United States Patent [19]

McGlynn

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[45] **Jan. 16, 1973**

[54] SHOULDER STRAP RETAINER

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[52] **U.S. Cl.** .....**2/2,** 24/262 GC, 24/259 A

[51] **Int. Cl.** **A41d 13/00**

[58] **Field of Search**.....2/2; 24/259 GC, 262 GC, 24/252 B, /259 A, 255 G

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Primary Examiner—Jordan Franklin
Assistant Examiner—George H. Krizmanich
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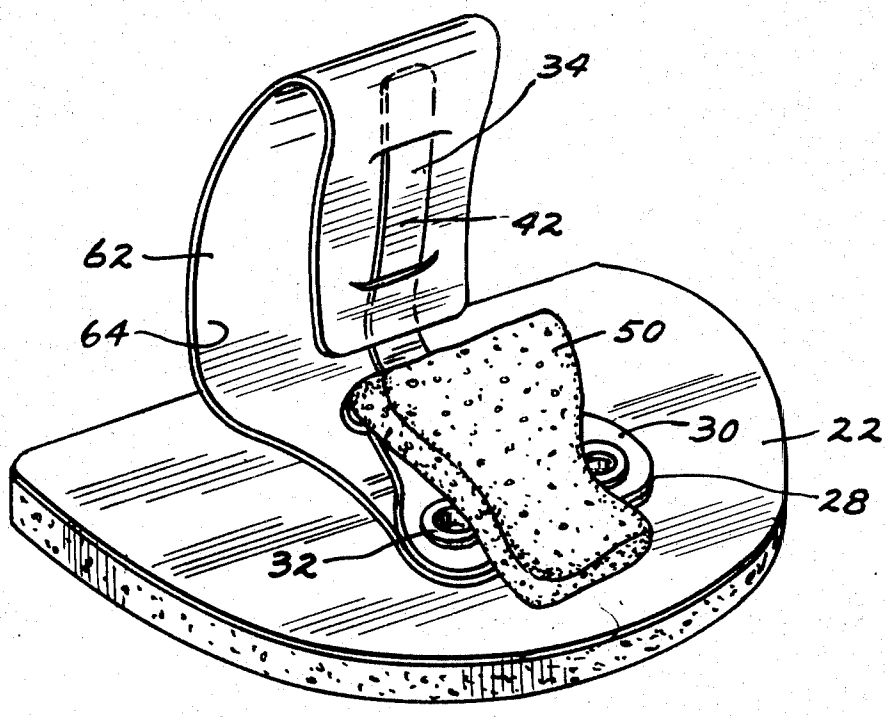
[57] **ABSTRACT**

A shoulder strap retainer consists of a weight distributing pad to be placed on the user's shoulder; a strap holding clip having a base plate riveted to the pad with a hold-down arm pivotally mounted to the base plate; and a cushion of soft, relatively frictional, material bonded to the base plate so as to come between the base plate and the hold-down arm. The base plate is substantially flat, and the hold-down arm is curved to include an enlarged shoulder strap encompassing portion in adjacent relationship to the pivotal mounting of the hold-down arm to the base plate, and a strap contacting end portion in overlying relationship to the cushion. The encompassing portion of the arm and the pivotal mounting of the arm to the base plate prevents the shoulder strap from sliding downwardly off the user's shoulder and the strap contacting portion of the arm combined with the frictional cushion tends to prevent the shoulder strap from riding upwardly or downwardly from the retainer.

4 Claims, 12 Drawing Figures



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SHEET 1 OF 2

FIG. 1

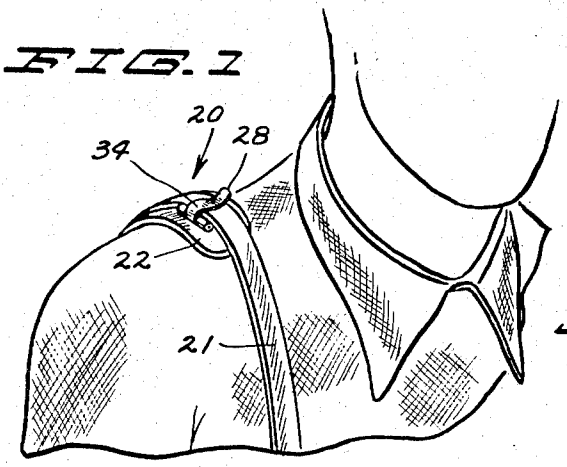
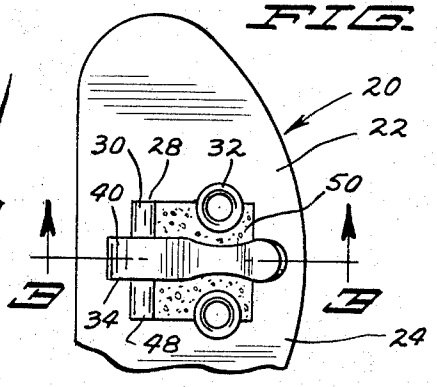


FIG. 2



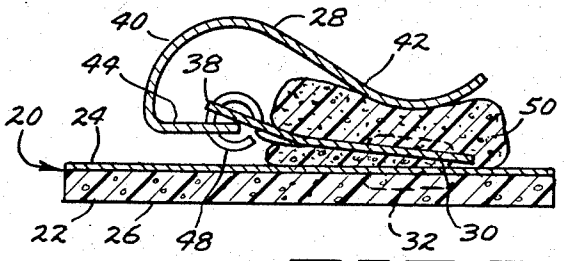


FIG. 3

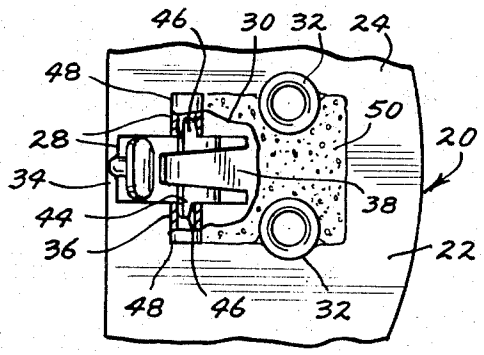


FIG. 4

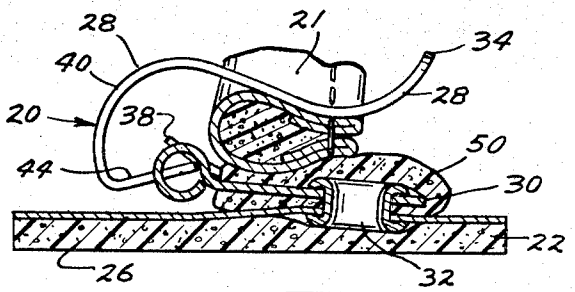


FIG. 5

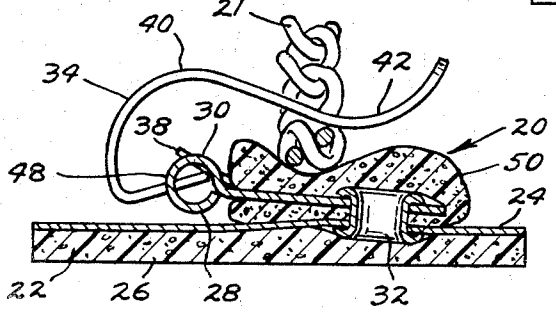


FIG. 7

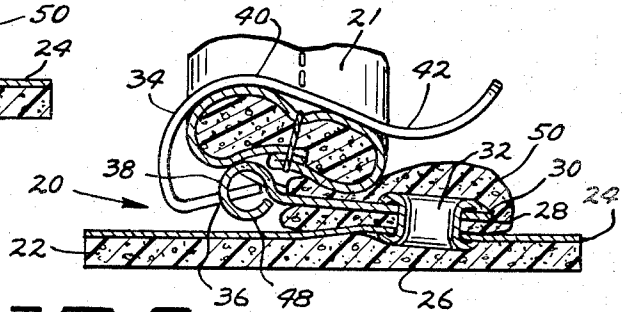


FIG. 6

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FIG. 10

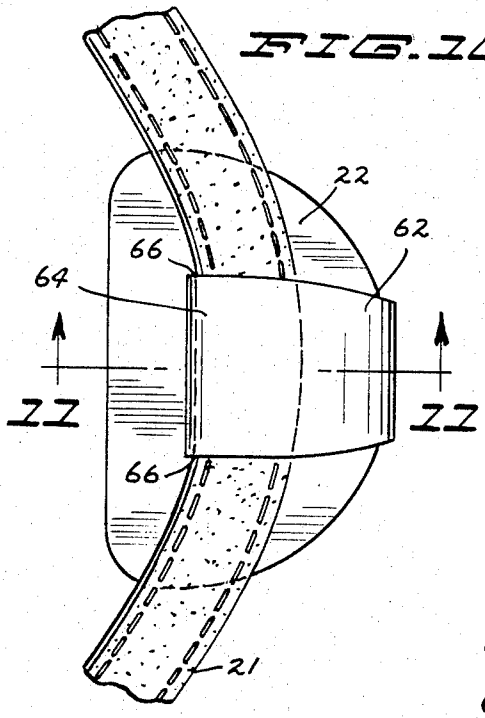
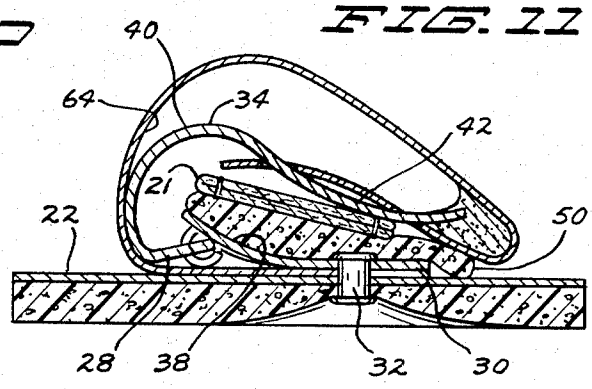


FIG. 11



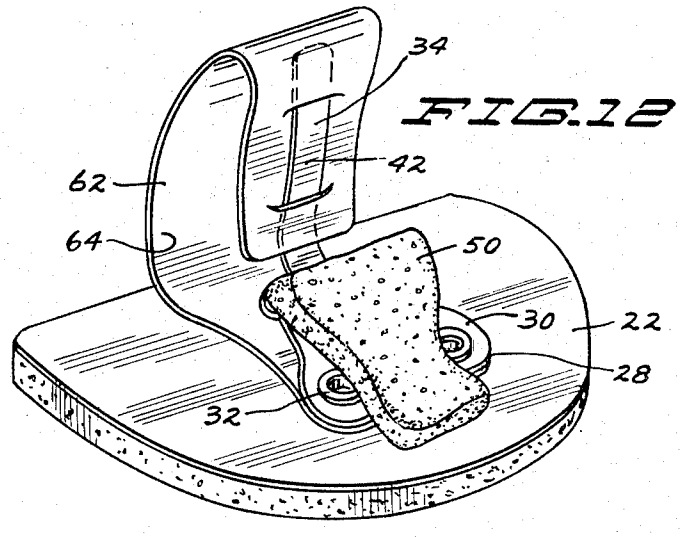
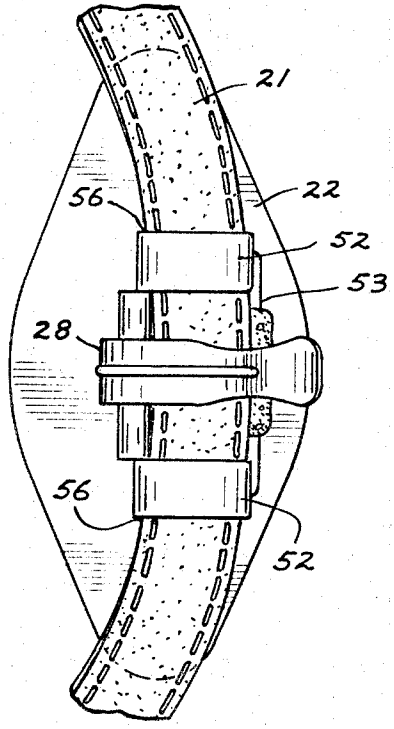


FIG. 12

FIG. 8



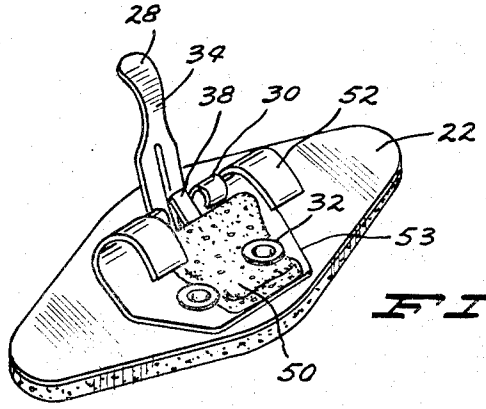


FIG. 9

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SHOULDER STRAP RETAINER

BACKGROUND OF THE INVENTION

This invention relates to the requirements of a person carrying a bag suspended from a strap extending over the shoulder:

1. to prevent the strap from sliding off of the shoulder; and

2. to distribute the weight carried by the shoulder strap for the comfort of user. A shoulder strap retainer is provided which may be clipped to any one of a number of different types of shoulder straps to distribute the weight of the shoulder strap, retain the shoulder strap in position on the user's shoulder, and prevent the shoulder strap from riding upwardly out of the clip which holds the strip in the retainer.

A substantial number of users of the present shoulder strap retainer will be by women carrying decorative containers formerly referred to as "handbags," but now so enlarged that shoulder straps have been added to qualify them as "shoulder bags." Other important usage will be by men and women in supporting such working equipment as camera bags or other heavy accessory supply bags.

Pads for distributing weight carried on the shoulders of an individual are known, and particularly such pads to protect individuals carrying heavy camera cases are known. See the patent to Dopyera, U.S. Pat. No. 3,050,734. Such pads have been designed, however, to fit on a particular style of shoulder strap, to be more or less permanently positioned on such a strap, and not conveniently removable for a temporary use with another shoulder strap on another bag. Clearly, a readily interchangeable shoulder strap retainer which may be moved readily from one shoulder strap and one style of shoulder strap to another is desirable, so that an individual may have one or two such devices for the number of different article containing bags that are likely to be owned.

Shoulder protectors shown in the patents to Trent, U.S. Pat. No. 2,501,749 and to Saunders, U.S. Pat. No. 2,763,004 are also of a type which is not readily interchangeable between different styles of shoulder strap.

It has been contemplated that protective shoulder pads be permanently, slideably attached to shoulder straps, and to the extent that these pads include materials with a high coefficient of friction between the strap and the user's shoulder, they will tend to prevent the strap from sliding from the shoulder. However, in the case of fashionable shoulder bags as worn by women, it is apparent that the effect of a fashionably decorative shoulder strap, which may be braided, chain links, flat or rounded leather, simulated leather or rope and many others, will be substantially negated by the appearance of a highly functional, permanently attached pad. The majority of potential users would choose the inconvenience of the constantly slipping shoulder strap rather than accept the change in appearance in their otherwise fashionable accessory. There may be other occasions, however, where the use of an article carrying bag would be willing to accept the inconvenience in appearance caused by wearing a shoulder strap retainer and on those occasions it would be desirable to affix such an item to the shoulder strap. This change in purpose intended for an article carrying bag would mean

that some otherwise fashionable and desirable bags would remain unsold because of a permanently affixed shoulder strap retainer. Such relatively permanent pads or retainers are shown in patents such as those to Newman, U.S. Pat. No. 3,154,787, Korib, U.S. Pat. No. 3,229,694, Crawford, U.S. Pat. No. 2,689,348.

BRIEF SUMMARY OF THE INVENTION

A shoulder strap retainer made according to the present invention includes a weight distributing pad to be placed on the user's shoulder and having a soft material of high friction coefficient, such as expanded polyurethane foam, forming a bottom shoulder contacting side thereof, and a relatively hard flexible surface such as a polyvinyl chloride sheet, forming the top side thereof. A strap holding clip, of metal or other suitable material, includes a base plate which is riveted at one edge to a central portion of the top side of the pad, and includes a curved hold-down arm that is pivoted to the base plate in spaced relationship to the rivets. A soft cushion of materials having a high coefficient of friction, such as polyurethane foam, is bonded to the base plate between it and a strap contacting end portion of the hold-down arm. This arm curves initially away from the base plate to provide an enlarged shoulder strap encompassing portion and then curves down toward the base plate where the end portion thereof is in overlying relationship to the soft cushion so as to tend to prevent the shoulder strap from riding upwardly or downwardly with respect to the retainer or out of the open end of the clip.

This hold-down arm is pivoted to the base plate in such a manner that when it is in downward position in contact with a shoulder strap, the tendency of the arm is to remain in this downward position due to an over-center spring action at the point of pivot of the arm with the base plate.

In use, the hold-down arm is first opened up and then the shoulder contacting portion of the shoulder strap to be supported is positioned on top of the base plate in the area between the pivotal hold-down arm mounting and the rivets and in position to lie in contact with the cushion bonded to the base plate. The hold-down arm is next closed to contact the shoulder strap and force it tightly against this soft cushion. Then the shoulder strap and retainer are placed on the shoulder in such a manner that the closed strap encompassing portion of the hold-down arm is toward the outside of the shoulder. The friction between the pad and the clothing on the shoulder will prevent or substantially inhibit the sliding of the retainer from the shoulder, and the shoulder strap will tend not to slide relative to the retainer because the strap contacting end portion is holding it in contact with the cushion which is bonded to the base plate. Should gravity and excessive force cause the strap to slip from the cushion toward the outside of the shoulder, it will be prevented from leaving the retainer by the strap encompassing portion of the hook. When the strap and retainer are shifted or removed from the shoulder by the user, the strap contacting end portion and cushion combine to support the retainer on the strap in position to be ready for use when the strap is again supported on a shoulder.

When it is desired to remove the retainer, even temporarily, or to use the retainer elsewhere, the hold-

down arm is raised and the retainer slid from the shoulder strap. The device is of course, then available for use on yet another shoulder strap.

In instances where the shoulder strap is of soft pliable material, the carrying of a heavy bag over long periods of time may cause an undesirable crease or "set" to form in the strap where it bends sharply over the hold-down arm. This is particularly true where the weight of the bag being carried is such as to force the strap back against the bottom of the curved strap encompassing portion of the hold-down arm. In this situation, it is advantageous to provide two additional strap support hooks, one on either side of the hold-down arm to flatten the angle which the shoulder strap will take as it hangs from the hold-down arm and the strap support hook.

In one form of this invention, a decorative flap of material is used to encompass the hold-down arm and is stiff enough and extends far enough to the side of the hold-down arm so that the edge portions of it form the strap support hook portions aforementioned.

IN THE DRAWINGS

FIG. 1 is a perspective view of a shoulder strap retainer in place on a shoulder strap, the combination situated on the shoulder of a person in position to support a shoulder bag;

FIG. 2 is a fragmentary enlarged top plan view of the shoulder strap retainer of FIG. 1;

FIG. 3 is a further enlarged cross sectional view of the retainer as seen on the line 3—3 in FIG. 2;

FIG. 4 is a fragmentary top plan view of the retainer of FIG. 2 but with the clip in open position and with parts broken away for clarity of illustration;

FIG. 5 is a vertical sectional view of the retainer as seen in FIG. 3 but with the retainer fastened on a first type of shoulder strap;

FIG. 6 is a vertical sectional view of the retainer as seen in FIG. 3, but with the retainer fastened on a second type of shoulder strap;

FIG. 7 is a vertical view of the retainer as seen in FIG. 3, but with the retainer fastened on a third type of shoulder strap;

FIG. 8 is a top plan view of a retainer made in accordance with a second form of the invention and showing a fragment of a shoulder strap in relation thereto;

FIG. 9 is a perspective view of the retainer of FIG. 8 but showing the clip in open condition;

FIG. 10 is a top plan view of a retainer made in accordance with a third form of the invention and showing a fragment of a shoulder strap in relation thereto;

FIG. 11 is an enlarged vertical sectional view of the shoulder strap retainer of FIG. 10 taken on the line 11—11 in that figure; and

FIG. 12 is a perspective view of the retainer of FIGS. 10 and 11 but showing the clip in open condition.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

First Form of the Invention

In a first form of the invention as seen in FIGS. 1 through 7, a shoulder strap retainer 20 includes a weight distributing pad 22 which consists of a relatively hard flexible upper surface skin 24, such as leather or polyvinyl chloride or the like, bonded to a lower soft layer 26 of material having a high coefficient of friction when situated next to clothing or human skin, such as, for example, expanded polyurethane foam.

A two piece strap holding clip 28, made of metal or other suitable material, and including a base plate 30, is riveted to the pad 22 as at 32. The clip has a hold-down arm 34 which is pivotally mounted to the base plate 32 by pivotal mounting 36.

This hold-down arm includes a concavely curved shoulder strap encompassing portion 40 adjacent the pivotal mounting 36 and an integral convexly curved strap engaging end portion 42 extending outwardly to form the outer end of the hold-down arm. Between the curved shoulder strap encompassing portion 40 and the pivotal mounting 36 of the arm is a flat portion 44. This flat portion is provided with outwardly extending ears 46,46 each of which is encompassed in an eyelet 48,48. These eyelets are constituted as end extensions of the base plate 30.

A resilient finger 38 is integral with and extends outwardly from a central portion of the base plate 30 and, when the hold-down arm is in its downward or closed position, this finger bears against the outer end of the flat portion 44 to tend to hold the arm 34 in the closed position. When the arm 34 is in the open position, as best seen in FIG. 4, the resilient finger 38 tends to hold the flat portion 44 in a manner causing the hold-down arm 34 to stay in the open position.

A cushion 50 of soft material such as expanded polyurethane foam, for example, is bonded to the upper surface of the base plate 30 between the base plate and the arm 34 and in alignment with the convexly curved strap engaging end portion 42 of that arm. It is desirable that this cushion have a sufficiently high coefficient of friction to engage the strap held in the retainer and prevent it from sliding therewithin. Any suitable cement or adhesive or other method of bonding may be used to secure the cushion to the base plate.

To utilize the shoulder strap retainer 20, the clip 28 is opened by positioning the arm 34 in its open condition as seen in FIG. 4. A strap for supporting a bag is placed in overlying relationship to the cushion 50, and the hold-down arm is moved toward closed condition so that the resilient finger 38 will come to bear on the flat portion 44 of the arm to tend to move it toward and hold it in the closed position. The shoulder strap and retainer will then be placed on the shoulder and will be positioned as seen in FIG. 1.

In each case, the shoulder strap will be placed between the pivot point 36 and the rivet point 32 so that any tendency of the strap to move with respect to the cushion 50 will likely cause movement toward the closed, shoulder strap encompassing portion 40 of the arm 34. The relationship of various straps in this regard is shown in FIGS. 5, 6 and 7. In FIGS. 5 and 6, two forms of padded strap are shown, and in FIG. 7, a shoulder strap constituted as a link chain is shown. Other shapes such as smooth round leather or plastic straps or woven rope straps will be held just as effectively. In all of these cases, any tendency of the strap to slip will cause it to slip into the "closed" portion of the clip 28, while the cushion 50 will also tend to prevent the strap from sliding out of the "open" end of the clip.

Second Form of the Invention

In the second form of the invention, as seen in FIGS. 8 and 9, parts similar to or identical with the parts identified in the first form of the invention are identically numbered. Thus a pad **22** has a two-piece clip **28** riveted to it as at **32**, and a cushion **50** is bonded to the top surface of the base plate **30** of clip **28**. Resilient finger **38** tends to hold the hold-down arm **34** in downward position when that arm has been placed in that position.

In situations where the strap **21** is of a soft and pliable material, the carrying of a heavy bag suspended therefrom will, in the case of the first form of the invention, tend to cause the permanent crease or "set" as the heavy weight of the bag tends to cause the strap to hang against the closed end of the clip **28**. In order to prevent this tendency to damage the shoulder strap, two hooks **52,52** are provided, one on either side of the hold-down arm **34**. These hooks are constituted, in the form of the invention as seen in FIGS. **8** and **9**, as integral upwardly curled J-shaped extensions of a flat plastic plate **53** which is riveted, with the base plate **30**, to the pad **22** with rivets **32**.

As clearly seen in FIG. **8**, when these hooks are employed to support a shoulder strap **21**, the bend of that strap will be much more gentle due to the contact of the hooks at points **56,56**. The formation of a sharp crease or set in the strap will be prevented.

Third Form of the Invention

In the third form of the invention as seen in FIGS. **10** through **12**, parts similar or identical to the parts identified in FIGS. **1** through **9** are identically numbered. In this form of the invention, however, a plastic or leather flap **62** of stiff but flexible material is positioned between base plate **30** and pad **22** through the instrumentality of rivets **32,32** and extends upwardly over the convexly curved strap engaging end portion **42** of the hold-down arm **34** in position to cover the hold-down arm and to leave a more pleasing aesthetic appearance to the retainer when in use. See particularly FIG. **10** in this regard.

This flap **62**, however, serves a much more important functional purpose in that the outer edge portions **64,64** of this flap form supports to perform a function similar to that of the hooks **52** of the second form of the invention. A shoulder strap **21** then rides on the outer edges of these supports as at **66,66**, and this alleviates the tendency for a sharp bend, kink or "set" to develop in the shoulder strap **21**.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A retainer for holding a shoulder strap in position on the shoulder of a human, said retainer including:

a weight distributing pad adapted to rest on a shoulder of a human,

a strap holding clip having a base plate mounted on top of said pad and a hold-down arm pivotably secured to said base plate for movement between open and closed positions, a cushion mounted on top of said base plate and engageable with said hold-down arm to frictionally engage a shoulder strap when said held down arm is in a closed, strap holding position, said cushion and arm tending to prevent said strap from moving relative to said pad and said pad tending to prevent said retainer from moving with respect to a shoulder of a human, and a flap of stiff but flexible material secured to said pad and extending outwardly over the hold-down arm and secured thereto, said flap being substantially wider than said hold-down arm so that the outer edges thereof provide supports for said strap to prevent the formation of a sharp bend in said strap.

2. The structure of claim **1** wherein said pad includes a lower, shoulder-contacting, soft layer having a high coefficient of friction covered by a relatively hard flexible upper, weight distributing skin.

3. The structure of claim **1** wherein said clip is a two piece clip with the hold-down arm formed with a concavely curved, shoulder strap encompassing portion and a convexly curved, strap engaging end portion.

4. The structure of claim **3** wherein said cushion is of relatively frictional material and disposed on said base plate so that said convexly curved, strap engaging portion of said arm is in overlying relation thereto.

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