May 7, 1963 T. W. CLARK 3,088,735

REBOUND BOARD FOR TABLE TENNIS

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FIG. 1

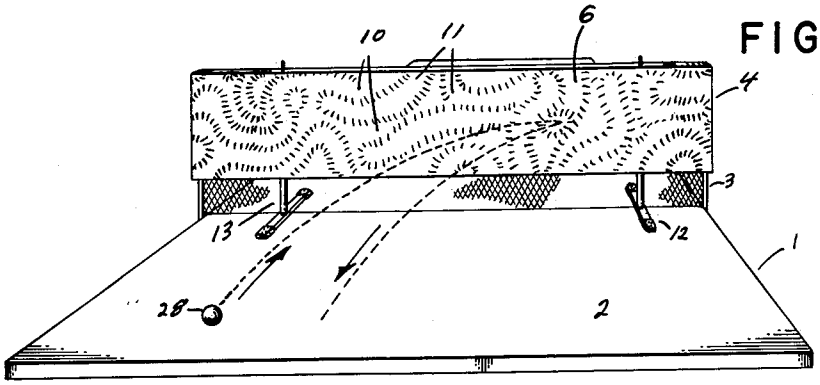


FIG. 2

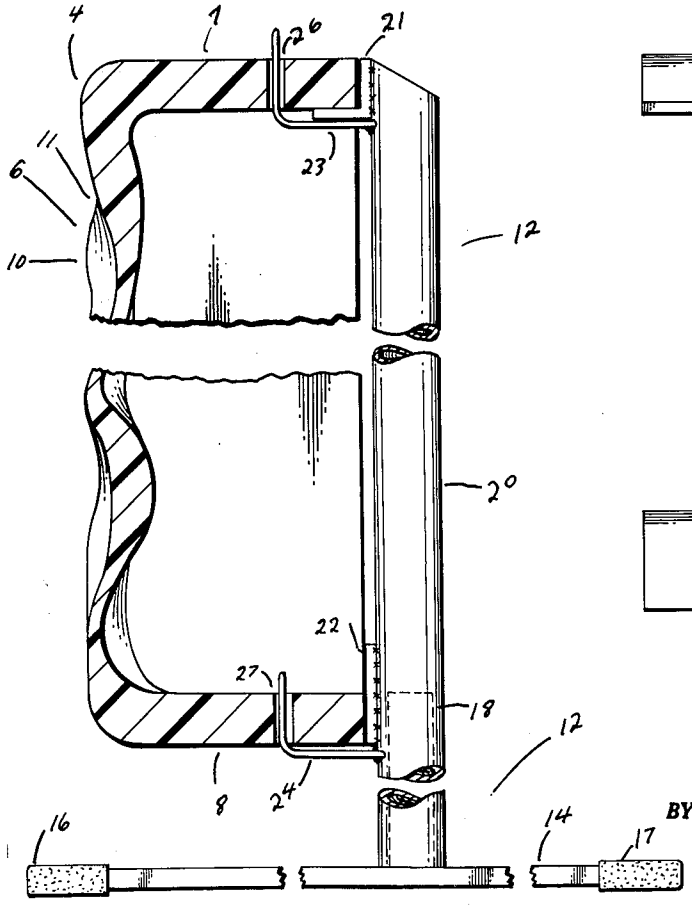
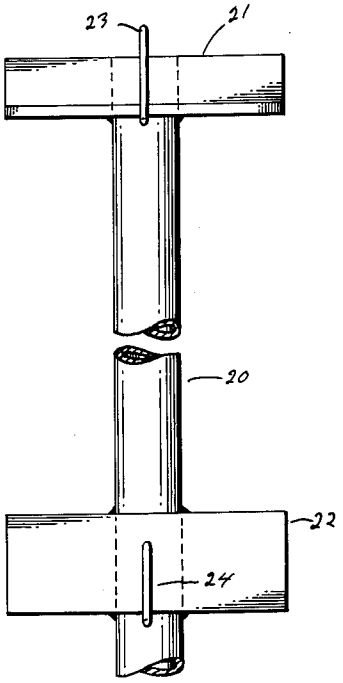


FIG. 3



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REBOUND BOARD FOR TABLE TENNIS

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5 Claims. (Cl. 273—30)

This invention relates to a rebound board which enables a player to practice solo the game of Ping-pong, and more particularly to a rebound board which may be mounted on a standard Ping-pong table to return a driven Ping-pong ball to the same end of the table from which the stroke originated so that the ball may again be driven by the player.

The present invention pertains to that character of solo practice in which the player drives a Ping-pong ball against a board where the ball rebounds toward the player. In previous devices of this character the boards have been characterized in that the rebound surfaces have presented either plane surfaces or, where curved, curved uniformly, with the result that an experienced player can anticipate with a fair degree of accuracy the approximate course which the ball will take in its rebound flight. This is of course objectionable in that such practice does not simulate actual play against an opponent who might return the stroked ball with a variety of return strokes. In actual game play against a skilled opponent, a player is perforce not able to anticipate the return path of the ball until the player has completed, or is at least well into, his stroke.

An object of this invention is, therefore, to provide a rebound surface capable of returning a driven Ping-pong ball in a direction which can readily be determined only after the rebounding ball is actually in its rebound flight.

A further object is to provide a rebound surface which will operate to return a driven Ping-pong ball at a speed which can readily be determined only after the rebounding ball is actually in its rebounding flight.

A further object is to provide a rebound surface which rebounds a ball in such a manner as to simulate substantially all of the strokes which an actual opponent would use in returning a driven ball.

More specifically stated, the present invention purposes to shape the rebound surface with lands and valleys of such irregularity that a Ping-pong ball may be driven along parallel lines of flight against a localized area of the surface, and depending upon the precise point of impact, be returned in a variety of directions and speeds so that substantially the same driving stroke may be returned at various angles and speeds.

A further particular object is to so shape the lands and valleys that the direction of return would for most strokes be within a predetermined playing area such as the playing surface of a Ping-pong table so that the player would be able to again drive the ball against the rebound surface.

More particular objects and advantages will appear and be understood in the course of the following description and claims, the invention consisting in the novel construction and in the adaptation and combination of parts hereinafter described and claimed.

FIGURE 1 is a perspective view illustrating a rebound board constructed in accordance with the teachings of the present invention and shown applied to a conventional Ping-pong table. Also shown is a Ping-pong ball with its path of travel to the board and its rebounding path from the board indicated by dotted lines.

FIG. 2 is a fragmentary vertical sectional view of the rebound board.

FIG. 3 is a fragmentary front elevation view illustrating one of two supports for the mounting of the rebound board on the Ping-pong table.

The numeral 1 designates a standard Ping-pong table whose upper surface 2 provides the playing surface.

Mounted on the table is a standard Ping-pong net 3. Also mounted on the table above and adjacent to said net is a rebound board 4 presenting a rebound surface 6 located perpendicular to the playing surface 2. The upper and lower portions of such rebound board terminates in horizontal flanges 7 and 8 which extend at right angles to the plane of the rebound board, rearwardly from the rebound surface 6, and parallel to the length of the board. The function of these flanges 7 and 8 is to provide reinforcing support for the rebound board. The rebound surface 6 lies immediately above the net and generally coplanar therewith. It is peculiarized in that there is a complete absence of any pattern in the form and placement of lands 10 and valleys 11 which create an irregular contour for the rebound surface 6. In a cross-section taken either vertically or horizontally of the board 4, the contours of the surface 6 are devoid of any regular pattern. Thus the contours of the surface 6 are irregular both vertically and horizontally, with the entire surface being curvilinear throughout both vertically and horizontally.

The rebound board 4 varies in thickness in an irregular fashion along both its length and its height. These variations have no relationship to the varying shapes of the lands 10 and the valleys 11. Such differences in thickness function to vary the elastic properties of the board in different areas with the thicker portions rebounding the ball at greater speeds than would the thinner portions of the wall.

The rebound board 4 is mounted on the table by means of two identical portable mounting stands 12 and 13. These mounting stands are comprised of a base 14 having two terminally placed rubber feet 16 and 17 which rest on the table. Firmly attached to the base 14 at its midlength is a vertical stud 18 over which a hollow standard 20 is slidably mounted. Welded to the standard 20 at its upper end is an L-shaped back-and-seat rest 21 for the support of the upper flange 7 of the board. Also welded to the standard in a position spaced below said top rest is a lower back rest 22. Both of these rests have substantial length. Two hooks 23 and 24 are likewise welded to the standard 20 and fit into vertical location holes 26 and 27 piercing flanges 7 and 8, respectively, to properly position the rebound board 4 with respect to the mounting attachment 12 and to give localizing support to the wall 4.

In operation the stands 12 and 13 are placed on the back side of the net 3 with the rebound board 4 mounted thereon so that the rebound surface 6 of the board 4 is coplanar with, adjacent to, and directly above the net 3. The player stands at the end of the table 1 facing the rebound board and drives a ball 28 toward the rebound surface 6 along a direction simulating actual play, which direction is approximately perpendicular to the net 3, and is, of course, thus approximately perpendicular to the general plane of the rebound board 4. Because of the irregular contour of the surface 6, the ball can rebound in a variety of directions, to one side or to the other and in a higher or lower line of flight. Likewise, the intensity of the rebound will vary, depending upon the thickness of the material at the precise point of impact.

The lands 10 and valleys 11 of the rebound surface 6 may be shaped and positioned in a great variety of ways. But there are practical limitations as to both shape and size. For example, if the lands and valleys are too large, a skilled player could soon become quite familiar with the slope or angle of the rebound surface 6 in a certain area so that he could stroke the ball into this area and expect a fairly consistent direction of rebound. However, if the lands and valleys are small enuogh, it would be very difficult for even a skilled player to become fa-

miliar enough with the rebound surfaces 6 and become skilled enough in placing his shots to strike a particular land 10 or valley 11 along a particular slope, and anticipate the direction of rebound.

On the other hand, if the lands 10 and valleys 11 are made quite small, the ball will not be able to enter a valley 11, but will rebound only off the crests of the lands 10. The desirable effect of the ball rebounding off the valley slopes would then be lost. Such a limitation on the smallness of the lands 10 and valleys 11 make the direction of slope of the contours of the surface 16 visible to a person in position to drive a ball. If the contours of the surface 6 followed a regular pattern so that each land 10 and valley 11 were identical to the next land and valley, shortly before the ball actually struck the surface 6, the direction of rebound could be fairly well ascertained by a skilled player. Because of this the lands 10 and valleys 11 are both shaped and positioned irregularly on the surface 6. The slopes vary both in steepness and in direction of slope. With such irregularity, it would be very difficult for the player to ascertain the rebound path of the ball until the ball had actually begun its return path.

In addition to the desirability of having the direction and speed of return non-foreseeable, it is also desirable that the ball's path of return be reasonably within a player's reach, so that a return stroke can be made. The flight path of the rebounding ball depends largely upon the angle that the path of approach makes with the rebounding surface. It is therefore desirable that the angle that a plane tangent to the rebound surface 6 makes with the plane of the board 4 is not more than about 10°. This maximum desirable angle would vary somewhat depending upon the skill and agility of the player.

Thus a ball driven substantially parallel to the median line of the table toward the central portion of the board will generally rebound onto the playing surface of the table.

The rebound board 4 is desirably made of molded resin bonded glass fibers, but could be made of other suitable material with similar desirable rebound characteristics. It is possible that the elastic properties of the board could be varied by changing the composition or density of the material of the board along different portions of the board, so that the speed of the rebound could be varied for rebounds from different portions of the wall.

It is thought that the invention will have been clearly understood from the foregoing detailed description of my now preferred illustrated embodiment. Changes in the details of construction will suggest themselves and may be resorted to without departing from the spirit of the invention. It is my intention that no limitations be implied and that the hereto annexed claims be given the broadest interpretation to which the employed language fairly admits.

What I claim is:

1. The combination, comprising: a generally planar board having a rebound surface, said rebound surface having lands and valleys shaped irregularly and disposed irregularly both vertically and horizontally, a table with a net disposed at the midlength of the table and at substantially right angles to the longitudinal median line of said table, said board positioned co-planar with, above, and adjacent to said net.

2. The combination, comprising: a generally planar rebound board having a rebound surface, said rebound surface having lands and valleys shaped irregularly and disposed irregularly both vertically and horizontally, the upper and lower ends of the board terminating in flanges extending rearwardly from the rebound surface, two support means each of which has a base with a stud projecting upwardly therefrom, a standard supported by said stud, an L-shaped rest at the upper portion of said standard and a rest at the lower portion of said standard, a hook projecting from said standard and piercing the upper flange in a generally vertical direction.

3. The combination as recited in claim 2, a table with a net disposed at the midlength of the table and at substantially right angles to the longitudinal median line of said table, said board positioned co-planar with, above, and adjacent to said net.

4. The combination, comprising: a rebound board having a rebound surface, said rebound surface having lands and valleys shaped irregularly and disposed irregularly both vertically and horizontally, a table having a playing surface and having a longitudinal median line, said rebound board being positioned upstanding from said table with said rebound surface being located above and on each side of said median line.

5. The combination, comprising: a rebound board having a rebound surface, said rebound surface having lands and valleys shaped irregularly and disposed irregularly both vertically and horizontally, a table with a net disposed at the mid-length of the table at substantially right angles to the longitudinal median line of said table, said board being positioned upstanding from said table with the rebound surface of said board being positioned above and on either side of said longitudinal median line of said table.

References Cited in the file of this patent

UNITED STATES PATENTS

2,104,375	Perry	Jan. 4, 1938
2,248,233	Heritage	July 8, 1941
2,270,809	Kaye	Jan. 20, 1942
2,718,674	Hinds	Sept. 27, 1955
2,812,946	Hughes	Nov. 12, 1957