ANTISKID DEVICE FOR LADDERS

Fig. 2

Fig. 1

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Fig. 4b

Fig. 7

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The present invention relates to antiskid devices of the type which may be attached to the ends of ladder rails or the like to prevent skidding along the ground, along building walls or other types of supporting means. Still more particularly, the invention relates to an antiskid device whose ground- or wall-engaging part may be pivoted to different positions of adjustment so as to insure that it will adhere to the support with requisite force.

It is an object of my invention to provide an antiskid device which is capable of standing long wear without any or with minimal effect on its antiskid characteristics, which is capable of properly gripping very smooth and flat as well as rough and uneven supporting surfaces, which is a good insulator of electric current so that it may be used by electricians and other persons servicing high-voltage lines and similar equipment, which is capable to withstand adverse climatic conditions including snow, ice, rain and sleet, which will leave no imprints, scratches or other marks in supporting surfaces, which is capable of uniformly distributing loads over a substantial area to prevent localized over stressing of its parts and of the support, and which may be manufactured at low cost and of many readily available materials.

Another object of the invention is to provide a very simple but highly reliable antiskid device of the above outlined characteristics whose ground- or wall-engaging part or parts may be readily separated from the remaining part or parts so that such ground engaging parts may be exchanged after a certain period of use without it being necessary to discard the entire antiskid device.

A further object of my invention is to provide an antiskid device which permits a ladder to be swung to differ-ent positions of inclination without it being necessary to change the position of its ground or wall-contacting parts.

A concomitant object of the invention is to provide an antiskid device of the above outlined characteristics which is constructed and assembled in such a way that it may be rapidly and conveniently transferred from the upper end to the lower end of a ladder rail or vice versa.

An additional object of the invention is to provide an antiskid device of the above outlined characteristics which is constructed and assembled in such a way that, at the time the structure to which it is attached assumes a certain position of inclination with respect thereto, the cooperating parts of the device automatically prevent further inclination of such structure in order to avoid excessive shifting of loads and eventual overturning of the assembly.

Still another object of the invention is to provide a novel block which may be put to use in antiskid devices of the above outlined characteristics.

With the above objects in view, one feature of my invention resides in the provision of an antiskid device for holding the ends of ladder rails and the like against skidding along the ground and along building walls or other types of supporting means. The antiskid device comprises a block including two rigidly connected sections at least one of which consists of elastically deformable wear-resistant material and has a surface provided with a plurality of antiskid projections. The device further comprises a rigid connecting member which may be secured to one end of a ladder rail or the like and which includes a coupling element cooperating with a complementary coupling element on the second section of the block. The coupling elements are articular connected to each other by means of a bolt or the like so that the block is pivotable with respect to the connecting member.

The first section of the block may consist of rubber or elastic plastic and is preferably a good insulator of electric current. The second section may also consist of rubber or plastic and its hardness preferably exceeds the hardness of the first section, i.e., the elasticity of the first section is normally greater than the elasticity of the second section.

The novel features which are considered as characteristic of the invention are set forth in particular in the appended claims. The improved antiskid device itself, however, both as to its construction and its method of operation, together with additional features and advantages thereof, will be best understood from the following detailed description of certain specific embodiments with reference to the accompanying drawings, in which:

FIG. 1 is a partly elevational and partly sectional view of an antiskid device which embodies one form of my invention;

FIG. 2 is an end view of the antiskid device as seen from the left-hand side of FIG. 1, a portion of the connecting member and a portion of the upper block section being broken away to reveal the construction of attaching means which provides an articulate connection for the block;

FIG. 3 is a side elevational view of an antiskid device which comprises a slightly different connecting member;

FIG. 4 is a bottom plan view of the block which forms part of the antiskid device shown in FIGS. 1 to 3;

FIG. 4a is a bottom plan view of a slightly different block;

FIG. 4b is an end elevational view of an antiskid device which comprises two blocks;

FIG. 5 is a side elevational view of an antiskid device which comprises a modified connecting member;

FIG. 6 is an end elevational view of the structure shown in FIG. 5 with a portion broken away to reveal the construction of the attaching means for the block; and

FIG. 7 is a side elevational view of another antiskid device.

Referring now in greater detail to the drawings, and first to FIGS. 1, 2, there is shown an antiskid device which comprises a solid one-piece block or blocks 1 and a connecting member A. The material of the block is elastic, for example, wear- and oil-resistant rubber which is a good insulator of electric current. Such types of rubber are often used in tires for automotive vehicles and are marketed under the name "Protector Rubber" or "Perburan." Of course, it is also possible to make the block of synthetic plastic material which exhibits the characteristics of hard corrosion- and wear-resistant rubber. The upper section 1a of this block comprises a substantially roof-shaped portion 1a' which is partially bounded by two inclined surfaces 8 separated by a transversely extending cylindrical top portion 6. As shown in FIG. 2, the major part of the upper section 1a is somewhat narrower than the plate-like rectangular lower section 1b of the block 1. The exposed major surface 1b' of this lower section is provided with a plurality of antiskid projections 3 and 4 which are arranged in intersecting rows, see FIG. 4. The projections 4 which form two rows along the
shorter sides of the surface 1b' assume the form of truncated four-sided pyramids; the remaining projections 3 and 4 of irregular shape are so located that each other at right angles and that such rows are parallel with the sides of the surface 1b'.

In accordance with an important feature of my invention, the block 1 preferably consists of two rigidly interconnected layers including a more elastic layer below the phantom-line 2 which is shown in FIG. 1, and a less elastic layer above this plane showing the surface 15a. Each of the lower layer the first or lower section (1b) and the other layer of greater hardness will be called the second or upper section (1a). Thus, the upper section 1a actually comprises a substantially prismatic section 1a'' which is immediately adjacent to the line 2, an intermediate portion 1a' which is adjacent to the prismatic section 1a'', and the roof-shaped upper portion 1a'" which is bounded by the inclined surfaces 5 and which comprises the aforementioned top portion 6. The width of the roof-shaped portion 1a'" is less than the width of the prismatic portion 1a'', and the intermediate portion 1a' which resembles a truncated pyramid is located between the portions 1a'' and 1a'. An important advantage of a block which comprises two sections of different hardness is that the harder upper section 1a lends rigidity whereas the softer lower section 1b lends elasticity so that the antiskid device can withstand tolerable deformation but will nonetheless adhere to and will follow the outlines of an uneven support, such as the ground, the wall of a building structure or the like.

The roof-shaped portion 1a'" of the upper section 1a constitutes a bearing element and is formed with a transversely extending horizontal bore 6a which accommodates a cylindrical bearing sleeve 9 of metallic or rigid plastic material. The axial length of the sleeve 9 equals the width of the roof-shaped portion 1a'" and this sleeve receives an inner sleeve 8 which serves as a tubular spacer and which is freely rotatable therein. As a rule, the sleeve 9 is vulcanized or otherwise secured to the material of the upper section 1a. The inner sleeve 8 receives a coupling element 12 as shown by the shaft 7. This sleeve serves as an attaching means for providing an articulare connection between the bearing element 1a'" of the upper section 1a and a cooperating bearing element 12 of the connecting member A. In the embodiment of FIGS. 1 and 2, the shaft 7 assumes the form of a threaded bolt whose head is shown as 11 and one leg 13b of the bifurcated coupling element 12 which is of inverted U-shape. The other leg 13b of the coupling element is inwardly adjacent to a retaining nut 11 which is screwed into the end portion of the bolt 7 so that the coupling element 12 is free to pivot with respect to the bolt 1 or vice versa. The legs 13a, 13b are formed with registering openings for the bolt 7 and assume the form of triangular plates whose end lower portions are rounded to fit with play into complementary recesses provided in the intermediate portion 1a' of the upper section 1a. The ends of the spacer sleeve 8 need not be secured to the leg 13c of the coupling element 12 as welded to the somewhat narrower web 15 of a U-shaped bracket 14 whose upwardly extending plate-like arms 15a, 15b are formed with suitably distributed openings 16 for screws, bolts, nails or similar fastening members by which the bracket 14 may be secured at one end of a ladder rail, not shown. Thus, the rail will be received between the arms 15a, 15b so that the bearing element 12 is engaged to the end of the rail and that the block 1 will be free to move its projections 3 and 4 into abutment with a wall (if the antiskid device of FIGS. 1 and 2 is mounted at the upper end of a rail) or with the ground (if the device is mounted at the lower end of a rail). The parts 12, 14 preferably consist of non-metallic material, such as wood and the connecting member A of FIGS. 1 and 2 has been found to be especially suited for use in connection with ladders which consist of aluminum or other light metal. It goes without saying that the antiskid device of my invention may be used on all types of ladders including step ladders, extension ladders, convertible ladders and others. Thus, in a typical step ladder, four antiskid devices will be secured to the lower ends of the four rails whereas an extension ladder may have two antiskid devices at each of its ends.

The configuration of the legs 13a, 13b or of the web 13 and of the portion 1a' or 1a'" is normally such that the block 1 may pivot through about 45° to each side of the neutral position shown in FIG. 1. This constitutes an additional safety measure against skidding. The maximum angle of inclination of the block 1 may vary within a wide range, e.g., between 30 and 60 degrees, depending on the type of ladder on which the antiskid device is used and the position of the ladder in question. Of course, the web 13 and the portion 1a'" which is rather distant from the surface 1b', the zone in which the sections 1a, 1b are joined to form a one-piece block may be much closer to the projections 3 and 4. Thus, and if the nature of the supporting surfaces which come in contact with the tips of projections 3 and 4 is such that the elasticity of the connections suffices to insure a satisfactory hold, the line 2 may be very close to the surface 1b', for example, at a distance of a few millimeters. Such types of antiskid devices may be used in homes or in workshops and factories where the ground is normally smooth so that one need not rely on the elasticity of the block itself but solely on the elasticity of the antiskid projections. An advantage of such construction is that the block is then much stronger because it mainly consists of comparatively hard material having little resiliency even though the projections still insure that the device will not skid along the ground or along another type of support.

On the other hand, when the rigidity of the block is less important than its elasticity, the line 2 may be more distant from the projections 3 and 4 and may be located between the portions 1a'', 1a'' or 1a', 1a'". In most instances, the lower section 1b is preferably bounded by side faces 1b'" which diverge outwardly in a direction away from the surface 1b' and, as clearly shown in FIGS. 1 and 2, the roof-shaped portion 1a'" of the upper section is normally within the outlines of such side faces. As a matter of fact, the legs 13a, 13b are also within the outlines of the side faces 1b'". As stated hereinabove, the legs 13a, 13b and/or the web 13 will prevent the block 1 from pivoting to both sides of its illustrated (neutral) position through an angle of more than about 45 degrees. In other words, the block 1 may pivot about the bolt 7 through about 45 degrees in a clockwise or in a counterclockwise direction, as viewed in FIG. 1.

Various methods of joining two elastic materials to form an integral block are well known in the art and form no part of this invention. It goes without saying that the line 2 need not define a flat zone since the bond between the sections 1a, 1b may be irregular and may be located in a plane which is slightly inclined with respect to the plane of coincidence of the two portions of the coupling element 12. It is also possible to provide a metallic carrier one side of which is bonded to the section 1a and the other side of which is bonded to the section 1b. All that counts is to provide a block which, while sufficiently elastic to follow the outlines of uneven supporting sup-
faces, is sufficiently rigid to avoid excessive deformation of its bearing element so that the block may be readily pivoted to different positions of inclination with respect to the neutral position of FIGS. 1 and 2 in which its surface \(1b'\) is substantially perpendicular to the longitudinal extensions of the arms \(15a, 15b, \) i.e., in which the surface \(1b'\) is substantially parallel with the webs 13, 15.

It is to be noted that the bearing element 12 and the bracket 14 may be forged, cast or molded as a unitary body so that they need not be joined by welds W.

Referring to FIG. 3, there is shown an anti-skid device whose block 1 is identical with the one shown in FIGS. 1 and 2. The connecting member B of this anti-skid device consists of a single piece of metallic casting which comprises a coupling element 18 having two legs 19a (only one shown) which are pivotable about the axis of the bolt 7, and a strong U-shaped bracket 17 which is integral with the element 18 and whose arms 19, 20 diverge upwardly and outwardly from a thick solid base 17a. The arms 19, 20 are provided with openings 21 for wood screws or machine screws, depending upon whether the rail whose end is received in the bracket 17 consists of wood or metal. It was of the bearing element 18, particularly the connecting member B is especially suited for use on ladders whose rails consist of wood and are of circular, semicircular or polygonal cross section.

The reason for making the upper section 1a (i.e., the bearing element 1a’) narrower than the lower section 1b is that the separating web 15 should not project laterally beyond the outlines of the block 1. In fact, and as will be noted by looking at FIG. 2 or 4, the axial length of the bolt 7 (including the head 10) normally need not exceed the width of the lower section 1b.

I have found that a very satisfactory base comprises a lower section 1b whose width equals one-half of its length. Thus, the ratio of the longer sides to the shorter sides of the surface \(1b'\) may be two-to-one or thereabouts.

Should the block 1 wear away to such an extent that its projections do not provide a satisfactory anti-skid insurance for a given type of ladder, the operator can replace the block in an extremely simple way, i.e., merely by unscrewing the nut 11, by withdrawing the bolt 7 from the spacer sleeve 8, and by withdrawing the spacer sleeve from the space between the legs 19a, 13b or from between the legs 19a, 13b. Also, if an extension ladder is furnished with two blocks but with four connecting members A and B and if it is desired to transfer the blocks from the lower ends to the upper ends of the rails, the user merely detaches the blocks from the connecting members A or B at the upper ends of the rails and connects them to the connecting members at the lower ends of the rails provided, of course, that a connecting member A or B is mounted at each end of each rail.

If desired, one or both sections of the block 1 may be stiffened by suitable inserts of metallic or rigid synthetic plastic material which is embedded in and which is vulcanized to the respective sections. FIG. 3 illustrates by way of example a stiffening plate 5 of metallic material which is embedded in the material of the upper section 1b. Such stiffening means are used if the anti-skid device is subjected to exceptionally high stresses, for example, if the device is mounted on rails of heavy load ladders which may carry certain sections of scaffolding or the like.

As a rule, the axis about which the block pivots is located close to the anti-skid projections, i.e., such pivot axis is normally close to the surface against which the block abuts when the anti-skid device is used as shown. Furthermore, if a ladder is long, for example, if its length is in the range of 12-15 meters, it is often desirable to use anti-skid devices whose block comprises three or more rows of less yieldable projections and wherein the lower section of the block comprises a greatly increased number of projections. One such block 101 is shown in FIG. 4a which comprises a lower section 101b having a transverse row of pyramidal projections 104 along each shorter side of its surface 101b' and a third row of such pyramidal projections 104 substantially midway between the shorter sides. Each transverse row comprises four projections and each longitudinal row comprises nine projections. Of course, many other combinations are possible, for example, each row may comprise alternating pyramidal projections 104 and conical projections 103.

The dimensions of the block 101 preferably exceed the dimensions of the block 1. The median row of projections 104 lends additional stability to the block by preventing excessive deformation of more readily yieldable projections 103.

FIG. 4b illustrates a further embodiment of my invention which is especially useful in very long ladders or in heavy-duty ladders which must carry exceptionally heavy loads and which must be protected against sidling even more strongly than a ladder which uses anti-skid devices of the type shown in FIGS. 1 to 4a. This anti-skid device comprises two blocks 201 which are pivotable about a common shaft 207 and which are received in two bearing elements 212 of a connecting member C. The inner legs of the bearing elements 212 are separated by a suitable spacer sleeve 208a. Otherwise, the construction of each block 201 may be same as that of the blocks shown in FIGS. 1 to 3.

Referring to FIGS. 5 and 6, there is shown an additional anti-skid device which comprises a block 1 and a comparatively short but very strong connecting member D. This connecting member includes an exceptionally high bracket 114 having a thick base 115 which is welded to the web 13 of the bearing element 12, and two comparatively short upstanding arms 115a, 115b which are angularly displaced through 90 degrees with reference to the legs 13, 13b. The arms 115a, 115b are formed with bores 116 which are parallel with the bore 6a and which may receive suitable fastening members to secure the bracket 114 to the end of a rail, to the leg of a table for machine tools, or the like.

The bearing sleeve 8 in the bore 6a of the roof-shaped portion 1a” of the upper block section 1a is parallel with the shorter sides of the surface 1b’. The connecting member D may be made of steel or of light metal, such as Silumin. In many instances, the connecting member D in such a way that the arms 115a, 115b are of U-shaped cross section. Thus, each reference numeral 116 indicates in FIG. 5 a pair of registering bores which are formed in spaced flanges of the respective arms. Of course, if the arms 115a, 115b are of rectangular cross section, the bores 116 are perpendicular to the plane of FIG. 6. The connecting member D may be secured to wooden or metallic supports but I have found that it is especially suited for use on metallic rails or the like.

FIG. 7 illustrates a further anti-skid device which comprises a somewhat different block 401 and a connecting member E. The block 401 is identical with the block 1 excepting that its upper section 401a consists of metal which is vulcanized to the elastically deformable lower section 401b opposite the surface 401b’ which latter is provided with deformable projections 403, 404.

The connecting member E is identical with the one shown in FIGS. 5 and 6 with the sole exception that its upstanding arms 115a’, 115b’ are of rectangular cross section so that it may be received in chambers provided in twin rails 129, 130 forming part of a ladder or the like. The screws or other fastening means extending through bores 127, 128 and through the rails 129, 130 secure the anti-skid device to the rails 129, 130 and enable an operator to rapidly detach the connecting member E if necessary. If desired, the rails 129, 130 may be U-shaped; in such instances, their open sides face each other. The connecting member E is a single piece of
metallic material (such as Silumin or Hydronalium) in which the web of the bearing element 12 is integral with the web 115. It is also possible to make the member E of rigid elastically deformable plastic material.

In this embodiment of my invention, I prefer to provide additional bores 123, 124 which extend through the web 115 and which may receive bolts or screws to secure the connecting member to a single rail such as may extend into the space between the arms 115a, 115b. Thus, the anisoid device of FIG. 7 may be used on single rails or on twin rails. Fastening devices may be introduced through the bores 123, 124 before the bolt 7 (only its head 19 is shown in FIG. 7) is inserted through the bore of the roof-shaped block portion 40a′ and through the registering openings of the legs of the bearing element 12.

It goes without saying that, whenever the connecting member consists of two or more parts, such as the parts 12, 14 of the member A, these parts need not always be connected by welding since the connection may be made by means of rivets or screws or in any other suitable way which insures that the connection will withstand all stresses which arise when the anisoid device is put to actual use.

The rectangular shape of the block, such as shown in FIGS. 4 and 4a, is of advantage when the anisoid device is used at the lower ends of ladders. However, it should be noted particularly when the anisoid device is applied at the upper ends of ladder rails, the block may assume a square, oval or circular shape. This is often advisable since an anisoid device which is applied to the upper end of a ladder rail must prevent skidding in all directions, i.e., not only vertically but also horizontally. Also, since the likelihood that the upper ends of ladder rails will slide is less than at the lower ends, anisoid devices which are applied to upper ends of rails may use comparatively small blocks with a lesser number of anisoid projections. Such projections may be comparatively soft and the pivotal connection of the block is preferably such that it may pivot through nearly 90 degrees with respect to a neutral position in order to insure that the upper ends of ladders will be held against skidding even if the ladder is nearly vertical and is caused to abut with its upper ends against a substantially vertical building wall or the like. Furthermore, it will be readily understood that the attaching means which secure the block to the connecting member may assume the form of a universal joint in order to allow the block to pivot about two or more axes.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can, by applying current knowledge readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute essential characteristics of the generic and specific aspects of this invention and, therefore, such adaptations should and are intended to be comprehended within the meaning and range of equivalence of the following claims.

What is claimed as new and desired to be secured by Letters Patent is:

1. An anisoid device, particularly for holding the ends of ladder rails and the like against skidding along the ground and along building walls or other supports, comprising a piece-block including a first section consisting of elastically deformable wear-resistant material and having a surface provided with a plurality of spaced stud-like anisoid projections, said block further including a second section which consists of elastically deformable wear-resistant material whose elasticity is less than the elasticity of the material of said first section and provided with a transversely extending bore whose axis is substantially parallel with the ground; a rigid connecting member adapted to be secured at one end of a ladder rail or the like, said connecting member including a bearing element having a pair of legs adjacent to but spaced from the ends of said bore, said legs having openings in registry with said bore; a bearing sleeve received in said bore and secured to said elastically deformable material of said second section for engaging ends abutting against said legs so as to prevent compression of said elastically deformable second section by said legs of said connecting member; and pivot means extending through said bore and through the openings of said legs providing an articulation connection between said legs and said connecting member so that said block is pivotable with respect to said connecting member about said axis.

2. An anisoid device as set forth in claim 1, wherein said stud-like anisoid projections are located in intersecting rows.

3. An anisoid device as set forth in claim 2, wherein surface of said first section is rectangular and said intersecting rows of anisoid projections are parallel with the sides of said surface.

4. An anisoid device as set forth in claim 3, wherein said surface has a pair of shorter sides and wherein said projections include a pair of projections each adjacent to one of said shorter sides and each comprising projections resembling truncated pyramids, at least some of the remaining projections resembles truncated cones.

5. An anisoid device, particularly for holding the ends of ladder rails and the like against skidding along the ground and along building walls or other supports, comprising a one-piece block including a first section consisting of elastically deformable wear-resistant material and having a surface provided with intersecting rows of anisoid projections, said block further including a second section consisting of elastically deformable material whose hardness exceeds the hardness of the material of said first section, said second section having a pair of pivot means extending through the openings of said legs of said anisoid block and said second section having a pair of pivot means extending through the openings of said legs of said anisoid block and said second section being pivotable with respect to said connecting member about said axis.

6. An anisoid device, particularly for holding the ends of ladder rails and the like against skidding along the ground and along building walls or other supports, comprising a one-piece block including a first section consisting of elastically deformable wear-resistant material and having a surface provided with intersecting rows of stud-like anisoid projections, said first section having side faces diverging outwardly from said surface thereof and said block further including a second section consisting of elastically deformable material whose hardness exceeds the hardness of the material of said first section, said second section having a roof-shaped portion which is located within the outlines of said side faces and which comprises a substantially cylindrically centrally located top portion parallel with said surface of the first section, said roof-shaped portion having a width and length less than the width and length of said first section and being located within the outlines of said side faces; a connecting member comprising a pair of spaced legs provided with registering openings and adjacent to the opposite ends of said second section so that said legs of said connecting member being normally disposed within the outlines of said first section; and pivot means extending through said second section in the proximity of and in parallelism with said cylindrical portion, said pivot means further extending through the openings of said legs to provide an articu-
late connection between said block and said connecting member.

7. An antiskid device, particularly for holding the ends of ladder rails and the like against skidding along the ground and along building walls or other supports, comprising a one-piece block including a first section consisting of elastically deformable wear-resistant material and having a surface provided with interesting rows of stud like antiskid projections, said first section having side faces diverging outwardly from said surface thereof and said block further including a second section consisting of elastically deformable material whose hardness exceeds the hardness of the material of said first section, said second section having a roof-shaped portion which is located within the outlines of said side faces and which comprises a substantially cylindrical centrally located top portion parallel with said surface of the first section, said roof-shaped portion having a width and length less than the width and length of said first section and being located within the outlines of said side faces; a connecting member comprising an inverted U-shaped bearing element having a pair of spaced legs provided with registering openings and adjacent to the opposite ends of said cylindrical portion, at least the legs of said connecting member being normally disposed within the outlines of said first section; and pivot means extending through said second section in the proximity of and in parallelism with said cylindrical portion, said pivot means further extending through the openings of said legs to provide an articulate connection between said block and said connecting member and to permit pivotal movements of said block about said pivot means, the configuration of said second section and of said bearing element being such that said second section abuts against said bearing element in response to substantial clockwise and anticlockwise movements of said block through angles of less than 90 degrees from a neutral position.

8. An antiskid device, particularly for holding the ends of ladder rails and the like against skidding along the ground and along building walls or other types of supports, comprising a one-piece block including a first section consisting of elastically deformable wear-resistant material and having a surface provided with intersecting rows of stud like antiskid projections, said block further including a second section of elastically deformable material whose hardness exceeds the hardness of the material of said first section, said second section being located opposite said surface and comprising a bearing element provided with a bore which is substantially parallel with said surface a bearing sleeve received in said bore and secured to said second section of elastically deformable material of said second section; a connecting member comprising a U-shaped bearing element having a web and a pair of substantially triangular flat plate-like legs, said legs having registering openings adjacent to opposite ends of said bore, said connecting member further comprising a bracket rigid with the web of said U-shaped bearing element and having a pair of spaced arms adapted to be secured to the end of a ladder rail, said legs and arms extending in opposite directions from said web; a spacer element having ends abutting against said legs so as to prevent compression of said elastically deformable second section by said legs of said connecting member; and a pivot member extending through said bore and through said openings to provide an articulate connection between said block and said connecting member, the configuration of said bearing elements being such that the block is pivotable with respect to said pivot member through substantially 45 degrees to both sides of a neutral position in which the surface of said first section is substantially perpendicular to the longitudinal extensions of said arms.

9. An antiskid device, particularly for holding the ends of ladder rails and the like against skidding along the ground and along building walls or other supports, comprising an antiskid member having a resilient portion provided with a transversely extending bore whose axis is substantially parallel with the ground; a rigid connecting member including a bearing element having a pair of legs adjacent to but spaced from the ends of said bore, said legs having openings in registry with said bore; a bearing sleeve received in said bore and secured to said resilient portion of said antiskid member; a tubular spacer element rotatably received in said bore and having ends abutting against said legs; a bolt extending through said spacer element and through the openings of said legs and having a head at the outer side of one of said legs; and a nut on said bolt at the outer side of the other leg, said bolt providing an articulate connection between said antiskid member and said connecting member and permitting said antiskid member to pivot about the axis thereof.

10. An antiskid device, particularly for holding the ends of ladder rails and the like against skidding along the ground and along building walls or other supports, comprising an antiskid member having a resilient portion provided with a transversely extending bore whose axis is substantially parallel with the ground; a rigid connecting member including a bearing element having a pair of legs adjacent to but spaced from the ends of said bore, said legs having openings in registry with said bore; a bearing sleeve received in said bore and secured to said resilient portion of said antiskid member; a spacer element having ends abutting against said legs so as to prevent compression of said resilient portion of said antiskid member by said legs of said connecting member; and pivot means extending through said bore and through the openings of said legs providing an articulate connection between said antiskid member and said connecting member and permitting said antiskid member to pivot about the axis thereof.

11. An antiskid device as set forth in claim 10, wherein said antiskid member consists of elastically deformable wear-resistant material and has a surface provided with a plurality of spaced stud-like antiskid projections.

12. An antiskid device as set forth in claim 10, wherein said connecting member comprises a web of substantially thickness, said pair of legs extending from one side of and rigid with said web, said connecting member further comprising a pair of arms extending from the other side of said web and adapted to be secured to the end of a ladder rail.

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