

B. T. WEIDMAN.
 POOL AND BILLIARD CUE.
 APPLICATION FILED FEB. 17, 1912.

1,042,299.

Patented Oct. 22, 1912.

2 SHEETS—SHEET 1.

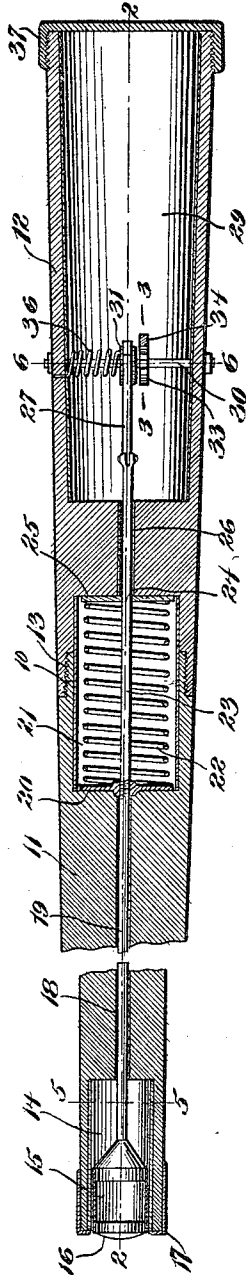


FIG. 1

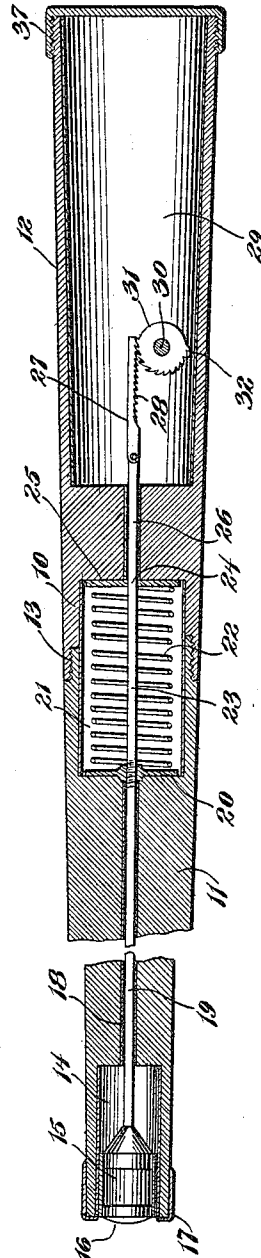


FIG. 2

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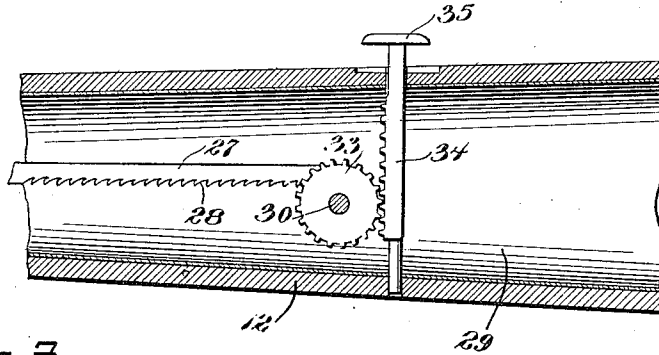


FIG. 3

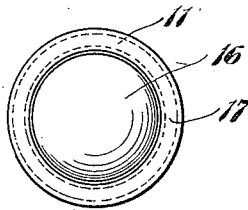


FIG. 4

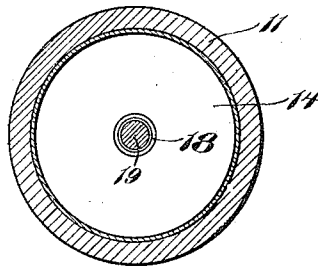


FIG. 5

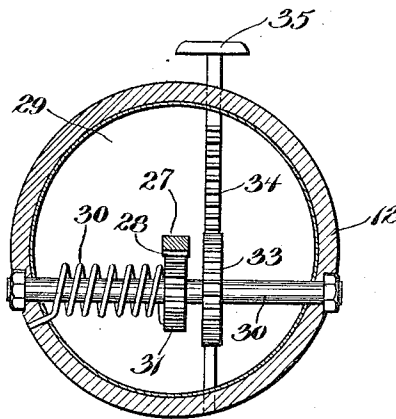


FIG. 6

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UNITED STATES PATENT OFFICE.

BENJAMIN T. WEIDMAN, OF ELLSWORTH, KANSAS.

POOL AND BILLIARD CUE.

1,042,299.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed February 17, 1912. Serial No. 678,186.

To all whom it may concern:

Be it known that I, BENJAMIN T. WEIDMAN, a citizen of the United States, residing at Ellsworth, in the county of Ellsworth and State of Kansas, have invented new and useful Improvements in Pool and Billiard Cues, of which the following is a specification.

An object of the invention is to provide a cue for use in playing pool, billiards or other games of a similar nature.

The invention embodies among other features a device which can be positioned to accurately strike the cue ball in the proper place, the striking of the cue ball by the cue being accomplished without moving the body of the cue.

In the use of the cues now generally used in pool or billiards, the body end of the cue is generally grasped in the right hand and the forward end of the cue is permitted to slide over a bridge formed by the left hand, the left hand being placed upon the table in the rear of the cue ball with the cue in alinement therewith, after which a sudden forward movement is given to the cue by swinging the right arm so that the tip of the cue will strike the ball and propel the same. In operating a cue in this manner, however, the operator's aim is oftentimes misdirected when the right arm is swung to operate the cue and in order to overcome this deficiency and provide a cue that can be efficiently operated, I employ a cue which when positioned on the table, upon a bridge formed by the hand, can be accurately aimed and in which when the tip of the cue strikes the cue ball, the cue body will remain stationary.

In the further disclosure of the invention, reference is to be had to the accompanying drawings constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a fragmentary vertical sectional view of the cue. Fig. 2 is a longitudinal sectional view taken on the line 2—2 in Fig. 1. Fig. 3 is a fragmentary sectional view taken on the line 3—3 in Fig. 1. Fig. 4 is an end view. Fig. 5 is a transverse sectional view taken on the line 5—5 in Fig. 1. Fig. 6 is a transverse sectional view taken on the line 6—6 in Fig. 1.

Referring more particularly to the views, I employ a cue body 10 comprising a forward

ward section 11 and a rear section 12, the forward section 11 being threadedly connected to the rear section 12 at the point 13. Mounted in the front end of the forward section 11 is a casing 14 in which is slidably mounted a plunger 15 provided on the outer end thereof with a tip 16, a sleeve 17 preferably made of rubber, being mounted to encircle the front end of the forward section 11 to cover the front edges of the casing 14 and the forward section 11. Secured to the rear end of the plunger 15 and extending rearwardly to slide in a passage 18 is a rod 19 having the rear end thereof rigidly secured to a circular plate 20 slidably mounted in a casing 21, one half of which extends into the forward section 11 from the rear end thereof and the other half of which extends into the rear section 12 from the front end thereof as shown, said casing being arranged at the point of connection of the forward and rear sections and having mounted therein an expansible helical spring 22 arranged to encircle the forward end of a rod 23 secured to the rear side of the plate 20 and mounted to slidably extend through an opening 24 in a cushion plate 25, secured within the rear end of the casing 21, the spring 22 being arranged with the front end thereof abutting against the plate 20 and the rear end thereof abutting against the cushion plate 25. The rod 23 extends rearwardly to slidably pass through a passage 26, formed in the rear section 12 and hingedly connected to the rear end of the rod 26 is a rack bar 27, the under side of the said bar being provided with teeth 28.

A casing 29 is mounted to extend into the rear section 12 from the butt end thereof and journaled in the said casing is a shaft 30 on which is keyed a semi-toothed wheel 31, the rack bar 27 being mounted to extend rearwardly over the semi-toothed wheel 31 with the teeth 28 of the rack bar adapted to be engaged by the teeth on the semi-toothed wheel 31. Formed on the semi-toothed wheel 31 adjacent one end of the teeth thereon is a lifting cam 32, said lifting cam being adapted to engage the rack bar 27 to move the teeth 28 thereof out of engagement with the teeth on the semi-toothed wheel 31 as will be hereinafter more fully disclosed.

A toothed wheel 33 is keyed to the shaft 30 and mounted to extend transversely to the rear section 12, in the casing 29, is a rack bar 34 the teeth of which mesh with

the teeth of the wheel 33, an end of the said rack bar being extended outwardly through an opening in the casing 29 to the outside of the rear section 12, a suitable knob 35 being
5 secured to the outer end of the mentioned rack bar. A torsion spring 36 has an end thereof secured to the casing 29 and the mentioned spring is mounted to loosely encircle a portion of the shaft 30 with the
10 other end of the spring secured to the semi-toothed wheel 31 as shown.

The tip 16 of the plunger 15 is arranged to extend a slight distance beyond the front end of the forward section 11 and when the
15 tip is in this position a portion of the rack bar 34 will extend outwardly a distance from the rear section 12, the knob 35 being spaced from the rear section. Now when it is desired to strike the cue ball, the device
20 is positioned with the forward section 11 reposing upon a bridge formed by the left hand, mounted upon the table and the rear end of the rear section 12, adjacent the butt end of the section is grasped in the right
25 hand with the thumb of the right hand reposing upon the knob 35. Now by pressing downwardly upon the knob, the teeth of the wheel 33 will impart rotation to the shaft 30 thus rotating the semi-toothed wheel 31,
30 against the torsional action of the spring 36 and the teeth of the semi-toothed wheel 31, engaging the teeth on the rack bar 27 will move the rack bar rearwardly in the section 12 thus compressing the spring 22 and moving
35 the tip 16 within the casing 14. The pressure on the knob 35 is continued until the knob 35 almost touches the rear section and when the knob reaches this position, the spring 22 will be compressed to its full extent,
40 the plunger 15 being now in its rear-most position in the casing 14. The cue is now aimed in the usual manner and when the cue has been properly positioned so that the tip 16 will strike the cue ball at the desired spot, an added pressure is exerted
45 on the knob 35 to move the same within the plane of the outer surface of the rear section and as the semi-toothed wheel has revolved almost a half turn, at the moment that the
50 knob 35 is pressed inwardly as mentioned, the cam 32 will engage the rack bar 27 thus lifting the same to disengage the teeth 28 thereof from the teeth on the semi-toothed wheel 31, thus freeing the rack bar 27 from
55 the toothed wheel 31 so that the full pressure of the spring 22 can be freely exerted against the plate 20 thus through the medium of the rod 19, imparting a forward motion to the plunger to cause the tip 16
60 to move outwardly from the front end of the forward section and strike the cue ball.

By referring to the figures, it will be seen that the teeth on the semi-toothed wheel 31 extend upwardly and the teeth 28 of the
65 rack bar 27 extend rearwardly and at the

moment the tip 16 has struck the cue ball, the pressure on the knob 35 is released and the torsional action of the spring 36 will reverse the rotation of the semi-toothed wheel 31 and the teeth of the semi-toothed
70 wheel 31 will ride over the rearmost tooth of the teeth 28 of the rack bar 27, said rack bar being now in its outermost position. As the rotation of the semi-toothed wheel 31 is reversed, the rotation of the toothed wheel
75 33 will also be reversed and the teeth of the wheel 33 meshing with the teeth of the rack bar 34 will impart an outward movement to the rack bar to move the upper portion of the rack bar upwardly from the rear section
80 to return the rack bar to its initial position, it being understood that the rack 27 is in initial position when the rack bar is in its outermost position with the last tooth of the rack bar engaging the first tooth of
85 the wheel 31. It will now be seen that the various parts of the device are in initial position, this position being the same as when the cue was first placed in position for striking the cue ball so that by repeating
90 the operation described with the ball, the tip 16 will again be moved within the casing 14 to prepare for a second shot. As mentioned heretofore, the casing 29 is mounted within the rear section 12 at the butt end of
95 the section and in order to give the cue a neat appearance, a cap 37 is threadedly engaged with the rear end of the casing 19 to close the butt end of the cue.

From the foregoing description it will be
100 seen that the cue described can be placed in position, aimed and operated so that the tip 16 will strike the cue ball without imparting a pushing or sliding movement to the body of the cue and with a cue of this
105 kind it will be readily apparent that the aim of the operator is not destroyed as is the case with the cue now generally used, in which the entire cue must be moved forwardly so that the tip thereof will strike the
110 cue ball.

I claim:—

1. In a device of the class described, the combination with a cue body, of a plunger
115 slidably mounted therein, a tip secured to the said plunger and movable therewith to extend beyond the forward end of the cue body, and a spring engaged rack and pinion mechanism mounted in the said cue body and connected with the said plunger for
120 moving the said plunger inwardly in the said cue body and then releasing the same to move outwardly so that the said tip will extend beyond the forward end of the cue body.
125

2. In a device of the class described, the combination with a cue body, of a plunger
130 slidably mounted in the cue body, and a spring engaged rack and pinion mechanism mounted in the said cue body and connected

to the said plunger for moving the said plunger inwardly in the said cue body and then releasing the same.

3. In a device of the class described, the
5 combination with a cue body, of a plunger mounted to slide therein, a tip on the said plunger and movable therewith to extend beyond the forward end of the cue body, and spring engaged means for moving the said
10 plunger rearwardly in the said cue body and then releasing the same.

4. In a device of the class described, the combination with a cue body, of a plunger mounted to slide in the forward end thereof,
15 a rod extending rearwardly from the said plunger, a plate secured to the rear end of the said rod, an expansible spring mounted in the said cue body and engaging the said plate to move the said rod forwardly in the
20 cue body, a second rod connected to the said plate and extending rearwardly in the cue

body, an operating knob and means connecting said operating knob with said second mentioned rod for operating the said plunger when the said knob is operated.

5. In a device of the class described the combination with a cue body, of a plunger slidably mounted therein, a tip secured to the said plunger and movable therewith to extend beyond the front end of the cue body,
30 an actuating knob and rack and pinion means connecting said plunger with said actuating knob for moving said plunger relatively to said cue body when said actuating knob is operated.

In testimony whereof I affix my signature in presence of two witnesses.

BENJAMIN T. WEIDMAN.

Witnesses:

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C. W. MILLER.

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