

M. M. BEEMAN.
 METHOD OF MAKING GARMENT STAYS.
 APPLICATION FILED NOV. 30, 1908.

1,002,488.

Patented Sept. 5, 1911.

FIG. 1.

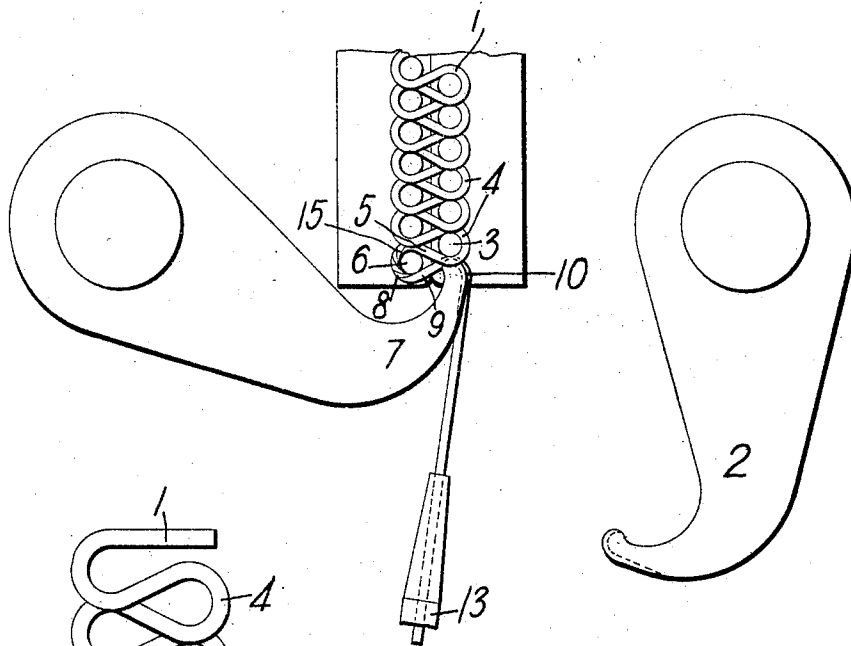


FIG. 4.

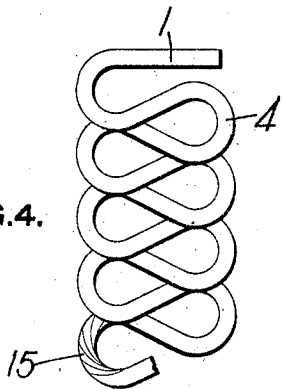


FIG. 5.



FIG. 3.

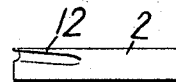
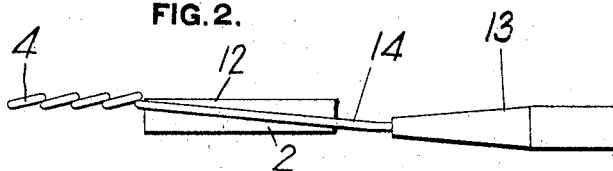


FIG. 2.



WITNESSES

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METHOD OF MAKING GARMENT-STAYS.

1,002,488.

Specification of Letters Patent.

Patented Sept. 5, 1911.

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To all whom it may concern:

Be it known that I, MARCUS M. BEEMAN, a resident of Meadville, in the county of Crawford and State of Pennsylvania, have invented a new and useful Improvement in Methods of Making Garment-Stays, of which the following is a specification.

This invention relates to a method of forming wire stays for garments and the like.

The object of the invention is to provide a method of forming said stays whereby a sufficiently rigid stay can be formed from comparatively light wire and particularly a stay which has greater resistance to bending in one direction than in the opposite and one which will not take a permanent set.

The invention comprises the method of bending wire to form the stay as hereinafter described and claimed.

In the accompanying drawing Figure 1 is a plan view showing the bending of the wire; Fig. 2 is a side view of a portion of the stay and the wire guide; Fig. 3 is a detail view of the end of one of the bending fingers; Fig. 4 is an enlarged plan view of a portion of the stay; and Fig. 5 is a cross section of the same.

In carrying out the method a wire 1 of suitable size is taken and is bent at intervals alternately in opposite directions, in a manner to form the stay and simultaneously twist the wire somewhat and place the same under initial torsional strain. The bending may be performed in any suitable way and is shown as carried out by mechanical means. As shown, the wire is taken by a finger 2 and bent around a pin 3 to form a loop or eye 4 and is carried by said finger across the stay, as at 5, and carried over another pin 6 which then rises, and the wire is caught by the opposite finger 7 and bent around said pin 6 to form a loop or eye 8 on the opposite side of the stay, and is then again carried across the stay, as at 9, and depressed and carried underneath the previously formed loop 4, as at 10. The bending as shown is performed by the bending fingers 2 and 7 having on their ends sloping or inclined lips 12 which serve to press the wire downwardly while bending the same around one of the pins and carrying the same across the stay. The unformed portion of the wire is held by the guide 13 inclined downwardly from the

plane of the formed portion of the stay, as shown at 14, Fig. 2, and consequently the portion of the stay forming the loops or eyes is formed on a spiral running upwardly, relatively speaking, while the transverse connecting portions are on a spiral running downwardly, due to the action of the inclined lips 12 of the bending fingers which force the wire underneath a previously formed loop or eye. The consequence is that the wire is twisted at the loops, as indicated by the spiral shade lines 15, Figs. 1 and 4, and is thereby put under an initial torsional strain. The loops of the fabricated portion of the wire are inclined or tilted from the plane of the stay, as shown in Fig. 2, while the unformed portion of the wire stands at the opposite angle or inclination from the plane of the stay. Consequently when the wire is carried across from side to side and the eye is tilted to bring it to the inclined position, a certain amount of twist is necessarily given to the wire. This places the wire under an initial torsional strain. This manner of forming the stays, that is, by holding the unformed portion of the wire at an incline to the formed portion of the stay, and carrying the wire across the stay and simultaneously bending it down, results in depressing the edges of the loops or eyes below the normal plane of the stay, so that the finished stay is somewhat concave on its lower side, as shown at 16, Fig. 5. This formation of the stay gives the same greater stiffness or resistance against bending in a direction away from the hollow or concave side of the stay, this being due in part to the concavity of the stay, in part to the torsional strain in the wire, and in part to the overlapping of the loops so that each loop is supported on one side on an adjacent one.

Inasmuch as garment stays must resist almost exclusively forces tending to bend them outwardly, this form of stay is admirably adapted for its purpose and can be formed of comparatively light wire and still answer its purpose. At the same time the stay is very yielding in the opposite direction, so that when the garment is taken off it is much more pliable than is usually the case with other forms of stays. Furthermore, the initial torsional strain in the wire and the concavity of the stay assist in preventing the stay from taking a perma-

nent bend or set when bent outwardly, that is, in the direction opposite from the concave face.

While the invention has been illustrated for forming a stay composed of only a single wire and having pear-shaped eyes or loops, this is not essential, and it will be understood that the invention is not limited to this particular form, but can be applied to the formation of wire stays of any character in which the wire is bent at intervals and alternately in opposite directions to form edge-forming loops or eyes and intermediate transverse connecting portions or crossings.

What I claim is:—

1. The method of forming garment stays consisting in bending wire at intervals and alternately in opposite directions to form curved edge-forming loops or eyes and transverse connecting portions, and while so bending the edge-forming loops or eyes imparting a twist to the wire and thereby placing the same under initial torsional strain.

2. The method of forming garment stays consisting in bending wire at intervals and carrying the same across the stay alternately in opposite directions to form curved edge loops or eyes and transverse connecting portions, and simultaneously therewith deflecting the part of the wire being carried across to deflect the loops or eyes from the normal

plane of the stay and thereby twisting the wire and putting the same under initial torsional strain.

3. The method of forming garment stays consisting in bending wire at intervals and carrying the same across the stay alternately in opposite directions to form edge-forming loops or eyes and transverse connecting portions, holding the unformed portion of the wire at an angle to the plane of the formed portion of the stay, and while carrying the wire across the stay deflecting the same in a direction opposite that at which the unformed wire lies, thereby twisting the wire and placing the same under torsional strain.

4. The method of forming garment stays consisting in bending wire at intervals and carrying the same across the stay and alternately in opposite directions to form curved edge-forming loops or eyes and transverse connecting portions, deflecting the wire and pushing the same under a loop or eye previously formed, whereby the eyes are deflected from the normal plane of the stay and the wire placed under initial torsional strain.

In testimony whereof, I have hereunto set my hand.

MARCUS M. BEEMAN.

Witnesses:

J. H. PARDEE,

A. L. WENTZ.