

Improvement in Billiard-Tables.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN BILLIARD-TABLES.

Specification forming part of Letters Patent No. 128,580, dated July 2, 1872.

To all whom it may concern:

Be it known that I, AMASA W. BAILEY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Billiard-Tables; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates to some of the details of construction pertaining to billiard-tables. One part of the invention relates to the construction of the cushion with reference to the preservation of the integrity of the salient angle thereof, against which the balls strike, and the regulation of the tension and elasticity of the cushion at the angle. In accomplishing the desired result I run a steel wire through the cushion just back of the angle, and pass one end of the wire around a suitable guide-sheave or roll to the end of a strong spring, the other end being connected either to a stationary plate or to a spring, first running around a guide-roll or not, as may be desirable. The spring or springs may be arranged so that the strain upon the wire may be regulated. One part of this invention consists in a cushion provided with a steel wire strained over guide-sheaves or pulleys and fastened at its opposite ends to strong springs, which not only preserve the tension of the wire, but yield when the cushion is struck by the balls, and by their elasticity not only preserve the angle of the cushion, but promote its rebounding quality. Instead of the spring to strain the wire, one end of the wire may be connected to a weight or to one arm of a weight-operated lever, the employment of the weight as well as of the spring, being a part of my invention. Another part of the invention consists in covering the cushion-wire with silk, linen, cotton, or other thread, to impart to the cushion endurance, and to increase its resilience. Another part of the invention relates to the method of connecting the cushion-rails and table. To effect this connection I first bore or drill deep holes in the edge of the table, and in each hole I insert a nut-threaded and outer screw-threaded tube, which is turned or entered into the table-edge until its outer end is flush with the edge. To prevent the nut-tube

from turning, I then drill a hole down through the table and through the tube or tube-shank, (near its inner end,) and insert in this hole a pin, the tube being also set, if necessary, by suitable cement. Then, from the outer side of the rail, I pass through the rail for each nut-tube a screw-bolt, the screw-threaded shank of which enters the nut-thread of the tube, and the head of which, when the screw-bolt is turned home, bears against the outer surface of the rail, the screw drawing the edge of the table close to and against the inner surface of the rail.

The drawing represents parts of the rails, cushion, and table, embodying my improvements.

A shows the parts in plan. B is a sectional elevation. C shows one of the straining-springs and adjacent parts in elevation. *a* and *b* denote two of the rails. *c* is a part of the cushion. *d* is the cleat upon which the cushion rests. *e* denotes the prominent or salient angle of the cushion against which the ball strikes. Just back of this angle the wire *f* runs through the cushion. One end of the wire passes over a roll or sheave, *g*, and thence along a bridge, *h*, to the end of a spring, *i*, to which it is connected, the shank of this spring being fastened to the rail, as seen at A, and the stress of the spring tending to keep the spring strained and at the same time yielding, and permitting the wire to yield under the force of the blow. The other end of the wire passes over a guide-roll, *k*, to the end of a slide, *l*, the outer end of which slide is nut-threaded, and has entering it a screw, *m*, by means of which the slide may be drawn outward to tighten the wire. The guide-roll *k* is placed in the end of a spring, *l*², the tension of which may be regulated by an elastic wedge, *m*². One end of the cushion-wire *n* is shown as passing around a guide-sheave or roll, *o*, through a bridge, *p*, around a guide-roll, *q*, to the end of one arm, *r*, of a lever, whose other and long arm, *s*, has hung upon its end a weight, *t*, the stress of which strains the wire, as will be readily understood. The wire *n* is shown as covered by the thread *u*, for protection both of the wire and of the cushion. The table *v* is bored or drilled with holes to receive the tubes *w*, each of which tubes is screw-threaded and nut-threaded, and is secured permanently in place by plaster or other

suitable cement, or by the pin *x*, or by both the pin and cement, the nut-thread of the tube when thus fixed receiving the screw-threaded shank of the bolt *y*, the head *z* of which bears against the outer surface of the rail, as seen at B.

I claim—

1. The cushion-wire, connected at one or both ends to a spring or springs, or to a weight or weighted lever, substantially as shown and described.

2. The guide-rolls or sheaves *g* in combination with the spring or springs, substantially as shown and described.

3. In combination with the guide-rolls or sheaves, the straining-screw *m*, substantially as shown and described.

4. The nut-threaded tube *w*, fixed in the table by the pin *x*, or by cement, or by the pin and cement, and serving to receive the bolt *y* that connects the table and rail, substantially as shown and described.

AMASA W. BAILEY.

Witnesses:

J. J. COBB,
JOSEPH G. BAILEY.