



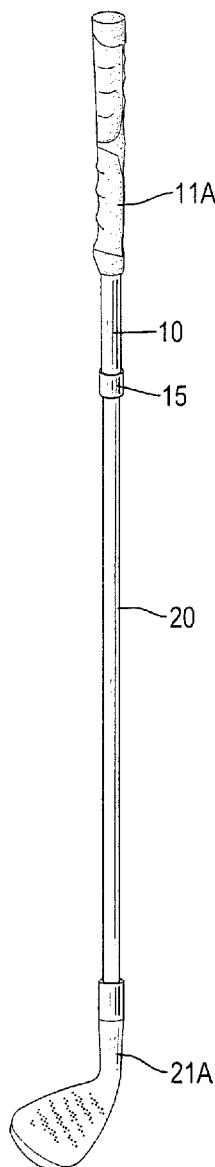
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(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2007/0293340 A1**
Cheng (43) **Pub. Date: Dec. 20, 2007**(54) **ADJUSTABLE STICK-LIKE SPORT APPARATUS**(52) **U.S. Cl. 473/316**(57) **ABSTRACT**(76) Inventor: **Chen-Hua Cheng**, Taichung (TW)

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SEATTLE, WA 98154(21) Appl. No.: **11/424,860**(22) Filed: **Jun. 17, 2006****Publication Classification**(51) **Int. Cl.**
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An adjustable stick-like sport apparatus has an outer tube and a stick, the outer tube has an opening. The stick slidably mounted in the outer tube and has an extension portion formed in one end and inserted into the outer tube. Two nipping members encircle the extension portion, are engaged with the extension portion and are mounted slidably in the outer tube. When the user rotates the stick with the extension portion, the nipping members are stable relative to the extension portion. The sticks may extend out of or retract in the outer tube to vary a length of the adjustable stick-like sport apparatus. After the length is adjusted, reversely rotating the stick causes the two nipping members to tightly abut the outer tube to fix the length of the adjustable stick-like sport apparatus.



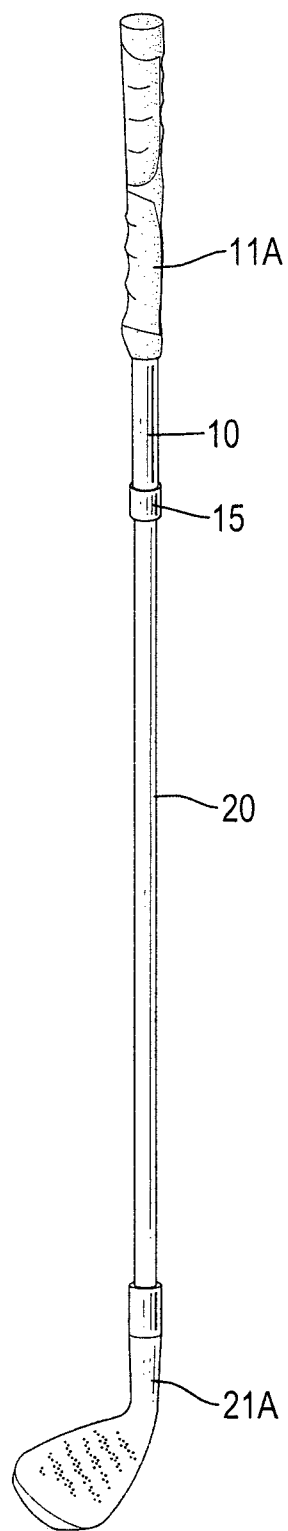


FIG.1

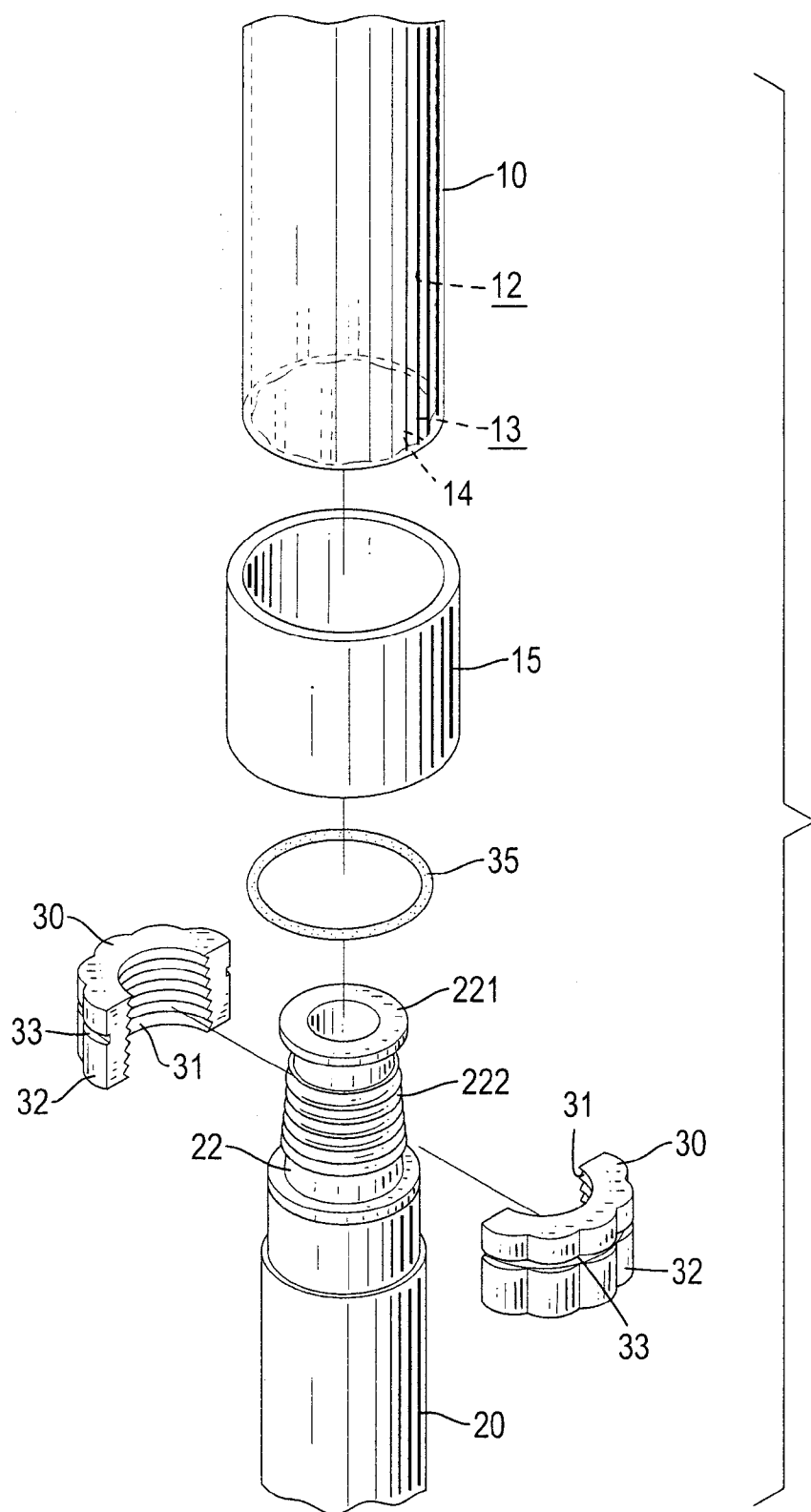


FIG.2

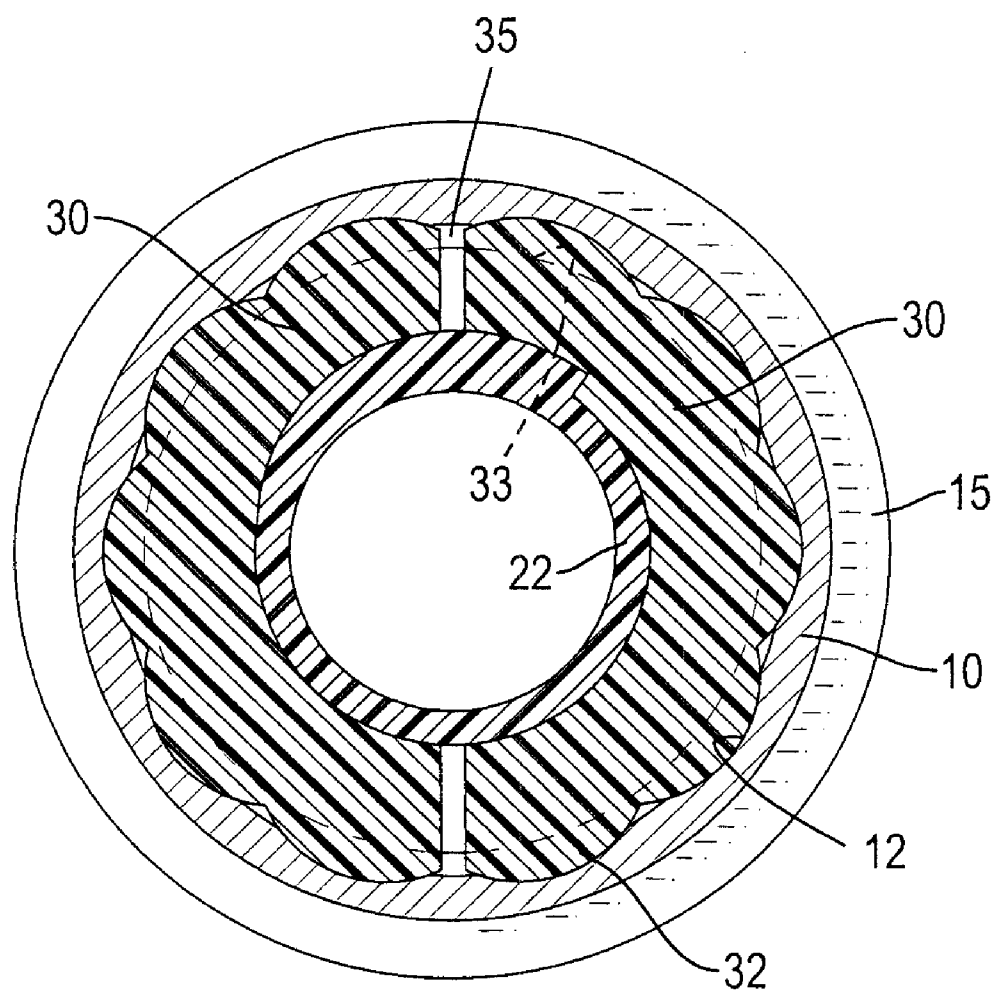
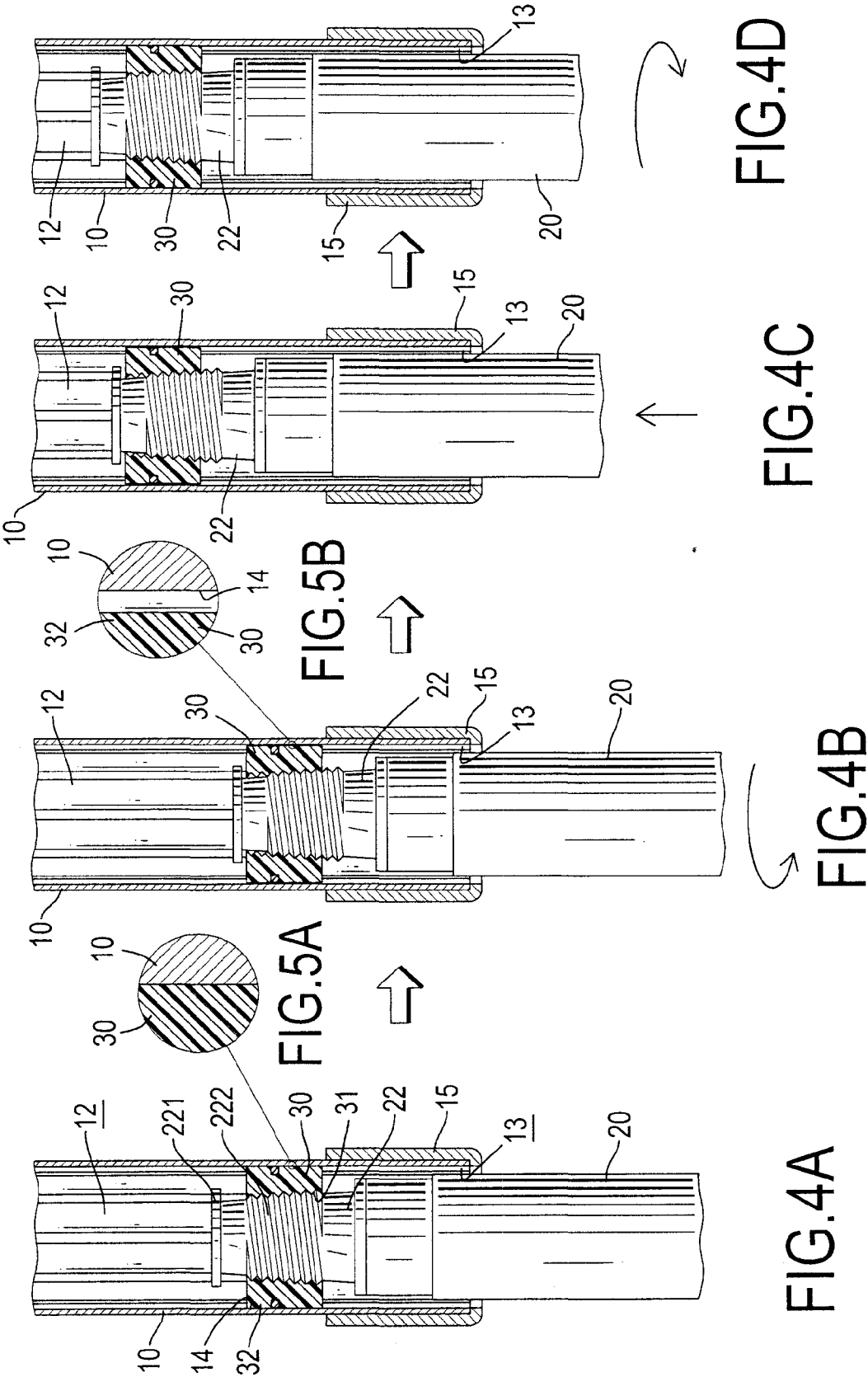


FIG.3



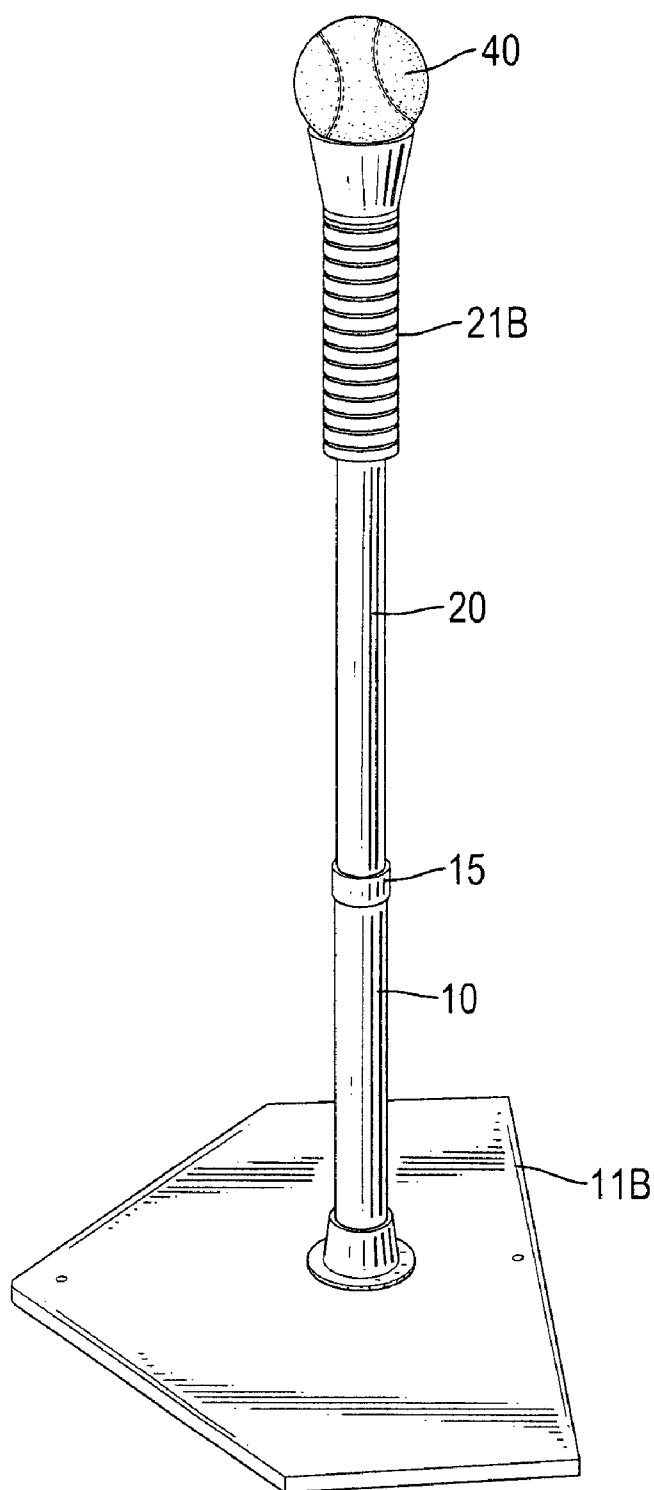


FIG.6

ADJUSTABLE STICK-LIKE SPORT APPARATUS

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to sport equipment, and particularly relates to a sport pole, the length of which is adjustable if necessary.

[0003] 2. Description of the Related Art

[0004] Stick-like sport apparatuses such as the golf clubs, bats, and baseball trainers are widely used nowadays. However, these sport apparatuses have a fixed length, which can not be adjusted according to the user's figure.

[0005] Therefore, the invention provides an adjustable stick-like sport apparatus to mitigate or obviate the aforementioned problems.

SUMMARY OF THE INVENTION

[0006] The main objective of the present invention is to provide an adjustable stick-like sport apparatus having an outer tube, a stick, and nipping members and a variable length. An adjustable stick-like sport apparatus in accordance with the present invention has an outer tube and a stick, the outer tube has an opening. The stick slidably mounted in the outer tube and has an extension portion formed in one end and inserted into the outer tube. Two nipping members encircle the extension portion, are engaged with the extension portion and are mounted slidably in the outer tube.

[0007] Other objectives, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is a perspective view of a first embodiment of an adjustable stick-like sport apparatus in accordance with this invention;

[0009] FIG. 2 is an enlarged and exploded perspective view of the adjustable stick-like sport apparatus in FIG. 1;

[0010] FIG. 3 is a sectional top view of the adjustable stick-like sport apparatus in FIG. 1;

[0011] FIGS. 4A-4D are a sequence of operational side view in partial section of the adjustable stick-like sport apparatus showing that the adjustable stick-like sport apparatus is shortened;

[0012] FIGS. 5A and 5B are enlarged cross sectional side views of the adjustable stick-like sport apparatus which respectively correspond to FIGS. 4A and 4B; and

[0013] FIG. 6 is a perspective view of a second embodiment of an adjustable stick-like sport apparatus in accordance with this invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0014] With reference to FIGS. 1-3, in a first embodiment of an adjustable stick-like sport apparatus in accordance with the present invention is a golf club and has an outer tube (10), a stick (20) and two nipping members (30).

[0015] The outer tube (10) has an outer wall, an inner wall (12) and a handle (11A). The handle (11A) is mounted on the outer wall. One end of the outer tube (10) has an opening (13). A runner (14) is defined in the inner wall (12) of the

outer tube (10), communicates with the opening and has a wave-like cross section. A bushing (15) is mounted around the outer tube around the opening (13).

[0016] The stick (20) has a first end and a second end, the first end is mounted with a golf head (21A). The second end is mounted slidably into the runner (14) in the outer tube (10). An extension portion (22) is formed on the second end of the stick (20), has an outer wall, a proximal end formed on the second end and a distal end and is tapered from the proximal end to the distal end. An outer thread (222) is defined in the outer wall of the extension portion (22). A flange (221) radially extends out from the distal end of the extension portion (22).

[0017] The nipping members (30) are semicircular, encircle the extension portion (22) and each nipping member (30) has an inner surface and an inner thread (31). The inner thread (31) is defined on the inner surface of the nipping member (30) and is engaged with the outer thread (222) on the extension portion (22) on the stick (20). The two nipping members (30) abut and are limited by the flange (221) to keep the extension portion (22) from falling out of the nipping members (30). Each nipping member (30) has an outer wall (32) and a wave-like outer cross section corresponding to the wave-like cross section of the runner (14) so the nipping members (30) do not rotate relative to the outer tube (10). The nipping members (30) are slidably mounted in the runner (14) in the outer tube (10). In addition, Each nipping member (30) has a curved groove (33) defined in a middle of the nipping member (30). A resilient ring (35) is mounted in the curved grooves (33) in the nipping members (30) to bind the nipping members (30) and the extension portion (20) together.

[0018] With reference to FIGS. 4A-4D, 5A and 5B, the two nipping members (30) are mounted slidably in the outer tube (10) without rotating. When the user rotates the stick (20) with the extension portion (22) to move the nipping members (30) toward the distal end of the extension portion (22), the outer walls (32) of the nipping members (30) loosely abut the inner wall (12) of the outer tube (10). Therefore, the stick (22) with the two nipping members (30) may retract in or extend out of the outer tube (10) to vary a length of the golf club, as shown in FIGS. 4B and 5B. When the length of the golf club is appropriate, the stick (20) is rotated reversely to move the two nipping members (30) toward the proximal end of the extension portion (22), as shown in FIGS. 4C and 4D. The space between the two nipping members (30) is expanded as the extension portion (22) press the two nipping members (30) outward, whereby the two nipping member (30) tightly abut the outer tube (20) and the length of the golf club is fixed.

[0019] With reference to FIG. 6, a second embodiment of the adjustable stick-like sport apparatus in accordance with the present invention is a baseball stand having an outer tube (10) and a stick (20).

[0020] A quinquangular base (11B) is mounted under the outer tube (10). A ball seat (21B) is mounted on a top end of the stick (20). A ball (40) is placed on the ball seat (21B). The operation is the same with the first embodiment, so detailed description is omitted here.

[0021] Simply rotating retractable stick (20) in the outer tube (10) may quickly vary in the length of the adjustable stick-like sport apparatus. Therefore, the operation of the adjustable stick-like sport apparatus is convenient to people.

[0022] It is to be understood, however, that even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and function of the invention, the disclosure is illustrative only. Changes may be made in the details, especially in matters of shape, size, and arrangement of parts within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. An adjustable stick-like sport apparatus comprising:

an outer tube having an outer wall and an inner wall, one end of the outer tube having an opening and a runner defined in the inner wall of the outer tube, communicating with the opening and having a wave-like cross section;

a stick having a first end and a second end mounted slidably into the outer tube, an extension portion formed on the second end of the stick, being tapered, an outer thread defined on the extension portion and a flange radially extending out from the distal end of the extension portion; and

two nipping members being semicircular, encircling the extension portion and mounted slidably in the runner in the outer tube and each nipping member having an inner surface, an inner thread defined on the inner surface and engaged with the outer thread of the extension portion and a wave-like outer cross section corresponding to the wave-like cross section of the runner.

2. The adjustable stick-like sport apparatus as claimed in claim 1, wherein a curved groove is defined in a middle of each nipping member, and a resilient ring is mounted in the curved grooves in the nipping members and binding the nipping members and the extension portion together.

3. The adjustable stick-like sport apparatus as claimed in claim 1, wherein the sport pole is a golf club, the first end of the stick is mounted with a golf head, and a handle is mounted on the outer wall of the outer tube.

4. The adjustable stick-like sport apparatus as claimed in claim 1, wherein the adjustable stick-like sport apparatus is a baseball stand and has a seat mounted on the first end of the stick and a base mounted under the outer tube.

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