

June 2, 1942.

L. G. SMITH.

2,285,368

SHOULDER PROTECTOR FOR GARMENT SUPPORTERS

Filed June 6, 1940

2 Sheets-Sheet 1

Fig. 1

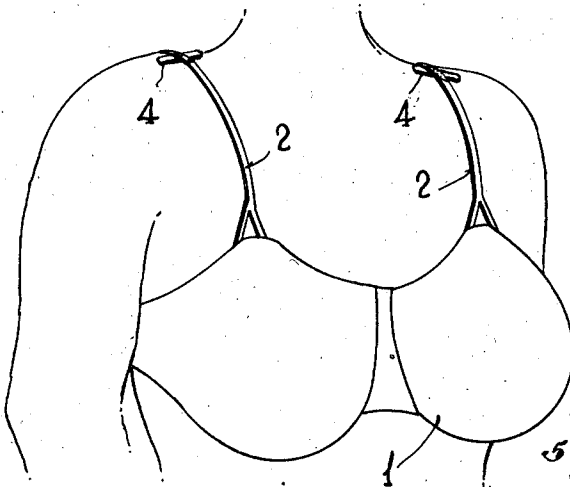


Fig. 4

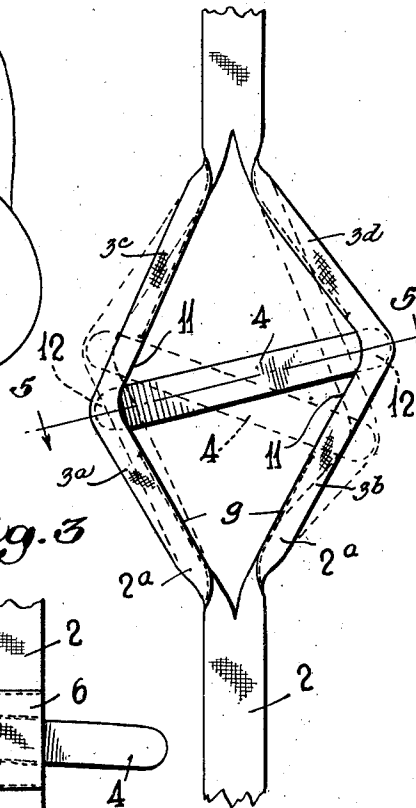


Fig. 2

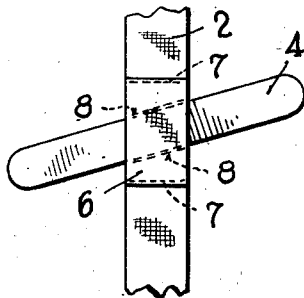


Fig. 3

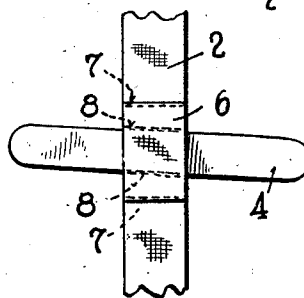


Fig. 6

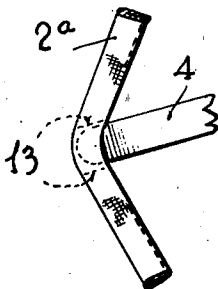


Fig. 7

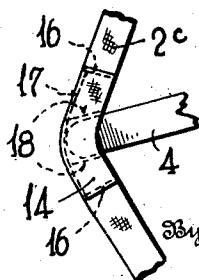
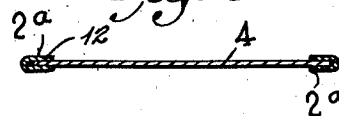


Fig. 5



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2 Sheets-Sheet 2

Fig. 8

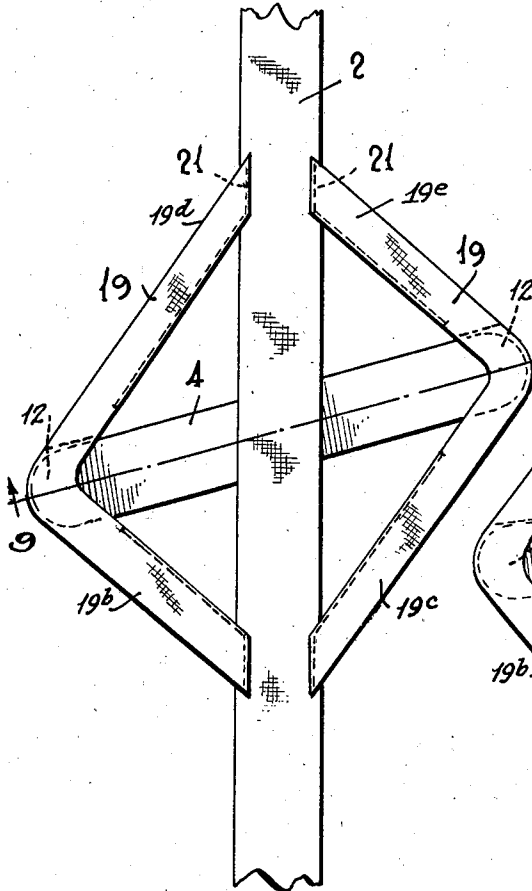


Fig. 10

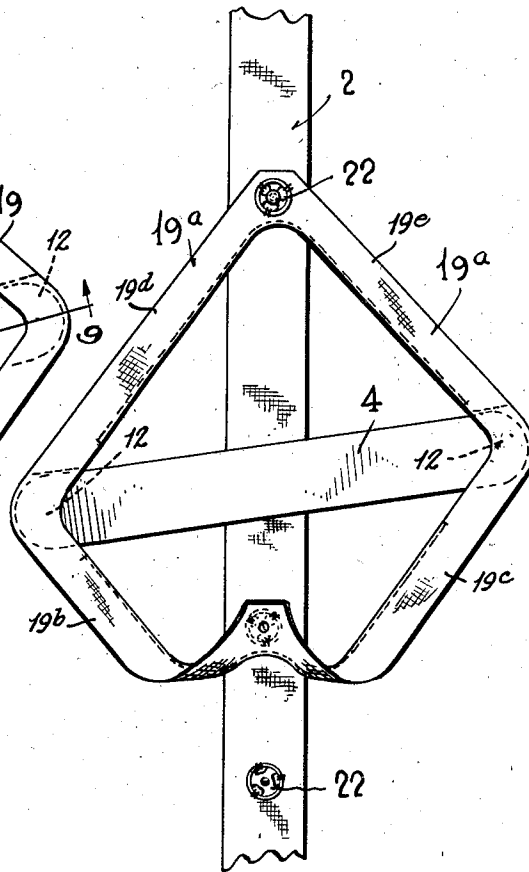
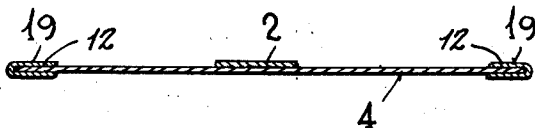


Fig. 9



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UNITED STATES PATENT OFFICE

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SHOULDER PROTECTOR FOR GARMENT SUPPORTERS

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Application June 6, 1940, Serial No. 339,175

5 Claims. (Cl. 2—336)

This invention relates to garment supporters and particularly to shoulder straps for supporting women's garments, such as brassières and corselets, which in some cases are required to carry considerable weight. In such cases the wearer has oftentimes been subjected to discomfort from the shoulder straps pressing too strongly on the shoulder, especially at the highest point or ridge, whereby the straps have had a tendency to cut into the flesh along the line where they pass over the shoulder ridges.

In the past, efforts have been made to overcome this inconvenience by making the straps particularly wide, but it has been found that the straps soon tend to roll transversely until they form into practically a string which causes as much discomfort as a narrow band. Furthermore, such wide bands are unsightly and thus undesirable particularly for evening wear when, depending on the particular fashion in vogue, the shoulders are more or less exposed. Another attempt to solve this difficulty has been by the use of two straps for each shoulder. In practice, however, it is found that the two straps will move together to the lowest point of the shoulder so that all of the weight is carried along a single line just as if only one strap were provided. Furthermore, even if the two straps were kept apart by frequent adjustment, it would be found that most of the time all of the weight would be carried by only one of the straps, depending on the position of the shoulder at the particular instant.

An object of this invention is to provide shoulder straps for women's garments which will not cause discomfort to the wearer.

Another object of this invention is to provide a shoulder strap which will eliminate the discomfort by properly distributing the weight carried by the strap over a larger area of the shoulder at the portion thereof where the discomfort would be likely to arise.

A further object of this invention is to control the direction of the distribution of the weight along the ridge of the shoulder, and to suit the direction of distribution to the conformity of the shoulder of the individual person.

Still another object of this invention is to provide means for distributing the weight carried by garment shoulder straps to avoid discomfort, which means is relatively inconspicuous and which is adapted to be made attractive and ornamental.

In the accompanying drawings, which illustrate several embodiments of the invention:

Fig. 1 is a diagrammatic view showing the up-

per portion of the body of a woman wearing a brassière supported by shoulder straps according to one embodiment of the invention;

Fig. 2 is an enlarged view of part of the shoulder strap of a brassière or corselet showing a rigid weight-distributing member adjusted and secured at one position;

Fig. 3 is a view similar to Fig. 2 with the rigid weight-distributing member secured at a different angle to suit the wearer;

Fig. 4 is a plan view of part of a garment shoulder strap according to another embodiment of the invention, the ends of the transverse rigid member being located in pockets but not fixedly secured in position, and showing in broken lines another position of adjustment of the rigid member;

Fig. 5 is a transverse sectional view on the line 5—5 of Fig. 4;

Fig. 6 is a plan view of a detail of one end of the rigid member secured in adjusted position by stitching, the rest of the device being omitted for simplicity;

Fig. 7 is a plan view of a modified means for attaching an end of a rigid member in adjusted position;

Fig. 8 is a plan view of a further modification of weight-distributing device attached to an undivided shoulder strap;

Fig. 9 is a sectional view on line 9—9 of Fig. 8; and

Fig. 10 is a view from the underneath side of a modified form of the device which is attachable to an undivided shoulder strap by snap fasteners.

In the drawings, numeral 1 indicates a woman's garment adapted to support the breasts and is herein shown as a brassière, but it is to be understood that other garments for this purpose, such as a corselet, or which carry weight for other reasons are also to be considered as included. The weight carried by the garment is supported by shoulder straps 2 which pass over the shoulders of the wearer. At the ridge of the shoulder where the strap tends to cut into the flesh and cause discomfort to the wearer, means is provided for distributing the weight laterally so as to spread the bearing surface whereby the shoulder can easily support the weight without discomfort.

Figs. 1, 2 and 3 represent an embodiment of the invention in which a flat rigid member 4 is secured at its middle portion to a shoulder strap 2 by means of a strip of cloth or a patch 6 sewed to the shoulder strap 2 at its ends by lines of stitches 7. It is to be noted that the rigid member 4 lies at an oblique angle with respect to the

direction of the shoulder strap, and it is secured in this position by lines of stitches 8 extending along its edges. The angle of the rigid member with respect to the strap should be adapted to best suit the individual who will wear the garment, and to this end the stitches 8 are usually omitted when the garment is manufactured and are applied either by the purchaser or by the merchant at the time of sale. Ordinarily the wearer will want the rigid member to extend as nearly as possible along the highest ridge of the shoulder. Fig. 3 shows the rigid member secured at a different angle.

In the embodiment of the invention shown in Fig. 4 the shoulder strap 2 is itself divided at a position where it passes over the ridge of the shoulder, and each part 2^a of the divided strap is folded over on itself along a longitudinal line and the edges are stitched together as indicated by numeral 9 except toward the center 11 where the edges are left free so as to form open pockets 12 for reception of the ends of the rigid member 4. The lengths of the free open ends are greater than the width of the ends of the rigid member 4 so that the rigid member can be adjusted angularly to the proper position to suit the individual. The dotted lines illustrate the rigid member in another position of adjustment. Fig. 6 shows one end of the ends of the rigid member secured in position by stitching 13. The parts 2^a include forward sections 3^a and 3^b, arranged upon the forward side of the member 4 and converging forwardly from the member 4. The parts 2^a also include rear sections 3^c and 3^d arranged upon the rear side of the member 4 and converging rearwardly. The section 3^a is shorter than the section 3^b while the section 3^c is longer than the section 3^d, whereby the pockets 12 are staggered and will hold the member 4 transversely inclined with respect to the shoulder strap 2.

Fig. 7 shows a part of an embodiment of the general type in which the strap is divided at the portion passing over the shoulder somewhat similar to that shown in Figs. 4 and 5, but instead of the divided portions being folded on themselves to form the pockets for the ends of the rigid member 4, the pockets are formed by strips or patches of fabric 14 being sewed to the strap portions 2^c by stitching along the ends 16 and along the outer edges 17. The inner edges are left free for adjustably receiving the ends of the rigid member, and after the rigid member is placed in proper angular position to suit the individual, the ends are made fast against movement by applying stitching 18 extending along the edges of the ends of member 4.

In Fig. 8 an embodiment of the invention is shown which differs from some of the preceding embodiments in that the straps of the garment are not divided at the shoulder ridges, but special securing wing straps 19 are secured by their ends to the garment straps 2 by sewing at 21. The wing straps 19 are doubled over longitudinally, and the edges are sewed together except at the center portions thereof where pockets are left for reception of the ends of rigid members 4. The pockets may initially be left oversized similarly as explained in connection with the previous embodiments, and upon or after sale the ends are secured in the required position by transverse stitching with the rigid member at the proper angle for the individual who will wear the garment. Obviously, instead of the straps 19 being folded over longitudinally, the straps

may be single and the pocket for the ends of the rigid member would then be formed by sewing on a patch of material similarly as shown and described in connection with Fig. 7. It will be noted that the strap 2 passes over the rigid member 4 so as to transfer its stress thereto, as shown in Fig. 9. The wing straps 19 include forward sections 19^b and 19^c, disposed upon the forward side of the member 4 and converging forwardly from the same. The wing straps 19 include rear sections 19^d and 19^e, disposed upon the rear side of the member 4 and converging rearwardly from the same. The same pockets 12 are provided at the meeting ends of the sections 19^b, 19^d; and 19^c, 19^e. The forward section 19^b is shorter than the forward section 19^c while the section 19^d is longer than the section 19^e. The pocket 12 to the left, Figure 8, is therefore nearer the forward ends of the sections 19^b and 19^c than the pocket 12 to the right, Figure 8.

In the embodiment shown in Fig. 10 the arrangement is similar to that of Fig. 8 except that the ends of wing straps 19^a are secured together and are removably attached to strap 2 by snap fasteners 22. The wing straps 19^a are identical with the wing straps 19, except for the manner of attachment with the shoulder strap 2. One wing strap 19^a includes the sections 19^b and 19^d and the pocket 12. And the other wing strap 19^a includes the section 19^c and 19^e, and the pocket 12. The lengths and arrangements of the sections of the wing straps and of the pockets in Figure 10 is identical with that shown in Figure 8.

What I claim is:

1. A pull distributing device for use in connection with the shoulder strap of a bust supporter or the like, said device comprising wing straps, said wing straps including forward sections which converge forwardly and are of different lengths and rear sections which converge rearwardly and are of different lengths, a stiff member secured to one wing strap adjacent to the inner ends of the sections of such wing strap and secured to the other wing strap adjacent to the inner ends of the sections of such other wing strap, the outer ends of the forward sections being adapted to be secured to the shoulder strap, and the outer ends of the rear sections being adapted to be secured to the shoulder strap, the arrangement being such that the stiff member may be arranged beneath the shoulder strap and held by the wing straps in an inclined transverse position with respect to the shoulder strap.

2. A pull distributing device for use in connection with the shoulder strap of a bust supporter or the like, said device comprising wing straps, each wing strap having forward and rear sections of different lengths, the short section of one wing strap being disposed adjacent to the long section of the other wing strap, the forward sections of the wing straps converging forwardly toward their outer ends and the rear sections of the wing straps converging rearwardly toward their outer ends, said wing straps having pockets adjacent to the inner ends of their sections, a stiff member having its ends held within the pockets, the forward ends of the forward sections being adapted to be secured to the shoulder strap, and the rear ends of the rear sections being adapted to be secured to the shoulder strap, the arrangement being such that the stiff member may be arranged beneath the shoulder

strap and held by the pockets in an inclined transverse position with respect to the shoulder strap.

3. A pull distributing device for use in connection with the shoulder strap of a bust supporter or the like, said device comprising wing straps, each wing strap having forward and rear sections of different lengths, the short section of one wing strap being disposed adjacent to the long section of the other wing strap, the forward sections of the wing straps converging forwardly toward their outer ends and having their outer ends secured to the shoulder strap and the rear sections of the wing straps converging rearwardly toward their outer ends and having such outer ends secured to the shoulder strap, said wing straps having pockets adjacent to the inner ends of their sections, and a stiff member having its ends held within the pockets, the arrangement being such that the stiff member will be held by the pockets in an inclined transverse position with respect to the shoulder strap.

4. The combination with the shoulder strap of a bust supporter or the like which extends over the ridge of the shoulder and passes to the front and back of the body of a pull device from the shoulder strap and disposed adjacent to and extending longitudinally of the shoulder strap, said device comprising a stiff member disposed be-

neath the shoulder strap adjacent to the ridge of the shoulder and extending transversely of the shoulder strap outwardly beyond the longitudinal edges of the shoulder strap, a pair of flexible straps extending longitudinally of the shoulder strap and having their intermediate portions secured to the member near its ends, and means for attaching the ends of the longitudinal straps upon each side of the stiff member with the shoulder strap at a point remote from the stiff member.

5. A supporting device comprising a shoulder strap extending over the ridge of the shoulder and passing to the front and back of the body, a stiff member disposed beneath the shoulder strap adjacent to the ridge of the shoulder and extending transversely of the shoulder strap outwardly beyond the longitudinal edges of the shoulder strap, wing straps extending longitudinally of the shoulder strap and having their intermediate portions secured to the stiff member, the wing straps having forward forwardly converging sections and rear rearwardly converging sections, means for securing the outer ends of the forward sections to the shoulder strap, and means for securing the outer ends of the rear sections to the shoulder strap.

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