

[72] Inventor **Donald W. Bergen**
Glenview, Ill.
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[73] Assignee **The Schott Mfg. Co. Inc.**
Chicago, Ill.

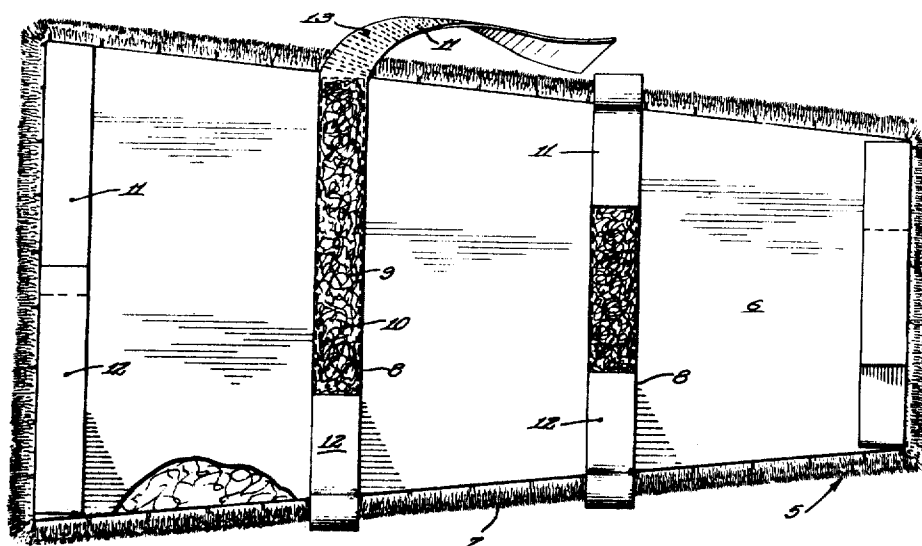
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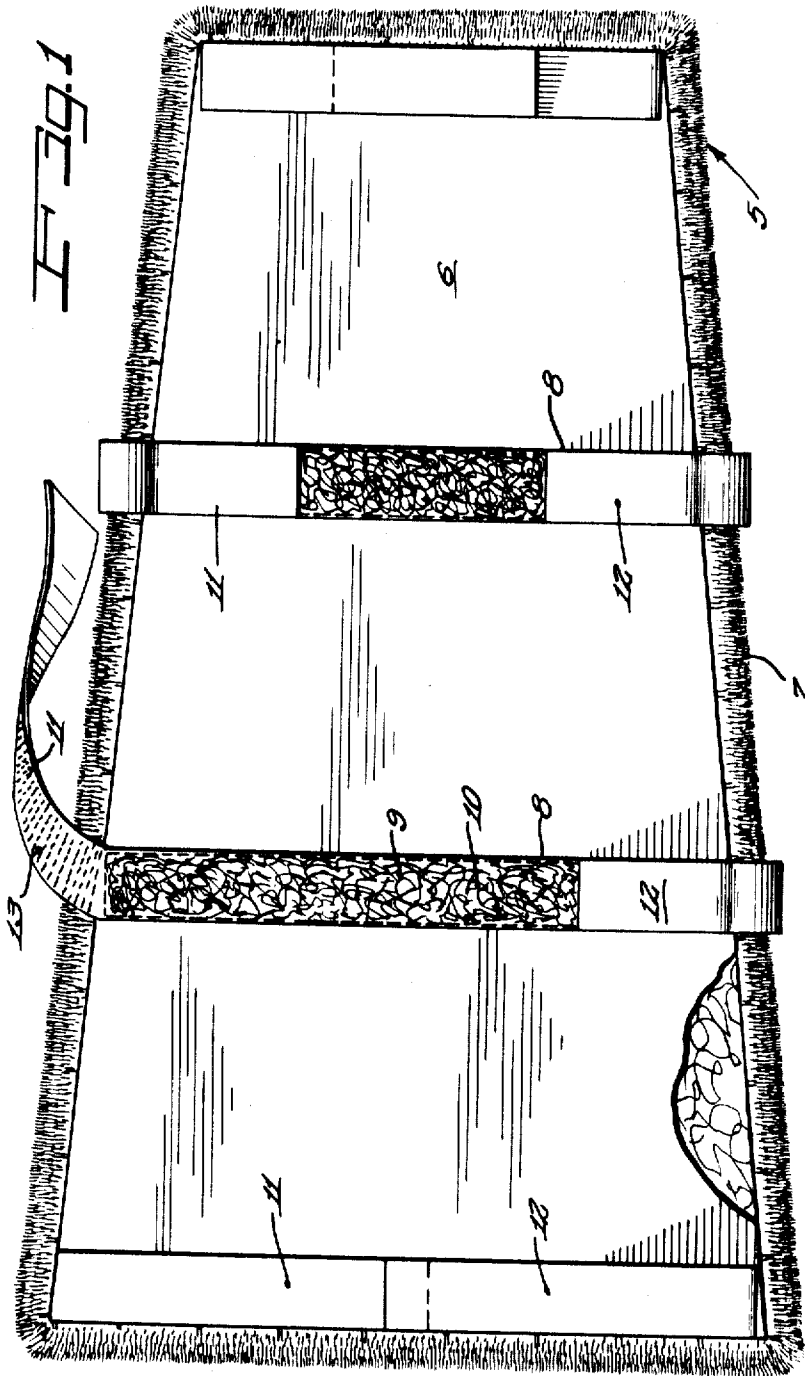
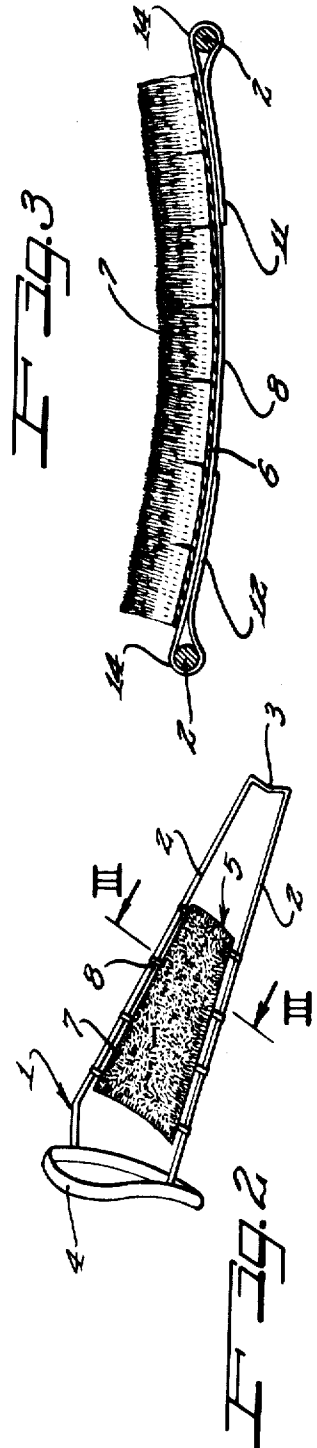
Primary Examiner—Richard A. Gaudet
Assistant Examiner—J. Yasko
Attorney—Hill, Sherman, Meroni, Gross and Simpson

[54] **LEG SUPPORT FOR SPLINT**
3 Claims, 3 Drawing Figs.

[52] U.S. Cl. 128/89 R,
161/62, 128/DIG. 15
[51] Int. Cl. A61f 5/04
[50] Field of Search 128/89, 85,
86, 87; 161/62—69

ABSTRACT: A leg support for use with a splint of the type used for fracture of a leg bone when traction is indicated. The support is readily attached to or removed from the splint and shaped to cradle the leg and provides soft cushioning support and protection to pressure-sensitive areas, and may be sterilized and reused indefinitely.





INVENTOR.

Donald W. Bergen

BY *Hill, Sherman, Morris, Goss & Kemp* ATTORNEYS

LEG SUPPORT FOR SPLINT

RELATED APPLICATION

The instant invention is an improvement on the splint liner shown, described and claimed in my copending application entitled "Splint Liner" filed July 5, 1968, Ser. No. 742,643, in that the instant invention is designed for use with a wire splint of the general character of a Thomas, Hodgen, or Cabot splint.

SUMMARY OF THE INVENTION

Heretofore, the actual means contacted by and supporting the leg of a patient, most frequently with the leg in an elevated position and usually under traction, attached to a wire posterior splint of the general character of a Thomas, Hodgen, or Cabot splint, comprised a series of canvas straps spaced apart and buckled to the side members of the splint. Such supporting means gave no cushioning to the leg, but on the contrary frequently caused an abrasion of the skin or other irritation and built up painful pressure areas especially at the edges of the straps on either side of the spacing therebetween. Further, it was objectionably tedious and time consuming to provide sufficient spaced straps and separately buckle each one into proper position on the splint frame in order to provide leg supporting means.

The instant invention overcomes the disadvantages of leg supporting means of the character above explained and known heretofore in the provision of a leg support in which the body part contacted by the leg is preferably one single piece of material having a high pile on one side and which is attached to the splint frame by simple straplike means which require only a slight pressure contact to secure them around the side members of the splint frame. The high pile is a soft cushioning protection to pressure-sensitive areas and eliminates irritation of the skin, such material preferably being mildew-proof and will inhibit bacterial growth. Each leg support may be treated as one piece and may be attached to and removed from a wire posterior splint in a matter of seconds, and the protectors may be sterilized and reused indefinitely.

Other advantages of the instant invention will be apparent from the following disclosures.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a bottom plan view of a leg support embodying the principles of the instant invention;

FIG. 2 is a greatly reduced perspective view of the support of FIG. 1 operatively connected to a wire posterior splint; and

FIG. 3 is an enlarged sectional view taken substantially as indicated by the line III-III of FIG. 2.

DETAILED DESCRIPTION

Referring to FIG. 2 of the drawings the instant leg support is shown in operative position upon a Thomas splint, selected for illustrative purposes, although, as stated above, the use of the instant invention is not confined to a Thomas splint alone. The illustrated splint, generally indicated by numeral 1, embodies a U-shaped frame including side members 2-2 and an outer end closure at 3. This frame may be bent from a single piece of metal rod or relatively heavy wire and the inner ends of the frame provided with a leg loop 4 usually made of leather, or a metallic ring covered with padding. When the splint is in use the leg loop 4 is disposed at the extreme upper end of the thigh, generally in contact with the perineal and ischial regions of the patient's body. In use, a splint of this character is most frequently disposed with a leg in an elevated position, many times with the leg under traction, the splint being held elevated by an overhead harness or equivalent means. Accordingly, it is desirable to comfortably support the patient's leg when in position on the splint. In the illustrated showing the side members 2-2 converge toward the enclosure 3 in keeping with the gradual decrease in size of the leg toward the foot.

The instant leg support, generally indicated by numeral 5, preferably includes a thin, strong, and relatively stiff sheet of fabric 6 which may be cotton, triacetate, or other suitable material which carries on the upper face thereof a dense high pile of fibers 7 secured to the backing substantially in the same manner as the pile of a carpet is secured to its backing. The fiber pile 7 is preferably an inch to an inch and one-quarter in height or thickness and is preferably of soft synthetic fibers, polyester fiber being highly satisfactory. The fiber pile 7 constitutes approximately seven-eighths of the composite fabric including the backing. Synthetic material, such as polyester fiber and triacetate backing are preferable because they are mildew-proof and will not support bacterial growth, accordingly reducing considerably the amount of care necessary for the leg support. The fiber 7 has the general appearance and feel of lamb's wool or sheepskin and the uniformity of the pile provides a smooth, nonirritating surface, designed to prevent pressure buildup and give soft, cushioning protection to pressure-sensitive areas, also insuring a high degree of absorbency. Further, the composite fabric 6-7 will not mat, bunch, wrinkle or adhere to the skin of the patient.

The leg support is quickly attached to or removed from the splint by the aid of a plurality, four in the illustrated instance, of straplike members 8, all of which are identical with the exception of length since the leg support tapers in conformity with the convergence of the side members 2-2 of the splint. The intermediate portion of each of the strap members may be stitched to the backing 6 of the composite fabric as indicated at 9, or equivalently and firmly secured thereto. These strap members 8 are preferably nylon tape fasteners, and the portion of the strap members secured to the backing 6 as an undersurface covered with a shallow nylon pile 10. The end portions 11 and 12 of the strap members 8 are provided with a myriad of relatively stiff loops, diagrammatically indicated at 13 in FIG. 1, which extend from the inner face of the end portions, and when the end portions 11 and 12 are lapped over the nylon pile 10 the hooklike ends of the loops anchor within the pile 10 and firmly hold the end portions in engagement with the pile 10 to provide loops as seen at 14 in FIG. 3 around the side members 2-2 of the splint. While these end portions hold firmly, they may be released from engagement with the pile 10 by stripping them off in the manner a piece of adhesive tape is removed, and they may be reengaged and disengaged indefinitely. Such nylon tape fasteners are sold on the open market under the registered trademark "Velcro" and are readily obtainable. It will be noted, therefore, that the leg support and the splint may be assembled ahead of time and handled as though it were all a one-piece construction, and the leg support cannot become maladjusted during handling or when in use. By looping the end portions of each strap member around the side members of the splint and pressing them against the intermediate pile 10 with a reasonably light pressure, the leg support is extremely easily and quickly attached to the splint, and just as easily and quickly removed therefrom after usage. Between usages, the leg support may be autoclaved or otherwise sterilized for the subsequent usage.

The leg supports are preferably made in different lengths, 12 inches, 18 inches, and 30 inches being satisfactory in most instances.

When in use, each leg support gently cradles the leg of the patient and provides soft cushioning support without interruption since the surface contacted by the leg is continuous. Consequently, decubitus ulcers, open sores, or other irritations will not occur by virtue of the patient's skin being in contact with the support.

It is apparent that the instant leg support may be manufactured economically, and when the number of repeated usages is considered, the leg support is much more economical, time saving, and beneficial to the patient than any such supports heretofore known.

Although various minor modifications might be suggested by those versed in the art, it should be understood that I wish to embody within the scope of the patent granted hereon all such modifications as reasonably and properly come within the scope of my contribution to the art.

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I claim as my invention:

1. A leg support comprising an open wire splint having side members and an outer end closure joining said side members, a flat piece of composite fabric including a backing and a high cushioning pile on the upper surface thereof, said piece positioned in the space between the side members of the splint to cradle the leg of a patient, and spaced strap means secured to the underface of the backing of said piece having a pair of free ends to form loops around the side members of the splint.

2. The leg support of claim 1, wherein the side members of the splint converge toward the end closure, and said piece of composite fabric also narrows toward one end thereof in keeping with the convergence of the splint side members.

3. The leg support of claim 2, wherein said strap means vary in length in accordance with the varying width of said piece of composite fabric.

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