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SHOULDER PAD STRUCTURE

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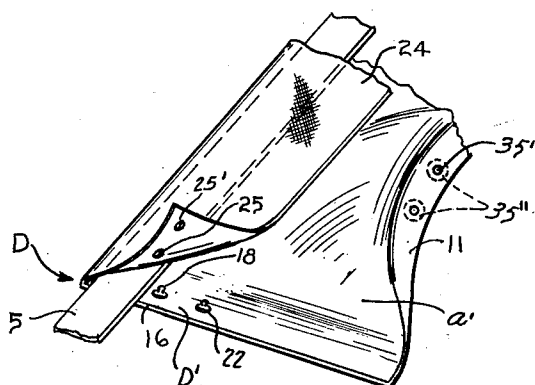
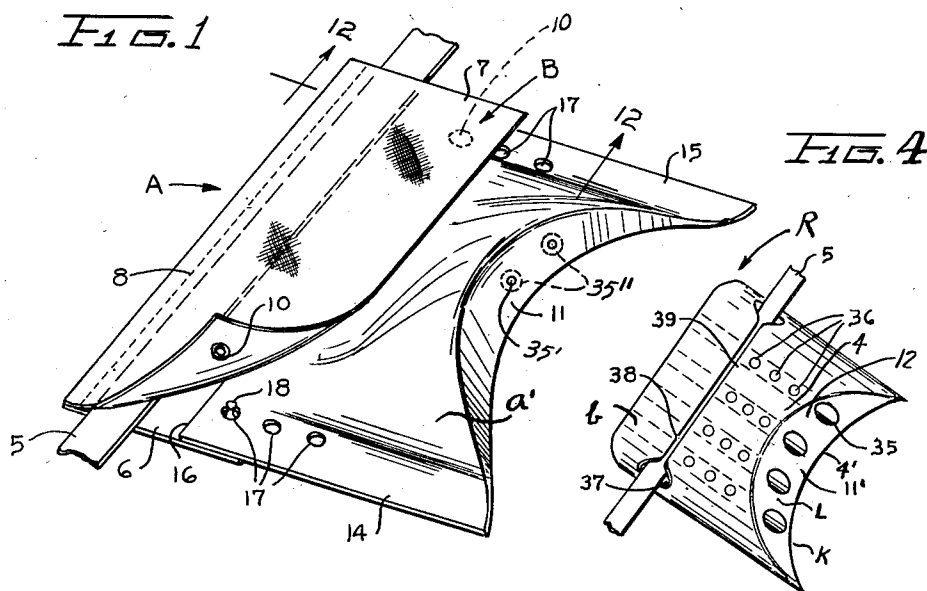


FIG. 2

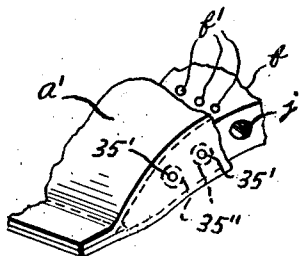
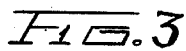
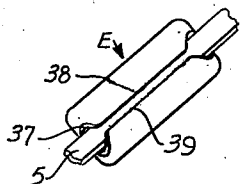


FIG. 5.



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SHOULDER PAD STRUCTURE

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This invention relates to the construction of shoulder pads, and shoulder pad covers, of various types, and more particularly to a type of a shoulder pad which is provided with means adapted to be held in desired position without the aid of sewing, and wherein such shoulder pad may be removed without resorting to the undoing of seams or of sewing, and wherein such shoulder pad is provided with means for being adjusted into various positions longitudinally upon the wearer's shoulder, and wherein the shoulder pad and cover are provided with means permitting the circulation of air therethrough thereby providing air ventilation for the interior of the pad structure and forming air cushioning means for same; and is filed as an improvement and as a continuation in part of my co-pending application for shoulder pads S. N. 722,868, filed January 18, 1947, and matured into U. S. Patent No. 2,422,834, issued June 24, 1947.

My novel construction is capable of being utilized in connection with various styles or types of shoulder pads, but particularly with the type of shoulder pads, for example, adapted to be worn by the wearer independently of the garment and be held frictionally in desired position without resorting to means of sewing.

In accordance with my invention, I produce a shoulder pad provided with a groove or slitted channel adapted to underlie and embrace, or incase, the shoulder strap of a brassière located upon the wearer's shoulder, in a manner whereby such a pad may be held frictionally to such strap when in desired position upon the wearer's shoulder, cushioning same against strap pressure. Such shoulder pad may be adapted to be adjusted into various suitable positions longitudinally upon the wearer's shoulder in a manner without affecting or changing the position of the shoulder strap, and wherein such shoulder pad may be adapted to hold shoulder straps of the wearer's slip, undergarment, or corselette in desired position thereby preventing or minimizing the possibilities of such straps slipping off the wearer's shoulder.

To illustrate the ordinary commercial utility of my novel shoulder pad in daily life, a shoulder pad constructed in accordance with my invention, of whatever style or type it may be made, could be utilized to great advantage; the fact that a shoulder pad could be placed under the shoulder strap upon the wearer's shoulder cushioning such shoulder against strap pressure and be adjusted into various desired positions longitudinally upon the wearer's shoulder and be held

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in selected position by frictional pressure to such strap, particularly so without resorting to means of sewing, and be removed, or replaced without resorting to undoing of seams, a matter which is a difficult task to most of the people especially to those not trained in the sewing profession, would render great comfort and satisfaction to the wearer to an extent whereby such shoulder pad would become an indispensable wardrobe item, and thus quite valuable to the trade commercially, especially so when such shoulder pad is provided with an air cooling ventilating system.

Thus a shoulder pad made in accordance with my invention, may be worn by the user with great satisfaction and comfort. It can be easily utilized, for various purposes, to suit the wearer's occasional requirements. It is believed that my present invention will prove useful to the wearer and thus valuable commercially.

The same is also true with respect to the air cushioning and air conditioning feature of my shoulder pad structure.

The average shoulder pad comprises a filler and a cover. Such filler is made either of felt, cotton or wadding, or a combination of same, and is usually massive. Its effect upon the wearer's shoulder is practically equivalent to that of a heavy quilt. Such shoulder pad is therefore heavy in weight, bulky and presses against the wearer's shoulder. It creates excessive heat, prevents free shoulder movements, thereby causing discomfort and irritation to such wearer, especially so during warm weather, or at affairs where the temperature is of a warmer degree than usual. Thus the ordinary type of shoulder pads presents a difficult problem which is quite annoying and unpleasant to the average wearer.

But my shoulder pad structure solves the above mentioned problem in a complete and satisfactory manner. It makes shoulder-pad-wearing a pleasure. The air perforations in my structure permits the flow of air through such structure thus providing an air cooling ventilating system within such pad structure thereby eliminating excessive heat. And in addition thereto, such perforations or compartments also provide air cushioning means within said pad structure thereby reducing the usual weight and shoulder pressure, caused by the average shoulder pad, to a minimum. Thus my novel shoulder pad structure permits free and comfortable movements of the wearer's shoulders, thereby providing a cheerful and pleasant feeling to the wearer.

It will thus be seen that this feature of my invention, namely, the air flowing system of ap-

plicant's shoulder pad structure, is a very important feature, in fact a very important part of my invention. This air flowing structure can be utilized in connection with various types or styles of shoulder pads. It can be made of various kinds of materials and in various styles, types, shapes or forms. Its function will be pleasing and desirable to the wearer to an extent whereby an air conditioning shoulder pad will become a necessity and an actual indispensable wardrobe item with the average person, and therefore very valuable commercially.

The variety of possible applications of the features of my novel construction in connection with different articles of apparel, as hereinabove indicated, is so prolific that for the purpose of illustrating the invention the specific embodiment of my invention in its application to a garment exhibiting the greatest difficulties has been selected. Such a garment is one which necessarily must conform most rigidly to the body contours and one which has the field of greatest possible commercial use. For this purpose I have selected for illustration of my novel construction, a garment constituting a brassiere provided with shoulder straps adapted to support upon the wearer's shoulder a shoulder pad made in accordance with my invention, so that the principle of construction may be best illustrated in the combination of the parts of the invention disclosed therein.

The objects of the present invention are attained by a novel construction which will be hereinafter described and illustrated in the drawing in connection with a specific embodiment of the invention.

In the accompanying drawing in which such specific embodiment of my invention is illustrated,

Fig. 1 is a top perspective view of my shoulder pad structure, showing the rear section adapted to be held upon the wearer's shoulder by a shoulder strap and the means for adjusting the front portion into various positions longitudinally upon the wearer's shoulder and be held frictionally in adjusted position; also showing the air openings within the cover.

Fig. 2 is a top perspective view of my shoulder pad made as a unitary structure, showing modified means for adjusting the shoulder pad longitudinally upon the wearer's shoulder.

Fig. 3 is a perspective view of a part of the front portion of the shoulder pad structure, showing the air openings in the cover and the air perforations in the filler.

Fig. 4 is a perspective top view showing my shoulder pad being used without a cover, and the strap being held in the slitted channel by frictional pressure of the lip sections against the strap, also showing the air apertures, and

Fig. 5 is a perspective top view of my shoulder pad being used only as a strap cushioning means to prevent strap pressure.

Referring more particularly to the drawings, in which similar reference characters identify similar parts in the several views, in my novel shoulder pad structure:

My present invention comprises a rear section indicated by arrow A adapted to encase a shoulder strap 5 (Fig. 1). Such rear section comprises two flap portions 6 and 7; these portions are sewn together to each other by means of stitchings 8 in a manner forming a single unit. The flap portion 6 is provided with studs 18 and the flap portion 7 is provided with snap

fasteners 10. The pad 16 is provided with side portions 14 and 15 and with a front section 11. Such side portions 14 and 15 are each provided with openings 17. These openings 17 are adapted to be placed over the studs 18, the snap fasteners 10 are then adapted to be interlocked with such studs 18, as indicated by arrow B, thereby holding said pad 16 in a locked position upon the wearer's shoulder. It will be seen that by changing the position of the openings 17 when being placed upon the studs 18, in the proper manner, such pad 16 may be adjusted into various positions longitudinally upon the wearer's shoulder. The unlocking of said snap fasteners 10 from the studs 18 will permit the removal of the openings 17 from such studs 18, thereby enabling the removal of the pad 16 from the rear section, arrow A. The simplicity of such operations, namely, the locking or unlocking of the fastening elements, is quite evident.

It is quite understood that the rear section may, if so desired, be utilized only as a cushioning means for the shoulder straps (and not as a pad holder) eliminating strap pressure against the wearer's shoulder.

The same is true with respect to my disclosure in Fig. 5, wherein the strap pad indicated by arrow E, which may be made of rubber, plastic or of any other suitable materials, and in any desirable manner, for example, molded, extruded or fabricated, is provided with a compartment, groove or slitted channel 37 adapted to house a shoulder strap 5. Such channel 37 may be provided with extensions or lip sections 38 and 39, which are adapted (particularly so when being conformed to the arch-shape of the wearer's shoulder) to press tightly against the strap 5, in a manner whereby such pad will be held frictionally to such shoulder strap, thereby being held in desired position upon the wearer's shoulder. It is quite evident that, by releasing the pressure of the lip sections 38 and 39, such strap pad can be easily removed from the shoulder strap 5 and thus from its position upon the wearer's shoulder.

The same is true with respect to the open, or slitted, channel structure 37 on the upper face of my shoulder pad indicated by arrow R (Fig. 4). This shoulder pad may be made of suitable rubber, plastic or of any other suitable materials, and may, if desired, be constructed in the following manner: The under face or portion 4' is approximately of even structure, and shaped in a manner adapted to fit upon the wearer's shoulder. The upper portion, or face, 4 is of a like even structure, shaped in a manner adapted to support the shoulder portion of a dress, waist or other garments. The rear section 6 of the shoulder pad, arrow R, may be provided with the groove, compartment or slitted channel 37 adapted to encase a shoulder strap 5, and with extensions or lip sections 38 and 39, for the same purpose as that of Fig. 5, thus holding the shoulder pad in desired position upon the wearer's shoulder. Of course, the shoulder pad may be provided with several of such grooves, compartments or slitted channels 37 for the purpose of being adjusted into various desired positions longitudinally upon the wearer's shoulder.

The front portion K is provided with openings, recesses, perforations or apertures forming air compartments 35. These compartments 35 are separated from each other by wall portions L. Each compartment 35 is provided with communicable openings, apertures or perforations 36 to

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permit the circulation of air therethrough. The wall portions L, while they may be formed in any desirable manner, may also be made, or formed, in a manner, for example, as illustrated in Fig. 4, wherein the upper portions 12 and the lower portions 11 of the wall portions L are of a heavier thickness than that of the center portions of such walls L, so that the wall portions L, or the front portion K, may easily and automatically be compressed or expanded during the wearer's shoulder movements. It is naturally understood, that, each time when the upper portion 4 is pressed towards the lower portion 4', the accumulated air within the openings, apertures or compartments, will escape through the perforations or openings 35 and 36, and each time when such upper portion 4 will assume its normal position such compartments will again "inhale" fresh air through the apertures 35 and 36. Thus the wall portions L, in addition to their function of forming the individual air compartments, also assume a spring-action which creates a system for suction, or inhaling, and expulsion of air, causing such air to circulate through the various openings or apertures thereby providing ventilating or cooling means for the interior of the shoulder pad, making this novel structure a practical air conditioned shoulder pad. Naturally, the above disclosure is for illustrative purposes only and not for limitations; various changes of form of structure may be resorted to without departing from the spirit of this invention or the teachings of same.

The shoulder pad 16 (Fig. 2) may, if desired, be provided with an end portion 24 adapted to overlap and cover the shoulder strap 5, as indicated by arrow D. Such end portion 24 may be provided with a plurality of spaced apart snap fasteners 25 and 25' adapted to be interlocked with studs 18 and 22' located at the top face a' of the pad 16. The positions of the interlocking fastening means are so arranged that the shoulder strap 5 may be encased either in the compartment located between the rear end of the shoulder pad and the stud 18, or in the compartment D' located between the studs 18 and 22'. Thus the shoulder pad 16 may be adjusted into various positions longitudinally upon the wearer's shoulder. Of course the shoulder pad 16 may be provided with more than two sets of fastening means for the purpose of providing additional compartments for housing the shoulder strap 5.

From the above it will be seen that one of the important features of my invention is the provision of air-cushioning and air-conditioning means within my shoulder pad structure, that is, the means permitting the circulation of air through the interior of the shoulder pad structure. It is naturally understood, that while I described this feature in connection with my uncovered shoulder pad, as illustrated in Fig. 4, yet, covered shoulder pads may also be provided with this important air-conditioning features, thereby greatly improving the covered shoulder pad structure. For clarification purposes the following may be pointed out. The ordinary type of shoulder pad comprises a filler and a cover; such cover is fully closed and does not contain any openings for permitting the flow of air into the interior of the shoulder pad structure (nor is the filler provided with apertures for the circulation of air therethrough), particularly is such the case with washable shoulder pads, wherein the cover is made of water repellent

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material. Such shoulder pads usually press heavily upon the wearer's shoulder and, at times, exude an undesirable odor, causing the wearer unpleasantness, discomfort and annoyance.

But my air conditioning and ventilating shoulder pad structure eliminates the above mentioned objectionable features and makes shoulder pad wearing a pleasurable, comfortable and convenient matter. The cover of my shoulder pad is provided with openings 35', (Figs. 1, 2 and 3) which may be formed in any suitable location. The edge portions of such openings 35' may be reinforced with suitable means, for example, eyelets 35''. The filler f may be provided with suitable communicable perforations, openings or apertures f' formed in a manner permitting the circulation of air therethrough, so that upon movements of the wearer's shoulder, while walking or dancing, air will continuously circulate through the apertures of the cover and of the filler thereby ventilating the interior of the shoulder pad structure, thus providing the covered shoulder pad with an air cooling and air cushioning system which will prevent excessive heat, minimize objectionable odors, reduce shoulder pressure, thereby eliminating annoyance to the wearer and make shoulder pad wearing a pleasurable event. It is believed that this novel feature of my invention, namely, the provision of an air ventilating system within a shoulder pad structure, is of such great importance to the wearer that such air conditioned shoulder pad will become an indispensable wardrobe item with such wearer. It is therefore believed that my air conditioned shoulder pad is a very valuable contribution to the shoulder pad industry from a commercial point of view.

For the purpose of clarifying and pointing out the importance of the adjustable feature of my invention, I wish to call the attention to the following: A person's shoulders are not always built or formed alike. This may be true with respect either to the height or to the shape of one shoulder with respect to the other shoulder of the same person. This defect affects greatly the "hang" of the wearer's garment, particularly so when wearing a "ready made" garment; and besides, people do not like to show that their shoulders are not of a uniform shape or height. Especially so is this the case with women, who do not like to disclose any defect in the gracefulness of their appearance. It can therefore be clearly seen that the teaching of my invention with respect to the feature of adjustability of my shoulder pad longitudinally upon the wearer's shoulder is of great importance to the average wearer. The fact that my shoulder pad can be individually adjusted to various degrees, or positions, longitudinally upon the wearer's shoulder, completely independent of the position of the shoulder pad upon the other of the wearer's shoulder, helps to "cover up" the above mentioned defect and aids to the gracefulness of the wearer's appearance.

In view of the above, it will be clearly seen that the teaching of my invention with respect to the communicable apertures, which may be formed or shaped in any suitable or desirable manner, and placed or formed in any suitable or desirable location, or, with respect to the adjustability of the shoulder pad to various positions longitudinally upon the wearer's shoulder, are each very important features, or parts, of my invention, and are very desirable from a practical point of view. They can be utilized individually or jointly

in the construction of shoulder pads. It is believed that shoulder pads constructed in accordance with the teachings of my invention, containing either one or both of the above mentioned features, or improvements, will become very popular among the consumers and thus valuable to the industry commercially.

From the above it will be seen that I have invented and perfected a shoulder-pad construction of a new and unique design, a shoulder-pad structure which is practical, useful and therefore of commercial value, and, although I have shown certain preferred forms of illustrations in order to explain and describe the novelty of my invention, yet, by showing such structures, I do not, by any means, limit myself to the structures, nor to the terms used in describing same, as they are for illustrative purposes only. Various suggestions and changes of structure may be resorted to, and I desire it to be understood that I have same in mind when showing and describing this invention, and seek protection by Letters Patent. And, although I have mentioned in describing this invention of what material certain parts may be made, how they may be formed, shaped or styled, and how they may be assembled, yet I desire it to be understood that this structure, or parts thereof, may be made of any suitable material, and shaped, formed, styled or arranged in any desirable manner, and assembled in any convenient way so that the parts may be easily taken apart, removed, cleaned, replaced, re-attached and re-assembled, and that various changes in detail may be resorted to without departing from the spirit of this invention.

I claim:

1. A shoulder pad structure comprising a filler and a cover for said filler, said filler provided with channeled portions, the roof of said channeled portions provided with apertures, the said cover provided with openings, the said openings adapted to permit the flow of air into the said cover and through the said channeled portions and also through the said apertures thereby facilitating the circulation of air within the said pad structure.

2. A shoulder pad structure comprising a filler and a cover for said filler, said filler provided with

a tubular section, said section provided with a perforated wall, said cover provided with an opening, said opening adapted to permit air to flow into said cover and through the said tubular section and said perforated wall thereby facilitating the circulation of air within said shoulder pad structure.

3. A shoulder pad adapted to be positioned upon the wearer's shoulder, said shoulder pad comprising a filler and a cover for said filler, said filler provided with at least one horizontally disposed tubular section, said tubular section provided with at least one perforated wall, said cover provided with openings, means carried by the edge portions of said openings in a manner reinforcing the said edge portions, said openings adapted to permit the flow of air into the said cover and into the said tubular section and said perforated wall thereby providing ventilating means for the interior of the said shoulder pad.

4. A shoulder pad structure comprising a filler and a cover for said filler, said filler having apertures positioned therein in various directions and communicating with each other, said cover having openings, said openings adapted to permit the flow of air into said cover for circulation through said apertures ventilating the interior of said shoulder pad structure.

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References Cited in the file of this patent
UNITED STATES PATENTS

Number	Name	Date
35 614,068	Wetzler	Nov. 8, 1898
640,124	Gaddis	Dec. 26, 1899
647,374	Brendel	Apr. 10, 1900
782,125	Gentry	Feb. 7, 1905
2,968,644	Frais	Jan. 26, 1937
40 2,231,130	Bowman et al.	Feb. 11, 1941
2,365,280	Lahm	Dec. 19, 1944
2,416,415	Stehlik	Feb. 25, 1947
2,420,799	Siteman	May 20, 1947
2,422,834	Kleinman	June 24, 1947
45 2,433,623	Perlmutter	Dec. 30, 1947
2,458,646	Root	Jan. 11, 1949
2,459,648	Ingalls	Jan. 18, 1949
2,465,120	Riley	Mar. 22, 1949