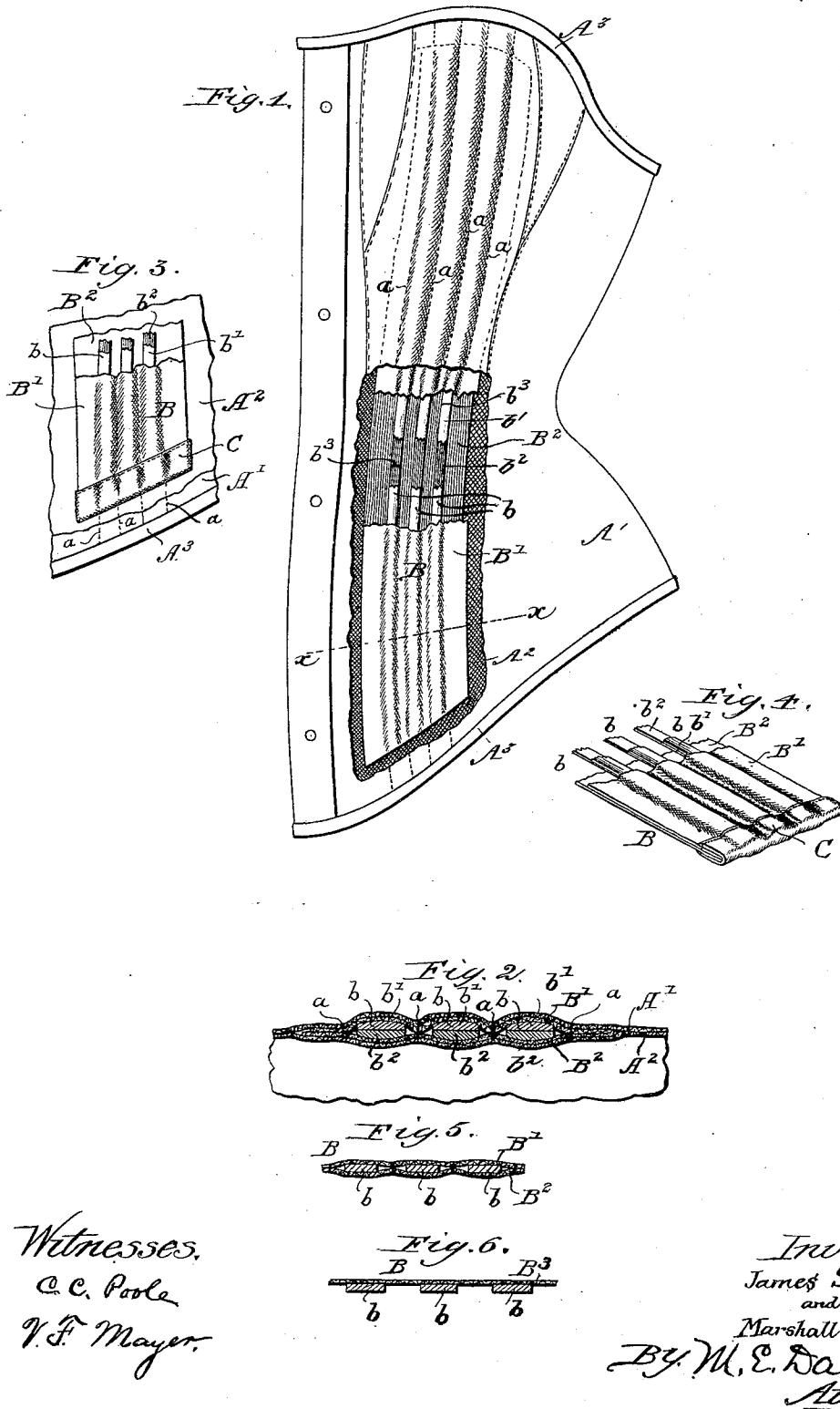


(No Model.)

J. STONE & M. GARDNER.
METHOD OF CONSTRUCTING CORSETS.

No. 351,345.

Patented Oct. 19, 1886.



UNITED STATES PATENT OFFICE.

JAMES STONE AND MARSHALL GARDNER, OF AURORA, ILLINOIS, ASSIGN-
ORS, BY DIRECT AND MESNE ASSIGNMENTS, TO SAID STONE, ELIZABETH
FLORSHEIM, OF CHICAGO, AND ALICE M. BALL, OF AURORA, ILLINOIS.

METHOD OF CONSTRUCTING CORSETS.

SPECIFICATION forming part of Letters Patent No. 351,345, dated October 19, 1886.

Application filed January 8, 1886, Serial No. 187,954. (No model.)

To all whom it may concern:

Be it known that we, JAMES STONE and MARSHALL GARDNER, of Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Methods of Constructing Corsets; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide an improvement in the manufacture of corsets with reference to the stiffening thereof; and it consists in the matters hereinafter described, and pointed out in the appended claims.

The invention embraces an improved process or method of applying stiffening to corsets, as will hereinafter appear.

A corset constructed by the novel process constituting our invention comprises, in its essential features, the usual outer and inner layers of cloth which form the body of the corset, and a composite stiffening-web inserted between the said body-layers, composed of a series of stiffening-strips (herein denominated "bones," as distinguished from the cord stiffening heretofore used) of whalebone, bamboo, cane, or other similar stiffening material, arranged side by side and apart from each other, and connected with each other by means of a layer or layers of flexible material, or by connections other than the cloth layers above mentioned as forming the body proper of the corset, the said stiffening-web forming what is called a "battery of bones," and being secured between the layers of the corset-body by stitches extending through said layers and through the flexible material of the battery between the said bones. The stiffening formed and applied in this manner is made shorter than the height of the corset, and terminates at both ends at a distance from the upper and lower edges of the latter. Said stiffening is also preferably provided at its ends with a binding extending over the ends of the stiffening-strips, and attached at both edges to the stiffening by stitches extending through the binding and the layer or layers of flexible

material uniting the strips, in a manner hereinafter more particularly described.

The composite stiffening-web above described is claimed as a novel article in an application for patent, Serial No. 146,738, filed by us in the United States Patent Office upon the 29th day of October, 1884.

The improved process or method above referred to as constituting this invention consists, essentially, in first forming a composite stiffening-web in continuous or indefinite lengths, said stiffening-web consisting of strips of bamboo or analogous material united by one or more layers of flexible material, or by other means, as above set forth, then cutting the stiffening-web into lengths or batteries shorter than the height of the corset, then applying the batteries between the layers which form the body of the corset, with the ends thereof at a distance from the upper and lower edges of the corset-body, and finally securing the stiffening in place by lines of stitches passing through the layers of cloth composing the corset and through the battery between the said bones.

In one common form of corset heretofore used the strips of whalebone, horn, or other similar material have been secured between the inner and outer layers of material composing the corset by forming, by means of parallel rows of stitching, a series of pockets, into which the strips of stiffening material have been inserted separately by the hand. This process of stiffening corsets has been found objectionably slow and expensive, and in order to facilitate the operation of inserting the bones a method for securing said bones in place has been employed wherein a sewing-machine having a cording attachment has been used to stitch a series of relatively narrow and flexible bones between the inner and outer layers of cloth composing the body of the corset. This method of inserting the strips has been found expeditious; but when it is used the strips have been extended to the extreme edge of the fabric of the corset at one margin thereof, for the reason that in stitching the strips into the corset the strips can only be cut off at a distance from the margin

of the corset by the slow and tedious process of ripping apart or separating the layers of cloth after they have been stitched, and severing the bones at a distance from the said margin, it being impracticable to terminate the stitching at a distance from the margin, on account of the use of the cording attachment, and because in the operation of inserting the bones the lines of stitching and the bones are continued unbroken from one piece or section to the next through a number of sections, as will be hereinafter more fully explained.

A construction in which the stiffening-strips extend to the extreme edge of the corset is objectionable for several reasons, one of which is that the ends of the strips are liable in a short time to wear through the binding secured over the edge of the corset in finishing it. It is desirable, therefore, to so construct and insert the stiffening that a flexible border will be left at a margin of the corset; and one of the principal objects of this invention is to provide a method whereby the desired flexible border will be left at the margin of the corset without especial care or attention to accomplish this end, while at the same time the operation of inserting the strips may be rapidly and easily performed.

A method illustrated in a prior Letters Patent to Gunning, No. 321,289, dated June 30, 1885, has been heretofore employed, by which the bones are made shorter than the height of the corset and terminate at a distance from both upper and lower margins of the latter. Said method involves the use of a separate fly, made shorter than the body of the corset and first fastened at one edge between the layers of the corset-body. The bones are secured between this fly and the outer layer of cloths forming the body of the corset, one bone at a time, and by stitching said fly only to the said outer layer along the side of the bone. The objection to this method and the advantage of the method herein set forth will be better understood from a full explanation at this point of the actual steps taken in the construction of the two corsets. In boning all corsets, where the manufacture is conducted on a large scale, each row of stitching is continued unbroken from one piece or section to another corresponding piece or section to the number, ordinarily, of twelve or twenty-four sections, which is the number of corresponding sections in a dozen corsets given out at one time or in one batch to the operator. The bones are also in continuous lengths, and run from one section to the next for the full length of such bones, which, in the case of bamboo, is ordinarily about twelve feet.

In the practice of the Gunning invention the stitching through the fly and the one outer layer of the corset is continued from one section to the other, as above set forth, one bone being inserted and stitched in at a time, and when a group of bones which are then held between the fly and the outer fold of the cor-

set are thus secured the sections are severed by cutting the bones and stitching between and at the adjacent edges of these sections. This obviously leaves the bones of the full length of the corset-section. The bones are then again cut off to the length of the fly, being of course unconfined by the stitching for the distance between the end of the fly and the edge of the corset-section. Thus it will be seen that not only are three operations of cutting performed upon the bones for each section of corset, in order to reduce them to the desired length, (which will be a little longer than the fly,) but also that there is a considerable waste of the stiffening material or bones. In addition to these disadvantages, it may be mentioned that the corset thus made has an unfinished appearance upon its inner surface, owing to the absence of stitching in that portion occupied by the fly, because the stitching, as pointed out, extends only through the fly and the outer layer of the corset. Not only is the corset thus constructed unsightly upon its inner surface, but it is also liable to wrinkle in the unstitched portion. In our method, on the other hand, the batteries of bones are originally cut to the desired length, and after having been once placed between the layers of the several sections the stitching may be continuous from one section to another and through both layers of the corset-body, leaving no occasion for severing the bones after the series of sections have been stitched, or for trimming them finally to the desired length. As will further appear, our method has a material advantage also with respect to the application of the cap or binding at the ends of the bones.

As a preferred way of carrying out our invention, the bones are united in the proper relative positions side by side to form a battery by means of two layers of cloth or other fabric, paper, or any other suitably-flexible material pasted or glued together with the strips between them, the stiffening, when used, being secured to or between the thicknesses of material composing the corset by stitching through the material of the corset and the material uniting the bones along the spaces between said bones, the use of paste or glue being preferred as enabling the battery to be much more expeditiously and cheaply made than by sewing between the bones, while at the same time affording a sufficiently-strong connection to enable the battery to be suitably placed and sewed in the corset.

The invention may be more readily understood by reference to the accompanying drawings, in which—

Figure 1 is a fragmentary view of a corset containing a length of composite stiffening web or battery constructed by the process constituting this invention, a part of the outer layer of the cloth of the corset being broken away to show the said battery. Fig. 2 is an enlarged sectional view through the inner and outer layers of the corset and the battery taken

upon line *x x* of Fig. 1. Fig. 3 is a side elevation of the lower marginal part of a corset, illustrating a binding applied to the lower edge of the battery. Fig. 4 is a perspective view of the end of a battery removed from the corset, showing a binding applied thereto. Figs. 5 and 6 illustrate other forms of the battery.

In the said drawings *A'* *A''* represent, respectively, the outer and inner layers of cloth composing the corset, and *B* a battery of bones separately constructed, as described, and secured between said layers by rows of stitching, indicated by *a*, Figs. 1 and 2. The batteries *B* each consist of a series of relatively narrow strips, *b*, of stiffening material—such as whalebone, horn, bamboo, cane, or other material used for the purpose—and two layers, *B'* *B''*, of cloth, paper, or other flexible material, between which the strips or bones *b* are secured, and by which they are held at the desired distance apart. The strips or bones may each consist of a single piece of whalebone, bamboo, or other material, as indicated in Fig. 5; or said strips may be made duplex or in two thicknesses or layers, as indicated at *b'* *b''*, Figs. 1, 2, 3, and 4, the use of the duplex strips being preferred, for the reason that the layers composing said strips serve to sustain each other, and thereby give a greater degree of flexibility and strength than can be obtained by the use of single bones of corresponding dimensions.

The layers *B'* *B''* of flexible material may be united to each other so as to hold the bones in place by lines of stitching extending between the bones, as shown, for instance, in Fig. 5, or by pasting or gluing together the said layers of flexible material with the bones between them. The use of glue or paste as a means for uniting the parts is preferred as affording a cheap and convenient means of uniting the parts, while at the same time one which is sufficiently strong for the purpose, it obviously not being necessary that the bones should be held in place otherwise than temporarily, or until the stiffening has been placed in the corset and properly secured therein by the lines of stitching between the bones.

In the construction of the stiffening described with duplex strips and in continuous lengths, the layers *b'* *b''*, composing the individual strips, are preferably arranged to break joints in the manner indicated at *b''*, Fig. 1, and as fully described in the above-mentioned prior application for Letters Patent of the United States, Serial No. 146,738.

The stiffening *B*, as clearly shown in Fig. 1, is cut into lengths shorter than the height of the corset, so as to leave a flexible marginal part, *A''*, both at the top and bottom of the corset, whereby the bones of the stiffening are prevented from wearing or cutting through the binding at the edge of the corset.

It is entirely obvious that the same favorable results of enabling the stiffening to be cut to the desired lengths, and readily and

quickly secured in place, may be obtained by the use of a stiffening in which a single layer only of flexible material is employed for uniting the strips. This construction is illustrated in Fig. 6, in which *B''* indicates a layer of cloth or other flexible material, to which is glued or pasted a series of single strips, *b*.

To obviate liability of the layers or thicknesses composing the body of the corset being worn or cut through by the raw edges or ends of the bones, the ends of the batteries *B* are preferably covered by a binding, *C*, of cloth, braid, or other suitable material, folded over the edge of the battery, and secured to the latter either by pasting or by sewing through the edges of the binding and the battery, as clearly shown in Figs. 3 and 4, said binding being applied to the stiffening before the latter is inserted in the corset.

In the prior patent to Gunning, hereinbefore referred to, a device is described for covering the ends of the bones, consisting of a folded piece of cloth or cap embracing the end portion of the bones, which for this purpose are made to project beyond the fly shown and described in said patent, said folded piece of cloth or cap being held by sewing its folded ends to the cloth of the corset at either side of the group of bones. In the operation of securing in place the cap shown in said patent, said cap is first attached at one of its ends between the inner and outer layers of cloth of the corset by being sewed at one end to said layers, together with the fly above mentioned, and after the bones have been secured beneath the fly and cut off, so as to leave their ends projecting beyond said fly, the cap is placed over the projecting ends of the bones, and its free ends thereafter secured by sewing to the layer of the corset between which and the fly the bones are secured.

The binding applied to a separate stiffening battery, as proposed by us, has obvious and important advantages over the cap shown in the said Gunning patent, for the reason said binding may be readily applied at one operation before the battery is inserted in the corset, and for the additional reasons that the said binding is held upon the battery throughout its entire length by the pasting or stitching employed to hold it in place, and is additionally held and secured by the lines of stitching which pass through the battery between the bones, and thereby securely hold the binding at both sides of each bone. In the construction employed in the Gunning patent, on the contrary, the caps are held at their ends only, so that they are liable to become displaced in their middle parts, and are adapted but imperfectly to hold the strips from endwise movement.

An advantage is gained by sewing the binding to the battery in the use of a battery made with duplex strips, for the reason that the stitches, passing through the binding and battery, serve as a means of holding the ends of

the layers composing said strips from sliding one upon the other.

We claim as our invention—

1. The method of constructing corsets having body-stiffening strips of bamboo or analogous material, which consists in first forming a composite stiffening-web by connecting together a plurality of stiffening-strips arranged parallel with each other, with spaces between them, then cutting the stiffening-web to a length shorter than the height of the corset, then applying the said length or battery between the layers of cloth which form the body of the corset, with the ends thereof at a distance from the top and bottom margins of the said layers, and thereafter securing the battery and the several strips thereof in place by stitching through both layers of the corset and through the battery, between the stiffening strips of the latter, substantially as described.

2. The method of constructing corsets having body-stiffening strips of bamboo or analogous material, which consists in first forming a composite stiffening-web by securing a series of parallel stiffening-strips to a layer or layers of flexible material, with spaces between said strips, then cutting the stiffening-web to a length shorter than the height of the corset, then applying the said length or battery between the layers of cloth which form the body

of the corset, and thereafter securing the battery and the several strips thereof in place by stitching through both layers of the corset and through the battery, between the stiffening-strips of the latter, substantially as described.

3. The method of constructing corsets having body-stiffening strips of bamboo or analogous stiffening material, which consists in first forming a composite stiffening-web by securing a series of parallel stiffening-strips to a layer or layers of flexible material, with spaces between said strips, then cutting the stiffening-web to a length or battery shorter than the height of the corset, then covering the ends of the length or battery with a binding, then applying the said length or battery between the layers of cloth which form the body of the corset, and thereafter securing the length or battery in place by stitching through both layers of the corset and through the battery, between the stiffening-strips of the latter, substantially as described.

In testimony that we claim the foregoing as our invention we affix our signatures in presence of two witnesses.

JAMES STONE.

MARSHALL GARDNER.

Witnesses:

D. ILIFF,

PETER LIES.