Dec. 11, 1951 N. MOSELEY 2,578,313

GAME PRACTICE DEVICE

Filed Dec. 14, 1949

Fig. 1.

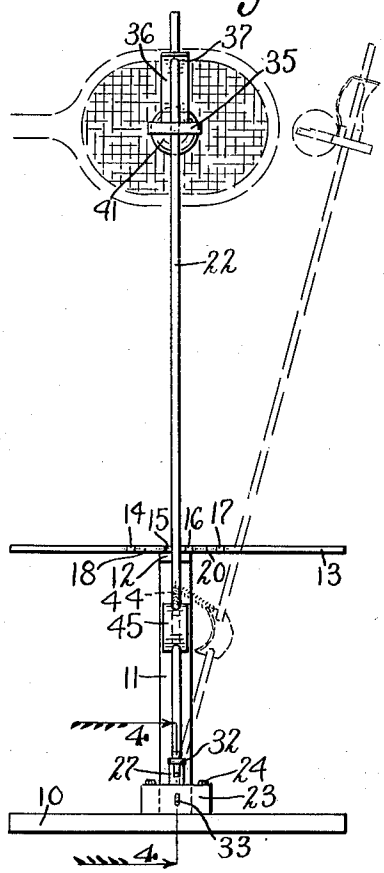


Fig. 2.

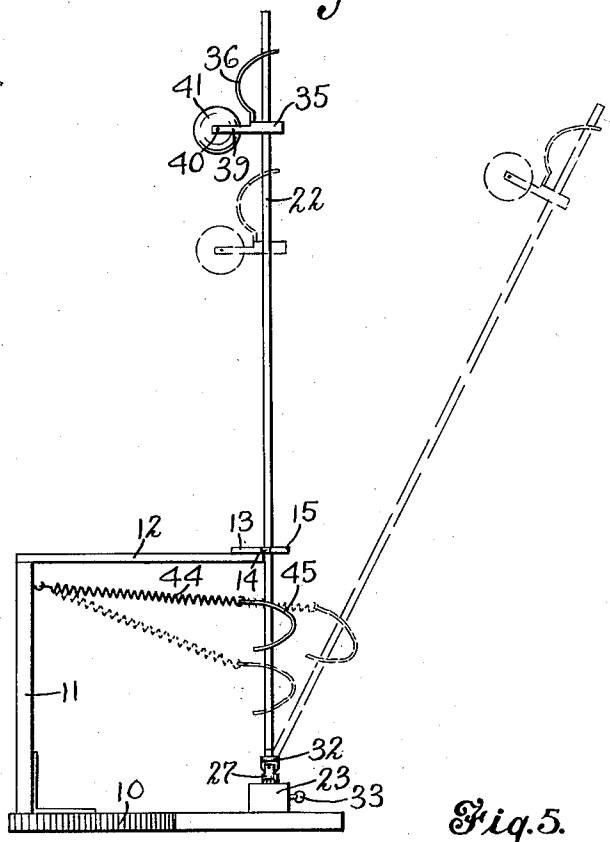


Fig. 3.

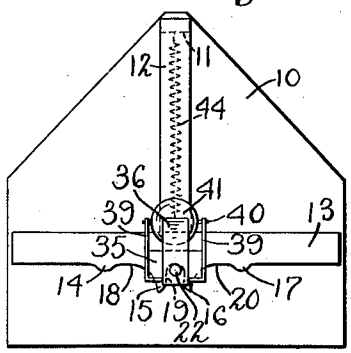


Fig. 4.

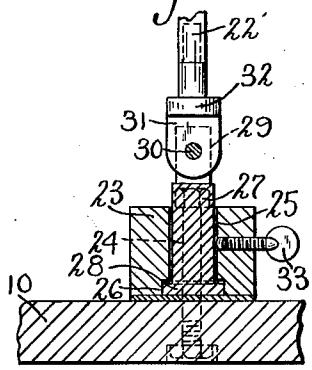
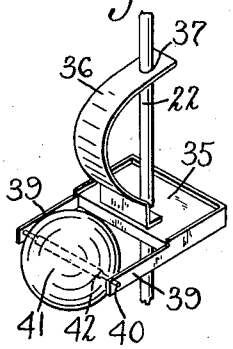


Fig. 5.



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GAME PRACTICE DEVICE

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6 Claims. (Cl. 273—29)

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This invention relates to a game practice device and more particularly to a device which may be used in practicing and perfecting strokes in the game of tennis. It is particularly adapted in teaching to a beginner the correct technic in stroking a tennis ball.

In learning the game of tennis, the beginner should be taught certain fundamentals such as hitting the ball in the center of the racket, striking the ball with the head of the racket at the proper angle to the forearm and also to the ground, to so strike the ball as to impart to it a movement in the proper direction, and to employ the proper swing, body balance and follow through. The present device will enable the user to practice all of these fundamentals by himself or with an instructor and at the same time the ball will be kept under control so that it will be returned to, or substantially to, its initial position so that it may receive a subsequent stroke.

In general, the device comprises a base upon which is supported a rod or shaft in a substantially vertical position. The tennis ball is rotatably mounted upon this shaft so that the height of the ball above the base may be adjusted as desired. As the ball is mounted to rotate about its axis, it is permitted to spin under the impact of the racket so that various strokes, such for example as a chop stroke or a topped stroke, may be demonstrated.

The rod or shaft is mounted upon the base for universal movement. More specifically, it is pivoted to a lower support member which in turn is rotatably mounted in a block secured to the base, so that the shaft may not only swing in a forward direction in one plane about its pivot, but may also tilt or swing at various angles to this plane due to the fact that the lower support member may rotate upon its axis, which varies the plane in which the shaft may swing about its pivot.

A stop or abutment member is provided and a tension spring secured to the shaft and to a post projecting upwardly from the base urges the shaft against this abutment. The abutment is provided with a series of projections having notches between them into which notches the shaft will be drawn by the spring after the shaft has been moved by a stroke upon the ball. The particular notch into which the shaft is returned by the spring will indicate to the user the direction of the impact upon the ball.

One object of the invention is to provide a practice device for the game of tennis which will be simple in construction and at the same time useful and instructive in operation.

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Still another object of the invention is to provide a practice device for the game of tennis, which device comprises a rod or shaft normally held in upright position and pivoted at its lower end, the shaft having the tennis ball rotatably mounted thereon in position to be conveniently struck by a racket.

Still another object of the invention is to provide a game practice device of the character described above in which the ball will be adjustably mounted upon the shaft so that its height may be adjusted to suit the user.

A still further object of the invention is to provide a tennis practice device of the character described in which an abutment is provided to engage an intermediate portion of the shaft and a spring secured to the shaft to tend to return it to a substantially upright position against the abutment.

To these and other ends the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawings:

Fig. 1 is a front elevational view of a game practice device embodying my invention;

Fig. 2 is a side elevational view thereof;

Fig. 3 is a top plan view of the device;

Fig. 4 is an enlarged sectional view on line 4—4 of Fig. 1; and

Fig. 5 is an enlarged perspective view showing the manner of mounting the ball upon the shaft.

To illustrate a preferred embodiment of my invention, I have shown a flat base 10 substantially of the size and shape of the home plate of a baseball diamond, but the shape and size of the base may be varied as desired. Secured at the rear end of the base is an upright standard 11 to which is secured a forwardly projecting member 12, and to the forward end of this member is secured a transversely extending abutment 13. The front face of this abutment is provided with a plurality of projections 14, 15, 16 and 17, these projections providing between adjacent ones thereof the notches 18, 19 and 20, the function of which will be described hereinafter.

Projecting outwardly from the base and normally standing in a substantially vertical position is a rod or shaft 22, the lower end of which is mounted upon the base for universal movement. To so mount the shaft 22, a block 23 may be secured to the base by fastening members 24, this block being provided with a central opening 25 having an enlarged or counter-sunk portion 26 at its lower end.

Within the opening of the block is rotatably

mounted a lower supporting member or post 27, the latter being provided with an enlarged base 28 seated in the enlarged portion 26 of the opening 25. The member 27 projects from the block at its upper end and is bifurcated to provide spaced legs 29. Between these legs is pivoted at 30 the lower flattened portion 31 of a member 32 secured to the lower end of the shaft 22.

As a result of the above construction, it will be seen that the shaft 22 may rotate about the vertical axis of the post 27 as this post is permitted to rotate in the block 23. Also, the shaft may swing in a vertical plane about the horizontal axis of the pivot pin 30 so that this shaft may move directly away from the abutment 13 in a plane substantially at right angles to this abutment, or may move away from the abutment in a plane at an acute angle thereto. If it is desired to limit the movement of the shaft to a pivotal movement about the horizontal pivot 30, the post 27 may be secured against rotation by a thumb screw 33 threaded into the block 23 and bearing against the post at its inner end.

A ball-support member 35 is slidably mounted on the shaft 22, the latter passing through an opening in the member 35, and this member is releasably held in adjusted vertical positions upon the shaft 22 by a bowed spring member 36 secured to the member 35 at its lower end, and at its upper end provided with an opening 37 to receive the shaft 22. Thus, the member 35 may be readily adjusted upon the shaft 22 in any desired position above the abutment 13, as shown for example in dotted lines in Fig. 2. When such adjustment is desired to be made, pressure upon the upper end of the bowed spring 36 will relieve the frictional engagement of this member with the shaft 22 and permit the support member 35 to be moved to any desired position. Upon release of pressure of the spring 36, the latter will again engage the shaft with sufficient friction to secure the support in position both vertically and rotationally.

The member 35 is provided with a pair of projecting arms 39 in which is rotatably mounted an axle 40 which may carry a regulation tennis ball 41. As shown, the axle 40 is provided with shoulders 42 so as to maintain the ball in a central position between the arms 39. With this arrangement, the ball can freely spin within the arms 39 so that natural conditions of a ball in free flight are simulated.

A tension spring 44 is connected at one end to the post 11 and at the other end to a bowed spring member 45, the end portions of which are provided with openings through which the rigid rod 22 snugly passes so that this spring member grips the rod frictionally but may be released therefrom when the ends of the member 45 are pressed together in order to adjust this member vertically on the rod. It will be apparent that the greater the distance of the member 45 from the base, the longer will be the leverage through which the spring 44 acts upon the rod 22, and, therefore, the greater the force applied to the rod to return it to an upright position against the abutment 13. This adjustment of the effective force of the spring 44 will control the speed of the rebound and the effective force exerted by the spring to oppose the outward movement of the rod when the ball is struck. In general, when the ball is adjusted to a lower position upon the rod, it will be desirable to adjust the member 45 to a lower position to decrease the effective force of the spring.

In use, the user will stand at one side of the base and strike the ball 41 from the left, as shown in Fig. 2, which will cause the rod 22 to be moved outwardly about its pivot 30, as shown in the dotted-line position in Fig. 2. If the stroke is true and straight, the rod 22 will be moved directly outwardly from the central notch 19 in which it normally stands and will be returned by the spring to the same position. When, however, the stroke is an oblique one, the post 27 will be caused to rotate in one direction or the other and, as a result, the rod 22 will be swung outwardly about its pivot in a plane at an oblique angle to the abutment 13. The spring will then return the rod into one of the notches 18 or 20, or if the angle is very sharp to a position on the abutment without the projections 14 and 17, so that the user may be able to tell the direction of his stroke and to correct it.

If desired, the notches 18, 19, and 20, and also the positions without the projections 14 and 17, may be numbered and thus a game may be played, the user scoring the number opposite the position on the abutment 13 to which the spring returns the rod 22. For example, if the user hits the ball with a true stroke it will be returned to the central notch 19, which may be marked "+15," and the player may score 15 points. If, however, the rod is returned into one of the notches 18 or 20, which may be marked "0," no score will be earned, while if the rod is returned to a position outside of the projections 14 and 17, which may be marked "—15," 15 points will be subtracted from the player's score.

If it is desired to prevent turning of the rod 22 for elementary practice, the set screw 33 may be tightened so that the rod may be permitted movement only about the hinge pin 30 and will always be returned to the central notch 19 in which it normally stands.

While I have described my device with particular relation to the game of tennis, it will be understood that it may be employed in connection with other games in which a ball is struck by a racket or bat or by the hand. For example, it may be employed in batting practice in the game of baseball.

While I have shown and described a preferred embodiment of my invention, it will be understood that it is not to be limited to all of the details shown, but is capable of modification and variation within the spirit of the invention and within the scope of the claims.

What I claim is:

1. In a practice device for tennis or like game, a base, a post rotatably mounted on the base to rotate about a vertical axis, a rod pivotally secured to said post about a horizontal axis, an abutment member, a spring urging said rod to a substantially upright position against an edge of said abutment member, and a ball mounted for vertical adjustment on said rod.

2. In a practice device for tennis or like game, a base, a post rotatably mounted on the base to rotate about a vertical axis, a rod pivotally secured to said post about a horizontal axis, an abutment member, a spring urging said rod to a substantially upright position against an edge of said abutment member, and a ball mounted for vertical adjustment on said rod, said spring having one end connected to the base and the other end connected to said rod for vertical adjustment thereon above the pivot of the rod.

3. In a practice device for tennis or like game, a base, a post rotatably mounted on the base to

rotate about a vertical axis, a rod pivotally secured to said post about a horizontal axis, an abutment member, a spring urging said rod to a substantially upright position against an edge of said abutment member, said spring being connected to said rod above said pivot for vertical adjustment, a support member mounted on the upper portion of said rod for vertical adjustment thereon and projecting laterally from said rod, and a ball mounted on said support member.

4. In a practice device for tennis or like game, a base, a post rotatably mounted on the base to rotate about a vertical axis, a rod pivotally secured to said post about a horizontal axis, an abutment member, a spring urging said rod to a substantially upright position against an edge of said abutment member, said spring being connected to said rod above said pivot for vertical adjustment, a support member mounted on the upper portion of said rod for vertical adjustment thereon and projecting laterally from said rod, and a ball mounted on the projecting portion of said support member for rotation about its axis.

5. In a practice device for tennis or like game, a base, a rod having its lower end connected to the base for universal swinging movement, an abutment member mounted above the base, means urging said rod to a substantially upright position against this member, and a ball mounted on said rod for rotation about a horizontal axis, said urging means comprising a spring, one end of which is secured to a part of the base and the other end secured to said rod for vertical adjustment thereon to vary the leverage of the force of the spring upon said rod with respect to its point of attachment to the base.

6. In a practice device for tennis or like game, a base, a rod having its lower end attached to the base for universal movement with respect thereto and extending upwardly from the base, an abutment member mounted above the base, means urging said rod to a substantially upright position against said member, and a ball mounted on said rod above said abutment member for adjustment longitudinally of the rod, and said urging means comprising a spring secured at one end to a part of the base and having its other end secured to the rod for vertical adjustment thereon to free the effective force of the spring.

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