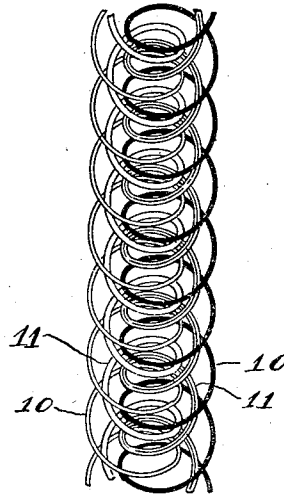


E. I. WORREST.
CORSET STAY.
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1,284,531.

Patented Nov. 12, 1918.



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UNITED STATES PATENT OFFICE.

ELLA I. WORREST, OF LINCOLN, NEBRASKA.

CORSET-STAY.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ELLA I. WORREST, a citizen of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Corset-Stays, of which the following is a specification.

The purpose of my invention is to effect an improvement in corset stays of the well known type formed of spirals of suitable wire rolled flat. The principal aims of such stays generally are to afford ample support to the corset and the figure of the wearer, while at the same time being sufficiently yielding to the contour of the figure; which will be light, and of such open structure that ventilation will be thorough.

Heretofore flattened spiral wire spring stays have been provided which had sufficient supporting efficiency, but these have usually been heavy, thick, of excessive rigidity, and with thick unyielding edges, which in certain movements or positions of the wearer bear uncomfortably upon the person and thereby also cause excessive wear in the corset fabric, as well as having such close formation in some of the better known kinds that ventilation has been inefficient, and laundrying is required at excessively frequent intervals to assure sanitation. It is among the advantages of my invention that a stay made in accordance therewith is extremely light for a given supporting efficiency, very thin, highly flexible, has thin edges which will not bear uncomfortably against the wearer, but yield, instead, by bending on a line transversely of the stay.

It has been an objection of some of the best known stays which attain in the desired degree the comfortable yielding to the contour of the figure so much desired, that they soon get a set form corresponding to that of the natural figure of the wearer, and frequently this is different from the approximation of the ideal which the corset is intended to give. My invention has been found to provide a most comfortable stay which retains its form properly.

It has been found in the art heretofore that the closest approach to the ideal in effecting adequate support with maximum flexibility is attained by the use of a plurality of strands of light wire of parallel convolutions, in the same stay, but there has usually been the objection that they are

heavy, thick, especially thick at the edges, so closely woven that circulation of air therethrough is inefficient and they quickly become filled with moisture from the person of the wearer when especially active, or overheated. Many also have the objection that the bends of the wires presented toward the edge at one or both sides are so acute that they chafe the inclosing fabric rapidly—or at least rapidly as compared to the rate of wear caused by a stay embodying my invention and having like supporting and flexing efficiency. It is difficult to construct a corset with one of these thick stays so that the stays will not show through the garments of the wearer, and at any event, to the touch hard angularities are presented which are most objectionable. I have found that it is possible to utilize a plurality of wires to produce a stay with sufficient supporting effect yet retaining comfortable flexibility, without the foregoing objections. My stay has the effect of tapering in thickness toward the edges so that no thick parts are presented thereat, and they do not tend to show through the garments of the wearer, nor offer disagreeable angularities to the touch as might occur in dancing, or when the wearer rests the hands upon the hips. It is so formed at both edges that no acutely bent portions are directed outward, but widely rounded convolutions presented so that the chafing of the corset fabric is reduced to a minimum and the life of the corset greatly prolonged. My stay is also of very open structure, so that the tendency of moisture to accumulate therein and upon is reduced to a minimum. The stay is also much lighter than one of like supporting and flexing efficiency produced by prior methods.

An additional advantage found in my stay is the fact that while it has yieldable edge portions, it will not fold in the pockets of the corset, which has been a great objection to prior stays of certain types. By reason of this construction also, the wearer is not subjected to irritation of the cuticle which is found to produce a most unpleasant itching sensation where certain types of stays are used.

Additional advantages reside in the invention and further objects and features of invention will be found, some of which will appear from the following description and

from the drawing, which is an elevation of a stay fragment constructed in accordance with my invention.

There is illustrated a section of stock 5 which may be formed and wound on spools to be cut off in the proper lengths and provided with guards at the ends as required for use. The stay as shown comprises a number of wire springs, each having been 10 bent to form regular spirals with equally spaced helices; then brought into close parallel relation with their abutting side portions intermeshed, and passed under rolls in such a manner as to flatten all, forming 15 scallop-like edges on the stock and securely holding the parts against separation. The wires may be screwed together before flattening, a method familiar in the art and therefore not described in detail, or the 20 coiled springs may be simply laid together in proper relation, so that they will overlap when flattened, which is also a familiar method in the art, and in either case the parts will be held in proper relation by their 25 snug fit and the use of sufficient pressure to cause the indentation of the crossed portions of wires by each other, securing an interlocking effect.

In the flattening of a uniform helical 30 spring, it is well known that at one side of the flattened spring there will appear curved portions of greater arc than the cylindrical boundary of the original helix while at the other side loops are presented having more 35 acute bends at their outer parts. The outer wires of my device are much smaller in diameter than the central wire, and are each disposed with their loops directed inwardly toward the loops of the other.

40 The stay comprises a light wire and a heavy wire at each side, the two at each side being formed with loops uniformly spaced longitudinally of the stay, the loops being presented inwardly, the loops from each 45 side being alternately lapped over and under those from the other side. The bows 10 of the lighter wires, however, are extended laterally a slightly greater distance than the bows 11 of the heavier wires, so that the

stay presents an edge portion of easily yield- 50 ing wire, while the stay as a whole has the strength for support afforded by the heavy wires supplementary to the light wires.

The advantages of an extremely broad 55 stay may thus be availed of when desired, without the objectionable edge portions found in the ordinary stay construction, the light wire exerting a supporting effect of a gentle nature, in the nature of a multiplicity of branches on a heavy stem, the 60 heavy wires being the counterpart of the stem. The device does not require to be made of great width, however, and may be produced in the narrow widths generally 65 used in corsets.

The stays may be electroplated after forming, or otherwise treated in accordance with 70 familiar practices in the art, to obviate liability of corrosion, and to improve them in other ways.

The light wires at the outer sides of the stay are preferably spaced further from the 75 medial line of the stay than the heavy wires, so that the edge portions presented will yield and flex more readily under pressure incident to use of the device in a corset. The 80 projecting easily flexible edge portions may be attained by using a slightly larger helix in the light wires at the right, so that the loops may extend inwardly the same distance as the loops of the heavy wire.

What is claimed:

In a corset stay, two compound spirally wound flat wire springs having their loops 85 opposed and overlapped in intermeshed relation, each spring consisting of one heavy wire and one very light wire, the light wire of each spring having bows extended a considerable distance beyond the bows of the heavy wire and the loops of the two wires 90 being slightly overlapped.

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

Mrs. ELLA I. WORREST.

Witnesses:

H. L. WOODWARD,
JOHN E. BENTON.