United States Patent [19]

Purdon

[11] **3,801,986**

[45] **Apr. 9, 1974**

[54] **SKIER'S ACCESSORIES**

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[52] **U.S. Cl.** **2/69,** 2/79, 2/227

[51] **Int. Cl.** **A41d 1/08**

[58] **Field of Search** 2/79, 85, 86, 87, 93, 94, 2/227, 1, 69

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Primary Examiner—H. Hampton Hunter

[57] **ABSTRACT**

The combination of warmup pants and a back pack constructed so that: (a) the pants can be worn during the warmup period while the pack is on the skier's back; and (b) after the warmup period the pants can be removed and stuffed into the pack.

6 Claims, 18 Drawing Figures

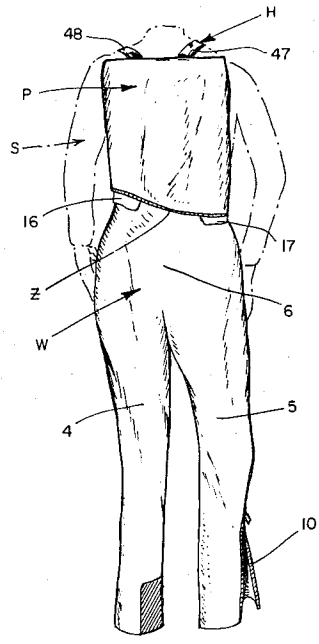


Fig. 2

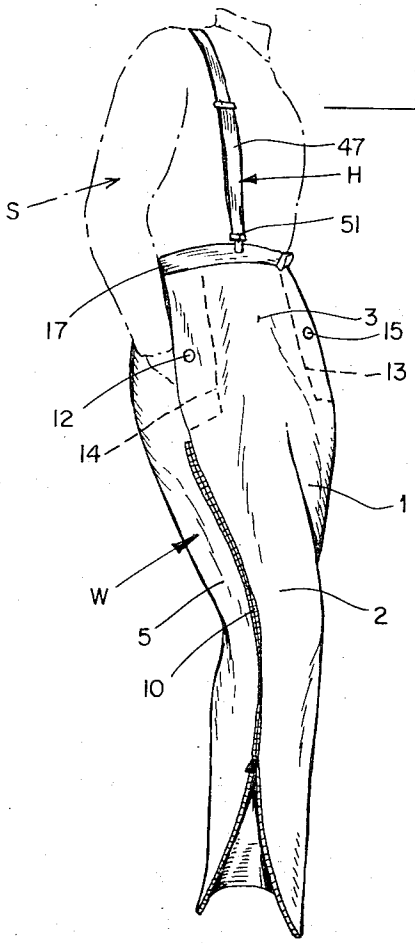
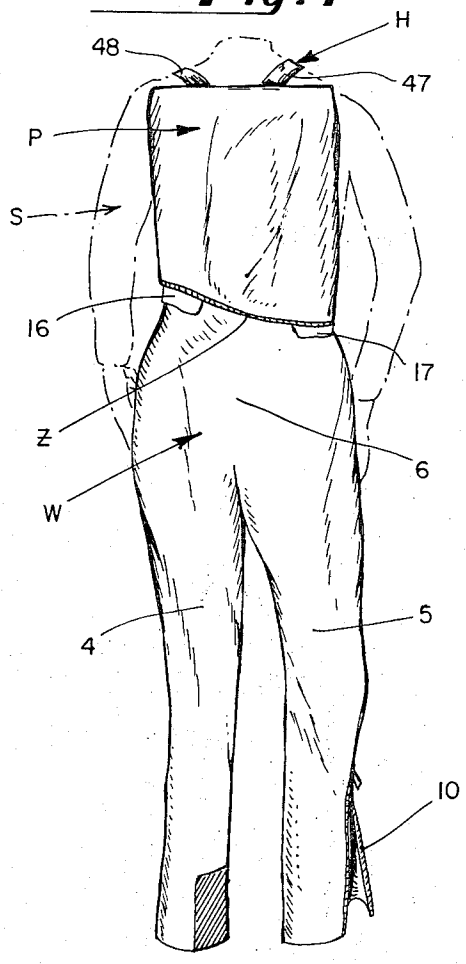


Fig. 1



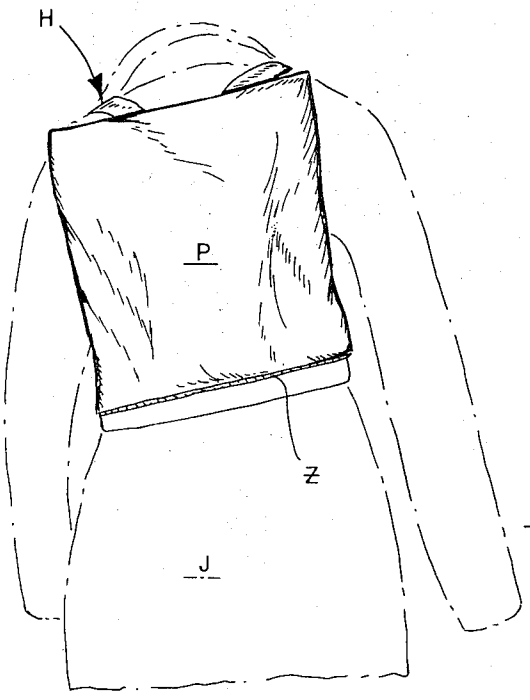


Fig. 3

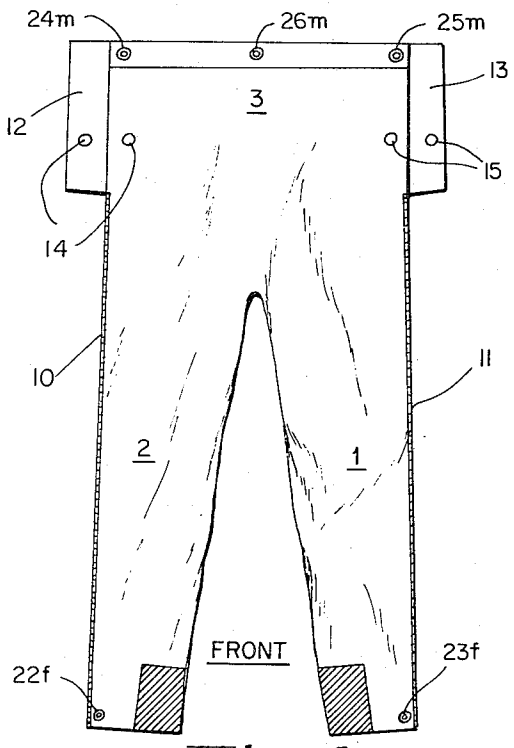


Fig. 4

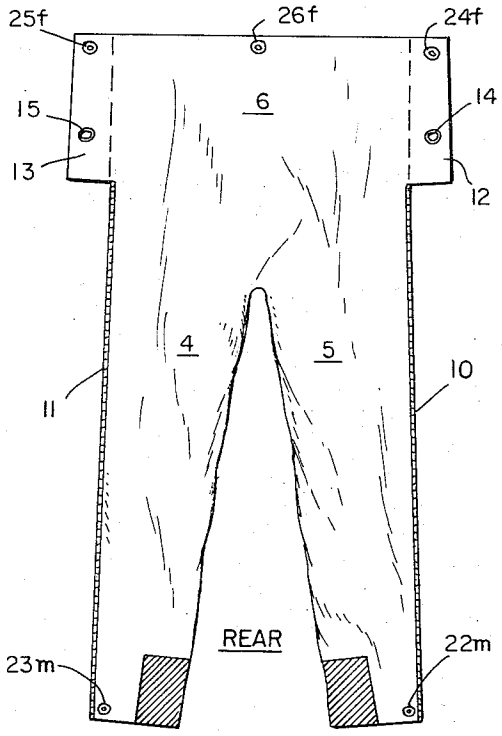


Fig. 5

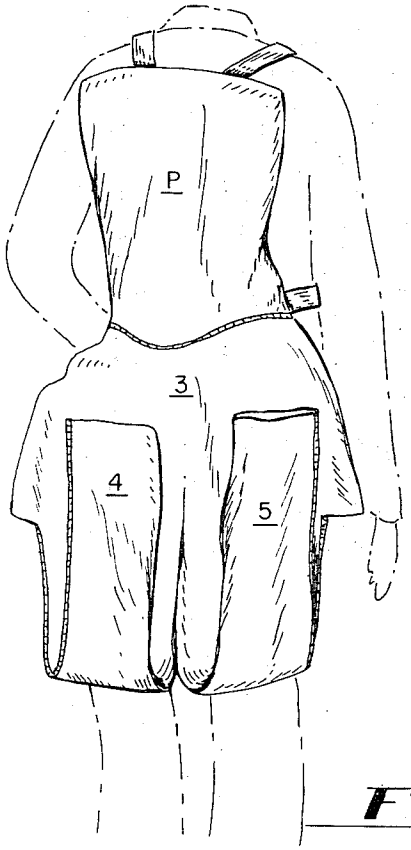


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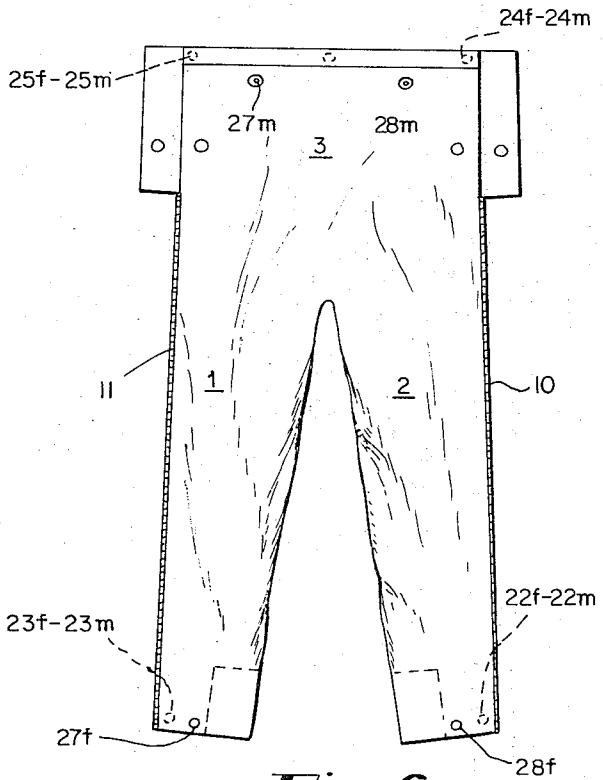


Fig. 6

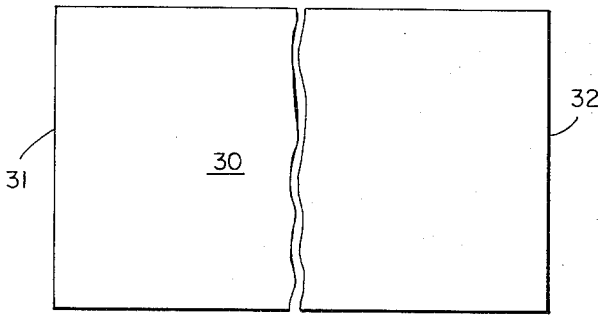


Fig. 8

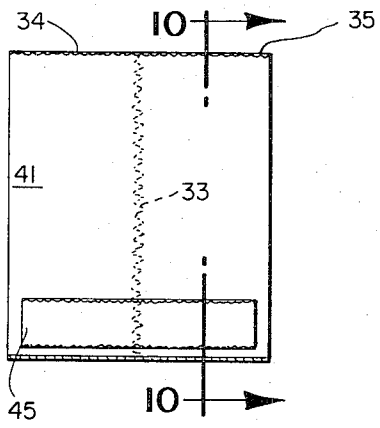


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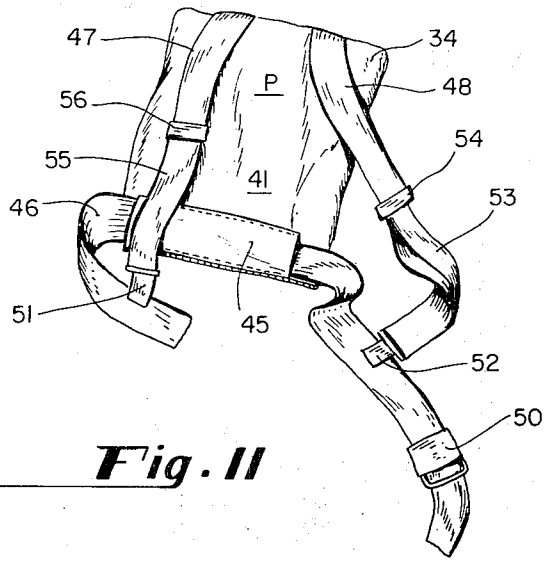


Fig. 11

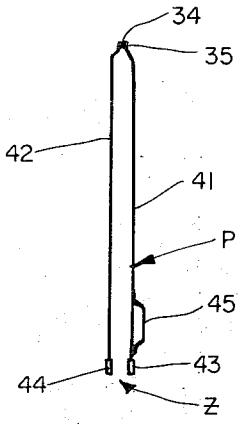


Fig. 10

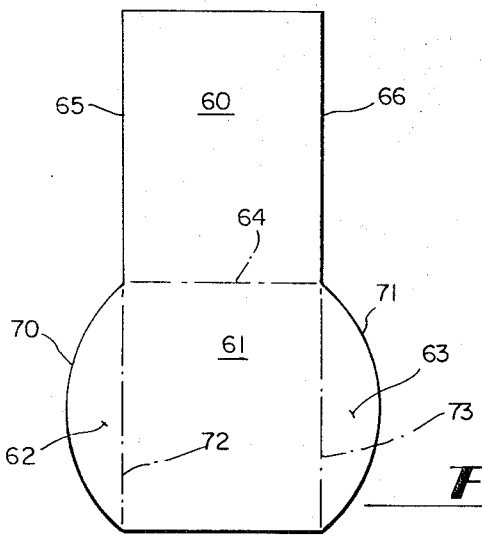


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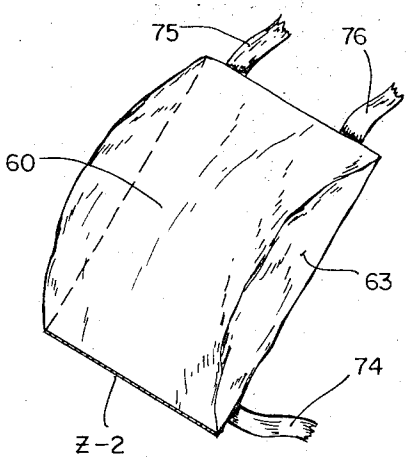


Fig. 13

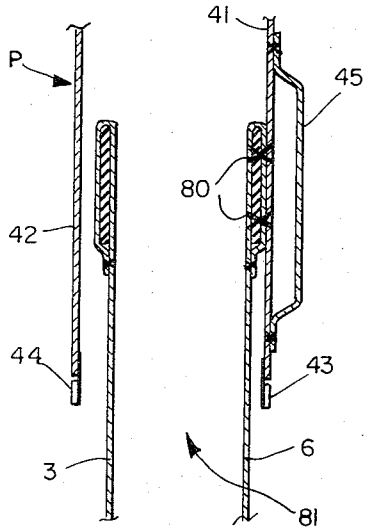


Fig. 14

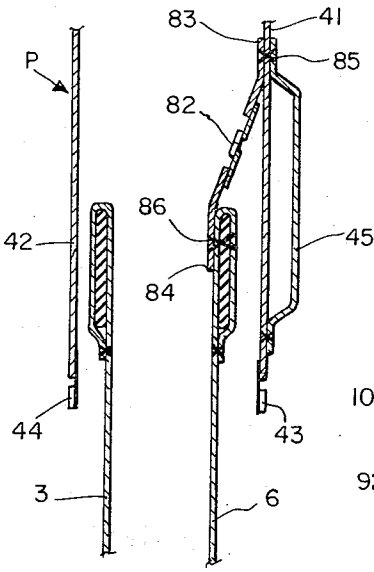


Fig. 15

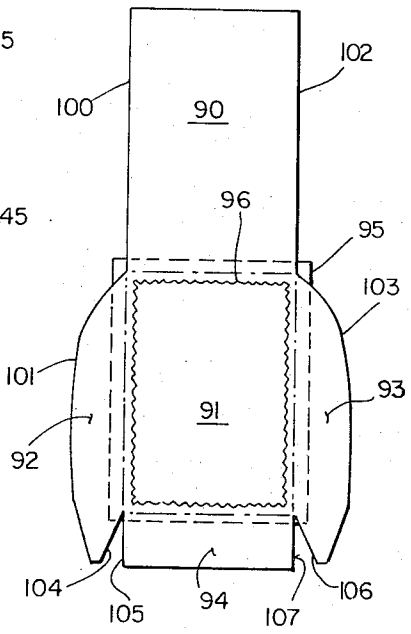


Fig. 16

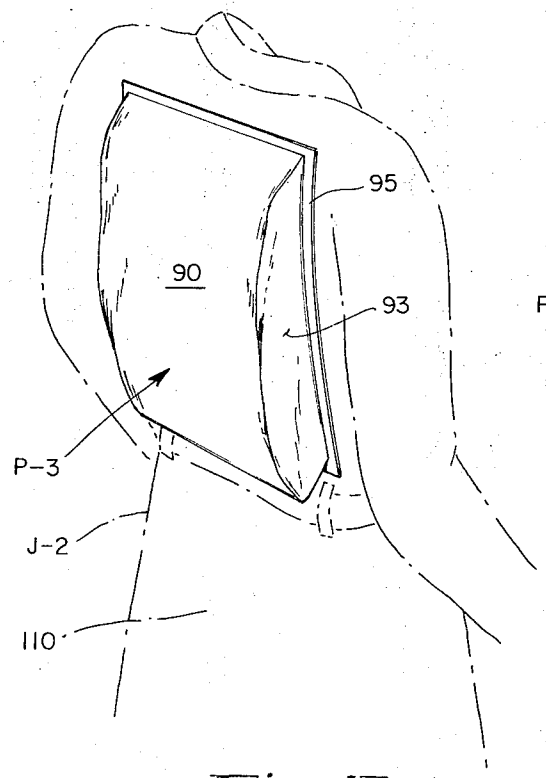


Fig. 17

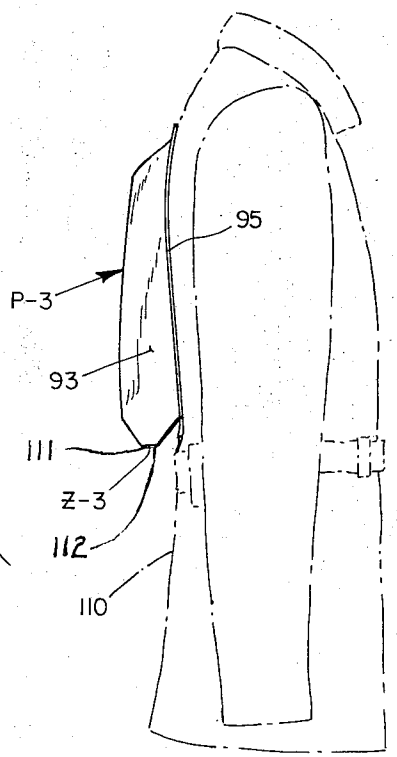


Fig. 18

SKIER'S ACCESSORIES

This invention relates in general to sporting goods and in particular relates to goods or accessories for use by skiers.

In many ski areas the temperature conditions make it highly desirable to use warmup pants during the first few runs. Furthermore, the contemplated run pattern may require severe leg action and warmup is physiologically important. Nevertheless, such desirable use of warmup pants has not been widespread due to the problem of stowing the pants when removed. It is conventional that when warmup pants are used they are not taken off even though the warmup function has been served. The pants become uncomfortable and put a restraint on the skier.

Thus, one of the principal objects of the invention is to provide a back pack in combination with warmup pants which permits the skier to use warmup pants during the initial runs, remove the pants and stow on his person in a manner so that the runs can be completed without interference from the pants.

Another object of the invention is to provide a combination of the kind in question where the pack is made of pliant material so as to be disposed on the skier's back without interfering with the skier's action whether or not the warmup pants are contained therein.

Another object of the invention is to provide a combination of the kind in question where the pack is made of pliant material so that when empty it will lie flat underneath the skier's jacket but which can be placed on the outside of the jacket and expanded for stowing the warmup pants.

Another object of the invention is to provide a pack of the kind in question which is made of pliant material and has flexible, quick-disconnect harness means to hold the pack on the skier's back, the pliant material permitting the pack, when empty, to lie flat under the skier's jacket and the harness providing for the pack and harness to be slipped from under the jacket and then mounted on the outside of the jacket in position for stowing the warmup pants.

Another object of the invention is to provide a pack of the kind in question which is made of pliant material and has flexible, quick disconnect harness means to hold the pack on the skier's back and the pack having a bottom opening which can be opened to permit the pants to be stowed and then closed to hold the pants intact in the pack.

Another object of the invention is to provide a pack of the kind in question which may be an independent unit or part of a skier's jacket and in either case having a bottom opening thru which the pants can be removed by the skier while the jacket or independent pack remains on the skier's back.

Another ojbect of the invention is to provide a pack of the kind in question which may be an independent unit or part of the skier's jacket and in either case being made of pliant material and having a bottom opening provided with fastener means, the opening, when opened permitting the pants to be inserted into the pack and when closed maintaining the pants in the pack.

Another object of the invention is to provide a pack which is carried on the skier's back and has means supporting the warmup pnats so that when the pants are free from the skier's legs thay will hang suspended from the pack, the arrangement permitting the skier to stuff the pants into the pack while the pack is on his back.

Another object of the invention is to provide a pack which is carried on the skier's back and has means suspending the warmup pants when the same are free from the skier together with auxiliary fastener means on the pants, the suspension of the pants and the fastener means permitting the skier to fold over the pants and fasten the same in folded position and then stuff the same into the pack while the pack is on his back.

Further objects of the invention and various of the advantages thereof will be apparent from the following description taken in conjunction with the drawings wherein:

FIG. **1** is a rear prospective view of warmup pants and a back pack as carried by a skier;

FIG. **2** is a front prospective view of the FIG. **1**;

FIG. **3** is a rear prospective view of a back pack as mounted on the outside of a skier's jacket;

FIG. **4** is a front view of warmup pants;

FIG. **5** is a rear view or warmup pants;

FIG. **6** is a view taken from the rear of warmup pants readied for the folding and stuffing operation;

FIG. **7** is a rear prospective view of the warmup pants in folded condition just prior to stuffing;

FIGS. **8, 9** and **10** are views illustrating the construction of a typical back pack;

FIG. **11** is a prospective view of a back pack and flexible harness;

FIGS. **12** and **13** are views illustrating a modified back pack;

FIGS. **14** and **15** are views illustrating typical permanent and non-permanent means of securing the pants to the back pack;

FIGS. **16, 17** and **18** illustrate an embodiment where the back pack and jacket are combined.

With reference to FIGS. **1** and **2**, the skier wears a pair of warmup pants W and carries a back pack P. The pack is maintained on the skier by the flexible harness H. The pack has an opening along the bottom edge which is provided with a zipper Z. When the zipper is open, the pants can be pushed up thru the opening and stuffed inside of the pack.

In FIGS. **1** and **2** the harness is worn over the sweater S but is adapted to be worn over the skier's jacket J as shown in FIG. **3**. The pants are constructed so that they can be put on or removed without the necessity of the skier stepping in or out of the pants, in other words the legs of the skier do not have to move thru the legs of the pant.

The pants are made of pliant material such as double layers of water repellent nylon with a layer of insulating material in between. This renders the pants capable of being stuffed into the pack. The pack is also preferably made of pliant, water repellent material and this permits the pack to expand or open up to facilitate stuffing. Furthermore, the pliable structure provides that if the skier puts his jacket over an empty pack the pack will lie flat underneath the jacket.

With reference to FIG. **2**, the pants have a front leg portion comprising the portions **1** and **2** which respectively fit over and cover the front portions of the left and right legs of the skier. A front torso portion **3** is connected to the top of leg portions and fits over and covers the lower front torso of the skier. Referring to

FIG. 1, the pants also have a rear leg portion comprising the portions 4 and 5 which fit over and cover the backs of the left and right legs. A rear torso portion 6 is connected to the top of the rear leg portions and covers the back torso of the skier. As will be understood, the tops of the legs and the inner lower section of the torso are all joined together at the crotch area.

The front and rear leg portions and the front and rear torso portions can be joined together by fastening means. For the legs zipper type fasteners are used. As indicated in FIG. 2 the front and rear leg portions 2 and 5 are joined by a zipper 10.

The left leg portions has similar zipper 11. (FIG. 4) Each zipper is arranged so that the closing action begins at the top. The top outer edges of the rear torso have small flaps which fit under the front torso. In FIG. 2 the flaps are indicated by the dotted lines 12 and 13. The tops of the respective zippers 10 and 11 are located just below the flaps. The flaps carry one portion of a snap fastener with other portions being on the front torso. The snap fasteners are indicated at 14 and 15. When the pants are on the skier the flaps are folded underneath the front torso and the two snaps are placed together. The left and right top abutting edges of the front and rear torso section have a conventional belt and buckle type fasteners for holding the pants in place. In FIG. 1 these fasteners are indicated at 16 and 17.

For putting on the pants, so that the front and rear portions are separated and then the portions are pulled up over the skier and held at the top by the respective buckles 16 and 17 and snaps 14 and 15. The left and right leg zipper arrangements 10 and 11 are then activated to close in the leg portions. For removal, the reverse procedure is used and the leg and torso portion are freed from the skiers body.

Preferably, the warmup pants and the pack are secured together, the top of the rear torso being connected to the bottom of the pack as will be explained later. The connection between the top of the rear torso and the pack provides that when the fasteners 14, 15, 16 and 17 are opened the pants will hang down from the pack. Being loose, free and pliant the pants can be stuffed up in the pack while the same is on the skier's back. In order to facilitate the stuffing operation, I have provided additional fastener means on the pants which permit the pants to be folded in a special way by the skier so that the pants can be quickly and easily pushed thru the bottom opening into the pack. The fastening means and the manner in which they operate will be explained following.

Referring to FIG. 4, the bottom of the right front leg 2 carries the female section 22*f* and (FIG. 5) the right rear leg carries the male section 22*m* of a snap fastener. The sections 22*f* and 22*m* are adapted to be snapped together to hold the pants in place for the folding operation.

The bottom of the left front leg 1 (FIG. 4) carries the female section 23*f* and (FIG. 5) the left rear leg 4 carries the male section 23*m* of a snap fastener. The sections 23*f* and 23*m* are adapted to be snapped together to hold the bottom parts of pants in place for the folding operation.

The top of the front torso 3 (FIG. 4) carries the male section 24*m* and (FIG. 5) the flap 12 carries the female section 24*f* of a snap fastener. The sections 24*m* and 24*f* are adapted to be joined together. Also the top of the front torso (FIG. 4) carries the male section 25*m* and (FIG. 5) the flap 13 carries the section 25*f*. The sections 25*f* and 25*m* are adapted to be joined together. In the center of the front torso is the section 26*m* and the rear torso carries the section 26f which are also adapted to be joined together.

There are additional fasteners used in the folding operation and these will be explained after the use of the fasteners 22*f* thru 26*m* is explained.

Assume that the skier's jacket has been removed (FIGS. 1 and 2). The buckles 16 and 17 and the side fasteners 14 and 15 are undone and then the leg zippers 10 and 11 are zipped down. The torso and leg sections are then free from the body but suspended from the pack.

The front torso 3 is then folded down and under the crotch and then the top of the front torso is pulled up toward the top of the rear torso. In this position the outside surface of the front torsos faces the outside surface of the rear torso (FIG. 6) so that the fastener sections 24*f*, 25*f* and 26*f* correspondingly face the sections 24*m*, 25*m* and 26*m*. By reaching in back, the skier snaps these sections together so that the front and rear torsos are joined together at the top. The dotted circles 25*f*–25*m*, 26*f*–26*m* and 24*j*–24*m* indicate that these fastener sections have been joined together. The legs of the pants now hang down along the back of the skier's legs.

The skier reaches down and manipulates the legs of the pants so that the outside surfaces of the front legs are facing the outside surfaces of the rear legs. The fastener sections 22*f* and 23*f* can face the corresponding fastener sections 22*m* and 23*m* (FIG. 6). To join these latter fasteners, the skier pulls up one of the legs (say the left leg) and snaps 23*f* and 23*m* together. This holds the bottom of the legs together. The same is done with the right leg by joining the sections 22*f* and 22*m*. The dotted circles 23*f*–23*m* and 22*f*–22*m* indicate that these fastener sections have been joined together.

In the inside-out position of the front torso 3 and the leg portions 1 and 2 (FIG. 6), certain additional fasteners on the inside surfaces of the front torso and front leg portions are exposed. On the leg 1 there is the female fastener 27*f* and the top left side of the torso there is the male section 27*m*. On the leg 2 there are corresponding fastener sections 28*f* and 28*m*. These fasteners are used to hold the legs in folded position as indicated in FIG. 7. To so position the legs, the left leg is folded up until the fasteners 27*f* and 27*m* are aligned and then snapped together. The right leg is then folded and the fasteners 28*f* and 28*m* are snapped together.

At this juncture, the skier can begin to stuff the pants into the pack. The preferred way of doing this is to simply grasp the bottommost part of the hanging folded legs with both hands and raise this to the bottom of the pack and begin to stuff the same into the pack thru the opening.

A preferred form of pack and flexible harness will next be explained.

Referring to FIGS. 8, 9, 10 and 11 the flat piece 30 of fabric material such as nylon, is formed generally in a rectangular shape. The edges 31 and 32 are folded inwardly to the center (FIG. 1) and inside stitched as indicated at 33. The top edge 34 is closed as by inside stitching 35. The bottom of the pack of course, re-

mains unstitched so as to form the opening. The foregoing forms the inside and outside panels **41** and **42** (FIG. **10**) of the pack with panel **41** being adapted to be placed against the skier's back. The bottom of the inside panel **41** has zipper section **43** and the bottom of the outside panel **42** has zipper section **44.** These form the zipper Z.

Across the bottom of the inside panel **41** is stitched a relatively heavy or stiff section of material which in conjunction with panel **41** forms a pocket or channel **45.** The channel is for retaining the belt portion of the flexible harness as will be noted first below. The heavy material is provided to avoid or minimize the collapse of the channel. In some cases an independent stiffening member is provided.

With reference to FIG. **11** the flexible harness comprises a flexible belt **46** which is threaded thru the channel **45** and the flexible, expandible straps **47** and **48.** The belt extends outwardly from the channel and surrounds the skier's body and is provided with a conventional adjustable type buckle **50.** Preferably, the belt is shiftable back and forth in the channel.

The straps **47** and **48** are connected to the top edge **34** of the pack and extended down over shoulders of the skier (FIG. **2**). The lower end of each of the straps has an alligator type fastener such as the clip **51** for the strap **47** and clip **52** for the strap **48.** The alligator clips can be gripped and ungripped with the belt and allow the straps to be positioned at a desired point along the length of the belt.

Preferably, straps **4** and **48** are adjustable in length. Thus the strap **48** is provided with a bottom loop **53** which is threaded thru clip **52** and connected back on the strap **54** by the conventional suspender slide adjusted to make the pack tight against the back in accordance with the dictates of the skier.

When the warmup pants are not being used, they are normally stored inside the pack. In getting the pants and jacket set up for a run the skier first removes his jacket and then fastens on the pack and harness in a manner described above. The zipper Z is then moved to open the bottom of the pack and the warmup pants are pulled underneath the crotch and moved up and fastened with the buckles **16** and **17** and fasteners **14** and **15** as described before. The leg zippers **10** and **11** are closed to bring the leg portions of the pants firm around the legs of the skier. The skier puts on his jacket and the pack will lie flat underneath.

After the warmup period has been completed and the skier desires to store the warmup pants he opens his jacket and manipulates the snap fasteners and buckles **14, 15, 16** and **17** and also the zippers **10** and **11** so that the pants become free from the body. The belt buckle **50** is opened and then the alligator clips **51** and **52** released. The harness and pack then can be slipped from underneath the skier's jacket and then put back on with the pack on the outside of the jacket. The various buckles and fasteners are then adjusted so that the pack conforms to the additional bulk created by the jacket. The pants hang down from the pack and the pants are now ready to be fastened, folded and stuffed in a manner described previously.

An alternative form of pack is illustrated in FIGS. **12** and **13.** A sheet of nylon fabric is cut into the shape indicated so that it comprises the outer panel section **60,** inner panel section **61** and edge panels **62** and **63.** The section **60** is folded down along the fold line **64** whereby the edges **65** adn **66** can be sewed to the edges **70** and **71** on the edge panels **62** and **63,** this being accomplished by that the edge sections **62** and **63** are foldable along the lines **72** and **73.** The foregoing arrangement forms a pack of the general shape which is shown in FIG. **13** which shape provides a pack with increased volume for storing the warmup pants by virtue of the edge panels and by that the vertical length of the panel **60** is greater than the vertical length of the panel **61.** The bottom edges of the panels **60** and **61** form the opening to the pack and are provided with zipper means indicated at Z–**2.** As will be understood, the inner panel **61** fits against the skier's back. A belt chanel (not shown) similar to the channel **45** is provided on the inner panel **61** for holding the belt **74.** The straps **75** and **76** are connected to the top of the pack and have the same construction as the straps **47** and **48** and are provided with buckles and clips similar to **50, 51, 52, 54** and **56** previously described.

The manner of attaching the warmup pants to the pack of FIGS. **8, 9,** and **10** and the pack of FIGS. **12** and **13** is illustrated in FIGS. **14** and **15.** The pack of FIGS. **8, 9,** and **10** will be taken as an example.

In FIG. **14** assume that the front torso **3** has been pulled around to the back side (as in FIG. **6**) and snapped to the rear torso **6.** The topmost portion of the rear torso **6** is secured to the bottom of the panel **41** by the stitches **80.** It will be noted that the stitching is inside of the opening **81.** With this construction it will be apparent that when the pants are fully stuffed inside of the pack the zipper (parts **43** and **44**) can be closed without interference. With the construction of FIG. **14** the pants are permanently secured to the pack.

The invention contemplates that the pants be secured so as to be removable from the pack. Such an arrangement is shown in FIG. **15.** A zipper **82** has parts **83** and **84** respectively connected to the panel **41** and the top of the rear torso **6** as by the stitches **85** and **86.** The zipper **82** is located inside of the opening (similar to the construction of FIG. **14**) so that the pack opening can be closed off without interference.

In FIGS. **16, 17,** and **18** I have illustrated a modified form of pack which is especially adapted to be mounted integral with the jacket. In this embodiment the warmup pants are not attached to the pack.

With reference to FIG. **16,** a piece of fabric is cut with the outer section **90,** inner section **91,** edge sections **92** and **93** and tail section **94.** The section **90** is stitched to a rectangular shaped piece of fabric **95** as by the stitches **96.**

The edge **100** is stitched to the edge **101.** The edge **102** is stitched to the edge **103.** The edges **104** and **105** and edges **106** and **107** are respectively stitched together. This forms a pack P=**3** the general shape of which is shown in FIGS. **17** and **18** where the pack is mounted on the jacket J–**2** as by the panel **95** being stitched or otherwise secured to the back **110** of the jacket. The bottom edges of the panels **90** and **94** respectively mount zipper section **111** and **112** to form the zipper Z–**3** which closes off the bottom opening of the pack.

The lower section of the pack is V-shaped as indicated in FIGS. **17** and **18** so that the opening and zipper are spaced away from the jacket. This provides a greater degree of flexibility for the pack opening and facilitates the stuffing of the warmup pants.

With the embodiment of FIGS. **16–18**, the warmup pants are stuffed in the pack either by the skier's companion or are folded by the skier and then stuffed up into the pack by manipulation of the hands and arms behind the back.

I claim:

1. In combination, a skier's warmup pants and a back pack for holding the warmup pants when the same are not in use:

the warmup pants having a front leg portion to fit over the front of the legs of the skier and connected thereto a front torso portion to fit over the front of the lower torso of the skier, a back portion to fit over the back of the legs of the skier and connected thereto a back torso portion to fit over the back of the lower torso of the skier and fastener means operative to provide for the leg portions to be joined together so the same surround and cover the legs of the skier and also to provide for torso portions to be joined together so the same surround and cover the lower torso of the skier;

the back pack having a front and a rear joined with one another whereby the top and opposite sides are closed and an opening is formed across the bottom to provide access to the interior of the pack, the front of the pack being adapted to fit over and engage the back of the skier, said pack and said pants respectively being formed of pliable material providing for the pants to be capable of being stuffed into the pack;

fastener mechanism on the bottom of said front and on the bottom of said rear and operative for closing off the opening;

means on the bottom of the front of the pack and means on the top of the rear torso connecting the bottom of the front and the top of the rear torso together and providing for the connection to be inside of said opening whereby the pants can be completely enclosed within the pack and whereby said fastener mechanism can close off the opening; and

flexible harness means connected to the pack to engage the skier's body and hold the pack on the back of the skier, and said connection also suspending the pants from the pack when the same are pulled free from the pack.

2. A construction in accordance with claim **1** further including means forming a channel on the bottom of said front, one side of the channel including stiffening means and said flexible harness means including a belt extending thru said channel and a pair of flexible straps, one end of each strap being respectively connected adjacent the top of the pack and the other end of each strap having clip means for releasably connecting the strap to the belt and each strap being adapted to extend from the top of the pack over the skier's shoulder and down to the belt.

3. A construction in accordance with claim **1** wherein said fastener mechanism for the opening is a zipper.

4. A construction in accordance with claim **1** wherein said means for connecting the top of the rear torso and the bottom of the front together comprises permanent stitching.

5. A construction in accordance with claim **1** wherein said means for connecting the top of the rear torso and the bottom of the front together comprises releasable means.

6. A construction is accordance with claim **1** further including fastener means on the leg portions and on the torso portions and operative when the legs are folded up over the torso to hold the pants in position.

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