A grip pad affixed to a skate shoe contact surface includes a pad sized and configured to correspond to the skate shoe contact surface, the pad comprising a material having a high coefficient of friction.
2100

2110 Remove oxidation from grip pad surface
2120 Prepare skate shoe contact surface
2130 Coat surfaces with adhesive
2140 Align and press grip pad to skate shoe contact surface

FIG. 21
SKATE SHOE GRIP PAD

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] Not Applicable

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not Applicable

REFERENCE TO A SEQUENCE LISTING, TABLE OR PROGRAM LISTING APPENDIX

[0003] Not Applicable

FIELD OF THE INVENTION

[0004] The present invention relates to skateboarding equipment and more specifically to a replaceable, universal skate shoe grip pad.

BACKGROUND OF THE INVENTION

[0005] Skateboarding is a relatively new sport in which a skateboarder (also referred to as a skater) rides a skateboard and performs various maneuvers or tricks on and with the skateboard as in surfing and snowboarding. A skater's stance is perpendicular relative to the skateboard as is true of surfing and snowboarding. Conventional skateboards include a deck having a riding or standing surface. The riding surface includes a grip material such as grip tape. Grip tape has an outwardly-facing sandpaper-like surface. The grip tape surface provides resistance to movement of the skater's skate shoes on the standing surface of the skateboard. The grip tape is conventionally affixed to the standing surface of the skateboard by means of pressure sensitive adhesive tape. The grip tape is highly abrasive.

[0006] A well known trick skaters perform is known as the ollie. The ollie is the basis for many other skateboard tricks and is named after Allen "ollie" Gelfand who invented the trick in 1976. The trick results in the skater actually achieving lift and becoming airborne from a position in which the skater is standing on the skateboard with four wheels on flat ground. The trick involves a hop or jump maneuver not just on the skateboard, but with the skateboard, in which the skater first crouches and 'pops' the tail of the skateboard downward with his back foot while using his front foot to provide 'lift'. Just before the skater begins the jump, he "pops" the tail or rear end of the skateboard in a quick "pop"/jump motion. While maintaining contact with the skateboard, the skater next lifts the front leg and bends the front ankle so that the anterior outer edge or side wall of the skater's shoe slides towards the nose or front of the skateboard. This sliding motion and the friction it produces between the skater's shoe and the grip tape on the riding surface of the skateboard guides and pulls the nose of the skateboard upward. The rear foot of the skater maintains contact with the tail of the skateboard to help guide it during the jump. At the peak of the jump, the skater lifts his rear leg and slides his front foot forward to level the skateboard and maintain contact between the skateboard riding surface and his rear foot. The process is reversed in the case of a 'nollie' or nose ollie.

[0007] Repeated ollies lead to the wearing of the anterior outer edge or ollie area of the skater's front or leading shoe in disproportionate measure to other areas of the skater's shoe. The grip and wear characteristics of the ollie area are therefore an important consideration in the selection and performance of a skate shoe. A skate shoe is simply a shoe designed for the sport of skateboarding just as other sports have their respective shoes for running, for playing basketball, and wrestling. The present inventor has found that no matter how much grip the ollie area of a shoe initially has it eventually wears out rendering the skate shoe useless for skateboarding. It's like having a great sports car with completely bald tires. This is especially true given the proliferation of skate parks that provide skaters with the opportunity to skate every day.

[0008] One solution to the problem of the wearing of the ollie area of the skate shoe is the use of a non-abrasive grip tape on the skateboard riding surface. One such grip tape is sold as No-Rip Grip™ by Setak Skateboarding (www.setaskate.com). The non-abrasive grip tape is formed of a polymer-based material. However, this non-abrasive grip tape disadvantageously compromises the abrasiveness of the riding surface of the skateboard and does not prevent wearing of the ollie area of the skate shoe, although the wearing proceeds at a slower rate.

[0009] Other prior art solutions include the use of duct tape to repair damaged shoes. Duct tape has been used by skaters as a make-shift repair method. Shoe Goo (available from Eclectic Products, Inc. of Eugene, Oreg.) is also used by some skaters to repair holes in skate shoes. Shoe Goo comes in a dispensing tube and a hole is repaired by squeezing the Shoe Goo into the hole. The Shoe Goo then solidifies into a plastic-like material.

[0010] Another solution includes a peel and stick bond patch available from Skate Aid (www.skateaid.us). Skate Aid, as the name implies, is a 'bond aid' used in the repair of the skate shoe. A similar product formed of neoprene, known for its anti-abrasion properties, is designed to protect a skater's shoe and marketed as the Ollie Guard Skateboard Shoe Protector (www.ollieguards.blogspot.com). Although the ollie guard shoe protector is preventative and therefore superior to the aforementioned products and repair methods it is only meant to provide protection to preserve the shoes aesthetics and longevity. However most, if not all, skaters put function before fashion and don’t really mind how their shoes look so long as they perform. Just as skaters aren't sheepish about grinding their trucks, neither do they mind having scuffed shoes. Trucks are the metal, front and back, parts of the skateboard that connect the skateboard deck with the wheels. While the ollie guard shoe protector provides protection to the shoe and makes the shoe look new for a longer time period, the ollie guard shoe protector doesn't provide any function for the sport of skateboarding.

[0011] Some skate shoes are designed to include an integral grip pad. However, once the grip pad wears out there's no way to replace it short of replacing the shoes, something a skater may not necessarily want to do even if he has his own shoe model or can thereby afford to regularly replace his shoes, the single most expensive piece of skateboarding equipment. The reason being that once shoes are replaced, the skater loses "board feel" through the soles of the shoe via worn shoes. 'Board feel' is how the skateboard feels beneath a skateboarder's feet and allows for better control. Board feel develops naturally and increases with time through the normal wearing of the shoe soles to the skateboard's unique concave top design in conjunction with the skateboard's grip tape. Therefore, when worn shoes are replaced with new ones the skateboard beneath a skateboarder's feet doesn't feel the same.
SUMMARY OF INVENTION

[0012] The replaceable, universal skate shoe grip pad of the invention overcomes the disadvantages of the prior art and achieves its various objectives by providing a grip pad affixable to a skate shoe’s skate-able contact surface areas. The skate shoe’s skate-able contact surface areas include the anterior outer edge or ollie area as well as other surface areas of the shoe that come into contact with the grip tape surface of the skateboard. The grip pad is sized and configured to cover a single contact surface area or a plurality of contact surface areas.

[0013] The grip pad is formed of a material having a high coefficient of friction such as gum rubber so as to maximize the friction between the exterior surface of the grip pad and the grip tape surface of the skateboard.

[0014] In accordance with an aspect of the invention, the grip pad is universal and is sized and configured to fit any shoe. The grip pad may have a plurality of shapes that substantially cover the skate-able contact surface areas of the shoe.

[0015] In accordance with another aspect of the invention, the grip pad can be affixed to the skate-able contact surface areas of the skate shoe with a permanent adhesive or with a temporary adhesive or any other affixing means. A worn out grip pad adhered with the permanent adhesive can have another grip pad placed directly over it perpetually so one’s shoe will never again wear out of grip.

[0016] In accordance with another aspect of the invention, the grip pad comprises a pad of a material of a high coefficient of friction such as gum rubber or silicone affixable to the skate-able contact surface areas of a skate shoe.

[0017] In accordance with another aspect of the invention, the grip pad is integral to the shoe and the grip pad can be affixed by any known means, for example a hook and loop system, a first component of which is integral to a skate-able contact surface area of the skate shoe and a second component of which is adhered to an interior surface of the grip pad.

[0018] In accordance with another aspect of the invention, the grip pad material has a hardness of between 35 and 65 durometer and preferably 40 durometer.

[0019] In accordance with another aspect of the invention, a method of affixing a grip pad to a skate shoe contact surface includes the steps of preparing a contact surface of the grip pad, preparing the skate shoe contact surface, coating the contact surfaces with an adhesive, and aligning the contact surface and pressing the contact surfaces together.

[0020] There has been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are, of course, additional features of the invention that will be described below and which will form the subject matter of the claims appended herein.

[0021] In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of design and to the arrangement of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein, as well as the abstract, are for the purpose of description and should not be regarded as limiting.

[0022] As such, those skilled in the art will appreciate that the conception upon which this disclosure is based may readily be utilized as a basis for the designing of other methods and apparatus for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent methods and apparatus insofar as they do not depart from the spirit and scope of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS—FIGURES

[0023] The present disclosure may be better understood and its numerous features and advantages made apparent to those skilled in the art by referencing the accompanying drawings wherein:

[0024] FIG. 1A shows a grip pad sized and configured for attachment to the anterior outer edge or ollie area of a skate shoe and FIG. 1B shows the grip pad in use;

[0025] FIG. 2A shows the grip pad of FIG. 1A including a toe wrap region for attachment to the toe box area of the skate shoe and FIG. 2B shows the grip pad in use;

[0026] FIG. 3A shows the grip pad of FIG. 2A including a blunt side wall region for attachment to the blunt side wall of the skate shoe and FIG. 3B shows the grip pad in use;

[0027] FIG. 4A shows the grip pad of FIG. 3A including a curtain area region for attachment to the curtain area of the skate shoe and FIG. 4B shows the grip pad in use;

[0028] FIG. 5A shows the grip pad of FIG. 4A including a lace protector/eyelet region for attachment to the lace protector/eyelet area of the skate shoe and FIG. 5B shows the grip pad in use;

[0029] FIG. 6A shows the grip pad of FIG. 5A including a plurality of vent holes and FIG. 6B shows the grip pad in use;

[0030] FIG. 7A shows the grip pad of FIG. 5A including a plurality of flex grooves and FIG. 7B shows the grip pad in use;

[0031] FIG. 8 shows a top view of the grip pad of FIG. 2B in use;

[0032] FIGS. 9A-9C show grip pads having regions of differing materials and differing durometers;

[0033] FIG. 10A is a side view of a grip pad having a contoured surface;

[0034] FIG. 10B is a cross-sectional view of the grip pad of FIG. 10A taken along line A-A;

[0035] FIG. 11 shows a grip pad having a mesh structure;

[0036] FIG. 12 shows a grip pad having a textured surface;

[0037] FIG. 13 shows a grip pad formed from a plurality of pieces;

[0038] FIG. 14 shows a grip pad formed from a plurality of letters and numerals;

[0039] FIG. 15 is an exploded view of a replaceable grip pad having a layered structure including a gripping material, an adhesive material and a removable exposure material;

[0040] FIG. 16 shows a spool of grip pad material from which grip pads may be sized and configured;

[0041] FIG. 17 shows an exploded view of an integral yet replaceable grip pad attached to a skate shoe by means of a hook and loop system;

[0042] FIG. 18 shows a grip pad formed of a liquid silicone material;

[0043] FIG. 19 is a perspective view of a representative shoe; and

[0044] FIG. 20 is a side elevation view of the representative shoe of FIG. 19.
DETAILED DESCRIPTION OF THE INVENTION

[0045] Before describing the preferred embodiment of the invention, the following glossary of technical terms describing the components of a shoe 1900 is presented with reference to FIG. 19 and FIG. 20.

[0046] Upper 1902: the portion of the shoe 1900 that encloses the foot and excludes the sole unit. It is the most aesthetic part of the shoe 1900. The upper 1902 corresponds to the entire upper portion of the shoe 1900 and therefore contains most of the shoe’s skate-able contact surface areas.

[0047] Forefoot Flex 1904: the area across the forefoot where the shoe 1900 flexes. The shoe 1900 flexes along the sole unit and the upper 1902.

[0048] Forefoot 1906: the front section of the shoe 1900 extending from the forefoot flex 1904 to the tip of the shoe 1900.

[0049] Eye Row 1908: the part of the shoe where the laces connect to the upper 1902. The eye rows 1908 should be parallel along the top of the foot.

[0050] Eyelet 1910: a round cutout in the eye rows 1908 to allow the passage of laces. The resistant material that encircles each eyelet 1910 is called the eye stay.

[0051] Throat line 1912: the line in between the laces and toe box 1916.

[0052] Vamp 1914: the anterior outer edge up to the throat line 1912, sometimes the vamp 1914 ends before the section with the laces.

[0053] Toe box 1916: the volume of the forefoot that contains the toes. The height and width of the toe box 1916 can differ between shoe models.

[0054] Toe cup 1918: the part of a shoe 1900 that covers the toes, the end or tip of the toe box 1916.

[0055] Mid-foot/Waist 1920: the middle section of the shoe 1900 under the laces. This section extends from the back of the arch to the forefoot 1906.

[0056] Quarter 1922: the rear and sides of the upper 1902 that covers the heel behind the vamp 1914. The heel section of the quarter 1922 is often strengthened with a stiffer, which helps support the rear of the foot. Some shoe designs use a continuous piece of leather for the vamp 1914 and quarter 1922.

[0057] Outsole 1924: the treaded layer of the shoe 1900 that makes direct contact with the ground.

[0058] With reference to FIG. 1A a grip pad 100 in accordance with the invention has a generally elongated, semi-circular shape and is sized and configured to be affixed to an anterior outer edge or ollie skate-able contact surface area 110 of a skate shoe 120 (FIG. 1B). The ollie contact area 110 has a correspondingly generally elongated, semi-circular shape and is located along the anterior outer edge of the skate shoe 120 and covers portions of the vamp 1914 and toe box 1916. The grip pad 100 is preferably 127 mm in length, 76 mm in height, 0.0625 mm thick and preferably has a hardness of 40 durometer. The inventor has found that these values provide the best grip between the grip pad surface and the riding surface of the skateboard. When affixed to the skate shoe 120, the grip pad 100 covers the ollie skate-able contact surface area of the skate shoe 120.

[0059] The grip pad 100 can be affixed to the skate shoe 120 using any known affixing means including permanent or temporary adhesives and/or a hook and loop systems. A preferred permanent adhesive is the Barge ‘Super Bond’ shoe repair glue available from Piece and Stevens of Buffalo, N.Y. It dries quickly and clearly and is formulated for attaching all types of leather and composition soles’ so it works on any shoe surface material/grip material combination. However other adhesives work as well for example Rensa Ortec of Renia Adhesives of Cologne, Germany, Barge Infinity Cement and Barge Rubber TP Cement of Piece and Stevens of Buffalo, N.Y., Master Multi-Purpose and Master All Clear and Du-All 88 and Petronio’s all of Petronio of Belleville, N.J., Jet Set of Deerfield, Ill., and DiRinaldo’s Choice of Sure Foot Corp. of Grand Forks, N. Dak.

[0060] Gum rubber has been used in the making of shoe soles and is the preferred material for making the grip pad 100. Gum rubber is preferred due to its natural high coefficient of friction, which means it provides good traction. A natural tan gum rubber sheet having a thickness of 0.0625 mm is available from Rubber Cal of Santa Ana, Calif.; however other materials can be used as well. For example Adiprene of Crompton (Uniroyal Chemical) of Manchester, England, Atlas of Asahi Glass Company of Thornton Cleveleys, UK, Bayprene and Perburan and Therman of Bayer of Pittsburgh, Pa., Breon of BP Chemicals of London, England, Butachlor of Ditsulg of Shanghai Tenglong Agrochem Co., Ltd of Yangpu Shanghai, China, Chemigum of Goodyear Chemical of Akron, Ohio, Chemraz of Greene Tweed and Co. of Kulpstown, Pa., Dai-el and Kel-F of DuKlin of Osaka, Japan, Dural of Enichem of Rome, Italy, Estane of BF Goodrich of Charlotte, N.C., Europrene of Polimeri Europa of Milan, Italy, Fluorel of Dyno of 3M Company of Maplewood, Minn., Genthane of General Tire and Rubber of Fort Mill, S.C., Hycar and Hytemp of B F Goodrich of Charlotte, N.C., Kalrez® and Viton® and Zalak and Vamac and Neoprene polychloroprene of DuPont Dow Elastomers of Wilmington, Del., Krynac and Torona of Polysar of Lanxess Deutschland GmbH of Leverkusen, Germany, Nipol and Norsorex of Zenon Chemicals Inc. of Louisville, Ky., Perflox of IER Industries of Macedonia, Ohio, Silastic of Dow Corning of Midland, Mich., Sinuiz of Freudenberg of Plymouth, Mich., Technoflon of Montedison of Milan, Italy, Voltalon of Exxon Mobil Chemical of Houston, Tex., and Zetpol of Nippon Zeon Co. Ltd. of Tokyo, Japan.

[0061] The grip pad material can be cut using any known method including die and laser cutting or formed via micro-injection, compression, and transfer molded.

[0062] The grip pad 100 is sized and configured to be affixible to the ollie contact area 110 of most sizes of skate shoes 120 and in this sense it is universal.

Theory of Operation

[0063] The grip pad 100 is formed of a material having a high coefficient of friction so as to maximize the friction between the ollie contact surface area 110 of the skate shoe 120 and the riding surface of the skateboard’s grip tape. The coefficient of friction is the ratio of the force of friction between two bodies and the force pressing them together and depends on the materials used. Rougher surfaces tend to have higher effective values. There are two types of friction, static and kinetic. Static friction is the friction between two still objects. Kinetic friction is the friction when two surfaces are moving relative to each other. Limiting friction or friction is in between the two. It is the maximum value of static friction, when motion is impending, just before you break traction and move from static friction to kinetic friction. A high coefficient of friction means high traction or good grip.

[0064] The grip pad material and the grip tape on the skateboard riding surface work in unison to effectively keep the
skateboarder’s skate shoes 120 on the skateboard. What grip tape is to the skateboard, the grip pad 100 is to the skate shoe 120. The grip pad is the female counter part to the grip tape’s male counter part. The grip pad 100 provides grip between the ollie contact surface area 110 of the skate shoe 120 and the skateboard’s grip tape for performing various tricks or maneuvers in the sport of skateboarding.

Alternative Embodiment

[0065] With reference to FIG. 2A, FIG. 2B and FIG. 8 an alternative embodiment includes a grip pad 200 having a toe box wrap portion 210. The toe wrap portion 210 includes a plurality of perforated sectional lines 212 running vertically splaying from top center to bottom edges round about covering the toe box area of the skate shoe. The perforated sectional lines 212 are symmetrically spaced for adaptability so as to cover any style shoe toe box shape with grip material. Excess toe box wrap material hanging over the sole of the skate shoe 120 may be cut off with scissors.

Operation

[0066] The toe box wrap 210 area of the grip pad 200 is meant to provide grip for tricks that use that part of the skate shoe 120 while skateboarding. One example is a maneuver known as the ‘ollie impossible’ in which the skateboard wraps around the skateboarder’s foot/shoe in a forward tumble, tail over nose motion after which the skateboarder lands on the skateboard.

Alternative Embodiment

[0067] Referring to FIG. 3A and FIG. 3B and alternative embodiment includes a grip pad 300 having a blunt side wall portion 310. The blunt side wall portion 310 is sized and configured to cover the blunt side wall of the skate shoe 120 not covered by the grip pad 100. In accordance with the skater’s perpendicular stance relative to the skateboard, the blunt side wall faces the front or nose of the skateboard on the skateboarder’s leading foot and towards the back or tail of the skateboard on his back foot.

Operation

[0068] The blunt side wall portion 310 can provide grip while performing a maneuver known as a ‘blunt stall’ or ‘blunt slide’ hence the name ‘blunt side’ wall. It is on the area of the skate shoe 120 (and therefore grip pad 300 when in use) that makes contact with the skateboard when performing this trick. Some skaters use this entire area while skating. The blunt side wall portion 310 can also provide grip when executing a nose ollie or noffie, or when riding switch stance. During a noffie a skater uses his front/leading foot to ‘pop’ his board up and relies on his back foot to help provide lift. The more grip the skate shoe 120 has, the easier this trick will be to perform. Switch stance can be likened to switching hitting in baseball and the same awkwardness of the noffie comes into play here where any help from equipment will be advantageous.

Alternative Embodiment

[0069] With reference to FIG. 4A and FIG. 4B, an alternative embodiment includes a grip pad 400 having a curtain area portion 410. The curtain area of the skate shoe 120 covers the sole portion of the skate shoe 120 like a curtain hence the name. The curtain area portion 410 of the grip pad 400 is co-extensive with the bottom edge of the grip pad 300 and covers a portion of the sole area of the skate shoe 120.

Operation

[0070] The purpose of the curtain area portion 410 is to provide better immediate contact from the skate shoe 120 to the skateboard. The curtain area portion 410 can provide grip when performing any trick in which the skateboard comes into contact with the leading edge of the skate shoe 120, for example in vert skating where various varial maneuvers are performed, and when launching and ollicing, or in the front toe wrap area 210 were that part of the shoe is used for the various technical flip tricks in street skating.

Alternative Embodiment

[0071] Referring to FIG. 5A and FIG. 5B, an alternative embodiment includes a grip pad 500 having a lace protector/eyelet portion 510. The lace protector/eyelet portion 510 is sized and configured to cover 2-3 eyelets 1910 or lace ‘holes’ of the outer anterior side starting from the bottom up of the skate shoe 120. Adhesive does not impede the removable/replacement of the laces.

Operation

[0072] Some skate shoes 120 come with integral lace protectors. However for those that do not, the lace protector/eyelet portion 510 provides protection to the laces of the skate shoe 120 as the laces are no match for the abrasive grip tape.

Alternative Embodiment

[0073] With reference to FIG. 6A and FIG. 6B, an alternative embodiment includes a grip pad 600 having a plurality of vent holes 610. The vent holes 610 are evenly spaced along the entire length of the grip pad 600 just above the curtain area portion 410. The vent holes 610 are of a diameter so as to allow air to flow and not let the elements into the skate shoe 120.

Operation

[0074] Being that humans sweat a lot from the feet and that with the use of the grip pad the skate shoe’s vent holes will be covered over by the grip pad, it makes sense to have vent holes 610 to allow the foot to breath. The vent holes 610 can be punched into the grip pad 500 yet will not be through the skate shoe 120. One skilled in the art will recognize that the vent holes 610 can be formed in any location of the grip pad 600.

Alternative Embodiment

[0075] Referring to FIG. 7A and FIG. 7B, an alternative embodiment includes a grip pad 700 having a plurality of flex grooves 710. The flex grooves 710 are perforated lines that run from the top of the lace protector/eyelet portion 510 down to the bottom of the curtain area portion 410.

Operation

[0076] The flex grooves 710 allow the grip pad 700 to move with the foot/shoe’s natural movement and help prevent the grip pad 700 from becoming unglued from the skate shoe 120.
Alternative Embodiments

[0077] With reference to FIG. 9A an alternative embodiment includes a grip pad 900 having portions of differing durometers; a 55 durometer portion 902 and 40 durometer portions 904 on either side of the 55 durometer portion 901. Referring to FIG. 9B, an alternative embodiment includes a grip pad 910 having portions of differing materials; a thermoplastic polyurethane portion 912 and gum rubber portions 914. FIG. 9C shows an alternative embodiment including a grip pad 920 having portions of differing durometers and differing materials; a thermoplastic polyurethane portion 922 having a durometer of 55 and gum rubber portions 924 having a 40 durometer.

Operation

[0078] Different durometers and different materials affect the grip pad’s characteristics. The higher the durometer or harder the material the more dumble the grip pad is yet the less traction it has. The reverse is true as well, the lower the durometer or the softer a material is, the more traction it has yet the faster it will wear out. So the right balance is required depending on what characteristics one is looking for. Different materials also have their own unique characteristics for example TPU’s (thermoplastic polyurethane) have a good resistance to abrasion, TPR’s (thermoplastic rubbers), a blend of petro-chemically derived material and rubber, are lightweight, flexible, and highly adhesive, while EVAene, a TPE (thermoplastic elastomer) has excellent process and color stability, good impact resistance, and absolute transparency.

So one can engineer and design the material according to the characteristics one is looking for in different areas of the grip pad. The grip pads 900, 910 and 920 are exemplary only and illustrate three possible combinations of durability, grip, and color characteristics.

Alternative Embodiment

[0079] An alternative embodiment of the replaceable grip pad includes a contoured grip pad 1000 as shown in FIGS. 10A and 10B (in cross section). The grip pad 1000 has a varying thickness and includes a thicker portion in the center portion 1010 thereof and progressively less thick portions extending from the center portion 1010 to the periphery 1020 thereof. The grip pad 1000 is preferably 2.1166 mm thick around its periphery 1020 and 4.233 mm at its center portion 1010.

Operation

[0080] The grip pad 1000 provides slight operational differences from the previously described grip pads in that it may hold the skateboard more effectively depending on the angle of the skateboard while skating. The grip pad 1000 will also last longer due to the additional material as contrasted to the previously described grip pads. The grip pad 1000 can be injection or transfer molded, shaped by extrusion or machined.

Alternative Embodiment

[0081] Referring to FIG. 11, an alternative embodiment includes a grip pad 1100 formed of a material having a plurality of apertures to provide for aesthetically different designs. The grip pad 1100 comprises a net mesh design.

Operation

[0082] The grip pad 1100 advantageously provides added flexibility to the skate shoe 120 as well as a view thereof through the various apertures.

Alternative Embodiment

[0083] Referring to FIG. 12, an alternative embodiment includes a grip pad 1200 having a textured material. The grip pad 1200 comprises 'diamond plated' design texture. Various textures are within the scope of the invention.

Operation

[0084] Texturing or an uneven surface helps with grip.

Alternative Embodiment

[0085] In an alternative embodiment of the invention, and with reference to FIG. 13, a grip pad 1300 may comprise a plurality of pieces 1310 of grip material. Grip pad 1300 includes a plurality of pieces 1310 that may be of different colors or grip pad material arranged as shown. As shown in FIG. 14, a grip pad 1400 includes three pieces 1410 of grip pad material including the graffiti style letter "S", the letter “K", and the number “8” that together form an acronym for the word "skate".

Operation

[0086] Grip pads 1300 and 1400 allow the user to be creative in the way he/she arranges the pieces 1310 and 1410 respectively for creative and aesthetic sensibilities, or to merely cover a portion of a grip pad that has worn down.

Alternative Embodiment

[0087] With reference to FIG. 15, an alternative embodiment includes a removable/re-applicable grip pad 1500 (shown in exploded view). The removable/re-applicable grip pad 1500 includes a grip pad portion 1510, an adhesive tape portion 1520 and an adhesive tape backing portion 1530. The adhesive tape portion 1520 is preferably Scotch 300LSE Hi-Strength Adhesive available from 3M of St. Paul, Minn. The removable/re-applicable grip pad 1500 is affixed to the skate shoe 120 after the shoe contact area is prepared as described below. Removing the adhesive tape backing portion 1530 from the removable/re-applicable grip pad 1500 exposes the adhesive tape portion 1520 for attachment to the skate shoe contact area. The removable/re-applicable grip pad 1500 is also shown sized and configured to cover not only the ullie area 110 of the skate shoe 120, but also the toe wrap area 210, the blunt side wall 310, the curtain area 410, and the lace protector/eyelet area 510.

Operation

[0088] The removable/re-applicable grip pad 1500 operates much the same way as does a grip pad affixed with permanent adhesive or any other form of affixation, the only difference being that the grip pad 1500 need not be permanently affixed to the skate shoe 120. The removable/re-applicable grip pad 1500 addresses the need some skaters may have to remove the grip pad after a skating session. The grip pad 1500 can be temporarily affixed to the skate shoe 120 just before a skate session and be removed when it is over thereby
allowing the skater to have all the benefits of the grip pad without it being permanently affixed to his skate shoe.

Alternative Embodiment

[0089] A spool 1600 of grip pad material is shown in FIG. 16. The grip pad material may include the grip material of the grip pad 100 or the three component material of the removable/re-applicable grip pad 1500. The single component grip pad material can be 2.12 mm thick by 7.62 cm wide by 1.52 m long.

Operation

[0090] The spool 1600 provides a convenient source of grip pad material from which a user may fashion various sizes and configurations of grip pads appropriate to the user’s needs.

Alternative Embodiment

[0091] An alternative embodiment of the invention provides an integral grip pad 1700 as shown in FIG. 17. The grip pad 1700 is provided by the skate shoe manufacturer and therefore comes with the skate shoe 120 and yet is replaceable. It can be affixed to the skate shoe 120 using a hook and loop system or any other means of attachment. The grip pad 1700 includes a first portion 1710 affixed to the skate shoe 120 such as by sewing. The first portion 1710 includes a first component of the hook and loop system disposed on an outward facing surface thereof. A second portion 1720 includes a grip pad material surface backed by a second component of the hook and loop system. The second portion 1720 is affixed to the first portion 1710 by meshing the first and second components together such that the grip pad material surface is exposed.

Operation

[0092] The grip pad 1700 is integral to the skate shoe 120 and is therefore ‘built into’ and comes with the skate shoe yet is replaceable. It can be affixed by various methods including a hook and loop system described, mechanical fasteners, and/or adhesives.

Alternative Embodiment

[0093] A grip pad 1800 in liquid form is shown in FIG. 18. The grip pad is preferably formed from a liquid silicone rubber such as RTV-1 (room temperature vulcanization, number 1 signifies that it’s a one part silicone and does not need mixing). RTV-1’s include KE-1310ST, KE-3490, and KE-3463 available from SHIN-ETSU Silicones of Akron, Ohio.

[0094] In accordance with a method of the invention, the contact area of the skate shoe is first cleaned and prepared as described below. Next, a layer of liquid silicone rubber of a desired thickness is applied. The liquid silicone rubber cures in 24 hours to provide the grip pad 1800 having an acceptable diameter.

Method of Affixing a Grip Pad to a Contact Surface

[0095] In accordance with a method 2100 (FIG. 21) of affixing a grip pad to a contact surface area of the skate shoe 120, a top layer of oxidation or ‘rust’ is removed 2110 from the grip pad material’s surface that will come into contact with the skate shoe 120 so that a fresh surface is exposed. A course wire brush or sand paper or even the skateboard’s own grip tape can be used for this purpose. This facilitates the adherence of a permanent adhesive to the grip pad surface. In another step, the skate shoe surface is prepared 2120. Preparation includes removing any loose dirt or dust using a damp towel, drying and slightly roughing. The drying process can be aided with a blow dryer. The skate shoe contact surface can be slightly roughened with the wire brush to get rid of any chemical coating or weatherproofing the skate shoe may have been treated with. The roughened surface also allows the permanent adhesive to better penetrate the skate shoe contact surface. Once both contact surfaces have been prepared both contact surfaces are coated 2130 evenly with the permanent adhesive. After a period of between 5 to 10 minutes the grip pad 100 is aligned and pressed 2140 onto the skate shoe contact surface to ensure good contact between the grip pad and the skate shoe 120. Any pockets of air should be worked out to ensure good contact. Although bonding is immediate, the permanent adhesive fully cures in 8 hours. Skate shops, where this product will be sold, can put the grip pad on for a user for free even as they perform other free services like putting the grip tape on a skateboard and assembling the skateboard on purchase.

CONCLUSION, RAMIFICATIONS, and SCOPE

[0096] One skilled in the art will appreciate that in addition to a permanent adhesive, temporary adhesives can be used as well. For example, the Scotch 300L SU Hi-Strength adhesive available from 3M of St. Paul, Minn. is a temporary adhesive. A temporary adhesive addresses the need some skater’s will have of wanting to place the grip pad on the skate shoe before a skate session and take the grip pad off after a skate session.

[0097] Having described the invention, the reader will see that at least one embodiment of the grip pad provides more grip than a skate shoe alone via the grip pad material’s higher coefficient of friction and the larger surface area it covers on a skate shoe. At the same time it also allows the skateboarder to retain the ever increasing board feel of worn shoes through the soles. The inventive grip pad is practical as a car analogy will show: Suppose someone just figured out a way to retrofit a car’s tires for a fraction of the cost of new tires resulting in better performance than new tires. Since most skate shoe’s upper portion and the area are just suede, leather, canvas, or the like, and are not a particularly functional material, a grip pad will make any shoe perform better, even old ones. The grip pad also has the practical aspect of replacing only the tires and not the entire car or skate shoe as is now the case.

[0098] While the above description contains much specificity, these should not be construed as limitations on the scope of the invention, but rather as examples of preferred embodiments thereof. Many other variations are possible. The grip pads described may include multi-colored graphic designs via micro-injection molding, be transparent or translucent and glow in the dark. Further, any of the elements shown in FIGS. 2A-7A can be removed and the grip pad would still be viable. Other examples include the composition of the grip pad material being of various other rubbers, natural or synthetic, such as: Ethylene Propylene Diene Monomer (EPDM), SBR (Styrene Butadiene Rubber), Nitrile (i.e. Buna-N), White Nitrile (i.e. Buna), Santoprene thermoplastic rubber, Commercial grade silicone, Premium Grade Silicone, FDA Grade Silicone, Skirt-board a blend of SBR/GUM all of Rubber Cal are also possible. Or other petrochemical derived materials can also be used as well. Any material used for shoe soles will work to make a grip pad. Metallic materials may
also be used for example copper on cast iron has a higher coefficient of friction than rubber on concrete and can be used to make a new grip tape and grip pad. Even methods other than the utilization of friction between two materials may be used. Perhaps in the future electro-magnetism will be used instead of friction. Accordingly, the scope of the invention should be determined not by the embodiments illustrated, but by the appended claims and their legal equivalents.

1. A grip pad affix-able to a skate shoe contact surface comprising:
a pad sized and configured to correspond to the skate shoe contact surface, the pad comprising a material having a high coefficient of friction.
2. The grip pad of claim 1, wherein the material comprises gum rubber.
3. The grip pad of claim 1, wherein the material has a hardness of between 35 and 65 and preferably 40 durometer.
4. The grip pad of claim 1, wherein the material comprises a grip portion, an adhesive tape portion and an adhesive tape backing portion.
5. The grip pad of claim 1, wherein the material comprises a first portion attached to the skate shoe contact surface and a second portion attachable to the first portion, the second portion having the high coefficient of friction.
6. The grip pad of claim 1, wherein the material is cut from a spool comprising the material having the high coefficient of friction.
7. The grip pad of claim 1, wherein the skate shoe contact surface comprises an ollie contact surface.
8. The grip pad of claim 7, wherein the skate shoe contact surface further comprises a toe box area.
9. The grip pad of claim 7, wherein the skate shoe contact surface further comprises a blunt side wall area.
10. The grip pad of claim 7, wherein the skate shoe contact surface further comprises a curtain area.
11. The grip pad of claim 1, wherein the material comprises a liquid silicone material.
12. The grip pad of claim 1, wherein the pad has a contoured surface.
13. The grip pad of claim 1, further comprising a plurality of perforated flex grooves.
14. The grip pad of claim 1, further comprising a plurality of vent holes.
15. The grip pad of claim 1, wherein the pad is textured.
16. The grip pad of claim 1, wherein the pad is perforated.
17. A method of affixing a grip pad to a skate shoe contact surface comprising the steps of:
preparing a contact surface of the grip pad;
preparing the skate shoe contact surface;
coating the contact surfaces with an adhesive; and
aligning the contact surfaces and pressing the contact surfaces together.
18. A grip pad affix-able to a skate shoe contact surface comprising:
a pad sized and configured to correspond to the skate shoe contact surface, the pad comprising a material having a hardness of between 35 and 65 durometer and preferably of 40 durometer.
19. A grip pad affix-able to a skate shoe contact surface comprising:
a first portion integral to the skate shoe contact surface; and
a second portion affix-able to the first portion, the second portion comprising a material having a surface having a high coefficient of friction.
20. The grip pad of claim 19, wherein the material comprises gum rubber.