(No Model.)

O. A. GORTON.

STIFFENING SPRING FOR CORSETS, &c.

No. 319,404. Patented June 2, 1885.

Fig. 1.

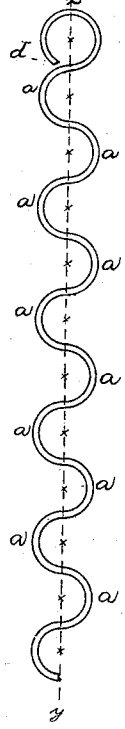


Fig. 2.

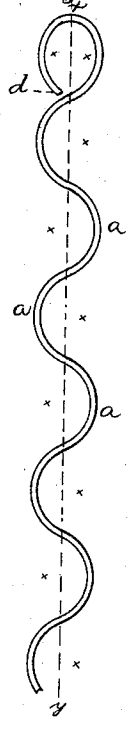


Fig. 3.

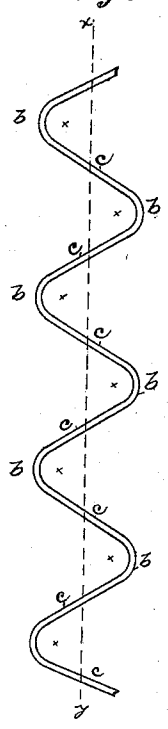


Fig. 4.

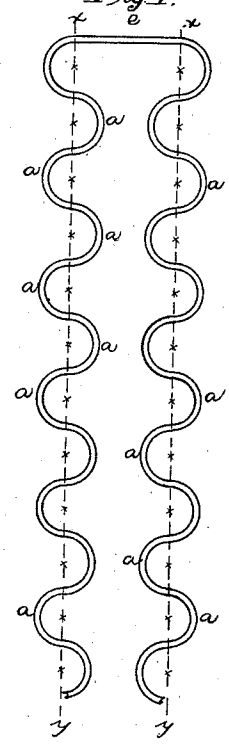


Fig. 5.

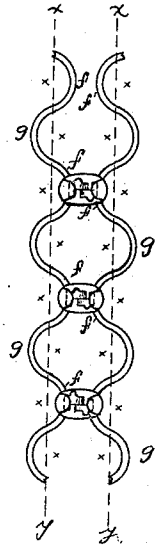


Fig. 6.

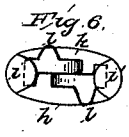
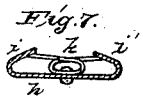


Fig. 7.



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UNITED STATES PATENT OFFICE.

ORREN A. GORTON, OF NEW YORK, N. Y.

STIFFENING-SPRING FOR CORSETS, &c.

SPECIFICATION forming part of Letters Patent No. 319,404, dated June 2, 1885.

Application filed October 6, 1884. (No model.)

To all whom it may concern:

Be it known that I, ORREN A. GORTON, of New York city, in the county and State of New York, have invented a certain new and useful Improvement in Stiffening-Springs for Corsets and Other Body-Wear, of which the following is a specification.

The object I have in view is to produce stiffening-springs for corsets, dresses, or garments of any kind worn by either sex, or for abdominal supporters, or other body-wear, which springs, while they will possess the requisite longitudinal stiffness to properly maintain the form of the article of body-wear to which they are applied, will have great lateral elasticity in all directions, permitting free movements of the body.

I design to supplant with my peculiar springs those at present used, which are usually made of flat strips of steel, whalebone, or other material. These flat-strip springs have no lateral elasticity edgewise of the springs, and do not permit the free movements of the body, which my springs are intended to allow; and hence the corsets or other body-wear provided with my stiffening-springs have the special advantage of being more conducive to the health of the wearer than are those articles as at present constructed. My peculiar springs not only take the place of the stiffening-steel or whalebone springs throughout the body of the corset or other article, but they may also be used for the clasp-springs at the front of the corset. I have provided a peculiar clasp for use with this spring, which clasp does not materially interfere with the free movements of the body.

My springs are constructed so that they can be readily placed in the flat sheaths or pockets provided in the articles of body-wear to which they are applied, and will not catch in the fabric of the articles, and, also, so that they will maintain their positions in such pockets or sheaths without turning.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 represents a part of a spring embodying my invention. Fig. 2 is a similar view of a slightly modified form of the spring. Fig. 3 represents a zigzag spring, which is shown for purposes of comparison, and is not included in my invention. Fig. 4 is a view of two springs made from one piece of wire. Fig. 5 is a view showing my invention applied to clasp-springs. Fig. 6 is a front view of the clasp, and Fig. 7 is an edge view of such clasp.

My improved spring is made of wire, of any suitable shape in cross-section, bent laterally into a succession of curves, *a*, every portion of the wire throughout its length being curved. To produce this construction, the centers of the curves must be upon a bisecting line, *x y*, as shown in Fig. 1, or on opposite sides of such a line, as shown in Fig. 2. The centers of the curves are shown by crosses in the drawings.

It has been proposed to use for body-wear a wire spring of zigzag form, such as shown in Fig. 3. This spring has the centers of its lateral curves *b* on the same side of the bisecting line *x y*, such curves being connected by straight portions of wire, *c*. The zigzag springs differ from the springs curved laterally in every part, in that appreciable portions of the wire between the lateral curves and crossing the bisecting line must be straight, as explained, thus differing from the spring covered by my invention in a respect which may be compared to the difference between the letters **Z** and **S**. In consequence of this important difference in shape, the zigzag spring is much weaker in point of longitudinal resistance or strength than is my spring, and hence is not practically adaptable for the uses for which my spring is designed.

At each end of my spring the curve of the wire may be continued, and the point *d* turned inwardly, presenting a finished end without catching points, for rendering the spring easy of insertion into the flat sheath or pocket which receives it. The point *d* may be attached to the body of the wire. If desired, two or more springs may be made of one piece of wire, the springs being connected at one end by a straight or curved piece, *e*, as shown in Fig. 4. The two or more springs thus connected will be used for insertion into adjoining sheaths or pockets.

For the clasp-springs my improved springs may be used, the alternate curves *f* being secured to the adjoining edges of the corset or other article, while the curves *g* are left projecting. Spring-clasps are used, which catch

over these projecting curves, but hold them loosely, so as to permit of free lateral movements. These clasps are composed of plates *h*, having catching-points *i i'*, and a double locking-spring, *k*. These spring-clasps are snapped over the projecting curves to close the corset-front, and can be readily released at any time at one or both ends by depressing spring *k*, this spring being provided with projecting lips *l*, for enabling this to be readily done.

What I claim is—

1. A stiffening-spring for body-wear, composed of a wire bent back and forth laterally in a series of compound curves throughout every portion of its length, substantially as set forth.

2. A stiffening-spring for body-wear, composed of a wire bent back and forth laterally in a series of compound curves throughout every portion of its length, the centers of such curves being upon or on opposite sides of a bisecting line, substantially as set forth.

3. The combination of two or more stiffening-springs made of one piece of wire bent back and forth laterally into a series of compound curves, said springs being connected together and adapted for insertion into adjoining sheaths or pockets, substantially as set forth.

4. A stiffening-spring for body-wear, composed of a wire bent back and forth laterally into a series of compound curves, and having inwardly-turned ends, substantially as set forth.

5. A stiffening-spring for body-wear, composed of a wire bent back and forth laterally into a series of compound curves throughout every portion of its length, the centers of such curves being upon or on opposite sides of a bisecting line, and having inwardly-turned ends, substantially as set forth.

6. The combination, with the stiffening-springs bent back and forth laterally in a series of compound curves, used as clasp-springs, of loose clasps connecting two of such springs and permitting lateral movement, substantially as set forth.

This specification signed and witnessed this 1st day of October, 1884.

ORREN A. GORTON.

Witnesses:

WM. H. MEADOWCROFT,

PAUL D. DYER.