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- (72) **Inventor; and**
- (71) **Applicant : RIEBER, Michael** [US/US].
- (74) **Agent: GEARHART, Richard;** Gearhart Law LLC, Innovation Plaza, Suite 1a, 41 River Road, Summit, NJ 07901 (US).
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HEEL SUPPORT

Inventor:

Michael Rieber

Claim of Priority

This PCT application claims priority to US Application 12/584,525 filed on September 8, 2009, the contents of which are fully incorporated herein by reference.

This application also claims the priority of US Provisional Patent Application 61/095,348 filed on September 9, 2008, the contents of which are fully incorporated herein by reference.

This PCT application is related to US Application 13/036,698 filed on February 28, 2011, the contents of which are fully incorporated herein by reference.

Technical Field

The invention relates to the field of cushions, in particular, a cushion used as a foot rest, or support, on furniture.

Background Art

Many people like to prop their feet on a coffee table when relaxing on a sofa. This presents a two-fold problem; one, the user's heel gets sore from resting on the hard surface of a table. Second, other people in the household may find it objectionable for another to put their feet on a piece of furniture. The present invention solves both these problems.

The present invention discloses a foot support in the form of a coaster having an appropriate filling. A padded foot support may appear to be a simple item to design, but

to make one that is light weight and performs its function well, requires ingenuity and a fair knowledge of appropriate material properties.

A comfortable support requires several, seemingly contradictory components.

The support material must be soft – but firm. That is, the material must be soft enough

5 that the heel will sink in and spread the support over as much of the foot as possible, both for comfort and stability. But the support must also provide sufficient resistance when deformed so that a reasonable thickness of material can be used without the heel sinking right through to the underlying hard surface. And, though the support material must deform rapidly to adjust to the shape of the foot, when the foot is removed, the support
10 material must recover rapidly to its original thickness and shape.

A relevant property of padding materials is the pressure they support when compressed to half their original thickness. A comfortably resting foot of a typical person requires a support of between 2.5 and 4 psi (pounds/square inch).

Fleece, for instance, exerts a pressure of only 0.75 psi (pounds per square inch)
15 when compressed to 50 % of it's original thickness, so a fleece support would have to be about six inches thick to prevent the heel sinking through the support and resting on the underlying hard table.

Foams, such as polyurethane foams, sometimes referred to as "Memory Foams", are firmer, but still not supportive enough for a comfortable footrest of reasonable
20 dimensions as they only exert pressures of about 1.8 psi at 50% compression.

Silicone rubber, on the other hand, exerts a pressure of about 5 – 10 psi at only 25% compression, and would, therefore, be too hard to provide a comfortable support. Even soft natural rubber exerts a pressure of about 3 psi at 25% compression and,

therefore, would not deform enough to spread the load sufficiently to make a comfortable heel support.

What is required is a suitable material that has the right balance of firmness and deformation to provide cushioning and support, while keeping the size thickness of the invention to a minimum. Suitable visco-elastic gel materials are available that address medicinal or therapeutic needs for elevating heels and elbows, or as cushioning to safeguard limbs from possible injury. However, the need for thin compact cushions for furniture protection, and leisure and relaxation has not yet been adequately addressed.

The present invention addresses this unmet need by providing a small, thin coaster designed to fit on any tabletop or bench top, and which incorporates a suitably selected visco-elastic gel in an appropriate packaging.

Known prior art foot cushions include U.S. Patent No. 6,374,410; U.S. Patent No. 5,173,979; and a U.S. Patent Application No. 2007/0001503.

U.S. Patent No. 6,374,410 discloses a knee pad for providing fall protection of a knee is disclosed. The knee pad is a flexible single piece flat pad made of encased resilient polymeric material and is configured to have a top edge portion having a crown for protecting patella of a knee, a pair of first and second side edge portions, and a bottom edge portion. The first side edge portion has an extended flap for protecting a side of the knee. The knee pad can be reversed, front to back, for selectively protecting either medial aspect or lateral aspect of the knee. Furthermore, the knee pad can be held in position by a body tight garment without additional attachment devices. Also disclosed is a multifunctional body protection pad that can be used interchangeably for providing fall protection of a knee or a hip.

The U.S. Patent No. 5,173,979 describes an inflatable cushion apparatus for maintaining a person's lower leg, ankle and foot, in an elevated and substantially horizontal position relative to the person's head and upper body. The inflatable cushion apparatus includes an angled front wall for supporting a person's upper leg in an inclined position. A top wall is provided which extends horizontally when the apparatus is inflated. A valve is provided to facilitate filling of the cushion apparatus.

The U.S. Patent Application No. 2007/0001503 discloses a device for protecting a substantially horizontal top of a piece of furniture from damage by either the back of the lower portion of the legs or the bottom of feet of a person sitting near the piece of furniture includes a cushion having two portion separated by a notch. The first portion of the cushion rests on the substantially horizontal top of the piece of furniture and under the back of the lower portion of the legs or the feet of the person sitting near the piece of furniture. The second portion of the cushion engages the edge of the substantially horizontal top of the piece of furniture.

Prior art discloses bulky unattractive devices that are designed to protect a foot from injury, provide therapeutic relief to a patient who is lying down, or protect furniture from scuff marks. All of these devices are bulky and do not aim at relieving stress or providing relaxation. The present invention provides relief and relaxation for both heels and elbows, whereas prior art addressed the needs of only one set of limbs. In addition the present invention satisfies a long felt need for leisure devices for heels and elbows that are easy to use, easy to clean and store, and appropriate to be utilized in any setting without any stigma or embarrassment. The present invention can even serve as a promotional item with a marketing message printed thereon.

One embodiment of this invention is illustrated in the accompanying drawings and will be described in more detail herein below.

Disclosure of Invention

5 The present invention is a cushion for supporting a user's heels or elbows on furniture. In a preferred embodiment, the cushioned heel support includes a sleeve and a suitable cushioning material disposed within the sleeve. The cushioning material preferably has a 50% compression force deflection in a range of 2.5 to 4 psi.

10 In a highly preferred embodiment, the support's cushioning material may be a dry, visco-elastic polymer that has a 25% compression force deflection that is in a range of 0.25 psi to 1 psi, in addition to having a 50% compression force deflection in a range of 2.5 to 4 psi.

15 In one embodiment of the support, the cushioning material has a thickness in a range of 0.25 inches to 2 inches, and a compression set characteristic such that after being compressed to 50% of an original thickness for 22 hours, the material returns to 100% of said original thickness.

 It is an object of the present invention to provide a cushioned support device for heels and elbows.

20 It is an object of the present invention to provide a feet and leg support device which would be safe to use by being thin, light, tear resistant, stain resistant, non-flammable, and hypoallergenic.

It is an object of the present invention to provide a cushioning device with a frictional bottom and/or top surface that would adhere to a smooth surface and thus prevent the device from being easily shifted and moved.

It is an object of the present invention to provide a cushion device wherein the cushioning material is a dry, visco-elastic polymer.

It is an object of the present invention to provide a cushion device wherein the top and bottom surfaces are made out of material suitable for disposing decals and printing, and which could also serve as a promotional object, displaying a logo, contact information or a marketing message.

It is an object of the present invention to provide a heel and elbow cushion that has a removable pouch that is made of supple material.

It is an object of the invention to provide a cushion that contains a deformable sleeve encased in a pouch, and the pouch made out of a soft material.

It is an object of the present invention to provide a pouch with an opening to admit a cushion, and said opening having a closing mechanism.

Brief Description of the Drawings

Fig. 1 is a side view of a preferred embodiment of the present invention, showing a user's legs, held in an elevated position, with heels resting on top of the cushioning member.

Fig. 2 is a side view of a preferred embodiment of the invention, showing a sleeve, its top and bottom surfaces and a side seam.

Fig. 3 is a top view of a preferred embodiment of the invention, showing a top surface and a side seam.

Fig. 4 is a bottom view of a preferred embodiment of the invention, showing a bottom surface and a side seam.

5 Fig. 5 is a side view of an alternative embodiment without a side seam.

Fig. 6 is a perspective view with a cross section, showing top and bottom surfaces, a side seam and an inner cavity.

Fig. 7 is a side view of the present invention, shown encased in a pouch, showing an opening with a closing mechanism, as well as top and bottom covers.

10 Fig. 8 is a side view of a pouch for the present invention showing an opening with a closing mechanism, a top cover, and a bottom cover.

Best Modes for Carrying Out the Invention

The preferred embodiments of the present invention will now be described with
15 reference to Fig. 1-8 of the drawings. Identical elements in the various figures are identified with the same reference numerals.

The present invention discloses a cushioning coaster for heels and elbows that can be used on a variety of surfaces including but not limited to tabletops, desktops, office
20 desktops, chairs and car seats. The present invention can provide much needed cushioning in many circumstances. For example, the present invention can serve as a movable cushion on medical examination tables and chairs, which are usually very firm and made from tough durable materials. Extra cushioning for a banged up or tender limbs or head may be necessary or desirable. Another application of the present invention may

be in an airplane or bus seating. These areas are only minimally comfortable to save on space and cost. Additionally, pillows and other cushioning materials are provided in very limited quantities, if at all. Therefore, a passenger arriving late to a flight, or deciding to rest well into the flight, may find that all available cushions have been distributed. The compact design of the present invention would easily fit into a small carry-on and provide a harried and often frustrated traveler with soothing softness both on airplane chairs, and in the waiting area. The present invention may additionally be utilized in vehicles, such as trucks cars and busses, to provide additional cushioning on hard surface armrests, firm seats and as knee pads against hard dashboards in compact cars. As will be described later, the present invention may be fitted with Velcro hooks, elastic straps or non-elastic bands to snugly attach unto vertical surfaces, narrow bars or pipes, and smooth, flat, and even slippery surfaces.

Fig. 1 shows a cushion 1 with a sleeve 10 being used by a person who is holding his or her feet in an elevated position for comfort or relaxation. The small size of the invention would be ideally suited to provide this kind of function since only one or two pressure points in close proximity would be used in any one time. The diameter of the presently claimed device may be between 1/4" to 36", with preferred range within 3-12 inches. An oversized cushion may be possible but will likely be unnecessarily large and obtrusive. Since this is a personal item, needed only for limb support, this cushion need not be especially thick if used with fillers that are described below. The sleeve 10 may be substantially flat, so it can be easily rolled or folded. The preferred thickness of the embodied device would provide ample cushioning support, while maximizing the

portability of the invention. The preferred thickness of the present invention could be from 1/100 inch to 100 inches with a preferred thickness of 1/4 to 2 inches thick.

A relevant property of padding materials is the pressure they support when compressed to half their original thickness. A comfortably resting foot of a typical
5 person requires a support of between 2.5 and 4 psi (pounds/square inch). In a preferred embodiment, the cushioning material, therefore, preferably has a 50% compression force deflection in a range of 2.5 to 4 psi.

Most cushioning materials are either too soft or too hard to meet this requirement.

Fleece, for instance, only exerts a pressure of only 0.75 psi (pounds per square
10 inch) when compressed to 50 % of its original thickness. A fleece heel support would have to be about six inches thick to prevent the heel sinking through the support and resting on the underlying hard table, making it far too bulky.

Foams, such as polyurethane foams, sometimes referred to as “Memory Foams”, are firmer, but still not supportive enough for a comfortable foot rest of reasonable
15 dimensions as they only exert pressures of about 1.8 psi at 50% compression. Silicone rubber, on the other hand, exerts a pressure of about 5 – 10 psi at only 25% compression, and would, therefore, be too hard to provide a comfortable support.

Even soft natural rubber exerts a pressure of about 3 psi at 25% compression and, therefore, would not deform enough to spread the load sufficiently to make a comfortable
20 heel support.

In a highly preferred embodiment, the support’s cushioning material may have a 25% compression force deflection that is in a range of 0.25 psi to 1 psi, in addition to having a 50% compression force deflection in a range of 2.5 to 4 psi. Such a material

will initially deform rapidly to provide a comparatively large area of support for the user's heel. Then, as the heel sinks in, the material's visco-elastic properties may result in a non-linear increase in the support pressure, so that when the material has compressed to around 50% of its original thickness, it may now fully support the heel.

5 Offering such little resistance to small deflections also means that such a material does not exhibit strong shear forces in response to small movements. This translates into a more comfortable experience for the user,

 One such material that may be used is AKTON™, a vulcanized, cross linked rubber material that behaves as a dry, visco-elastic material, and may be supplied by
10 Action Products, Inc., Hagerstown, MD 2174, USA.

 Tables 1 and 2 below show the results of performing the American Society for Testing and Materials (ASTM) Standard Test Methods for Rubber Properties in Compression, procedure 1, on three samples of AKTON® visco-elastic material. This test is also known as ASTM D575-91(96), test 1.

15 From Table 1, at 25% deflection, i.e., when the sample is compressed 25% from its original thickness, the median deflection pressure is only 0.63 lbs. per square inch.

 At 50% deflection, however, the median deflection pressure is now 3.45 lbs. per square inch, as can be seen in Table 2.

20

Sample Id: Akton®	Lbs. per Square inch
1.	0.66
2.	0.63
3.	0.63
Median	0.63

Table 1 25% Deflection (ASTM D575-91(96) Compression Deflection Test)

Sample Id: Akton®	Lbs. per Square inch
1.	3.45
2.	3.10
3.	3.47
Median	3.45

5 Table 2: 50% Deflection (ASTM D575-91(96) Compression Deflection Test)

Sample Id: Akton®	% Set
1.	0
2.	0
3.	0
Median	0

10 Table 3:: 25% Compression (ASTM D 575-91(96) Compression Set Test)

Sample Id: Akton®	% Set
1.	0
2.	0
3.	0
Median	0

15 Table 4:: 50% Compression (ASTM D 575-91(96) Compression Set Test)

Tables 3 and 4 above show the results of performing the American Society for Testing and Materials (ASTM) Standard Test Methods for Rubber Properties in Compression, Procedure 2, on three samples of AKTON® visco-elastic material. This test is also known as ASTM D575-91(96), test 2.

From Table 3 and Table 4 it can be seen that after 22 hours, the samples all recovered to 100% of their original thickness, i.e., they had a set of 0% from both 25% compression and from 50% compression.

These results show that Akton may make a very good material to include in a heel support.

In one embodiment of the support, the cushioning material may be a piece of Akton having a thickness in a range of 0.25 inches to 2 inches. Being Akton, the resultant heel support cushion may have a 25% deflection pressure in a range of 0.5 to 0.8 lbs. per square inch, and a 50% deflection pressure in a range of 2.5 to 4.5 lbs. per square inch, and more preferably, a 25% deflection pressure of substantially 0.6 lbs. per square inch, and a 50% deflection pressure of substantially 3.4 lbs per square inch.

The heel support cushion may also have a compression set characteristic such that after being compressed to 50% of an original thickness for 22 hours, the material returns to 100% of said original thickness.

The sleeve 10 may have a cover which has a top and bottom and an opening and a closing mechanism, with the dimensions of the cover substantially conforming to the dimensions of the sleeve. The cover may be made from a soft material and may contain frictionally adherent components, such as described in the discussion of Figs. 3 and 4. The cover may be removable, integral or monolithic to the sleeve 10, and function as an added cushioning layer, while also serving to protect the filler material inside the sleeve 10. The cover or the bare sleeve 10 may be any color, and may contain material suitable for disposing indicia, or other matter, including but not limited to, figures, pictures, advertising, logos, designs, or patterns.

Fig. 2 is a side view of the preferred embodiment showing a cushion 1 with a sleeve 10, the sleeve having a top surface 20, a top section 25, a bottom surface 30, a bottom section 35, and a side seam 40. The top surface 20 and the bottom surface 30

would be manufactured from separate sections of material 25 and 35, and attached together at the side seam 40. The preferred embodiment specifies the presence of the of the side seam 40 since it would function as a strengthening member by preventing deformation, tearing, and undue stretching. A side seam 40 is also typically required by the manufacturing process for items of this type, as it is generally easier to manufacture several simple segments of material and fuse, weld or stamp them together, than it is to shape a piece of raw material into a final product. The seam could be made by a number of methods, including but not limited to, stitching, gluing, stamping, fusing, or welding, or in any other way that would create a hermetical, and durable linkage. Alternatively, the top surface 20 and the bottom surface 30 may be manufactured as a single unit obviating the need for the side seam 40. The preferred width of the side seam 40 should be no greater than $1/16$ to $1/4$ of an inch. However, in a seamless embodiment, it may be desirable to impregnate the sleeve 10 with armature made of diagonal or interlaced fibers of a tough durable material, such as polymeric or fine metallic fiber. A framework made of fine fibers would provide a desired level of structural integrity, while not compromising the flexibility of the present invention.

Fig. 3 and Fig. 4 disclose the top and the bottom views respectively of the preferred embodiment of the present invention. Shown are a cushion 1 with a sleeve 10, the sleeve 10 having a top surface 20, a top section 25, a bottom surface 30, a bottom section 35, and a side seam 40. Either section 25 or 35 may be manufactured from a frictional material such as, but not limited to, rubber, plastic, fiber, resin, any combination thereof, or a composite material, or some other material containing increased frictional coefficient. The sections 25 and 35 may be manufactured from same

or different materials. Alternatively, the top or bottom surfaces 20 and 30 need not be frictional but may have frictional elements disposed thereon, for example, bottom surface 30 made of cloth having a rubber strip, multiple strips, or a plurality of interconnected strips, forming a design, pasted or stuck onto the bottom surface 30. The frictional

5 elements may cover the entire surface or any portion thereof. The frictional elements may be random or may be disposed in patterns, caricatures, figures, indicia, or any other desired design. The frictional elements may be in any color, or may all be the same color, different colors or may be varying or mixed colors. In an ideal embodiment, the material used, should be strong enough to resist tearing through rough handling or from
10 foot wear containing jagged edges, and at the same time be easy to clean and resistant to staining. The increased friction is desirable to help keep the present invention in one place without using any means of attachment, or without straining limb muscles to prevent undue shifting. Alternatively, straps, hook and loop connectors, or snap fastener connectors can be disposed on the bottom surface 30 by default, or as required, such as in
15 cases where friction alone will no longer hold the sleeve 10 from shifting or falling.

Additionally, the bottom surface 30 may contain an elastic band (not shown) stretching from one side of the seam 40, across the bottom surface 30 to the opposite side of the seam 40, or it may be a non-elastic band disposed in a similar fashion. This type of a band may then be mounted onto a supporting surface by first pulling it away from the
20 bottom surface 30 and then by wrapping it around a back or bottom of a chair or a top surface, or around a narrow structural element, such as an arm rest, or wrapped around some other support surface. The present invention may utilize the hook portion of

Velcro™ hook and loop type fastening material, so that the material may latch onto cloth covered surfaces.

Still referring to Fig. 3 and Fig. 4, the shape shown is substantially round or circular. The shape can also be square, rectangular, octagonal, or take a shape of a figure or in any other shape that still enables the present invention to fulfill its purpose as a cushion. Although shown as the same in the figures, the top and bottom surfaces 20 and 30 of the sleeve 10 or of a cover 60 (fig. 7) may be different from each other, in means including but not limited to, surface texture, color, presence of or type of indicia, pictures, figures, designs, and patterns, or even in size, shape, or material. For instance, the top surface of the sleeve or a cover may be a brown football design that is disposed on a beige circular bottom surface, and the football design of the top surface may be leather while the bottom surface is a tough polymer with adherent elements. Alternately, the entire cushion could be football shaped, and could have the logo or colors of a specific team, or of one team on one side and a second team on the other side.

As mentioned above, the top surface 20 and the bottom surface 30 can instead be formed to be one monolithic unit, thus eliminating the side seam 40. In Fig. 5, which is a side view of the present invention, showing a sleeve 10, a top surface 20 and a bottom surface 30, the side seam 40 is absent. This may be done for aesthetic considerations or to increase the flexibility of the sleeve 10. With or without the side seam 40, the present invention is highly flexible and can be deformed or folded for storage, for insertion into a protective covering or it can take the shape of the supporting surface underneath.

Fig. 6 is a perspective cross-sectional view of the preferred invention. Visible are cushion 1, a sleeve 10, which has a top surface 20, a bottom surface 30, a side seam 40,

and inner cavity that may be filled with a cushioning material 50. In a preferred embodiment, the inner cavity may, for instance, be partially or completely filled with a flowing gel-like substance, such as but not limited to, a visco-elastic polymer, such as Acton® polymer. A good filler material such as Acton may be hypoallergenic and would not leak, flow, or bottom out. Acton® polymer is also generally known for its fire retarding qualities and as being resistant to microbiological growth. The Acton® polymer would be the preferred filler since it does not cause pressure sores after prolonged usage. The cross section view of the preferred invention discloses it as being somewhat oval and substantially flat. Such a shape provides maximum utility and traction for a typical device embodied by the present invention.

Fig. 7 is a side view of the cushion 1 with the sleeve 10 submerged within a protective pouch. The sleeve 10 is deformable and is filled with cushioning material 50. Visible in Fig. 7 are a sleeve 10, a pouch 60, a pouch top cover 70, a pouch bottom cover 80, an opening 100, and a closing mechanism 110. The opening 100 would be wide enough for easy insertion and egression of the sleeve 10. The pouch 60 would be tight enough to minimize slippage between the sleeve 10 and the pouch 60, which may be decreased further by frictional qualities of the top surface 20 and bottom surface 30 (not shown) of the sleeve 10. The slippage is not desirable since the middle of the top surface 20 possesses the maximum support qualities. Any slippage would shift the position of the reclining limbs toward the edges of the present invention, and thus diminish or hamper the utility of the present invention. The bottom cover 80 may be made out of frictional material, such as but not limited to, rubber, plastic, resin or a polymer, or may have

multiple frictional elements disposed thereon that would be manufactured from frictional materials disclosed earlier in the sentence.

Still referring to Fig. 7, the pouch 60 in a preferred embodiment may be manufactured from a non-flammable, easy to clean, durable, stain resistant, and stretchable fabric. The fabric would be supple and gentle to the touch. The main purpose of the pouch 60 is to provide increased protection to the sleeve 10 against dirt and damage. It can serve to increase the softness of the present invention and thus be more aesthetically pleasing to a user. It is also more hygienically preferable to use the sleeve 10 together with the pouch 60, since the latter can be easily be replaced with a clean pouch 60, while the soiled pouch 60 is cleaned and or used by another person. It could be made from any suitable material, including but not limited to, fabric, leather, glass, paper, wood, metal, plastic, rubber, etc.

The pouch 60 may be made from material suitable for printing or adding decals, including but not limited to, textured materials, indicia, pictures, figures, designs, and patterns. Any color or combination of colors may be used for the above, and the pouch itself may be any material or color or combination of materials and colors. The pouch 60 may additionally contain exterior or interior pockets (not shown).

Although shown as the same in the figures, the top and bottom surfaces of the sleeve 10 or of the pouch 60 may be different from each other, in means including but not limited to, surface texture, color, presence and/ or type of indicia, pictures, figures, designs, and patterns, or even in size, shape, or material.

Fig. 8 is a side view of the cover 60 without the inner sleeve 10. Also visible are a top cover 70, a bottom cover 80, an inside surface 90, an opening 100, and a closing

mechanism 110. In a preferred embodiment, the inside surface 90 of the pouch 60 would be smooth and without protrusions that can damage the sleeve 10. In Fig. 8, zip fasteners are implemented as the closing mechanism 110 for the opening 100. Alternatively, the opening 100 can be held closed by a variety of means, including but not limited to,

5 elongated flaps, loops and lace, hook and loop fasteners, or be crumpled shut with a draw cord, a channel and rail fastener, as well as coil or invisible zipper.

The present invention would be used at home, in office settings, or other settings, as a cushion for heels and elbows. Typically, a person wishing to relax, to daydream, to read or to think about a difficult issue would desire to lean back and place his or her feet
10 on a desk, a bench, or a different item of furniture in front of them. Alternatively, a person wishing to speak on the phone, read, or to take a brief snooze may lean his or her elbows on adjacent furniture. The hard surface or most furnishings causes discomfort and may lead to sore spots on feet and arms reclining on such surfaces. The present invention would solve this problem. It would typically be placed on top of furniture and used as a
15 cushion under feet or arms to avoid discomfort and to promote muscular relaxation. The softness of the cushion would shield reclining limbs from the hardness of the surfaces underneath.

Although designed for heels and elbows, the present invention may be used with any part of the body, for instance, to rest ankles on a wheelchair. It also protects furniture
20 and can be used in other ways, including but not limited to, the following: to rest feet on bleachers; as an arm rest in car, theater, etc.; to protect heels at the beach when sitting in a chair with heels on the foot coaster in the sand; as an elbow pad for studying at a desk; in place of a pillow for cheek rest when resting one's face against a glass window of a

car, on a plane, etc. The cover, pouch, and sleeve can be of different textures, colors, have pictures, be decorated, and heated or frozen.

Although this invention has been described with a certain degree of particularity, it is to be understood that the present disclosure has been made only by way of

5 illustration and that numerous changes in the details of construction and arrangement of parts may be resorted to without departing from the spirit and the scope of the invention.

Industrial Applicability

The present invention may have industrial applicability in the field of office and
10 household furnishings. The present invention may also have industrial applicability in other fields, such as, but not limited to, interior decoration and novelty gifts.

I claim:

Claim 1: A cushioned heel support, comprising:

a sleeve (10) having a top surface (20) and a bottom surface (30); and

a cushioning material (50) disposed within said sleeve, said cushioning material

5 having a 50% compression force deflection in a range of 2.5 to 4 psi.

Claim 2: The support of claim 1 wherein said cushioning material further comprises a dry, visco-elastic polymer having a 25% compression force deflection in a range of 0.25 psi to 1 psi.

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Claim 3: The support of claim 2 wherein said cushioning material has a thickness in a range of 0.25 inches to 2 inches.

Claim 4: The support of claim 3 wherein said cushioning material has a compression set characteristic such that after being compressed to 50% of an original thickness for 22 hours, the material returns to 100% of said original thickness.

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Claim 5: The support of claim 4 wherein said top surface and said bottom surface are made of tear resistant material.

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Claim 6: The support of claim 4 wherein said bottom surface frictionally adheres to a smooth surface.

Claim 7: The support of claim 4 wherein said top surface is made out of a material suitable for disposing decals or printing thereon.

Claim 8: The support of claim 4 wherein said sleeve is substantially round.

5

Claim 9: The support of claim 4 wherein the sleeve is substantially flat.

Claim 10: The support of claim 4 further comprising a cover for the sleeve, said cover having a top, a bottom and an opening having a closing mechanism; and wherein the

10 dimensions of said cover substantially conform to the dimensions of said sleeve.

Claim 11: The support of claim 10, wherein said cover is made out of a soft fabric.

Claim 12: The support of claim 10 wherein said bottom of said cover frictionally adheres

15 to a smooth surface.

Claim 13: The support of claim 10 wherein said closing mechanism contains hook and loop fasteners.

20 Claim 14: The support of claim 10 wherein said closing mechanism comprises a zip fastener.

Claim 15: The support of claim 10 wherein said top of said cover is made of a material suitable for disposing decals or printing thereon.

Claim 16: The support of claim 10 wherein said top of said cover and said bottom of said
5 cover are made of a stain resistant material.

PATENT COOPERATION TREATY

PCT

DECLARATION OF NON-ESTABLISHMENT OF INTERNATIONAL SEARCH REPORT
(PCT Article 17(2)(a), Rules 13ter.1(c) and (d) and 39)

Applicant's or agent's file reference	IMPORTANT DECLARATION	Date of mailing (<i>day/month/year</i>) 23 JUNE 2011 (23.06.2011)
International application No. PCT/US2011/026497	International filing date (<i>day/month/year</i>) 28 FEBRUARY 2011 (28.02.2011)	(Earliest) Priority date (<i>day/month/year</i>) 09 SEPTEMBER 2008 (09.09.2008)
International Patent Classification (IPC) or both national classification and IPC <i>A47C 27/00(2006.01)i, A47C 16/00(2006.01)i</i>		
Applicant RIEBER MICHAEL		

This International Searching Authority hereby declares, according to Article 17(2)(a), that **no international search report will be established** on the international application for the reasons indicated below.

1. ☐ The subject matter of the international application relates to:
 - a. ☐ scientific theories.
 - b. ☐ mathematical theories.
 - c. ☐ plant varieties.
 - d. ☐ animal varieties.
 - e. ☐ essentially biological processes for the production of plants and animals, other than microbiological processes and the products of such processes.
 - f. ☐ schemes, rules or methods of doing business.
 - g. ☐ schemes, rules or methods of performing purely mental acts.
 - h. ☐ schemes, rules or methods of playing games.
 - i. ☐ methods for treatment of the human body by surgery or therapy.
 - j. ☐ methods for treatment of the animal body by surgery or therapy.
 - k. ☐ diagnostic methods practised on the human or animal body.
 - l. ☐ mere presentation of information.
 - m. ☐ computer programs for which this International Searching Authority is not equipped to search prior art.
2. ☒ The failure of the following parts of the international application to comply with prescribed requirements prevents a meaningful search from being carried out:

☐ the description
 ☐ the claims
 ☒ the drawings
3. ☐ A meaningful search could not be carried out without the sequence listing; the applicant did not, within the prescribed time limit:

☐ furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.
☐ furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.
☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rule 13ter.1(a) or (b)
4. Further comments:

Name and mailing address of ISA/KR  Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsaro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer PARK, SUNG WOO Telephone No. 82-42-481-8140 
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