July 9, 1940. J. S. POPPER 2,207,550

TABLE SHUFFLEBOARD

Filed Oct. 20, 1938 2 Sheets-Sheet 1

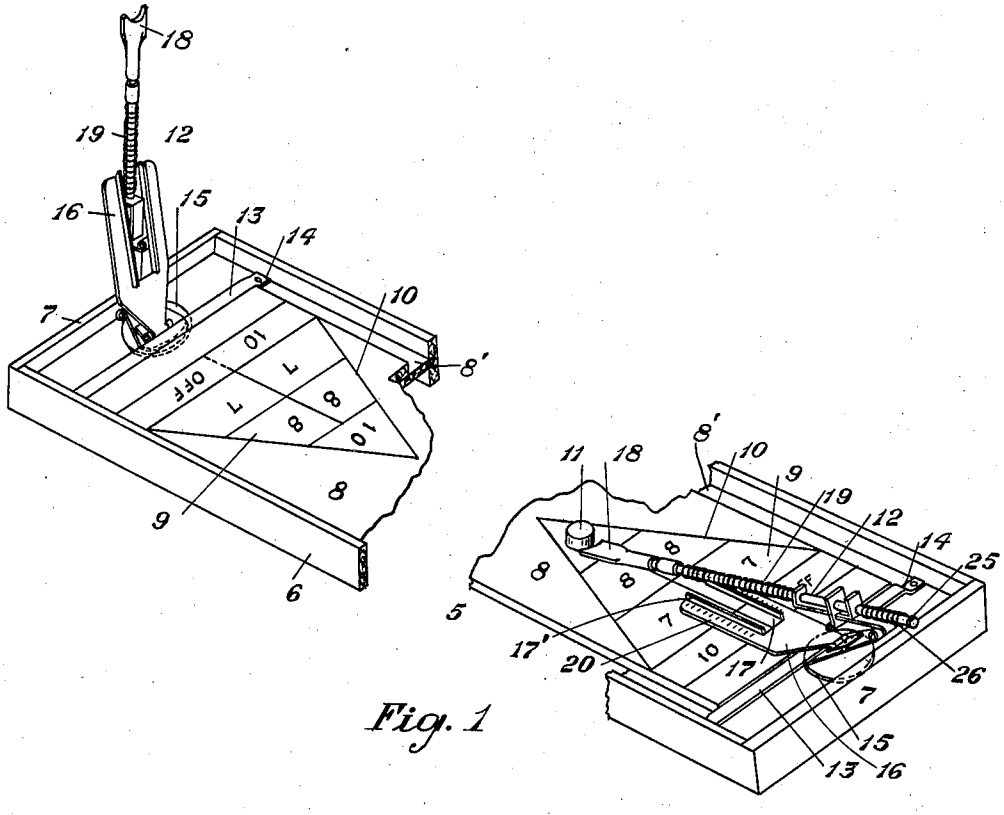


Fig. 1

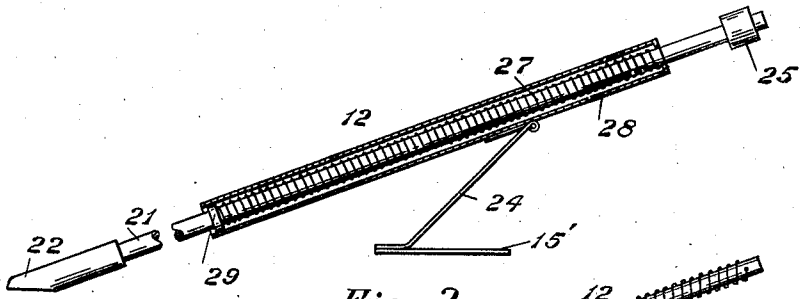


Fig. 2

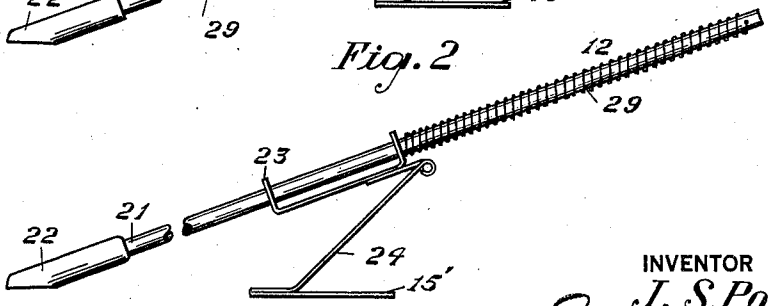


Fig. 3

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TABLE SHUFFLEBOARD

Filed Oct. 20, 1938 2 Sheets-Sheet 2

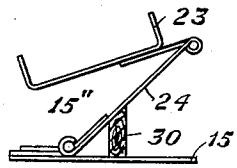


Fig. 4

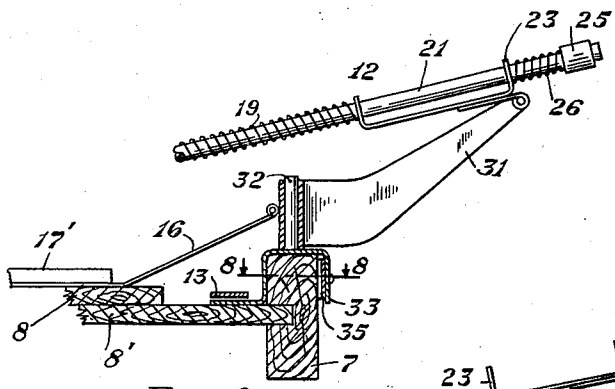


Fig 6

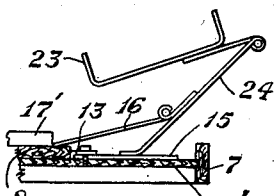


Fig. 5

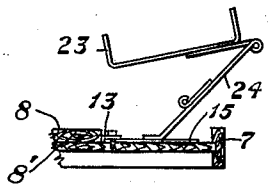


Fig. 7

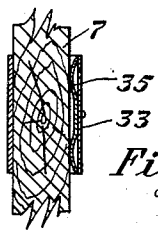


Fig. 8

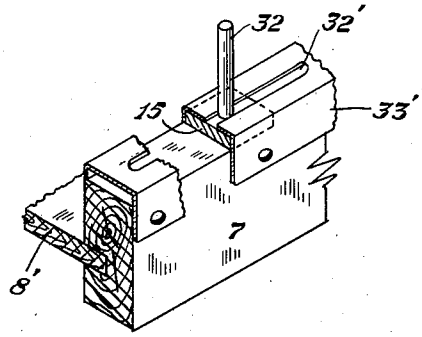


Fig. 9

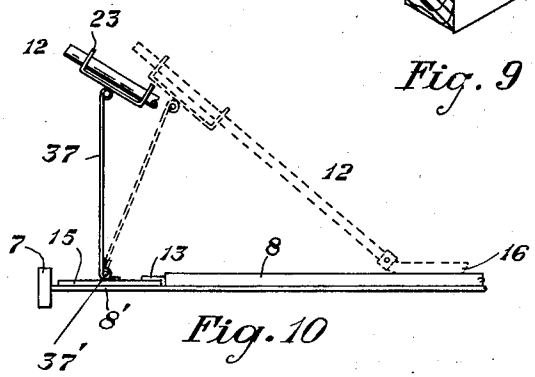


Fig. 10

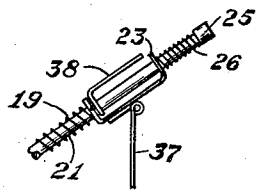


Fig. 11

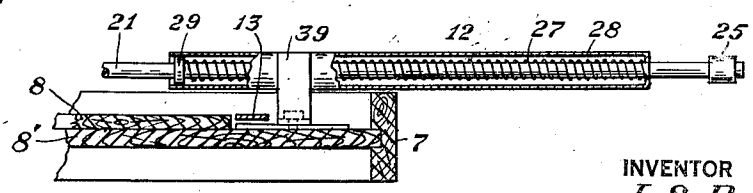


Fig. 12

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UNITED STATES PATENT OFFICE

2,207,550

TABLE SHUFFLEBOARD

Julius S. Popper, Union City, N. J.

Application October 20, 1938, Serial No. 235,962

7 Claims. (Cl. 273—129)

This invention relates to a game apparatus, and more particularly to a portable or miniature shuffleboard adapted to be used in the home, the club and various places of amusement.

One of the objects of the invention is the provision of a table or other portable device on which the game of shuffleboard may be played with substantially the same degree of skill and accuracy as if played on a shuffleboard of regulation size.

Another object is to provide a game of the above-mentioned class with mechanism for actuating or propelling the playing pieces or disks from one end of the court to the opposite end.

These and further objects of the invention will be apparent from the following description, when considered in connection with the accompanying drawings, on which various modifications of the improved device are illustrated.

Referring to the drawings,

Figure 1 is a perspective view of a shuffleboard embodying this invention, the intermediate portions broken away, and showing at one end the actuating or propelling cue in engaged position with a playing weight or disk to be projected towards the opposite end of the court, and with the cue at the opposite end in raised position, to which position it is adjusted when the disks are propelled from the other end.

Fig. 2 is a sectional view, showing a cue provided with a tubular casing and mounted on a standard.

Fig. 3 is an elevational view of another from of cue.

Fig. 4 is a side elevation of one form of support for the cue.

Fig. 5 is a side elevation and enlarged view of a cue support similar to that illustrated in Fig. 1. The bifurcated plate associated with the support may be removed if desired.

Fig. 6 is a broken-away side elevation, partly in section, showing the cue mounted on a modified support carried on the end wall of a casing or table.

Fig. 7 is a side elevation of a modfied form of support or mounting for the cue.

Fig. 8 is a section taken on the line 8, 8 of Fig. 6.

Fig. 9 is a perspective view of a modified support carried on the end wall of the casing or table.

Fig. 10 is another modification of the support or mounting for the cue, the normal position of the support and cue being indicated by full lines and the extended or active position of the elements being indicated by dotted lines.

Fig. 11 is a broken-away view of a cue and its support, showing a thumb-brake for controlling the action of the cue.

Fig. 12 is a sectional view of a cue and a modified mounting therefor.

In the drawings, the reference numeral 5 designates a casing having longitudinal side walls 6 and transverse end walls 7 connected therewith in accordance with the usual cabinet construction. This casing may be mounted on legs or supported on any suitable base. A miniature shuffleboard court 8, on which the game is played, extends lengthwise of the table. This court on which the game is played is mounted on a base 8' and is pivoted at each end with score-markings 9, 9 about which extend triangular boundary lines 10, 10, in accordance with the usual regulation shuffleboard court. A space is provided between the edges of the court 8 and the walls of the casing 5, which walls extend a sufficient distance upwardly from the surface of the court. These walls provide a barrier whereby the playing-pieces or flat disks 9 are prevented from lateral displacement from the casing when they are projected by the cues 12, 12 along the surface of the court from either of its ends.

A transverse bar 13 is positioned near each end of the casing 6. The ends of this bar are bent angularly and secured in the space between the edges of the court 8 and the side walls 6 as shown at 14. The portion of the bar intermediate its ends is slightly raised from the surface of the court. This provides a space to receive a substantially round base 15 of a carriage on which the cue 12 is mounted, as shown in Fig. 1. The carriage in Fig. 1 includes, in addition to the base, a bifurcated plate 16 which is hinged at its bottom to said base. The round base 15 is adapted to be inserted beneath the raised portion of the transverse bar 13, and the hinged connection just referred to, lies in such position with respect to the bar as to prevent the accidental dislodgement of the base. In this position the base may be readily rotated with its periphery bearing against the inner edge of the end wall of the casing 5, and it may be also moved in a transverse direction across the end of the table. When the base is thus moved, the carriage and its component parts will, of course, partake of such movement. The under-side or the table-engaging ends of the legs of the plate 16 are provided with pads which frictionally engage with the surface of the table and prevent the slipping of

the plate thereon. The plate 16 is of substantially rectangular formation and is provided with a guide-channel 17. This channel is just wide enough to receive the disk-engaging end 18 of the cue 12, so that when the cue is pulled back against the resistance of the spring 19, its edges will slidingly engage with the vertical flanges 17' of the guide-channel. When the cue is released, its disk-engaging end will be guided by the channel finages and will accurately project the disk 11 across the surface of the court 8 in the desired direction. A scale 20 is provided on each of the surfaces of the plate 16 adjacent the channel guide 17 for the purpose of more definitely adjusting the cue in its pulled-back position.

The cue or projecting device 12, which is carried by the plate 16 comprises a cylindrical plunger rod 21 having at one end a head 22 of larger diameter than the rod, as more clearly shown in Figs. 1 and 2. This head is provided at its outer end with the disk-engaging surface 18, previously referred to. This end has an arcuate surface to fit against the periphery of the disk 11. A coil or actuating spring 19 surrounds part of the rod, as shown in Figs. 1 and 6, and abuts at one end a collar adjacent the enlarged head 22 and at the other end abuts a substantially U-shaped bracket 23 carried by a resilient support 24. The cylindrical rod 21 extends through and slidingly engages alined openings in the arms of this bracket. A stop 25 is provided for the spring 26. This stop also may be used for connection with the manipulating or grip-end 25 which is carried on the outer end of the rod opposite the end 18, and an additional coil spring or snubber 26 surrounds the rod in the space between one end of the bracket 23 and the spring stop and grip-end 25. To manipulate the cue, the enlarged head 22 terminating in the disk engaging end 18 may be grasped, and the cylindrical rod may be pushed outwardly against the compression of the spring 19, or, if desired, the finger-grip 25 may be pulled outwardly so that the spring 19 is compressed. When the head 22 or the grip is released, the spring 19 projects the end 18 of the rod or cue outwardly into contact with the disk-playing weight 11 at the starting lines at one end of the court. The spring 26 acts as a shock absorber and overcomes any tendency of the cue to become deflected by concussion when released. Accurate aim is thus assured so that the disk may be projected with precision to the desired point. The impulse transmitted by the spring-actuated rod or cue 12 to the disk causes it to slide on the surface of the court or game board 8 to the end opposite from which it was projected. The disk may be thus moved into the desired position on the score markings or it may be directed against other disks which may be on the court to cause their dislodgment. The cue and its carriage at one end of the board are swung into a vertical position when the disks are projected from the opposite end, as illustrated in Fig. 1.

In Fig. 2 a cue surrounded by a coil spring 27 is illustrated. A tubular casing 28 is provided for this type of cue mounting, and this casing forms an enclosure for the spring 27. This spring extends between the collar 29, which is fixed to the cylindrical rod of the cue, and the upper end of the casing. When operated the enlarged head 22 is grasped and the cylindrical rod of the cue is pushed back or outwardly against the compression of the spring 27. The cue may be operated in an alternate manner by pulling the cylindrical rod outwardly with respect to the casing by means of the finger-grip-end 25. The fixed collar 29 which travels with the rod causes the compression of the spring 27. The release of the grip-end causes the cue to be projected forwardly in an obvious manner under the tension exerted by the spring, and the cue operates to propel the disk along the surface of the court of the game board as previously outlined. The carriage which provides a mounting for the cue is shown in this instance as comprising a standard 24, which is hinged to the tubular casing 28, and a base 15' which functions similarly to the base 15 of Fig. 1.

The cue illustrated in Fig. 3 is shown as having its U-shaped bracket 23 mounted upon a carriage similar to that illustrated in Fig. 2. The cue is reciprocally mounted in this bracket, and a spring 29, surrounding the cylindrical rod of the cue, is connected at one of its ends to one arm of the bracket 23, while the other end of the spring is held in fixed position at the grip-end of the rod by any suitable means.

The carriage for supporting the cue, as illustrated in Fig. 4, includes a bracket 23, through the alined openings in the arms of which the cylindrical rod of the cue reciprocates. The support 24 is shown as being hingedly connected to the base 15 and also to the bracket 23. A rest 30 is provided for the support 24. The mounting for the cue is so constructed as to provide a "follow through" movement for the cue near the end of its travel. The movement is one in which the cue is gradually checked near the end of its stroke, so that it is not brought to an abrupt stop. By this movement the disk is more accurately projected in the desired direction by reason of the elimination of the shock at the time the disk leaves the cue.

In Fig. 5 the carriage is similar to that depicted in Fig. 4. In this case, however, the support 24 is fixed to the base 15, and the bifurcated plate 16 is hinged to the support 24.

In Fig. 6 of the drawings, the cylindrical rod of the cue is shown as being reciprocally mounted on bracket 23, which in turn is hinged to an arm 31. The arm 31 is provided with a cylindrical portion having an opening therethrough. This cylindrical portion is pivotally mounted on a supporting pin 32, which is carried on an inverted U-shaped member 33. This latter member resiliently engages with the top edge of the end wall 7 of the casing, and one of its ends slidingly engages beneath the transverse strip 13. The bifurcated plate 16 is hingedly connected to the cylindrical portion of the arm 31 which is pivotally mounted on the pin. The member 33 with the carriage and its various components, may be moved back and forth across the end of the casing on the wall 7. The cue is adapted to partake of this movement and also the pivotal movement provided by the connection of the arm 31 with the supporting pin 32.

Fig. 7 is a view similar to Fig. 4. The support, however, in Fig. 7 is hingedly connected at its approximate midpoint to provide greater flexibility and also to provide a follow through movement such as was described in connection with Fig. 4.

Fig. 8 is a plan view which discloses more clearly the resilient engagement between the member 33 and the top end wall 7 by means of the curved spring 35.

In Fig. 9 an inverted U-shaped member 33' is illustrated, which extends entirely across the end wall 7 of the table and is affixed thereto. The member 33' is raised slightly from the top edge

of the end wall 7 to provide clearance for a substantially rectangular base 15''. This base carries a supporting pin 32 similar to that illustrated in connection with Fig. 8, and which is adapted to have an arm 31, as shown in said figure, pivoted thereon. This pin extends from its base and through the transverse slot 32' in the member 32. The pin and the various elements carried thereby are adapted to be moved from side to side in the transverse slot across the end wall.

In Fig. 10 a mounting is disclosed for the cue whereby it may be moved by means of the flexible connection of the support 37 with its hinged joint 37' to obtain a "follow-through" movement in its propelling action on the disk, such as is well known in the game of golf. This action is described in more detail in connection with the description of Fig. 4, previously referred to. The cue 12 and its U-shaped bracket 23 are mounted on a resilient support 37, which is adapted to be moved from the normal position shown in full lines to the actuated position shown in dotted lines.

Fig. 11 discloses a thumb-brake 38 which comprises a substantially L-shaped resilient member affixed to one of the arms of the bracket 23 and having an aperture therethrough corresponding to that in the associated bracket arm. It will be understood that while this brake is only illustrated in connection with the cue in Fig. 11, it is equally well adapted to be used with the cues illustrated in any of the figures of the drawings. The cylindrical rod of the cue extends through these apertures and when pressure is applied to the free end of the member 38 by means of the thumb, this end will bear against the rod and provide a braking action thereon to hold the cue in the desired position. The release of this braking action will, of course, free the rod and permit it to be projected in a forward direction by the force exerted upon it by the spring 19 surrounding its cylindrical rod portion.

In Fig. 12 the cue is shown in a horizontal position and mounted in a casing such as described in connection with Fig. 2. The cue is carried on a mounting such as illustrated at 39, or a mounting such as indicated in Figs. 6 or 9 may be used equally well.

It will be noted that the cue is supported on a universal mounting and is adapted to be moved in any variable angular direction.

In the operation of the improved device, the enlarged end or cue-engaging end may be grasped and pushed outwardly against the compression of the coil spring, or the finger-grip-end of the cue may be pulled back or outwardly, so that the coil spring or springs around the cylindrical plunger rod portion of the cue become compressed or extended to a desired degree. The cue-engaging end or finger-grip-end may be released after the cue is in the proper position. If the thumb-brake is used, this will be released. The disk-engaging head of the cue upon the released condition of the elements just mentioned is caused to transmit an impulse created by the action of the released spring or springs which project the disk, with which the head of the cue had been previously placed in contact, along the surface of the court to a point at the opposite end where it is desired to have the disk register within a score marking or against another disk. As previously pointed out, the carriage on which the cue is hingedly mounted is adapted to be moved across the end of the game board from one side to the other. The carriage is also adapted to be rotated so that the cue can be pivotally moved to project the playing disk in any desired or variable angular direction. When the series of playing disks have been all projected from one end of the board, the game may be continued from the other end of the board. In this case, the cue is raised at the latter end as previously described.

It will be obvious that the general principles herein disclosed may be modified in many other organizations widely different from those illustrated, without departing from the spirit of the invention as defined in the following claims.

What is claimed is:

1. A projector for use in playing games of amusement of the kind in which playing disks may be slidingly propelled upon a game board having a flat surface, a cue hingedly connected to a universal mounting and adapted to be moved transversely on each end of said game board to engage and project the disks longitudinally of said board, a spring carried by the cue for imparting a projecting impulse thereto, and snubbing means for absorbing the concussion of the actuated spring.

2. A projector for use in playing games of amusement of the kind in which playing disks may be slidingly propelled upon a game board having a flat surface, said projector including a cue hingedly connected to a universal mounting and adapted to be moved transversely on an end of said game board to engage and propel the disks longitudinally of said board, a spring carried by the cue for imparting a propelling impulse thereto, and resilient means associated with said cue for providing a follow through movement when the cue is operated whereby it is checked gradually near the end of its stroke.

3. A projector for use in playing games of amusement of the kind in which playing disks may be slidingly propelled upon a game board having a flat surface, said projector including a guide extending transversely on the ends of said board, a pivotally mounted carriage movable along said guide, a cue pivotally mounted on said carriage and adapted to engage and propel the disks longitudinally of said board, an actuating spring carried by the cue for imparting a propelling impulse thereto, and a snubbing spring for absorbing the concussion of said spring when actuated.

4. A projector for use in playing games of amusement of the kind in which playing disks may be slidingly propelled upon a game board having a flat surface, said projector including a cue comprising a rod having a universal mounting and adapted to be moved transversely on an end of said game board to engage and propel the disks longitudinally of said board, a channelled plate associated with the rod mounting to provide a guide for said rod, a compressible actuating spring carried by the rod for imparting a propelling impulse thereto, and a snubber spring for absorbing the concussion of the actuating spring.

5. A projector for use in playing games of amusement of the kind in which playing disks may be slidingly propelled upon a game board having a flat surface, a carriage for the projector adapted to be moved both pivotally and transversely on an end of said game board, a cue hingedly and pivotally mounted on the carriage and adapted to engage and propel the disks longitudinally of said board, a plate carried by the carriage to provide a guide for said cue, a spring carried by the cue for imparting a propelling im-

pulse thereto, and means for providing a braking action for said cue.

6. A projector for use in playing games of amusement of the kind in which playing disks may be slidingly propelled upon a game board having a flat surface, a carriage for the projector adapted to be moved transversely on an end of said game board, a cue hingedly and reciprocally mounted on said carriage and adapted to engage and propel the disks at variable angles from one end of the board to the opposite end of the board, a plate carried by the carriage having a channel therein for guiding said cue, a spring carried by the cue for imparting a propelling impulse thereto, and snubbing means for absorbing the concussion of said spring when actuated.

7. In a projector for use in playing games of amusement of the kind in which playing disks may be slidingly propelled upon a game board having a flat surface and lying within a longitudinal casing having vertical walls about its edges and including a court within said walls having markings at each of its ends to indicate scoring positions, guiding means for the projector mounted transversely near the ends of the casing, a carriage adapted to be moved along said means, and a cue hingedly and reciprocally mounted on said carriage for propelling playing disks at variable angles from one end of the court toward the opposite end of the court.

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