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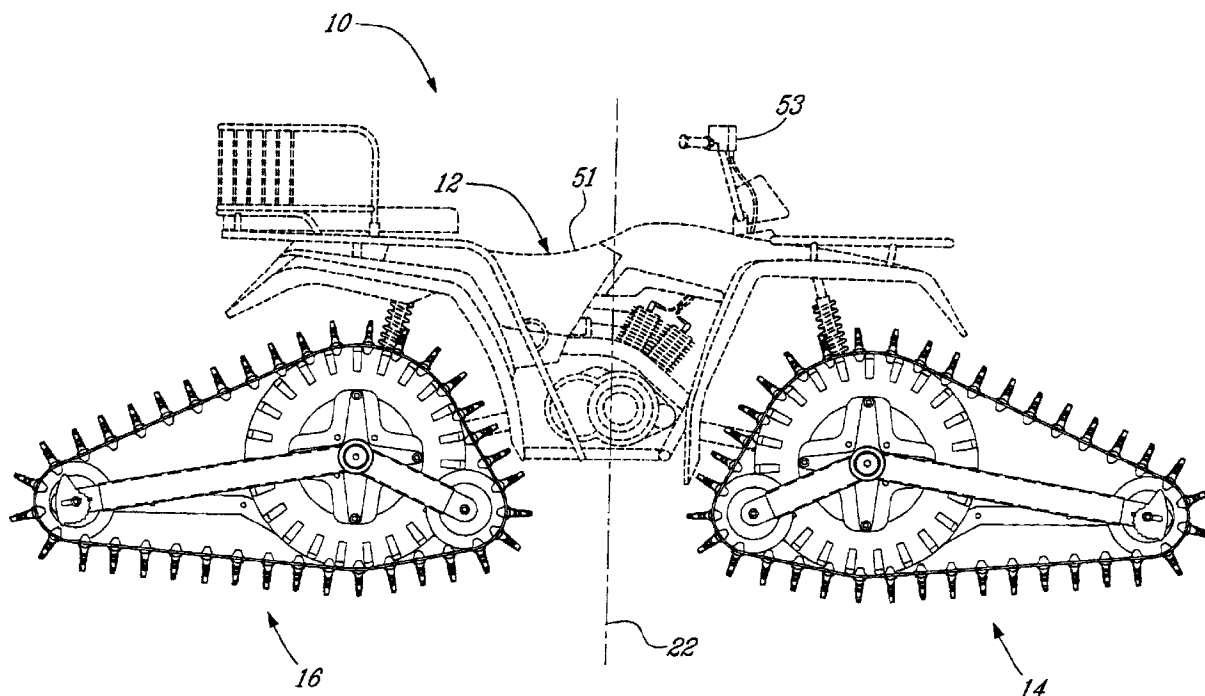
(72) **Inventeurs/Inventors:**
BOIVIN, DENIS, CA;
BOIVIN, ALAIN, CA;
COURTEMANCHE, DENIS, CA

(73) **Propriétaire/Owner:**
CAMOPLAST SOLIDEAL INC., CA

(74) **Agent:** SMART & BIGGAR

(54) **Titre :** CHENILLES POUR VEHICULE TOUT TERRAIN

(54) **Title:** TRACK ASSEMBLY FOR AN ALL-TERRAIN VEHICLE



(57) **Abrégé/Abstract:**

The present invention is concerned with track assemblies for an all-terrain vehicle, which make it maneuverable and effective upon a variety of unstable, uneven, stable and even surfaces, while designed to maintain tension upon the endless track belts to keep them in their due course and prevent accidental loosening while having a punctually localized surface contact with a ground surface, and at the same time reducing the damages inflicted on the terrain.





**BUREAU DES BREVETS
CONSTAT DE RÉEXAMEN**

**PATENT OFFICE
CERTIFICATE OF RE-EXAMINATION**

N° de brevet - Patent No: **2,388,294**

Par la présente, les soussignés certifient que le brevet susmentionné a été réexaminé selon les paragraphes 48.1 à 48.3 de la *Loi sur les brevets* et que le Conseil de réexamen convient de ce qui suit:

The undersigned hereby certify that the above-noted patent has been re-examined pursuant to section 48.1 to 48.3 of the *Patent Act* and that the Re-examination Board has determined the following:

- (i) Les revendications / Claims 1, 5-19, 21, 24-28, 32-46, 48, 51-57, 60-62, 76-90, 97-99, 102-104, 118-132, 139-141, 145-159, 161, 164-169, 172-174, 188-202, 209-211, 214-216, 230-244, 251-253, 257-268, 270, 273-278, 281-283, 297-308, 316-318, 321-323, 337-348, 356 and 357

du brevet susmentionné sont non brevetables et sont rejetées /
are unpatentable and are cancelled from the above noted
patent.

- (ii) Les revendications / Claims 2-4, 20, 22, 23, 29-31, 47, 49, 50, 58, 59, 63-75, 91-96, 100, 101, 105-117, 133-138, 142-144, 160, 162, 163, 170, 171, 175-187, 203-208, 212, 213, 217-229, 245-250, 254-256, 269, 271, 272, 279, 280, 284-296, 309-315, 319, 320, 324-336 and 349-355

du brevet susmentionné sont brevetables /of the above noted
patent are hereby confirmed to be patentable.

Paul Fitzner
Président
Chairperson

Patrick Cyr
Membre
Member

Daniel Rempel
Membre
Member

Daté à Gatineau (Québec), ce
Dated at Gatineau, Quebec, this

18th

jour de
day of

November , 2014

CLAIMS:

1. An endless track for a track assembly to provide traction to an all-terrain vehicle (ATV), the track assembly being mountable to the ATV in place of a ground-engaging wheel, the track assembly comprising a plurality of track-contacting wheels for contacting the endless track, the plurality of track-contacting wheels including a driving wheel to impart motion to the endless track, the endless track comprising:
 - i) an inner side for engaging the plurality of track-contacting wheels; and
 - ii) a ground-engaging outer side for engaging the ground;the endless track being free of stiffening rods extending in a transversal direction of the endless track.
2. The endless track claimed in claim 1, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
3. The endless track claimed in claim 2, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
4. The endless track claimed in claim 3, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track when the driving wheel imparts motion to the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.
5. The endless track claimed in any one of claims 1 to 4, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.

6. The endless track claimed in any one of claims 1 to 5, wherein the ground-engaging outer side comprises a plurality of traction projections spaced apart in a longitudinal direction of the endless track.
7. The endless track claimed in claim 6, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
8. The endless track claimed in claim 7, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.
9. The endless track claimed in claim 6, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
10. The endless track claimed in claim 9, wherein the lug is generally rectangular.
11. The endless track claimed in claim 9, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.
12. The endless track claimed in claim 9, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.
13. The endless track claimed in claim 12, wherein the height of the traction projection is greatest at a point close to a center of the endless track than to a

first lateral edge of the endless track and than to a second lateral edge of the endless track.

14. The endless track claimed in any one of claims 6 to 13, wherein the inner side comprises a plurality of inner lugs distributed in the longitudinal direction of the endless track.

15. The endless track claimed in claim 14, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each one of the plurality of rows of lugs being spaced apart in the longitudinal direction of the endless track.

16. The endless track claimed in claim 15, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.

17. The endless track claimed in claim 16, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.

18. The endless track claimed in any one of claims 5 to 17, wherein the plurality of track-contacting wheels includes an idler wheel, a first given one of the rows of lugs being a row of guide lugs to be positioned adjacent to the idler wheel.

19. The endless track claimed in claim 18, wherein the row of guide lugs is a first row of guide lugs, a second given one of the rows of lugs being a second row of guide lugs to be positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.

20. The endless track claimed in claim 19, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless

track, a third given one of the rows of lugs and a fourth given one of the rows of lugs respectively being a third row of guide lugs and a fourth row of guide lugs to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third row of guide lugs and the fourth row of guide lugs.

21. The endless track claimed in any one of claims 1 to 17, wherein the plurality of track-contacting wheels includes a first idler wheel and a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.
22. The endless track claimed in claim 21, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.
23. The endless track claimed in claim 22, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.
24. The endless track claimed in any one of claims 21 to 23, wherein the track assembly comprises a frame interconnecting the first idler wheel and the second idler wheel.
25. The endless track claimed in claim 24, wherein the frame is pivotable about a pivot axis generally parallel to an axis of rotation of the driving wheel.
26. The endless track claimed in claim 25, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

CANCELLED X
ANNULÉE

27. An ATV comprising the endless track claimed in any one of claims 1 to 26.
28. A set of endless tracks for a set of track assemblies to provide traction to an all-terrain vehicle (ATV), the set of track assemblies being mountable to the ATV in place of ground-engaging wheels, each endless track of the set of endless tracks comprising:
- i) an inner side for facing a plurality of track-contacting wheels of a track assembly of the set of track assemblies, the plurality of track-contacting wheels including a driving wheel to impart motion to the endless track; and
 - ii) a ground-engaging outer side for engaging the ground;
- the endless track being free of stiffening rods extending in a transversal direction of the endless track.
29. The set of endless tracks claimed in claim 28, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
30. The set of endless tracks claimed in claim 29, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
31. The set of endless tracks claimed in claim 30, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track when the driving wheel imparts motion to the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

32. The set of endless of tracks claimed in any one of claims 28 to 31, wherein a profile of the endless track in a transversal direction of the endless track is generally convex.
33. The set of endless tracks claimed in any one of claims 28 to 32, wherein the ground-engaging outer line comprises a plurality of traction projections spaced apart in a longitudinal direction of the endless track.
34. The set of endless tracks claimed in claim 33 wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
35. The set of endless tracks claimed in claim 34, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.
36. The set of endless tracks claimed in claim 33 wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
37. The set of endless tracks claimed in claim 36, wherein the lug is generally rectangular.
38. The set of endless tracks claimed in claim 33, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.
39. The set of endless tracks claimed in claim 33 wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.

40. The set of endless tracks claimed in claim 39, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.

41. The set of endless tracks claimed in any one of claims 33 to 40, wherein the inner side comprises a plurality of inner lugs distributed in a longitudinal direction of the endless track.

42. The set of endless tracks claimed in claim 41, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of the plurality of rows of lugs being spaced apart in the longitudinal direction of the endless track.

43. The set of endless tracks claimed in claim 42, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.

44. The set of endless tracks claimed in claim 43, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.

45. The set of endless tracks claimed in any one of claims 42 to 44, wherein the plurality of track-contacting wheels comprises an idler wheel, a first given one of the rows of lugs being a row of guide lugs to be positioned adjacent to the idler wheel.

46. The set of endless tracks claimed in claim 45, wherein the row of guide lugs is a first row of guide lugs, a second given one of the rows of lugs being a second row of guide lugs to be positioned adjacent to the idler wheel such that the idler

wheel passes between the first row of guide lugs and the second row of guide lugs.

47. The set of endless tracks claimed in claim 45, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless track, a third given one of the rows of lugs and a fourth given one of the rows of lugs respectively being a third row of guide lugs and a fourth row of guide lugs to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third row of guide lugs and the fourth row of guide lugs.
48. The set of endless tracks claimed in any one of claims 28 to 44, wherein the plurality of track-contacting wheels includes a first idler wheel and a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.
49. The set of endless tracks claimed in claim 48, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.
50. The set of endless tracks claimed in claim 49, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.
51. The set of endless tracks claimed in any one of claims 48 to 50, wherein the track assembly comprises a frame interconnecting the first idler wheel and the second idler wheel.

52. The set of endless tracks claimed in claim 51, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.

53. The set of endless tracks claimed in claim 52, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

54. The set of endless tracks claimed in any one of claims 28 to 53, wherein the set of endless tracks includes four endless tracks.

55. An ATV comprising the set of endless tracks claimed in any one of claims 28 to 54.

56. A track assembly for providing traction to an all-terrain vehicle (ATV), the track assembly being mountable to the ATV in place of a ground-engaging wheel, the track assembly comprising:

- a) a plurality of track-contacting wheels which includes:
 - i) a driving wheel; and
 - ii) an idler wheel;

and

- b) an endless track disposed around the plurality of track-contacting wheels and comprising:

- i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track; and
- ii) a ground-engaging outer side for engaging the ground; the endless track being free of stiffening rods extending in a transversal direction of the endless track.

57. The track assembly claimed in claim 56, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel

spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.

58. The track assembly claimed in claim 57, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.

59. The track assembly claimed in claim 58, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.

60. The track assembly claimed in any one of claims 57 to 59, comprising a frame interconnecting the first idler wheel and the second idler wheel.

61. The track assembly claimed in claim 60, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.

62. The track assembly claimed in claim 61, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

63. The track assembly claimed in any one of claims 60 to 62, wherein the frame comprises a first arm and a second arm shorter than the first arm.

64. The track assembly claimed in claim 63, wherein the first arm and the second arm define an obtuse angle therebetween.

65. The track assembly claimed in any one of claims 63 and 64, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.
66. The track assembly claimed in any one of claims 60 to 65, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.
67. The track assembly claimed in claim 66, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first idler wheel and the second idler wheel for adjusting the tension of the endless track.
68. The track assembly claimed in claim 67, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.
69. The track assembly claimed in any one of claims 66 to 68, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.
70. The track assembly claimed in any one of claims 66 to 69, wherein the tension adjusting mechanism comprises a cam.
71. The track assembly claimed in claim 70, wherein the cam comprises a periphery defining a plurality of notches.
72. The track assembly claimed in any one of claims 70 and 71, wherein the cam comprises a handle for facilitating rotation of the cam by a user.

73. The track assembly claimed in any one of claims 56 to 72, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
74. The track assembly claimed in claim 73, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
75. The track assembly claimed in claim 72, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.
76. The track assembly claimed in any one of claims 56 to 75, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.
77. The track assembly claimed in any one of claims 56 to 76, wherein the ground-engaging outer side comprises a plurality of traction projections spaced apart in a longitudinal direction of the endless track.
78. The track assembly claimed in claim 77, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
79. The track assembly claimed in claim 78, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.

80. The track assembly claimed in claim 77, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.

81. The track assembly claimed in claim 80, wherein the lug is generally rectangular.

82. The track assembly claimed in claim 77, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.

83. The track assembly claimed in claim 77, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.

84. The track assembly claimed in claim 83, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.

85. The track assembly claimed in any one of claims 77 to 84, wherein the inner side comprises a plurality of inner lugs distributed in the longitudinal direction of the endless track.

86. The track assembly claimed in claim 85, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of lugs of the plurality of rows of lugs being spaced apart in the longitudinal direction of the endless track.

87. The track assembly claimed in claim 86, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.

88. The track assembly claimed in claim 87 wherein the row of drive lugs is a first row of drive lugs, a second row of lugs is a second row of drive lugs positioned to engage the driving wheel.
89. The track assembly claimed in any one of claims 86 to 88, wherein a first given one of the rows of lugs is a row of guide lugs to be positioned adjacent to the idler wheel.
90. The track assembly claimed in claim 89, wherein the row of guide lugs is a first row of guide lugs, a second row of lugs being a second row of guide lugs to be positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.
91. The track assembly claimed in any one of claims 57 to 90, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the lower run of the endless track being curved in the longitudinal direction of the track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.
92. The track assembly claimed in any one of claims 57 to 90, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.

93. The track assembly claimed in any one of claims 91 and 92, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.
94. The track assembly claimed in any one of claims 91 to 93, wherein the track assembly is configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.
95. The track assembly claimed in any one of claims 56 to 94, wherein the track assembly is steerable to steer the ATV on the ground.
96. The track assembly claimed in any one of claims 56 to 94, wherein the track assembly is connected to a body of the ATV via a rod used for direction.
97. An ATV comprising the track assembly claimed in any one of claims 56 to 96.
98. A set of track assemblies for providing traction to an all-terrain vehicle (ATV), the set of track assemblies being mountable to the ATV in place of ground-engaging wheels, each track assembly of the set of track assemblies comprising:
- a) a plurality of track-contacting wheels which includes:
 - i) a driving wheel; and
 - ii) an idler wheel;
 - and
 - b) an endless track disposed around the plurality of track-contacting wheels and comprising:
 - i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track;
 - and
 - ii) a ground-engaging outer side for engaging the ground;

the endless track being free of stiffening rods extending in a transversal direction of the endless track.

99. The set of track assemblies claimed in claim 98, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.
100. The set of track assemblies claimed in claim 99, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.
101. The set of track assemblies claimed in claim 100, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.
102. The set of track assemblies claimed in any one of claims 99 to 101, comprising a frame interconnecting the first idler wheel and the second idler wheel.
103. The set of track assemblies claimed in claim 102, wherein the frame is pivotable about a pivot axis coaxially parallel to the axis of rotation of the driving wheel.
104. The set of track assemblies claimed in claim 103, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

105. The set of track assemblies claimed in any one of claims 102 to 104, wherein the frame comprises a first arm and a second arm shorter than the first arm.
106. The set of track assemblies claimed in claim 105, wherein the first arm and the second arm define an obtuse angle therebetween.
107. The set of track assemblies claimed in any one of claims 105 and 106, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.
108. The set of track assemblies claimed in any one of claims 102 to 107, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.
109. The set of track assemblies claimed in claim 108, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first idler wheel and the second idler wheel for adjusting the tension of the endless track.
110. The set of track assemblies claimed in claim 109, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.
111. The set of track assemblies claimed in any one of claims 109 and 110, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.
112. The set of track assemblies claimed in any one of claims 108 to 111, wherein the tension adjusting mechanism comprises a cam.

113. The set of track assemblies claimed in claim 112, wherein the cam comprises a periphery defining a plurality of notches.
114. The set of track assemblies claimed in any one of claims 112 and 113, wherein the cam comprises a handle for facilitating rotation of the cam by a user.
115. The set of track assemblies claimed in any one of claims 98 to 104, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
116. The set of track assemblies claimed in claim 115, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
117. The set of track assemblies claimed in claim 116, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.
118. The set of track assemblies claimed in any one of claims 98 to 117, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.
119. The set of track assemblies claimed in any one of claims 98 to 118, wherein the ground-engaging portion comprises a plurality of traction projections spaced apart in a longitudinal direction of the endless track.

120. The set of track assemblies claimed in claim 119, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.

121. The set of track assemblies claimed in claim 120, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.

122. The set of track assemblies claimed in claim 119, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.

123. The set of track assemblies claimed in claim 122, wherein the lug is generally rectangular.

124. The set of track assemblies claimed in claim 119, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.

125. The set of track assemblies claimed in claim 119, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.

126. The set of track assemblies claimed in claim 125, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.

127. The set of track assemblies claimed in any one of claims 119 to 126, wherein the inner side comprises a plurality of inner lugs distributed in the longitudinal direction of the endless track.

128. The set of track assemblies claimed in claim 127, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of lugs of the plurality of rows of lugs being spaced apart in the longitudinal direction of the endless track.

129. The set of track assemblies claimed in claim 128, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.

130. The set of track assemblies claimed in claim 129, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.

131. The set of track assemblies claimed in any one of claims 128 to 130, wherein a first given one of the rows of lugs is a row of guide lugs to be positioned adjacent to the idler wheel.

132. The set of track assemblies claimed in claim 131, wherein the row of guide lugs is a first row of guide lugs, a second given one of the rows of lugs being a second row of guide lugs to be positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.

133. The set of track assemblies claimed in any one of claims 99 to 132, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the

lower run of the endless track being curved in the longitudinal direction of the track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.

134. The set of track assemblies claimed in any one of claims 99 to 132, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.
135. The set of track assemblies claimed in any one of claims 133 and 134, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.
136. The set of track assemblies claimed in any one of claims 133 to 135, wherein the track assembly is configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.
137. The set of track assemblies claimed in any one of claims 98 to 136, wherein a first track assembly and a second track assembly of the set of track assemblies are steerable to steer the ATV on the ground.
138. The set of track assemblies claimed in any one of claims 98 to 136, wherein the track assembly is connected to a body of the ATV via a rod used for direction.

139. The set of track assemblies claimed in any one of claims 98 to 138, wherein the set of track assemblies includes four track assemblies.

140. An ATV comprising the set of track assemblies claimed in any one of claims 98 to 139.

141. An endless track for a track assembly of a set of track assemblies to provide traction to an all-terrain vehicle (ATV), the ATV comprising a straddle seat and handlebars, the track assembly comprising a plurality of track-contacting wheels for contacting the endless track, the plurality of track-contacting wheels including a driving wheel to impart motion to the endless track, the endless track comprising:

- i) an inner side for facing the plurality of track-contacting wheels; and
- ii) a ground-engaging outer side for engaging the ground;

the endless track being free of stiffening rods extending in a transversal direction of the endless track.

142. The endless track claimed in claim 141, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.

143. The endless track claimed in claim 142, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.

144. The endless track claimed in claim 143, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track when the driving wheel imparts motion to the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

145. The endless track claimed in any one of claims 141 to 144, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.

146. The endless track claimed in any one of claims 141 to 145, wherein the ground-engaging outer side of the endless track comprises a plurality of traction projections projecting outwardly.

147. The endless track claimed in claim 146, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.

148. The endless track claimed in claim 147, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.

149. The endless track claimed in claim 146, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.

150. The endless track claimed in claim 149, wherein the lug is generally rectangular.

151. The endless track claimed in claim 146, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.

152. The endless track claimed in claim 146, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.

153. The endless track claimed in claim 152, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.

154. The endless track claimed in any one of claims 141 to 153, wherein the inner side comprises a plurality of inner lugs projecting inwardly.

155. The endless track claimed in claim 154, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of lugs of the plurality of rows of lugs being spaced apart in a longitudinal direction of the endless track.

156. The endless track claimed in claim 155, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.

157. The endless track claimed in claim 156, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.

158. The endless track claimed in any one of claims 155 to 157, wherein the plurality of track-contacting wheels includes an idler wheel, a first given one of the rows of lugs being a row of guide lugs to be positioned adjacent to the idler wheel.

159. The endless track claimed in claim 158, wherein the row of guide lugs is a first row of guide lugs, a second one of the rows of lugs being a second

row of guide lugs to be positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.

160. The endless track claimed in claim 159, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless track, a third given one of the rows of lugs and a fourth given one of the rows of lugs respectively being a third row of guide lugs and a fourth row of guide lugs to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third row of guide lugs and the fourth row of guide lugs.

161. The endless track claimed in any one of claims 141 to 160, wherein the plurality of track-contacting wheels includes a first idler wheel and a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.

162. The endless track claimed in claim 161, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.

163. The endless track claimed in claim 162, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.

164. The endless track claimed in any one of claims 161 to 163, wherein the track assembly comprises a frame disposed between the first idler wheel and the second idler wheel.

165. The endless track claimed in claim 164, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.

166. The endless track claimed in claim 165, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

167. An ATV comprising the endless track assembly in any one of claims 141 to 166.

168. A track assembly for a set of track assemblies to provide traction to an all-terrain vehicle (ATV), the ATV comprising a straddle seat and handlebars, the track assembly comprising:

a) a plurality of track-contacting wheels which includes:

i) a driving wheel; and

ii) an idler wheel;

and

b) an endless track disposed around the plurality of track-contacting wheels and comprising:

i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track; and

ii) a ground-engaging outer side for engaging the ground; the endless track being free of stiffening rods extending in a transversal direction of the endless track.

169. The track assembly claimed in claim 168, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler

wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.

170. The track assembly claimed in claim 169, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.

171. The track assembly claimed in claim 170, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.

172. The track assembly claimed in any one of claims 169 to 171, comprising a frame interconnecting the first idler wheel and the second idler wheel.

173. The track assembly claimed in claim 172, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.

174. The track assembly claimed in claim 173, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

175. The track assembly claimed in any one of claims 172 to 174, wherein the frame comprises a first arm and a second arm shorter than the first arm.

176. The track assembly claimed in claim 175, wherein the first arm and the second arm define an obtuse angle therebetween.

177. The track assembly claimed in any one of claims 175 and 176, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.
178. The track assembly claimed in any one of claims 172 to 177, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.
179. The track assembly claimed in claim 178, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first idler wheel and the second idler wheel for adjusting the tension of the endless track.
180. The track assembly claimed in claim 179, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.
181. The track assembly claimed in any one of claims 179 and 180, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.
182. The track assembly claimed in any one of claims 178 to 181, wherein the tension adjusting mechanism comprises a cam.
183. The track assembly claimed in claim 182, wherein the cam comprises a periphery defining a plurality of notches.
184. The track assembly claimed in any one of claims 182 and 183, wherein the cam comprises a handle for facilitating rotation of the cam by a user.

185. The track assembly claimed in any one of claims 168 to 184, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.

186. The track assembly claimed in claim 185, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.

187. The track assembly claimed in claim 186, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

188. The track assembly claimed in any one of claims 168 to 187, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.

189. The track assembly claimed in any one of claims 168 to 188, wherein the ground-engaging outer side comprises a plurality of traction projections projecting outwardly.

190. The track assembly claimed in claim 189, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.

191. The track assembly claimed in claim 190, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.

192. The track assembly claimed in claim 189, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.

193. The track assembly claimed in claim 192, wherein the lug is generally rectangular.

194. The track assembly claimed in claim 189, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.

195. The track assembly claimed in claim 189, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.

196. The track assembly claimed in claim 195, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.

197. The track assembly claimed in any one of claims 168 to 196, wherein the inner side comprises a plurality of inner lugs projecting inwardly.

198. The track assembly claimed in claim 197, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the top of each row of lugs of the plurality of rows of lugs being spaced apart in a longitudinal direction of the endless track.

199. The track assembly claimed in claim 198, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.

200. The track assembly claimed in claim 199, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.

201. The track assembly claimed in any one of claims 198 to 200, wherein a first given one of the rows of lugs is a row of guide lugs to be positioned adjacent to the idler wheel.

202. The track assembly claimed in claim 201, wherein the row of guide lugs is a first row of guide lugs, a second one of the rows of lugs being a second row of guide lugs to be positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.

203. The track assembly claimed in any one of claims 169 to 202, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the lower run of the endless track being curved in the longitudinal direction of the track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.

204. The track assembly claimed in any one of claims 169 to 202, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.

205. The track assembly claimed in any one of claims 203 and 204, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.

206. The track assembly claimed in any one of claims 203 to 205, wherein the track assembly is mountable to the ATV in place of a ground-engaging wheel, the track assembly being configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.

207. The track assembly claimed in any one of claims 168 to 206, wherein the track assembly is steerable to steer the ATV on the ground.

208. The track assembly claimed in any one of claims 168 to 206, wherein the track assembly is connected to a body of the ATV via a rod used for direction.

209. An ATV comprising the track assembly claimed in any one of claims 168 to 208.

210. A set of track assemblies for providing traction to an all-terrain vehicle (ATV), the ATV comprising a straddle seat and handlebars, each track assembly of the set of track assemblies comprising:

a) a plurality of track-contacting wheels which includes:

- i) a driving wheel; and
- ii) an idler wheel

and

b) an endless track disposed around the plurality of track-contacting wheels and comprising:

- i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track; and
 - ii) a ground-engaging outer side for engaging the ground;
- the endless track being free of stiffening rods extending in a transversal direction of the endless track.

211. The set of track assemblies claimed in claim 210, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.

212. The set of track assemblies claimed in claim 211, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.

213. The set of track assemblies claimed in claim 212, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.

214. The set of track assemblies claimed in any one of claims 211 to 213, comprising a frame interconnecting the first idler wheel and the second idler wheel.

215. The set of track assemblies claimed in claim 214, wherein the frame is pivotable about a pivot axis substantially parallel to the axis of rotation of the driving wheel.

216. The set of track assemblies claimed in claim 215, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

217. The set of track assemblies claimed in any one of claims 214 to 216, wherein the frame comprises a first arm and a second arm shorter than the first arm.

218. The set of track assemblies claimed in claim 217, wherein the first arm and the second arm define an obtuse angle therebetween.

219. The set of track assemblies claimed in any one of claims 217 and 218, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.

220. The set of track assemblies claimed in any one of claims 214 to 219, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.

221. The set of track assemblies claimed in claim 220, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first idler wheel and the second idler wheel for adjusting the tension of the endless track.

222. The set of track assemblies claimed in claim 221, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.

223. The set of track assemblies claimed in any one of claims 221 and 222, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.

224. The set of track assemblies claimed in any one of claims 220 to 223, wherein the tension adjusting mechanism comprises a cam.

225. The set of track assemblies claimed in claim 224, wherein the cam comprises a periphery defining a plurality of notches.

226. The set of track assemblies claimed in any one of claims 224 and 225, wherein the cam comprises a handle for facilitating rotation of the cam by a user.

227. The set of track assemblies claimed in any one of claims 210 to 226, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.

228. The set of track assemblies claimed in claim 227, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.

229. The set of track assemblies claimed in claim 228, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

230. The set of track assemblies claimed in any one of claims 210 to 229, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.

231. The set of track assemblies claimed in any one of claims 210 to 230, wherein the ground-engaging surface comprises a plurality of traction projections projecting outwardly.

232. The set of track assemblies claimed in claim 231, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transverse direction of the endless track.

233. The set of track assemblies claimed in claim 232, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transverse direction of the endless track.

234. The set of track assemblies claimed in claim 231, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.

235. The set of track assemblies claimed in claim 234, wherein the lug is generally rectangular.

236. The set of track assemblies claimed in claim 231, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.

237. The set of track assemblies claimed in claim 231, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.

238. The set of track assemblies claimed in claim 237, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.

239. The set of track assemblies claimed in any one of claims 210 to 238, wherein the inner side comprises a plurality of inner lugs projecting inwardly.

240. The set of track assemblies claimed in claim 239, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of lugs of the plurality of rows of lugs being spaced apart in a longitudinal direction of the endless track.

241. The set of track assemblies claimed in claim 240, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.

242. The set of track assemblies claimed in claim 241, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.

243. The set of track assemblies claimed in any one of claims 240 to 242, wherein a first given one of the rows of lugs is a row of guide lugs to be positioned adjacent to the idler wheel.

244. The set of track assemblies claimed in claim 243, wherein the row of guide lugs is a first row of guide lugs, a second given one of the rows of lugs being a second row of guide lugs positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.

245. The set of track assemblies claimed in any one of claims 211 to 244, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the lower run of the endless track being curved in the longitudinal direction of the

track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.

246. The set of track assemblies claimed in any one of claims 211 to 244, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.
247. The set of track assemblies claimed in any one of claims 245 and 246, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.
248. The set of track assemblies claimed in any one of claims 245 to 247, wherein the track assembly is mountable to the ATV in place of a ground-engaging wheel, the track assembly being configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.
249. The set of track assemblies claimed in any one of claims 210 to 248, wherein a first track assembly and a second track assembly of the set of track assemblies are steerable to steer the ATV on the ground.
250. The set of track assemblies claimed in any one of claims 210 to 248, wherein the track assembly is connected to a body of the ATV via a rod used for direction.

251. The set of track assemblies claimed in any one of claims 210 to 250, wherein the set of track assemblies includes four track assemblies.

252. An ATV comprising the set of track assemblies claimed in any one of claims 210 to 251.

253. An endless track for a track assembly to provide traction to an all-terrain vehicle (ATV), the track assembly comprising a plurality of track-contacting wheels for contacting the endless track, the plurality of track-contacting wheels including a driving wheel to impart motion to the endless track, the endless track comprising:

- i) an inner side for engaging the plurality of track-contacting wheels, the inner side comprising a plurality of drive lugs to engage the driving wheel; and
 - ii) a ground-engaging outer side for engaging the ground;
- the endless track being free of stiffening rods extending in a transversal direction of the endless track.

254. The endless track claimed in claim 253, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.

255. The endless track claimed in claim 254, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.

256. The endless track claimed in claim 255, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track when the driving wheel imparts motion to the endless track, the

flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

257. The endless track claimed in any one of claims 253 to 256, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.

258. The endless track claimed in any one of claims 253 to 257, wherein the ground-engaging outer side comprises a plurality of traction projections.

259. The endless track claimed in claim 258, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.

260. The endless track claimed in claim 259, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.

261. The endless track claimed in claim 258, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.

262. The endless track claimed in claim 261, wherein the lug is generally rectangular.

263. The endless track claimed in claim 258, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.

264. The endless track claimed in claim 156, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.

265. The endless track claimed in claim 264, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.

266. The endless track claimed in any one of claims 253 to 265, wherein the plurality of drive lugs is arranged into a plurality of rows of drive lugs spaced apart in the transversal direction of the endless track.

267. The endless track claimed in any one of claims 253 to 266, wherein the plurality of track-contacting wheels includes an idler wheel, the inner side comprising a plurality of guide lugs being positioned adjacent to the idler wheel.

268. The endless track claimed in claim 267, wherein the plurality of guide lugs is arranged into a plurality of rows of guide lugs spaced apart in the transversal direction of the endless track, a first one of the rows of guide lugs and a second one of the rows of guide lugs being arranged to be positioned adjacent to the idler wheel such that the idler wheel passes between the first one of the rows of guide lugs and the second one of the rows of guide lugs.

269. The endless track claimed in claim 268, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless track, a third one of the rows of guide lugs and a fourth one of the rows of guide lugs being arranged to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third one of the rows of guide lugs and the fourth one of the rows of guide lugs.

270. The endless track claimed in any one of claims 253 to 266, wherein the plurality of track-contacting wheels includes a first idler wheel and a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.

271. The endless track claimed in claim 270, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.

272. The endless track claimed in claim 270, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.

273. The endless track claimed in any one of claims 270 to 272, wherein the track assembly comprises a frame interconnecting the first idler wheel and the second idler wheel.

274. The endless track claimed in claim 273, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.

275. The endless track claimed in claim 274, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

276. An ATV comprising the endless track claimed in any one of claims 253 to 275.

277. A track assembly for providing traction to an all-terrain vehicle (ATV), the track assembly comprising:

- a) a plurality of track-contacting wheels which includes:
- i) a driving wheel; and
 - ii) an idler wheel;

and

b) an endless track disposed around the plurality of track-contacting wheels and comprising:

- i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track, the inner side comprising a plurality of drive lugs to engage the driving wheel; and
- ii) a ground-engaging outer side for engaging the ground;

the endless track being free of stiffening rods extending in a transversal direction of the endless track.

278. The track assembly claimed in claim 277, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.

279. The track assembly claimed in claim 278, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.

280. The track assembly claimed in claim 279, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.

281. The track assembly claimed in any one of claims 278 to 280, comprising a frame interconnecting the first idler wheel and the second idler wheel.

282. The track assembly claimed in claim 281, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.

283. The track assembly claimed in claim 282, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

284. The track assembly claimed in any one of claims 281 to 284, wherein the frame comprises a first arm and a second arm shorter than the first arm.

285. The track assembly claimed in claim 284, wherein the first arm and the second arm define an obtuse angle therebetween.

286. The track assembly claimed in any one of claims 284 and 285, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.

287. The track assembly claimed in any one of claims 281 to 286, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.

288. The track assembly claimed in claim 287, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first idler wheel and the second idler wheel for adjusting the tension of the endless track.

289. The track assembly claimed in claim 288, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.

290. The track assembly claimed in any one of claims 288 and 289, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.
291. The track assembly claimed in any one of claims 287 to 290, wherein the tension adjusting mechanism comprises a cam.
292. The track assembly claimed in claim 291, wherein the cam comprises a periphery defining a plurality of notches.
293. The track assembly claimed in any one of claims 291 and 292, wherein the cam comprises a handle for facilitating rotation of the cam by a user.
294. The track assembly claimed in any one of claims 277 to 293, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
295. The track assembly claimed in claim 294, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
296. The track assembly claimed in claim 295, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

297. The track assembly claimed in any one of claims 277 to 296, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.

298. The track assembly claimed in any one of claims 277 to 297, wherein the ground-engaging outer side of the endless track comprises a plurality of traction projections.

299. The track assembly claimed in claim 298, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.

300. The track assembly claimed in claim 299, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.

301. The track assembly claimed in claim 298, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.

302. The track assembly claimed in claim 301, wherein the lug is generally rectangular.

303. The track assembly claimed in claim 298, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.

304. The track assembly claimed in claim 298, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.

305. The track assembly claimed in claim 304, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.

306. The track assembly claimed in any one of claims 277 to 305, wherein the plurality of drive lugs is arranged into a plurality of rows of drive lugs spaced apart in the transversal direction of the endless track.

307. The track assembly claimed in any one of claims 277 to 306, wherein the inner side comprises a plurality of guide lugs to be positioned adjacent to the idler wheel.

308. The track assembly claimed in claim 307, wherein the plurality of guide lugs is arranged into a plurality of rows of guide lugs spaced apart in the transversal direction of the endless track, a first one of the rows of guide lugs and a second one of the rows of guide lugs being arranged to be positioned adjacent to the idler wheel such that the idler wheel passes between the first one of the rows of guide lugs and the second one of the rows of guide lugs.

309. The track assembly claimed in claim 307, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless track, a third one of the rows of guide lugs and a fourth one of the rows of guide lugs being arranged to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third one of the rows of guide lugs and the fourth one of the rows of guide lugs.

310. The track assembly claimed in any one of claims 278 to 309, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the

driving wheel and from the first idler wheel to the second idler wheel, the lower run of the endless track being curved in the longitudinal direction of the track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.

311. The track assembly claimed in any one of claims 278 to 310, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.
312. The track assembly claimed in any one of claims 310 and 311, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.
313. The track assembly claimed in any one of claims 310 to 312, wherein the track assembly is mountable to the ATV in place of a ground-engaging wheel, the track assembly being configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.
314. The track assembly claimed in any one of claims 277 to 313, wherein the track assembly is steerable to steer the ATV on the ground.
315. The track assembly claimed in any one of claims 277 to 314, wherein the track assembly is connected to a body of the ATV via a rod used for direction.

316. An ATV comprising the track assembly claimed in any one of claims 277 to 315.

317. A set of track assemblies for providing traction to an all-terrain vehicle (ATV), each track assembly of the set of track assemblies comprising:

a) a plurality of track-contacting wheels which includes:

- i) a driving wheel; and
- ii) an idler wheel;

and

b) an endless track disposed around the plurality of track-contacting wheels and comprising:

- i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track, the inner side comprising a plurality of drive lugs to engage the driving wheel; and
- ii) a ground-engaging outer side for engaging the ground;

the endless track being free of stiffening rods extending in a transversal direction of the endless track.

318. The set of track assemblies claimed in claim 317, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.

319. The set of track assemblies claimed in claim 318, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.

320. The set of track assemblies claimed in claim 319, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.

321. The set of track assemblies claimed in any one of claims 318 to 320, comprising a frame interconnecting the first idler wheel and the second idler wheel.

322. The set of track assemblies claimed in claim 321, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.

323. The set of track assemblies claimed in claim 322, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

324. The set of track assemblies claimed in any one of claims 321 to 323, wherein the frame comprises a first arm and a second arm shorter than the first arm.

325. The set of track assemblies claimed in claim 324, wherein the first arm and the second arm define an obtuse angle therebetween.

326. The set of track assemblies claimed in any one of claims 324 and 325, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.

327. The set of track assemblies claimed in any one of claims 321 to 326, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.

328. The set of track assemblies claimed in claim 327, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first

idler wheel and the second idler wheel for adjusting the tension of the endless track.

329. The set of track assemblies claimed in claim 328, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.

330. The set of track assemblies claimed in any one of claims 328 and 329, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.

331. The set of track assemblies claimed in any one of claims 327 to 330, wherein the tension adjusting mechanism comprises a cam.

332. The set of track assemblies claimed in claim 331, wherein the cam comprises a periphery defining a plurality of notches.

333. The set of track assemblies claimed in any one of claims 331 and 332, wherein the cam comprises a handle for facilitating rotation of the cam by a user.

334. The set of track assemblies claimed in any one of claims 317 to 333, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.

335. The set of track assemblies claimed in claim 334, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.

336. The set of track assemblies claimed in claim 335, wherein the endless track includes a central portion aligned with the driving wheel in the transversal

direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

337. The set of track assemblies claimed in any one of claims 317 to 336, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.

338. The set of track assemblies claimed in any one of claims 317 to 337, wherein the ground-engaging outer side of the endless track comprises a plurality of traction projections.

339. The set of track assemblies claimed in claim 338, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.

340. The set of track assemblies claimed in claim 339, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.

341. The set of track assemblies claimed in claim 338, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.

342. The set of track assemblies claimed in claim 341, wherein the lug is generally rectangular.

343. The set of track assemblies claimed in claim 338, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.

344. The set of track assemblies claimed in claim 338, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.

345. The set of track assemblies claimed in claim 344 wherein the height of the traction projection is greater than or closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.

346. The set of track assemblies claimed in any one of claims 317 to 345, wherein the plurality of drive lugs is arranged into a plurality of rows of drive lugs spaced apart in the transversal direction of the endless track.

347. The set of track assemblies claimed in any one of claims 317 to 346, wherein the inner side comprises a plurality of guide lugs to be positioned adjacent to the idler wheel.

348. The set of track assemblies claimed in claim 347, wherein the plurality of guide lugs is arranged into a plurality of rows of guide lugs spaced apart in the transversal direction of the endless track, a first one of the rows of guide lugs and a second one of the rows of guide lugs being arranged to be positioned adjacent to the idler wheel such that the idler wheel passes between the first one of the rows of guide lugs and the second one of the rows of guide lugs.

349. The set of track assemblies claimed in claim 348, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless track, a third one of the rows of guide lugs and a fourth one of the rows of guide lugs being arranged to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third one of the rows of guide lugs and the fourth one of the rows of guide lugs.

350. The set of track assemblies claimed in any one of claims 318 to 349, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the lower run of the endless track being curved in the longitudinal direction of the track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.

351. The set of track assemblies claimed in any one of claims 318 to 349, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.

352. The set of track assemblies claimed in any one of claims 350 and 351, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.

353. The set of track assemblies claimed in any one of claims 350 to 352, wherein the track assembly is mountable to the ATV in place of a ground-engaging wheel, the track assembly being configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.

354. The set of track assemblies claimed in any one of claims 317 to 353, wherein a first track assembly and a second track assembly of the set of track assemblies are steerable to steer the ATV on the ground.

355. The set of track assemblies claimed in any one of claims 317 to 354, wherein the track assembly is connected to a body of the ATV via a rod used for direction.

356. The set of track assemblies claimed in any one of claims 317 to 355, wherein the set of track assemblies includes four track assemblies.

357. An ATV comprising the set of track assemblies claimed in any one of claims 317 to 356.

ABSTRACT OF THE DISCLOSURE

The present invention is concerned with track assemblies for an all-terrain vehicle, which make it maneuverable and effective upon a variety of unstable, uneven, stable and even surfaces, while designed to maintain tension upon the endless track belts to keep them in their due course and prevent accidental loosening while having a punctually localized surface contact with a ground surface, and at the same time reducing the damages inflicted on the terrain.

TITLE OF THE INVENTION

Track assembly for an all-terrain vehicle

FIELD OF THE INVENTION

[0001] The present invention relates to all-terrain vehicles. More specifically, the present invention is concerned with track assemblies for an all-terrain vehicle.

BACKGROUND OF THE INVENTION

[0002] Traditionally, two types of all-terrain vehicles are proposed either the wheel type or the tracked type.

[0003] Generally, a wheeled vehicle is more maneuverable than a tracked vehicle, but is not as efficient on uneven or soft terrain such as, for example snow.

[0004] Tracked all-terrain vehicles have been proposed, which require complicated track assemblies comprising a track frame to maintain the tension of the endless track belt and prevent it from loosening. Furthermore, such vehicles have generally a large contact area with the ground, which results in a decreased maneuverability and an increased impact on the often soft terrain.

[0005] Therefore, there is still room for improvements toward an all-terrain vehicle provided with track assemblies, which is maneuverable and effective upon a variety of unstable or uneven surfaces, while designed to maintain tension upon the endless track belts to keep them in their due course

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and prevent accidental loosening, and at the same time reducing the damages inflicted to the terrain.

OBJECTS OF THE INVENTION

[0006] An object of the present invention is therefore to provide improved track assemblies for an all-terrain vehicle.

SUMMARY OF THE INVENTION

[006A] In accordance with an aspect of the present invention, there is provided an endless track for a track assembly to provide traction to an all-terrain vehicle (ATV). The track assembly is mountable to the ATV in place of a ground-engaging wheel. The track assembly comprises a plurality of track-contacting wheels for contacting the endless track. The plurality of track-contacting wheels includes a driving wheel to impart motion to the endless track. The endless track comprises an inner side for facing the plurality of track-contacting wheels. The endless track also comprises a ground-engaging outer side for engaging the ground. The endless track is free of stiffening rods extending in a transversal direction of the endless track.

[006B] In accordance with another aspect of the present invention, there is provided a set of endless tracks for a set of track assemblies to provide traction to an all-terrain vehicle (ATV). The track assemblies are mountable to the ATV in place of ground-engaging wheels. Each endless track of the set of endless tracks comprises an inner side for facing a plurality of track-contacting wheels of a track assembly of the set of track assemblies. The plurality of track-contacting wheels includes a driving wheel to impart motion to the endless track. The endless track also comprises a ground-engaging outer side for engaging the ground. The endless track is free of stiffening rods extending in a transversal direction of the endless track.

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[006C] In accordance with another aspect of the present invention, there is provided a track assembly for providing traction to an all-terrain vehicle (ATV). The track assembly is mountable to the ATV in place of a ground-engaging wheel. The track assembly comprises a plurality of track-contacting wheels which includes (i) a driving wheel and (ii) an idler wheel. The track assembly also comprises an endless track disposed around the plurality of track-contacting wheels. The endless track comprises an inner side for facing the plurality of track-contacting wheels. The driving wheel is rotatable to impart motion to the endless track. The endless track also comprises a ground-engaging outer side for engaging the ground. The endless track is free of stiffening rods extending in a transversal direction of the endless track.

[006D] In accordance with another aspect of the present invention, there is provided a set of track assemblies for providing traction to an all-terrain vehicle (ATV). The track assemblies are mountable to the ATV in place of ground-engaging wheels. Each track assembly of the set of track assemblies comprises a plurality of track-contacting wheels which includes (i) a driving wheel and (ii) an idler wheel. The track assembly also comprises an endless track disposed around the plurality of track-contacting wheels. The endless track comprises an inner side for facing the plurality of track-contacting wheels. The driving wheel is rotatable to impart motion to the endless track. The endless track also comprises a ground-engaging outer side for engaging the ground. The endless track is free of stiffening rods extending in a transversal direction of the endless track.

[006E] In accordance with another aspect of the present invention, there is provided an endless track for a track assembly of a set of track assemblies to provide traction to an all-terrain vehicle (ATV). The ATV comprises a straddle seat and handlebars. The track assembly comprises a plurality of track-contacting wheels for contacting the endless track. The plurality of track-

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contacting wheels includes a driving wheel to impart motion to the endless track. The endless track comprises an inner side for facing the plurality of track-contacting wheels. The endless track also comprises a ground-engaging outer side for engaging the ground. The endless track is free of stiffening rods extending in a transversal direction of the endless track.

[006F] In accordance with another aspect of the present invention, there is provided a track assembly for a set of track assemblies to provide traction to an all-terrain vehicle (ATV). The ATV comprises a straddle seat and handlebars. The track assembly comprises a plurality of track-contacting wheels which includes (i) a driving wheel and (ii) an idler wheel. The track assembly also comprises an endless track disposed around the plurality of track-contacting wheels. The endless track comprises an inner side for facing the plurality of track-contacting wheels. The driving wheel is rotatable to impart motion to the endless track. The endless track also comprises a ground-engaging outer side for engaging the ground. The endless track is free of stiffening rods extending in a transversal direction of the endless track.

[006G] In accordance with another aspect of the present invention, there is provided a set of track assemblies for providing traction to an all-terrain vehicle (ATV). The ATV comprises a straddle seat and handlebars. Each track assembly of the set of track assemblies comprises a plurality of track-contacting wheels which includes (i) a driving wheel and (ii) an idler wheel. The track assembly also comprises an endless track disposed around the plurality of track-contacting wheels. The endless track comprises an inner side for facing the plurality of track-contacting wheels. The driving wheel is rotatable to impart motion to the endless track. The endless track also comprises a ground-engaging outer side for engaging the ground. The endless track is free of stiffening rods extending in a transversal direction of the endless track.

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[006H] In accordance with another aspect of the present invention, there is provided an endless track for a track assembly to provide traction to an all-terrain vehicle (ATV). The track assembly comprises a plurality of track-contacting wheels for contacting the endless track. The plurality of track-contacting wheels includes a driving wheel to impart motion to the endless track. The endless track comprises an inner side for facing the plurality of track-contacting wheels. The inner side comprises a plurality of drive lugs to engage the driving wheel. The endless track comprises a ground-engaging outer side for engaging the ground. The endless track is free of stiffening rods extending in a transversal direction of the endless track.

[006I] In accordance with another aspect of the present invention, there is provided a track assembly for providing traction to an all-terrain vehicle (ATV). The track assembly comprising a plurality of track-contacting wheels which includes (i) a driving wheel and (ii) an idler wheel. The track assembly comprises an endless track disposed around the plurality of track-contacting wheels. The endless track comprises an inner side for facing the plurality of track-contacting wheels. The driving wheel is rotatable to impart motion to the endless track. The inner side comprises a plurality of drive lugs to engage the driving wheel. The endless track comprises a ground-engaging outer side for engaging the ground. The endless track is free of stiffening rods extending in a transversal direction of the endless track.

[006J] In accordance with another aspect of the present invention, there is provided a set of track assemblies for providing traction to an all-terrain vehicle (ATV). Each track assembly of the set of track assemblies comprises a plurality of track-contacting wheels which includes (i) a driving wheel and (ii) an idler wheel. The track assembly comprises an endless track disposed around the plurality of track-contacting wheels. The endless track comprises an inner side for facing the plurality of track-contacting wheels. The driving wheel is rotatable to impart motion to the endless track. The inner side comprises a plurality of drive

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lugs to engage the driving wheel. The endless track comprises a ground-engaging outer side for engaging the ground. The endless track is free of stiffening rods extending in a transversal direction of the endless track.

[006K] In accordance with another aspect of the present invention, there is provided an endless track for a track assembly that can be substituted to a ground engaging wheel of a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces, the track assembly comprising a track driving wheel, the endless track comprising: an inner face and an opposite ground engaging outer face; a plurality of track drive wheel engaging members longitudinally spaced apart along the track for sequentially engaging the track driving wheel such that rotation of the track driving wheel imparts motion to the endless track to propel the reduced-size vehicle; a longitudinal segment spanning two or more track driving wheel engaging members being free of stiffening rods that extend in a transverse direction of the endless track.

[006L] In accordance with another aspect of the present invention, there is provided an endless track for a track assembly that can be substituted to a ground engaging wheel of a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces that is steerable by operating a steering mechanism, the track assembly comprising a track driving wheel, the endless track comprising: an inner face and an opposite ground engaging outer face; a plurality of track drive wheel engaging members longitudinally spaced apart along the track for engaging the track driving wheel such that rotation of the track driving wheel imparts motion to the endless track to propel the reduced-size vehicle; a plurality of stiffening rods longitudinally spaced apart, the stiffening rods having longitudinal dimensions less than a transverse dimension of the endless track.

[006M] In accordance with another aspect of the present invention, there is provided an endless track for a track assembly that can be substituted to a ground engaging wheel of a reduced-size vehicle designed primarily for off-highway usage,

over undeveloped roads or other unprepared surfaces that is steerable by operating a steering mechanism of the reduced-size vehicle, the track assembly comprising a track driving wheel, the endless track comprising: an inner face and an opposite ground engaging outer face; a plurality of track drive wheel engaging members longitudinally spaced apart along the track for engaging the track driving wheel such that rotation of the track driving wheel imparts motion to the endless track to propel the reduced-size vehicle; a central portion and a pair of opposite lateral end portions on either side of the central portion; a longitudinally extending segment spanning two or more track driving wheel engaging members having lateral end portions free of stiffening rods that extend in a transverse direction of the endless track.

[006N] In accordance with another aspect of the present invention, there is provided an endless track for a track assembly that can be substituted to a ground engaging wheel of a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces, the track assembly comprising a track driving wheel, the endless track comprising: an inner face and an opposite ground engaging outer face; a plurality of traction lugs projecting from the ground engaging outer face and longitudinally spaced apart along the track; a longitudinal segment spanning two or more traction lugs being free of stiffening rods that extend in a transverse direction of the endless track.

[006O] In accordance with another aspect of the present invention, there is provided an endless track for a track assembly that can be substituted to a ground engaging wheel a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces that is steerable by operation of a steering mechanism, the track assembly comprising a track driving wheel, the endless track: having an inner face and an opposite ground engaging outer face; having a plurality of drive projections longitudinally spaced apart along the track for sequentially engaging the track driving wheel such that rotation of the track driving wheel imparts motion of the endless track to propel the reduced-size vehicle; having a plurality of traction lugs projecting from the ground engaging outer face, the

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traction lugs being longitudinally spaced apart and registering with respective ones of the drive projections; having a portion defined between one of the drive projections and a registering traction lug being free of a stiffening rod.

[006P] In accordance with another aspect of the present invention, there is provided an endless track for a track assembly that can be substituted to a ground engaging wheel of a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces that is steerable by operation of a steering mechanism, the track assembly comprising a track driving wheel, the endless track: having an inner face and an opposite ground engaging outer face; having a plurality of track drive wheel engaging members longitudinally spaced apart along the track for engaging the track driving wheel such that rotation of the track driving wheel imparts motion to the endless track to propel the reduced-size vehicle; having a central portion and a pair of lateral end portions on either side of the central portion; having a variable transverse stiffness profile and manifesting a higher stiffness to effort to transversely bend the endless track at the central portion than at either one of the lateral end portions.

[006Q] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly by a steering mechanism, the track assembly comprising: a track driving wheel; an endless track, the track driving wheel being in a driving engagement with the endless track, the endless track including: an inner face and an opposite ground engaging outer face; a plurality of track drive wheel engaging members longitudinally spaced apart along the track for sequentially engaging the track driving wheel such that rotation of the track driving wheel imparts motion to the endless track; a longitudinal segment spanning two or more track driving wheel engaging members being free of stiffening rods that extend in a transverse direction of the endless track.

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[006R] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly by a steering mechanism operated with handlebars, the track assembly comprising: a track driving wheel; an endless track, the track driving wheel being in a driving engagement with the endless track, the endless track including: an inner face and an opposite ground engaging outer face; a plurality of track drive wheel engaging members longitudinally spaced apart along the track for sequentially engaging the track driving wheel such that rotation of the track driving wheel imparts motion to the endless track; a plurality of stiffening rods longitudinally spaced apart, the stiffening rods having longitudinal dimensions less than a transverse dimension of the endless track.

[006S] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly by operation of a steering mechanism, the track assembly comprising: a track driving wheel; an endless track, the track driving wheel being in a driving engagement with the endless track, the endless track including: an inner face and an opposite ground engaging outer face; a plurality of track drive wheel engaging members longitudinally spaced apart along the track for sequentially engaging the track driving wheel such that rotation of the track driving wheel imparts motion to the endless track; a longitudinally extending segment spanning two or more track driving wheel engaging members having lateral end portions free of stiffening rods that extend in a transverse direction of the endless track.

[006T] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly with a steering mechanism, the track

assembly comprising: a track driving wheel; an endless track, the track driving wheel being in a driving engagement with the endless track, the endless track including: an inner face and an opposite ground engaging outer face; a plurality of track drive wheel engaging members longitudinally spaced apart along the track for sequentially engaging the track driving wheel such that rotation of the track driving wheel imparts motion to the endless track; a plurality of traction lugs projecting from the ground engaging outer face and longitudinally spaced along the track; a longitudinal segment spanning two or more traction lugs being free of stiffening rods that extend in a transverse direction of the endless track.

[006U] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly by operation of a steering mechanism, the track assembly comprising: a track driving wheel; an endless track, the track driving wheel being in a driving engagement with the endless track, the endless track including: an inner face and an opposite ground engaging outer face; a plurality of drive projections longitudinally spaced apart along the track for sequentially engaging the track driving wheel such that rotation of the track driving wheel imparts motion to the endless track; a plurality of traction lugs projecting from the ground engaging outer face, the traction lugs being longitudinally spaced apart and registering with respective ones of the drive projections; a portion defined between one of the drive projections and a registering traction lug being free of a stiffening rod.

[006V] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces that is steerable by changing an orientation of the track assembly by a steering mechanism, the track assembly comprising a track driving wheel and an the endless track, the endless track: having an inner face and an opposite ground engaging

outer face; having a plurality of track drive wheel engaging members longitudinally spaced apart along the track for engaging the track driving wheel such that rotation of the track driving wheel imparts motion to the endless track to propel the reduced-size vehicle; having a central portion and a pair of lateral end portions on either side of the central portion; having a variable transverse stiffness profile and manifesting a higher stiffness to effort to transversely bend the endless track at the central portion than at either one of the lateral end portions.

[006W] In accordance with another aspect of the present invention, there is provided an endless track for a track assembly that can be substituted to a ground engaging wheel of a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces that is steerable by operating a steering mechanism, the track assembly comprising a track driving wheel, the endless track: having an inner face and an opposite ground engaging outer face; having a plurality of track drive wheel engaging members longitudinally spaced apart along the track for engaging the track driving wheel such that rotation of the track driving wheel imparts motion to the endless track to propel the reduced-size vehicle; having a central portion and a pair of opposite lateral end portions; having a traction lug arrangement projecting from the outer face, the traction lug arrangement having a variable projecting height dimension that diminishes from the central portion toward the lateral end portions.

[006X] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly by a steering mechanism, the track assembly comprising: an endless track having an outer ground engaging face and an opposite inner face; a plurality of wheels supporting and guiding the endless track, the plurality of wheels including: a front and rear idler wheels in a spaced apart relationship, a segment of the endless track extending between the front and the rear idler wheels defining a ground engaging run; wheel means located between the

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front and rear idler wheels, the wheel means being in rolling contact with the inner face of the ground engaging run; the front and rear idler wheels and the wheel means being spatially arranged such as to provide the ground engaging run of the endless track with a leading section, a load bearing section and a trailing section; the load bearing section being located underneath the wheel means and transferring to the ground surface a major portion of the load carried by the track assembly; the leading section extending between the front idler wheel and the load bearing section, the leading section being oriented such as to converge toward the ground surface when the endless track is in motion and propels the vehicle; the trailing section extending between the load bearing section and the rear idler wheel, the trailing section being oriented such as to diverge from the ground surface when the endless track is in motion and propels the vehicle; the endless track including: a plurality of track driving projections protruding from the inner face and longitudinally spaced apart along the track; a longitudinal segment spanning two or more track driving projections being free of stiffening rods that extend in a transverse direction of the endless track.

[006Y] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly by a steering mechanism of the vehicle, the track assembly comprising: an endless track having an outer ground engaging face and an opposite inner face; a plurality of wheels supporting and guiding the endless track, the plurality of wheels including: a front and rear idler wheels in a spaced apart relationship, a segment of the endless track extending between the front and the rear idler wheels defining a ground engaging run; wheel means located between the front and rear idler wheels, the wheel means being in rolling contact with the inner face of the ground engaging run; the front and rear idler wheels and the wheel means being spatially arranged such as to provide the ground engaging run of the endless track with a leading section, a load bearing section and a trailing section; the load bearing section being located underneath the wheel

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means and transferring to the ground surface a major portion of the load carried by the track assembly; the leading section extending between the front idler wheel and the load bearing section, the leading section being oriented such as to converge toward the ground surface when the endless track is in motion and propels the vehicle; the trailing section extending between the load bearing section and the rear idler wheel, the trailing section being oriented such as to diverge from the ground surface when the endless track is in motion and propels the vehicle; the endless track including: a plurality of track driving projections protruding from the inner face and longitudinally spaced apart along the track; a plurality of stiffening rods longitudinally spaced apart, the stiffening rods having longitudinal dimensions less than a transverse dimension of the endless track.

[006Z] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly by operation of a steering mechanism of the vehicle, the track assembly comprising: an endless track having an outer ground engaging face and an opposite inner face; a plurality of wheels supporting and guiding the endless track, the plurality of wheels including: a front and rear idler wheels in a spaced apart relationship, a segment of the endless track extending between the front and the rear idler wheels defining a ground engaging run; wheel means located between the front and rear idler wheels, the wheel means being in rolling contact with the inner face of the ground engaging run; the front and rear idler wheels and the wheel means being spatially arranged such as to provide the ground engaging run of the endless track with a leading section, a load bearing section and a trailing section; the load bearing section being located underneath the wheel means and transferring to the ground surface a major portion of the load carried by the track assembly; the leading section extending between the front idler wheel and the load bearing section, the leading section being oriented such as to converge toward the ground surface when the endless track is in motion and propels the vehicle; the trailing section extending between the load bearing section and the

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rear idler wheel, the trailing section being oriented such as to diverge from the ground surface when the endless track is in motion and propels the vehicle; the endless track including: a plurality of track driving projections protruding from the inner face and longitudinally spaced apart along the track; a longitudinally extending segment spanning two or more track driving projections having lateral end portions free of stiffening rods that extend in a transverse direction of the endless track.

[06AA] In accordance with another aspect of the present invention, there is provided a track assembly for an a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly with a steering mechanism, the track assembly comprising: an endless track having an outer ground engaging face and an opposite inner face; a plurality of wheels supporting and guiding the endless track, the plurality of wheels including: a front and rear idler wheels in a spaced apart relationship, a segment of the endless track extending between the front and the rear idler wheels defining a ground engaging run; wheel means located between the front and rear idler wheels, the wheel means being in rolling contact with the inner face of the ground engaging run; the front and rear idler wheels and the wheel means being spatially arranged such as to provide the ground engaging run of the endless track with a leading section, a load bearing section and a trailing section; the load bearing section being located underneath the wheel means and transferring to the ground surface a major portion of the load carried by the track assembly; the leading section extending between the front idler wheel and the load bearing section, the leading section being oriented such as to converge toward the ground surface when the endless track is in motion and propels the vehicle; the trailing section extending between the load bearing section and the rear idler wheel, the trailing section being oriented such as to diverge from the ground surface when the endless track is in motion and propels the vehicle; the endless track including: a plurality of track driving projections protruding from the inner face and longitudinally spaced apart along the track; a plurality of traction lugs projecting from the ground engaging outer face and longitudinally spaced along the track; a longitudinal segment

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spanning two or more traction lugs being free of stiffening rods that extend in a transverse direction of the endless track.

[06BB] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly by operation of a steering mechanism, the track assembly comprising: an endless track having an outer ground engaging face and an opposite inner face; a plurality of wheels supporting and guiding the endless track, the plurality of wheels including: a front and rear idler wheels in a spaced apart relationship, a segment of the endless track extending between the front and the rear idler wheels defining a ground engaging run; wheel means located between the front and rear idler wheels, the wheel means being in rolling contact with the inner face of the ground engaging run; the front and rear idler wheels and the wheel means being spatially arranged such as to provide the ground engaging run of the endless track with a leading section, a load bearing section and a trailing section; the load bearing section being located underneath the wheel means and transferring to the ground surface a major portion of the load carried by the track assembly; the leading section extending between the front idler wheel and the load bearing section, the leading section being oriented such as to converge toward the ground surface when the endless track is in motion and propels the vehicle; vi) the trailing section extending between the load bearing section and the rear idler wheel, the trailing section being oriented such as to diverge from the ground surface when the endless track is in motion and propels the vehicle; the endless track including: a plurality of track driving projections protruding from the inner face and longitudinally spaced apart along the track; a plurality of traction lugs projecting from the ground engaging outer face, the traction lugs being longitudinally spaced apart and registering with respective ones of the track driving projections; a portion defined between one of the track driving projections and a registering traction lug being free of a stiffening rod.

[06CC] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces that is steerable by changing an orientation of the track assembly by a steering mechanism, the track assembly comprising: an endless track having an outer ground engaging face and an opposite inner face; a plurality of wheels supporting and guiding the endless track, the plurality of wheels including: a front and rear idler wheels in a spaced apart relationship, a segment of the endless track extending between the front and the rear idler wheels defining a ground engaging run; wheel means located between the front and rear idler wheels, the wheel means being in rolling contact with the inner face of the ground engaging run; the front and rear idler wheels and the wheel means being spatially arranged such as to provide the ground engaging run of the endless track with a leading section, a load bearing section and a trailing section; the load bearing section being located underneath the wheel means and transferring to the ground surface a major portion of the load carried by the track assembly; the leading section extending between the front idler wheel and the load bearing section, the leading section being oriented such as to converge toward the ground surface when the endless track is in motion and propels the vehicle; the trailing section extending between the load bearing section and the rear idler wheel, the trailing section being oriented such as to diverge from the ground surface when the endless track is in motion and propels the vehicle; the endless track including: a plurality of track driving projections protruding from the inner face and longitudinally spaced apart along the track; a central portion and a pair of lateral end portions on either side of the central portion; a variable transverse stiffness profile and manifesting a higher stiffness to effort to transversely bend the endless track at the central portion than at either one of the lateral end portions.

[06DD] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly by a steering mechanism of the

vehicle, the track assembly having a leading end and a trailing end and comprising: an endless track having an outer ground engaging surface and an opposite inner surface; a plurality of wheels for supporting and driving the endless track, the plurality of wheels including: a leading idler and a trailing idler, the leading and trailing idlers being in a spaced apart relationship, a segment of the endless track extending between the leading and the trailing idlers defining a ground engaging run, the leading and trailing idlers having first and second respective axes of rotation; a drive wheel having a third axis of rotation and being in driving engagement with the endless track for imparting movement to the endless track; the ground engaging run, having: a load bearing section located between the leading idler and the trailing idler, the load bearing section transferring to the ground surface a major portion of the load carried by the track assembly, the load bearing section having a longitudinal extent that does not exceed a diameter of the drive wheel; a leading section extending between the leading idler and the load bearing section, the leading section being oriented such as to converge toward the ground surface when the endless track is in motion and propels the vehicle; a trailing section extending between the load bearing section and the trailing idler, the trailing section being oriented such as to diverge from the ground surface when the endless track is in motion and propels the vehicle; a first horizontal distance defined between the first axis of rotation and the third axis of rotation being different from a second horizontal distance defined between the second axis of rotation and the third axis of rotation.

[06EE] In accordance with another aspect of the present invention, there is provided a track assembly for a reduced-size vehicle designed primarily for off-highway usage, over undeveloped roads or other unprepared surfaces steerable by changing an orientation of the track assembly by operation of a steering mechanism of the vehicle, comprising: an endless track having an outer ground facing surface and an opposite inner surface; a plurality of wheels for supporting and driving the endless track, including: a drive wheel for rotation about a first rotation axis in driving engagement with the endless track; a leading idler for rotation about a second rotation axis vertically spaced apart from the first rotation axis; a trailing idler wheel

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for rotation about a third rotation axis vertically spaced apart from the first rotation axis and horizontally spaced apart from the second rotation axis; the drive wheel being in an overlapping relationship with one of the leading and trailing idlers.

[06FF] In accordance with another aspect of the present invention, there is provided an endless track for a track assembly mountable to an axle of an all-terrain vehicle (ATV) to provide traction to the ATV on the ground, the track assembly being configured to replace a ground-engaging wheel mountable to the axle of the ATV, the track assembly comprising a plurality of track-contacting wheels for contacting the endless track, the plurality of track-contacting wheels including a drive wheel for driving the endless track when the axle of the ATV rotates, the endless track comprising: an inner surface for facing the plurality of track-contacting wheels; ground-engaging outer surface for engaging the ground; and a plurality of traction projections projecting from the ground-engaging outer surface and spaced in a longitudinal direction of the endless track; wherein at least a segment of the endless track including two or more of the traction projections is free of stiffening rods which (1) extend in a transversal direction of the endless track for at least a majority of a width of the endless track and (2) are made of a rigid material at least as rigid as glass fiber.

[0007] In accordance with another aspect of the present invention, there is provided an all-terrain vehicle comprising at least two track assemblies to support the all-terrain vehicle onto a ground surface, each one of said at least two track assemblies comprising: a longitudinal endless track belt provided with an inner surface provided with a plurality of inner lugs and an outer surface provided with a plurality of external lugs; a mounting structure to mount said longitudinal endless track belt to said vehicle, wherein, when mounted to said mounting structure, said longitudinal endless track belt has a punctually localized surface contact with the ground surface.

[0008] In accordance with another aspect of the present invention, there is provided an endless track belt assembly comprising: a track driving wheel provided with a plurality of teeth; an endless track belt provided with an inner surface having a plurality of inner lugs and an outer surface having a plurality of external lugs, said endless track belt being wound around said track driving wheel; wherein a) said teeth are so spaced that a distance between two consecutive teeth spans a distance separating two consecutive inner lugs of said endless track belt and b) said endless track belt, when mounted to said track driving wheel, has a punctually localized contact with a ground surface.

[0009] In accordance with another aspect of the present invention, there is provided a method for mounting an endless track belt on a all-terrain vehicle, comprising the acts of: providing an endless track belt having inner lugs and external lugs; providing a track driving wheel having a plurality of teeth so spaced that a distance between two consecutive of the plurality of teeth spans a distance separating two consecutive of a plurality of inner lugs of the endless track belt; interconnecting the track driving wheel to an inside idler wheel and to an outside idler wheel; and tensioning the endless track belt around the track driving wheel, the inside idler wheel and the outside idler wheel so that the endless track belt has a punctually localized surface contact with a ground surface.

[0010] Other objects, advantages and features of the present invention will become more apparent upon reading of the following non-restrictive description of preferred embodiments thereof, given by way of example only with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] In the appended drawings:

[0012] Figure 1 is a side elevational view of an all-terrain vehicle provided with track assemblies according to an embodiment of the present invention;

[0013] Figure 2 is a side elevational view of the front track assembly of the vehicle of Figure 1, seen from of the outside of the all-terrain vehicle;

[0014] Figure 3 is a side elevational view of the front track assembly of the vehicle of Figure 1, seen form the inside of the all-terrain vehicle;

[0015] Figure 4 is a sectional view taken along the line 4-4 of Figure 3;

[0016] Figure 5 is an enlarged side view of an outside idler wheel attachment of the track assembly of Figure 2;

[0017] Figure 6 is a sectional view of a rigid member of the track assembly of Figure 2;

[0018] Figure 7 is a top plan view of the attachment of the front track assembly of Figure 1 to the all-terrain vehicle;

[0019] Figure 8 is a side elevational view of a rear track assembly of Figure 1, seen from the inside of the all-terrain vehicle;

[0020] Figure 9 is a top plan view of the attachment of the rear track assembly of Figure 1 to the all-terrain vehicle;

[0021] Figure 10 is a sectional view similar to Figure 4 but illustrating a second type of endless track; and

[0022] Figure 11 is a sectional view similar to Figure 4 but illustrating a third type of endless track.

DESCRIPTION OF THE EMBODIMENT

[0023] A track assembly for an all-terrain vehicle according to an embodiment of the present invention will now be described in details with reference to the appended drawings.

[0024] Figure 1 shows an all-terrain vehicle 10 comprising a body 12, a straddle seat 51, handlebars 53, and four track assemblies (only two shown) according to the present invention arranged in a plane adjacent to each side of the vehicle 10.

[0025] There are two identical track assemblies in the front of the all-terrain vehicle 10, of which only one track assembly 14 is visible in Figure 1, in place of conventional front wheels. Similarly, there are two identical track assemblies, of which only one track assembly 16 is visible in Figure 1, in place of the conventional rear wheels.

[0026] Only the track assemblies 14 and 16 visible in Figure 1 will be described hereinbelow. Furthermore, as they are symmetrical about a vertical axis 22 when viewed from the outside of the vehicle 10 (see Figure 1), only the track assemblies 14 will be described hereinbelow. It is also to be noted that the elements as seen from the outside of the vehicle 10 will bear the same

numbers in the rear track assembly 16 than the corresponding ones in the front track assembly 14, with a prime.

[0027] However, since the attachment of rear and front track assemblies differs as seen from the inside of the vehicles 10, they will be described separately.

[0028] The front track assembly 14 is better seen in Figure 2. It comprises a longitudinal endless track belt 23 and a mounting structure to mount the endless track belt 23 to the vehicle 10. The mounting structure includes a track driving wheel 24, a pair of inside idler wheels 26, a pair of outside idler wheels 28 and supports to interconnect the wheels 24, 26 and 28 as will be described hereinbelow.

[0029] The endless track belt 23 is provided with inner lugs 30 on its inner surface 31 and with external lugs 32 on its outer surface 33. It is wound around the track driving wheel 24 and the idler wheels 28 and 26.

[0030] As can be better seen from Figure 4, the track driving wheel 24 is mounted to a conventional hub 35 of the all-terrain vehicle 10. The wheel 24 includes a first mounting plate 37 mounted to the hub 35 and a second mounting plate 34 mounted to the first plate 37 via four bolt and spacer assemblies 36. A circular disk 38 is mounted to the bolt and spacer assemblies 36 and includes equidistant wide teeth 40 contacting the inner surface 31 of the track 23.

[0031] As will be apparent to one skilled in the art, the equidistant teeth 40 are so located as to cooperate with some of the inner lugs 30 of the endless track belt 23. More precisely, as can be better seen from Figure 2, the

teeth 40 are spaced so that the distance between two consecutive teeth 40 spans the distance separating consecutive inner lugs 30 of the endless track belt 23, in a meshing engagement, in such a way as to drive the endless track belt 23.

[0032] Each of the inside idler wheels 26 includes a peripheral portion in contact with the internal surface 31 of the track 23. The wheels 26 are interconnected by a spacing element (not shown).

[0033] Similarly, each outer idler wheel 28 includes a peripheral portion in contact with the internal surface 31 of the track 23. The wheels 28 are interconnected by a spacing element 42.

[0034] The wheels 24, 26 and 28 are interconnected, as seen from the outside of the track assembly 14, by an angled connecting element 44. The angled connecting element 44 has a center portion 46 provided with an aperture 48 in which bearings 50 are mounted. A fastener 52 connects the connecting element 44 to the second plate 34 while allowing the angled connecting element 44 to pivot about the fastener.

[0035] The connecting element 44 has a short arm 54 having a free end to which the inside idler wheels 26 are rotatably mounted. The connecting element 44 also has a long arm 56 having a free end to which the inside idler wheels 28 are rotatably mounted as will be further discussed hereinbelow. The connecting element 44 is better seen from the top plan view of Figure 6.

[0036] Turning now briefly to Figure 3 of the appended drawings, as can be seen from the inside of the all-terrain vehicle 10, the idler wheels 26 and 28 of the front track assembly 14 are also directly connected together by an

elbowed connection element 58. The inside idler wheels 26 are rotatably mounted to a first end of the elbowed connection element 58 while the outside idler wheels 28 are rotatably mounted to a second end of the elbowed connection element 58.

[0037] The rotatable connection of the outside idler wheels 28 to the angle connection element 44 and to the elbowed connection element 58 will now be described with reference to Figure 5.

[0038] As will easily be understood by one skilled in the art upon inspection of Figure 5, the tension of the endless track belt 23 is adjusted by the connection of the outside idler wheels 28 to the elements 44 and 58. For concision purpose, only the connection of the wheels 28 to the elbowed connection element 58 will be described.

[0039] With reference to the enlarged side view of Figure 5, a tension adjusting assembly according to another aspect of the present invention will be described. As can be seen from this figure, a distal end of the connection element 58 includes a slotted aperture 60 receiving a fastener 62 used to rotatably mount the wheels 28 to the assembly. By sliding the fastener 62 in the aperture 60, it is possible to increase or decrease the tension on the track 23. To adjust and maintain this track tension, a cam element 64, having an outer periphery provided with notches 66 located at different distances from the attachment point of the element 64, is mounted to the fastener 62. By selecting which notch 66 is in contact with a fixed pin 68 of the element 58, a predetermined tension may be maintained. It is to be noted that the cam element 64 is provided with a handle 70 to facilitate the manipulation by a user.

[0040] Returning to Figure 4 of the appended drawings the endless track 23 will be described in greater detail.

[0041] As can be seen from Figure 4, the overall profile of the track 23, from one side to the other, i.e. transversely, is generally convex. However, the convex profile of the track 23 is created by a lug arrangement comprising two successive transverse rows of lugs arranged in a staggered relationship.

[0042] A first transverse row of lugs contains three lugs 72, 74 and 76 and a second row of lugs contains four lugs 78, 80, 82 and 84. These lugs are symmetrical about a longitudinal axis (not shown).

[0043] A first lateral lug 72 of the first row includes three ground-contacting surfaces separated by two indentations. The shape of lateral lug 72 is such that the ground contacting surfaces are generally transversally convex.

[0044] A central lug 74 is centered about longitudinal axis and includes two ground-contacting surfaces separated by an indentation. The ground contacting surfaces are symmetrical about the longitudinal axis and are generally transversally convex.

[0045] A second lateral lug 76 is a mirror image of lug 72 about the longitudinal axis.

[0046] The first and second lateral lugs 72 and 76 are laterally spaced apart from the central lug 74.

[0047] In the second transverse row of lugs, a first intermediate lug 80 includes two ground-contacting surfaces separated by an indentation. The ground engaging surfaces are slightly transversally convex.

[0048] A first external lug 78 includes two ground-contacting surfaces that are separated by an indentation and are transversally convex.

[0049] Finally, the second intermediate lug 82 and the second external lug 84 are respectively mirror images of lugs 80 and 78 with respect to the longitudinal axis. For concision purposes, these lugs will not be further described herein.

[0050] Of course, the sequences described hereinabove of the lug arrangement defined by the rows of lugs are repeated onto the entire external surface of the endless track 23.

[0051] The endless track belt 23 further includes, for each row of lugs, a stiffening rod 71, made of glass fibers for example. Each stiffening rod 71 is embedded in the material forming the track belt 23 so as to be generally parallel to the inner surface 31 thereof. The rods 71 provide enhanced rigidity to the endless track belt 23. The enhanced rigidity of the track belt 23 has many advantages. For example, it helps the track to provide adequate traction even when the center portion of the track is not in direct contact with the ground, as illustrated in Figure 4. However, it has been found that this type of traction may be detrimental to the steering of the vehicle in some conditions.

[0052] As it is apparent from Figure 4 the ground contacting surfaces of symmetrical lugs 78 and 84 are not aligned with the outer surfaces of the other lugs to form a continuous profile. Indeed, the ground contacting surfaces

of lugs 78 and 84 are more angled and exceed the convex profile defined by the other lugs. This configuration of the outer lugs is advantageous since it further prevents the vehicle from tipping over during sharp turns at high speed when the vehicle 10 is severely tilted.

[0053] As mentioned hereinabove, the way the front track assembly 14 is attached to the body 12 of the vehicle 10 differs from the way the rear track assembly 16 is attached to the body 12 of the vehicle 10. These two attachments will be described hereinbelow.

[0054] The front track assembly 14 is attached to the body 12 of the vehicle 10 in a fashion shown in Figures 4 and 7, while the rear track assembly 16 is attached to the body 12 of the vehicle 10 in a fashion shown in Figure 8 and 9.

[0055] As seen in Figures 4 and 7, the front track assembly 14 is mounted to a tubular wheel table 100 of the vehicle 10 by means of a generally triangular plate 102 fastened thereto by a plurality of U-bolts 104, 106, 108 and 110. A rod 112 is connected between the elbowed connection element 58 and a pivot 114 of the tubular wheel table 100. A first end of the rod 112 is attached to the elbowed connection element 58 by means of rubber damping elements 116, in such a way as to allow a vertical movement at this point of the rod 112 in relation to the elbowed connection element 58. A second end of the rod 112 is attached to the pivot 114 of the tubular wheel table 100 by means of an R-clip 120, in such a way as to allow at this point a horizontal movement of the plate 102 holding the tubular wheel table 100 relative to the elbowed connection element 58.

[0056] The front track assembly 14 is further attached to the body 12 of the vehicle 10 through a conventional rod 150 of the suspension system of the vehicle 10 and a conventional rod 157 used for direction (see Figure 4).

[0057] As seen in Figures 8 and 9, the rear track assembly 16 is mounted to the body 12 of the vehicle 10 by a rod 212. The rod 212 is connected on a first end to the elbowed connection element 58' by means of a rubber damping attachment 216. It is attached, on a second end, to a tubular chassis 130 of the body 12 of the vehicle 10 by means of a chipping joint 132 fastened thereto by an R-clip 134.

[0058] From the above description of the fashion in which the front and rear track assemblies 14 and 16 are mounted to the body 12 of the vehicle 10, in relation to Figures 4 and 7, and 8 and 9 respectively, the present invention provides for track assemblies that are easily removed or mounted to the vehicle 10, through using R-clips (120 and 134), which enable disconnecting the track assemblies from the vehicle in a simple manner.

[0059] As stated hereinabove, the interior surface 31 of the endless track belt 23 is provided with a plurality of equally spaced lugs 30, which ensure a positive engagement with the teeth 40 provided on the outer circumference of the wheel 24. In operation, the wheel 24 is coupled to a drive shaft, via the hub 30, connected to an engine (not shown), in such a way that the engine drives the wheel 24 in rotation. The wheel 24 thus drives the endless track belt 23 by the meshing engagement of the teeth 40 with the internal lugs 30 of the endless track belt 23.

[0060] It is further to be understood that the external lugs 32 on the external circumference surface of the endless track belt 23 respectively exert a

positive mechanical connection with the underlying ground surface that contributes to propel the vehicle 10.

[0061] Figure 10 and Figure 11 show sectional views similar to that of Figure 4 but illustrating variants of an endless track that may be mounted to the track assembly of the present invention.

[0062] In Figure 10, the overall profile of the endless track belt 23a, from one side to the other, i.e. transversely, is generally convex.

[0063] The convex profile of the endless track belt 23a is created by the same lug arrangement as that described hereinabove in relation to Figure 4. In this specific embodiment however, the endless track belt 23a does not include stiffening rods under each row of lugs. Consequently, the rigidity of the endless track belt 23a is less than the rigidity of the endless track belt 23 (Figure 4) and the profile of the endless track belt 23a conforms itself to the profile of the ground. Since the pressure is more localized in the center of the endless track belt 23a, a more punctually localized contact zone between the endless track belt 23a and the ground 29 is created. In many cases, this punctually localized contact zone makes the vehicle 10 more maneuverable.

[0064] Turning now to Figure 11, a third version of an endless track belt 23b will be described. The endless track belt 23b is wound around the track driving wheel 24 and the idler wheels 28 and 26, is still provided with inner lugs 30 on its inner surface 31. However, its outer surface is provided with rectangular lugs 86. Since there are no stiffening rods in the endless track belt 23b, the endless track belt 23b is free to conform itself to the ground 29, as seen in Figure 11. Furthermore, since the pressure is exerted only in the middle

of the endless track belt 23b by the wide teeth 40, a punctually localized contact zone between the endless track belt 23b and the ground 29 is created.

[0065] As will be apparent to one skilled in the art, the endless track belts 23a has a particularly punctually localized contact surface with the ground 29. Indeed, since it is transversally convex, it generally contacts the ground 29 with a limited surface at any given time when the ground 29 is hard.

[0066] Furthermore, since there are no guiding rails for the endless track belts 23, 23a or 23b, the external lugs only exert a pressure on the ground 29, when it is hard, in the vicinity of the wide teeth 40 if the wheel 24. These two combined features improve the maneuverability of the vehicle since it emulates the contact of a conventional tire onto hard ground, given that a shortened length of contact of the endless track with the ground surface reduces the resistance to a turning force.

[0067] Of course, one skilled in the art could designed another convex profile of the external lugs of the endless track belts 23 and/or another arrangement of the mounting assembly of the endless track belts 23 to the vehicle 10 to obtain this "one point contact" feature without departing from the spirit and nature of the present invention. For example, one could provide a guiding rail having a convex profile and transversally convex lugs to achieve similar results.

[0068] As people in the art will understand, the all-terrain vehicle of the present invention, provided with four endless track assemblies, can be used for a wide range of operations and terrain, while being highly mobile and offering good running performance.

[0069] The endless track structure maintains an adequate configuration over a variety of surfaces.

[0070] It will be obvious to people skilled in the art that the present invention can be applied both in the case of a two-wheel drive vehicle wherein the power is typically applied only to the rear track belt assemblies and the front track assemblies merely facilitate steering, and in the case of a four-wheel vehicle, wherein power is independently provided to each one of the four track assemblies.

[0071] As will be further understood by one skilled in the art, the all-terrain vehicle 10, equipped with track assemblies according to the present invention, may be viewed as a snow vehicle since it may be used on snow as efficiently as conventional snow vehicles such as snowmobiles, for example. However, the one-point contact feature of the present invention allows the use of the all-terrain vehicle on harder surface without the usual drawbacks of tracked vehicles.

[0072] Interestingly, the present track assembly system can equip all four wheels of an all-terrain vehicle or only the front or rear wheels thereof, since it only weakly reduces the speed of the vehicle relative to the underground surface.

[0073] A further possibility would be to use track assemblies according to the present invention in place of the rear wheels of a vehicle, while mounting skis in place of the front wheels thereof.

[0074] Although the present invention has been described hereinabove by way of preferred embodiments thereof, it can be modified,

without departing from the spirit and nature of the subject invention as defined in the appended claims.

CLAIMS:

1. An endless track for a track assembly to provide traction to an all-terrain vehicle (ATV), the track assembly being mountable to the ATV in place of a ground-engaging wheel, the track assembly comprising a plurality of track-contacting wheels for contacting the endless track, the plurality of track-contacting wheels including a driving wheel to impart motion to the endless track, the endless track comprising:
 - i) an inner side for facing the plurality of track-contacting wheels; and
 - ii) a ground-engaging outer side for engaging the ground;the endless track being free of stiffening rods extending in a transversal direction of the endless track.
2. The endless track claimed in claim 1, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
3. The endless track claimed in claim 2, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
4. The endless track claimed in claim 3, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track when the driving wheel imparts motion to the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.
5. The endless track claimed in any one of claims 1 to 4, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.

6. The endless track claimed in any one of claims 1 to 5, wherein the ground-engaging outer side comprises a plurality of traction projections spaced apart in a longitudinal direction of the endless track.
7. The endless track claimed in claim 6, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
8. The endless track claimed in claim 7, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.
9. The endless track claimed in claim 6, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
10. The endless track claimed in claim 9, wherein the lug is generally rectangular.
11. The endless track claimed in claim 6, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.
12. The endless track claimed in claim 6, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.
13. The endless track claimed in claim 12, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a

first lateral edge of the endless track and than to a second lateral edge of the endless track.

14. The endless track claimed in any one of claims 6 to 13, wherein the inner side comprises a plurality of inner lugs distributed in the longitudinal direction of the endless track.
15. The endless track claimed in claim 14, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of lugs of the plurality of rows of lugs being spaced apart in the longitudinal direction of the endless track.
16. The endless track claimed in claim 15, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.
17. The endless track claimed in claim 16, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.
18. The endless track claimed in any one of claims 15 to 17, wherein the plurality of track-contacting wheels includes an idler wheel, a first given one of the rows of lugs being a row of guide lugs to be positioned adjacent to the idler wheel.
19. The endless track claimed in claim 18, wherein the row of guide lugs is a first row of guide lugs, a second given one of the rows of lugs being a second row of guide lugs to be positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.
20. The endless track claimed in claim 19, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless

track, a third given one of the rows of lugs and a fourth given one of the rows of lugs respectively being a third row of guide lugs and a fourth row of guide lugs to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third row of guide lugs and the fourth row of guide lugs.

21. The endless track claimed in any one of claims 1 to 17, wherein the plurality of track-contacting wheels includes a first idler wheel and a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.
22. The endless track claimed in claim 21, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.
23. The endless track claimed in claim 22, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.
24. The endless track claimed in any one of claims 21 to 23, wherein the track assembly comprises a frame interconnecting the first idler wheel and the second idler wheel.
25. The endless track claimed in claim 24, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.
26. The endless track claimed in claim 25, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

27. An ATV comprising the endless track claimed in any one of claims 1 to 26.
28. A set of endless tracks for a set of track assemblies to provide traction to an all-terrain vehicle (ATV), the set of track assemblies being mountable to the ATV in place of ground-engaging wheels, each endless track of the set of endless tracks comprising:
- i) an inner side for facing a plurality of track-contacting wheels of a track assembly of the set of track assemblies, the plurality of track-contacting wheels including a driving wheel to impart motion to the endless track; and
 - ii) a ground-engaging outer side for engaging the ground;
- the endless track being free of stiffening rods extending in a transversal direction of the endless track.
29. The set of endless tracks claimed in claim 28, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
30. The set of endless tracks claimed in claim 29, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
31. The set of endless tracks claimed in claim 30, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track when the driving wheel imparts motion to the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

32. The set of endless of tracks claimed in any one of claims 28 to 31, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.
33. The set of endless tracks claimed in any one of claims 28 to 32, wherein the ground-engaging outer side comprises a plurality of traction projections spaced apart in a longitudinal direction of the endless track.
34. The set of endless tracks claimed in claim 33, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
35. The set of endless tracks claimed in claim 34, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.
36. The set of endless tracks claimed in claim 33, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
37. The set of endless tracks claimed in claim 36, wherein the lug is generally rectangular.
38. The set of endless tracks claimed in claim 33, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.
39. The set of endless tracks claimed in claim 33, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.

40. The set of endless tracks claimed in claim 39, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.
41. The set of endless tracks claimed in any one of claims 33 to 40, wherein the inner side comprises a plurality of inner lugs distributed in a longitudinal direction of the endless track.
42. The set of endless tracks claimed in claim 41, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of lugs of the plurality of rows of lugs being spaced apart in the longitudinal direction of the endless track.
43. The set of endless tracks claimed in claim 42, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.
44. The set of endless tracks claimed in claim 43, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.
45. The set of endless tracks claimed in any one of claims 42 to 44, wherein the plurality of track-contacting wheels comprises an idler wheel, a first given one of the rows of lugs being a row of guide lugs to be positioned adjacent to the idler wheel.
46. The set of endless tracks claimed in claim 45, wherein the row of guide lugs is a first row of guide lugs, a second given one of the rows of lugs being a second row of guide lugs to be positioned adjacent to the idler wheel such that the idler

wheel passes between the first row of guide lugs and the second row of guide lugs.

47. The set of endless tracks claimed in claim 45, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless track, a third given one of the rows of lugs and a fourth given one of the rows of lugs respectively being a third row of guide lugs and a fourth row of guide lugs to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third row of guide lugs and the fourth row of guide lugs.
48. The set of endless tracks claimed in any one of claims 28 to 44, wherein the plurality of track-contacting wheels includes a first idler wheel and a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.
49. The set of endless tracks claimed in claim 48, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.
50. The set of endless tracks claimed in claim 49, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.
51. The set of endless tracks claimed in any one of claims 48 to 50, wherein the track assembly comprises a frame interconnecting the first idler wheel and the second idler wheel.

52. The set of endless tracks claimed in claim 51, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.
53. The set of endless tracks claimed in claim 52, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.
54. The set of endless tracks claimed in any one of claims 28 to 53, wherein the set of endless tracks includes four endless tracks.
55. An ATV comprising the set of endless tracks claimed in any one of claims 28 to 54.
56. A track assembly for providing traction to an all-terrain vehicle (ATV), the track assembly being mountable to the ATV in place of a ground-engaging wheel, the track assembly comprising:
- a) a plurality of track-contacting wheels which includes:
 - i) a driving wheel; and
 - ii) an idler wheel;
 - and
 - b) an endless track disposed around the plurality of track-contacting wheels and comprising:
 - i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track; and
 - ii) a ground-engaging outer side for engaging the ground; the endless track being free of stiffening rods extending in a transversal direction of the endless track.
57. The track assembly claimed in claim 56, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel

spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.

58. The track assembly claimed in claim 57, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.
59. The track assembly claimed in claim 58, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.
60. The track assembly claimed in any one of claims 57 to 59, comprising a frame interconnecting the first idler wheel and the second idler wheel.
61. The track assembly claimed in claim 60, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.
62. The track assembly claimed in claim 61, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.
63. The track assembly claimed in any one of claims 60 to 62, wherein the frame comprises a first arm and a second arm shorter than the first arm.
64. The track assembly claimed in claim 63, wherein the first arm and the second arm define an obtuse angle therebetween.

65. The track assembly claimed in any one of claims 63 and 64, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.
66. The track assembly claimed in any one of claims 60 to 65, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.
67. The track assembly claimed in claim 66, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first idler wheel and the second idler wheel for adjusting the tension of the endless track.
68. The track assembly claimed in claim 67, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.
69. The track assembly claimed in any one of claims 66 to 68, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.
70. The track assembly claimed in any one of claims 66 to 69, wherein the tension adjusting mechanism comprises a cam.
71. The track assembly claimed in claim 70, wherein the cam comprises a periphery defining a plurality of notches.
72. The track assembly claimed in any one of claims 70 and 71, wherein the cam comprises a handle for facilitating rotation of the cam by a user.

73. The track assembly claimed in any one of claims 56 to 72, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
74. The track assembly claimed in claim 73, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
75. The track assembly claimed in claim 72, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.
76. The track assembly claimed in any one of claims 56 to 75, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.
77. The track assembly claimed in any one of claims 56 to 76, wherein the ground-engaging outer side comprises a plurality of traction projections spaced apart in a longitudinal direction of the endless track.
78. The track assembly claimed in claim 77, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
79. The track assembly claimed in claim 78, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.

80. The track assembly claimed in claim 77, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
81. The track assembly claimed in claim 80, wherein the lug is generally rectangular.
82. The track assembly claimed in claim 77, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.
83. The track assembly claimed in claim 77, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.
84. The track assembly claimed in claim 83, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.
85. The track assembly claimed in any one of claims 77 to 84, wherein the inner side comprises a plurality of inner lugs distributed in the longitudinal direction of the endless track.
86. The track assembly claimed in claim 85, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of lugs of the plurality of rows of lugs being spaced apart in the longitudinal direction of the endless track.
87. The track assembly claimed in claim 86, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.

88. The track assembly claimed in claim 87, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.
89. The track assembly claimed in any one of claims 86 to 88, wherein a first given one of the rows of lugs is a row of guide lugs to be positioned adjacent to the idler wheel.
90. The track assembly claimed in claim 89, wherein the row of guide lugs is a first row of guide lugs, a second given one of the rows of lugs being a second row of guide lugs to be positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.
91. The track assembly claimed in any one of claims 57 to 90, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the lower run of the endless track being curved in the longitudinal direction of the track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.
92. The track assembly claimed in any one of claims 57 to 90, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.

93. The track assembly claimed in any one of claims 91 and 92, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.
94. The track assembly claimed in any one of claims 91 to 93, wherein the track assembly is configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.
95. The track assembly claimed in any one of claims 56 to 94, wherein the track assembly is steerable to steer the ATV on the ground.
96. The track assembly claimed in any one of claims 56 to 94, wherein the track assembly is connected to a body of the ATV via a rod used for direction.
97. An ATV comprising the track assembly claimed in any one of claims 56 to 96.
98. A set of track assemblies for providing traction to an all-terrain vehicle (ATV), the set of track assemblies being mountable to the ATV in place of ground-engaging wheels, each track assembly of the set of track assemblies comprising:
- a) a plurality of track-contacting wheels which includes:
 - i) a driving wheel; and
 - ii) an idler wheel;and
 - b) an endless track disposed around the plurality of track-contacting wheels and comprising:
 - i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track; and
 - ii) a ground-engaging outer side for engaging the ground;

the endless track being free of stiffening rods extending in a transversal direction of the endless track.

99. The set of track assemblies claimed in claim 98, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.
100. The set of track assemblies claimed in claim 99, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.
101. The set of track assemblies claimed in claim 100, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.
102. The set of track assemblies claimed in any one of claims 99 to 101, comprising a frame interconnecting the first idler wheel and the second idler wheel.
103. The set of track assemblies claimed in claim 102, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.
104. The set of track assemblies claimed in claim 103, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.

105. The set of track assemblies claimed in any one of claims 102 to 104, wherein the frame comprises a first arm and a second arm shorter than the first arm.
106. The set of track assemblies claimed in claim 105, wherein the first arm and the second arm define an obtuse angle therebetween.
107. The set of track assemblies claimed in any one of claims 105 and 106, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.
108. The set of track assemblies claimed in any one of claims 102 to 107, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.
109. The set of track assemblies claimed in claim 108, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first idler wheel and the second idler wheel for adjusting the tension of the endless track.
110. The set of track assemblies claimed in claim 109, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.
111. The set of track assemblies claimed in any one of claims 109 and 110, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.
112. The set of track assemblies claimed in any one of claims 108 to 111, wherein the tension adjusting mechanism comprises a cam.

113. The set of track assemblies claimed in claim 112, wherein the cam comprises a periphery defining a plurality of notches.
114. The set of track assemblies claimed in any one of claims 112 and 113, wherein the cam comprises a handle for facilitating rotation of the cam by a user.
115. The set of track assemblies claimed in any one of claims 98 to 104, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
116. The set of track assemblies claimed in claim 115, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
117. The set of track assemblies claimed in claim 116, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.
118. The set of track assemblies claimed in any one of claims 98 to 117, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.
119. The set of track assemblies claimed in any one of claims 98 to 118, wherein the ground-engaging outer side comprises a plurality of traction projections spaced apart in a longitudinal direction of the endless track.

120. The set of track assemblies claimed in claim 119, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
121. The set of track assemblies claimed in claim 120, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.
122. The set of track assemblies claimed in claim 119, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
123. The set of track assemblies claimed in claim 122, wherein the lug is generally rectangular.
124. The set of track assemblies claimed in claim 119, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.
125. The set of track assemblies claimed in claim 119, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.
126. The set of track assemblies claimed in claim 125, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.

127. The set of track assemblies claimed in any one of claims 119 to 126, wherein the inner side comprises a plurality of inner lugs distributed in the longitudinal direction of the endless track.
128. The set of track assemblies claimed in claim 127, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of lugs of the plurality of rows of lugs being spaced apart in the longitudinal direction of the endless track.
129. The set of track assemblies claimed in claim 128, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.
130. The set of track assemblies claimed in claim 129, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.
131. The set of track assemblies claimed in any one of claims 128 to 130, wherein a first given one of the rows of lugs is a row of guide lugs to be positioned adjacent to the idler wheel.
132. The set of track assemblies claimed in claim 131, wherein the row of guide lugs is a first row of guide lugs, a second given one of the rows of lugs being a second row of guide lugs to be positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.
133. The set of track assemblies claimed in any one of claims 99 to 132, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the

lower run of the endless track being curved in the longitudinal direction of the track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.

134. The set of track assemblies claimed in any one of claims 99 to 132, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.
135. The set of track assemblies claimed in any one of claims 133 and 134, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.
136. The set of track assemblies claimed in any one of claims 133 to 135, wherein the track assembly is configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.
137. The set of track assemblies claimed in any one of claims 98 to 136, wherein a first track assembly and a second track assembly of the set of track assemblies are steerable to steer the ATV on the ground.
138. The set of track assemblies claimed in any one of claims 98 to 136, wherein the track assembly is connected to a body of the ATV via a rod used for direction.

139. The set of track assemblies claimed in any one of claims 98 to 138, wherein the set of track assemblies includes four track assemblies.
140. An ATV comprising the set of track assemblies claimed in any one of claims 98 to 139.
141. An endless track for a track assembly of a set of track assemblies to provide traction to an all-terrain vehicle (ATV), the ATV comprising a straddle seat and handlebars, the track assembly comprising a plurality of track-contacting wheels for contacting the endless track, the plurality of track-contacting wheels including a driving wheel to impart motion to the endless track, the endless track comprising:
- i) an inner side for facing the plurality of track-contacting wheels; and
 - ii) a ground-engaging outer side for engaging the ground;
- the endless track being free of stiffening rods extending in a transversal direction of the endless track.
142. The endless track claimed in claim 141, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
143. The endless track claimed in claim 142, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
144. The endless track claimed in claim 143, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track when the driving wheel imparts motion to the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

145. The endless track claimed in any one of claims 141 to 144, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.
146. The endless track claimed in any one of claims 141 to 145, wherein the ground-engaging outer side comprises a plurality of traction projections projecting outwardly.
147. The endless track claimed in claim 146, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
148. The endless track claimed in claim 147, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.
149. The endless track claimed in claim 146, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
150. The endless track claimed in claim 149, wherein the lug is generally rectangular.
151. The endless track claimed in claim 146, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.

152. The endless track claimed in claim 146, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.
153. The endless track claimed in claim 152, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.
154. The endless track claimed in any one of claims 141 to 153, wherein the inner side comprises a plurality of inner lugs projecting inwardly.
155. The endless track claimed in claim 154, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of lugs of the plurality of rows of lugs being spaced apart in a longitudinal direction of the endless track.
156. The endless track claimed in claim 155, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.
157. The endless track claimed in claim 156, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.
158. The endless track claimed in any one of claims 155 to 157, wherein the plurality of track-contacting wheels includes an idler wheel, a first given one of the rows of lugs being a row of guide lugs to be positioned adjacent to the idler wheel.
159. The endless track claimed in claim 158, wherein the row of guide lugs is a first row of guide lugs, a second given one of the rows of lugs being a second

row of guide lugs to be positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.

160. The endless track claimed in claim 159, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless track, a third given one of the rows of lugs and a fourth given one of the rows of lugs respectively being a third row of guide lugs and a fourth row of guide lugs to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third row of guide lugs and the fourth row of guide lugs.
161. The endless track claimed in any one of claims 141 to 160, wherein the plurality of track-contacting wheels includes a first idler wheel and a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.
162. The endless track claimed in claim 161, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.
163. The endless track claimed in claim 162, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.

164. The endless track claimed in any one of claims 161 to 163, wherein the track assembly comprises a frame interconnecting the first idler wheel and the second idler wheel.
165. The endless track claimed in claim 164, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.
166. The endless track claimed in claim 165, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.
167. An ATV comprising the endless track claimed in any one of claims 141 to 166.
168. A track assembly for a set of track assemblies to provide traction to an all-terrain vehicle (ATV), the ATV comprising a straddle seat and handlebars, the track assembly comprising:
- a) a plurality of track-contacting wheels which includes:
 - i) a driving wheel; and
 - ii) an idler wheel;and
 - b) an endless track disposed around the plurality of track-contacting wheels and comprising:
 - i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track; and
 - ii) a ground-engaging outer side for engaging the ground; the endless track being free of stiffening rods extending in a transversal direction of the endless track.
169. The track assembly claimed in claim 168, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler

wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.

170. The track assembly claimed in claim 169, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.
171. The track assembly claimed in claim 170, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.
172. The track assembly claimed in any one of claims 169 to 171, comprising a frame interconnecting the first idler wheel and the second idler wheel.
173. The track assembly claimed in claim 172, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.
174. The track assembly claimed in claim 173, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.
175. The track assembly claimed in any one of claims 172 to 174, wherein the frame comprises a first arm and a second arm shorter than the first arm.
176. The track assembly claimed in claim 175, wherein the first arm and the second arm define an obtuse angle therebetween.

177. The track assembly claimed in any one of claims 175 and 176, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.
178. The track assembly claimed in any one of claims 172 to 177, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.
179. The track assembly claimed in claim 178, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first idler wheel and the second idler wheel for adjusting the tension of the endless track.
180. The track assembly claimed in claim 179, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.
181. The track assembly claimed in any one of claims 179 and 180, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.
182. The track assembly claimed in any one of claims 178 to 181, wherein the tension adjusting mechanism comprises a cam.
183. The track assembly claimed in claim 182, wherein the cam comprises a periphery defining a plurality of notches.
184. The track assembly claimed in any one of claims 182 and 183, wherein the cam comprises a handle for facilitating rotation of the cam by a user.

185. The track assembly claimed in any one of claims 168 to 184, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
186. The track assembly claimed in claim 185, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
187. The track assembly claimed in claim 186, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.
188. The track assembly claimed in any one of claims 168 to 187, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.
189. The track assembly claimed in any one of claims 168 to 188, wherein the ground-engaging outer side comprises a plurality of traction projections projecting outwardly.
190. The track assembly claimed in claim 189, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
191. The track assembly claimed in claim 190, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.

192. The track assembly claimed in claim 189, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
193. The track assembly claimed in claim 192, wherein the lug is generally rectangular.
194. The track assembly claimed in claim 189, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.
195. The track assembly claimed in claim 189, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.
196. The track assembly claimed in claim 195, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.
197. The track assembly claimed in any one of claims 168 to 196, wherein the inner side comprises a plurality of inner lugs projecting inwardly.
198. The track assembly claimed in claim 197, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of lugs of the plurality of rows of lugs being spaced apart in a longitudinal direction of the endless track.
199. The track assembly claimed in claim 198, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.

200. The track assembly claimed in claim 199, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.
201. The track assembly claimed in any one of claims 198 to 200, wherein a first given one of the rows of lugs is a row of guide lugs to be positioned adjacent to the idler wheel.
202. The track assembly claimed in claim 201, wherein the row of guide lugs is a first row of guide lugs, a second given one of the rows of lugs being a second row of guide lugs to be positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.
203. The track assembly claimed in any one of claims 169 to 202, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the lower run of the endless track being curved in the longitudinal direction of the track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.
204. The track assembly claimed in any one of claims 169 to 202, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.

205. The track assembly claimed in any one of claims 203 and 204, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.
206. The track assembly claimed in any one of claims 203 to 205, wherein the track assembly is mountable to the ATV in place of a ground-engaging wheel, the track assembly being configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.
207. The track assembly claimed in any one of claims 168 to 206, wherein the track assembly is steerable to steer the ATV on the ground.
208. The track assembly claimed in any one of claims 168 to 206, wherein the track assembly is connected to a body of the ATV via a rod used for direction.
209. An ATV comprising the track assembly claimed in any one of claims 168 to 208.
210. A set of track assemblies for providing traction to an all-terrain vehicle (ATV), the ATV comprising a straddle seat and handlebars, each track assembly of the set of track assemblies comprising:
- a) a plurality of track-contacting wheels which includes:
 - i) a driving wheel; and
 - ii) an idler wheel;
 - and
 - b) an endless track disposed around the plurality of track-contacting wheels and comprising:

- i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track; and
 - ii) a ground-engaging outer side for engaging the ground;
- the endless track being free of stiffening rods extending in a transversal direction of the endless track.

211. The set of track assemblies claimed in claim 210, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.
212. The set of track assemblies claimed in claim 211, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.
213. The set of track assemblies claimed in claim 212, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.
214. The set of track assemblies claimed in any one of claims 211 to 213, comprising a frame interconnecting the first idler wheel and the second idler wheel.
215. The set of track assemblies claimed in claim 214, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.

216. The set of track assemblies claimed in claim 215, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.
217. The set of track assemblies claimed in any one of claims 214 to 216, wherein the frame comprises a first arm and a second arm shorter than the first arm.
218. The set of track assemblies claimed in claim 217, wherein the first arm and the second arm define an obtuse angle therebetween.
219. The set of track assemblies claimed in any one of claims 217 and 218, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.
220. The set of track assemblies claimed in any one of claims 214 to 219, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.
221. The set of track assemblies claimed in claim 220, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first idler wheel and the second idler wheel for adjusting the tension of the endless track.
222. The set of track assemblies claimed in claim 221, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.
223. The set of track assemblies claimed in any one of claims 221 and 222, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.

224. The set of track assemblies claimed in any one of claims 220 to 223, wherein the tension adjusting mechanism comprises a cam.
225. The set of track assemblies claimed in claim 224, wherein the cam comprises a periphery defining a plurality of notches.
226. The set of track assemblies claimed in any one of claims 224 and 225, wherein the cam comprises a handle for facilitating rotation of the cam by a user.
227. The set of track assemblies claimed in any one of claims 210 to 226, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
228. The set of track assemblies claimed in claim 227, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
229. The set of track assemblies claimed in claim 228, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.
230. The set of track assemblies claimed in any one of claims 210 to 229, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.
231. The set of track assemblies claimed in any one of claims 210 to 230, wherein the ground-engaging outer side comprises a plurality of traction projections projecting outwardly.

232. The set of track assemblies claimed in claim 231, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
233. The set of track assemblies claimed in claim 232, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.
234. The set of track assemblies claimed in claim 231, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
235. The set of track assemblies claimed in claim 234, wherein the lug is generally rectangular.
236. The set of track assemblies claimed in claim 231, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.
237. The set of track assemblies claimed in claim 231, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.
238. The set of track assemblies claimed in claim 237, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.

239. The set of track assemblies claimed in any one of claims 210 to 238, wherein the inner side comprises a plurality of inner lugs projecting inwardly.
240. The set of track assemblies claimed in claim 239, wherein the plurality of inner lugs is arranged into a plurality of rows of lugs spaced apart in the transversal direction of the endless track, the lugs of each row of lugs of the plurality of rows of lugs being spaced apart in a longitudinal direction of the endless track.
241. The set of track assemblies claimed in claim 240, wherein a first one of the rows of lugs is a row of drive lugs positioned to engage the driving wheel.
242. The set of track assemblies claimed in claim 241, wherein the row of drive lugs is a first row of drive lugs, a second one of the rows of lugs is a second row of drive lugs positioned to engage the driving wheel.
243. The set of track assemblies claimed in any one of claims 240 to 242, wherein a first given one of the rows of lugs is a row of guide lugs to be positioned adjacent to the idler wheel.
244. The set of track assemblies claimed in claim 243, wherein the row of guide lugs is a first row of guide lugs, a second given one of the rows of lugs being a second row of guide lugs to be positioned adjacent to the idler wheel such that the idler wheel passes between the first row of guide lugs and the second row of guide lugs.
245. The set of track assemblies claimed in any one of claims 211 to 244, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the lower run of the endless track being curved in the longitudinal direction of the

track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.

246. The set of track assemblies claimed in any one of claims 211 to 244, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.
247. The set of track assemblies claimed in any one of claims 245 and 246, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.
248. The set of track assemblies claimed in any one of claims 245 to 247, wherein the track assembly is mountable to the ATV in place of a ground-engaging wheel, the track assembly being configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.
249. The set of track assemblies claimed in any one of claims 210 to 248, wherein a first track assembly and a second track assembly of the set of track assemblies are steerable to steer the ATV on the ground.
250. The set of track assemblies claimed in any one of claims 210 to 248, wherein the track assembly is connected to a body of the ATV via a rod used for direction.

251. The set of track assemblies claimed in any one of claims 210 to 250, wherein the set of track assemblies includes four track assemblies.
252. An ATV comprising the set of track assemblies claimed in any one of claims 210 to 251.
253. An endless track for a track assembly to provide traction to an all-terrain vehicle (ATV), the track assembly comprising a plurality of track-contacting wheels for contacting the endless track, the plurality of track-contacting wheels including a driving wheel to impart motion to the endless track, the endless track comprising:
- i) an inner side for facing the plurality of track-contacting wheels, the inner side comprising a plurality of drive lugs to engage the driving wheel; and
 - ii) a ground-engaging outer side for engaging the ground;
- the endless track being free of stiffening rods extending in a transversal direction of the endless track.
254. The endless track claimed in claim 253, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
255. The endless track claimed in claim 254, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
256. The endless track claimed in claim 255, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track when the driving wheel imparts motion to the endless track, the

flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

257. The endless track claimed in any one of claims 253 to 256, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.
258. The endless track claimed in any one of claims 253 to 257, wherein the ground-engaging outer side comprises a plurality of traction projections.
259. The endless track claimed in claim 258, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
260. The endless track claimed in claim 259, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.
261. The endless track claimed in claim 258, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
262. The endless track claimed in claim 261, wherein the lug is generally rectangular.
263. The endless track claimed in claim 258, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.

264. The endless track claimed in claim 258, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.
265. The endless track claimed in claim 264, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.
266. The endless track claimed in any one of claims 253 to 265, wherein the plurality of drive lugs is arranged into a plurality of rows of drive lugs spaced apart in the transversal direction of the endless track.
267. The endless track claimed in any one of claims 253 to 266, wherein the plurality of track-contacting wheels includes an idler wheel, the inner side comprising a plurality of guide lugs to be positioned adjacent to the idler wheel.
268. The endless track claimed in claim 267, wherein the plurality of guide lugs is arranged into a plurality of rows of guide lugs spaced apart in the transversal direction of the endless track, a first one of the rows of guide lugs and a second one of the rows of guide lugs being arranged to be positioned adjacent to the idler wheel such that the idler wheel passes between the first one of the rows of guide lugs and the second one of the rows of guide lugs.
269. The endless track claimed in claim 268, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless track, a third one of the rows of guide lugs and a fourth one of the rows of guide lugs being arranged to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third one of the rows of guide lugs and the fourth one of the rows of guide lugs.

270. The endless track claimed in any one of claims 253 to 266, wherein the plurality of track-contacting wheels includes a first idler wheel and a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.
271. The endless track claimed in claim 270, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.
272. The endless track claimed in claim 270, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.
273. The endless track claimed in any one of claims 270 to 272, wherein the track assembly comprises a frame interconnecting the first idler wheel and the second idler wheel.
274. The endless track claimed in claim 273, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.
275. The endless track claimed in claim 274, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.
276. An ATV comprising the endless track claimed in any one of claims 253 to 275.

277. A track assembly for providing traction to an all-terrain vehicle (ATV), the track assembly comprising:

a) a plurality of track-contacting wheels which includes:

- i) a driving wheel; and
- ii) an idler wheel;

and

b) an endless track disposed around the plurality of track-contacting wheels and comprising:

- i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track, the inner side comprising a plurality of drive lugs to engage the driving wheel; and
- ii) a ground-engaging outer side for engaging the ground;

the endless track being free of stiffening rods extending in a transversal direction of the endless track.

278. The track assembly claimed in claim 277, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.

279. The track assembly claimed in claim 278, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.

280. The track assembly claimed in claim 279, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.

281. The track assembly claimed in any one of claims 278 to 280, comprising a frame interconnecting the first idler wheel and the second idler wheel.
282. The track assembly claimed in claim 281, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.
283. The track assembly claimed in claim 282, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.
284. The track assembly claimed in any one of claims 281 to 284, wherein the frame comprises a first arm and a second arm shorter than the first arm.
285. The track assembly claimed in claim 284, wherein the first arm and the second arm define an obtuse angle therebetween.
286. The track assembly claimed in any one of claims 284 and 285, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.
287. The track assembly claimed in any one of claims 281 to 286, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.
288. The track assembly claimed in claim 287, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first idler wheel and the second idler wheel for adjusting the tension of the endless track.
289. The track assembly claimed in claim 288, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.

290. The track assembly claimed in any one of claims 288 and 289, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.
291. The track assembly claimed in any one of claims 287 to 290, wherein the tension adjusting mechanism comprises a cam.
292. The track assembly claimed in claim 291, wherein the cam comprises a periphery defining a plurality of notches.
293. The track assembly claimed in any one of claims 291 and 292, wherein the cam comprises a handle for facilitating rotation of the cam by a user.
294. The track assembly claimed in any one of claims 277 to 293, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
295. The track assembly claimed in claim 294, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
296. The track assembly claimed in claim 295, wherein the endless track includes a central portion aligned with the driving wheel in the transversal direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

297. The track assembly claimed in any one of claims 277 to 296, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.
298. The track assembly claimed in any one of claims 277 to 297, wherein the ground-engaging outer side comprises a plurality of traction projections.
299. The track assembly claimed in claim 298, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
300. The track assembly claimed in claim 299, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.
301. The track assembly claimed in claim 298, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
302. The track assembly claimed in claim 301, wherein the lug is generally rectangular.
303. The track assembly claimed in claim 298, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.
304. The track assembly claimed in claim 298, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.

305. The track assembly claimed in claim 304, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.
306. The track assembly claimed in any one of claims 277 to 305, wherein the plurality of drive lugs is arranged into a plurality of rows of drive lugs spaced apart in the transversal direction of the endless track.
307. The track assembly claimed in any one of claims 277 to 306, wherein the inner side comprises a plurality of guide lugs to be positioned adjacent to the idler wheel.
308. The track assembly claimed in claim 307, wherein the plurality of guide lugs is arranged into a plurality of rows of guide lugs spaced apart in the transversal direction of the endless track, a first one of the rows of guide lugs and a second one of the rows of guide lugs being arranged to be positioned adjacent to the idler wheel such that the idler wheel passes between the first one of the rows of guide lugs and the second one of the rows of guide lugs.
309. The track assembly claimed in claim 307, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless track, a third one of the rows of guide lugs and a fourth one of the rows of guide lugs being arranged to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third one of the rows of guide lugs and the fourth one of the rows of guide lugs.
310. The track assembly claimed in any one of claims 278 to 309, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the

driving wheel and from the first idler wheel to the second idler wheel, the lower run of the endless track being curved in the longitudinal direction of the track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.

311. The track assembly claimed in any one of claims 278 to 310, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.
312. The track assembly claimed in any one of claims 310 and 311, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.
313. The track assembly claimed in any one of claims 310 to 312, wherein the track assembly is mountable to the ATV in place of a ground-engaging wheel, the track assembly being configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.
314. The track assembly claimed in any one of claims 277 to 313, wherein the track assembly is steerable to steer the ATV on the ground.
315. The track assembly claimed in any one of claims 277 to 314, wherein the track assembly is connected to a body of the ATV via a rod used for direction.

316. An ATV comprising the track assembly claimed in any one of claims 277 to 315.
317. A set of track assemblies for providing traction to an all-terrain vehicle (ATV), each track assembly of the set of track assemblies comprising:
- a) a plurality of track-contacting wheels which includes:
 - i) a driving wheel; and
 - ii) an idler wheel;
 - and
 - b) an endless track disposed around the plurality of track-contacting wheels and comprising:
 - i) an inner side for facing the plurality of track-contacting wheels, the driving wheel being rotatable to impart motion to the endless track, the inner side comprising a plurality of drive lugs to engage the driving wheel; and
 - ii) a ground-engaging outer side for engaging the ground;
- the endless track being free of stiffening rods extending in a transversal direction of the endless track.
318. The set of track assemblies claimed in claim 317, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in a longitudinal direction of the track assembly, an axis of rotation of the driving wheel being located in the longitudinal direction of the track assembly between an axis of rotation of the first idler wheel and an axis of rotation of the second idler wheel.
319. The set of track assemblies claimed in claim 318, wherein the axis of rotation of the driving wheel is located closer to the axis of rotation of the second idler wheel than to the axis of rotation of the first idler wheel in the longitudinal direction of the track assembly.

320. The set of track assemblies claimed in claim 319, wherein the first idler wheel is located in a front of the track assembly and the second idler wheel is located in a rear of the track assembly.
321. The set of track assemblies claimed in any one of claims 318 to 320, comprising a frame interconnecting the first idler wheel and the second idler wheel.
322. The set of track assemblies claimed in claim 321, wherein the frame is pivotable about a pivot axis generally parallel to the axis of rotation of the driving wheel.
323. The set of track assemblies claimed in claim 322, wherein the pivot axis of the frame is coaxial with the axis of rotation of the driving wheel.
324. The set of track assemblies claimed in any one of claims 321 to 323, wherein the frame comprises a first arm and a second arm shorter than the first arm.
325. The set of track assemblies claimed in claim 324, wherein the first arm and the second arm define an obtuse angle therebetween.
326. The set of track assemblies claimed in any one of claims 324 and 325, wherein the first idler wheel is mounted to the first arm and the second idler wheel is mounted to the second arm.
327. The set of track assemblies claimed in any one of claims 321 to 326, comprising a tension adjusting mechanism mounted to the frame for adjusting a tension of the endless track.
328. The set of track assemblies claimed in claim 327, wherein the tension adjusting mechanism is configured to adjust a position of a given one of the first

idler wheel and the second idler wheel for adjusting the tension of the endless track.

329. The set of track assemblies claimed in claim 328, wherein the given one of the first idler wheel and the second idler wheel is the first idler wheel.
330. The set of track assemblies claimed in any one of claims 328 and 329, wherein the tension adjusting mechanism is configured to adjust the position of the given one of the first idler wheel and the second idler wheel to any one of a plurality of predetermined positions.
331. The set of track assemblies claimed in any one of claims 327 to 330, wherein the tension adjusting mechanism comprises a cam.
332. The set of track assemblies claimed in claim 331, wherein the cam comprises a periphery defining a plurality of notches.
333. The set of track assemblies claimed in any one of claims 331 and 332, wherein the cam comprises a handle for facilitating rotation of the cam by a user.
334. The set of track assemblies claimed in any one of claims 317 to 333, wherein a flexibility of the endless track in the transversal direction of the endless track allows the endless track to conform to a profile of the ground.
335. The set of track assemblies claimed in claim 334, wherein the profile of the ground includes a depression, the flexibility of the endless track in the transversal direction of the endless track allowing the endless track to conform to the depression.
336. The set of track assemblies claimed in claim 335, wherein the endless track includes a central portion aligned with the driving wheel in the transversal

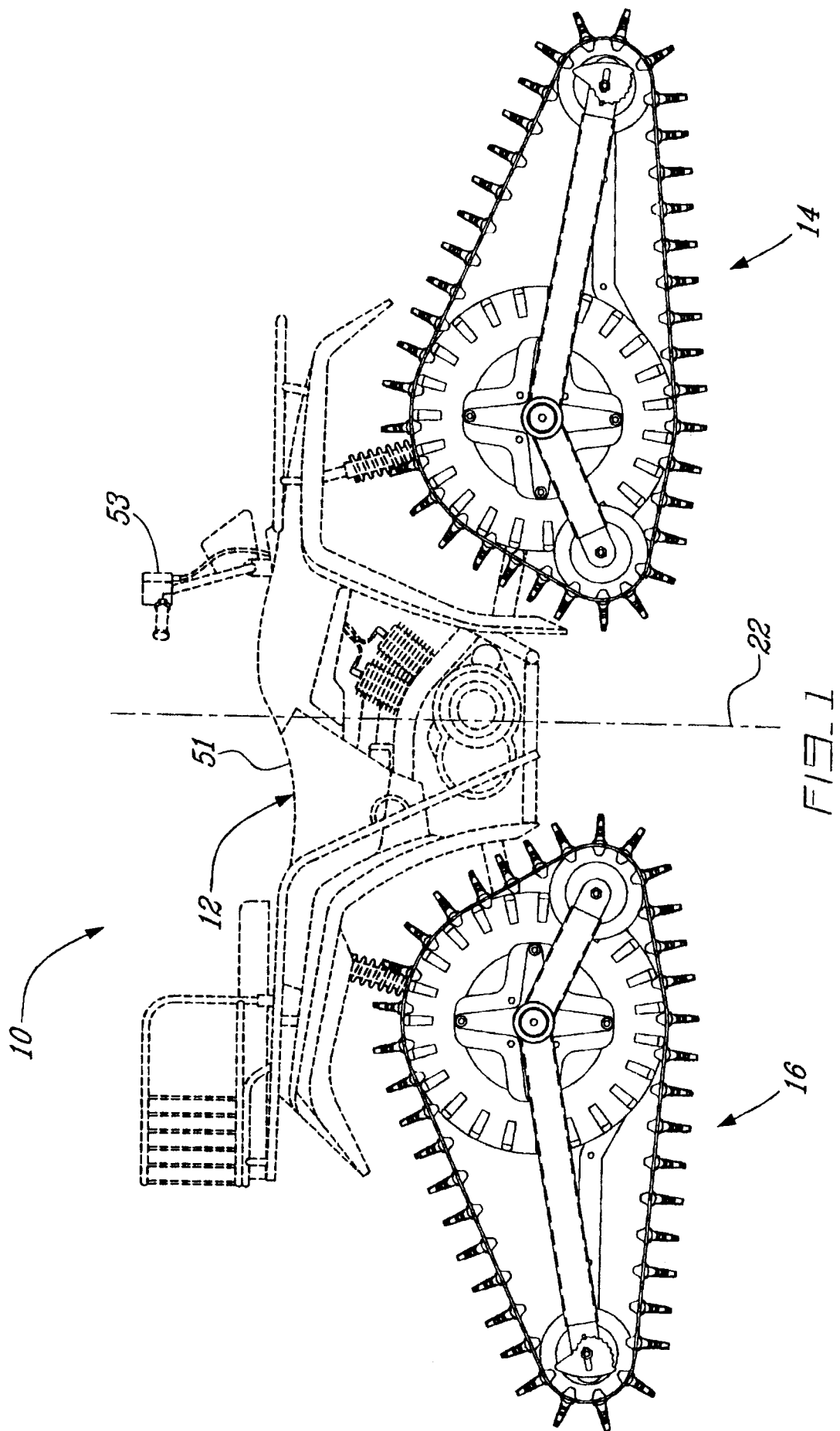
direction of the endless track, the flexibility of the endless track in the transversal direction of the endless track allowing the central portion of the endless track to contact the depression.

337. The set of track assemblies claimed in any one of claims 317 to 336, wherein a profile of the endless track in the transversal direction of the endless track is generally convex.
338. The set of track assemblies claimed in any one of claims 317 to 337, wherein the ground-engaging outer side comprises a plurality of traction projections.
339. The set of track assemblies claimed in claim 338, wherein each traction projection of the plurality of traction projections comprises a plurality of traction lugs spaced apart in the transversal direction of the endless track.
340. The set of track assemblies claimed in claim 339, wherein the plurality of traction lugs of the traction projection comprises at least three traction lugs spaced apart in the transversal direction of the endless track.
341. The set of track assemblies claimed in claim 338, wherein each traction projection of the plurality of traction projections comprises a lug extending substantially from a first lateral edge of the endless track to a second lateral edge of the endless track.
342. The set of track assemblies claimed in claim 341, wherein the lug is generally rectangular.
343. The set of track assemblies claimed in claim 338, wherein each traction projection of the plurality of traction projections extends from a first lateral edge of the endless track to a second lateral edge of the endless track.

344. The set of track assemblies claimed in claim 338, wherein each traction projection of the plurality of traction projections has a height varying in the transversal direction of the endless track.
345. The set of track assemblies claimed in claim 344, wherein the height of the traction projection is greatest at a point closer to a center of the endless track than to a first lateral edge of the endless track and than to a second lateral edge of the endless track.
346. The set of track assemblies claimed in any one of claims 317 to 345, wherein the plurality of drive lugs is arranged into a plurality of rows of drive lugs spaced apart in the transversal direction of the endless track.
347. The set of track assemblies claimed in any one of claims 317 to 346, wherein the inner side comprises a plurality of guide lugs to be positioned adjacent to the idler wheel.
348. The set of track assemblies claimed in claim 347, wherein the plurality of guide lugs is arranged into a plurality of rows of guide lugs spaced apart in the transversal direction of the endless track, a first one of the rows of guide lugs and a second one of the rows of guide lugs being arranged to be positioned adjacent to the idler wheel such that the idler wheel passes between the first one of the rows of guide lugs and the second one of the rows of guide lugs.
349. The set of track assemblies claimed in claim 348, wherein the idler wheel is a first idler wheel, the plurality of track-contacting wheels including a second idler wheel spaced apart from the first idler wheel in the transversal direction of the endless track, a third one of the rows of guide lugs and a fourth one of the rows of guide lugs being arranged to be positioned adjacent to the second idler wheel such that the second idler wheel passes between the third one of the rows of guide lugs and the fourth one of the rows of guide lugs.

350. The set of track assemblies claimed in any one of claims 318 to 349, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the lower run of the endless track being curved in the longitudinal direction of the track assembly between the axis of rotation of the first idler wheel and the axis of rotation of the second idler wheel.
351. The set of track assemblies claimed in any one of claims 318 to 349, wherein the endless track has an upper run extending over the driving wheel and from the first idler wheel to the second idler wheel and a lower run extending under the driving wheel and from the first idler wheel to the second idler wheel, the track assembly being configured such that, in the longitudinal direction of the track assembly, a lowest segment of the lower run of the endless track is located where the driving wheel is located.
352. The set of track assemblies claimed in any one of claims 350 and 351, wherein the driving wheel engages the upper run of the endless track and the lower run of the endless track.
353. The set of track assemblies claimed in any one of claims 350 to 352, wherein the track assembly is mountable to the ATV in place of a ground-engaging wheel, the track assembly being configured to press onto the ground a limited portion of the lower run of the endless track that is located where the ground-engaging wheel would contact the ground if the ground-engaging wheel was mounted to the ATV in place of the track assembly.
354. The set of track assemblies claimed in any one of claims 317 to 353, wherein a first track assembly and a second track assembly of the set of track assemblies are steerable to steer the ATV on the ground.

355. The set of track assemblies claimed in any one of claims 317 to 354, wherein the track assembly is connected to a body of the ATV via a rod used for direction.
356. The set of track assemblies claimed in any one of claims 317 to 355, wherein the set of track assemblies includes four track assemblies.
357. An ATV comprising the set of track assemblies claimed in any one of claims 317 to 356.



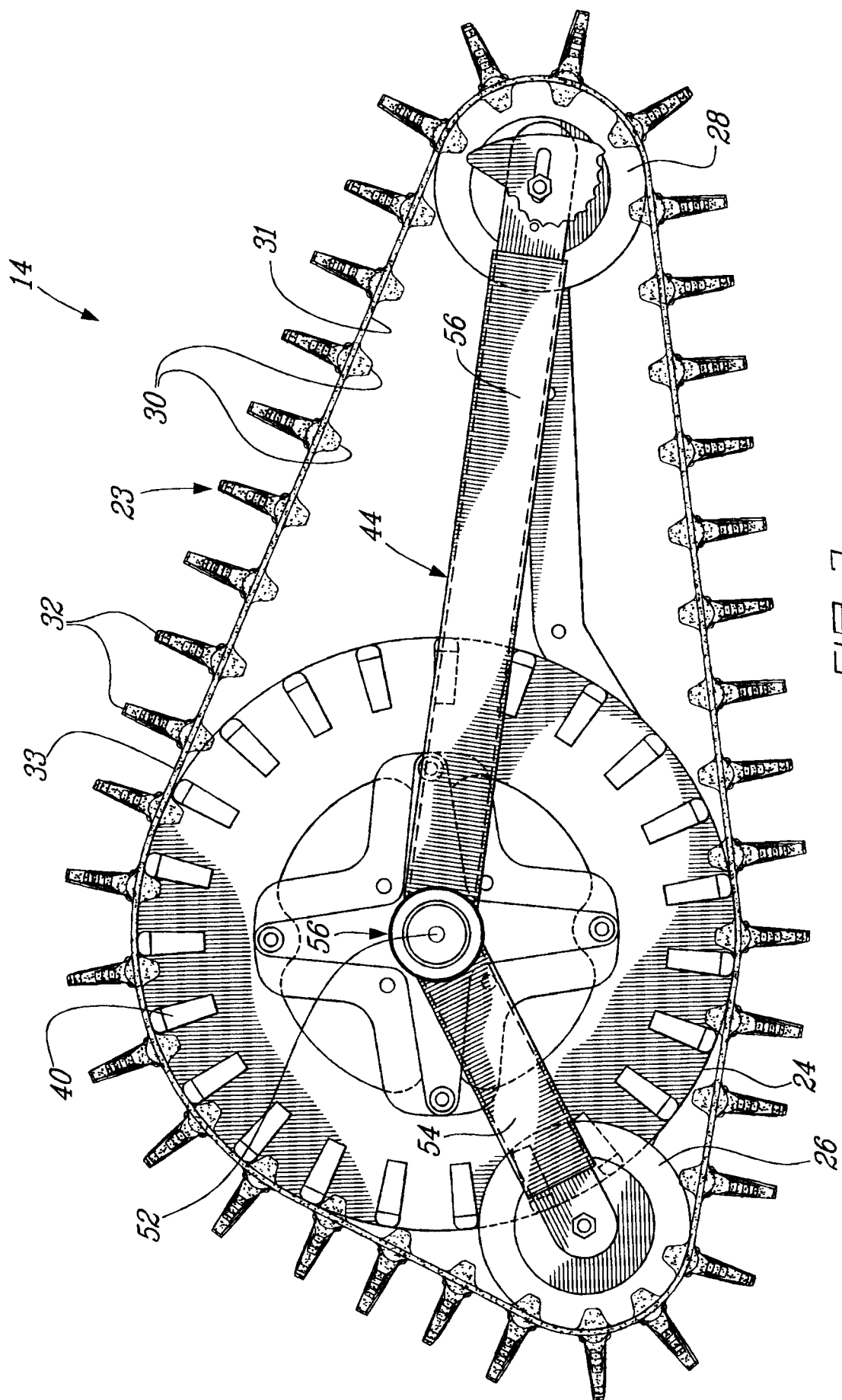
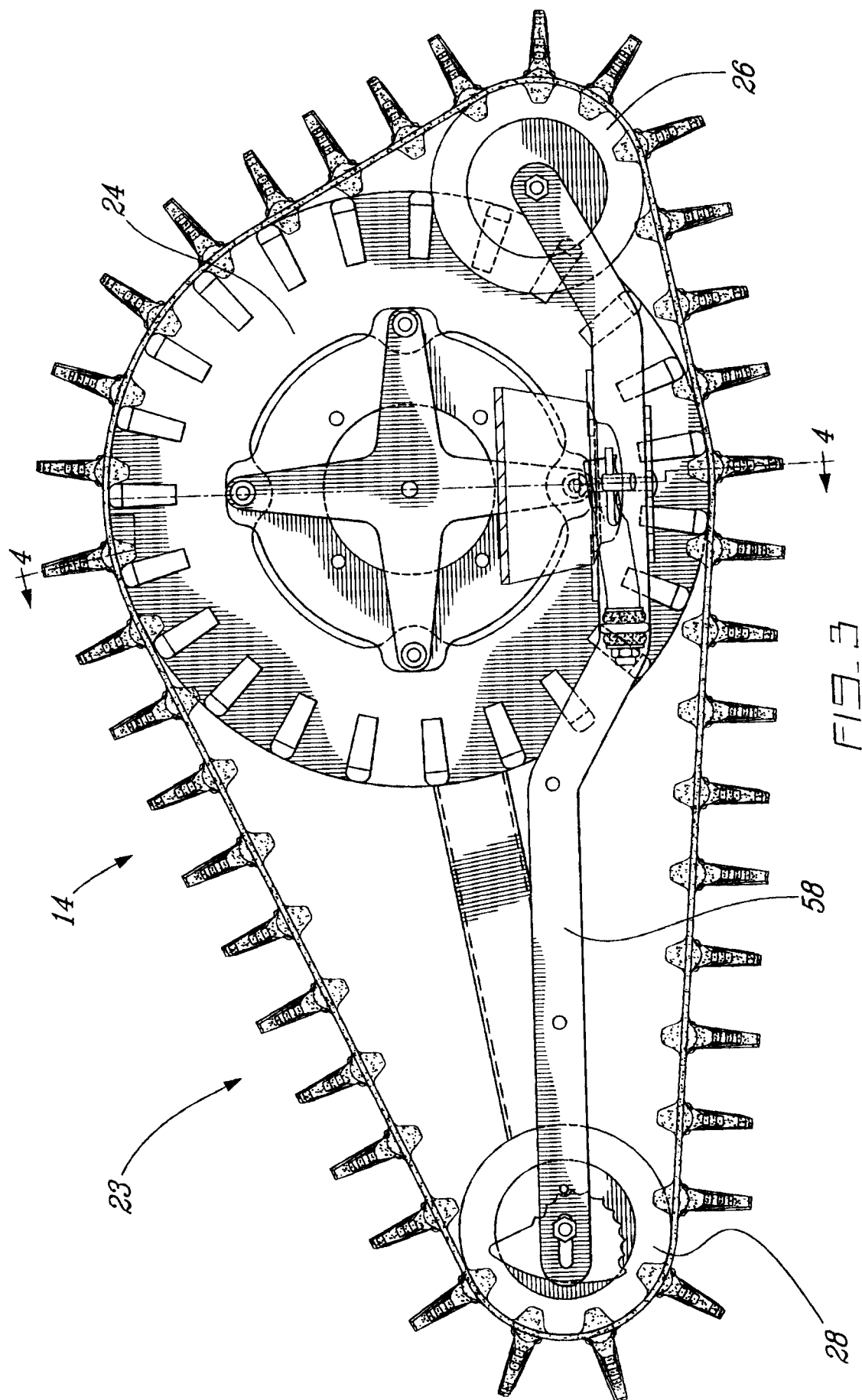


FIG. 2



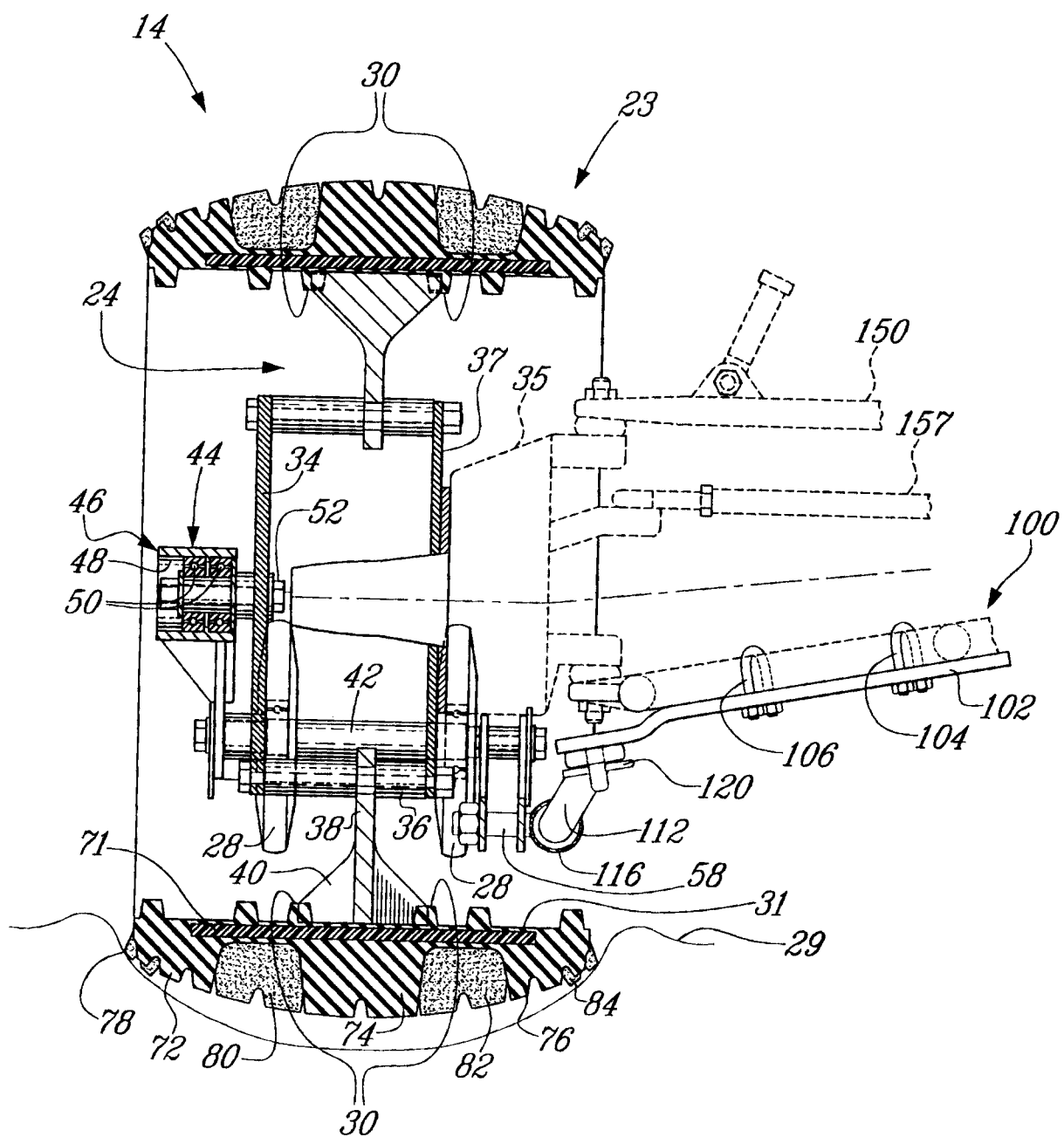
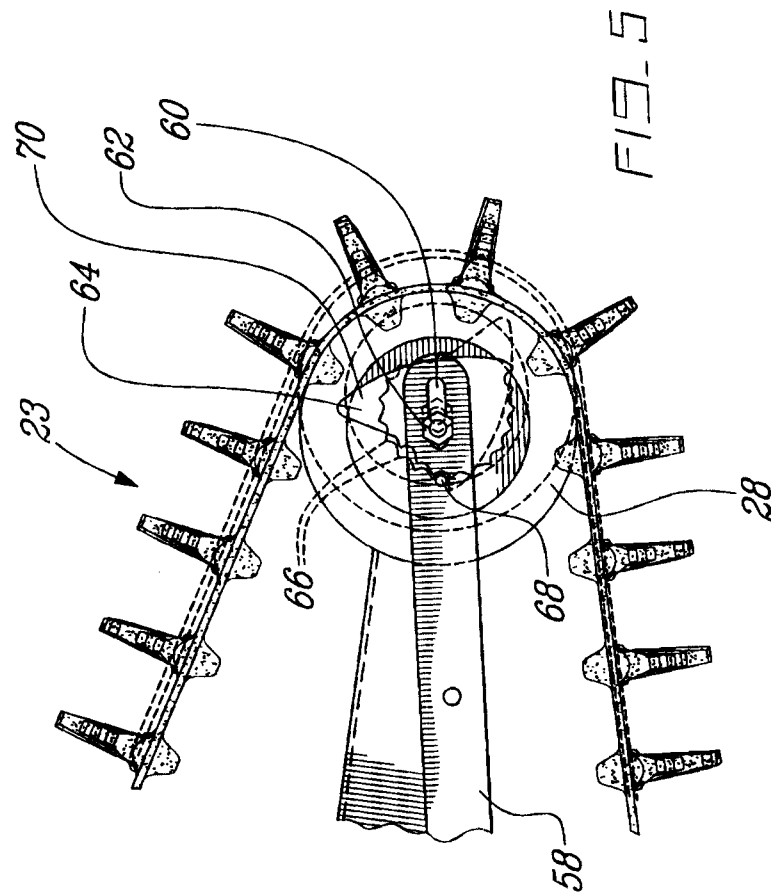
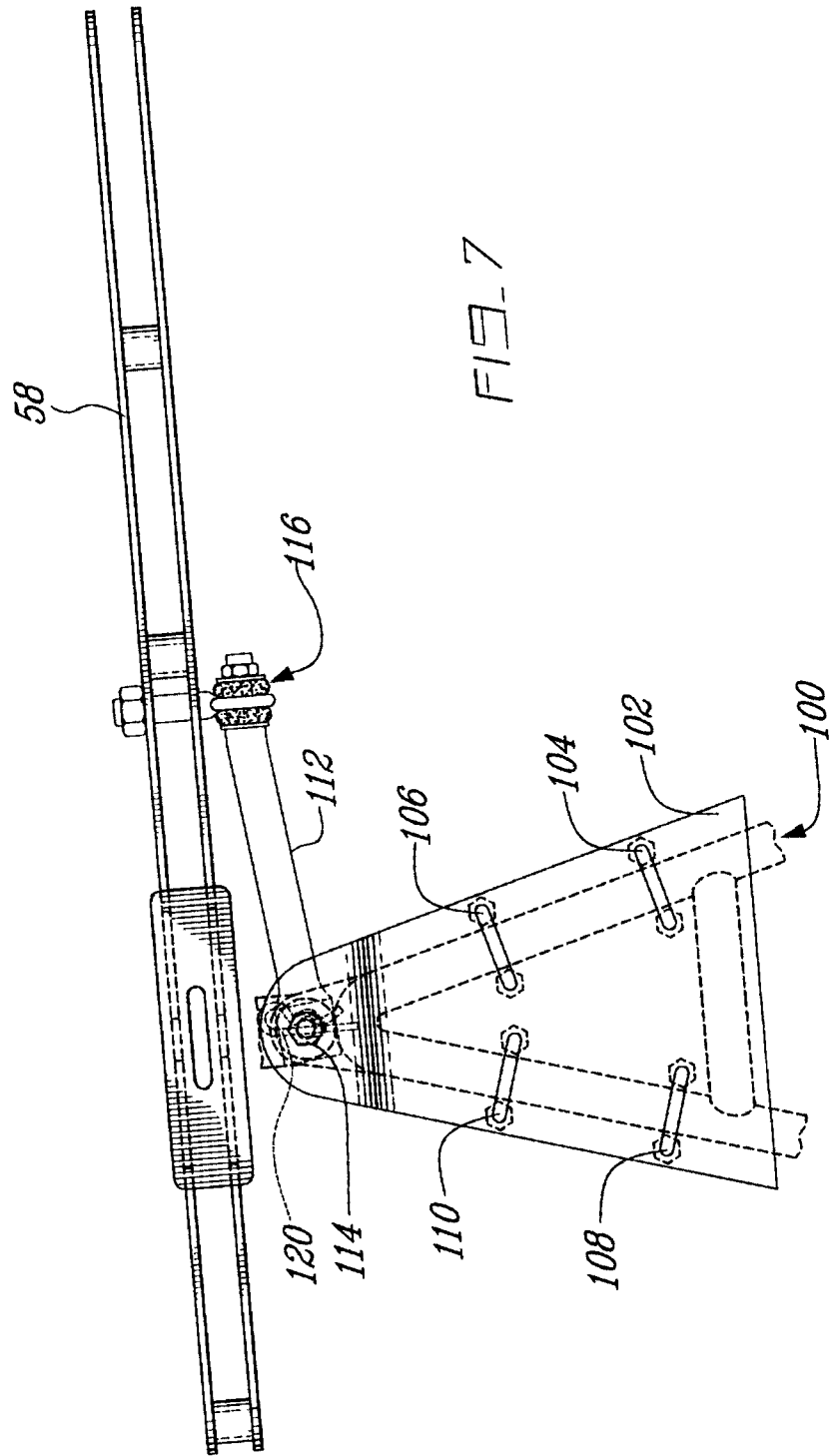
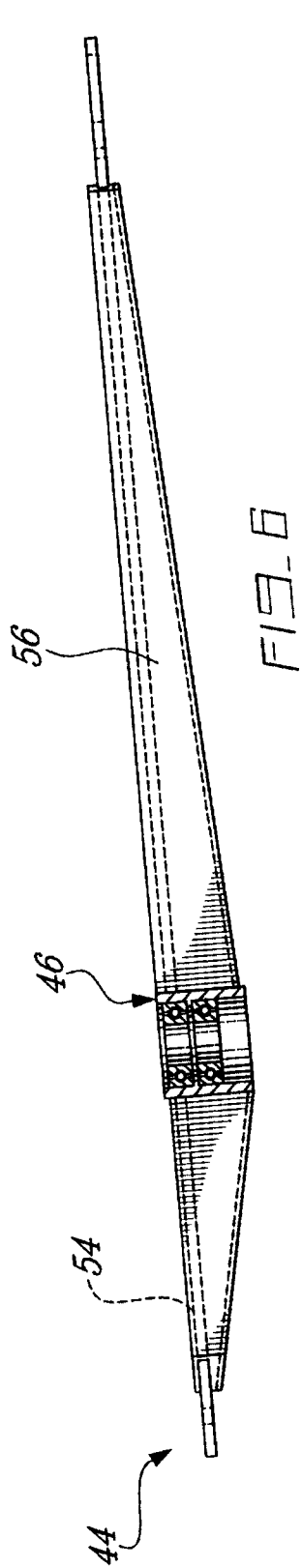
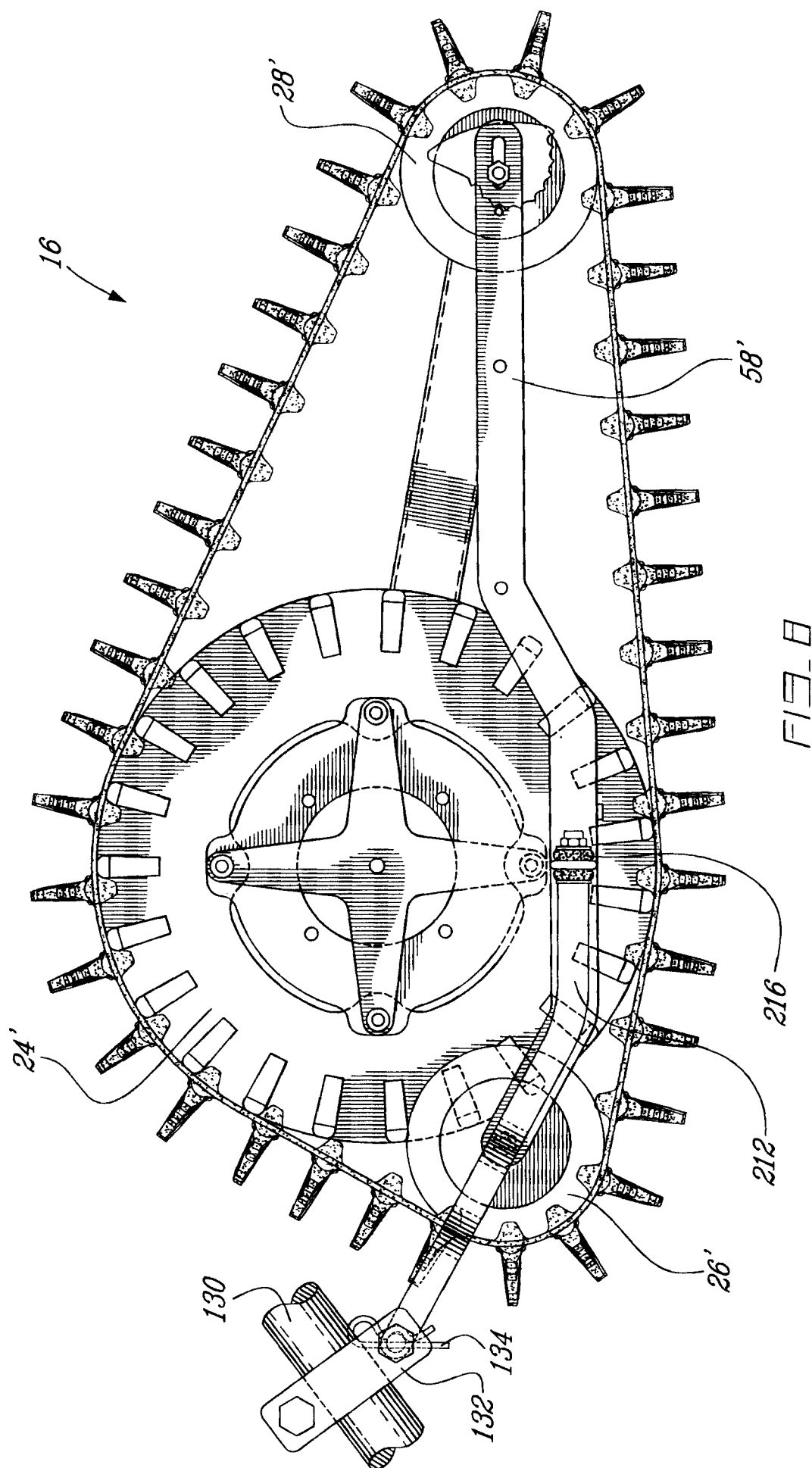


FIG. 4







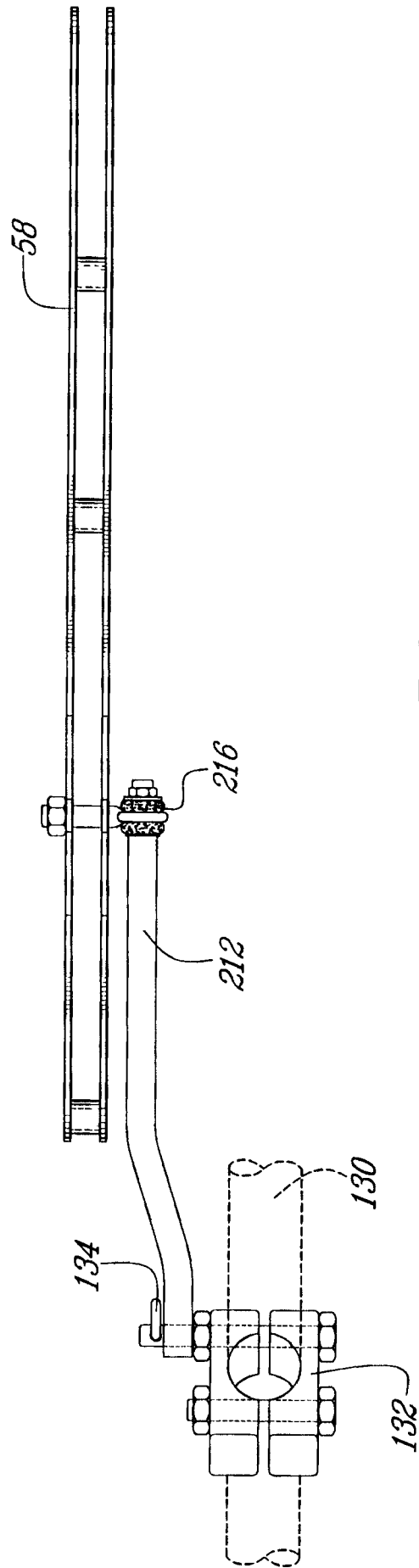


FIG. 9

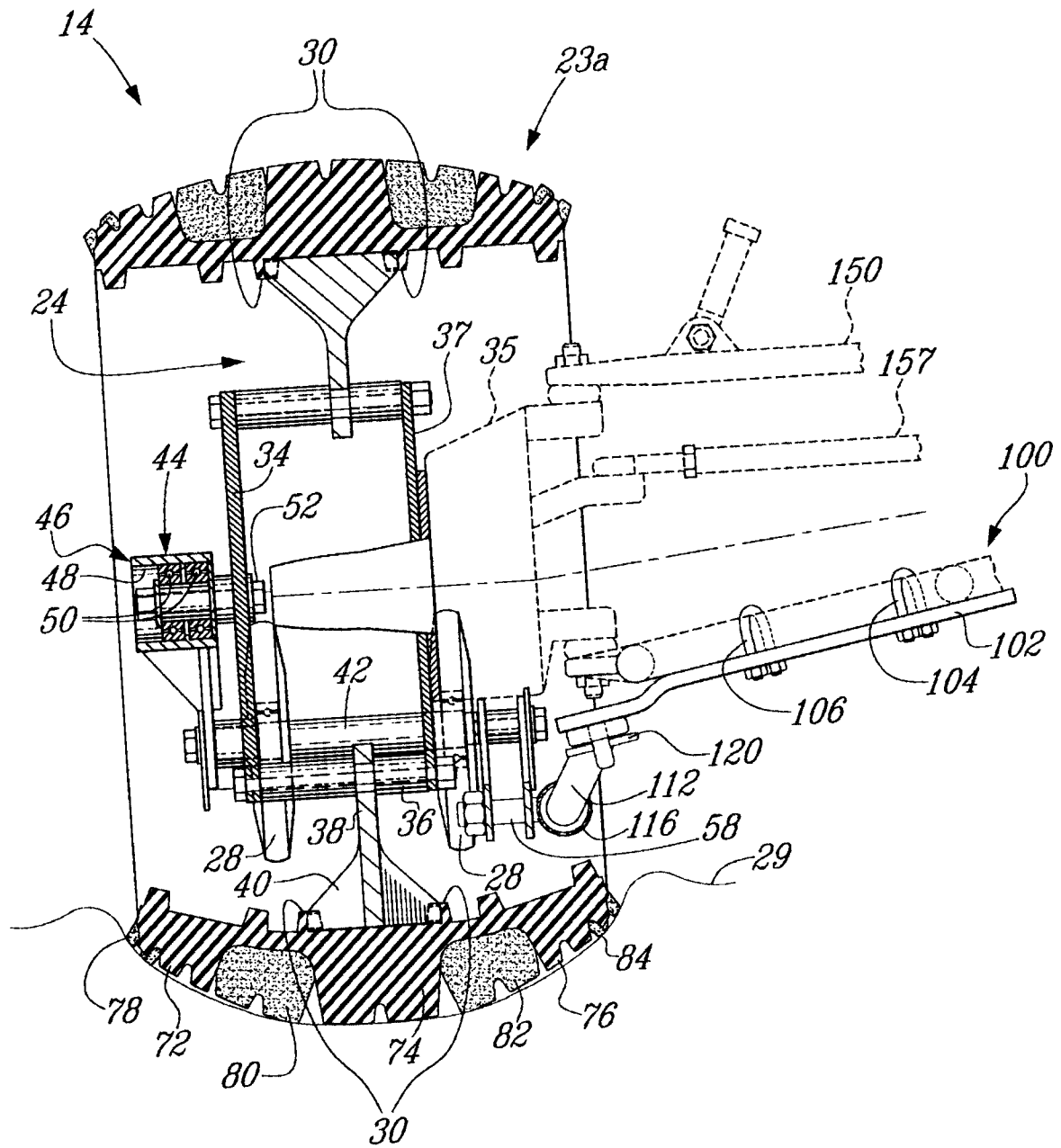
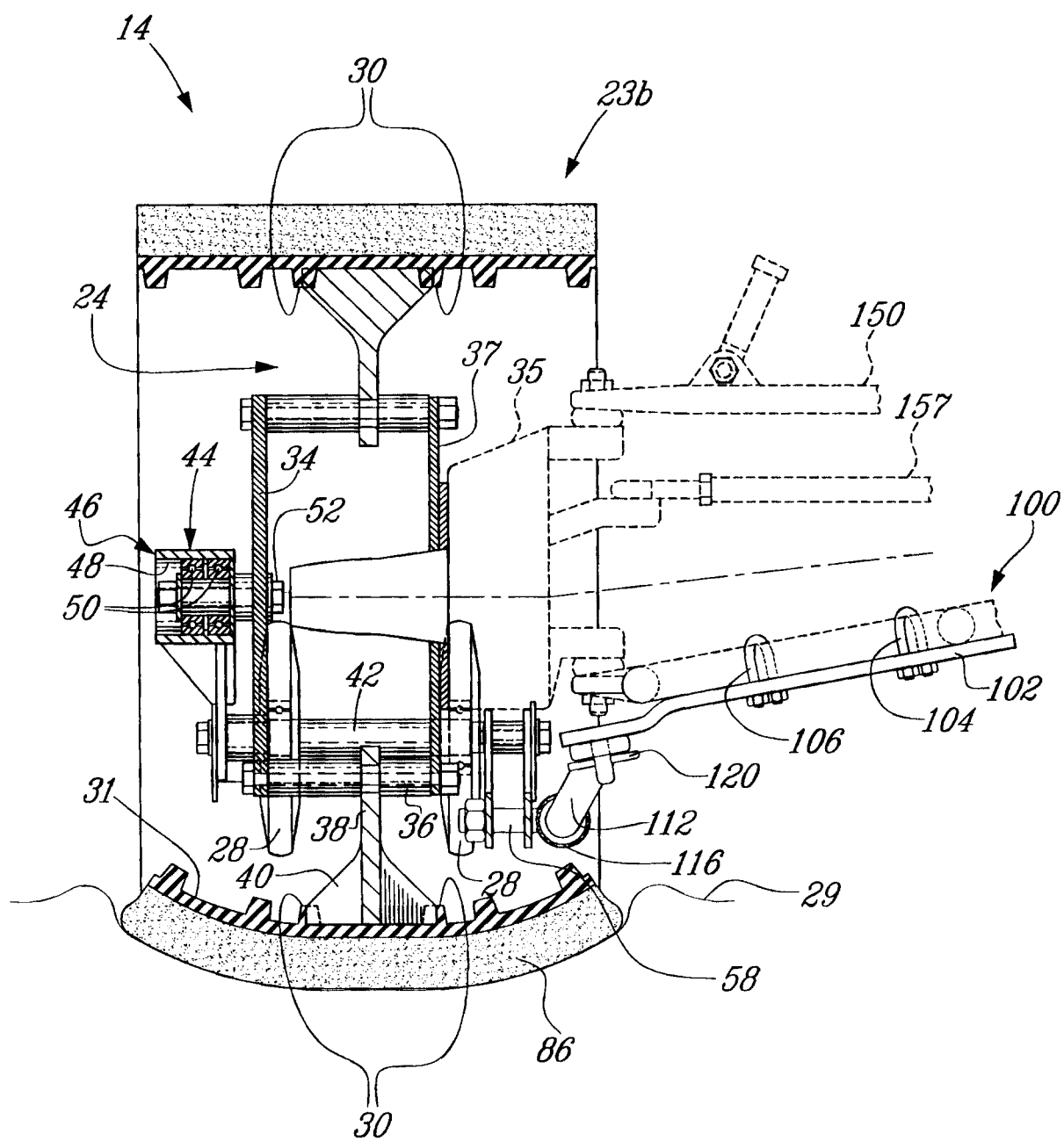


FIG. 10



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