UNITED STATES PATENT OFFICE.

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EXTENSIBLE BILLIARD-TABLE.

1,108,017.


Application filed July 12, 1913. Serial No. 775,884.

To all whom it may concern:

Be it known that I, CYRUS F. WENDELEN, a citizen of the United States, residing at 408 East Main street, Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Extensible Billiard-Tables; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to billiard and pool tables, and more particularly to a billiard or pool table having a movable top.

One of the principal objects of my invention is to provide a billiard table with a movable top, and means for operating said top.

Another object is to provide means for holding the top at any desired point in the path of its movement.

A further object is to provide means for automatically locking the tip in a predetermined position.

Another object is to provide means for moving the top without displacing the billiard balls from their position on the table.

A still further object is to provide a billiard table having a movable top which will be simple, durable, efficient in operation, and inexpensive to manufacture.

With these and other objects in view, the invention consists in the construction, combination, and arrangement of parts herein-described and more fully described and claimed, and illustrated in the accompanying drawings, in which like reference characters indicate like parts throughout the several views, in which,

Figure 1, is a side elevational view of a table constructed according to my invention, Fig. 2, is a side elevational view of the supporting plate, showing the lock actuating arm thereon. Fig. 3, is a vertical transverse sectional view on the line 3—3 of Fig. 6. Fig. 4, is a side elevational view of the locking plate. Fig. 5, is a top plan view of the table stand, the table top being removed therefrom, the rack bar being shown. Fig. 6, is a horizontal sectional view through the central portion of the locking plate, pin supporting plate, lock actuating arm, and adjacent parts. Fig. 7 is a section on line 7—7 of Fig. 5.

Referring more particularly to the drawings, the table stand comprises side and end bars 1, forming a rectangular frame which is supported from the floor by means of legs 2. A cross bar 3, is secured between the side bars of the frame and parallel with the end bars of the frame, and to one side of the transverse axis of the frame, and is connected to one of the end bars 1, by means of a supporting bar 4, the latter being positioned to one side of the longitudinal axis of the frame.

A top 5, which is considerably longer than the frame, but of the same width, comprises side and end boards which are provided in the usual manner with a playing surface and cushion, the lower edges of the side boards at both ends thereof, being provided with plates 6, which are adapted to bear on rollers 7, secured in recessed brackets 8, which are countersunk in the upper edges of the side bars of the frame at opposite ends thereof. A shaft 9, extends transversely of the frame, and has its ends supported in bearings in the side bars thereof, and provided with crank arms 10, for rotating said shaft. The shaft is formed in two sections which have their adjacent ends secured in a sleeve 11, by means of set screws 12.

A hollow shaft 13, is rotatably mounted on the shaft 9, and bears at one end in a bearing block 14, secured to one of the side bars of the frame, and has its opposite end extending through a bearing opening in the supporting bar 4, and projecting into a circular recess formed in the pin supporting plate 15, said plate being secured to the hollow shaft by means of a pin 16. A pin actuating member 17, is secured by means of a pin 18, to the shaft 9, and has one of its ends provided with an arcurate slot 19, adapted to receive the upper reduced end of a locking pin 20. On each side of the slot 19, the pin actuating arm is recessed as at 21, and the bottom of this recess is oppositely beveled so that the deepest portion of the recess occurs mid-way of the length of the slot, the bottom of the recess sloping upwardly from that point to the ends of the recess. Formed integrally with the upper reduced end of the pin 20, is a lug 22, which extends at both sides of the pin into the recess 21, and has its under face oppositely beveled to conform with the beveled bottom of the recess 21, so that when the pin actuating arm is moved in either direction from the position shown in Fig. 3, the pin 20 will be raised until one longi-
The hollow shaft 13, to which said plate is pinned, will be rotated, and will thus cause the table top 5 to move longitudinally out of the table support through the medium of a rack bar 39, which is secured to the under side of the table top, and which is actuated by means of a toothed sleeve or pinion 40, which is pinned to the hollow shaft 13, by means of a set screw 41.

As indicated in Fig. 7 the teeth of the rack bar extend only half way across the same, the plane portion of the under side of the bar resting on the smooth portion of the sleeve, and the teeth of the bar and sleeve are slightly less in length than the depth of the notches in which they work so that said teeth contact only on their lateral sides and thus allow a very smooth and regular action between the bar and sleeve. When the table top has reached the point desired, the rotation of the shaft 9, is stopped, whereupon the leaf spring 56 will assume its normal position, thus allowing the locking pin 20 to engage one of the recesses 27 in the plate 26, and thus locking the table top against movement.

By reason of the low gear ratio between the rack bar 39 and the pinion 40, together with the action of the spring 38, the movement of the table top will be very smooth and gradual, and will thus prevent displacement of the pool or billiard balls, as the table top is moved. It will be noticed that the recesses 27 are very close together so that no matter in what position the table top may be, the pin 20, may be dropped into one of the recesses.

Positioned centrally of the end bars of the frame of the table stand, are a pair of buffers 42 which extend inwardly from the bar and which comprise cylindrical casings adapted to receive pins 43 which are surrounded within the casings by helical springs 44, which are interposed on the pins 43, between the inner ends of the casings and enlargement 45, formed on the outer end of the pins, and which are adapted to engage the inner faces of the end boards of the table top, when the latter reaches either extremity of its movement, thus bringing the table top to a gradual stop. In order to guide the table top, a plurality of posts or guide members 46 are secured to the inner faces of the side bars of the frame, and which are adapted to contact with the inner faces of the side boards of the table top for guiding the same in its movement. It will of course be understood that table tops of different lengths may be used with a supporting frame of standard size, and that the length of the rack bar 39 may be optional. It is evident that a pool or billiard table constructed according to my invention, may be used to a great advantage in a smaller room than would be required for an ordinary table of the same size.
also apparent that should a player lean against either end of the table, the top will
not be moved, but may be only moved by rotating the shaft 9, through the medium of
the crank arms 10. Although the table top is illustrated as adapted for billiard playing
only, it is of course to be understood that it may be provided with pockets for playing
pool.

If it is so desired in lieu of of the con-
struction shown, a split pin (not shown),
may be secured in the recess 34 in the sup-
porting plate 15, and the inner end of the
spring 36 may be received in said pin, the
outer end being free to play in a slot in a pin
(not shown) secured to the member 17 in a
manner similar to the pin 37.

Although I have described the preferred
embodiment of my invention, I reserve and
may exercise the right to make such changes
in the construction, combination and arrange-
ment of parts, as do not depart from the
spirit of the invention and the scope of the
append claims.

Having thus fully described my invention
what I claim as new and desire to secure by
Letters-Patent is:

1. The herein described billiard table com-
prising a table stand and a movable top
thereof, a rack bar secured to the under side
of said top, a hollow shaft rotatably mounted
in said stand, a pinion on said hollow shaft
adapted to actuate said rack bar, a shaft
extending through said hollow shaft and
journaled in said stand and yieldable driv-
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ing connections between said last mentioned
shift and said hollow shaft.

2. The herein described billiard table com-
prising a table stand and a movable top
thereof, a rack bar secured to said top, a
hollow shaft rotatably supported in said
stand, a pinion on said hollow shaft adapted
to actuate said rack bar, a second shaft ro-
tatably in said hollow shaft and journaled in
said stand, yieldable driving connections be-
tween said second shaft and said hollow
shaft, and means for locking said hollow
shaft against rotation.

3. The herein described billiard table com-
prising a table stand and a movable top
thereof, a rack bar secured to said top, a
hollow shaft rotatably supported in said
stand, a pinion on said hollow shaft adapted
to actuate said rack bar, a second shaft ro-
tatably in said hollow shaft, yieldable driv-
ing connections between said hollow shaft
and said second shaft, and means for auto-
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matically locking said hollow shaft against
movement imparted through said rack bar.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

CYRUS F. WENDELKEN.

Witnesses:
E. L. Rugg,
J. R. Hamill.

Option of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."