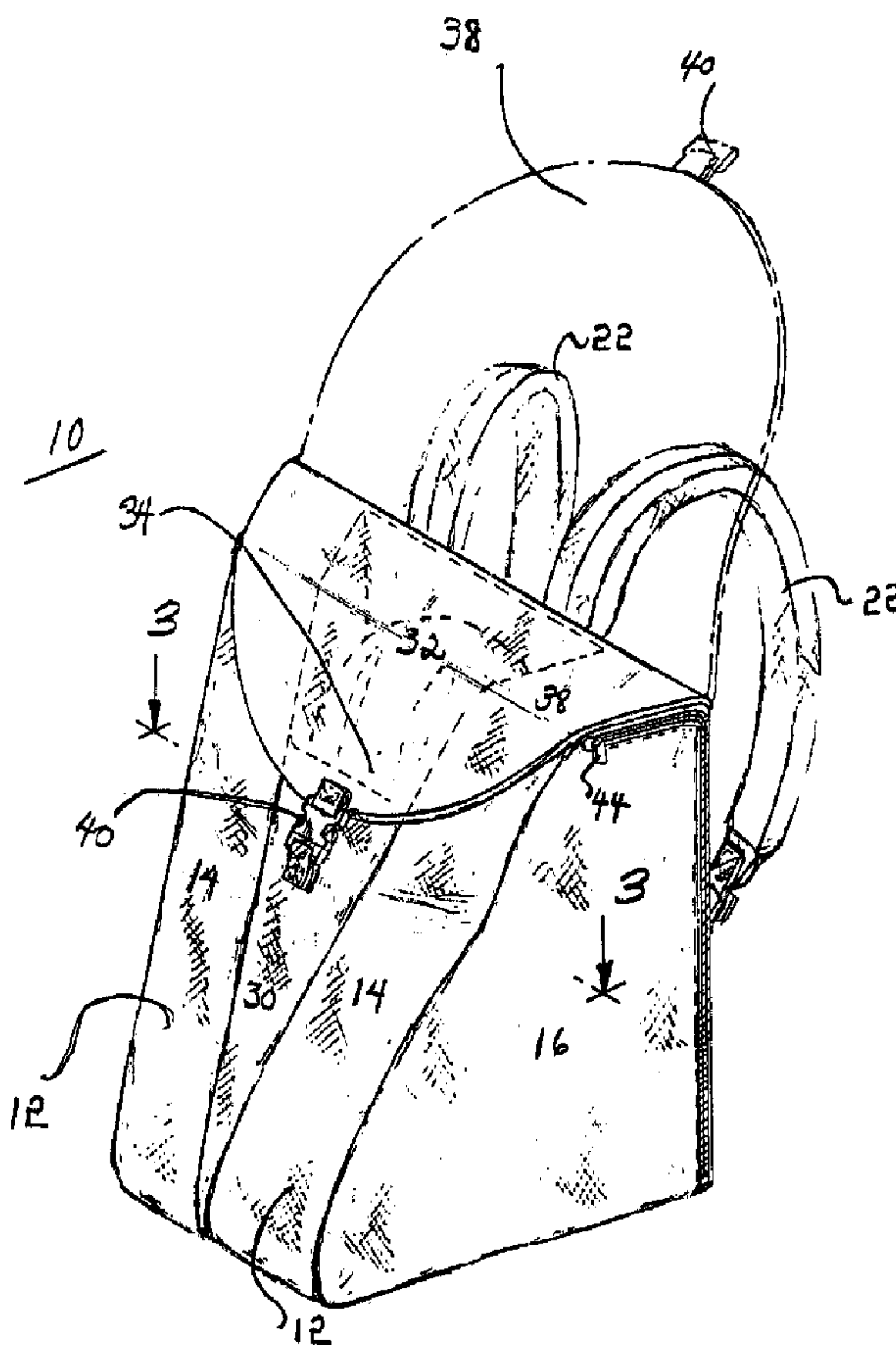




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(54) Titre : SAC DE PATINS A ROUES ALIGNEES
 (54) Title: BACKPACK FOR HEAVY BULKY FOOTWEAR



(57) Abrégé/Abstract:

A backpack for carrying bulky, heavy footwear such as inline skates, conventional roller skates, ice skates or ski boots is provided. Preferably, a backpack for carrying inline skates is provided. According to the invention, the backpack includes a left

(57) **Abrégé(suite)/Abstract(continued):**

and right opposed trapezoidal compartments. These compartments have a generally rectangular back face and a narrow width. The left and right compartments are angularly joined together at the front base portion of the compartments to form an isosceles triangle therebetween. The joined right and left trapezoidal compartments define a portion of the front face of the backpack. A piece of luggage material such as tight weave nylon is used to complete the front of the backpack by closing off the top of the area between the left and right trapezoidal compartments. The left and right trapezoidal compartments are rather narrow and in fact are only wide enough to receive the narrow part of a boot or skate. This prevents shifting of the footwear when carried. The compartments have a sufficient height for receipt of the blade portion of a skate and/or of the top portion of a bulky boot, for example, a ski boot. In addition, the compartments have a sufficient depth to receive the blade portion of a skate.

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ABSTRACT

A backpack for carrying bulky, heavy footwear such as inline skates, conventional roller skates, ice skates or ski boots is provided. Preferably, a backpack for carrying inline skates is provided. According to the invention, the backpack includes a left and right opposed trapezoidal compartments. These compartments have a generally rectangular back face and a narrow width. The left and right compartments are angularly joined together at the front base portion of the compartments to form an isosceles triangle therebetween. The joined right and left trapezoidal compartments define a portion of the front face of the backpack. A piece of luggage material such as tight weave nylon is used to complete the front of the backpack by closing off the top of the area between the left and right trapezoidal compartments. The left and right trapezoidal compartments are rather narrow and in fact are only wide enough to receive the narrow part of a boot or skate. This prevents shifting of the footwear when carried. The compartments have a sufficient height for receipt of the blade portion of a skate and/or of the top portion of a bulky boot, for example, a ski boot. In addition, the compartments have a sufficient depth to receive the blade portion of a skate.

Background of the Invention1. Field of the Invention

The field of the invention is backpacks for carrying heavy footwear such as inline skates or ski boots.

2. Description of the prior art

There are numerous backpacks on the market. These backpacks may be used to carry sporting equipment and the like. However, heavy bulky footwear, such as inline roller skates (roller blades)[™], conventional roller skates, ice skates, and ski boots are particularly difficult to accommodate in a standard backpack. The footwear either does not fit or shifts around in the bag. As a result, prior art backpacks have proved unsatisfactory for transporting bulky, heavy footwear.

Carriers for ice skates and roller skates and the like are known, for example, U.S. Patent No. 4,126,256 and 2,672,263 shows the use of L-shaped compartments for carrying roller skates or ice skates. Ski boot bags having a triangular shape are known. See Design Patent No. 312,726. Backpacks having side compartments are also known in the art. See, U.S. Patent No. 4,096,978 (Noice). However, there still is a need for a versatile backpack that can accommodate inline roller skates or other bulky footwear.

Summary of the Invention

A backpack for carrying heavy, bulky footwear such as inline skates (rollerblades)[™], conventional roller skates, ice skates, ski

boots or riding boots is provided. Preferably a backpack for carrying inline roller skates is provided.

According to the invention, the backpack includes left and right opposed footwear compartments. These compartments have a generally polygonal side face, preferably a trapezoidal or pentagonal side face, a generally rectangular back face and a narrow width. The left and right footwear compartments are angularly joined together at the front base portion of the compartments to form an isosceles triangle therebetween. The joined right and left footwear compartments define a portion of the front face of the backpack. A piece of luggage material such as tight weave nylon is used to complete the front of the backpack by closing off the top of the area between the left and right footwear compartments. The left and right footwear compartments are rather narrow on the front face and in fact are only wide enough to receive the narrow part of a boot or skate. This prevents shifting of the footwear when carried. The narrow width of the footwear compartments contributes to the efficient use of the space and limits the bulk of the bag. The compartments have a sufficient height for receipt of the blade portion of a skate and/or of the top portion of a bulky boot, for example, a ski boot. In addition, the compartments have a sufficient depth to receive the blade portion of a skate. As a result the compartments can efficiently accommodate bulky footwear such as boots for example, ski boots and riding boots or skates for

example, inline skates, ice skates or conventional roller skates with a minimal amount of wasted space.

10 Additionally an interior compartment is provided between the footwear compartments for carrying sundries that the user might require to use in conjunction with the bulky footwear. Preferably the inside compartment is sufficiently large to accommodate a sports helmet as well as the sundry pads that an inline roller skater might use. Optionally where the bag is used for ski boots, various protective clothing such as hats, gloves and scarves may be stowed in the inside compartment formed between the opposed trapezoidal compartments.

The footwear compartments can be opened and closed by use of any convenient closure mechanism. Desirably the compartments are opened by a zipper arrangement which opens the top and back of the compartments to allow for easy insertion of a skate or boot. However, other closure mechanisms are contemplated such as snaps or velcro™ closures.

20 The backpack has been ergonomically designed to transport heavy footwear preferably boots or skates in a compact back pack which is easy and comfortable to carry. The angularly connected footwear compartments enclose the boot or skate in a minimum amount of space while at the same time directing the weight of the footwear toward the side to evenly distribute the weight across the back of the user. In addition, according to the invention when the backpack is used with blade skates, the blade portion of a skate is

directed away from the user to prevent accidental injury if the user is pushed or jarred from behind. An interior compartment is also provided for carrying sport accessories.

In use the footwear compartments are opened by opening the closure device such as a zipper across the side and front of the bag to allow for insertion of a skate or bulky boot. The blade portion of the skate is either placed horizontally along the side of the compartment with the back of the boot facing the back vertical wall of the bag or optionally the skate may be placed blade up along the vertical back wall of the bag with the boot portion of the skate facing towards the front of the bag. Where a ski boot is carried, desirably the ski boot would be placed in the bag with the sole portion of boot in the horizontal section of the compartment pointing toward the front of the bag and the boot portion extending vertically in the rear of the compartment.

When heavy bulky footwear is placed in the footwear compartments, the weight of the footwear is directed toward the side of the user. As a result the backpack can be comfortably carried and accommodate heavy, bulky footwear without discomfort of the user. In the case of blade skates such as roller blades or ice skates, the blade which often digs into the user's back in a normal backpack is directed by the angled footwear compartments away from the back of the user.

It is an object of the invention to provide a backpack for bulky, heavy footwear which can be comfortably carried.

It is an object of the invention to provide a backpack for bulky, heavy footwear which will evenly distribute the weight of the footwear across the back of the user.

It is an object of the invention to provide a backpack for comfortably carrying a pair of rollerblades and a helmet.

10 It is an object of the invention to provide a backpack for blade skates which directs the blades away from the back of the user while distributing the weight of the load across the user's back.

It is an object of the invention to provide a compact backpack for carrying blade skates which will prevent the skates from shifting in the backpack.

Other and further objects will become apparent from the present specification.

20 In accordance with the present invention there is provided a backpack for carrying a pair of heavy, bulky footwear comprising: a) said backpack having a front and a back; b) a left and right side footwear compartments for holding said footwear; said footwear compartments having a predetermined size sufficient to receive one each of a pair of heavy, bulky footwear; c) each said footwear compartment having generally polygonal side walls having a top, bottom, a generally rectangular back wall and a front wall; d) said left and right side footwear compartment angularly joined together at the front of said backpack to form a generally isosceles triangularly shaped space between the footwear

compartments; e) said front walls of said footwear compartments defining a portion of the front of said backpack; f) said left and right footwear compartments having a width from twice the width of said footwear to approximately the same width as said footwear; g) a flat back wall connecting said right and left footwear compartments, said flat back wall joining said right and left side footwear compartments together; h) means to enclose the generally isosceles triangularly shaped space formed between said left and right side footwear compartments to form an interior compartment between the left and right side footwear compartments.

In accordance with the present invention there is provided a backpack comprising: a) a front and back; b) a left and right side compartment; said compartments having a predetermined size; c) each said compartment having side walls a bottom a back wall and a front wall; d) said left and right side compartments angularly joined together at the front of said backpack to form with said back a generally isosceles triangularly shaped space between the compartments; e) said front walls of said compartments defining a portion of the front of said backpack; f) means to enclose the generally isosceles triangularly shaped space formed between said left and right side compartments to form an interior compartment between the left and right side compartments.

The preferred embodiment of the present invention is illustrated in the drawings and examples. However, it should be expressly understood that the present invention should not be limited solely to the illustrative embodiment.

Brief Description of the Drawings

Fig. 1 is a perspective view of the backpack according to the invention.

Fig. 2 is a side view of the backpack of Fig. 1 with an inline skate in place.

Fig. 3 is a sectional view through 3-3 of Fig. 1.

Fig. 4 is a rear view of the backpack according to the invention.

Fig. 5 is a side view of the backpack of Fig. 1 with an inline skate in an alternate location to that shown in Fig. 2.

Fig. 6 is a perspective view of an alternate embodiment of the backpack according to the invention.

Fig. 7 is a perspective view looking from the side of Fig. 6.

Detailed Description of the Invention

10 According to the invention a backpack carrying bulky footwear is provided. The backpack provides a means to carry heavy footwear such as ski boots, riding boots, blade skates such as inline roller skates and ice skates, conventional roller skates, and the like in a compact package. Most preferably a backpack for carrying inline roller skates is provided. The backpack according to the invention can be easily and comfortably carried by the user without having the blades of blade skates uncomfortably and dangerously stick into the user's back and without the footwear shifting around in the backpack.

20 According to the invention, two opposed footwear compartments are provided. The footwear compartments have a narrow width to snugly engage the footwear, e.g., inline skates, and prevent shifting and/or movement of the footwear when carried. The footwear compartments are angularly joined at their front base to form the front of the bag and to direct the weight in the compartments outwardly toward the sides of the user. As a result, a compact

backpack for transporting bulky footwear which occupies a limited amount of space is provided. The weight of the footwear carried in the backpack is evenly distributed across the back of the user. In another aspect of the invention, an interior compartment is provided between the opposed footwear compartments for carrying sports accessories such as sports helmets and pads or cold weather gear such as hats, goggles, scarves and gloves.

10 Referring to Figs. 1 to 5, according to the invention a backpack 10 is provided for carrying heavy bulky footwear. The backpack includes opposed footwear compartments 12. Compartments 12 are composed of polygonal side walls preferably trapezoidal walls 16 which are separated by back wall 24. Alternatively side walls 16 may desirably be pentagonally shaped as shown in Figs. 6 and 7. The space between side walls 16 is narrow and is only sufficiently wide to accommodate the heel portion of the bulky footwear. Narrow front walls 14 are preferably approximately the width of a normal blade skate or ski boot. Desirably front walls 14 are about the width of the body of a normal skate or boot and may even be slightly less to obtain a snug fit. Optionally the width may be up to 20 two times the width of a normal boot or skate. Side walls 16 are identical on either side of the footwear compartments 12. Referring to Figs. 2 and 5, side walls 16 are desirably longer at the bottom than at the top. Preferably the top 20 of side wall 16 is from one half to two thirds the size of bottom 18 of side wall 16.

Front wall 14 is sloped and interconnects the side walls 16. Vertical back wall 24 is perpendicular to side walls 16 and interconnects side walls 16 at the back.

The backpack 10 is formed by connecting opposed footwear compartments 12 to form the left and right side of the backpack 10. The footwear compartments 12 are angularly joined together at the front base thereof preferably by sewing the compartments 12 to form a compartment therebetween preferably in the shape of an isosceles triangle. Desirably the triangle formed therebetween is an equilateral triangle. The angle α formed between the angularly joined footwear compartments 12 is from 30° to 90° preferably from 45° to 75° and most preferably about 60° . When the angle α is 60° , an equilateral triangle is formed between the angled footwear compartments 12. As best seen in Fig. 1 and Fig. 3, the interior compartment 34 is formed between the angularly joined footwear compartments 12 and triangular floor 26 which is sewn or otherwise attached to the bottom of footwear compartments 12. Backpack back wall 28 interconnects the rear of the angularly spaced footwear compartments 12 to complete the rear of backpack 10. Shoulder straps 22 are attached to the backpack back wall 28 for carrying the backpack 10. The front of the bag is completed by front wall extension 30 which is sewn to the front 14 of footwear compartments 12 to close off the interior compartment 34 from the outside. The interior compartment 34 has an opening 32 at the top to allow loading of athletic accessories. Preferably the interior compartment

is generally triangular and is of sufficient size so that a sporting helmet 36 can be carried in the interior compartments 34. Optionally, other sporting equipment can be carried either in conjunction with the helmet 36 or instead of the helmet. For example, when the bag 10 is used for inline roller skating, knee, wrist and elbow pads can be carried. Optionally if the bag 10 is used for ski boots, winter wear accessories can be carried in the compartment 34 for example, gloves, scarves and hats. A cover 38 is hingedly attached to the top of backpack 10 to close off opening 32. Preferably the cover 38 is held in place through interlocking connector 40. Optionally a velcro connector system can be used. Desirably a lumbar belt support system 42 is provided so that the bag 10 can be secured around the user's waist. Footwear compartments 12 include zipper closure system 44 which allow opening of compartment 12 along the top 20 and the vertical back wall 24. The backpack can be made out of a variety of materials that are suitable for softsided luggage. Preferably the backpack is made out of heavy tight weave nylon most preferably, nylon codura or nylon pack cloth.

Referring now to Figs. 6 and 7 which show an alternative embodiment of the backpack according the invention. The same parts as shown in Figs. 1 through 5 are referred to by the same reference numerals. The backpack 50 of Figs. 6 and 7 has polygonal footwear compartments, preferably pentazoidal shaped footwear compartments 52 having pentazoidal shaped side walls 54 and sloping front walls

56. As shown in Fig. 6 the footwear compartments are sewn together a greater distance at the front base thereof than the embodiment of Figs. 1 through 5. As shown In Fig. 7, in use the weight of the footwear is directed as shown by the arrows. As shown in Fig. 6 optionally a drawstring closure 58 is provided to close off the interior compartment of the bag.

10 In use, one each of a pair of heavy footwear preferably an inline skate 46 is placed in each of the footwear compartments 12. There are two preferred configurations for the skates. As shown in Fig. 2, the skate can be placed in the compartment so that the blade extends horizontally along the side of the bag 10. In this configuration the blade of the skate 46 will be directed away from the back for the user and hence, any jarring during carrying of the bag will not result in any discomfort or injury due to the blade imbedding in the user's back. Optionally as shown in Fig. 5 the blade skate 46 may be inserted into the bag so that the blade extends vertically toward the back of the bag 10. In such an embodi-
20 ment the ankle portion of skate 46 will point toward the front of the bag. Again the blade of the skate will be directed away from the back of the user by the angularly joined footwear compartments 12. When ski boots are used, it is generally preferred that the sole portion of the boot be placed in the horizontal direction in the footwear compartments 12 and the boot portion extend in the vertical direction and rest against the back of the angularly joined footwear compartments. Since the side walls 16 are narrowly

spaced apart, the boot or skate is held securely in the compartment without shifting. The resulting backpack is compact and can be used to easily transport heavy footwear preferably inline roller skates, conventional roller skates, ice skates, ski boots and riding boots most preferably inline roller skates. The weight of the bag is evenly and uniformly distributed across the back of the user. The symmetrically aligned angularly connected footwear compartments point any skate blade away from the back of the user and thus minimize the likelihood of injury or discomfort due to the lodging of the blade into the back of the user. Moreover, the arrangement minimizes the space required to carry the skates or other footwear and allows for a roomy inside compartment which can be used to carry other sporting equipment which will usually be associated with the heavy footwear.

The foregoing is considered as illustrative only to the principles of the invention. Further, since numerous changes and modifications will occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described above, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

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CLAIMS:

1. A backpack for carrying a pair of heavy, bulky footwear comprising:
 - a) said backpack having a front and a back;
 - 5 b) a left and right side footwear compartments for holding said footwear; said footwear compartments having a predetermined size sufficient to receive one each of said pair of heavy, bulky footwear;
 - c) each said footwear compartments having generally
10 polygonal side walls having a top, bottom, a generally rectangular back wall and a front wall;
 - d) said left and right side footwear compartment angularly joined together at the front of said backpack to form a generally isosceles triangularly shaped space between the
15 footwear compartments;
 - e) said front walls of said footwear compartments defining a portion of the front of said backpack;
 - f) said left and right footwear compartments having a width from twice the width of said footwear to approximately the
20 same width as said footwear;
 - g) a flat back wall connecting said right and left footwear compartments, said flat back wall joining said right and left side footwear compartments together;

h) means to enclose the generally isosceles triangularly shaped space formed between said left and right side footwear compartments to form an interior compartment between the left and right side footwear compartments.

2. A backpack according to claim 1 wherein said left and right side footwear compartments have a narrow width for snugly securing said footwear in said left and right side footwear compartments.

3. A backpack according to claim 1 wherein said footwear is selected from the group consisting essentially of ski boots, riding boots, inline roller skates, conventional roller skates and ice skates.

4. A backpack according to claim 1 wherein said side walls of the left and right side footwear compartments have a maximum length at the bottom of said compartment and a minimum length at the top of said compartment.

5. A backpack according to claim 4 wherein the length of said side wall at the top of the footwear compartments is $\frac{1}{2}$ of the length at the bottom of the footwear compartments.

6. A backpack according to claim 1 wherein said isosceles triangularly shaped space is an equilateral triangularly shaped space.

7. A backpack according to claim 1 wherein said polygonal side walls are generally trapezoidally shaped.
8. A backpack according to claim 1 wherein said polygonal side walls are generally pentagonally shaped.
9. A backpack according to claim 1 wherein said interior compartment has a sufficient size to receive a standard protective sport helmet.
10. The back pack according to claim 1 wherein each said footwear compartment front wall is sloping.
11. A backpack according to claim 1 wherein the angularly joined left and right footwear compartments form an angle α therebetween, said angle α being from about 30° to 90° .
12. A backpack according to claim 11 wherein the angle α formed between the left and right side footwear compartments is 45° to 75° .
13. A backpack according to claim 11 wherein the angle α formed between the left and right side footwear compartments is 30° to 60° .

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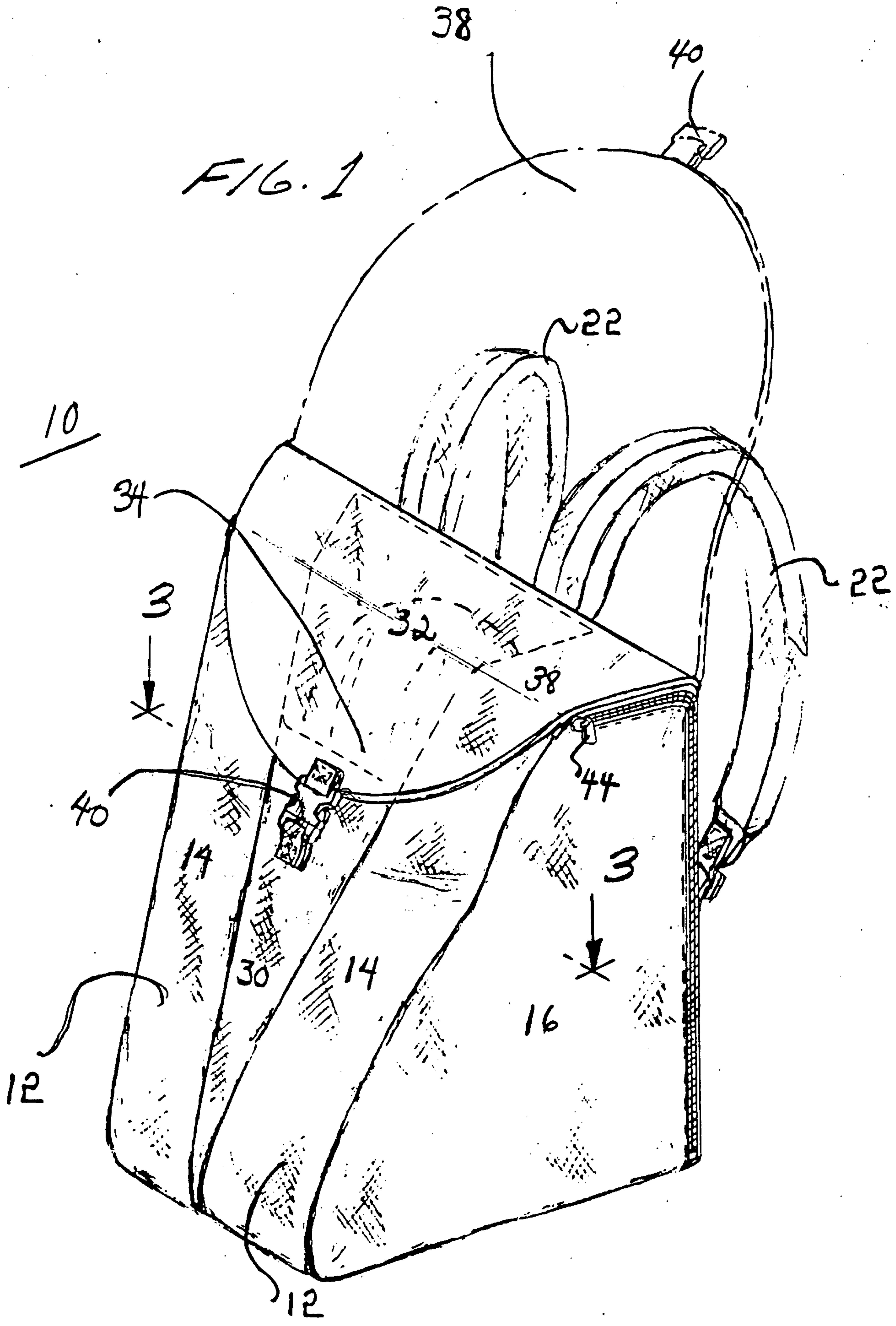
14. A backpack according to claim 13 wherein the angle α formed between the left and right side footwear compartments is 60° .

15. A backpack according to claim 14 wherein said
5 footwear is a pair of inline skates.

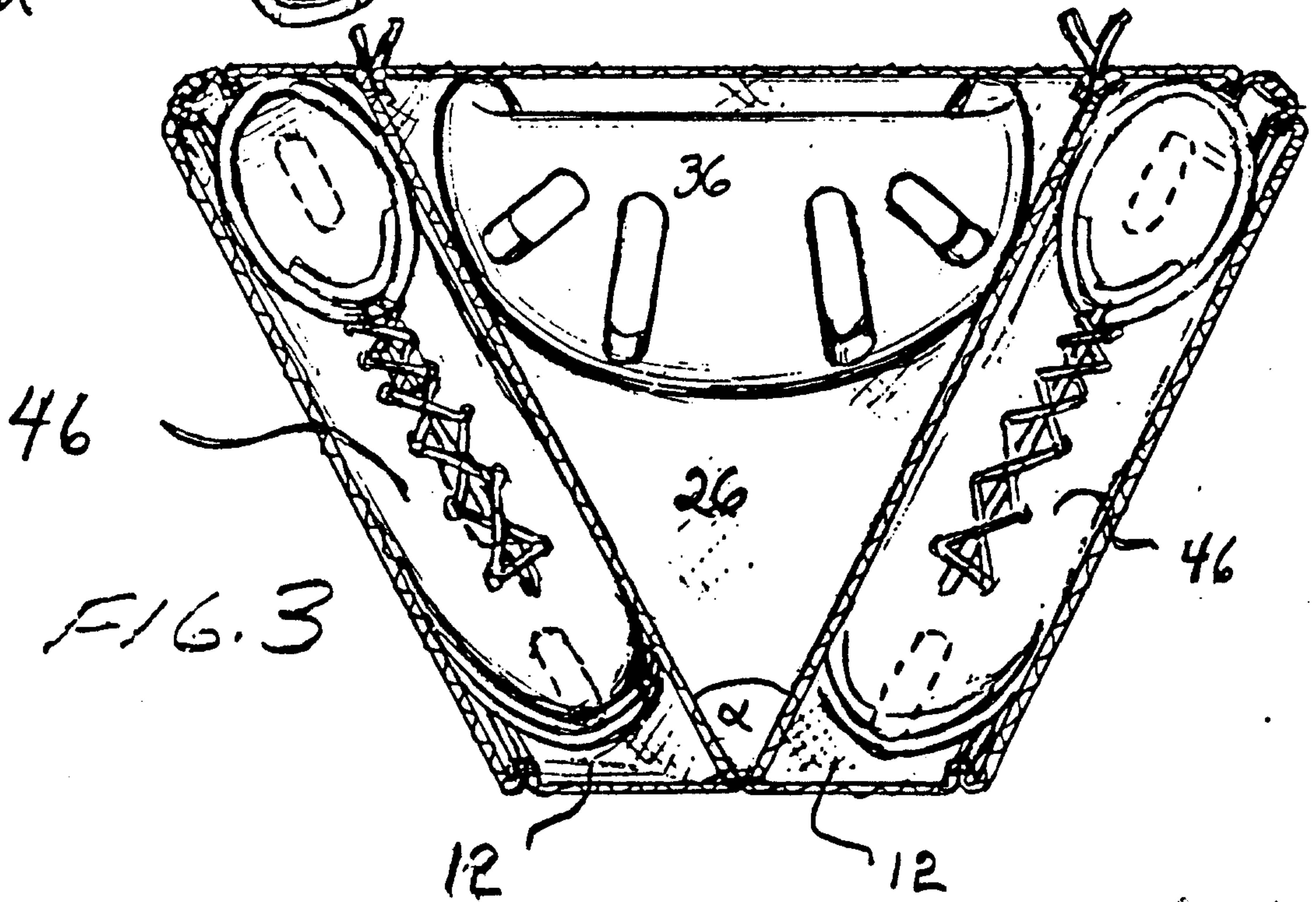
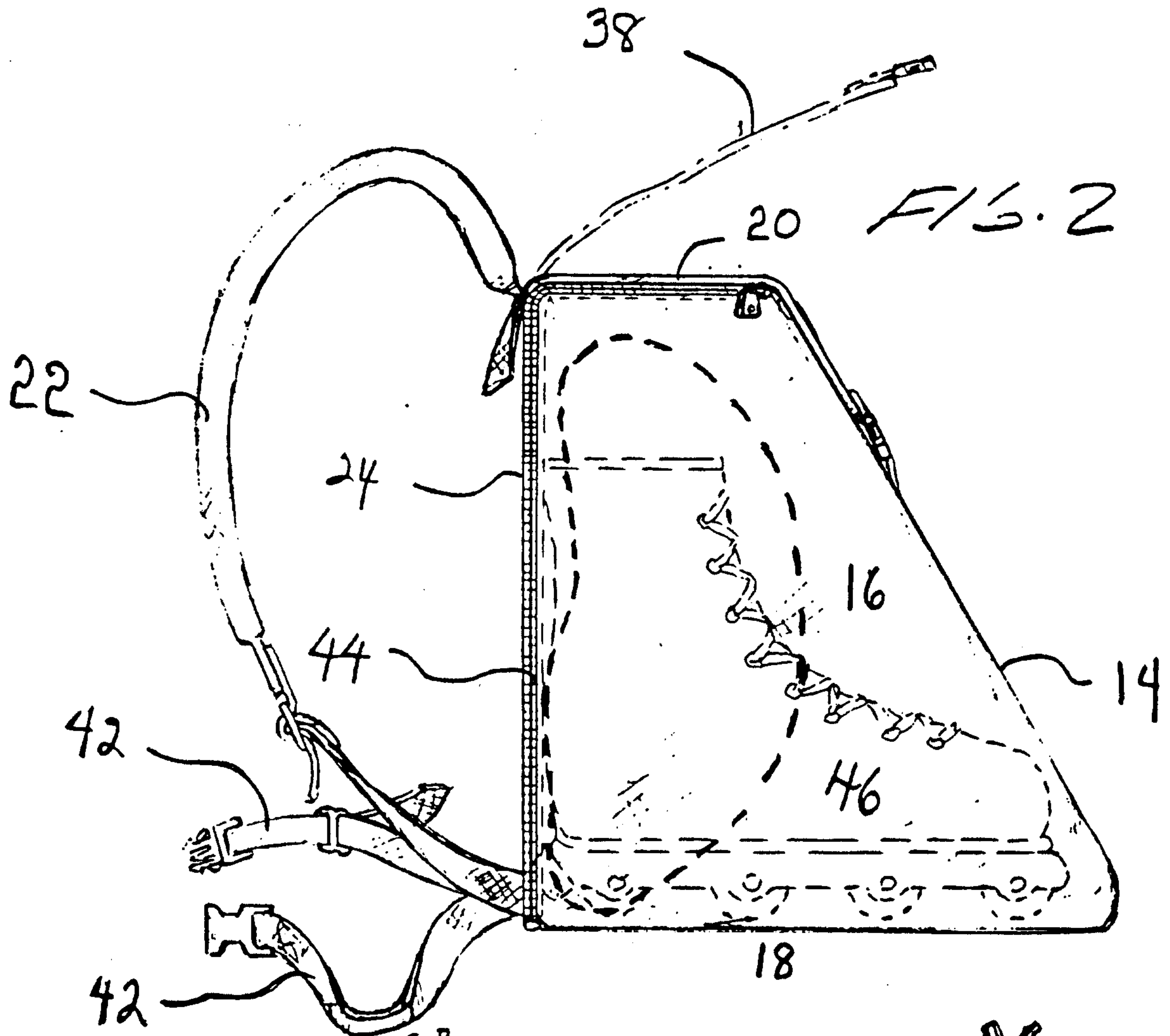
16. A backpack according to claim 15 further
comprising, said compartments having a width of
approximately the width of an inline skate, having a height
sufficient to receive an inline skate blade and having a
10 depth sufficient to receive an inline skate blade.

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Patent Agents



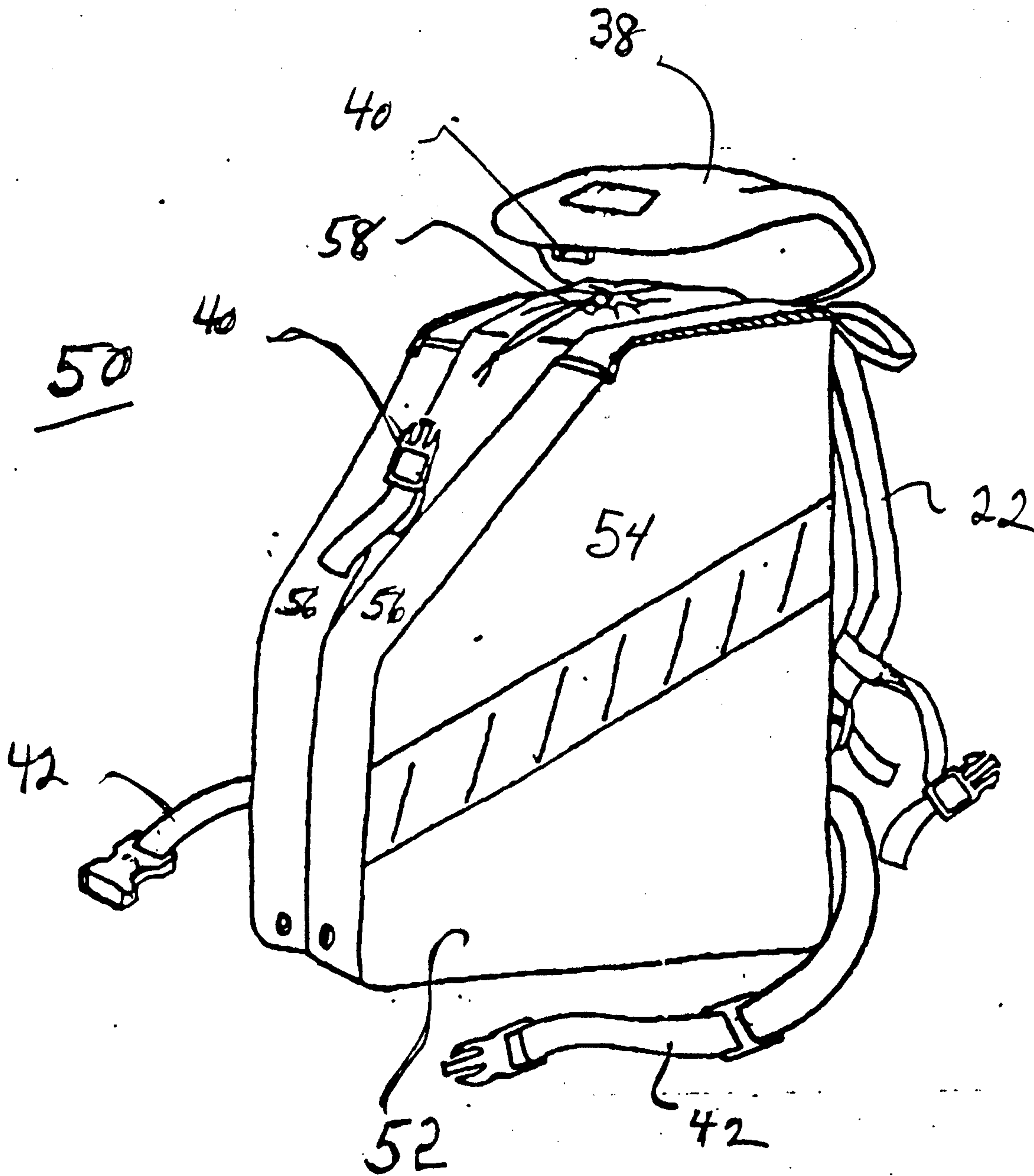


Fig 6

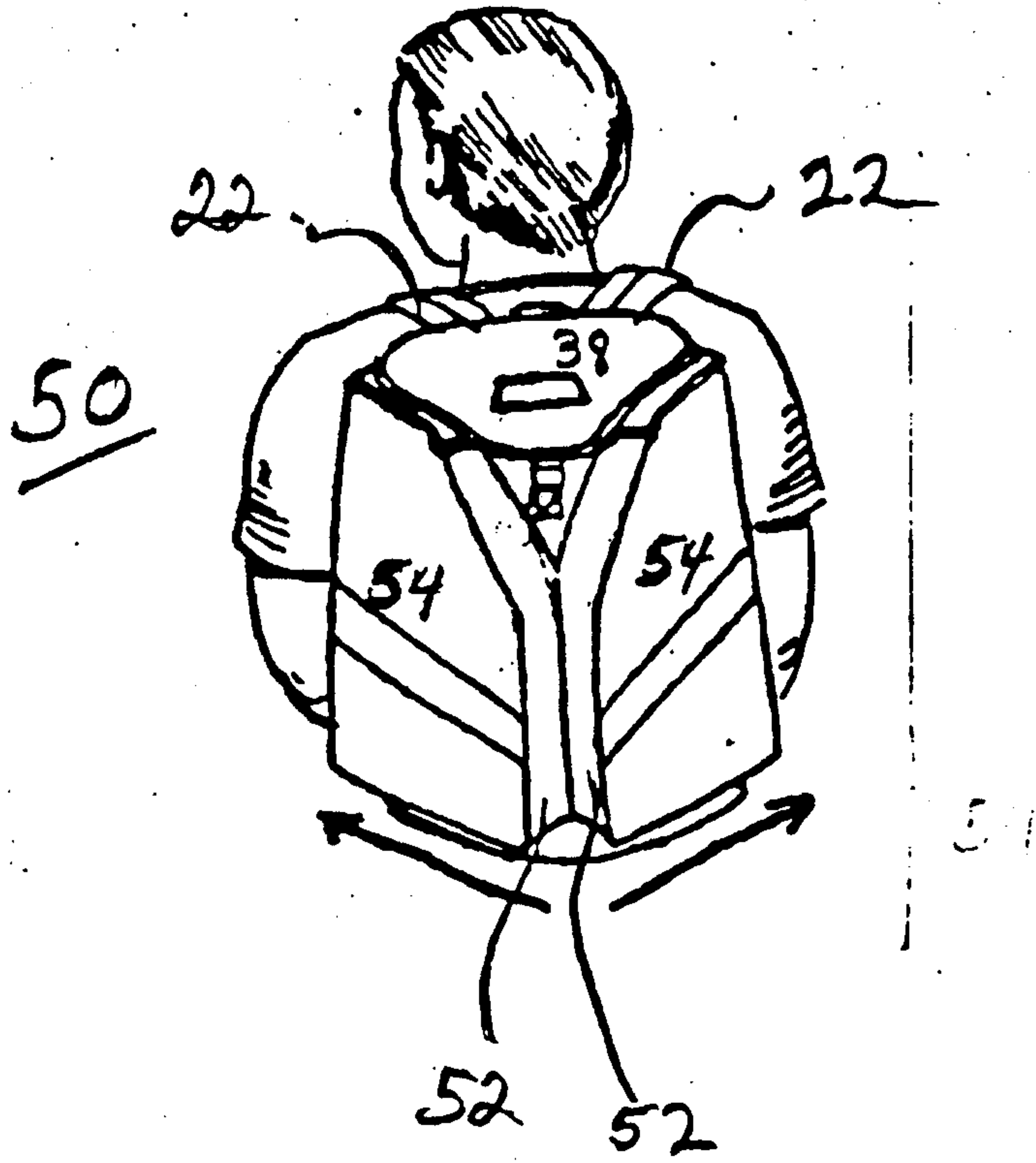


Fig 7

