J. M. WELSH.

CORSET STAY.

APPLICATION FILED APR. 6, 1908.

1,064,947. Patented June 17, 1913.

Fig. 1

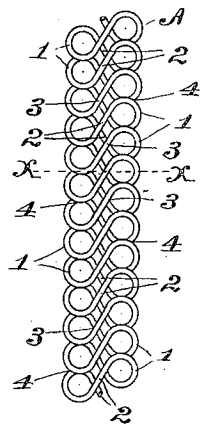


Fig. 2

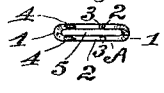


Fig. 3

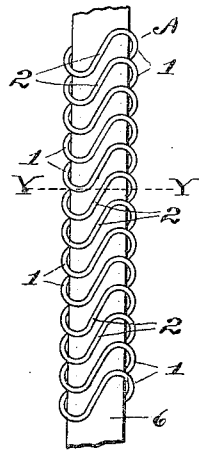
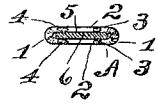


Fig. 4



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UNITED STATES PATENT OFFICE.

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CORSET-STAY.

1,064,947. Specification of Letters Patent. Patented June 17, 1913.

Application filed April 6, 1908. Serial No. 425,333.

To all whom it may concern:

Be it known that I, JAMES M. WELSH, a citizen of the United States, and resident of Meadville, in the county of Crawford, in the State of Pennsylvania, have invented new and useful Improvements in Corset-Stays, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to wire stays for corsets and analogous wearing apparel.

The objects of the invention are to produce a wire stay which is strong, durable and capable of resisting severe strains, and which permits of a thin flexible reinforcing strip to be inserted endwise therethrough, so that wire of very small gage can be used without sacrificing strength.

The invention comprises the improved construction of wire stay hereinafter described and claimed.

In the accompanying drawing, Figure 1 is a plan view of a garment stay embodying my invention; Fig. 2 is a transverse section on the dotted line X—X, Fig. 1; Fig. 3 is a plan view of the stay provided with a metal reinforcing strip; and Fig. 4 is a transverse section on the dotted line Y—Y, Fig. 3.

The stay is composed of wire and is preferably formed of a continuous piece A of a high grade steel wire, such as is ordinarily known as "piano-wire" or "music wire."

In producing the stay, the wire is bent at intervals into a series of loops 1 of uniform shape and size and preferably circular and disposed alternately in two parallel rows forming the edges of the stay, the successive loop-connecting portions 2 of the wire being preferably substantially straight and crossing each other at 3. The loop-connecting portions 2 extend from edge to edge of the stay and are disposed alternately on opposite side faces of the stay in parallel planes and out of contact, whereby a wide unobstructed passage is produced throughout the length of the stay, as shown at 5, Fig. 2.

The straight loop-connecting portions 2 extend substantially diagonally across the stay and pass alternately over and under two preceding portions, whereby the side of each loop is made to overlap the adjacent side of an adjoining loop, as indicated at 4, and each loop of a row is so arranged that its center is disposed on a transverse line passing midway between the centers of two adjoining loops of the other row. Thus two contiguous oppositely arranged loops form substantially a figure **8**. The overlapping of the loops permits them to slide over each other when the stay is flexed, and therefore adds to the flexibility of the stay, as well as enabling the loops to mutually support each other when the stay is flexed, whereby short bends are avoided.

By this formation a stay is produced which possesses maximum strength and durability, which is very flexible and at the same time capable of resisting severe strains, and which readily assumes its normal condition after having been flexed.

To permit the stay to be formed from wire of very small gage so as to reduce the thickness thereof, and at the same time maintain the necessary strength, I provide a reinforcement consisting of a thin spring-metal strip 6 which is inserted endwise in the passage 5 and has its side edges embraced by the rows of loops, as shown in Fig. 4.

What I claim is:

1. A garment stay consisting of wire bent at intervals into a series of loops arranged alternately in two parallel rows forming the edges of the stay, with the loop connecting portions disposed alternately on opposite side faces of the stay in substantially parallel planes extending from edge to edge of the stay, the loop connecting portions on one side face crossing those on the other side face, and each loop connecting portion extending in its plane from edge to edge of the stay, thereby producing a uniform passage extending from edge to edge of the stay for its entire length.

2. A garment stay consisting of wire bent at intervals into a series of loops arranged alternately in two parallel rows forming the edges of the stay, with the loop connecting portions disposed alternately on opposite side faces of the stay in substantially par-

allel planes extending from edge to edge of the stay, the loop connecting portions on one side face crossing those on the other side face, with two contiguous oppositely arranged loops forming substantially a figure 8, and each loop connecting portion extending in its plane from edge to edge of the stay, thereby producing a uniform passage extending from edge to edge of the stay for its entire length.

3. A garment stay consisting of wire bent at intervals into a series of loops arranged alternately in two parallel rows forming the edges of the stay, with the loop connecting portions extending diagonally from edge to edge of the stay and disposed alternately on opposite side faces of the stay in substantially parallel planes extending from edge to edge of the stay, the loop connecting portions on one side face crossing those on the other side face, and each loop connecting portion extending in its plane from edge to edge of the stay, thereby producing a uniform passage extending from edge to edge of the stay for its entire length.

4. A garment stay consisting of wire bent at intervals into a series of loops arranged alternately in two parallel rows forming the edges of the stay, with the loop connecting portions disposed alternately on opposite side faces of the stay in substantially parallel planes extending from edge to edge of the stay, the loop connecting portions on one side face crossing those on the other side face, and each loop connecting portion extending in its plane from edge to edge of the stay, thereby producing a uniform passage extending from edge to edge of the stay for its entire length, each side of a loop overlapping the adjacent side of an adjoining loop.

5. A garment stay consisting of wire bent at intervals into a series of loops arranged alternately in two parallel rows forming the edges of the stay, with the loop connecting portions disposed alternately on opposite side faces of the stay in substantially parallel planes extending from edge to edge of the stay, the loop connecting portions on one side face crossing those on the other side face, and each loop connecting portion extending in its plane from edge to edge of the stay, thereby producing a uniform passage extending from edge to edge of the stay for its entire length, the loops of each row overlapping successively and each loop being free from an adjoining loop to permit movement of the loops over one another when the stay is flexed.

6. A garment stay consisting of wire bent at intervals into a series of loops arranged alternately in two parallel rows forming the edges of the stay, with the loop connecting portions disposed alternately on opposite side faces of the stay in substantially parallel planes extending from edge to edge of the stay, the loop connecting portions on one side face crossing those on the other side face, and each loop connecting portion extending in its plane from edge to edge of the stay, thereby producing a uniform passage extending from edge to edge of the stay for its entire length, and a reinforcing flat metal strip extending lengthwise of the stay and having its edges embraced by the two rows of loops.

7. A garment stay comprising a single continuous wire, bent at intervals to form a central body connection, and a series of uniformly shaped loops arranged in two substantially closely arranged parallel rows, each complete consecutive loop being alternately formed on one side of the center of the stay, and each consecutive loop being connected by a portion of wire bent in zigzag relation to the loops with which it connects, as to render the loops on each side of the stay disposed in staggered relation to those formed on the opposite side, the loops in each row disconnected from the adjacent loops in the same row.

8. A garment stay comprising a single continuous wire, bent at intervals to form a central body portion and a series of uniform circular shaped loops arranged in two substantially parallel rows extending throughout the length of the stay, the loops of each row being consecutively disposed alternately at opposite sides of the center of the width of the stay, each loop on each of the respective sides being so formed as to overlap the loop formed above it but disconnected therefrom, and adapted to engage therewith when the stay is flexed, each of the loops forming the rows on the respective sides being connected by portions of the wire bent in zigzag relation thereto as to render the loops formed on one side disposed in staggered relation to those formed on the opposite side.

9. A garment-stay consisting of wire bent at intervals to form a series of uniform circular loops arranged alternately in two parallel rows, two oppositely arranged loops forming substantially a figure 8 and the loop-connecting portions extending diagonally across the stay from edge to edge thereof and disposed alternately on opposite side faces of the stay in substantially parallel planes and out of contact to form a wide unobstructed passage extending throughout the length of the stay, and a reinforcing strip in said passage and having its edges embraced by the loops.

10. A garment-stay consisting of wire bent at intervals to form a series of loops arranged alternately in two parallel rows and having their connecting portions extending from edge to edge of the stay and

crossing one another and being disposed alternately on opposite side faces of the stay in substantially parallel planes to produce a wide unobstructed passage extending throughout the length of the stay, the loops of each row overlapping successively and each loop being free from an adjoining loop, and a reinforcing flat metal strip inserted in said passage and having its edges embraced by the two rows of loops.

JAMES M. WELSH.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."