Corresponding reference characters indicate corresponding parts throughout the several views of the drawings.

In accordance with the present invention, it has now been found that improved railroad tie pads and improved coatings for such pads may be made from a composition containing a rubbery material which may be a polymer of isobutylene or a copolymer of isobutylene and small amounts of a diolefín, the rubbery material having a molecular weight in excess of 10,000, asphalt having a ring and ball softening point between approximately 125° F. and 190° F. and a specific gravity between approximately 1.01 and 1.04, microcrystalline wax having a melting point above approximately 170° F., an inert, water-insoluble filler and a rubber processing oil. Such a composition has been found to possess advantageous properties for use in making railroad tie pads of use of such pads. The nature of this composition is such that it enables railroad tie pads made therefrom or coated therewith to seal out effectively water and dirt from entry between the tie plate and tie. Thus, tie pads made from the above-described composition or coated therewith advantageously provide a coating on railroad spikes as they are driven through the pad and into the tie, thereby forming a tight seal around the spike which precludes the admission of water, sand, dirt or other foreign matter known to cause deterioration of the tie wood under the plate and loosening of the spikes. Also, these pads, upon being compressed between the tie plate and tie by spikes driven therethrough, seal up the spike holes of the tie plate which are left open and form “mushrooms” which extend into and close the openings thereby preventing the entry of water and dirt under the tie plate.

It has further been found that the pads of the present invention are exceptionally resilient over a wide temperature range and retain their body and dimensional stability at both the extreme cold and hot temperatures encountered in actual railroad practice. Thus, the pads possess the important characteristics of not becoming brittle at temperatures as low as −20° F. and of not flowing or losing any appreciable loss of body at temperatures as high as 340° F. A strong and complete seal between the pad and the tie is consequently maintained at all times, insuring protection of the tie from deteriorating substances.

Further, while the pads possess a desirable degree of tackiness which provides a strong adhesive bond between a railroad tie plate and tie, the composition of the invention from which the pads are made or with which the pads are coated is such that the pads may be packaged in surface treated paper and readily removed therefrom for use without undesirable sticking.

As mentioned above, the rubbery material of the composition may be either a polymer of isobutylene or a copolymer of isobutylene and small amounts of a diolefín having a molecular weight greater than 10,000. As a polymer of isobutylene, any polyisobutylene such as that sold under the trade designation “Vistanex” (marketed by Enjay Company) and having a molecular weight greater than 10,000 may be used. As a copolymer of isobutylene and a small amount of a diolefín, any butyl rubber, including butyl rubber reclaim, having a molecular weight in excess of 10,000 may be employed. The rubbery material used is unvulcanized and remains unvulcanized in the practice of the invention.

Any asphalt having a ring and ball softening point between approximately 125° F. and 190° F. and a specific gravity between approximately 1.01 and 1.04 may be used including mixtures of asphalts which have these properties. Also, it is preferred that the asphalt component of the composition have a penetration (at 77° F.) between approximately 10 and 90.

The microcrystalline wax (i.e., hydrocarbon wax derived
from petroleum) may be any such wax having a melting point above approximately 170° F. Preferably, the wax employed should also have a penetration (at 77° F.) between approximately 10 and 20.

As the filler component of the composition, any inert, water-insoluble filler material or mixtures thereof may be used. It is preferred that the filler material have a particle size of less than 250 microns. Because of their low gravity of body building characteristics, ground anarthrite coal and diatomaceous earth (such as sold under the trade designation "Celite" by Johns-Manville Sales Corp.) are the preferred filler materials for use in the present invention. However it will be understood that other inert, water-insoluble filler materials such as whiting, clay, other types of ground coal, and barytes may also be used.

With respect to the rubber processing oil component, any oil commonly used for that purpose in the rubber industry may be utilized. The term "rubber processing oils" is well known to the art and denotes oils used to soften or lubricate rubber. Such oils are commonly used in the processing of rubber. Exemplary rubber processing oils include those sold under the trade designation "Enarco Red Seal B-20" (marketed by National Refining Company), "Circosol 2XH" (marketed by Sun Oil Company) and "Circolite Oil" (marketed by Sun Oil Company). "Enarco Red Seal B-20" has the following properties: specific gravity (at 60°F) 0.86-0.924; index of refraction 1.486; aniline point 154; aromatics 40%. "Circosol 2XH" is a heavy, clear transparent, and viscous liquid having a pale green color. It is composed of hydrocarbons of comparatively high molecular weight and is entirely derived from selected crude. In composition, it may be regarded as relatively naphthenic. It has the following properties: viscosity (SUS at 210°F) 80–90; API gravity (at 60°F) 17.5–19.5; aniline point 170–180; flash point (open cup) 430°F. "Circolite Oil" is composed of light petroleum hydrocarbons having a high degree of naphthenicity and has the following properties: viscosity (SUS at 100°F) 150–160; aniline point 154–160; flash point (open cup) 325; pour point –30°F. Other conventional rubber processing oil such as petroleum oils, palm oil and pine tar may also be used.

In addition to the above-noted components, a rubber reclaiming oil may be included in the composition when butyl rubber reclaim is employed as the rubbery material component. An exemplary rubber reclaiming oil which may be used is that sold under the trade designation "B.R.T. 3" (marketed by the Barrett Division, Allied Chemical and Dye Corporation). This is refined coal tar having the following properties: specific gravity 1.16–1.18; distillation range 170°C (5%); 300°C (35%). The use of this coal tar or a like refined coal tar is advantageous in that it also acts as a preservative for the wood in the tie. It will be understood that other conventional reclaiming oils may be used.

As a further optional component, small amounts of GR-S rubber (copolymer of butadiene and styrene) may be included in the above-described composition either dissolved in the asphalt component or as a separate component.

The amount of the various components included in the composition may be varied within the following percentage by weight ranges: Rubbery material (e.g. polyisobutylene or butyl rubber) having a molecular weight in excess of 10,000 3-35%; asphalt 1–70%; microcrystalline wax 1–15%; filter 10–40%; rubber processing oil 4–25%; reclaiming oil 0–15%; and GR-S rubber 0–3%.

In accordance with the invention, improved railroad tie pads may be made from the above-described composition by calendering or extruding the composition and then cutting or segmenting the resulting strips into pads of the desired size. Alternatively, the composition may be heated to the molten state and applied onto a paper backing or any other kind of support by rolls, or by a knife the thickness of the pad being governed by the opening between the rolls. After leaving the rolls, the composition is immersed in water and then cut to the desired size. FIG. 8 of the drawing shows a pad made from the above composition. As shown, the pad generally designated 1 is of rectangular shape and may have dimensions of, for example, 7 ⅜" x 12 ⅞" and a thickness of approximately ⅜".

In a further embodiment of the invention, an improved tie pad may also be produced by coating a supporting member such as the structural pad of the type described in U.S. 2,858,988 dated November 4, 1958, with the above-noted composition of the invention. Referring to FIGS. 1–4 of the drawings, such a pad is generally designated 3. The pad is shown to be of rectangular shape in plan, its side edges being designated 5, and its end edges being designated 7. The pad consists of a plurality of cord plies each designated 9 with layers of rubber 11 between the cord plies and at the faces of the pad. The union between the cord plies 9 and layers of rubber 11 is preferably strengthened by vulcanization of the rubber. The layers of rubber between the cord plies are thin with respect to the thickness of the cord plies (see FIG. 5). The cord is preferably a high quality dipped cord such as that used in tires. The rubber may be natural, synthetic or reclaimed or a mixture of any two or all three of these. The adjacent cord plies are at angles to one another, and all the cord plies are on the bias with their ends designated 5 and 7 of the pad. For example, adjacent cord plies may be at right angles to one another and at a forty-five degree angle with respect to the edges of the pad. The adjacent cord plies may be at other angles to each other or to the edges of the pad without affecting the utility of the product for the intended purpose. The pad when unstrapped is of arch formation both lengthwise and widthwise of the pad, edges 5 and 7 being curved as apparent from FIGS. 1 and 4, the pad having greater curvature along its widthwise and lengthwise center lines than along its edges.

As shown, pad 3 is coated on all surfaces thereof with a coating 13 of the composition of the invention. This coating may be applied in various ways such as, for example, by cold extruding the composition onto the pad. Alternatively, the composition can be heated to a temperature of approximately 400°F or higher to render it molten and the pad thereafter dipped or thoroughly immersed in the molten composition so that all surfaces thereof become coated with the composition. After dipping, the pad is squeezed through rollers to remove any excess material. The amount of the composition employed is dependent upon the thickness of the coating desired and the method of application. For example, approximately 4–6 oz. of the composition is sufficient to give a coating of ⅜" thickness to a pad approximately 7 ⅜" x 12" in size.

It will be understood that supporting members other than the above-described tie pad of U.S. Patent 2,858,988 may be coated with the composition of the invention to give useful tie pads.

FIGS. 6 and 7 show how the tie pads of the invention are used between a tie plate 15 and a tie 17. A rail is indicated at 19 and spikes for fastening the rail and tie plate to the tie are indicated at 21. Prior to application to the tied, the pad may be dipped in an insecticide. The pad is sufficiently tacky to bond the pad to the tie. When the tie plate and rail are applied, the pad is compressed as shown in FIGS. 6 and 7. The pad is stressed in such a manner that its edges 5 and 7 make a tight seal with the tie, thereby excluding dirt and water from between the pad and the tie.

A pad of the invention such as coated pad 3 undergoes only a minimal distortion of lateral distortion under the high compression to which it is subjected and has great strength in compression and resistance to fatigue. Also, the pad is resistant to tearing at the spike holes. Further, the pad is sufficiently resilient to dampen shocks and vibra-
The above components were mixed as described in Example 3.

**Example 5**

The following composition was prepared for use in making and coating railroad tie pads.

<table>
<thead>
<tr>
<th>Component</th>
<th>Parts by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl rubber reclaim (having a molecular weight greater than 10,000)</td>
<td>100 10</td>
</tr>
<tr>
<td>Microcrystalline wax (having a melting point of 175°F.)</td>
<td>35</td>
</tr>
<tr>
<td>Ground coal</td>
<td>13</td>
</tr>
<tr>
<td>Rubber processing oil (sold under the trade designation “Circosol 2XH”)</td>
<td>11</td>
</tr>
<tr>
<td>Asphalt (having a ring and ball softening point of 170°F.)</td>
<td>11</td>
</tr>
</tbody>
</table>

The above components were mixed as described in Example 3.

**Example 6**

The following composition was prepared for use in making and coating railroad tie pads.

<table>
<thead>
<tr>
<th>Component</th>
<th>Parts by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polysobutylene (sold under the trade designation “Vistanex” and having a molecular weight greater than 10,000)</td>
<td>8</td>
</tr>
<tr>
<td>Microcrystalline wax (having a melting point of 175°F.)</td>
<td>5</td>
</tr>
<tr>
<td>Ground coal</td>
<td>30</td>
</tr>
<tr>
<td>Processing oil (sold under the trade designation “Circolite”)</td>
<td>7</td>
</tr>
<tr>
<td>Asphalt (having a ring and ball softening point of 170°F.)</td>
<td>50</td>
</tr>
</tbody>
</table>

The above components were mixed as described in Example 3.

**Example 7**

The following composition was prepared for use in making and coating railroad tie pads.

<table>
<thead>
<tr>
<th>Component</th>
<th>Parts by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl rubber reclaim (having a molecular weight greater than 10,000)</td>
<td>15.5</td>
</tr>
<tr>
<td>Microcrystalline wax (having a melting point of 175°F.)</td>
<td>15</td>
</tr>
<tr>
<td>Ground coal</td>
<td>10</td>
</tr>
<tr>
<td>Rubber processing oil (sold under the trade designation “Circosol 2XH”)</td>
<td>5.5</td>
</tr>
<tr>
<td>Asphalt (having a ring and ball softening point of 135°F.)</td>
<td>56</td>
</tr>
</tbody>
</table>

The above components were mixed as described in Example 3.

**Example 8**

The following composition was prepared for use in making and coating railroad tie pads.

<table>
<thead>
<tr>
<th>Component</th>
<th>Parts by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl rubber (having a molecular weight greater than 10,000)</td>
<td>4</td>
</tr>
<tr>
<td>Microcrystalline wax (having a melting point of 175°F.)</td>
<td>11</td>
</tr>
<tr>
<td>Ground coal</td>
<td>19</td>
</tr>
<tr>
<td>Processing oil (sold under the trade designation “Enarco Red Seal B-20”)</td>
<td>6</td>
</tr>
<tr>
<td>Asphalt (having a ring and ball softening point of 135°F.)</td>
<td>60</td>
</tr>
</tbody>
</table>

The above components were mixed as described in Example 3.

**Example 9**

The composition of Example 3 was heated to a temperature of 400°F. A tie pad of U.S. Patent 2,858,958 was dipped in the molten composition and thoroughly coated with the composition. The tie pad was then squeezed through rollers to remove any excess material. The resulting product was a coated tie pad such as shown in FIGS. 1-5 of the drawings.
Example 10

The composition of Example 3 was extruded into a continuous length and then cut into individual tie pads such as shown in FIG. 8 of the drawings.

It will be understood that the pads of the invention may be used as shims on ties to build up the rails to the proper elevation; they may also be used in crossings and switch frogs, and for various purposes other than railroad purposes.

The coating of the pads of this invention or the pads on tie pins, etc., performs the desired sealing function and protects the tie surface at both high and low temperatures. The coating or pad will not become brittle at low temperatures and will not flow away at elevated temperatures; the spike holes are thereby kept continuously sealed up.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As various changes could be made in the above products without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I claim:

1. A composition comprising between approximately 3% and approximately 35% by weight of an unvulcanized rubbery material selected from the group consisting of polysisobutylene and a copolymer of isobutylene and small amounts of a diolefin, said material having a molecular weight greater than 10,000, between approximately 1% and approximately 70% by weight of asphalt having a ring and ball softening point between approximately 125°F. and 190°F, and a specific gravity between approximately 1.01 and 1.04, between approximately 1% and approximately 15% by weight of microcrystalline wax having a melting point above approximately 170°F. and a penetration (at 77°F.) between approximately 10 and 20, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler having a particle size of less than 250 microns, and between approximately 4% and approximately 25% by weight of a rubber processing oil.

2. A composition comprising between approximately 3% and approximately 35% by weight of an unvulcanized rubbery material selected from the group consisting of polysisobutylene and a copolymer of isobutylene and small amounts of a diolefin, said material having a molecular weight greater than 10,000, between approximately 1% and approximately 70% by weight of asphalt having a ring and ball softening point between approximately 125°F. and 190°F, and a specific gravity between approximately 1.01 and 1.04, between approximately 1% and approximately 15% by weight of microcrystalline wax having a melting point above approximately 170°F. and a penetration (at 77°F.) between approximately 10 and 20, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler and between approximately 4% and approximately 25% by weight of a rubber processing oil.

3. A composition comprising between approximately 3% and approximately 35% by weight of an unvulcanized rubbery material selected from the group consisting of polysisobutylene and a copolymer of isobutylene and small amounts of a diolefin, said material having a molecular weight greater than 10,000, between approximately 1% and approximately 70% by weight of asphalt having a ring and ball softening point between approximately 125°F. and 190°F, and a specific gravity between approximately 1.01 and 1.04 and a penetration (at 77°F.) between approximately 10 and 20, between approximately 1% and approximately 15% by weight of microcrystalline wax having a melting point above approximately 170°F. and a penetration (at 77°F.) between approximately 10 and 20, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler, between approximately 4% and approximately 25% by weight of a rubber processing oil.
proximately 4% and approximately 25% by weight of rubber processing oil, not more than approximately 15% by weight of a reclaiming oil and not more than approximately 5% by weight of a butadiene-styrene copolymer.

8. A railroad tie pad adapted to be positioned between a railroad tie and an overlying tie plate, comprising a tacky, resilient, generally rectangular sheet composed of approximately 3% and approximately 35% by weight of an unvulcanized rubbery material selected from the group consisting of polyisobutylene and a copolymer of isobutylene and small amounts of diolefin, said material having a molecular weight greater than 10,000, between approximately 1% and 70% by weight of asphalt having a ring and ball softening point between approximately 125° F. and 190° F., a specific gravity between approximately 1.01 and 1.04 and a penetration (at 77° F.) between approximately 10 and 90, between approximately 1% and approximately 15% by weight of microcrystalline wax having a melting point above approximately 170° F. and a penetration (at 77° F.) between approximately 10 and 200, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler having a particle size of less than 250 microns, and between approximately 4% and 25% by weight of a rubber processing oil.

9. A railroad tie pad adapted to be positioned between a railroad tie and an overlying tie plate, comprising a tacky, resilient, generally rectangular sheet composed of approximately 3% and approximately 35% by weight of an unvulcanized rubbery material selected from the group consisting of polyisobutylene and a copolymer of isobutylene and small amounts of a diolefin, said material having a molecular weight greater than 10,000, between approximately 1% and 70% by weight of asphalt having a ring and ball softening point between approximately 125° F. and 190° F., a specific gravity between approximately 1.01 and 1.04 and a penetration (at 77° F.) between approximately 10 and 90, between approximately 1% and approximately 15% by weight of microcrystalline wax having a melting point above approximately 170° F. and a penetration (at 77° F.) between approximately 10 and 20, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler having a particle size of less than 250 microns, and between approximately 4% and 25% by weight of a rubber processing oil.

10. A railroad tie pad adapted to be positioned between a railroad tie and an overlying tie plate, comprising a tacky, resilient, generally rectangular sheet composed of approximately 3% and approximately 35% by weight of an unvulcanized rubbery material selected from the group consisting of polyisobutylene and a copolymer of isobutylene and small amounts of a diolefin, said material having a molecular weight greater than 10,000, between approximately 1% and 70% by weight of asphalt having a ring and ball softening point between approximately 125° F. and 190° F., a specific gravity between approximately 1.01 and 1.04, between approximately 1% and approximately 15% by weight of microcrystalline wax having a melting point above approximately 170° F. and a penetration (at 77° F.) between approximately 10 and 200, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler and between approximately 4% and approximately 25% by weight of a rubber processing oil.

11. A railroad tie pad adapted to be positioned between a railroad tie and an overlying tie plate, comprising a supporting member coated with a composition comprising between approximately 3% and approximately 35% by weight of an unvulcanized rubbery material selected from the group consisting a polyisobutylene and a copolymer of isobutylene and small amounts of a diolefin, said material having a molecular weight greater than 10,000, between approximately 1% and 70% by weight of asphalt having a ring and ball softening point between approximately 125° F. and 190° F., a specific gravity between approximately 1.01 and 1.04, between approximately 1% and approximately 15% by weight of microcrystalline wax having a melting point above approximately 170° F. and a penetration (at 77° F.) between approximately 10 and 200, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler and between approximately 4% and approximately 25% by weight of a rubber processing oil.

12. A railroad tie pad adapted to be positioned between a railroad tie and an overlying tie plate, comprising a plurality of cord plies with rubber between the cord plies and at the faces of the pad, said pad being of substantially uniform thickness throughout its entire area, said pad when unstressed being of arched configuration and said pad being coated with a composition comprising between approximately 3% and approximately 35% by weight of an unvulcanized rubbery material selected from the group consisting of polyisobutylene and a copolymer of isobutylene and small amounts of a diolefin, said material having a molecular weight greater than 10,000, between approximately 1% and approximately 15% by weight of asphalt having a ring and ball softening point between approximately 125° F. and 190° F., a specific gravity between approximately 1.01 and 1.04, between approximately 1% and approximately 15% by weight of microcrystalline wax having a melting point above approximately 170° F. and a penetration (at 77° F.) between approximately 10 and 20, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler and between approximately 4% and approximately 25% by weight of a rubber processing oil.

13. A railroad tie pad adapted to be positioned between a railroad tie and an overlying tie plate, comprising a plurality of cord plies with rubber between the cord plies and at the faces of the pad, said pad being of substantially uniform thickness throughout its entire area, said pad when unstressed being of arched configuration and said pad being coated with a composition comprising between approximately 3% and approximately 35% by weight of an unvulcanized rubbery material selected from the group consisting of polyisobutylene and a copolymer of isobutylene and small amounts of a diolefin, said material having a molecular weight greater than 10,000, between approximately 1% and approximately 15% by weight of asphalt having a ring and ball softening point between approximately 125° F. and 190° F., a specific gravity between approximately 1.01 and 1.04, between approximately 1% and approximately 15% by weight of microcrystalline wax having a melting point above approximately 170° F. and a penetration (at 77° F.) between approximately 10 and 20, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler and between approximately 4% and approximately 25% by weight of a rubber processing oil.

14. A railroad tie pad adapted to be positioned between a railroad tie and an overlying tie plate, comprising a plurality of cord plies with rubber between the cord plies and at the faces of the pad, said pad being of substantially uniform thickness throughout its entire area, said pad when unstressed being of arched configuration and said pad being coated with a composition comprising between approximately 3% and approximately 35% by weight of an unvulcanized rubbery material selected from the group consisting of polyisobutylene and a copolymer of isobutylene and small amounts of a diolefin, said material having a molecular weight greater than 10,000, between approximately 1% and approximately 15% by weight of asphalt having a ring and ball softening point between approximately 125° F. and 190° F., a specific gravity between approximately 1.01 and 1.04, between approximately 1% and approximately 15% by weight of microcrystalline wax having a melting point above approximately 170° F. and a penetration (at 77° F.) between approximately 10 and 20, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler and between approximately 4% and approximately 25% by weight of a rubber processing oil.

15. A railroad tie pad adapted to be positioned between a railroad tie and an overlying tie plate, comprising a plurality of cord plies with rubber between the cord plies and at the faces of the pad, said pad being of substantially uniform thickness throughout its entire area, said pad when unstressed being of arched configuration and said pad being coated with a composition comprising between approximately 3% and approximately 35% by weight of an unvulcanized rubbery material selected from the group consisting of polyisobutylene and a copolymer of isobutylene and small amounts of a diolefin, said material having a molecular weight greater than 10,000, between approximately 1% and approximately 15% by weight of asphalt having a ring and ball softening point between approximately 125° F. and 190° F., a specific gravity between approximately 1.01 and 1.04, between approximately 1% and approximately 15% by weight of microcrystalline wax having a melting point above approximately 170° F. and a penetration (at 77° F.) between approximately 10 and 20, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler and between approximately 4% and approximately 25% by weight of a rubber processing oil.
melting point above approximately 170° F. and a penetration (at 77° F.) between approximately 10 and 20, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler having a particle size of less than 250 microns, and between approximately 4% and 25% by weight of a rubber processing oil.

15. A railroad tie pad adapted to be positioned between a rail tie and an overlying tie plate, comprising a plurality of cord plies with rubber between the cord plies and at the faces of the pad, said pad being of substantially uniform thickness throughout its entire area, said pad when unstressed being of arched conformation, and said pad being coated with a composition comprising between approximately 3% and approximately 35% by weight of a rubber reclaim consisting of a copolymer of isobutylene and a small amount of a diolefin and having a molecular weight greater than 10,000, between approximately 1% and approximately 70% by weight of asphalt having a softening point of approximately 170° F., between approximately 1% and approximately 15% of microcrystalline wax having a melting point of approximately 175° F. and a penetration (at 77° F.) between approximately 10 and 20, between approximately 10% and approximately 40% by weight of an inert, water-insoluble filler having a particle size of less than 250 microns, between approximately 4% and 25% by weight of a rubber processing oil, not more than 15% by weight of a reclaiming oil and not more than approximately 5% by weight of a butadiene-styrene copolymer.

16. A railroad tie and an overlying tie plate, comprising a plurality of cord plies with rubber between the cord plies and at the faces of the pad, said pad being of substantially uniform thickness throughout its entire area, said pad when unstressed being of arched conformation, and said pad being coated with a composition comprising between approximately 3% and approximately 35% by weight of rubber reclaim consisting of a copolymer of isobutylene and a small amount of a diolefin and having a molecular weight greater than 10,000, between approximately 1% and approximately 70% by weight of asphalt having a softening point of approximately 170° F., between approximately 1% and approximately 15% of microcrystalline wax having a melting point of approximately 175° F. and a penetration (at 77° F.) between approximately 10 and 20, between approximately 10% and approximately 40% by weight of ground anthracite coal, and between approximately 4% and approximately 25% by weight of a rubber processing oil.

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