The golh system comprises the complete set for the course golh, park golh, snow golh, night golh, and basedisk. Golh is the hybrid golf comprising the flying golfrisbee and the rolling golfball. Basedisk is the golfrisbee sport following the similar game rules of baseball. To make the golh dream come true, the golh system comprises the golh club, sky-ballet golfrisbee, golh lubricant, golh cart, golh trolley, golh bag, golh swing trainer, and the manufacture processes to be an integrated system package. The sky-ballet golfrisbee comprises a skirt to make it safe for playing in the park. The golfrisbee of golh will be the human power farthest throw in the world to be the new Guinness world record. The ski golh and basedisk will be the new Olympic sports.
GOLH, HANDISK & BASEDISK SYSTEM OF SKY-BALLETT GOLFRISBEE FOR COURSE GOLH, SNOW GOLH, NIGHT GOLH, PARK GOLH, DISK GOLH

BACKGROUND

[0001] 1. Field of the Invention

[0002] Golh sports are the century sports for the 21st century. The golh, handisk, and basedisk, etc. are the new sports derived from our invention golfrisbee. The golfrisbee is thrown into the sky and spin fast. The golfrisbee throwing process is more like the sky-ballet. It looks beautiful just like the ballet dancer spinning on the stage. Therefore, we refer the golfrisbee to be the ballet in the sky. Our goal is to have the golh sports to be the Olympic sports.

[0003] Golf was invented for several centuries. However, the golf is still not an Olympic sport. It is due to the original golf sport remaining as the sport for the rich people. In the northern cold place, the golf is limited to be a game during the daytime of the weekend in the warm seasons only. However, in the weekend, many people need to go to church in the Sunday morning. Furthermore, the high-flying golf ball is dangerous to people. Due to safety reason, the golfers need to book for the tee-time to play. The rate of the usability of the huge golf course is very low. No wonder the golfing fees are high. Golf becomes the sport for the rich people only.

[0004] To change the situation, the golfrisbee is introduced to make the revolution in the golf sport of modern society. New, the golfrisbee has made the breakthrough in golfrisbee technology. It will make the golh sport to be the sport for the people, not for the rich. Based on the innovation of the golfrisbee, many sports are created accordingly such as golh, golfrisbee, basedisk, handisk, basketdisk, tennidisk, waterdisk, etc. A lot of new associations are formed such as Golh Association, Golfrisbee Association, Basedisk Association, Handisk Association, Basketdisk Association, Waterdisk Association, etc as shown in the website http://www.golfrisbee.com. In the future, the handisk and ice golfrisbee will be the popular sport for people, golh have the potential to be the Olympic sport. Therefore, the golh will be the first Olympic sports of golf type sports.

[0005] Golh is the hybrid golf sport made of flying golfrisbee and the rolling ball. Golfrisbee is to swivel disk to fly. In golh sport, the long drive adopts flying golfrisbee; the putting adopts the rolling golf ball. The golfrisbee has the self-landing essential characteristics which it can play in the park to be the park sport. In the golh sport, the golfrisbee is strictly limited to roll on the ground such as putting the ball to roll into the hole. Because there is no flying golf ball, so golh is relatively safe to be played in the park to be the Park Golh. Even playing in the golf course, multiple groups of golfers can play at the same hole place without safety concern. Multiple groups of golfers share the golf course price. Golh does not need the tee-time. It reduces the golf course expense a lot.

[0006] The golh sports can be further divided to be

- [0007] (1) Course Golh;
- [0008] (2) Park Golh;
- [0009] (3) Disk Golh;
- [0010] (4) Snow Golh;
- [0011] (5) Ski Golh;
- [0012] (6) Night Golh;
- [0013] (7) Long-Drive Golh;
- [0014] (8) Basedisk;
- [0015] (9) Other: such as Handisk, Ice Golfrisbee, Tennidisk, Basketdisk, Waterdisk, etc.

[0016] Golh can play in the golf course to be the course golh. There is the technology compatibility between the golfrisbee and golfball. For the course golh, there is no tee-time requirement for the golfers. The golfer can play golh in the course any time and any place.

[0017] The high-flying golfball is dangerous. There is no golf in the park. However, the golfrisbee is safe, the golfer can play golh in the public park. The golh played in the park is the park golh. Since the park golh and basedisk can play in the public park, the customer base for the park golh is huge.

[0018] The basedisk is the conjugate sport of the baseball. Basedisk is to play golfrisbee according to the baseball game rules. The flying disk is the golfrisbee type basedisk launched with the golh club. The basedisk is smaller and heavier than golfrisbee. The basedisk flies as fast as the baseball.

[0019] Basedisk is the attacker swiveling the golfrisbee to launch the disk to fly. The pitcher is no longer needed. The defenders catch the disk and pass the disk to touch the attacker. The rule is the same as the baseball. The flying disk for the golh and basedisk has innovations to fly long-range distance and is safe to operate.

[0020] To play the basedisk or golh in the park, we need to have the portable base or portable-putting hole. The golh system pack includes the universal portable putting base for both the basedisk and park golh.

[0021] The handisk is the conjugate sport of the football. The handisk is to play the golfrisbee according to the football game rules. The disk is launched to fly with the hand or golh club.

[0022] The disk golh is to play the golfrisbee in the disc golf course according to the disk golf rules. On the disk golf course, there are many baskets. The basket is corresponding to the hole in the golf course. Disk golfers throw the flying disk into the basket with the hand. Instead of using hand throwing disk, the golfers use the golh club to launch the golfrisbee to fly. Disk golh is the golfer launching the golfrisbee to fly into the basket directly with the golh club. The hand-throw disk golfers are our potential golh customers.

[0023] One of the golh target accounts is the golf course. However, to make the golfers and the golf courses to accept the golh sport, we need to provide the complete golh system package for the golf market strategy. At the beginning, to approach the golf course, the golf market strategy is to take the market share which the golfer cannot play the long drive. There are the places and times which the golfers cannot play the long drive such as the park, snow course and the time in the night. The golh can play the long drive in the golf course during the darkness in the night. To differentiate from the
golf having no long driving capability, we mention the new snow golf and the new night golf having the long drive capability with golfrisbee to be the park golf, snow golf and night golf. To make the golfers and golf courses accept the golf sport, we promote the night golf and snow golf. The night golf and snow golf can have the long drive with the flying golfrisbee and the putting with rolling golfball. The snow golf and night golf do not conflict with the existing golf sport activities. The snow golf and night golf can do the time sharing with golf for the golf course.

[0024] Night golf is to play golf in the night. Night golf is the golf sport in the southern hot desert places. Why there is the need for the night golf? The first reason is that it is too hot to play golf during the daytime for the cities in the desert such as Las Vegas. The golfer has to wait until the temperature being cooled down in night. The night golf is the only golf which can be played in the hot desert. The second reason is that, in the weekdays, after the business hour, it is already 6 p.m. It becomes dark. If the golfer wants to play golf in the weekday, the night golf is the only choice. However, it is difficult to find the long drive flying golfball in the night. The night golf is limited to be putting only!

[0025] On the contrary, the snow golf and ski golf are the golf spots for the northern cold places. Snow Golf is the conjugate of the night golf. It is the golf in the cold northern snow winter season. In 1893, the father of snow golf, Rudyard Kipling, started to put the golf ball into the tin can. In 19th century, the USGA (United States Golf Association) already set the game rule for the snow golf. However, the snow golf cannot keep the snowy golf course to operate in the winter. After 110 years, the snow golf still cannot play the highflyng golfball game. It is impossible to have the long drive of the golfball in the snowy golf course. It is hard to find the golfball in the white snowfield. Therefore, the snow golf and night golf have the putting only.

[0026] Today the snow golf and the night golf already have the special rules and means. Both are the indoor golf activities to putting the golf ball to roll into the hole only. To have the long drive in night golf or snow golf, the LED and buzzer has to be installed on the golfball. However, as the golfball is hit with the impact of the golf club, the impact force will destroy the LED and buzzer. As the highflyng golfball falls on the ground, the impact force will destroy the LED and buzzer installed in the golfball, too. Therefore, it is impossible to mount any signal indicator device on the golfball.

[0027] Why does the golf cost so much? The long drive of the golfball causes all the problems.

[0028] (i) The highflyng golf ball is very dangerous that the golf cannot be played in the public park. It can only be played in the private golf course. Even in the private golf course, the highflyng golf ball of the multiple groups of golfers will hit on each other and hurt each other. The golf cannot have multiple groups playing at the same time. For the safety reasons, golf has the ‘tee-time’ regulation. There is booking for the tee-time. At any time, only one group can play at one hole place of the golf course.

[0029] (ii) The long drive of golf cannot be played in the winter snow course. On the thick snow, there is no solid ground to place the tee. The golf ball has to be played on the snow directly. As the swiveling golf club hits the ball, the snow powders will sprays everywhere that you can not see where the golfball flies. Even worse, as the highflyng golf ball falls on the snow, the golf ball punches the snow pile and is buried in the snow. The golf ball disappears in the snow golf course. The golfer never can find the golf ball again until the snow melts in the next spring. So, there is no long drive in the snowy golf course. The golf course needs to shut down in the snowy winter season.

[0030] In 1893, the father of snow golf Rudyard Kipling introduced the snow golf which only had the putting golf ball to roll on the small area snow-clean ground activities. The snow golf does not have the long-range highflyng golf ball activities. The snow golf is only in-house activities. It is no more the golf sport in the open field. The snow golf only has the putting activity. The snowy golf course still needs to shut down and lay off their employee. In the winter season, the snow golf only has the putting golf ball to roll into the hole activity. The golfer can put in the house, not in the golf course. Today golf sport cannot play in the snowy golf course. In the winter season, the golf course is filled with snow. The highflyng golf ball falls on to the snow and buried under the snow. It is impossible to find the golf ball that the golf game cannot play in the snowy golf course in the winter season. The golf course has to be shut down in the winter. The employee is laid off for 3 months to half year. The golf course lost a lot of money.

[0031] (iii) The golf ball is hit by the golf club seriously. As the high flying golf ball falling and hitting on the solid ground, the impact is seriously. Even LED embedded in the golf ball will be destroyed in the hitting and impact processes. So, there is no night golf. Since the golf club launches the sky-ballet golfrisbee as the human hand throws the flying disk. The soft-landing is the essential characteristics of the flying disk. So, there is no impact force applying to the flying disk in both the launching and landing process. We may embed the LED light in the sky-ballet golfrisbee to have the Night Golth.

[0032] The long drive of the golfball causes no night golf, no snow golf, no park golf and booking for tee-time. It causes the usage of the golf course to be low. In the park, the city government pays the “green fee.” In the private golf course, the golfers need to pay the green fee for the green grass. It causes the high operation cost of the golf course.

[0033] The Golth adopts the flying disk to solve the snow golf problem.

[0034] (1) For the long drive of golth, there is no hitting impact force during the launching golfrisbee process. As the golfrisbee falls on the ground, the golfrisbee has the soft-landing characteristics. The golfrisbee has the enough lift force to carry the miniature LED, buzzer and battery. So, the LED and buzzer can be installed on the golfrisbee. The light and sound will lead the golther to locate and find the golfrisbee in the dark or in the snow very quickly.

[0035] (2) The sky-ballet golfrisbee is mounted on the golfrisbee club to launch to fly. The golfrisbee club does not contact with the snow powder at all.
Therefore, the golfer can see where the sky-ballet golfrisbee flies and lands.

[0036] (3) Due to the soft-landing of the sky-ballet golfrisbee, the sky-ballet golfrisbee will land on the top of the snow. The golfer can identify the sky-ballet golfrisbee in the snow golf course easily.

[0037] (4) Due to safety of golfrisbee, the golf course can be as compact as a small park. The 18 hole paths can be folded as a net. The compact golf course can be located in the residential area, which is close to the golfer customers. It is convenient and safe for the night golfer.

[0038] Since the golfrisbee has the sound device and light device, the snow golf and night golf has the long Drive capability with golfrisbee. The golf can be played in the snowy golf course to be snow golf. The snow golf course just needs to blow the snow away from the putting hole area to clean out a small area for putting the golfball. With the golfrisbee, the snowy golf course can continue operating in the winter season.

[0039] The golfrisbee can be played in the snowfield to be the ski golfrisbee. The ski golfrisbee is to play the golf with the cross-country ski. The snow golf and ski golf are referred as white golf. With the golfrisbee, in the shiny sunshine, the golfer can play the white golf. The white golf has the different taste from the green golf. To play the white golfrisbee, we need to provide the auxiliary equipment. The complete system package includes the golfrisbee cart equipped with ski to play the ski golf.

[0040] Both snow golf and night golf have the highflying disk activity. Using the sky-ballet golfrisbee, the snow golf and the night golf have the complete golf course activity. The golf can boost up the golf course’s income a lot. Definitely, the golf courses will welcome the golf for their own benefit—the golf course’s income. Due to the night golf, the golf course can operate at night in the weekday or in the hot desert. With the night golf, the golf course can continue operating during the night. After the office hours, the businessperson can eat dinner in the restaurant of the golf course. Then go to play the night golf. Due to the snow golf, the golf course can operate in the snowy winter. With the golfrisbee, the golf course can increase the operation time and no shutdown in the snowy winter. The golf can boost up the economics of the golf course. The golf courses definitely encourage the golfer to adopt the golf club to play golf after it becoming dark or snowy. This is the win-win solution for the golf course and the golfers. It reduces the golfer’s cost a lot, too. The member fee of the golf course will worth more. The golf course will sell the golfrisbee and golfers and encourage all the golfers to play golf in the night or in snowy course in the days. To encourage the golfer to play the golf, they will allow the golfers to share the same course and no tee-time!

[0041] However, the night golf and the snow golf have the tough times and tough places to play. Therefore, we make the innovation in the golfrisbee system pack to meet the challenges of all the tough environments. We make the innovation in golfrisbee technologies based on our invention of golfrisbee. We integrate the technologies and make the innovation in system integration to meet the technical challenges in park golf, night golf, ski golf and snow golf to promote the golf sport.

[0042] Eventually, as the golfers’ population increases, the golf will be the dominant sport in the golf course. To play the golf in the golf course, the golfrisbee technologies have to be compatible with the golf and ball technology. The swing of golf club is similar to the swing of golf club. The long-drive flying distance has to be compatible. As shown in the following table, the long drive flying capability of golfrisbee is about the same as flying golfball.

### Technology Compatibility between Golfrisbee & Golfball

<table>
<thead>
<tr>
<th></th>
<th>Golfball</th>
<th>PDGA Disc</th>
<th>Aerobee Disc</th>
</tr>
</thead>
<tbody>
<tr>
<td>the long drive record</td>
<td>1200 ft.</td>
<td>712 ft.</td>
<td>1257 ft.</td>
</tr>
<tr>
<td>average</td>
<td>900 ft.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[0043] Now the flying disk technology is comparable with the golf technology. The long-drive champion record for the golfball is about 1236 feet. The hand-throw Aerobee Ring has the flying range record to be 1257 feet. Therefore, the golfball and flying disk can be compatible to share the same golf course. Furthermore, we make the innovation for golfrisbee—the sky-ballet golfrisbee. The sky-ballet golfball will make the flying disk flying better—higher and longer. With the sky-ballet golfrisbee, golf club and professional training with the golf swing trainer, almost all the people can launch the golfrisbee as well as and as far as the long drive of golf balls. From the following table of comparison, eventually the golf sport will be the dominant sport over the golf sport.

### Comparison Table for Golf & Golfrisbee

<table>
<thead>
<tr>
<th>Place/Time</th>
<th>Golf</th>
<th>Golfrisbee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tee-Time</td>
<td>Required</td>
<td>Not Required</td>
</tr>
<tr>
<td>Course Cost</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>City Park</td>
<td>Cannot Play</td>
<td>Can Play</td>
</tr>
<tr>
<td>Night</td>
<td>Only Putting</td>
<td>Long Drive &amp; Putting</td>
</tr>
<tr>
<td>Weekday</td>
<td>Cannot Play</td>
<td>Can Play</td>
</tr>
<tr>
<td>Descent</td>
<td>Only Putting</td>
<td>Long Drive &amp; Putting</td>
</tr>
<tr>
<td>Snow Golf</td>
<td>Cannot Play</td>
<td>Can Play</td>
</tr>
<tr>
<td>Snow Golf Course</td>
<td>Cannot Play</td>
<td>Can Play</td>
</tr>
<tr>
<td>Snow Field</td>
<td>Cannot Play</td>
<td>Can Play</td>
</tr>
<tr>
<td>Disk Golf Course</td>
<td>Cannot Play</td>
<td>Can Play</td>
</tr>
<tr>
<td>Basdisk</td>
<td>Cannot Play</td>
<td>Can Play</td>
</tr>
<tr>
<td>Handisk, etc</td>
<td>Cannot Play</td>
<td>Can Play</td>
</tr>
</tbody>
</table>

[0044] Furthermore, the way of golfrisbee swing is different from the way of golf swinging. There is the golf swing trainer to train the golfer to be the golfer.

[0045] In golf, from long drive to putting, the golfer changes from wood club to steel club. The golfball does not change.

[0046] In golfrisbee, from long drive to putting, the golfer changes from golfrisbee to golfball.

[0047] Golfrisbee is to introduce a complete system pack solution to the existing golf and flying disk problems. It offers
the solution for the snow golf, night golf, park golf and disk golf. One unique golfrisbee disk will fulfill all the different tough requirements of the different golf sports. In addition, we need to provide the system pack solution.

[0048] The screw system of the golfrisbee cannot allow the dirt or sand to attach to it. We need to have the field cleaner to clean the sand and dirt away. Comparing with golf, the golfrisbee is a high-tech sport. To play good, you need to understand the mechanics, aerodynamics, etc. The most difficult problem is the initial static friction stick force problem during the sky-ballet golfrisbee launching process. To swing consistently, each time the fit cap of the sky-ballet golfrisbee needs to be cleaned with blowing air and applied with lubricants of different viscosity. The static friction controller contains the compression air and lubricant.

[0049] The snow golf course and night golf courses are the tough play environment. We need special golf equipment for the snow golf and night golf. To play the snow golf in the snow golf course, there are other issues needed to be addressed. To play the snow golf in the field, it is impossible to drag the heavy golf bag to walk on the soft snow in the cold windy golf course. We need a specially designed golf cart to carry the bag and the golfer altogether.

[0050] To carry the heavy golf bag to walk on the soft snow is not an easy job. For the golf course in the desert of Las Vegas, the snake and animal will come out in the night. We need to minimize the hazards in the snow golf and night golf. The golfrisbee bag is integrated with the personal portable golfrisbee cart. The golfer can ride on the personnel portable golfrisbee cart in the golf course to minimize the hazards and speed up the play. As he arrives the disk-landing place, he can step down the golfrisbee cart, pop the support stick to support the golfrisbee cart as the standing golf bag. The golfrisbee cart will serve as the supporting bag as you play the golfrisbee. As the golfer launches the sky-ballet golfrisbee disk, the golfer can immediately step on the golf cart to run after the flying disk.

[0051] 2. Description of Prior Art

[0052] Golf is the national sport of US. It is the representative sport of the capitalism. It is the rich people's sport. However, it becomes the critics and hated target of the poor people in the world. Before, we do not care. After 911, we must consider that it is time for us to change the style of the golf sport. After 911, all the Americans are confused why the other worlds hate us so much? Golf sport is the representative for the hatred and is attacked by the outside western and well-developed countries. For the poor people, the golf is the rich people's sport. One-round of 18-hole play cost at least $30.00, even more. It is the month living fees of the poor people. With the addition of the caddy's fee, the poor people cannot imagine to join the golf sport in all his life. No wonder the golf represents the wealthy people's sport to be the hatred for the poor people. Due to the hatred caused by envy, even the golf sport is so popular in US, however, the golf is still rejected to be the sport of the Olympic sport.

[0053] The snow golf is popular in the northern snowy place. The night golf is popular in the southern desert place. In the desert, it is very hot in the day. So, the night golf becomes popular. Both snow golf and night golf have golf limited to putting. There is no highflying golfball activity in the snow golf and night golf. The golfer cannot play the long drive in the nighttime or snowy field. As the golf club head hits on the golf ball, the LED, buzzer and battery embedded in the golf ball most likely will crack. As the highflying golf ball hits on the solid ground, the LED, buzzer and battery most likely will crack.

[0054] Both basedisk and golfrisbee are the new sports based on the innovation of the golfrisbee. The basedisk is the golfrisbee adopting the baseball game rule. The golfrisbee is the hybrid sport constituted of the flying golfrisbee and rolling golfball. The golfrisbee can play in the park to be the park golf. Golfrisbee is the park golf which is safe to play in the park. It is invented for the Olympic golf sport. You cannot play the golf in the park. However, you can fly disk in the park. The golfrisbee can be played in the park as the flying disk being played in the park. As the object flying in the sky, it is the flying disk. As the object rolling on the ground, it is the rolling ball. From long drive to putting, the golfer changes the golfrisbee to be the golfball. In golfrisbee, the golfer does not change club. The same club can either launch the golfrisbee or put the golfball. The LED and battery can be embedded in the flying disk. Because the golfrisbee does not hit on the flying disk and the flying disk has the soft landing, the LED and battery will be left unharmed. You can play golfrisbee in the snow golf course. The flying disks will softly land on the top of the snow pile.

[0055] Furthermore, the golfrisbee can have the multiple groups to share the golf course at the same time. The multiple groups share the same tee-time. There is no need to reserve the tee-time anymore. Golfrisbee reduces the cost a lot for the member and increases the income of the golf course. It is the new golf standard which can play the golf in the snowy golf course. For the golfrisbee and basedisk sports, the golfrisbee completely changes the world value about the golf with the flying disk technology. It will save the American from the hatred and attacks of the terrorism.

[0056] Golfrisbee will save the golf course in the winter season. The golf course can continue operating in the winter season. Accordingly, the innovations of golfrisbee and golfrisbee are not only in the golf technology and flying disk technology but also in the way of sporting system integration. Without the innovation of the sporting system integration, the golf sport will not be functional properly.

[0057] The golfrisbee is technologically compatible to golf. The long drive of flying disk is compatible to the long drive of golf ball. The Guinness World Record set Aerobie Pro Ring (U.S. Pat. Nos. 4,560,358 and 4,456,265) to be the world's farthest thrown object 1,257 feet. Actually, it is not the dome-shaped flying disk. It is a flat plate with ring shape. There are two reasons for the ring plate structure to be the farthest thrown object. The first is the thin profile of the ring plate; the second is the long-range stability. The thin profile has the low drag force. The long-range stability is due to the side edge stability of the spoiler rim to keep the straight flight. However, the side stability causes the Aerobie Ring not having the dogleg curving flying capability. The dogleg flying capability is emphasized in the disk golf course. Furthermore, the inclined edge of the spoiler rim induces the drag at the front and end edges that the throwing distance is reduced. The thin plate without the proper protection. It easily hurts the other people. The flat plate ring is not safe to play in the park.

[0058] To make the flying disk have the thin profile is not easy. The Aerobie Superdisc is the flying disk version of the Aerobie Pro Ring. However, Aerobie Superdisc no longer
keeps the thin profile of the ring structure. The Aerobie Superdisc has the inclined curved edge with the dotted surface to increase the friction for handholding. At the edge, it has the spoiler rim for stable flight. The spoiler rim is like the upright directional wing of the airplane or the damping board of the boat. However, it induces many other drawbacks. At the leading edge, the spoiler rim will induce the separation of the boundary layer on the top of the flying disk. At the trailing edge, the spoiler rim will induce the separation of the flow from the soft cushion tail fin. Comparing to the Aerobic Pro Ring, the hand-thrown distance of Aerobic Superdisc is reduced a lot.

[0059] The U.S. Pat. No. 4,508,297 of Innova disk has the flying range of 712 ft. It is a flying disk approved by the Professional Disc Golf Association (PDGA). The hand-thrown flying disk has the vertical sharp edge for handholding. The disk having both the sharp edge and the side edge of the supersonic airfoil. However, the hand-thrown flying disk is always operating in the subsonic speed range. It is not a correct design for the front edge. The triangle is tilt upward. It is not correct design for the tail end, either. The speed of flying disk is much less than the sonic speed. For the supersonic airfoil design, it does not need the triangle. At the head side, the sharp edge does not have the supersonic effect. However, at the tail side, the vertical edge and the upward slope of the triangular design causes the separation of the airflow from the tail fin. It induces a lot of drag to the flying disk. Due to the vertical sharp-edge, Innova Disk has to be thrown horizontally. Even worse, the sharp edge of triangular design causes the Innova disk to be unsafe for the park sport. Originally, the flying disk has the benefit to play in the park safely. However, the Innova disk destroyed the park sport benefit. The Innova disk is small and heavy with the sharp edge. The Innova disk is dangerous to the public that it cannot be played in the public park. Just like the golf ball is forbidden in the park, the disk golf is forbidden in the park. The disk golf is no more a “park sport.” Just like the golf, the disk golf needs to play in the “disk golf course.”

[0060] The drag force determines the flying distance. The wobbling phenomena and the abrupt shape are the most important two aerodynamic drag factors. To eliminate the wobbling, the structure of golfrisbee is symmetrical. To reduce the drag force, the golfrisbee shape is further smoothed. The essential difference between the sky-ballet golfrisbee and the conventional hand-throwing flying disk is that the sky-ballet golfrisbee gets rid of all the sharp edges. It has no edge at all. The sky-ballet golfrisbee has the dome shape smooth design in its middle portion. The sky-ballet golfrisbee with the skirt is safe to play in the park. It is the only flying disk having both the thin profile of the ring structure and the dome shape of the flying disk. The golfrisbee is launched with the golf club. The screw of club head is about half turn only. It makes the sky-ballet flying disk being able to have very thin profile. Since the sky-ballet golfrisbee is not thrown with hand, it has no edge designed for the hand holding and throwing. The sky-ballet golfrisbee is launched with the golf club, it does not need the hand holding vertical edge of flying disk. It has the smoothly curved design in the middle portion of the bottom of sky-ballet golfrisbee. The skirt introduces the side stability without the loss of the dog-leg fly capability. The skirt further has the bumper design to play safe in the park. Furthermore, the skirt serves as the bumper to protect the people from being hit. The skirt made of the foam material has the opening space between the golfrisbee main body and the skirt. The skirt of the golfrisbee has the function of the long range stability of the spoiler rim; however, the skirt does not have the drag caused by the spoiler rim. Theoretically, the farthest distance comes from throwing angle at 45 degrees, not throwing level. The sky-ballet golfrisbee has no edge that it can launch at any angle. With the aerodynamic smooth airfoil design, thin ring structure and launching with the golf club, the sky-ballet golfrisbee will be the new Guinness World Record to set sky-ballet Golfrisbee to be the “Manpower throwing” World’s farthest thrown object.

[0061] The golfrisbee needs to play as the snow golfrisbee and the night golfrisbee. It is impossible for the golfer to pull the golf trolley in the deep snow. It is extreme dangerous to walk in the dark field. The golfrisbee cannot use the existed golf facilities to play the snow golf or night golf. The golf never plays in the snow field or the dark field. The golf cart, golf trolley or golf bag is not designed for the snow golf or night golf. The golf cart is a four wheels electrical car. The golf trolley cannot carry golfer. The golf bag is too heavy to be used on the soft snow. Therefore, the golf cart or golf trolley is not capable to work in the snow field and the dark field. In the snow field and the dark field, the golfrisbee has to be integrated with the golfrisbee cart and be able to carry the golfer. The Dean L. Kamen et al’s U.S. Pat. No. 5,971,091 Transportaion Vehicles and Methods and U.S. Pat. No. 6,302, 230B1 Personal Mobility Vehicles and Methods do not have the trolley function of golfrisbee cart. Our new innovative golfrisbee cart is unique to have the multiple functions of the golfrisbee, golfrisbee cart and golfrisbee bag. The golf cart is similar to the two-wheel golf trolley. However, the golfer can ride on the golf cart.

[0062] The golf swing trainer provides guidance for the path of the swing of the golf club. Our golfrisbee trainer not only guides the swing path but also guides the swing speed and swing acceleration. The golfer swing trainer integrates both the weight training and swing training in the same swing trainer.

OBJECTS AND ADVANTAGES

[0063] The sports of golfrisbee, snow golfrisbee, ski golfrisbee, night golfrisbee, park golfrisbee, disk golfrisbee and basdisk are the golfrisbee sport family which is derived from our invention of the sky-ballet golfrisbee. We provide the complete system packs solution for the golfrisbee sport family. The system pack includes the sky-ballet golfrisbee, golfrisbee cart, portable hole base, static friction lubricant, swing trainer, self-lock golfrisbee bag, and golfrisbee cart. The cost of golfrisbee and basdisk are reduced with the integrated manufacturing process. It becomes the sport for the people. The golfrisbee, ski golfrisbee and basdisk, etc will be the first golf type sports to be the official Olympic Sports and Winter Olympic Sports.

DRAWINGS FIGURES

[0064] FIG. 1 is the sky-ballet golfrisbee; (A) is the side view of the golfrisbee disk; (B) is the right-hand golfrisbee club; (C) is the left-hand golfrisbee club.

[0065] FIG. 2 is the section view of the sky-ballet golfrisbee; (A) is the side section view of the golfrisbee disk; (B) is the section view of the right-hand golfrisbee club; (C) is the section view of the left-hand golfrisbee club.
FIG. 3 is the section view of the sky-ballet golf frisbee as shown in FIG. 1A; (A) is the bottom view of the sky-ballet golf frisbee taken at the horizontal line X-X in FIG. 3B; (B) is the horizontal section view of the sky-ballet golf frisbee taken at the horizontal center line in FIG. 3A; (C) is the vertical section view of the sky-ballet golf frisbee taken at the vertical center line Y-Y in FIG. 3A.

FIG. 4 is the section view of the sky-ballet golf frisbee having the punched through fitting cap and the wing segment with the adjustable angle of attack; (A) is the bottom view of the sky-ballet golf frisbee taken at the horizontal line W-W in FIG. 4B; (B) is the horizontal section view of the sky-ballet golf frisbee taken at the horizontal center line in FIG. 4A; (C) is the vertical section view of the sky-ballet golf frisbee taken at the vertical center line Z-Z in FIG. 4A.

FIG. 5 is the section view of the sky-ballet having the ring shape; (A) is the bottom view of the sky-ballet golf frisbee; (B) is the horizontal section view; (C) is the vertical section view.

FIG. 6 is the section view of the sky-ballet golf frisbee with the exchangeable cap and weight-balanced design; (A) is the bottom view of the sky-ballet golf frisbee; (B) is the horizontal section view; (C) is the vertical section view.

FIG. 7 is the golf frisbee static friction controller which has the functions of air compressor, air cleaner and lubrication; (A) is the golf frisbee static friction controller at the idle position; (B) is the golf frisbee static friction controller in the air compression mode; (C) is the golf frisbee static friction controller at the air cleaning mode; (D) is the golf frisbee static friction controller in the lubrication mode.

FIG. 8 is the airfoil shape of the golf frisbee wings; (A) is the section view of an airfoil for the lift-upward motion with right hand rotation; (B) is the section view of an airfoil for the lift-up motion with left hand; (C) is the section view of an airfoil for the lift-upward motion; (D) is the section view of an airfoil for the diving-downward motion with right hand rotation; (E) is the section view of an airfoil for the diving-downward motion with left hand rotation; (F) is the section view of an airfoil for the diving-downward motion.

FIG. 9 is the two-wheel golf trolley; (A) is the two-wheel golf-pulling trolley; (B) is the integrated two-wheel golf trolley with the golf bag; (C) is the ski type golf trolley; (D) is the belt type golf trolley.

FIG. 10 is three-wheel type foldable and portable personal golf cart; (A) is the side view of the personal golf cart; (B) the personal golf cart stands as standing bag; (C) is the back view of the personal golf cart; (D) is the side view of the personal golf cart having the snow ski; (E) is the personal golf cart having the snow ski stands as stand-up bag; (F) is the back view of the personal golf cart having the snow ski.

FIG. 11 is two-wheel type foldable and portable personal golf cart; (A) is the side view of the personal golf cart; (B) is the personal golf cart stands as standing bag; (C) is the back view of the personal golf cart; (D) is the side view of the personal golf cart having the automatic ski capability; (E) is the personal golf cart having the automatic ski capability and also serving as standing bag; (F) is the back view of the personal golf cart having the automatic ski capability.

FIG. 12 shows the operation of the automatic ski system; (A) is on the hard ground, the ski is not engaged with the ground; (B) is the detailed mechanism of the automatic ski not engaged with the ground as shown in FIG. 11A; (C) is on the soft ground, the ski is engaged with the ground; (D) is the detailed mechanism of the automatic ski engaged with the ground as shown in FIG. 11C.

FIG. 13 shows the operation of the fast installment of the ski shoes of the golf cart; (A) is the shaft of wheel fed into the notch on the ski frame; (B) is the shaft of wheel fed into the guided slot of ski shoe; (C) the lock plate is closed to have the shaft of wheel sealed in the slot; (D) the hook of the spring is mounted on the shaft to have the automatic bias of the automatic operation of the snow ski.

FIG. 14 is the snow ski having the elongated guiding slot to have snow ski to be packed.

FIG. 15 is the snow wheel; (A) is the snow wheel rolling on the solid ground; (B) is the snow wheel rolling on the snow.

FIG. 16 is the section view of the integrated waterproof LED light for sky-ballet golf frisbee; (B) is the top view of the integrated waterproof LED light for sky-ballet golf frisbee.

FIG. 17 is the section view of the integrated waterproof sound generator for sky-ballet golf frisbee; (B) is the top view of the integrated waterproof sound generator for sky-ballet golf frisbee.

FIG. 18 is the partial section view of the self-locked golf bag; (A) the cap of the self-locked golf bag is in the locked position; (B) the cap of the self-locked golf bag is uncarped and is self-locked at the bottom of the bag.

FIG. 19 is the portable base for the golf putting and basedisc.

FIG. 20 is golf super swing trainer; (A) is the isometric view of the golf super swing trainer; (B) is the side view of the golf super swing trainer; (C) is the guide implemented with the gear for the golf frisbee club; (D) is the guide implemented with the steel rope for the golf frisbee club.

FIG. 21 is the golf simulator.

FIG. 22 is the working flow of the golf frisbee disk and golf frisbee hut; (A) the module process for golf club and golf frisbee; (B) the assembly flow for the golf club and golf frisbee.

DESCRIPTION AND OPERATION

The golf is the long drive of golf playing with the disk. The flying distance of the golf frisbee is compatible with the golfball. For the conventional flying disk, the flying distance is much less than the golfball. Therefore, the golf frisbee has the special design to have the long range flying capability. All the shape of the sky-ballet golf frisbee has the streamline design for integrity. There is no abrupt line segment or sections as most of the flying disk and ring
With the golf club, it will be the human power farthest throw in the world to be the new Guinness world record. Furthermore, the golfrisbee is designed to be safe to play as the conventional flying disk does.

[0087] As shown in FIG. 1, it shows the set of the sky-ballet golfrisbee. The golfrisbee has two kinds of design. As shown in FIG. 3, it shows the helicopter type wing segment 17. As shown in FIG. 5, it shows the UFO type design. The sky-ballet golfrisbee 1 has a skirt 16. The skirt 16 has several functions.

[0088] (1) It serves as the bumper to protect both human and the golfrisbee itself. The skirt is made of the soft material such as foam rubber. The skirt 16 has the skirt hanger 161 extended into the sky-ballet golfrisbee body.

[0089] (2) The skirt 16 serves as the stabilizer at the side of the golfrisbee for the long range flight. At the front of the golfrisbee, the skirt 16 serves as the guiding slot to guide the air flowing above the golfrisbee. It reduces the drag force at the front end. This design is the subsonic airfoil design. It is completely different from the Innova Disk. The Innova Disk has the triangle front end being the supersonic airfoil design. However, for the supersonic wing operates at the subsonic speed, it induces a lot of drag force.

[0090] (3) At the tail of the golfrisbee, the skirt 16 guides the airflow to wash downward to increase the lift and drifting distance.

[0091] On the contrary, in the Innova patent, the design of triangle rim will cause the air flowing upward, instead downward. It reduces the airlift force of the flying disk.

[0092] FIG. 1B is the right-hand golf club 2R; FIG. 1C is the left-hand golf club 2L. The weight 23 is to train the golfer to develop the golf muscle. The slot 231 is to have the weight 23 to be mounted on the golf club. The fixed handle is located at the end of the golf club. The sliding handle 21 is to have the natural slow-to-fast swing movement. The slot 211 is to have the sliding handle to be mounted on the golf club.

[0093] FIG. 2 is the section view of the sky-ballet golfrisbee and the golf club. The sky-ballet golfrisbee is in the UFO shape with right-handed cap 13R and left-handed cap 13L. This is the basic model of the sky-ballet golfrisbee. Due to the co-existence of the caps 13R and 13L, the weight of sky-ballet golfrisbee 1 is well balanced. Due to the weight balance, it does not have the wobbling phenomena that the sky-ballet flying distance is much longer than the unbalanced flying disk. Furthermore, the caps 13R and 13L are embedded in the sky-ballet body itself. Since the cap 13R and 13L are located at the rim. To embed the cap 13R and 13L in the body of the sky-ballet golfrisbee, the rim of the sky-ballet golfrisbee has the ring band structure. It reduces the aerodynamic drag force that the sky-ballet golfrisbee can fly longer and further. The left-hand screw 34L is fit in the left-hand cap 13L; the right-hand screw 34R is fit in the right-hand cap 13R. Except the left-hand screw 34L, the structure and operation of the left-hand golf club 2L are the same as the right-hand golf club 2R.

[0094] The right-handed screw 3R has the screw 34R notched on its top end. The bottom of the right-handed screw stub 3R is pivotally mounted in the club head 36. The screw 3R is locked with the locking screw 35. For one fixed cap 13R, the rotation of screw 3R determines the launching position on the swiveling circle of the swiveling golf club 2R. To launch the golfrisbee with golf club properly, the allowance of angle of the screw 3R rotation is only 5 degrees.

[0095] The extension club locker 22 is optional. To adjust the length of golf club, the golf club has two segments. Releasing the extension club locker 22, the lower segment 21 is slidable in the upper segment 2U. Locking the extension club locker 22, the lower segment 21 is locked in the upper segment 2U. The length of golf club is adjusted to be the ideal club length of the golfer.

[0096] The rotational motor 70 is optional. As use the rotational motor, the locking screw 35 is released to allow the screw 34R to have the free rotation. The rotation motor index 71 is the stopping position of the rotational motor 70. The battery 5 embedded in the handle is to supply the power to the rotation motor 70. The switch 51 is to turn on and turn off the rotation of the rotation motor 70. There is turn-on process and turn-off process. For the turn-on process, the battery power is first on, and then the rotation motor 7 starts to rotate. For the turn-off process, the motor rotor first stops the screw 34R at the position prescribed by the index 71. Then the battery power is shut down.

[0097] Swiveling the golf club to launch the golfrisbee, the golfrisbee rotates on the golf club with the golf club head being the pivotal center. It builds up the angular momentum. The rotational radius is large. As the golfrisbee takes off, the center of rotation is at the center of the golfrisbee. The rotational radius becomes small. According to the conservation of angular momentum, the rotation speed of the golfrisbee will become faster. The effect is similar to the ballet dancer shrinking her hands in front of her chest to speed up the spin speed. Therefore, the golfrisbee is referred to be the sky-ballet golfrisbee. To increase the sky-ballet effect, the ring band mass is reduced and the center mass is increased.

[0098] FIG. 3 shows the alternative design of the sky-ballet golfrisbee. As shown in FIG. 3, the hole 42 in the ring band is to reduce the weight. The center weight 12 is added to the center of the sky-ballet golfrisbee to increase the sky-ballet effect. The center weight 12 is constituted of the weights 120, 124 the screw 122 and the nut 123. For the night golf and/or snow golf, the weight 120 and/or 124 can be either the light source and/or the sound source. As shown in FIG. 16, the weight 120 is the light source for the night golf. The screw 122 passes the hole 1203 to hold the light 120 to the sky-ballet golfrisbee 1. The light source 1200 emits the light in the night golth to guide the golfer to locate the sky-ballet golfrisbee. To save the power, the light sources are LED. The LEDs have different colors. As the golfrisbee rotates in the night, it has the rainbow in the dark sky. The switching button 1201 can be pushed to shut the battery power. The switching button can be capacitor type that the seal of 1201 can be solid. The battery and the switching circuit 1202 are to supply the power and light control to the light source 1200.

[0099] As shown in FIG. 17, it shows the sound source 124 is to add the weight at the center of the sky-ballet golfrisbee. The screw 122 passes the hole 1243 to hold the
sound source 124 to the sky-ballot golfrisbee 1. The speaker 1240 generates the sound to guide the golfer to locate the sky-ballot golfrisbee. The switching button 1241 can be pushed to shut the battery power. The switching button can be capacitor type that the seal of 1241 can be solid. The battery and the switching circuit 1242 are to supply the power and light control to the light source 1240.

[0100] As shown in FIG. 8, to have the video, audio effect, enhanced sky-ballot effect and the lifted flying capability, the sky-ballot golfrisbee is modified to be the helicopter type sky-ballot golfrisbee. The wing 17 has many different wing segments to modify the lifted flying path of the sky-ballot golfrisbee. As shown in FIG. 8A, the wing 17 having the segment 17a is for the right-hand golf club to have the lifted up flying path. As shown in FIG. 8B, the wing 17 having the segment 17b is for the left-hand golf club to have the lifted up flying path. As shown in FIG. 8C, the wing 17 having the segment 17c is for the left-hand golf club or right-hand club to have the lifted up flying path. As shown in FIG. 8D, the wing 17 having the segment 17d is for the right-hand golf club to have the lifted down flying path. As shown in FIG. 8E, the wing 17 having the segment 17e is for the left-hand golf club or right-hand club to have the lifted down flying path. As shown in FIG. 8F, the wing 17 having the segment 17f is for the left-hand golf club or right-hand club to have the lifted down flying path.

[0101] As shown in FIG. 4, the golfrisbee has the universal wing 17a. The wing segment 17a can adjust the angle of attack to change the flying path of the golfrisbee. The wing segment 17a has the short stub 17b pivotally fit in the golfrisbee body. Changing the angle of the attack of the wing segment 17a, the lift force of the golfrisbee will change. The flying path of the golfrisbee will change accordingly.

[0102] There are many different versions of the sky-ballot golfrisbee. As shown in FIG. 4, the cap 1311 is the punched through cap. For the punched through type cap, the launching angle can be increased a lot. Furthermore, the sky-ballot golfrisbee 1 can be made much thinner. It can reduce the drag force. The flying distance can be much farther. As shown in FIG. 5, the wing segment 17 is optional to be removed to be a sky-ballot golfing. As shown in FIG. 6, the sky-ballot golfrisbee has only one right hand cap to minimize the air drag. To have the weight balance, the air bubble 13b is embedded in the golfrisbee body on the opposite side of the cap. The volume of the air bubble is the same as the volume of the cap.

[0103] The screw mechanism of golfrisbee is a complicated mechanism. It needs the lubricant to reduce the static friction. The initial static friction causes the uncertainty during the golf club swirling process. To have the consistent swirling process and expected result, the lubrication is needed to eliminate the stick force of the initial static friction. Furthermore, as the golfrisbee falls on the ground, the dirt sticks to the screw of the cap. It will cause the inconsistent swirling result. So, the cap 13 of the sky-ballot golfrisbee is needed to be checked and cleaned quite often.

[0104] As shown in FIG. 7, in the field operation, we use the static friction controller 7. It has the three processes to be integrated in one device: the air compression, the air clean and the lubricant application. The static friction controller is constituted of the compressing cylinder 70, the switching block 71, the spraying nozzle 72 and the container 74. The lubricant 75 is stored in container 74. The cap 742 is to seal the lubricant 741 entrances. The spraying nozzle 72 is mounted on the top of the sliding cylinder 70. The sliding tube 70 can be fit in the hole 722. The cavity 723 guides the fluid into the nozzle 720. The hole 721 is to fit for the spraying tube. As the finger presses on the spraying nozzle 72, the sliding cylinder 70 slides downward as shown in the FIG. 7B. The one-way compression piston 7021 moves upward to seal the conduit. The one-way compression valves 714 moves downward to allow the air to be sucked into the conduit 713. The air inside the switching block compartment 716 is forced to flow out into the container 74. As the finger is released, the sliding cylinder 70 moves upward under the air pressure in the compartment 716. The air inside the conduit 713 is compressed and the one-way valve 714 is closed. As the air pressure inside the conduit 713 is larger than the air pressure in the compartment 716, the one-way valve 7021 moves downward and the compressed air flows into the compartment. Repeating the process as shown in FIG. 7A and FIG. 7B reciprocally, the air pressure inside the container 74 is built up.

[0105] To use the compressed air to clean the cap of the golfrisbee or the screw of the golth head, as shown in FIG. 7C, the finger holds the sliding tube at the position to have the conduit 701 to align with the hole 711 on the wall of the switching block 71. The compressed air flows through the hole 711, the conduit 701, the cavity 723, and the nozzle 720. The compressed air blows on the cap or screw to blow away the dirt. As the dirt is cleaned, the golther can apply the lubricant 75 to the cap or screw. As shown in FIG. 7D, the finger holds the sliding tube 70 at the position to have the conduit 701 to align with the hole 712 on the wall of the switching block 71. The lubricant 75 flows through the hole 712, the conduit 701, and the cavity 723 and the nozzle 720. The lubricant 75 sprays on the cap and screw to lubricate the cap and screw.

[0106] Depending on the distance between the threads of the screw, there are many different golf club heads. Therefore, the golther may carry several golf clubs. However, to carry the golth bag walking on the snow is not so easy. So, the trolley is needed. As shown in FIG. 9A, the golth trolley 5 is mounted on the axle 500 of wheels 50. The foldable handle 51 pulls the frame 52 to drag the golth trolley 5 forward. The supporter 55 is hinged to the car 520 on the frame 52 with the pivotal axle 550. The golth bag 4 is leaced against the frame 52. FIG. 9B shows the golth bag being integrated with the portable trolley 5a. To ski on the snow, as shown in FIG. 9C, the trolley 5 is mounted on the snow ski 901. To ski on the snow and run on the road, as shown in FIG. 9D, the trolley is mounted on the belt wheel 501. The belt wheel is composed of two wheels 5011 and 5012, belt 5013 and triangle structure 5014. The trolley 5 is pivotally mounted on the top node of the structure 5014.

[0107] To play the night golf in the desert or the snow golf in the heavy snow northern place, the golther has to ride on the cart. In the desert, during the day, the temperature is too high to play golth. The only time to play golth is in the night. However, in the night, the snakes come out, too. To minimize the accident, the golther has to ride on the golth cart. In the heavy snow place, the snow depth can be very deep. It is impossible for the golther to ski to drag the golth trolley. The golther has to ride on the golth cart, too.
There are two kinds of cart. One is three-wheel golf cart as shown in FIG. 10. The golfer can stand on the golf cart and drive the golf cart. The golf cart is a foldable and portable golf cart. Releasing the extension lock 821, the length of pole 82 can be adjusted. The pole 82 is foldable with the pivotal joint 830. The technique for the golf cart adopts our former U.S. Pat. 5,474,144 Twin-Wheel Motor Car with Differential Height and Speed Mechanism. It needs only one motor to drive the twin-wheels 80. Since it is the three wheels, it does not need the complicate self-balance circuits and control. It does not have the speed limit as the two wheel golf cart does. So, the cost becomes much cheaper and the speed is much faster. As shown in FIG. 10C, the front wheel 86 is mounted on the support frame 82 with the axle 860. Rotating the handle 51, the frame 82 rotates which also causes the front wheel 86 to rotate to change direction. The twin-wheels have the differential mechanism to drive the wheels 86 to have the different speed during the turning direction. In FIG. 10B, the support 85 pivotally rotates on the axle 850 to support the ear 820. The support 85 supports the frame 82. The golf cart is served as the standing bag and golf trolley.

To run on the deep snow in the golf course, the wheel can change to the snow wheel 80s as shown in FIG. 15. The wheel paddle 801 is at the end of the cylinder 802. The cylinder 802 is under the bias of the spring 803. As shown in FIG. 15A, the snow wheel 80s rolls on the solid ground. The wheel paddle 801 is compressed to be the same circle as the wheel 80s. As shown in FIG. 15A, the snow wheel 80s rolls on the snow. The wheel paddle 801 is expanded into the snow to serve as the paddle. The wheel paddle 801 expels the snow to drive the golf cart 8 forward or backward.

As shown in FIG. 10D to FIG. 10F, the golf cart 9 is further equipped with the automatic golf snow ski 9. As shown in FIG. 12A and FIG. 12B, the automatic golf snow ski 9 is raised up to run on the solid ground. As shown in FIG. 12C and FIG. 12D, the automatic golf ski 9 is lowered to support the weight of golf cart 9 to drive on the soft snow. The wheel can be changed to be the snow wheel 80s.

As shown in FIG. 12B, there is a Z-shape guiding slot 910 notched on the guiding plate 91. The wheel axle 600 passes through the Z-shape guiding slot 910. The spring 92 connects between the axle 600 and the ski 9 to push the ski forward to raise the ski 9. The spring 92 is constituted of two segments 923 and 924. The segment 924 has the hooked end 921 to hook the axle 600. The segment 924 has the hooked end 920 to hook the ear 923 of the guiding board 91. Under the compression force of the spring 92, the guiding plate 91 is pulled forward to raise the ski 9 up.

As shown in FIG. 12C, the wheel rolls on the soft snow 95 and traps in the snow 95. The snow 95 contacts with the ski 9. As the wheel 60 rotates to drive the golf cart to move forward, due to friction, the ski 9 is left behind. The wheel axle 600 climbs up the slope of the Z-shape guiding slot 910 and forces the ski 9 downward to engage with snow 95 to support the weight of golf carts.

FIG. 13 shows the installation of the snow ski without removing the wheel. As shown in FIG. 13A, the wheel axle 600 passes the slot and presses the locking plate 912 downward. The locking plate 912 is pivotally mounted on the guiding plate 91 with the pin 9120. FIG. 13B shows the axle 600 is mounted in the guiding slot 910. FIG. 13C shows the locking plate is closed with the biasing spring. FIG. 13D shows the hook 921 is attached to the axle 600 and the installation is finished. FIG. 14 shows the lower slot of Z-shape guiding slot can make the extension to be the guiding slot 910c. The snow ski 9 can be folded to integrate with the golf cart or golf trolley.

FIG. 11 shows the two-wheel golf cart. The golf cart is foldable and portable. Releasing the extension lock 621, the length of pole 62 can be adjusted. The pole 62 is foldable with the pivotal joint 630. The golf cart can be further innovated from the Segway of Dean L. Kamen et al’s U.S. Pat. No. 5,971,091 Transportation Vehicles and Methods and U.S. Pat. No. 6,302,230B1 Personal Mobility Vehicles and Methods. The supporting stick 65 is pivotally mounted on the frame 62 with the pivotal axle 650 passing the ear 620 of the frame 62. The two-wheel golfer cart 6 is served as the standing bag as shown in FIG. 11B. The snow ski 9 can be mounted as shown in FIG. 12D, FIG. 12E and FIG. 12F. The wheel can be changed to be the snow wheel 8s, too.

FIG. 18 show the self-locked portable golf bag for traveling golfer. As shown in FIG. 18A, the golf bag has the self-lock cap 43 being self locked with the golf bag 42. The handle 41 is to carry the golf bag 42 or to hang the golf bag 42 on the golf cart as shown in FIG. 10. Under the biasing spring 431, the pressing plate 432 presses against the top rim of the golf bag 42. Under this pressure, the protrude 430 is locked in the notch 4210. To open the golf bag, press cap 43 downward, the protrude 430 moves downward to slide in the slot 421. Rotating the cap 43, the protrude 430 slides to the end of the horizontal segment of the slot 421. Lifting up the cap 43, the golf bag 42 is opened. As shown FIG. 18B, the cap 43 can be held at the bottom of golf bag 42 to facilitate the carry of the golf bag 42. Sliding the protrude 430 into the vertical segment of the slot 422 and press the cap 43 upward. As the protrude hits the end of the vertical segment, rotating the cap 43 horizontally to the end. Releasing the pressure on the cap 43, under the biasing force of the spring 431, the pressing plate bias against the bottom plate of the golf bag 42. Under the biasing force, the protrude 430 is fit in the notch 422. The self-locked cap 43 is self-locked to the bottom of the golf bag 42.

To play the badminton, we need the portable base. To play the golf in the park, we need the portable-putting hole. As shown in the FIG. 19, it shows the universal portable hole base. It can be used as either the base in the badminton or the putting hole in the park golf. The rolling golfball can roll upward on the inclined plate 452 and the plateau 451 into the hole 450. The flag 46 has the flag 461 to mark the number of the hole. The flag is inserted in the hole 450 of the base 45 with the stub 460 fitting inside the hole 450.

The swing of golf is different from the swing of golf. To launch the golf-fish with the golf club, the swing speed and the swing pattern is very important. To train the golfer to be familiar with the swing way of golf, as shown in FIG. 20, the golf swing trainer 10 is important for the golf instructor. The golfer stands inside the golfer trainer and has the golfer club 2 fit inside the swing glider 23 as the same position as the payload 23 shown in FIG. 1. The handle 21s is fit at the position 21 shown in FIG. 1. The Computer aided golfer instructor 101 drives the solenoid tube
1022 located inside the tube 102 to rotate to drive the gliding stub 1021 and the swing glider 23s to slide. The swing glider 23s is to guide the correct swing speed of the golf club. In FIG. 200, it shows the alternative design of the guide. As the pulley 101p pulls the rope 1025, the guide 23s slides to move to guide the correct swing speed.

[0118] The golfrisbee simulator is the miniature of the portable wheel balance machine. Instead of balancing the wheel, we apply the same principle and mechanism to measure the rotation of the golfrisbee. The golfer can easily check the simulating results of flying distance, launching angle, launching speed, and flying direction on the LCD screen. Furthermore, the golfer can adjust the parameter of the viscosity of the lubricant, the starting angle, the launching angle of the screw, etc to find the optimum swing pattern for himself. With the golfrisbee simulator, the golfer does not need to go through the tedious “launching and walking, trial and error” process and improve his techniques systematically.

[0119] FIG. 21 is the golfrisbee simulator 1. The golfrisbee 1 is mounted on the rubber wheel head 111. The rubber wheel 111 envelops around the steel drum 1110 to be the rubber head. Any golfrisbee cap 3 can easily fit on the rubber wheel head 111. As the golfer swings the golfer club, the sensors 113 and microprocessor 114 of balance mechanism record and analyze the dynamical behaviors of the golfrisbee. The dynamics results are shown on the LCD display. The LCD display 112 is mounted on pole of the golf club.

[0120] The golfrisbee is made of the composite material to be one single piece. Furthermore, the golfrisbee has the screw. Therefore, the mass production manufacture process is very important to the golf industry. As shown in FIG. 22A, the manufacture of making golfrisbee and golfrisbee module is highly complicated four step process. In the first step, the golfrisbee head locking screw 35, launching stubs 34R and 34L are cast with model. As shown in step 2, the locking screw 35 is put in the club head module to cast the golfrisbee head with the locking screw 35. As shown in step 3, the launching stubs 34R and 34L are put in the golfrisbee module to cast the golfrisbee with the launching screws. As shown in step 4, the golfrisbee is put in the skirt module to have the skirt 16 cast to be one unit with the golfrisbee 1.

[0121] FIG. 22B shows the assembly process of the golfrisbee and golfrisbee. In step 5, the handle, golf club head, golf club pole and golf launching stub are assembled to be the golfrisbee. In step 6, the payload 124, screw 123 and golfrisbee body are assembled to be golfrisbee 1. In step 7, the golfrisbee 1 is mounted on the launching screw stub and is ready for launching test.

[0122] While the invention has been particularly shown and described with reference to the preferred embodiments thereof, it will be understood by those skilled in the art that various changes in form and details may be made therein without departing from the spirit and scope of the invention.

We claim:

1. A golfrisbee comprising a golfrisbee means, said golfrisbee means being in circular symmetrical structure;

2. said golfrisbee comprising a ring band at rim of said golfrisbee;

3. said ring band being thicker than other portion of said golfrisbee;

4. said ring band having smooth transitional curve to outside edge and inside region.

5. A golfrisbee system according to claim 1 of which said ring band having cavity means, said golfrisbee system further comprising a golf club means, said golf club means comprising a head means, said cavity means of said ring band fitting on said head means of golf club means.

6. A golfrisbee according to claim 1 of which said golfrisbee further comprising a skirt means, said skirt means attaching to said circular symmetrical structure with small stub means; between said skirt means and said circular symmetrical structure being space to allow air to flow through.

7. A golfrisbee system according to claim 1 of which a center of said golfrisbee further comprises accessories to increase weight of said golfrisbee to have sky-ballet spinning launching effect.

8. A golfrisbee system according to claim 7 of which said accessories further comprising lighting means, said lighting means is to shine light in the night golf sport.

9. A golfrisbee system according to claim 7 of which said accessories further comprising sound means, said sound means generate sound in the snow golf sport to guide golfer to find said golfrisbee.

10. A golfrisbee according to a golfrisbee means, said golfrisbee means being in circular symmetrical structure;

11. said golfrisbee comprising a circular skirt means being attached to said circular symmetrical structure with small stub means;

12. between said skirt means and said circular symmetrical structure being space to allow air to flow through.

13. A golf system according to claim 1 further comprising a portable base, said base comprising an inclined plane and a hole, a golfball rolling on said inclined plane into said hole.

14. A golf system according to claim 2 of which said golf club means further comprising a handle means, a pole means and a launching head means, said handle means being mounted on one end of said pole means and said launching head means being mounted on another end of said pole means,

15. said cavity means of said golfrisbee being fit on said launching head means of said golf club means.

16. A golf system according to claim 12, said golfrisbee means further comprising a sliding handle means mounted on a upper portion of said pole means and a weight means mounted on a low portion of said pole for training purpose.
14. A golf system according to claim 12, said cavity of said golffrisbee further comprises screw means and said launching head means of said golf club means further comprise screw means.

15. A golf system according to claim 12 further comprises a golffrisbee cleaner means,

said golffrisbee cleaner means comprising a sliding tube means, a switching block means and single-directional valve means;

said switching block means having an air hole connecting to air inside a container of said golffrisbee means and a lubricant hole connecting to lubricant inside a container of said golffrisbee means;

as said sliding tubing means being compressed reciprocally, said single-directional valves means compressing air to flow into said golffrisbee cleaner means;

as an inlet of said sliding tube means in alignment with said air hole, compressed air blowing out through said sliding tube;

as an inlet of said sliding tube means in alignment with said lubricant hole, compressed lubricant blowing out through said sliding tube.

16. A golf system means according to claim 1 further comprising a self-locked golf bag means,

said self-locked golf bag means comprising a cap and a bag,

said bag comprising an L-shaped guiding slot at the top end and an L-shaped guiding slot at the bottom end;

said cap comprising a spring biased means and a protrudes means,

said protrudes means sliding in said L-shaped slot and said spring biased means biasing against said bag to have self-locked action.

17. A golf system means according to claim 2 further comprising a golf cart means, said golf cart means comprising a pair of wheel means, a frame means and a frame support means,

a bag means being able to hang on said frame means, pulling out said frame support means, said frame leaning on said frame support means and sitting on said pair of wheel means;

said golf cart means further comprising accessories of snow ski means and snow wheel means;

said golf cart means either pulled or self-driving with motor power means, golfer standing on said golf cart means to drive said golf cart means.

18. A golf system means according to claim 12 further comprising a golf simulator means, said golf simulator means comprising sensors means, microprocessor means and display means,

said sensors means sensing stress and dynamics behavior of said launching head means,

said microprocessor means analyzing data collected by said sensor means,

said display means displaying said data analyzed by said microprocessor means.

19. A golf system means according to claim 12 further comprising a golf swing trainer means, said golf swing trainer means comprising slanted circular means and elastic means,

said elastic means hanging at left end and right end of said slanted circular means, said elastic means holding said pole of said golf club means,

said slanted circular means further comprising a guiding means, microprocessor means and a driving means, said guiding means holding said lower portion of said golf club means to guide golfer to swing according to preset swing pattern stored in said microprocessor means, said microprocessor means driving said driving means to shift said guiding means according to said preset swing pattern.

20. A golf system means according to claim 1 further comprising a golf manufacture process, said manufacture process being divided to be several steps, said manufacturing process comprising putting previous step module casting output means in a next module step to cast one new module of said next step.