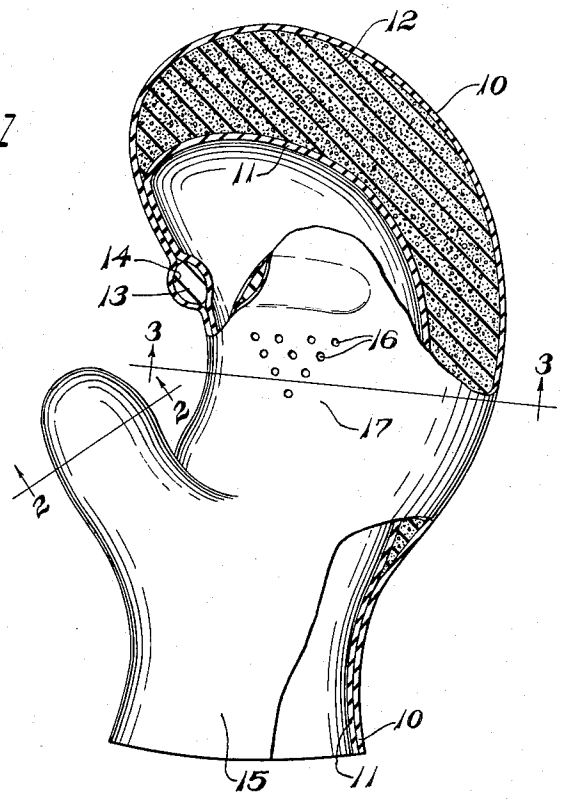
April 21, 1953 H. W. TAUSCH 2,635,240

PADDED GLOVE AND METHOD OF MAKING SAME

Filed Jan. 13, 1950 2 SHEETS--SHEET 1

Fig-1



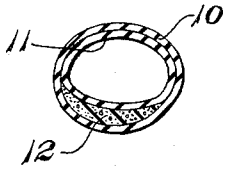
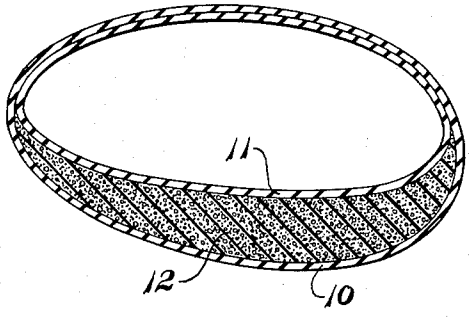


Fig-2

Fig-3



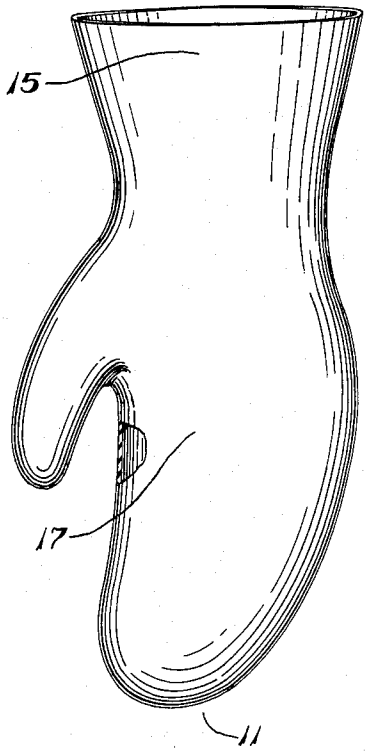
Inventor
Harry W. Tausch
By Robert W. Furlong
Atty.

April 21, 1953 H. W. TAUSCH 2,635,240

PADDED GLOVE AND METHOD OF MAKING SAME

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Fig-5



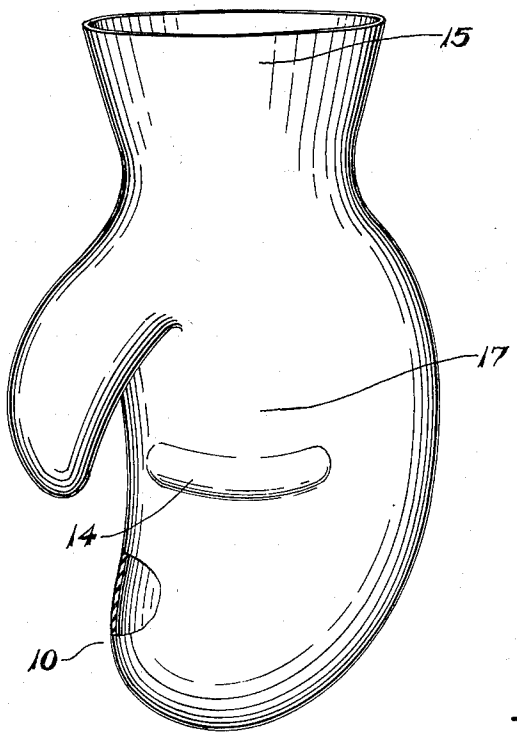


Fig-4

Inventor
Harry W. Tausch
By Robert W. Furlong
Atty

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UNITED STATES PATENT OFFICE

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PADDED GLOVE AND METHOD OF MAKING SAME

Harry W. Tausch, Stratford, Conn., assignor, by mesne assignments, to The B. F. Goodrich Company, Akron, Ohio, a corporation of New York

Application January 13, 1950, Serial No. 138,286

16 Claims. (Cl. 2—18)

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This invention relates to padded articles and pertains more particularly to padded flexible resilient rubbery articles of wearing apparel and the method of making same.

It is an object of this invention to provide a cushioned glove and the like, such as a boxing glove or baseball catcher's mitt, which is constructed substantially of a flexible resilient rubbery material.

Another object of this invention is to provide a flexible resilient cushioned article, such as a cushioned glove or helmet, which may be manufactured in numerous colors.

A further object of this invention is to provide a soft flexible resilient article, such as a boxing glove, which does not require lacing to hold the article in place.

Another object of this invention is to provide a glove and the like, such as a boxing glove, which does not tend to cause skin abrasions when the outer surface of the glove forcibly contacts the skin tissues of an opponent.

Still another object of this invention is to provide a simple and inexpensive method of forming a cushioned flexible resilient article.

Other objects of this invention will be apparent from the drawings and description which follow.

Conventional cushioned articles, such as boxing gloves, are customarily constructed of a leather body member and a fabric lining which form a cavity into which stuffing material is inserted to provide padding for the article. This type of construction has many disadvantages among which are the necessity of having means for lacing the article securely to the hand, stitching, a relatively weighty article, and an expensive article. A boxing glove, for instance, must be carefully laced to the wearer's arm to assure that the glove is held securely onto the arm of the wearer during use of the glove, but must not be laced so tightly that blood circulation is restricted in the wearer's arm.

Stitching in an article, such as a boxing glove, often causes injury to the wearer's opponent, since it causes the opponent's skin tissues to rupture when the stitches forcibly contact such tissues. Furthermore, the surface of the leather covering inherently causes skin abrasions when the surface shearingly contacts the opponent's skin tissue.

I have eliminated the aforementioned disadvantages in such articles in that an article constructed in accordance with my invention is formed substantially completely of a soft resilient

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rubbery material. The elastic properties of the rubbery material cause the glove's wrist portion to grip the wrist of the wearer holding the glove securely on the wearer's hand without requiring lacing. No stitches are required in an article made in accordance with my invention, and the surface of the rubbery material may be treated, so that the article will not cause skin abrasions to skin tissues with which the surface comes in contact.

For a clearer understanding of my invention reference will henceforth be made to a boxing glove embodying my invention; however, it will be understood that I contemplate the use of my invention in other articles of wearing appared in which the same or similar problems arise, such as baseball gloves, football helmets, shoulder pads, etc.

In the drawings:

Fig. 1 is a side elevation partly broken away and in section of a boxing glove constructed in accordance with this invention;

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

Fig. 3 is a section on the line 3—3 of Fig. 1;

Fig. 4 is a view in perspective partly broken away and in section of the body member of a boxing glove constructed in accordance with this invention; and

Fig. 5 is a view in perspective partly broken away and in section of the liner member of a boxing glove constructed in accordance with this invention.

The glove is comprised of an outer covering or body member 10, an inner liner 11, a stuffing or padding material 12 and a hand grip member 13.

The outer covering 10 is a unitary element formed in the configuration of a mitten, that is, a covering for the hand which differs from a glove in that it does not have a separate sheath for each finger but has a division for the thumb, and is constructed of a soft flexible resilient rubbery material. The outer covering 10 is preferably slightly curved in the finger and thumb portions to conform to the contour of the hand when slightly cupped, and has a groove 14 in the finger portion adapted to receive the hand grip member 13. The outer surface of the outer covering 10 is preferably chlorinated to render such surface smooth and non-tacky.

The inner liner 11 likewise is a unitary element formed in the configuration of a mitten and is constructed of a flexible resilient rubbery material. The inner liner 11, like the outer covering 10, is preferably slightly curved in the

finger and thumb portions to conform to the contour of the hand when slightly cupped. The periphery of the inner liner 11 is preferably smaller than the periphery of the outer covering 10, so that the former when inserted into the latter in face-to-face relationship will be unwrinkled.

The marginal areas of wrist zone 15 of covering 10 and liner 11 are preferably flared outwardly around their peripheries, the constricted portion of the wrist zone 15 being slightly smaller than the wrist of the wearer so as to grip it firmly and hold the glove securely on the hand. The stuffing material 12 may be any soft flexible low density padding material, such as cotton, wool, rayon, etc. It is preferable, however, that the stuffing material 12 be a sponge rubber, preferably latex foam sponge. The stuffing material may be formed or shaped into one or more elements having the desired shape, or the cavity between the liner 11 and covering 10 may be filled with a number of small pieces of scrap sponge rubber.

The hand grip member 13 is preferably formed of a soft flexible material, preferably of sponge rubber, and assists the wearer in clenching the glove and affords support to the hand of the wearer when the wearer strikes a solid object.

The entire outer face of the palm side of liner 11 is adhered in face-to-face contacting relationship to the inner palm face of covering 10 and the opposing faces of cover 10 and liner 11 of the back side of the liner are adhered together entirely around the periphery of wrist zone 15.

The hand grip member 13 which is relatively long as compared to its width is adhered between the opposing faces of covering 10 and liner 11, so that it is held securely in place between the two.

The stuffing material 12 fills the cavity formed between the non-adherent opposing faces of the cover and liner.

Ventilation openings 16, 16 are preferably formed in the palm portion 17 of the glove passing through both the cover and the liner to provide a means for allowing perspiration to escape from the interior of the glove.

Among the vulcanizable rubber-like materials from which the outer covering 10 and the inner liner 11 may be constructed are natural rubber which is essentially a rubbery polymer of isoprene, such as caoutchouc and the like, or synthetic rubber, such as the rubbery polymers of open-chain conjugated diolefins having from four to eight carbon atoms exemplified by butadiene-1,3; 1,4-dimethyl butadiene-1,3; 2,3-dimethyl butadiene-1,3, and the like, or the rubbery copolymers of these and similar conjugated diolefins with each other or with copolymerizable monomeric materials containing a single ethylenic linkage, such as styrene, methyl acrylate, ethyl acrylate, methyl methacrylate, ethyl methacrylate, acrylonitrile, isobutylene, or similar materials, or the rubbery polymers of chloroprene, and the like.

The preferred method of making a padded glove embodying this invention is to form the outer covering 10 and the inner liner 11 separately by depositing coatings of a rubbery material from an aqueous dispersion thereof onto forms having the desired configurations, and assembling the members.

The outer covering 10 and the inner liner 11 are formed separately on dipping forms having the desired configuration preferably by dipping the forms in a coagulant solution, such as a solution of calcium nitrate in acetone, aqueous acetic acid, etc., to produce a coating of coagulant on the surface of the form. The coagulant-coated dipping form is then immersed in an aqueous dispersion of a rubbery material, such as rubber latex, and allowed to remain therein for a sufficient period (1–10 minutes or more) to build up a deposit of latex rubber solids of the desired thickness by diffusion of the coagulant into the latex, a thickness of 1/32 inch being satisfactory. The coated forms are then heated to dry the deposits and to vulcanize the rubbery materials, and the deposits are stripped from the forms.

The entire outer face of the palm side of liner 11 is adhered, as by cementing, in face-to-face contacting relationship to the inner face of the palm side of covering 10 with hand grip member 13 lodged between the opposing faces of liner 11 and covering 10 and adhered thereto in a position generally parallel to and approximately at a level with the second finger joints of the hand when the hand is in the glove. Ventilation means, such as openings 16, 16, are formed in the palm portion of covering 10 and liner 11.

The stuffing material 12 is inserted in the cavity formed by the non-adherent opposing surfaces of the outer covering 10 and the inner liner 11 to form the desired padded areas and the cover and liner are adhered together around the periphery of wrist portion 15 sealing the aforementioned cavity.

The outer face of covering 10 and the inner face of liner 11 are preferably chlorinated, in a manner well known to the art, to render the surfaces non-tacky and smooth.

A padded article made in accordance with this invention does not require stitching to form the assembled completed article. This invention therefore provides an article, such as a boxing glove, which does not have stitches which would readily break causing frequent repairs to be made to the article. Furthermore, there are no stitches which tend to rupture skin tissues of a combatant when such stitches forcibly contact the combatant's body.

No laces are required to secure the glove on the wearer's hand, since the inherent elastic properties of the rubbery material in the wrist portion 15 of the glove causes the wrist portion of the glove to firmly grasp the wearer's wrist holding the glove securely in place.

Articles made in accordance with this invention many be manufactured in numerous colors. The desired color may be imparted to the article by adding the appropriate dye or coloring material to the aqueous dispersion of rubber material from which the members of the article are formed.

The treatment of the outer and inner surfaces of the article to render the surfaces smooth and non-tacky provides an article which will not cause skin abrasions and which is readily pulled on and removed from the hand.

My invention provides a simple and inexpensive method of constructing a flexible soft cushioned article.

It is clear that obvious variations and modifications may be made without departing from the scope and spirit of this invention as defined in the appended claims.

I claim:

1. A flexible resilient padded boxing glove

which comprises a deposited hollow thin-walled flexible resilient rubber-like hand-enveloping liner member, a deposited hollow thin-walled flexible resilient rubber-like cover member encompassing said liner member in face-to-face relationship, said liner and cover members terminating in wrist-encircling marginal zones, the outer face of the palm side of said liner member being adhered in face-to-face contacting relationship to the opposing face of said cover member and the opposing marginal zones of said cover member and said liner member being adhered together, a padding material confined between the nonadhered opposing faces of said cover member and said liner member, and ventilating means in the palm area of said glove.

2. A flexible resilient padded boxing glove which comprises a deposited hollow unitary thin-walled flexible resilient vulcanized rubber-like hand-enveloping liner member, a deposited hollow unitary thin-walled flexible resilient vulcanized rubber-like cover member encompassing said liner member in face-to-face relationship, said liner and cover members terminating in wrist-encircling marginal zones, the outer face of the palm side of said liner member being adhered in face-to-face contacting relationship to the opposing face of said cover member and the opposing marginal zones of said cover member and said liner member being adhered together around their peripheries, a soft flexible hand gripping member situated generally parallel to and approximately at a level with the second finger joints of the hand when inserted in said glove, said hand gripping member confined between the opposing palm faces of said cover member and said liner member and adhered thereto, a sponge rubber padding material confined between the nonadhered opposing faces of said cover member and said liner member, and ventilation means extending through said cover member and said liner member in the palm area of said glove.

3. A padded boxing glove comprising a deposited hollow thin-walled unitary flexible inner mitten comprising a vulcanized rubber-like composition and having a constricted zone in the wrist portion thereof terminating in a flared margin, a second deposited hollow thin-walled unitary flexible outer mitten comprising a vulcanized rubber-like composition and having a constricted zone in the wrist portion thereof terminating in a flared margin, said outer mitten being substantially larger than said inner mitten except at said flared margin and having a normally curved bulbous configuration, said inner mitten being secured within said outer mitten in mating relationship and adhered thereto throughout the extent of the palm area and margin thereof to form an enclosed cavity between the backs of said mittens, and a padding material filling said cavity.

4. A padded boxing glove comprising a deposited hollow thin-walled unitary flexible inner mitten comprising a vulcanized rubber-like composition and having a constricted zone in the wrist portion thereof terminating in a flared margin, a second deposited hollow thin-walled unitary flexible outer mitten comprising a vulcanized rubber-like composition and having a constricted zone in the wrist portion thereof terminating in a flared margin, said outer mitten being substantially larger than said inner mitten except at said flared margin and having a normally curved bulbous configuration, said inner

mitten being secured within said outer mitten in mating relationship and adhered thereto throughout the extent of the palm area and margin thereof to form an enclosed cavity between the backs of said mittens, the outer face of said outer mitten and the inner face of said inner mitten having a chlorinated surface, and a padding material filling said cavity.

5. A padded boxing glove comprising a deposited hollow thin-walled unitary flexible inner mitten comprising a vulcanized rubber-like composition and having a constricted zone in the wrist portion thereof terminating in a flared margin, a second deposited hollow thin-walled unitary flexible outer mitten comprising a vulcanized rubber-like composition and having a constricted zone in the wrist portion thereof terminating in a flared margin and having a normally curved bulbous configuration, said inner mitten being secured within said outer mitten in mating relationship and adhered thereto throughout the extent of the palm area and margin thereof to form an enclosed cavity between the backs of said mittens, a sponge rubber padding material filling said cavity, and ventilating means extending through said outer member and said inner member in the palm area of said glove.

6. The method of making a padded resilient glove which comprises providing a hollow deposited unitary flexible resilient thin-walled vulcanized rubber-like cover member, providing a hollow deposited unitary flexible resilient thin-walled vulcanized rubber-like liner member, said cover and liner members terminating in wrist-encircling margins, encompassing said liner member with said cover member in face-to-face relationship, adhering the outer face of the palm side of said liner member to the opposing face of said cover member, inserting a padding material between the nonadhered opposing faces of said cover member and said liner member, and adhering the opposing margins of said cover member and said liner member together.

7. The method of making a padded resilient boxing glove which comprises providing a hollow deposited unitary flexible resilient thin-walled vulcanized rubber-like cover member, providing a hollow deposited unitary flexible resilient thin-walled vulcanized rubber-like liner member, said cover and liner members terminating in wrist-encircling marginal zones, encompassing said liner member with said cover member in face-to-face relationship, adhering the outer face of the palm side of said liner member to the opposing face of said cover member, forming ventilation openings in the adhered palm portion of said cover member and said liner member, inserting a sponge rubber padding material between the nonadhered opposing faces of said cover member and said liner member, and adhering the opposing marginal zones of said cover member and said liner member together along their peripheries.

8. The method of making a padded resilient boxing glove which comprises providing a hollow deposited unitary flexible resilient thin-walled vulcanized rubber-like cover member, providing a hollow deposited unitary flexible resilient thin-walled vulcanized rubber-like liner member, said cover and liner members terminating in a wrist-encircling marginal zone, encompassing said liner member with said cover member in face-to-face relationship, adhering the outer face of the palm side of said liner member to the opposing face of said cover member with a soft flexible hand gripping member, relatively long as compared to

its width, adhered therebetween at a position generally parallel to and approximately at a level with the second finger joints of the hand when inserted in said glove, forming ventilation openings extending through said cover member and said liner member in the adhered palm portion of said cover member and liner member, inserting sponge rubber padding material between the nonadhered opposing faces of said cover member and said liner member, and adhering the opposing marginal zones of said cover member and said liner member together along their peripheries.

9. The method of making a padded resilient glove which comprises forming a hollow thin-walled liner member and a hollow thin-walled cover member separately by depositing layers of vulcanizable rubber-like material upon the surfaces of forms from an aqueous dispersion of said vulcanizable rubber-like material, said liner and cover members terminating in marginal zones encircling a wrist-opening therein, vulcanizing said deposits, stripping said deposits from said forms, assembling said cover member over said liner member in face-to-face relationship, inserting a sponge rubber padding material between the opposing faces of said cover member and said liner member, and adhering the opposing marginal zones of said cover member and said liner member together along their peripheries.

10. The method of making a padded resilient boxing glove which comprises forming a hollow thin-walled liner member and a hollow thin-walled cover member separately by depositing layers of vulcanizable rubber-like material upon the surfaces of forms from an aqueous dispersion of said vulcanizable rubber-like material, said liner and cover members terminating in wrist-encircling marginal zones, vulcanizing said deposits, stripping said deposits from said forms, encompassing said liner member with said cover member in face-to-face relationship, adhering the outer face of the palm side of said liner member to the corresponding opposing face of said cover member, inserting a padding material between the nonadhered opposing faces of said cover member and said liner member, and adhering the opposing marginal zones of said cover member and said liner member together.

11. The method of making a padded resilient boxing glove which comprises forming a hollow thin-walled liner member and a hollow thin-walled cover member separately by depositing layers of vulcanizable rubber-like material upon the surfaces of forms from an aqueous dispersion of said vulcanizable rubber-like material, said liner and cover member each terminating in wrist-encircling marginal zones, vulcanizing said deposits, stripping said deposits from said forms, encompassing said liner member with said cover member in face-to-face relationship, adhering the outer face of the palm side of said liner member to the corresponding opposing face of said cover member with a soft flexible hand gripping member, relatively long as compared to its width, adhered therebetween at a position generally parallel to and approximately at a level with the second finger joints of the hand when inserted in said glove, inserting a sponge rubber padding material between the nonadhered opposing faces of said cover member and said liner member, and adhering the opposing marginal areas of said cover member and said liner member together along their peripheries.

12. The method of making a padded resilient boxing glove which comprises forming a hollow unitary thin-walled liner member and a hollow unitary thin-walled cover member separately by depositing layers of vulcanizable rubber-like material upon the surfaces of forms from an aqueous dispersion of said rubber-like material, said liner and cover member each terminating in a marginal zone encircling a wrist opening, vulcanizing said deposits, stripping said deposits from said forms, encompassing said liner member with said cover member in face-to-face relationship, adhering the outer face of the palm side of said liner member to the corresponding opposing face of said cover member with a soft flexible hand gripping member, relatively long as compared to its width, adhered therebetween at a position generally parallel to and approximately at a level with the second finger joints of the hand when inserted in said glove, forming ventilation openings extending through said cover member and said liner member in the adhered palm portion of said cover member and liner member, inserting a sponge rubber padding material between the nonadhered opposing faces of said cover member and said liner member, and adhering the facing marginal zones of said cover member and said liner member together along their peripheries.

13. The method of making a padded resilient glove which comprises separately forming a hollow unitary thin-walled mitten-shaped liner member and a hollow unitary thin-walled mitten-shaped cover member adapted to encase said liner member by depositing layers of vulcanizable rubber-like material upon the surfaces of forms from an aqueous dispersion of said rubber-like material, said liner and cover member each terminating in a marginal zone encircling a wrist opening, vulcanizing said deposits, stripping said deposits from said forms, encompassing said liner member with said cover member in face-to-face relationship, adhering the outer face of the palm side of said liner member to the corresponding opposing face of said cover member with a soft flexible hand gripping member, relatively long as compared to its width, adhered therebetween at a position generally parallel to and approximately at a level with the second finger joints of the hand when inserted in said glove, forming ventilation openings extending through said cover member and said liner member in the adhered palm portion of said cover member and liner member, inserting a sponge rubber padding material between the nonadhered opposing faces of said cover member and said liner member, and adhering the facing marginal zones of said cover member and said liner member together along their peripheries.

14. A flexible resilient padded glove which comprises a hollow unitary thin-walled flexible resilient rubber-like hand-enveloping liner member, a hollow unitary thin-walled flexible resilient rubber-like cover member encompassing said liner member in face-to-face relationship, said liner and cover members terminating in wrist-encircling marginal zones, the outer face of the palm side of said liner member being adhered in face-to-face contacting relationship to the opposing face of said cover member and the opposing marginal zones of said cover member and said liner member being adhered together, and a padding material confined between the nonadhered opposing faces of said cover member and said liner member.

15. The method of making a padded glove

which comprises forming a hollow thin-walled flexible resilient rubber-like cover member, forming a hollow thin-walled flexible resilient rubber-like liner member, encompassing said liner member with said cover member in face-to-face relationship, adhering the outer face of the palm side of said liner member to the corresponding opposing face of said cover member, inserting a soft flexible low density stuffing material between the nonadhered opposing faces of said cover member and said liner member, and adhering the opposing marginal areas of said cover member and said liner member together along their peripheries to form a sealed cavity having said stuffing material confined therein.

16. The method of making a padded glove which comprises forming a hollow unitary thin-walled flexible resilient rubber-like cover member, forming a hollow unitary thin-walled flexible resilient rubber-like liner member, encompassing said liner member with said cover member in face-to-face relationship, adhering the outer face

of the palm side of said liner member to the corresponding opposing face of said cover member, inserting a soft flexible low density stuffing material between the nonadhered opposing faces of said cover member and said liner member, and adhering the opposing marginal areas of said cover member and said liner member together along their peripheries to form a sealed cavity having said stuffing material confined therein.

HARRY W. TAUSCH.

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