No. 888,660. PATENTED MAY 26, 1908.

C. W. SEARS & H. G. BOESCHE.

GAME APPARATUS.

APPLICATION FILED JUNE 24, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

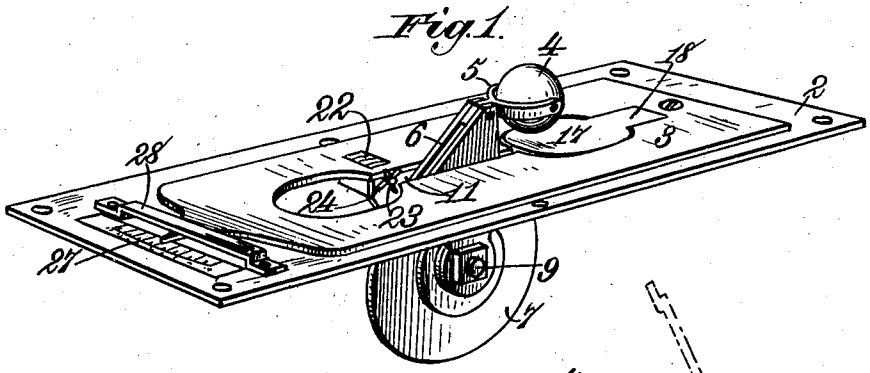


Fig. 2.

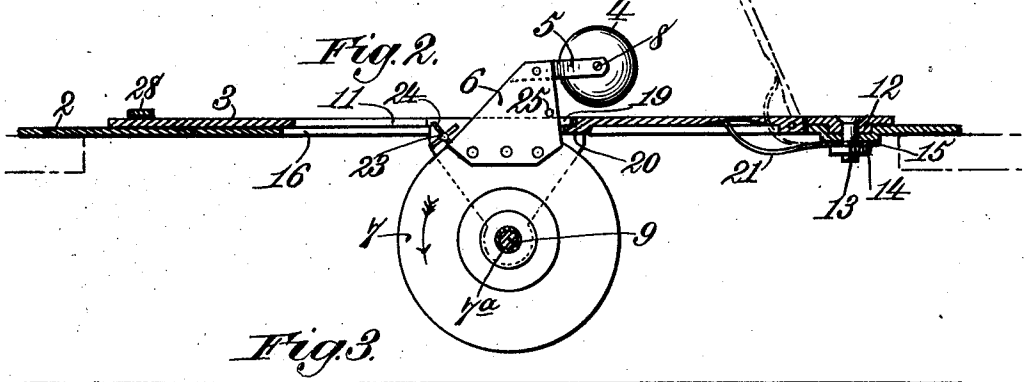


Fig. 3.

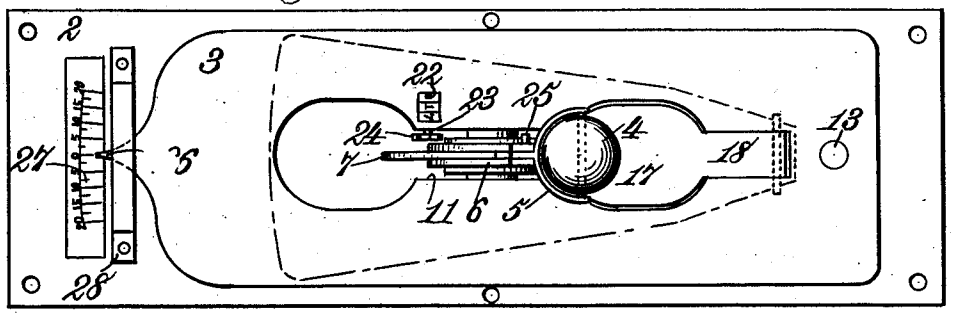


Fig. 4.

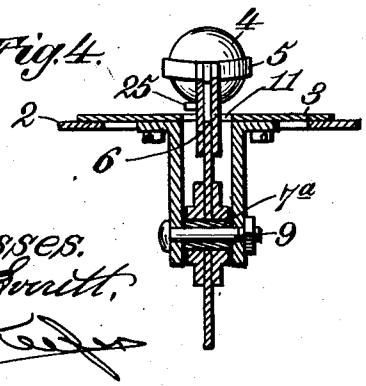


Fig. 5.



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2 SHEETS—SHEET 2.

Fig. 6.

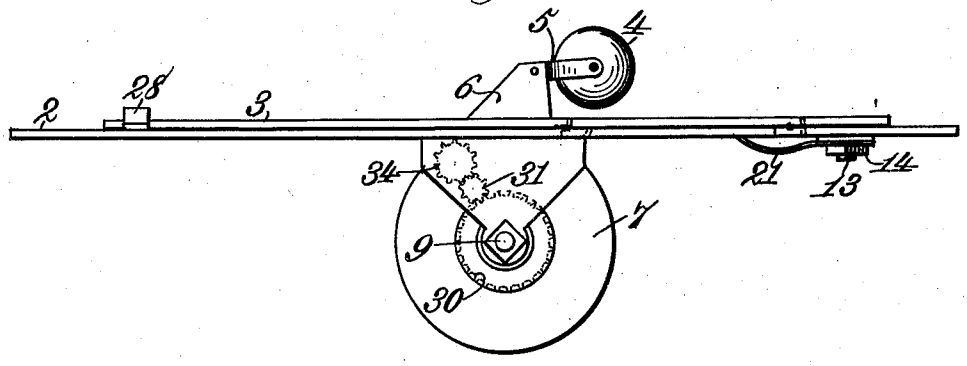
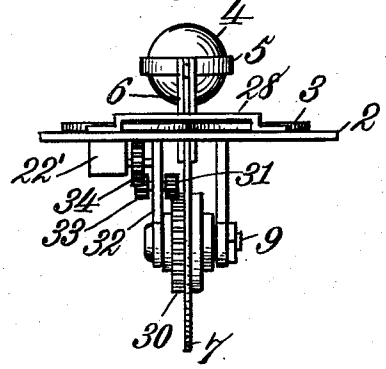


Fig. 7.



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UNITED STATES PATENT OFFICE.

CHARLES W. SEARS AND HERMAN G. BOESCHE, OF SOUTH OMAHA, NEBRASKA.

GAME APPARATUS.

No. 888,660. Specification of Letters Patent. Patented May 26, 1908.

Application filed June 24, 1907. Serial No. 380,573.

To all whom it may concern:

Be it known that we, CHARLES W. SEARS and HERMAN G. BOESCHE, citizens of the United States, residing at South Omaha, in the county of Douglas and State of Nebraska, have invented new and useful Improvements in Game Apparatus, of which the following is a specification.

This invention relates to game apparatus.

Game apparatus involving our invention can be put to a variety of uses. For instance, indoor golf may be played therewith, or the device could be utilized to aid golf players in practicing to secure skill in golf strokes.

Game apparatus involving our invention is simple in construction, can be inexpensively made, and afford considerable amusement.

The device, as will be understood, can be used either in or out doors and it can not only be utilized in playing a game or practicing certain strokes, but it can be employed for analogous purposes.

In the drawings accompanying and forming a part of this specification we illustrate in detail one advantageous form of embodiment of the invention, which, to enable those skilled in the art to practice the same, will be hereinafter more particularly described, while the novelty of the invention will be included in the claims succeeding said description. Various modifications may be adopted within the scope of our said claims.

Referring to the drawings: Figure 1 is a perspective view of game apparatus involving our invention. Fig. 2 is a longitudinal section of said apparatus. Fig. 3 is a top plan view, and Fig. 4 a sectional view of the same. Fig. 5 is a detail view in perspective of a trap. Fig. 6 is a side elevation of a modified form of the invention. Fig. 7 is an end elevation of the same.

Like characters refer to like parts throughout the several figures of the drawings.

The apparatus shown in the drawings includes in its make-up a body or main member with which the various parts are operatively associated, and, while this may be of any desirable character, it may be conveniently formed from a plate as 2. In addition to this body or main member there is an auxiliary member as 3 which may also consist of a plate. The body member or plate 2 may be placed over an opening in the floor or ground, depending upon whether or not the device is played in or out doors. In Fig. 2 it is supposed that the device is placed over an opening in a floor, the plate 2 resting on the flooring and, if desired, it may be attached thereto, and, to obtain this result, the plate 2 is shown as having at its corners perforations through which screws or other fastenings can be passed. The upper plate 3 is pivoted to and fits flatwise against the lower plate for lateral swinging movement, and the purpose of this will hereinafter appear.

We have shown a ball at 4, and it is this ball that is struck by the blow of a golf club or the like when the device is in use. This ball in the present case is rotatively as well as revolubly mounted. The ball 4, which may be made of any material or composition customarily employed in making golf balls, is illustrated as rotatively supported by the fork 5 rigidly connected with and extending from a block as 6. The block 6 is represented as consisting of three plates riveted or otherwise suitably connected together, the central plate being shallower than the outer plates and being curved on its under side to conform to the peripheral curvature of the wheel or disk 7. The shank of the fork 5 may, if desired, be made integral with the central plate of the three comprising the block 6. The outer plates of the block are adapted to straddle the wheel 7 and to be suitably connected thereto; screws might be utilized for this purpose. While the pivot for the ball 4 may be of any suitable character, we prefer to use a screw as 8 for this purpose, by means of which the ball 4 is removably mounted, so that, when the latter becomes worn from use, it can be taken off by the removal of the pivot 8 and a new one put in its place.

The block 6 and wheel 7 constitute a convenient and simple carrier for the ball 4. The wheel 7 may be rotatably supported in any desirable way. It is shown as having a sleeve 7^a fitted in the central opening therein through which the pivot 9 passes. Said pivot may as illustrated consist of a bolt supported by the companion hangers or brackets attached to and depending from the laterally vibratory or swinging plate 3. The upper plate 3 is shown as having a slot 11 comprising a central narrow portion and two substantially circular end portions. The block 6 normally, or as shown in Figs. 1 to 4 inclusive, fits in the straight or intermediate portion of said slot 11. The terminal circular portions of the slot 11 are of greater diam-

eter than the ball 4 so that, when said ball revolves on the rotation of the wheel 7, it can freely pass through these terminal portions.

The plate 3 is illustrated as having near one end and on the under side thereof a downwardly-extending boss or sleeve 12 which is adapted to turn in an opening near the corresponding end of the lower plate 2. Through this boss is shown as extended a bolt 13, the head of which is represented as countersunk in said upper plate, and between the nut 14 of the bolt and the lower plate 2 a washer as 15 is interposed, said washer being of greater diameter than the opening in the plate 2 in which said boss 12 is fitted. By virtue of this mounting of the plate 3 it will be clear that the latter can be swung sidewise in opposite directions from a central position, it being represented as occupying such central position in Figs. 1 and 3. The lower plate 2 has a slot 16 which is made somewhat of fan shape and sufficiently wide as to permit a fairly considerable range of lateral movement of the upper plate 3.

In the rear circular portion of the slot 11 is set a trap as 17, said trap being generally made flat and its upper surface being normally flush with the corresponding surface of the upper plate 3. This trap 17 is shown as having a shank or circumferential extension 18 pivotally mounted in an aperture or opening extending radially outward from said rear circular portion of said slot 11. Normally the trap 17 is closed, and we have heretofore indicated the normal relation of the block 6. The block 6 is shown as equipped on one side thereof with a detent as 19 which may consist of a projection thereon, adapted to engage a catch as 20 on the trap, as clearly shown in Fig. 2. The carrier for the ball has a preponderance of weight at one side of its center or movement and, when said carrier stands in its normal position as indicated in said Fig. 2, this preponderance is above such center, so that the same can be utilized to maintain the trap 17 closed. When, however, the detent or projection 19 is disengaged from the catch 20 the trap 17 can be swung open and to a substantially upright position, and for this purpose a spring as 21 may be provided, said spring being shown as held in place by the nut 14 of the bolt 13. In fact the spring is interposed between the nut 14 and washer 15. It is of bowed character and its free end engages against the under surface of the trap 17. The spring is constantly under tension and it is apparent that, when the projection 19 is disengaged from the projection 20, the trap 17 will be released and can be instantly swung open by the power of the spring 21. The forward or advancing movement of the wheel 7 and consequently of the block 6 and ball 4 is indicated by the arrow in Fig. 2. It will be apparent that, owing to the fact that the detent or projection 19 normally rests on the catch or projection 20, accidental retractive movement of the said wheel, block, and ball is prevented thereby. In addition to this the trap covers that part of the slot immediately to the rear of the ball 4 so that, even though provision be made in the slot for the passage of the ball during its revolution, the presence thereof does not affect a stroke. We prefer to employ indicating means set in action on the revolution of the ball, a reading of which will indicate to a player the force of his blow, and said indicating means may be of any desirable character; for example, the same may consist of a register as 22 suitably supported by the laterally swinging plate 3 on the under side thereof, said plate 3 being slotted to permit the reading of the numerals or other characters of the register. The register is shown as equipped with a shaft as 23 by turning which the same may be operated in the well known manner. This shaft 23 is shown as having at its outer end several radial fingers as 24 adapted for engagement by a pin as 25 on one side of the block 6. When the ball is given a slight blow the same may revolve only a few times. When it is given a heavy blow it may revolve a large number of times and each time a complete revolution is made indication of this fact is given by the register 22, the pin 25 on each of said revolutions striking one of the radial fingers or arms 24 to effect such result. A player can therefore readily determine, by reading the register, what character of blow he is delivering. The register, when the device is played simply as a game in contradistinction to practice work, can be used to keep score.

It will be remembered that the plate 3 is laterally vibratory. When the ball 4 is struck fairly and squarely the plate 3 will not be shifted sidewise. When, however, the ball is otherwise hit or is given a foul or glancing blow, it, and naturally the plate 3, will be moved sidewise from its normal central position, and we provide indicating means of a suitable character for showing the amount of lateral movement, so that, if the lateral movement is considerable, a player can train himself to deliver a square or dead stroke to the ball. The plate 3 is shown as having at its extreme forward end a pointer or index-finger as 26, which is adapted to travel upon a scale as 27, the scale bearing at its center a mark indicating zero and numbers progressing from the zero or central mark at opposite sides thereof. It will be clear that, when the plate 3 is in its normal position, the pointer 26 is at the zero mark of the scale. The amount of movement oppositely from the central or neutral mark can be readily read from the scale, the latter being carried in the present case on the upper side of the lower stationary plate 2. The

said lower plate 2 is equipped with an arched strip 28 under the arch of which the pointer 26 is movable, and this strip 28 constitutes a suitable guide for the plate 3 during the lateral motion thereof. In other words the strip 28 prevents upward displacement of the said plate 3. By virtue of the fact that the upper plate 3 fits flatwise against the lower plate 2, said plate 3 will not wabble during this vibration or oscillation.

In Figs. 6 and 7 we have shown a modified means of operating the register from the wheel 7, as we will now set forth. Said wheel 7 is provided with a gear or gears as 30, one of which is shown as being in mesh with the pinion 31, the shaft of which is supported by a suitable bracket as 32 on the plate 2 and as having a pinion as 33 meshing with the gear 34 of the register as 22'. When the wheel 7 rotates the register 22 will be operated, the number of counts made thereby conforming to the number of revolutions made by the ball 4 which, as will be understood, is connected with said wheel 7.

The device in use is generally connected to the top of the box which is preferably set into the ground a depth sufficient to bring the upper surface of the plate flush with the top of the ground, or, if the device is used indoors, it can be set in an opening in a floor. In both cases it will be firmly mounted in position in some suitable way. We may also, if desired, cover the top of the plate 2 or other exposed parts which are apt to be struck by a golf club, with rubber, leather or other soft material, so as to avoid injury to the club.

What we claim is:

1. In an apparatus of the class described, a ball-carrier and a member movably mounted and movably carrying said ball-carrier, said member being slotted to provide for the movement of the ball, a trap for the slot of said member, and means movable with the ball-carrier for normally holding said trap closed.

2. In an apparatus of the class described, a lower plate, an upper plate pivoted to and fitted flatwise against the lower plate for vibration, a ball-carrier rotatably supported by the upper plate, both plates being slotted to provide for the passage of the ball, and indicating means coöperative with the upper plate.

3. In an apparatus of the class described, a lower plate, an upper plate pivotally supported by the lower plate and vibratory transversely thereof, a ball-carrier movably supported by the upper plate and both plates being slotted for the passage of the ball, and indicating means coöperative with the upper plate.

4. In an apparatus of the class described, a lower plate, an upper plate pivoted to the lower plate for vibratory movement, a ball-carrier movably supported by the upper plate, both plates being slotted for the passage of the ball on the revolution thereof, and registering means actuated by the ball-carrier on the movement thereof.

5. In an apparatus of the class described, a lower plate, an upper plate pivoted to the lower plate for vibratory movement, a ball-carrier, means depending from the upper plate for supporting said ball-carrier for rotation, both plates having slots for the passage of said ball on the rotation of the ball-carrier, indicating means for indicating the rotation of the ball-carrier, and independent indicating means for indicating the amount of vibratory movement of the upper plate.

6. In an apparatus of the class described, a lower plate, an upper plate pivoted to the lower plate for vibratory movement, a ball-carrier, means carried by the upper plate for rotatively supporting said ball-carrier, both plates being slotted for the passage of the ball on the rotation of said ball-carrier, a register carried by the upper plate, means operable by the ball-carrier on the rotation thereof for actuating the register, and a scale on the lower plate, the upper plate having a pointer coöperative with said scale.

7. In an apparatus of the class described, a swinging member, a movably-mounted ball-carrier supported by said swinging member, the latter being slotted for the passage of the ball, and a trap fitted in the slot of said member, the ball-carrier being provided with means for holding the trap closed, and means for opening the trap when the same is released.

8. In an apparatus of the class described, a swinging member, a ball-carrier movably supported by the swinging member, the latter being slotted to provide for the passage of the ball, a trap set in the slot of said swinging member, the ball-carrier having a detent to hold the trap closed, and also having a preponderance of weight at one side to maintain such closed relation, and a spring to open the trap when the same is released by the ball-carrier on the movement thereof.

9. In an apparatus of the class described, a body member, an auxiliary member connected with said body member for vibratory movement, a ball-carrier rotatively supported by said auxiliary member, the body member being slotted to receive the ball of the ball-carrier during the rotation of the latter, and indicating means for indicating the amount of movement of one of the movable members.

10. In an apparatus of the class described, a lower plate, an upper plate pivotally connected to said lower plate, hangers depending from the upper plate, a wheel rotatably supported by the hangers below the two plates, a block connected with said wheel, a yoke connected with the block, a ball rotatably supported by the yoke, both plates

being slotted for the passage of the ball on the rotation of the said wheel, and indicating means coöperative with said wheel.

11. In an apparatus of the class described, a lower plate having a scale, an upper plate pivotally connected with the lower plate and having a pointer coöperative with said scale, a wheel rotatively supported by the upper plate, a block connected with the wheel, a fork connected with the block, a ball rotatively supported by the block, said upper plate being slotted to provide for the passage of the ball on the rotation of the wheel, a register connected with the upper plate, a pin on the block to operate the register, a trap in the slot, means connected with the block for engaging the trap to hold the same normally closed, and a spring for opening the trap when the same is released on the rotation of the wheel.

12. In an apparatus of the class described, a movably mounted member having a slot, a movably mounted ball-carrier provided with a ball movable through said slot on the movement of said ball-carrier, a trap for the slot, and means controlled by the ball-carrier for releasing the trap on the movement of said ball-carrier.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

CHARLES W. SEARS.
HERMAN G. BOESCHE.

Witnesses:
BERNICE BUNNELL,
S. EDITH BAKER.