March 6, 1951

W. WEST

2,544,373

STIFF NARROW FABRIC

Filed Aug. 24, 1949

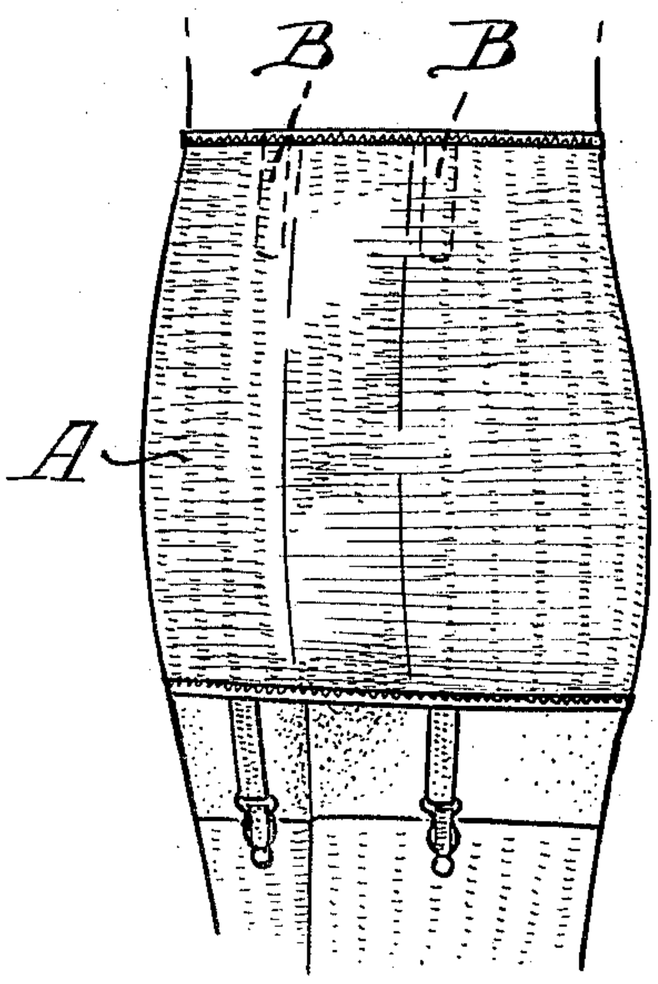

Fig. 1

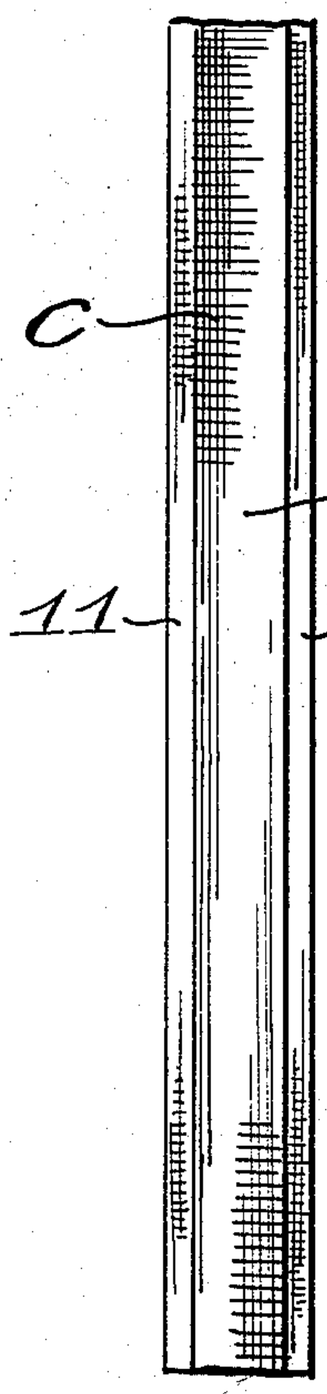

Fig. 2

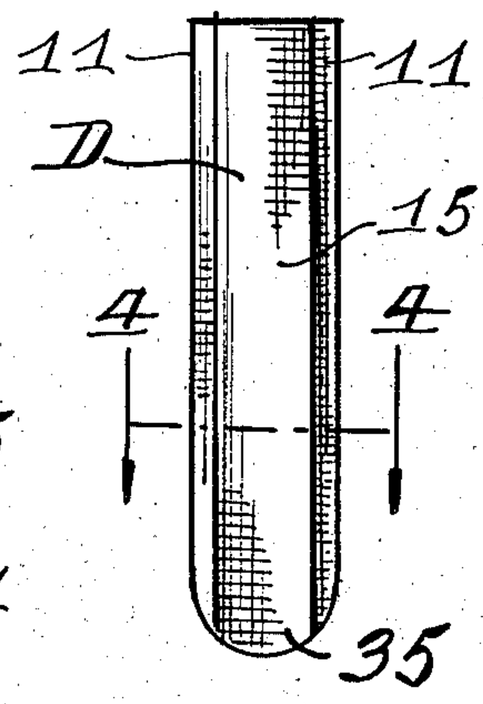

Fig. 3

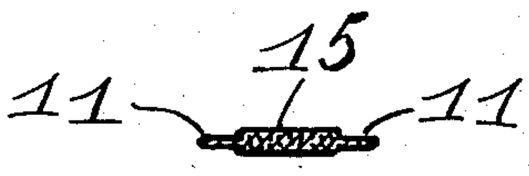

Fig. 4

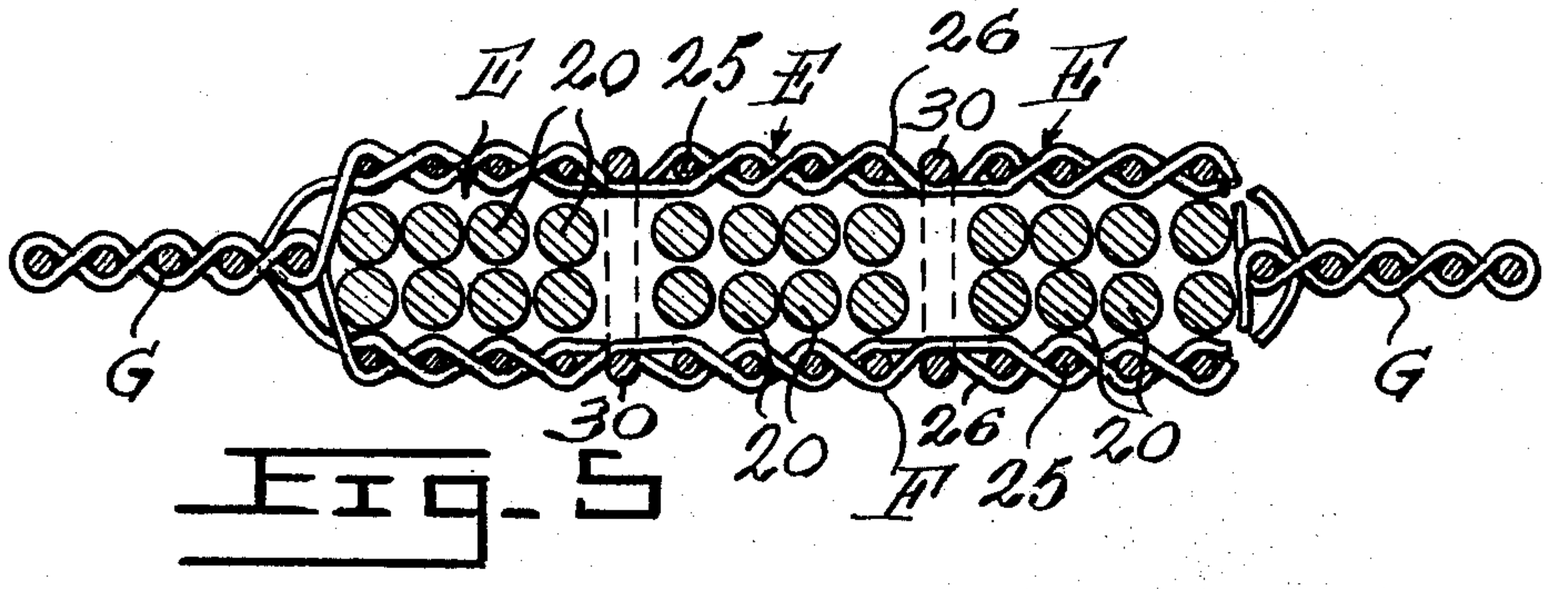

Fig. 5

Inventor
William West

By Edwin Shumaker

Attorney

Patented Mar. 6, 1951 2,544,373

UNITED STATES PATENT OFFICE

2,544,373

STIFF NARROW FABRIC

William West, Montreal, Quebec, Canada, assignor to Donahue Corporation of Canada Ltd., St. Hyacinthe, Quebec, Canada, a corporation of Canada

Application August 24, 1949, Serial No. 112,133
In Canada August 11, 1949

2 Claims. (Cl. 2—255)

1

Introduction

This invention relates to the manufacture of foundation garments.

One of the problems with these garments, which are usually made of elastic material, is that they tend to rumple and roll at the waistline. Many attempts have been made to solve this problem but none of these have proved entirely satisfactory.

The present invention provides an effective means of coping with the problem which is practical and economical.

Applicant's development

In accordance with the invention, there is provided a special stay which is used to support the garment at a marginal portion. Such a stay includes a resin-impregnated non-stretchable narrow fabric having a relatively heavy body portion which extends the major extent of the width of the fabric and a relatively narrow selvage portion at each side of the body portion. The body portion is made up of a plurality of groups of relatively heavy warp threads arranged side by side and a facing and backing made up of warp and weft threads of normal thickness. The facing and backing enclose the groups of heavy warp threads. Binder threads extend the length of the fabric in the body portion between respective groups of heavy threads. The fabric is impregnated with a substantially insoluble resin material which imparts to the body portion of the fabric sufficient stiffness to act as a stay for foundation garments but leaves the selvage workable to allow stitching.

A garment constructed according to the invention, for example a girdle or brassière, includes the usual central portion and marginal portion extending from the central portion. A plurality of stays, as described, are attached to the body contacting surface of the marginal portion, each stay extending inwardly from the outer edge of the marginal portion. Stitching passed through the selvage portion of the stays and through the waist-band portion of the garment holds the stays in place.

Detailed description

Having thus generally described the nature of the invention, reference will now be made in detail to the accompanying drawings illustrating preferred embodiments, and in which:

Figure 1 is a view of a girdle constructed according to the invention.

2

Figure 2 is a plan view of a strip of stiffened narrow fabric of the type employed in the present invention.

Figure 3 is a stay made from the narrow fabric shown in Figure 2.

Figure 4 is a cross-section along the line 4—4 of Figure 3.

Figure 5 is an enlargement on a much greater scale of the cross section shown in Figure 4.

Referring more particularly to the drawings, A represents a girdle of elastic material and B stays attached thereto adjacent the upper or waist edge.

In accordance with the invention, these stays are blanked from a strip of narrow fabric as shown at C in Figure 2. The stay D may be as shown in Figures 3 to 5.

The narrow fabric C is made up of a relatively wide body portion **15** and relatively narrow selvage portions **11**. The body portion is constructed with a plurality of groups E of relatively heavy warp threads **20**. The fabric is covered with facings F made up of warp and weft threads **25** and **26** respectively which threads also extend out to the sides to make the selvage of the fabric G. Separating the respective groups, are binder threads **30**.

In accordance with the invention, the fabric C is stiffened by impregnation with a solution of a substantially water-insoluble resinous material or a natural resinous material which is resistant to washing and to perspiration. One suitable solution is formed by mixing polyvinyl acetate resin with alcohol to form a 5 to 10% solution.

Other suitable impregnating agents can be employed as for example shellac or shellac-like materials applied from a solution or dispersion.

Once impregnated, the fabric is blanked out, for example, on a stamping machine to form stays preferably having one end **35** or both rounded.

These stays have the advantage that the body portion is sufficiently stiff to give the staying action required, for example, comparable with whale bone, "feather bone" and corded materials. Yet, the margin or selvage is sufficiently workable to allow ready stitching without breaking needles or injuring the fabric.

The stays D are applied to the marginal portion of the garment in spaced apart position as shown in Figure 1. This structure enables the garment to retain its shape and prevent rolling which is so objectionable and uncomfortable and which shortens the life of the garment.

The fabric may vary in width. In the case of the stays used in a girdle as shown, suitable width

for the fabric is about ¾ inch and the body portion measuring about 7/16 inch in width. The fabric can be considerably wider, up to 6 to 12 inches in width. This latter fabric is used, for example, in making a wide stay for the lower edge of the brassière. The structure of the brassière, in so far as attachment of the stay is concerned, will be similar to that of the girdle.

The dimensions of the above do not alter the spirit of the invention but in general the fabric can be said to be of "narrow fabric."

It will be understood that improvements can be made in the details and that the embodiments shown and described in detail are illustrative only.

I claim:

1. A stay for foundation garments, comprising, a resin-impregnated non-stretchable narrow fabric having a relatively heavy body portion extending the major extent of the width of the fabric and a relatively narrow selvage portion at each side of the body portion, the body portion being made up of a plurality of groups of relatively heavy warp threads arranged side by side, and a facing and backing on the body portion of the fabric and the selvage formed by warp and weft threads of normal thickness, said facing and backing enclosing the groups of relatively heavy warp threads, and binder threads extending the length of the fabric in the body portion between respective groups of said heavy threads, said fabric being impregnated with a substantially water-insoluble resinous material imparting to the body portion of the fabric sufficient stiffness to act as a stay for foundation garments but leaving the marginal portion sufficiently workable to allow stitching.

2. A foundation garment of the girdle type having a central portion and a marginal portion extending outwardly from the marginal portion, said portions being of elastic material, a plurality of spaced apart non-stretchable stiffening members secured to the body contacting surface of the marginal portion, each stiffening member extending inwardly from the outer edge of the marginal portion, each stiffening member comprising a narrow fabric having a relatively heavy body portion extending the major extent of the width of the fabric and a relatively narrow selvage portion on each side of the body portion, the body portion being made up of a plurality of groups of relatively heavy warp threads arranged side by side, and a facing and backing on the body portion of the fabric and the selvage formed by warp and weft threads of normal thickness, said facing and backing enclosing the groups of relatively heavy warp threads, and binder threads extending the length of the fabric in the body portion between respective groups of said heavy threads, said fabric being impregnated with a substantially water-insoluble resinous material imparting to the central portion of the fabric sufficient stiffness to act as a stay for foundation garments but leaving the selvage portion of the fabric workable, and stitching passed through the selvage portion of each stiffening member and through the marginal portion of the garment to hold each stiffening member in place.

WILLIAM WEST.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
708,907	McLean	Sept. 9, 1902
758,923	Knowlton et al.	May 3, 1904
781,407	Dornan	Jan. 31, 1905
2,334,529	Amyot	Nov. 16, 1943
2,373,954	Frankfurther	Apr. 17, 1945