(No Model.)

R. S. WILLARD.

GARMENT SUPPORTER.

No. 356,860. Patented Feb. 1, 1887.

Fig. 1.

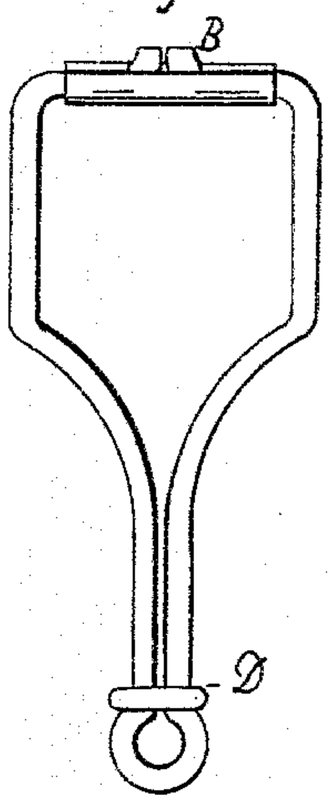

Fig. 2.

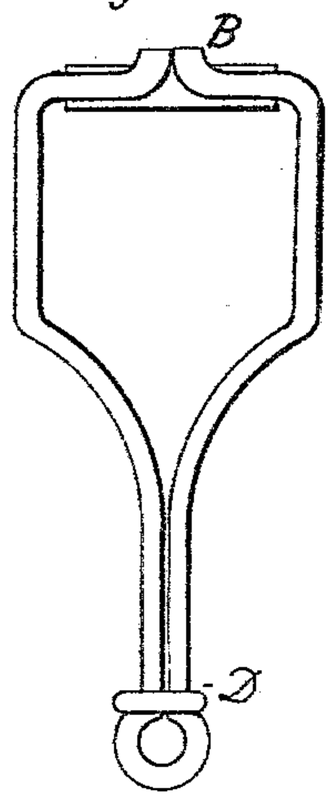

Fig. 3.

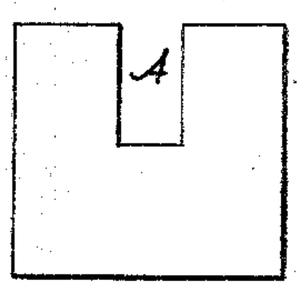

Fig. 4.

Witnesses
Calvin B. Walker
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Rodney S. Willard, Inventor

By his Attorney
Benj. R. Curtis

UNITED STATES PATENT OFFICE.

RODNEY S. WILLARD, OF ST. ALBANS, VERMONT.

GARMENT-SUPPORTER.

SPECIFICATION forming part of Letters Patent No. 356,860, dated February 1, 1887.

Application filed August 10, 1886. Serial No. 210,538. (No model.)

To all whom it may concern:

Be it known that I, RODNEY S. WILLARD, a citizen of the United States, residing at St. Albans, in the county of Franklin and State of Vermont, have invented certain new and useful Improvements in Garment-Supporters; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to a garment-supporter made of wire bent so as to produce parallel holding-surfaces, with an eye below and a larger eye or loop above for the attachment of an elastic band; and it consists in a supporter of this general character having novel means for securing the ends of the wire which form one side of the large loop; and it further consists in flattening the wire holding-jaws.

In the accompanying drawings, Figure 1 represents a supporter embodying my improvement. Fig. 2 is a vertical section through the sleeve or ferrule that holds the wire ends. Fig. 3 is a view of the sleeve or ferrule unrolled on an enlarged scale; and Fig. 4 is a cross-section of the wire holders of a supporter, the wire of the holders being flattened in a plane transverse to that of the supporter.

Heretofore garment-supporters have been made of wire by bending the same into the proper form and bringing the free ends in position to abut against each other. A sleeve or ferrule has been applied to these wire ends and the parts secured by soldering. The wire ends have in other cases been secured by looping them together, and I have made application for patent for a mode of securing them, which consists in overlapping the ends of the wire and soldering them; but the application of solder involves considerable expense, because of the time and labor required.

My present invention provides a fastening which can be made and applied by machinery without the use of solder. I secure about the ends of the wire a sheet-metal sleeve made from a flat piece notched at one side, as shown at A in Fig. 3 of the drawings. The ends of the wire are bent, as clearly indicated at B in Figs. 1 and 2, and enter the notch or slot in such manner as to be held therein when the sleeve is secured about the wire, substantially in the manner illustrated. This sheet-metal sleeve can be formed with the notch either in the edge of the plate forming the sleeve or wholly within the body of said plate, and the plate can be cut with the notch or slot and the wires bent and the sleeve secured about them, so as to securely hold said wires, either by hand-tools or by machinery, and my present invention does not relate to the means employed for producing it, but to the article itself. It will be perceived that the necessity of using solder is obviated and that the ends of the wire are held against either lateral or endwise movement.

D indicates a ring or band that is applied about the holding-wire, as indicated, the function of which is to prevent the fabric which the supporter holds from being drawn into the lower eye. The present invention is not, however, confined to use of such ring or band.

The improvement, which consists in flattening the holding-wires or spring-holders, is not limited in its use to the particular means described for securing the wire ends. Preferably the wire of the lower eye or loop and the holding-wires, or the latter alone, are made flat, the upper loop being formed of the round or unflattened wire. Such flattening provides a wider holding-face with a given weight of metal, so that a larger number of threads will be embraced between the holding-faces, and the danger of injury to delicate fabrics, distortion or displacement of threads is diminished. Holding-wires flattened so as to embrace several threads parallel with their length and a corresponding extent of crossing threads will obviously tend to distribute their grasp or hold more widely than is possible with ordinary wire, and they are more suitable for laces and other fine or fragile goods, the threads of which are liable to be pulled apart or broken by force applied through the holder. The same effect and advantage can measurably be secured by an equivalent construction made from sheet metal, a wide holding-surface being thereby provided.

In practice I first form the supporter of or-

dinary round iron or steel wire, giving to the article the described shape, and in some cases making the holding-wires flat in a plane transverse to the supporter. I then carefully temper the wire of the article until it resembles needle-steel and is highly elastic. The flattening of that part of the wire which is to constitute the holding-jaws should be effected before forming the supporter and before tempering.

My attention has been called to Patent No. 7,347, reissued to Warren, October 10, 1876, for a stocking-supporter. The device therein described and claimed is made flat in a plane parallel to the holder for the specified purpose of presenting sharp edges to the fabric supported. Such construction I do not claim; but

What I do claim, and desire to secure by Letters Patent, is—

1. The garment-supporter made of wire, having its free ends secured within a notch or slot of a sleeve or ferrule, all substantially as shown and described.

2. A garment-supporter made of round spring-wire, the holding-jaws of which are parallel and formed of the wire flattened in a plane transverse to the supporter, substantially as shown and described, whereby said holding-wires present broader surfaces to the article supported, their elasticity being unimpaired, as set forth.

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

RODNEY S. WILLARD.

Witnesses:
ALBERT P. CROSS,
STEPHEN E. ROYCE.