES PATENT OFFICE.

CHARLES H. THURSTON, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO BAY STATE TOOL COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

WIRE FABRIC.

SPECIFICATION forming part of Letters Patent No. 780,586, dated January 24, 1905.

Application filed June 26, 1902. Serial No. 113,355.

To all whom it may concern:

Be it known that I, CHARLES H. THURSTON, a citizen of the United States, and a resident of Boston, in the county of Suffolk, State of Massachusetts, have invented a new and useful Improvement in Wire Fabric, of which the following is a full, clear, and exact description.

My invention has for its object the construction of a structural element to be employed in the manufacture of light wire articles—as glass-holders, toasters, tooth-brush racks, scrap-baskets, &c.—and also in the production of larger articles, as trellises, light fences, hanging ladders, &c.

Referring to the drawings forming part of this specification, Figure 1 is a plan view of an embodiment of my invention in its basic form. Fig. 2 is a side view of a section of the main part or backbone of the structural element, showing the notch therein for the reception of one of the subordinate parts or ribs of the element. Fig. 3 is a similar view of said backbone, showing such a rib in section located in said notch. Fig. 4 is a view similar to the last, but showing said rib fixed in position. Fig. 5 is a transverse section of the backbone, showing a portion of a rib carried thereby. Fig. 6 is a perspective view of a glass-holder as manufactured from my wire fabric, showing a glass or tumbler held thereby. Figs. 7, 8, 9, and 10 are transverse sections of the backbone made in several different shapes, that of Fig. 7 being of sheet metal with a central swaged ridge, that of Fig. 8 of sheet metal with its edges bent up, that of Fig. 9 being a solid cylindrical rod, and that of Fig. 10 being a solid square rod.

In the preferred form of my invention (shown in the first five figures of the drawings) the backbone 1 is formed from solid metal rod having a central ridge 2 and lateral wings 3, said ridge having notches cut therein at frequent intervals, said notches 4 reaching to the level of the upper face of the wings 3 and made of a width equal to the diameter of the ribs 10, and the distance from notch to notch depending upon the character of the articles to be manufactured. For the lighter fancy articles such distance is preferably about half an inch. So, also, the dimensions of the backbone and ribs depend on the nature of the articles, the sizes shown in Figs. 1 and 6 being substantially that used for light articles.

The ribs 10 are usually bent in a flattened zigzag manner and laid in the notches 4, and then a suitable pressure is applied to the ridges adjacent to said notches until the latter are partially closed over the sides of the ribs, the latter being preferably of round wire, and hence capable of having the metal swaged or hammered in over the same.

Inasmuch as the notches 4 reach to the level of the upper faces of the wings the ribs rest upon the same, as shown in Fig. 5. This gives three points for the retention of each rib in position—the two edges of said wings and the ridge—and it is hence practically impossible with the application of ordinary force to twist the backbone away from the ribs. For the same reason none of the ribs can be rocked with respect to each other or the backbone; but all the parts are held rigidly together. Substantially the same function is accomplished by the constructions of backbone illustrated in Figs. 7, 8, 9, and 10, Figs. 7 and 8 showing each a form which can be shaped from sheet metal and that of Fig. 7 being practically identical with the preferred construction. The form in Fig. 8 is simply a flat strip of sheet metal having its side edges bent up and notched, the wires 10 being set into such notches down to the level of the unnotched portion of the backbone. In the constructions illustrated in Figs. 9 and 10 the same feature is disclosed of the notched faces of the backbone being narrower than the unnotched portion below, and so serving to more securely resist a torsional strain upon the backbone relative to its ribs or wires. This is what renders my wire fabric especially valuable for the manufacture of articles of general

utility, making them practically indestructible. This is even more pronounced after the articles have been tinned or plated, the plating so filling and tightening the joints as to give the parts a practically integral character.

While the ridge 2 could be made higher and perforated for the reception of the wire ribs, yet the labor of stringing the wire and shaping it afterward would entail an expense for labor which would be wholly prohibitive. With my arrangement, however, the wire can be first shaped and then dropped into the notches and fastened therein with almost no work.

To make fancy articles from this wire fabric, such as the glass-holder illustrated in Fig. 6, all that is necessary to do is to curve the backbone 1 into a circle and solder its ends together and bend the extremities of the wire 10 into handles 12. Then tin or plate it, and the article is complete, after having, perhaps, curved somewhat the lower bends of the wire to render the holder more stable.

It is evident that the element shown in Fig. 1, if made on a larger scale and stood vertically with an end of the backbone stuck into the ground, makes a complete flower-trellis.

Although I have described but one backbone to an element, there is nothing to prevent the application of two or more to the wires, and so adapt the element to a larger variety of uses. Such additional backbone is shown at the lower left-hand section of Fig. 1.

What I claim as my invention, and for which I desire Letters Patent, is as follows, to wit:

A wire fabric composed of one or more lengths of metal having a longitudinal formation thereon substantially narrower than the body thereof and notched at intervals, and a single length of wire bent back and forth into a multiplicity of parallel sections fixed in said notches, substantially as described.

In testimony that I claim the foregoing invention I have hereunto set my hand this 24th day of June, 1902.

CHAS. H. THURSTON.

Witnesses:
A. B. UPHAM,
E. R. SCOTT.