A portable lacrosse goal assembly is provided comprising a rigid frame comprising a plurality of hollow pole frame sections. A net is attached to the rigid frame. At least one retractable wheel assembly is mounted within one of the hollow pole frame sections and is movable between a retracted position wherein it is positioned within the hollow pole frame section and an extended position wherein it extends outside the hollow pole frame section.
FIG. 1

FIG. 2

FIG. 6
ATHLETIC GOAL ASSEMBLY
CROSS REFERENCE TO RELATED APPLICATION

[0001] The present application is a non-provisional application claiming priority from U.S. Provisional Application Ser. No. 60/822,850 filed on Aug. 18, 2006.

TECHNICAL FIELD

[0002] The present invention relates generally to a sports goal assembly and more particularly to a lacrosse goal assembly with improved transportation characteristics.

BACKGROUND OF THE INVENTION

[0003] The sport of lacrosse has increased in popularity significantly over the years. Wherein it once had a limited range of collegiate clubs in the east coast, it now ranges throughout the United States and Internationally. In combination with its official growth, so too has the growth of general popularity and the resultant increase in general recreational play. One key aspect of lacrosse that often impacts its professional, collegiate, and recreational followers is the necessity to set up quickly relatively portable equipment. This allows the users to take full advantage of a wide array of locations without the need for permanent fixtures. This is a benefit to the entire range of play from practice to performance.

[0004] Goal assemblies, however, are often large and heavy. This makes their movement from temporary fields difficult and onerous. Even large and heavy assemblies often need to be moved into garages or other storage facilities such that the playing field may be utilized for alternate uses. This is an aspect that pervades many sports in addition to lacrosse. As such, it would be highly desirable to have an improved goal assembly that facilitated easier transportation or movement. This improvement in transportation characteristics would allow for temporary setups and would allow players to spend their valuable time playing and practicing rather than setting up equipment.

SUMMARY OF THE INVENTION

[0005] In accordance with the advantages of the present invention, a portable lacrosse goal assembly is provided comprising a rigid frame comprising a plurality of hollow pole frame sections. A net is attached to the rigid frame. At least one retractable wheel assembly is mounted within one of the hollow pole frame sections and is moveable between a retracted position wherein it is positioned within the hollow pole frame section and an extended position wherein it extends outside the hollow pole frame section into a ground contacting position.

[0006] Other objects and features of the present invention will become apparent when viewed in light of the detailed description and preferred embodiment when taken in conjunction with the attached drawings and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 is an illustration of an embodiment of a goal assembly in accordance with the present invention;

[0008] FIG. 2 is a detailed illustration of a portion of the goal assembly illustrated in FIG. 1, the illustration showing the retractable wheel assembly in the retracted position;

[0009] FIG. 3 is a detailed illustration of a portion of the goal assembly illustrated in FIG. 1, the illustration showing the retractable wheel assembly transitioning into the extended position;

[0010] FIG. 4 is a detailed illustration of a portion of the goal assembly illustrated in FIG. 1, the illustration showing the retractable wheel assembly in the extended position;

[0011] FIG. 5 is a detailed illustration of the goal assembly illustrated in FIG. 4, the goal assembly showing goal transportation;

[0012] FIG. 6 is a detailed illustration of a portion of the goal assembly illustrated in FIG. 1, the illustration detailing the retractable wheel assembly.

DESCRIPTION OF PREFERRED EMBODIMENTS

[0013] Referring to FIG. 1, which is an illustration of a portable athletic goal assembly 20 in accordance with the present invention. Although the portable athletic goal assembly is generally illustrated as a lacrosse goal assembly, it should be understood that the present invention would be applicable to a variety of different sports. The portable athletic goal assembly 20 is generally comprised of a rigid frame 21 to which a net 22 is attached. The rigid frame 21 preferably includes an upper section 24, two side sections 26, 28, and a base section 30, which together define an opening. In at least one embodiment, it is contemplated that these sections 24, 26, 28, 30 comprises hollow pole sections as illustrated in FIGS. 2-6.

[0014] More specifically, the upper section 24 includes a top member having a first end 34 and a second end 36. The first end 34 is attached to the first side section 26 and the second end 36 is attached to the second side section 28. The upper section 24 is oriented horizontally with respect to the ground when the goal 20 is in use.

[0015] The first and second side sections 26, 28 are oriented vertically when the goal 20 is in use. The first side section 26 has a first end 38, a second end 40, and generally defines a first vertical axis 42. Similarly, the second side section 28 has a first end 44, a second end 46, and generally defines a second vertical axis 48. Attached to the first end 34 of the top member 24 is the first side section first end 38. The second end 36 of the top member 24 is attached to the second side section first end 44. The second end 40 of the first side section 26 and the second end 46 of the second side section 28 are each attached to the base section 30. At least one embodiment, a first curved transition section 47 is positioned between the second end 40 and the base section 30. A second curved transition section 49 is positioned between the second end 46 and the base section 30. A retractable wheel opening 51 is preferably formed in the curved transition sections 47, 49 to accommodate the retractable wheel assembly 32.

[0016] The base section 30 is oriented horizontally with respect to the ground when the goal 20 is in use and rests on the ground when the goal 20 is in use. The base section 30 preferably includes a first base member 50 and a second base member 52. The first base member 50 has a first end 74 and second end 76 and the second base member 52 has a first end 78 and a second end 80. The first base member first end 74 is in communication with the first side section second end
40. The first base member second end 76 is connected to the second base member first end 78. The second base member second end 80 is then in communication with the second side section second end 46.

[0017] A plane is defined by upper section 24, first side section 26, and second side section 28. The base section, which includes first and second base members, preferably does not lie in the plane defined by the three other sections. Rather, first and second base members 50, 52 preferably diverge out from the plane to provide stability to the goal when in use.

[0018] The present invention further includes a retractable wheel assembly 32 in order to selectively facilitate movement of the portable athletic goal assembly 20 from one location to another. The retractable wheel assembly is preferably located in either one or both of the side sections 26, 28 such that the portable athletic goal assembly 20 may be rotated forward and rolled from one location to another (see FIG. 5). A representative wheel assembly 32 is illustrated in FIGS. 2-6. It should be understood that this representative wheel assembly 32 is capable of being mounted in any of the hollow pole frame sections.

[0019] The retractable wheel assembly 32 can be moved between a retracted position 100 (FIG. 2) and an extended position 110 (FIG. 4), thus exposing at least one wheel, to assist in moving the goal 20 (FIG. 5). Once the goal 20 has been placed in its desired location, the wheel assembly 32 can be retracted into the side section and hidden from view.

[0020] Referring to FIGS. 2-6, the retractable wheel assembly 32 includes an aligning member 54 (cylindrical guide arm) attached to at least one wheel 56. The cylindrical guide arm 54 is preferably configured such that it slidably engages an internal portion 57 of a hollow pole section 26, 28. By extended inside the hollow pole section 26, 28 the cylindrical guide arm 54 provides structural stability for wheels 56, 58 attached to the aligning member 54 (cylindrical guide arm). An axle 60 connects the wheels 56, 58 to rotate about axle 60. A diminished diameter section 59 of the cylindrical guide arm 54 in the region wherein the wheels 56, 58 are mounted insures the retractable wheel assembly 32 can completely fit within the hollow pole section 26, 28.

[0021] Aligning member 54 is positioned and moves along first vertical axis 42. Aligning member 54 includes two pins 62, 64 (lock elements) and first side section includes two sets of holes (retraction pin engagement holes) 66, 68 and (extension pin engagement holes) 70, 72 for receiving pins 62, 64. The first set of holes 66, 68 defines the retracted position for wheel assembly 32 and the second set of holes 70, 72 defines the extended position for wheel assembly 32. The pins 62, 64 are spring-loaded and therefore default to a radially extended position with respect to the first vertical axis. Pins 62, 64 can be pushed in or retracted, to move wheel assembly 32 between the two sets of holes. For example, when wheel assembly 32 is locked into the retracted position pins 62, 64 are extended through the first set of holes 66, 68. However, when a user is going to move the athletic goal to a different position, pins 62, 64 would be pushed out of the first set of holes 66, 68. Wheel assembly 32 slides down along first vertical axis and pins 62, 64 pop out into the second set of holes 70, 72, thus locking wheel assembly 32 into the extended position and exposing wheels 56, 58. The retractable wheel opening 51 formed in the curved transition portions 47, 49 provides a simple, but effective, methodology of moving the wheels 56, 58 in and out of the hollow pole section 26.

[0022] Once the goal has been positioned in its desired location, the pins 62, 64 can be pushed out of the second set of holes 70, 72 and the wheel assembly will slide up along the first vertical axis. The wheel assembly 32 will lock into the retracted position, thus hiding the wheels, when pins 62, 64 pop out into the first set of holes 66, 68.

[0023] A second wheel assembly would be identical to the first wheel assembly. Therefore, when a user desires to move the goal both wheel assemblies will need to be positioned in their respective extended positions. Similarly, when the goal has been positioned in its desired location, both wheel assemblies will need to be positioned to their respective retracted positions. Thus wheel assemblies 32 can be mounted on any number of the hollow pole sections to provide additional or alternate rolling surfaces.

[0024] While the invention has been described in connection with one or more embodiments, it is to be understood that the specific mechanisms and techniques which have been described are merely illustrative of the principles of the invention, numerous modifications may be made to the methods and apparatus described without departing from the spirit and scope of the invention as defined by the appended claims.

What is claimed is:

1. A portable lacrosse goal assembly comprising:
   a. a rigid frame comprising a plurality of frame sections defining an opening;
   b. a net attached to said rigid frame; and
   c. at least one retractable wheel assembly mounted to one of said frame sections and movable between a retracted position and an extended position, said at least one retractable wheel configured to be benign to goal assembly operation when in said retracted position.

2. A portable lacrosse goal assembly comprising:
   a. a rigid frame comprising a plurality of hollow pole frame sections;
   b. a net attached to said rigid frame; and
   c. at least one retractable wheel assembly mounted within one of said hollow pole frame sections, said at least one retractable wheel assembly movable between a retracted position wherein said retractable wheel assembly is positioned within said hollow pole frame section and an extended position wherein said retractable wheel assembly extends outside said hollow pole frame section.

3. A portable lacrosse goal assembly as described in claim 2, wherein said plurality of hollow pole frame sections comprises:
   a. an upper section;
   b. a first side section;
   c. a second side section; and
   d. a base section.
4. A portable lacrosse goal assembly as described in claim 3, wherein said at least one retractable wheel assembly comprises:

a first retractable wheel assembly mounted within said first side section; and

a second retractable wheel assembly mounted within said second side section.

5. A portable lacrosse goal assembly as described in claim 3, further comprising:

a first curved transition section joining said first side section to said base section; and

a retractable wheel opening formed in said first curved transition section, said retractable wheel assembly extended out of said retractable wheel opening when in said extended position.

6. A portable lacrosse goal assembly as described in claim 2, wherein said retractable wheel assembly comprises:

a cylindrical guide arm configured to slidably fit within said hollow pole frame section; and

a wheel element rotatably mounted to said cylindrical guide arm.

7. A portable lacrosse goal assembly as described in claim 2, wherein said retractable wheel assembly comprises:

a cylindrical guide arm configured to slidably fit within said hollow pole frame section; and

a pair of wheel elements rotatably mounted to said cylindrical guide arm.

8. A portable lacrosse goal assembly as described in claim 6, further comprising:

a retraction lock element formed on said cylindrical guide arm, said retraction lock element removably securing said retractable wheel assembly in said retracted position.

9. A portable lacrosse goal assembly as described in claim 8, wherein said retraction lock element comprises:

at least one push pin element configured to removably engage at least one retraction pin engagement hole formed in said hollow pole frame section.

10. A portable lacrosse goal assembly as described in claim 9, further comprising:

a pair of push pin elements configured to removably engage a pair of retraction pin engagement holes formed in said hollow pole frame section.

11. A portable lacrosse goal assembly as described in claim 9, further comprising:

an extended lock element formed on said cylindrical guide arm, said extended lock element removably securing said retractable wheel assembly in said extended position.

12. A portable lacrosse goal assembly as described in claim 11, wherein said extension lock element comprises:

at least one push pin element configured to removably engage at least one extension pin engagement hole formed in said hollow pole frame section.

13. A portable goal assembly comprising:

a rigid frame comprising a plurality of hollow pole frame sections, said plurality of hollow pole frame sections including an upper section, a first side section, and a second side section;

a net attached to said rigid frame; and

at least one retractable wheel assembly mounted within one of said hollow pole frame sections, said at least one retractable wheel assembly movable between a retracted position wherein said retractable wheel assembly is positioned within said hollow pole frame section and an extended position wherein said retractable wheel assembly extends outside said hollow pole frame section.

14. A portable goal assembly as described in claim 13, wherein said plurality of hollow pole frame sections further comprises:

a base section;

a first curved transition section joining said base section to said first side section; and

a second curved transition section joining said base section to said second side section.

15. A portable goal assembly as described in claim 14, further comprising:

a first retractable wheel opening formed in said first curved transition section, said at least one retractable wheel assembly comprising a first retractable wheel assembly extending out of said first retractable wheel opening when in said extended position;

and

a second retractable wheel opening formed in said second curved transition section, said at least one retractable wheel assembly comprising a second retractable wheel assembly extending out of said second retractable wheel opening when in said extended position.

16. A portable goal assembly as described in claim 13, wherein said retractable wheel assembly comprises:

a cylindrical guide arm configured to slidably fit within said hollow pole frame section; and

a pair of wheel elements rotatably mounted to said cylindrical guide arm.

17. A portable goal assembly as described in claim 13, further comprising:

a retraction lock element removably securing said retractable wheel assembly in said retracted position; and

an extended lock element removably securing said retractable wheel assembly in said extended position.

18. A portable goal assembly as described in claim 17, wherein said retraction lock element comprises:

at least one push pin element configured to removably engage at least one retraction pin engagement hole formed in said hollow pole frame section.

19. A portable goal assembly as described in claim 17, wherein said extension lock element comprises:

at least one push pin element configured to removably engage at least one extension pin engagement hole formed in said hollow pole frame section.

20. A portable goal assembly as described in claim 13, wherein at least one retractable wheel assembly is completely stored with said hollow pole frame section when in said retracted position.