



US00RE35290E

# United States Patent

[19]

[11] E

Patent Number: **Re. 35,290**

Druskoczi

[45] **Reissued** Date of Patent: **Jul. 2, 1996**

[54] **SURGICAL COLLAR AND LINER THEREFOR**

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3,374,785	3/1968	Gaylord, Jr. .	
3,477,425	11/1969	Grassl .....	602/18
3,756,226	9/1973	Calabrese et al. .	
3,810,466	5/1974	Rogers .	
3,850,164	11/1974	Hare .....	602/18
3,921,626	11/1975	Neel .	
4,232,663	11/1980	Newton .	
4,400,030	8/1983	Maruzzo et al. ....	297/228.1
4,572,173	2/1986	Comeau .	
4,676,233	6/1987	Scheinberg .	
4,712,540	12/1987	Tucker et al. .	
4,718,412	1/1988	Nesbitt .	

[21] Appl. No.: **54,946**

[22] Filed: **Apr. 29, 1993**

### Related U.S. Patent Documents

Reissue of:

[64] Patent No.: **5,010,877**  
 Issued: **Apr. 30, 1991**  
 Appl. No.: **440,716**  
 Filed: **Nov. 24, 1989**

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[51] **Int. Cl.<sup>6</sup>** ..... **A61F 5/00**

[52] **U.S. Cl.** ..... **602/18; 128/DIG. 23**

[58] **Field of Search** ..... **128/DIG. 23, 602; 602/17-19; 297/228.1**

### [57] ABSTRACT

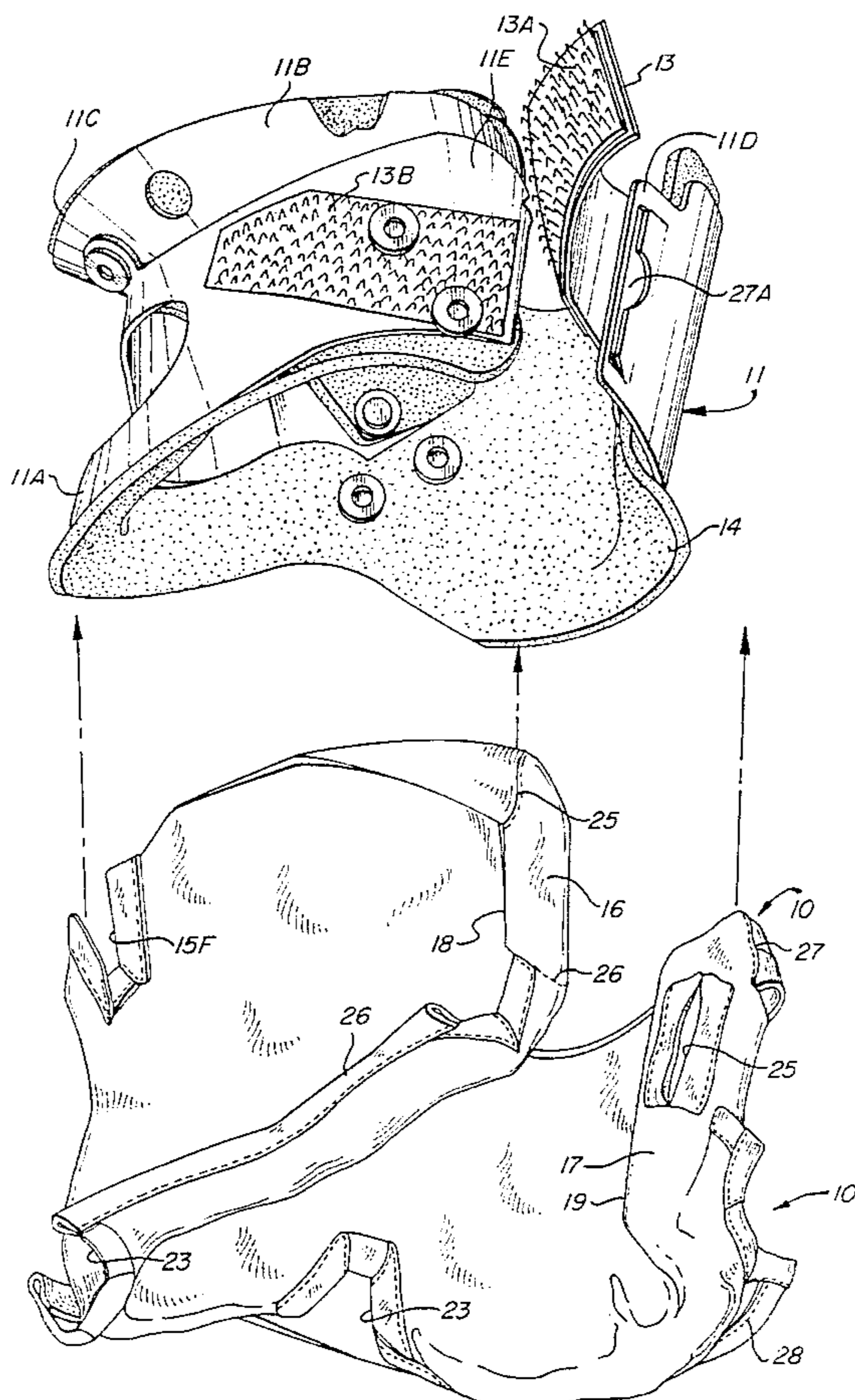
This disclosure is directed to a liner and a surgical collar wherein the liner is formed of a blank of soft, pliable absorbent material shaped to conform to the interior surface of the surgical collar and having opposed reversible folded pockets formed along the opposed ends of the blank for receiving the edges of the surgical collar and a reversible foldable edge flange for overlying the upper peripheral portion of the surgical collar so as to render the collar more comfortable to the wearer. The liner may be formed as a unitary member, or in several parts, depending upon the specific construction of the surgical collar.

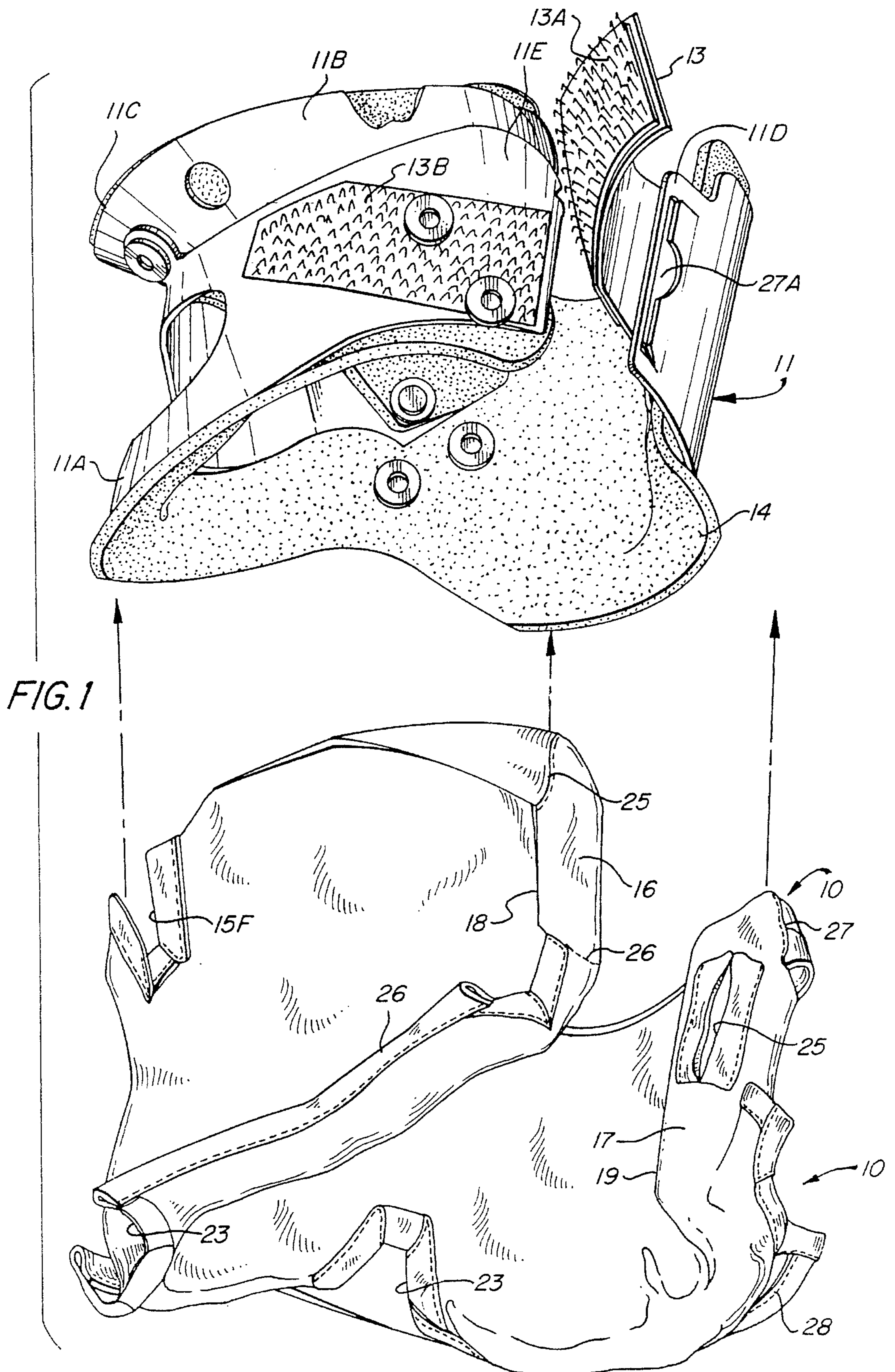
### [56] References Cited

#### U.S. PATENT DOCUMENTS

773,716	11/1904	Cragin .	
1,473,506	11/1923	Nessler .	
2,373,071	4/1945	Waranch .....	297/228.1 X
2,818,063	12/1957	Smith et al. .	
2,911,970	11/1959	Bartels .	
3,320,950	5/1967	McElvenny .	

**16 Claims, 5 Drawing Sheets**







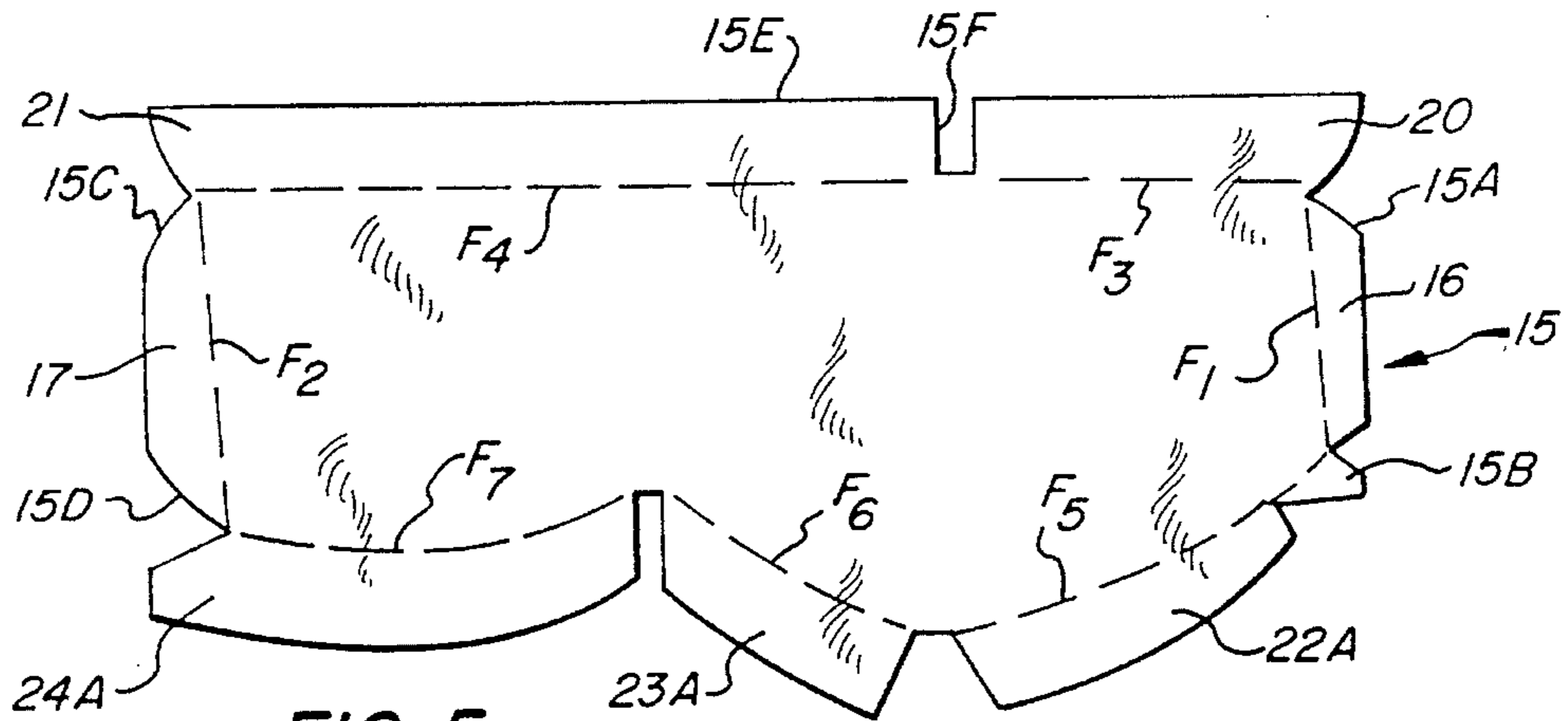


FIG. 5

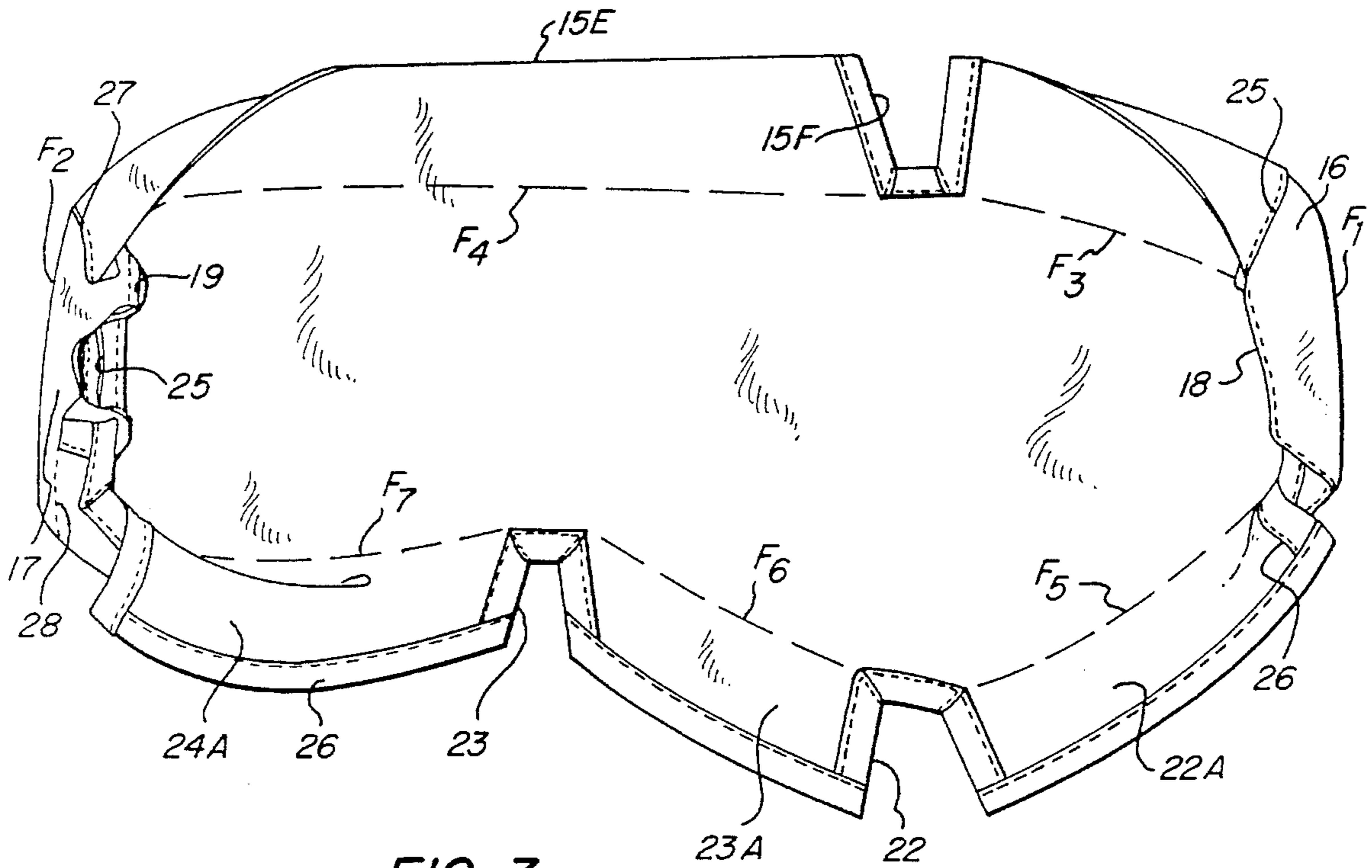


FIG. 3

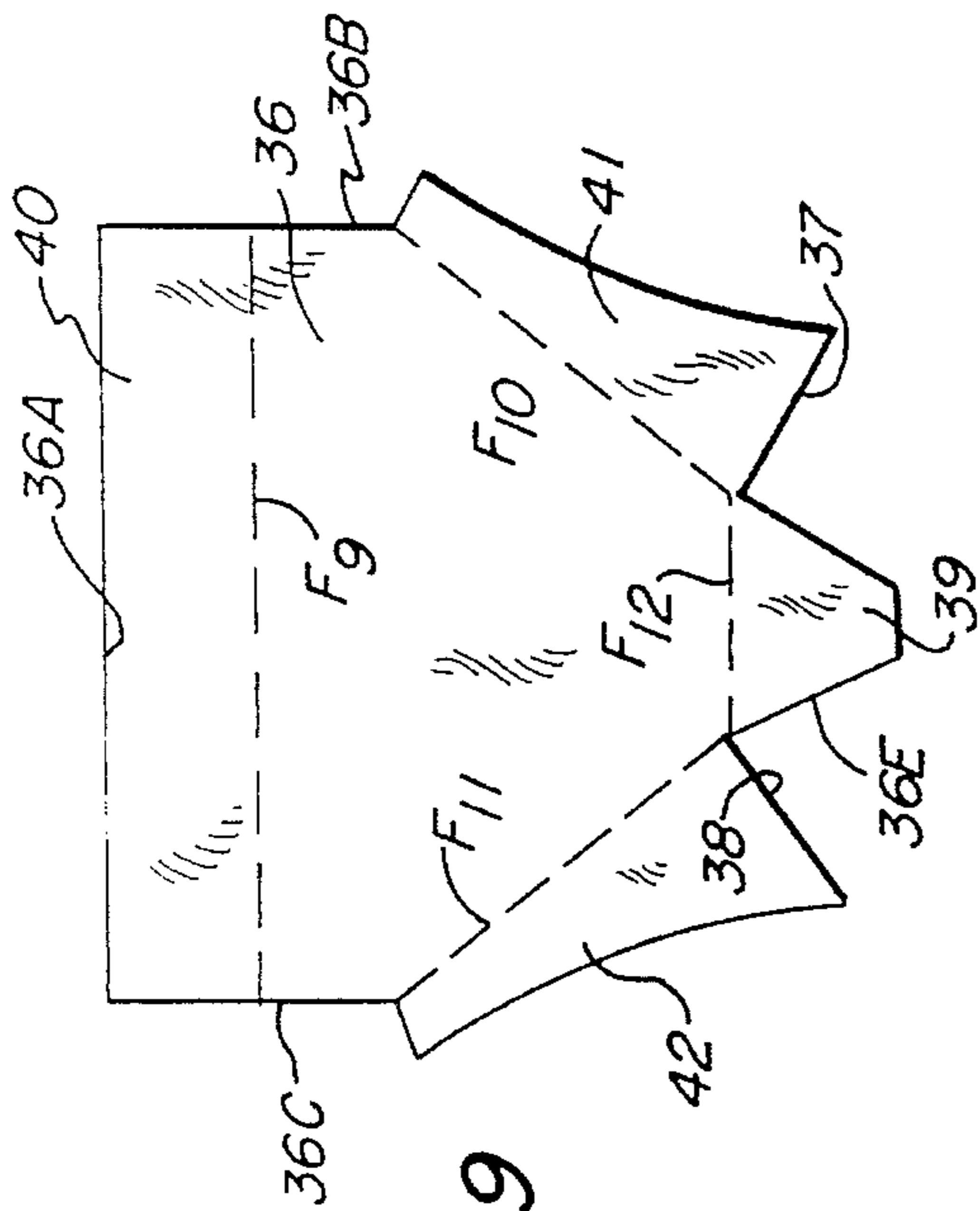


FIG. 9

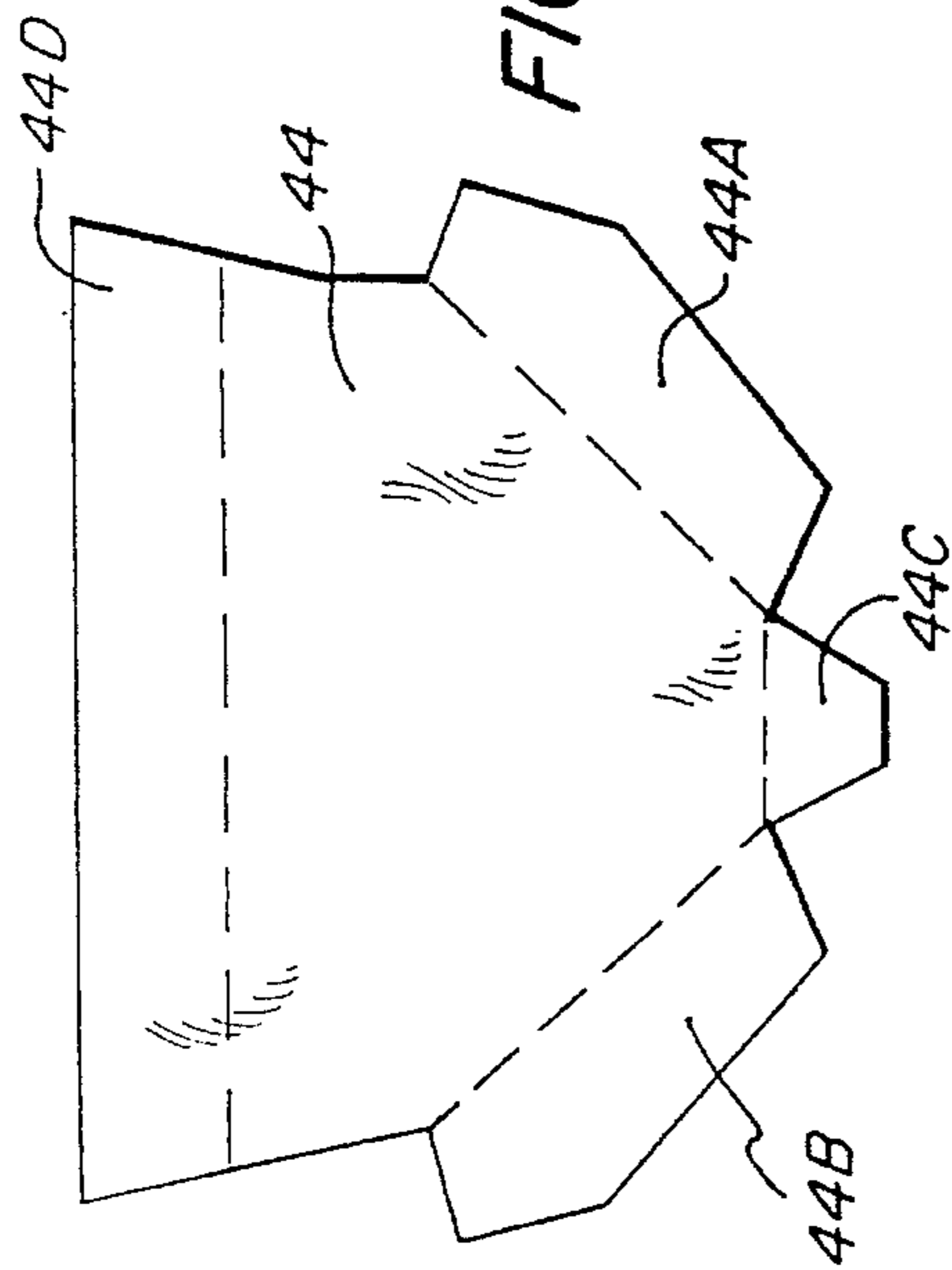


FIG. 9A

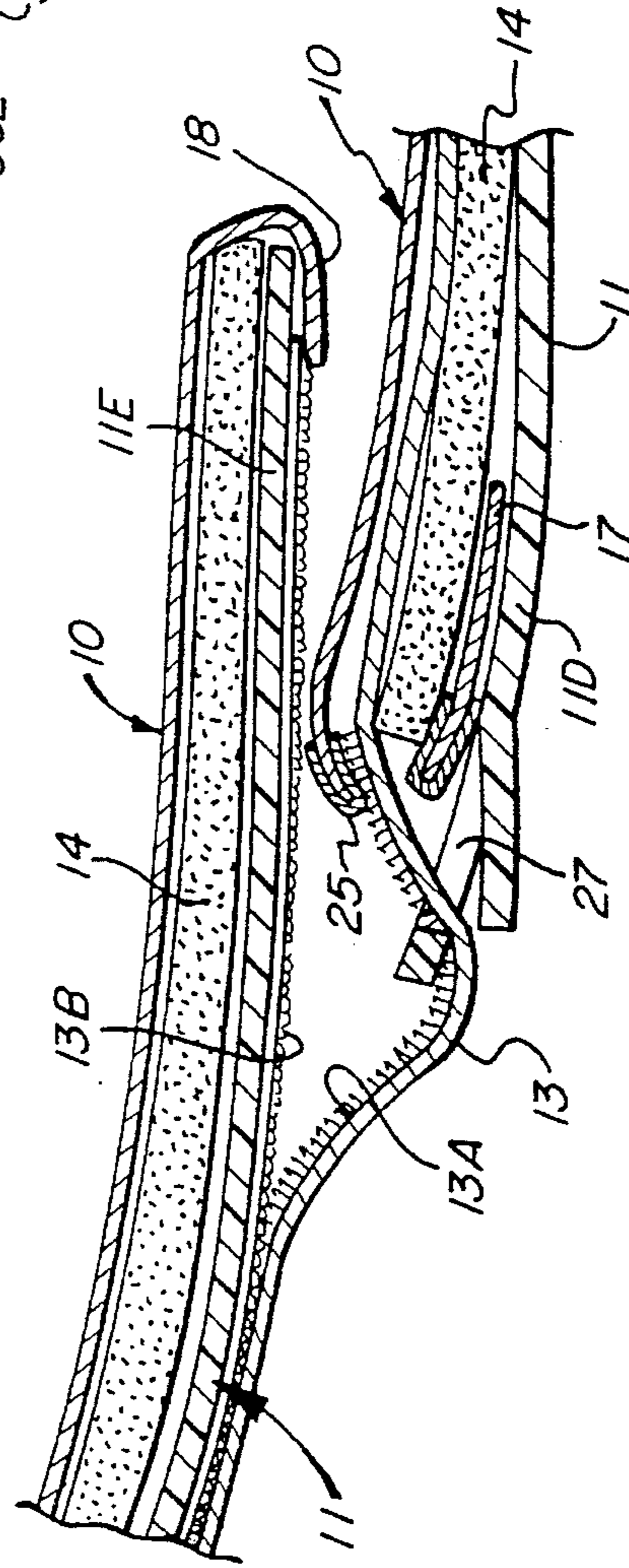


FIG. 6



## SURGICAL COLLAR AND LINER THEREFOR

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates the additions made by reissue.

### FIELD OF INVENTION

This invention is directed to a surgical collar and more specifically, to a liner for in combination with a surgical collar,

### PROBLEM AND PRIOR ART

Surgical collars are frequently required to be worn by patients to maintain the head and/or neck immobile as a result of an accident, injury or surgical procedure. More often than not, such surgical collars are required to be worn continuously by the patient over a considerable period of time. Usually, such collars are formed of a relatively rigid body portion defining a brace which circumscribes the patient's neck, suitably shaped to confine the sides of the head and chin of the patient so as to maintain the head immobile relative to the neck. Such collars along the inner surface may be provided with a rubber or foam pad which are currently formed of a plastic foam-like material. Such plastic foam material has a surface which is generally, non-porous and non-absorbent. As a result, the closeness of such foam or rubber-like liner against a patient's skin, and particularly in hot and humid weather, causes the skin to perspire, thus rendering the wearing of such collar extremely uncomfortable. Because of perspiration, such pads acquire an unpleasant gym smell and are difficult to clean and/or wash. Also, because of perspiration and the foam or rubberized nature of the collar padding, one's skin after prolonged wear can become irritated and cause a very discomforting rash.

### OBJECTS

An object of this invention is to provide an absorbent liner for use with a surgical collar which can be rendered readily detachably connected and which is readily absorbent and easy to wash or clean.

Another object is to provide an absorbent liner so as to render the wearing of a surgical collar more comfortable to the patient.

Another object is to provide a surgical collar liner which is formed of a soft absorbent material which can be readily fitted to the shape of the surgical collar and secured in place thereon.

Another object is to provide a liner for a surgical collar which is readily simple in construction, can be economically fabricated and which is simple to use.

### SUMMARY OF THE INVENTION

The foregoing objects and other features and advantages are attained by a surgical collar liner which is formed out of a blank of soft, absorbent material which is pre-formed and shaped so that it can be readily fitted to a standard surgical collar. In one form of the invention, the liner is formed so as to be attached to a unitary type of standard collar and which liner comprises a blank of material having reversely folded marginal end portions to define an end pocket for receiving the opposed ends of the unitary surgical collar. One of the

end pockets is provided with a slit through which the fastening strap of the collar is extended. The upper longitudinal marginal portion of the blank is adapted to be reversely folded about the upper peripheral portion of the surgical collar to aid in maintaining the liner properly fitted to the collar. If desired, the lower longitudinal marginal portion of the blank may likewise be reversely folded about the bottom edge of the collar.

In another form of the invention, the liner may be made in two half sections, each being formed of a soft pliable, absorbent material having similar reversely folded end portions to define end pockets for receiving the opposed ends of a segmented surgical collar and having reversely folded longitudinal marginal flaps to secure the liner to its complementary surgical collar section.

### FEATURES

A feature of this invention resides in the provision of a liner which is constructed so as to be readily fitted to the interior surface of a surgical collar.

Another feature resides in the provision of a unitary liner having end pockets for receiving the opposed ends of a unitary surgical collar and having a slit formed at one end through which the fastening strap of the collar is extended.

Another feature resides in the provision of a liner formed in two half sections, each being fitted to a surgical collar which is formed in two sections.

Other features and advantages will become more readily apparent when considered in view of the drawings in which:

FIG. 1 is a perspective exploded view of a surgical collar and liner therefor embodying the invention.

FIG. 2 is a perspective view of the surgical collar and liner of FIG. 1 in the assembled position.

FIG. 3 is a plan view of the liner of FIG. 2 showing the outer side thereof which engages the inner surface of the surgical collar.

FIG. 4 is a plan view of FIG. 3 showing the inner or opposite surface of the liner which engages the neck of the wearer.

FIG. 5 is a detail plan view of the blank from which the liner of FIGS. 3 and 4 is formed.

FIG. 6 is a sectional view taken along line 6—6 on FIG. 2.

FIG. 7 illustrates a perspective view of a modified form of the invention.

FIG. 8 is a sectional view taken along line 8—8 on FIG. 7.

FIG. 9 is a plan view of a blank of sheet material from which the front half of the liner is made.

FIG. 9A is a plan view of a blank of sheet material from which the back half of the liner is made.

### DETAIL DESCRIPTION

Referring to FIG. 1, there is shown the liner 10 embodying the invention as applied to a surgical collar 11. The surgical collar 11 comprises a standard, readily available collar construction which consists of molded plastic member 11A which defines the body portion adapted to circumscribe the neck of the wearer. Connected to the upper end of the body portion 11A is an extended portion 11B which is shaped to define a chin rest 11C. Connected to one end 11D of the body portion 11A is a Velcro fastening strap 13. Attached to the other end 11E is a piece of complementary

hook and loop material or hook type material **13B** for receiving the looped portion **13A** of the Velcro fastening strap **13**. Connected along the inner surfaces of the respective body portion **11** and connected chin rest or extended portion **11B** is a soft plastic foam pad **14**.

In accordance with this invention, a liner **10** is provided so as to render the wearing of such surgical collar **11** more comfortable to the patient. The liner **10** is formed from a blank of soft, pliable sheet material which is readily absorbent, e.g., a terrycloth or towel-like fabric. As best seen in FIGS. **1** to **3-6**, the liner comprises a blank **13** which is constructed to conform to the inner surface of the collar **11**. The blank **15** is cut to define a pattern generally of the outline shown in FIG. **5**. As shown in FIG. **5**, the pattern for the liner **10** is provided with side notches **15A**, **15B**, **15C** and **15D** at the opposed ends of the blank **15**. Extending generally between notch **15A**, **15B** and **15C**, **15D** respectively is a foldline  $F_1$  and  $F_2$  to define a marginal end flap **16** and **17** which are adapted to be reversely folded about its respective folding  $F_1$  and  $F_2$ , as will be hereinafter described to form end pockets **18** and **19** respectively.

The upper edge **15E** is provided with a notch **15F** arranged so as to be located at the chin rest portion **11C** of the collar, and which notch **15F** in the assembled position of the liner **10** facilitates the liner to circumscribe the inner surface of the collar **11**. Extending horizontally along the upper edge **15E** and generally parallel thereto and extending between notches **15A** and **15C** is a foldline  $F_3$ ,  $F_4$  defining top marginal flaps **20**, **21**. The bottom edge is provided with a pair of notches **22**, **23** to facilitate conforming the liner to the interior shape of the collar **11**. Extending generally parallel to the bottom edge of the liner blank **15** are foldlines  $F_5$ ,  $F_6$  and  $F_7$  to define bottom marginal flaps **22A**, **23A** and **24A**.

To assemble the liner blank **15** described to form the liner **10**, the marginal end flap **16** and **17** are reversely folded as shown in FIG. **3** so that the contiguous edges of the opposed notches **15A**, **15B** and **15C**, **15D** respectively can be readily secured to the end flap therebetween as by a sewn seam as indicated at **25**, **26** and **27,28** respectively so that the adjacent edges of the upper and lower flaps are secured to the opposed ends of the end flaps **16** and **17**. As shown in FIG. **3**, end pockets **18** and **19** are formed at the opposed ends of the liner; which are arranged to receive the ends **11E** and **11D** of the collar **11**. Adjacent to end pocket **19**, the liner is provided with a slit **25**. If desired, a binding or hem **26** may be formed along the peripheral portion of the liner blank **15**, e.g., along the bottom and ends of the blank **15**.

In assembling the liner **10** to the collar **11**, the liner **10** is positioned on the interior of the collar **11** so that end **11E** of the collar **11** is received within end pocket **18** of liner **10**, and end **11D** of the collar fitted into end pocket **19** of the liner. The fastening strap **13** is threaded through slit **25** and through an adjusting slot **27A** formed in the end of the collar. See FIG. **1**. The upper and lower marginal flap portions **20**, **21** and **22A**, **23A**, **24A** of the liner **10** respectively are then reversely folded about the upper and lower ends of the collar **11** and secured or folded between the plastic collar **11** and its foam pad **14** as best seen in FIG. **2**. As indicated in FIGS. **2**, **3** and **4**, the liner blank is suitably notched at **15F** and **23** to conform the liner **10** to the front curvature of the collar at the upper and lower front end thereof in the operative assembled position.

From the foregoing, it will be apparent that the liner **10** being formed of an absorbent material will readily absorb any perspiration, thereby rendering the collar more comfort-

able over an extended period of time. Also, by the use of the liner, the harsh feel of the plastic collar against the skin of the patient is avoided. As the liner is readily detachable and washable, the same can be readily washed and cleaned at frequent intervals, thereby avoiding the unpleasant gym odor of perspiration and/or rash which will otherwise occur during the wearing of the conventional collars.

FIGS. **7** and **8** illustrate a modified form of the invention. In this embodiment, the invention is applied to a surgical collar **30** comprising a pair of half sections **31** and **32** which define the front and back sections of the collar. In the illustrated embodiment, the front and back collar sections comprise a molded plastic foam section. Such collars are readily available. However, because of the inherent nature of a plastic foam and the inability of such material to absorb perspiration, such collars can become very uncomfortable when worn for an extended period of time. Thus, to obviate this problem, a liner is provided as hereinbefore described.

In this form, the liner **33** comprises a two-part liner, a front portion **34** and a rear portion **35**. Each portion **34** and **35** is formed of a blank of soft absorbent material, e.g., terrycloth. FIGS. **9** and **9A** illustrate the general pattern for forming the front liner portion and rear liner portion **34** and **35** respectively.

Referring to FIG. **9**, the pattern for forming the front liner portion **34** is substantially as shown. It comprises a blank **36** having a top edge **36A**, similarly shaped side edges **36B** and **36C** and a bottom edge **36E** having opposed V-shaped notches formed therein as indicated at **37** and **38** defining a center flap **39**. Parallel to the top edge **36A** is a foldline  $F_9$  to define a top flap **40**. Foldlines  $F_{10}$  and  $F_{11}$  define side flaps **41** and **42**, and foldline  $F_{12}$  defines the bottom flap **39**.

To assemble the front pattern blank **36** to define the front liner portion **34**, the side flaps **41** and **42** are reversely folded about their respective foldlines  $F_{10}$  and  $F_{11}$  as is the bottom flap **39**, and the respective contiguous edges of the respective flaps are sewn together to form a pocket for receiving the bottom edge of the front collar section **31** as shown in FIG. **7**. The upper marginal portion **40** is similarly reversely folded about the foldline  $F_9$  to define an upper pocket for receiving the upper edge of the front collar section **31** as shown in FIG. **7**. If desired, after the marginal flaps **40**, **41**, **42** and **39** have been folded and sewn, the opposed ends formed at **36B** and **36C** may be reversely folded to define end pockets as indicated at **42** to receive the end of the front collar section **31**. With the blank **36** so formed, it will be noted that the front collar section **34** can be readily fitted to the liner section **34** so that the surface of the liner is against the skin of the wearer and the collar section **31** snugly fitted to the liner section **34**.

The blank **44** defining the rear liner section **35** is similarly shaped and similarly formed to the liner section **34**. As seen in FIG. **7**, the rear liner section **35**, when formed like the front blank **44** as hereinbefore described, is similarly fitted to the rear or back collar section **32**. FIG. **7** illustrates the sewn seam **46B**, **46B** by which the side marginal flaps **44A**, **44B** are secured to the bottom flap **44C** in the assembled position of blank **44**. The top marginal flap **44D** is reversely folded to define the top pocket for receiving the upper edge of the rear collar section **32**, as hereinbefore described with respect to pattern **36**.

As noted in FIG. **7**, the two half sections **31** and **32** of the collar with their respective liners can be readily applied to the neck of a patient and secured by hook and loop material fastening strap **46**. As shown, the strap **46** is secured at an intermediate point **47** to the back of the rear collar section



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32. The opposed ends of the strap are provided with the looped end of a hook and loop material 46A, 46A. The front section of the collar is provided on opposite sides thereof the complementary hook portion 48 of the hook and loop material fastener. Thus, with the liner sections 34 and 35 fitted to the respective half sections 31 and 32 of the collar, the respective sections can be readily applied to the patient and secured by mating the respective ends 46A of the strap to pad 48 of the front collar sections.

From the foregoing, it will be apparent that a readily simply constructed absorbent liner can be detachably connected to the conventionally known collars and thereby render the wearing of such collars more comfortable to the patient, and also avoiding the unpleasant odor associated with the wearing of such collars over an extended period of time due to perspiration.

While the invention has been described with respect to several embodiments thereof, it will be appreciated that variations and modifications may be made without departing from the spirit or scope of the Invention.

What is claimed is:

1. A surgical collar and liner therefor, said collar [and further including aperture means formed in said blank adapted to receive a portion of said collar] having an upper longitudinal edge forming a chin rest, and opposed ends, and said liner comprising a flat blank of soft pliable absorbent material capable of being washed, adapted to cover the interior surface of said collar, said blank having opposed longitudinal extending marginal portions and opposed end portions, said opposed end portions of said blank being reversely folded to form [an] end [pocket] pockets thereat between said opposed marginal portions, said end pockets being adapted to receive the opposed ends of said collar and further including aperture means formed in said blank adapted to receive a portion of said collar, said longitudinally extending marginal portions extending beyond the upper longitudinal edge and a lower longitudinal circumscribing edge of said collar, said marginal portions being adapted to [e] be outwardly and reversely folded over the longitudinal [edge] edges of said collar whereby said liner covers the interior surface of said collar and is releaseably secured to said collar solely by said marginal portions, said end pockets, and said aperture means.
2. The surgical collar and liner as defined in claim 1, wherein said marginal portions [including] include notched out portions intermediate the ends thereof, said notched out portions being positioned to accommodate said chin rest and permitting said marginal portion to be reversely folded about the respective longitudinal edges of said collar.
3. A surgical collar and liner therefor as defined in claim 2 wherein [said] a lower one of the marginal portions [having] has a second notched portion [disposed opposite] spaced from said first mentioned notched portions allowing said lower marginal portion to be reversely folded about the lower [peripheral] longitudinal edge of said collar in the operable position thereof.
4. A surgical collar and liner therefor, said surgical collar comprising a body portion adapted to circumscribe the neck of the wearer, said body having opposed end portions, and upper and lower longitudinally [ending] extending edge portions,

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said upper edge portion forming a chin rest at [the] a front end of said collar [and further including aperture means formed in said blank adapted to receive said fastening strap],

and a fastening strap for securing the ends of the collar about a wearer's neck,

a liner for covering [the] an interior surface of said collar, said liner comprising a flat blank of soft pliable material sized to circumscribe and cover the inner surface of said collar,

said blank having opposed end portions, and longitudinally extending marginal portions extending between said end portions of said blank,

said end portions being reversely folded to define [an end pocket] end pockets for receiving an end portion of said collar and further including aperture means formed in said blank adapted to receive said fastening strap,

and said marginal portions being notched to allow said marginal portions to be reversely folded about the longitudinal edges of said collar in the operative position thereof whereby said liner covers the interior surface of said collar and is releaseably secured to said collar solely by said marginal portions, said end pockets and said aperture means.

5. A surgical collar and liner therefor as defined in claim 4 wherein said aperture means comprises a slit formed [therein] in said lining adjacent one end thereof whereby said fastening strap is adapted to be threaded through said slit for securing said collar and liner in the operative position.

6. A surgical collar and liner therefor as defined in claim 5 and including opposed notched portion disposed in said upper and lower marginal portions, said notched portion being positioned opposite the front end of said collar to facilitate the reverse folding of said marginal portions about the edges of said collar.

[7. A liner for use with a surgical collar comprising a flat blank of soft pliable absorbent washable material,

said blank having opposed end portions,

said opposed end portions being outwardly and reversely folded to form an end pocket thereat,

said end pockets being adapted to receive the opposed ends of a surgical collar,

said blank having opposed longitudinally extending marginal portions adapted to be reversely folded along the longitudinal edges thereof.

said longitudinally extending marginal portions extending beyond the longitudinal edges of a surgical collar, and said longitudinally extending marginal portions being foldable outwardly and reversely about the longitudinal circumferential edges of the collar,

at least one of said end pockets having a slit formed therein adapted for providing a pass through for the collar securing means.]

8. A surgical collar and liner therefor, said collar including a plastic body member and a foam pad coupled to said plastic body member and defining an interior surface of the collar, and the collar further having an upper longitudinal edge forming a chin rest, and opposed ends, and

said liner comprising a flat blank of soft pliable absorbent material capable of being washed, adapted to cover the interior surface of said collar, said blank having opposed longitudinal extending marginal portions and opposed end portions, each of said opposed end portions of said blank being reversely folded to form an

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*end pocket thereat between said opposed marginal portions,*

*said end pockets being adapted to receive the opposed ends of said collar,*

*said longitudinally extending marginal portions extending beyond the upper longitudinal edge and a lower longitudinal circumscribing edge of said collar,*

*said marginal portions being adapted to be outwardly and reversely folded over the longitudinal edges of said collar whereby said liner covers the interior surface of said collar and is releasably secured to said collar by said marginal portions and said end pockets.*

9. *The surgical collar and liner as defined in claim 8, wherein said upper marginal portion includes a notched out portion intermediate the ends thereof,*

*said notched out portion being positioned to accommodate said chin rest and permitting said upper marginal portion to be reversely folded about the respective upper longitudinal edge of said collar.*

10. *A surgical collar and liner therefor as defined in claim 9 wherein a lower marginal portion of said liner has a notched portion disposed opposite said first mentioned notched portion allowing said lower marginal portion to be reversely folded about a lower longitudinal edge of said collar in the operable position thereof.*

11. *A surgical collar and liner therefor,*

*said surgical collar comprising a body portion adapted to circumscribe the neck of the wearer, said body portion including a plastic body member and a foam pad non-releasably secured to the plastic body member so as to form an interior surface of the collar opposite the wearer's neck,*

*said body portion having opposed end portions, and upper and lower longitudinally extending edge portions,*

*said upper edge portion forming a chin rest at a front end of said collar, and*

*said collar further including a fastening strap for securing said body portion about a wearer's neck,*

*a liner for covering the interior surface of said collar, said liner comprising a flat blank of soft pliable material sized to circumscribe and cover the inner surface of said collar,*

*said blank having opposed end portions, and longitudinally extending marginal portions extending between said end portions of said blank,*

*each of said end portions being reversely folded to define an end pocket for receiving an end portion of said collar,*

*and said marginal portions being notched to allow said marginal portions to be reversely folded about the longitudinal edges of said collar in the operative position thereof whereby said liner covers the interior surface of said collar and is releasably secured to said collar solely by said marginal portions and said end pockets.*

12. *A liner for use with a surgical collar including a plastic body member and a foam pad non-releasably secured to the plastic body member comprising:*

*a blank of soft pliable absorbent washable material, said blank having opposed end portions,*

*each of said opposed end portions being reversely folded to form an end pocket thereat,*

*said end pockets being adapted to receive the opposed ends of a surgical collar,*

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*said blank having opposed longitudinally extending marginal portions disposed between said opposed end portions,*

*said longitudinally extending marginal portions being folded outwardly and reversibly onto said blank to define opposed longitudinally extending pockets,*

*said longitudinally extending pockets being adapted to receive opposed longitudinal edges of a surgical collar whereby said liner is detachably secured to a surgical collar and whereby said liner covers an entire inner surface of said pad of said surgical collar to define a barrier between a neck of a wearer and the pad of the surgical collar in combination with the surgical collar, the end pockets of the liner receiving the opposed ends of the surgical collar, the longitudinally extending pockets of the liner receiving opposed longitudinal edges of the surgical collar and said liner being detachably secured to the surgical collar solely through said pockets.*

13. *A liner for surgical collar comprising:*

*an originally flat blank of soft pliable absorbent washable material, opposed end portions of the blank being reversibly folded thereat and at least one marginal portion of the blank disposed between the opposed end portions also being reversibly folded thereat and joined with the reversibly folded end portions to define at least part of a common pocket simultaneously extending along at least one marginal portion of the blank to the opposed ends of the blank in combination with one section of a two-section surgical collar, the one collar section including a plastic body member and a foam pad non-releasably secured on an inner side of the body member so as to form an inner side of the section applied to a collar wearer's neck, the one pocket receiving at least opposed end portions of the section and at least one marginal edge of the section extending between the opposed ends, and the liner exposing at least a central portion of an outer side of the one collar section.*

14. *The liner and surgical collar section combination of claim 13 wherein the collar section includes an upper marginal edge defining a chin piece and an opposing lower marginal edge and wherein the common pocket receives at least the lower marginal edge of the collar section.*

15. *The liner and surgical collar section combination of claim 14 wherein a remaining marginal portion of the blank opposite the one marginal portion is reversely folded to form a separate, second pocket receiving the upper marginal edge of the collar section and overlapping the chin rest.*

16. *The liner and surgical collar section combination of claim 14 wherein a remaining marginal portion of the blank opposite the one marginal portion is reversely folded and joined with the opposed end portions to form an upper marginal side of the common pocket receiving the upper marginal edge of the collar section and overlapping the chin rest.*

17. *A lined, two-section surgical collar comprising:*

*front and rear collar sections of similar but different size and appearance, each collar section including a plastic body member and a foam pad coupled with a plastic body member to define an inner side of the section, opposed ends of the pad forming opposed ends of the collar section, opposed marginal portions of the pad defining opposed marginal edges of the collar section; and*

*front and rear collar section liners, each liner being formed from an originally flat blank of the soft, pliable,*

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*absorbent washable fabric, each liner having at least a pair of reversibly folded margin portions joined together forming a pocket receiving at least one of the collar sections and extending at least to the opposed ends of the one collar section, the front and rear section 5 liners being of generally similar but different size and*

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*appearance so as to be distinguishable from one another for use on appropriate ones of the front and rear collar sections.*

\* \* \* \* \*