

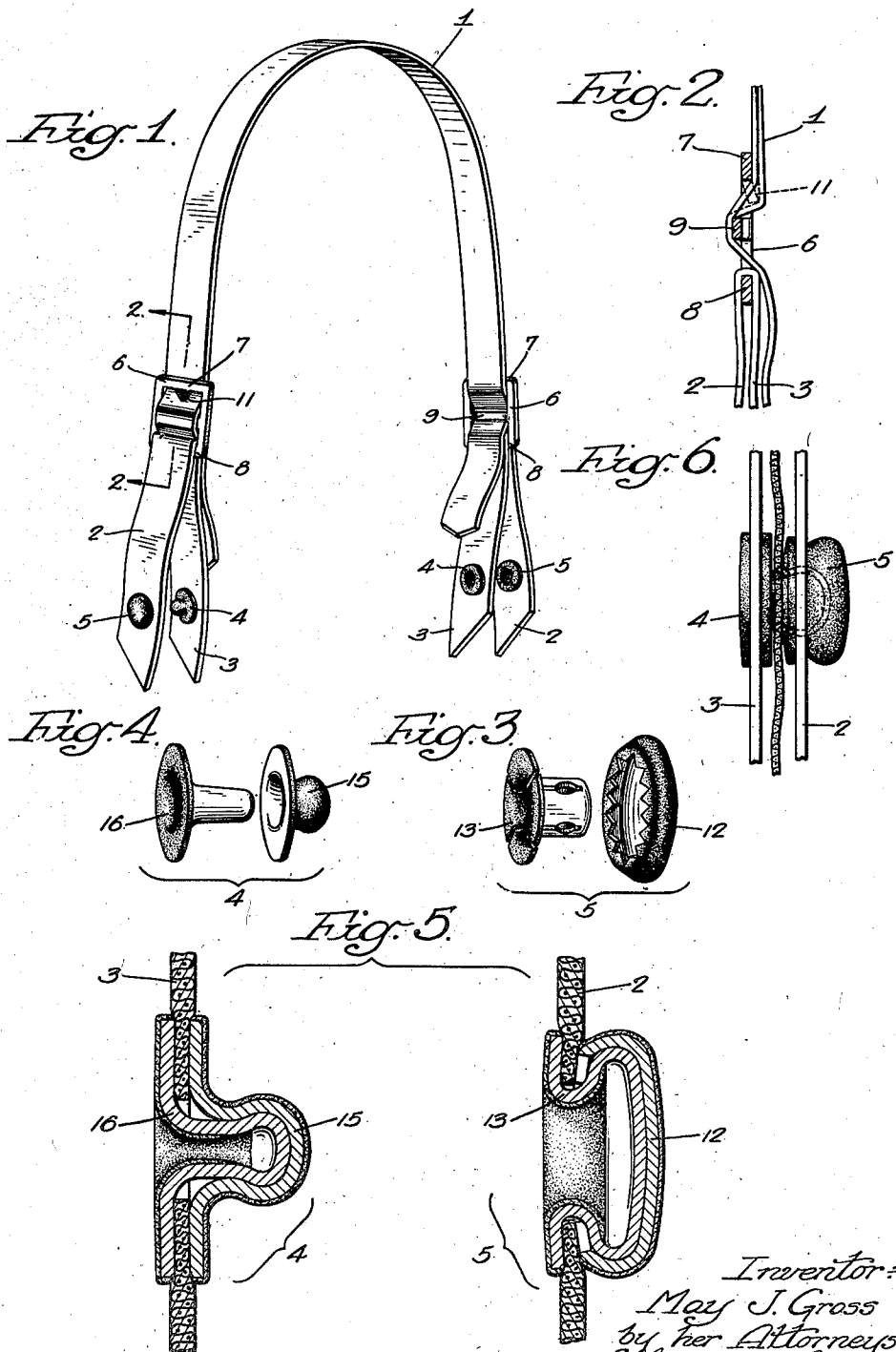
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GRIPPING FASTENER

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GRIPPING FASTENER

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2 Claims. (Cl. 24—208)

This invention relates primarily to improvements in shoulder straps of the type adapted for use with feminine garments. The invention, however, is not restricted to shoulder straps, and embodiments thereof may be adapted usefully to other purposes.

The invention in its immediate application contemplates the provision of a detachable shoulder strap that shall be in effect a complete self-contained unit in the sense that it comprises the complete means for attachment of the strap to the garment, and avoids requirement for any special garment construction or provision in the garment of any attaching elements such as buttons, buttonholes or the like.

The invention further departs from the conventional shoulder strap or garment support practice, in that it contemplates the provision in the strap of means for attachment to the garment that shall afford a substantially positive, secure and readily manipulated connection, and that shall be free from any tendency to mutilate the fabric of the garment.

Another object is to provide a shoulder or other strap device in the nature of a single strap having full adjustability as to length and wherein the adjustment means is of a character affording positive assurance against slippage.

Another object of the invention is to provide a shoulder strap readily adjustable as to length, and wherein the adjustment means by reason of its novel construction shall be capable of positively holding the strap against slippage under heavy strain without, however, mutilating the strap material.

Still another object of the invention is to provide a shoulder strap device readily adjustable as to length wherein the strap proper shall consist in effect of a single strand of material uncomplicated by the free loops required for adjustment purposes in the conventional straps employing slide buckles.

A still further object of the invention is to provide a shoulder strap of the aforescribed characteristics wherein provision is made for adjustment as to length from one or both ends of the strap.

Still another object of the invention is to provide a shoulder strap the component parts of which may be assembled and are normally held together without stitching, said component parts thereby being readily detachable as required one from another and equally readily reassembled. In this aspect, the invention further contemplates the provision of a shoulder strap device

wherein any or all of the component parts may be merchandized as units, as hereinafter more fully set forth.

The foregoing and other objects hereinafter appearing I attain by the novel construction illustrated in the attached drawing, in which:

Figure 1 is a view in perspective of a strap made in accordance with my invention;

Fig. 2 is a section on the line 2—2, Fig. 1;

Figs. 3 and 4 are, respectively, detached views in perspective of the two principal elements of a snap fastener of the general type to which my invention relates;

Fig. 5 is a fragmentary sectional view of the end portion of the strap showing the details of my improved fastener, and

Fig. 6 is a sectional view illustrating the manner in which the fasteners function to attach the strap to the garment.

With reference to the drawing and as shown in Fig. 1 thereof, the strap comprises a shoulder-engaging portion 1 constituting the strap proper, and at each extremity thereof a pair of tabs 2 and 3 which respectively carry the interlocking or mating elements 4 and 5 of a snap fastener. For feminine purposes, the shoulder portion 1 may consist of a single strand of suitable material, such for example as ribbon or other narrow fabric of fine texture. In accordance with my invention, the tabs 2 and 3 of each pair are adjustably attached to the opposite ends of the shoulder portion 1 through the medium of a buckle 6, this buckle comprising two end cross bars, 7 and 8 respectively, and an intermediate cross bar 9. The tabs 2 and 3 are supported by the cross bar 8, and in the present instance, the said tabs are constituted by a single strip of suitable material which passes freely over the bar 8. The material of which the tabs are formed may vary, although I prefer to employ an elastic fabric having a degree of resiliency. The cross bar 7 at the opposite end of the buckle is provided preferably with a single tang 11 of blunt triangular form which projects inwardly toward the intermediate cross bar 9 and preferably is displaced at a slight angle from the major plane of the buckle defined by the cross bars 7 and 8 and their connecting elements. The intermediate cross bar 9 is also preferably displaced from the said major plane of the buckle but towards the opposite face of the latter, so that when the extremity of the portion 1 of the strap is passed through the buckle, as illustrated in Fig. 2, the tang 11 will exert a definite snubbing action sufficient without penetrating the fabric to positively

retain the strand against slippage and in the position to which it may be adjusted.

It will be apparent that the novel construction described above affords an adjustable shoulder strap wherein the portion which passes over the shoulder and which constitutes the strap proper consists of a single unlooped strand of material. Thereby is avoided the unsightly appearance of the conventional strap employing for adjustment purposes a sliding buckle in conjunction with a free loop at one end of the strap. My invention also avoids the recognized impermanency of adjustment of the said conventional strap arising from the inability of the sliding type of buckle to prevent slipping of the strap therethrough under any substantial strain, a strap made in accordance with my invention being definitely slipproof. While my invention in the broader aspects is not limited to a use of any specific means for adjustably connecting the strap element 1 to the tabs 2-3, attention is directed to the buckle illustrated, which by reason of its peculiar construction is functionally well adapted to the desired end, in that it affords a substantially positive and non-slipping connection without mutilating the fabric of the strap element. This is of particular importance in straps for feminine wear which of necessity consist of delicate and easily disfigured materials and which must at all times present a good appearance. The single tang 11 of the buckle has the faculty of positively snubbing and holding the strap without mutilation.

Another advantageous feature of the invention resides in the provision of means affording adjustment in the effective length of the strap from either or both ends. This, also, possesses a particular importance in straps for feminine apparel arising from the custom of anchoring the strap at the top of the shoulder to the outer garment. When the strap has been so anchored near the center, an individual adjustment means for each end at the opposite sides of the anchorage point is frequently required to assure the proper draping of the supported garment, and the double feature greatly facilitates and simplifies accurate adjustment under these conditions.

Still another feature of importance resides in the ability afforded by the invention to assemble the strap without stitches. This not only simplifies and reduces the cost of manufacture, but makes feasible the merchandizing of the tabs 2-3 and the associated buckle as a unit and affords the purchaser wide latitude in the choice of material and color for the strap element 1. It also makes possible the ready substitution of one strap element for another to meet the varying requirements as to color or material, or substitution of the tab and buckle units. It will be noted that in the illustrated embodiment of my invention, the fastener elements 4 and 5, which are applied to the tabs after the latter are passed through the buckles, prevent subsequent withdrawal of the tabs. This is preferred, although obviously the buckles may be so proportioned as to permit such withdrawal or detachment of the tabs if desired.

As previously set forth, the strap comprises in the snap fasteners 4-5 a complete means for detachably connecting the strap to the garment, thereby avoiding the requirement for any special means on the garment itself for making the connection. This has obvious advantages over the conventional shoulder strap, which not only

requires the provision in or on the garment of strap-attaching means, but also must be attached to the garment at the same predetermined point or points, leaving little or no latitude for variation or adjustments in this respect. My invention contemplates the clipping of the fabric of the garment between the intermated elements of the snap fastener. The conventional snap fastener is incapable, however, of being so clipped on a fabric without damage to the latter, and is also incapable when so attached of remaining closed and holding the fabric when any substantial strain is placed on the latter. I have discovered means whereby the conventional snap fastener may be simply and inexpensively adapted for this purpose.

For the purpose of better describing this phase of the invention, I have illustrated in Figs. 3 and 4 the construction of a conventional form of snap fastener of the general type to which my invention relates. It will be understood, however, that except in the respects hereinafter set forth, the invention is not restricted to any specific construction of snap fastener. The fastener illustrated consists of two metallic principal elements shown respectively in Figs. 3 and 4. The female element consists of two parts, 12 and 13, which in well known manner are adapted to be clamped together upon the fabric to which this element is to be attached, and which in the present instance consists of the tabs 2. The part 12 constitutes the head or normally exposed portion of the fastener, while the part 13 forms the socket for reception of the intermating male element. This element, as shown in Fig. 4, also comprises two parts, 15 and 16 respectively, which also in well known manner are adapted to be clamped together upon the supporting fabric, in the present instance constituted by the tabs 3. The part 15 constituting the male element proper is adapted for insertion under pressure in the socket element 13 in which it is held by spring action of the socket member which is constructed for that function. In certain other commercial forms of snap fastener, the resilient characteristic required for proper functioning is obtained by other means, and my invention is applicable to these other forms of snap fastener, and is not restricted to the specific form herein illustrated.

As set forth above, when snap fasteners of this conventional type are clipped upon a fabric so that the fabric is pressed into the socket behind the male element, the fabric almost invariably is damaged. I have discovered that by providing the mating elements of the conventional snap fastener with a thin film or coating of enamel or other similar coating material having the characteristics of smoothness and, to a degree, flexibility, snap fasteners of this type may be clamped upon a fabric, even the delicate and sheer fabrics employed in feminine undergarments, without damage thereto, and that at the same time the grip of the fastener upon the fabric is of such a positive nature that the fastener cannot be displaced by any stretching or straining of the fabric such as might normally be experienced in the use of a garment support of the type described. Commercial enamels or lacquers having adequate hardness, wear resistance, and adherence may be used, although I prefer to employ enamels of the type that may be baked. It is essential, however, that the coating material used shall be capable of affording a smooth and substantially frictionless surface.

In Fig. 5, in which is illustrated a preferred

embodiment of my invention, I have shown the film extending over all exposed surfaces of the snap fastener. It will be understood, however, that for the practice of the invention, it is essential only that the actual intermating parts be provided with the coating film.

So far as I am aware, I am the first to provide a snap device of this character that is capable of being clamped to the fabric as described and as illustrated in Fig. 6 without injury to the fabric. While this feature of the invention is concerned primarily with the production of an efficient and satisfactory form of shoulder strap for feminine garments, it will be apparent that in principle it may find utility in other fields, and I do not, therefore, desire to limit the invention as to its field of application. The term "single-strap" employed in the claims is used to distinguish the applicant's invention from the conventional strap employing a slide buckle wherein the strap proper is necessarily doubled on itself. It is not intended that this term shall restrict the invention to the use of a single strand of material in the major strap element.

There may be various modifications in detail

without departure from the invention as defined in the appended claims.

I claim:

1. A fabric-gripping snap fastener of the character set forth comprising male and female mating elements of metal adapted to interlock by spring action, said elements being provided with a superficial coating possessing the characteristics of smoothness, hardness and flexibility, said coating embracing those portions of said elements which contact the said fabric and substantially precluding damage to the latter while insuring a substantially positive retention of said elements in interlocked fabric-gripping relation.

2. A fabric-gripping snap fastener of the character set forth comprising male and female mating elements of metal adapted to interlock by spring action, said elements being provided with a superficial coating of enamel, said coating embracing those portions of the elements which contact the said fabric and substantially precluding damage to the fabric while insuring a substantially positive retention of the said elements in interlocked fabric-gripping relation.

MAY J. GROSS.