ABSTRACT: A finger bridge training device to aid in teaching the basic hand position used in the game of billiards. The teaching aid generally comprises an arched, hand-like form or mold of rigid, lightweight material. The form encases the entire forwardly located hand of the player except for the forefinger. A semicircular groove is molded between the thumb and the first knuckle in order to correctly support and guide the movement of the billiard cue.
The present invention relates to a training aid for use in playing the game of billiards and, more particularly, to a device for teaching the basic hand position used in the game of billiards.

By definition, the game of billiards includes any of the several games played on an oblong table in which small balls are driven against one another or into pockets by means of a long, tapered stick or cue. As with other athletic endeavors, the game of billiards requires concentration, coordination and practice if one desires any degree of competency. Probably the single most important technique to be mastered when learning any of the many variations of billiards is that of forming and utilizing the basic hand position for guiding the billiard cue.

There are three commonly used finger bridges needed to adequately handle all of the variously occurring shots encountered in billiards. They are the basic, rail and vee bridges. For discussion and explanation of these three bridges see Winning Pocket Billiards, Willi Mosconi, Chapter 3, pages 37-46, Crown Publishers, Inc., New York, 1965. Of the three, the basic bridge is the most important and most frequently used. However, most beginners experience difficulty in using the correct basic bridge because it requires the hand be positioned awkwardly and uncomfortably. Moreover, the basic bridge must be diligently practiced before the player can use it with ease.

Accordingly, in order to overcome the problems of becoming accustomed to the basic bridge, it is a primary object of the present invention to provide a device which will aid in training the beginning player of billiards in correctly forming and utilizing the basic finger bridge.

It is a further object of the present invention to establish the correct habits of using the basic finger bridge by providing a bridge forming device which may be worn by the student player while he adapts to the various shots requiring the basic bridge encountered in the game.

These and other objects of the invention are more particularly set forth in the following detailed description and in the accompanying drawings wherein:

FIG. 1 is a front, elevational view of one embodiment of the present invention;

FIG. 2 is a side, elevational view of the same embodiment of the present invention which was illustrated in FIG. 1;

FIG. 3 is a bottom view of the same embodiment of the present invention as illustrated in FIGS. 1 and 2; and

FIG. 4 is a perspective view of the same embodiment as illustrated in FIGS. 1 through 3 shown in position on the hand of the player.

The illustrated basic finger bridge training or teaching aid 10 comprises a hollow handlike form or mold of rigid, lightweight material formed in an arched position of a size somewhat larger than the hand of the intended user. The handlike form is designed to encase and rigidly support a player's forwardly positioned hand in manner to accurately guide a billiard cue during play. The handlike form is suitably arched with the little finger 12 spread at an angle of approximately 45° with the general direction of the middle finger 14 and fourth finger 16. Fingers 14 and 16 are formed adjacent to and parallel with each other and extend downwardly to a point generally underneath thumb 18. It is also possible to position the finger 16 so that it is separated from the third finger. The heel of the palm 20 and the tips of the fingers 12, 14 and 16 are all in a common plane and the only portions of the form covering the palm of the hand is approximately 1 to 1½ inches above the table surface. The inside edge of thumb 18, the outside edge of the first knuckle 24 and a portion of middle finger 14 combine to form a groove 26 which accommodates a billiard cue as the cue is slid back and forth to strike a cue ball. A circular aperture 22, which is approximately 1½ inches in diameter, is cut in the front side of knuckle 24. This aperture provides a space through which the user's forefinger may extend out and over the cue and rest on top of thumb 18, as is more particularly described below, in relation to FIG. 4.

The entire training aid 10 can be formed of any lightweight material which is shape retaining and which is not irritating to a person's skin. The training aid may, for example, be molded from plastic material. Common plastics which may be used for the handlike form are, for example, polyethylene and polystyrene. The wall thickness should be such as to provide rigidity to the teaching aid. When polyethylene is used, the wall may be approximately three-sixteenths inch thick. Pigments may be added to the plastic to give any desired hue to the training aid. The form is generally slightly oversized to allow easy insertion of the wearer's hand. Although not critical to the function of the finger bridge training aid, its entire inner surface is preferably finished to a pebble grained texture adding comfort for the wearer by allowing air to pass between the hand and the training aid thereby evaporating perspiration from the hand. It is essential that the groove 26 be finished with a smooth surface in order to facilitate the movement of the cue. The remainder of the exterior of the handlike form, except for a portion of heel 20, as explained below, preferably has a smooth finish, mainly to enhance the appearance.

FIGS. 1 and 2 illustrate the planar relationship of the tips of the fingers 12, 14 and 16, and the heel of the palm 20. Typically the finger bridge training aid is approximately 6 inches long from the heel of the palm to the finger tips and is approximately 4 inches wide across the finger tips thereby providing a stable support for the player's shot. The arched position of the hand is also evident.

The length of cue groove 26 is also seen in FIG. 2. The groove 26 extends from the approximate area of the joint where the thumb 18 joins the palm of the hand through the area between the forefinger knuckle 24 and the remainder of thumb 18. The groove is essentially semicircular in cross-section with a radius of approximately one-fourth inch. Generally, the cue strikes the billiard ball near the center, or approximately 1¾ inches above the table surface for a regulation 2¼ inch diameter ball. Since the top surface of the groove is two thicknesses of material higher above the table than a player's hand would normally be, the tip of the cue would not be in the range of the center of the billiard ball if the cue rested in a horizontal groove. Therefore, the groove 26 is provided with a slight degree of downward tilt. Thus, when training aid 10 is positioned correctly, approximately 6 inches behind the cue ball, the cue will strike the ball about at approximately its center. It may also be seen that by pivoting the cue over the forward lip of groove 26 the cue ball may be struck anywhere along its height thus allowing the techniques of applying "english", by striking the ball above or below the center of the ball, to be learned and utilized by the player. Aperture 22 is seen to be positioned close enough to groove 26 for the player's forefinger to be easily extended out and over the cue when in place.

Ridges 30, illustrated in FIG. 3, are preferably included on the rear portion of the heel of the palm of the training aid in order to prevent the slipping of the training aid over the felt surface of the billiards table. Ridges which are approximately one-sixteenth inch high are suitable for this purpose. A plurality of four or five closely spaced ridges 30 are generally adequate. Since the coefficient of friction of the felt on a billiards table is relatively high, the slight effect of these ridges is enough to prevent substantially all forward slipping during a shot.

Referring to FIG. 4, the operation of the finger bridge forming device 10 is now apparent. The player's hand is inserted in bridge training aid 10 with his forefinger 32 extending through aperture 22 out and over billiards cue 34 which slides along groove 26. The entire training aid may be positioned for an accurate shot with forefinger 32 acting as an auxiliary guide for the cue. A stable support for the shot is provided by fingers 12, 14 and 16 and heel 20. Various sizes as well as left and right handed models are contemplated in order to accommodate all hand sizes.
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It should be noted that although the technically correct position for the tip of the forefinger in the basic bridge is between the thumb and the middle finger, and the present invention positions are still essentially correct and account for no inaccuracy in shooting or subsequent incorrect shooting after the player has progressed beyond the beginning stage and ceases the use of training aid.

The present invention is thus seen to present an effective means of training the beginning billiards player in the forming and utilization of the basic finger bridge. After a period of time, when the beginner has adjusted to the position of his hand, he may cease the use of the training aid. He will then have acquired the correct basic hand bridge position for supporting and guiding the cue and will be able to confidently rely thereon in game situations.

Various features of the invention are set forth in the following claims.

We claim:

1. A finger bridge aid for use in the game of billiards comprising a rigid, hollow form in the shape of a human hand without the forefinger, said form possessing an aperture and a knuckle formation at the forefinger location, said handlike form being shaped in an arched manner to simulate a preferred positioning of a billiard player's forwardly located hand during play, the heel of the palm and the tips of the last three fingers of the form lying in a common plane so as to provide a multipoint, stable positioning of the form during use, said form having a groove in the upper surface when the form is stably positioned, said groove extending between and being formed by the thumb and said knuckle of said form to correctly guide the movement of a billiard cue, and said aperture and said first knuckle permitting a user's forefinger to extend therethrough as an auxiliary guide for the cue.

2. A finger bridge aid in accordance with claim 1 wherein said handlike form is molded from a plastic material.

3. A finger bridge aid in accordance with claim 1 wherein a small set of ridges is molded into said heel to preclude slippage of said form on the felt covering of a billiards table.

4. A finger bridge aid in accordance with claim 3 where the last finger of the form is spread at an angle of approximately 45° to the third and fourth fingers of the form.
UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,544,111 Dated December 1, 1970

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It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 3, line 4, following the word "positions" insert "the forefinger atop the thumb, the finger positions".

SIGNED AND SEALED
MARCH 1971

(SEAL)
Attest:
Edward M. Fletcher, Jr.
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