F. E. HELD & M. BENSINGER.

Billiard-Cushion.

No. 161,880. Patented April 13, 1875.

Fig: 1.

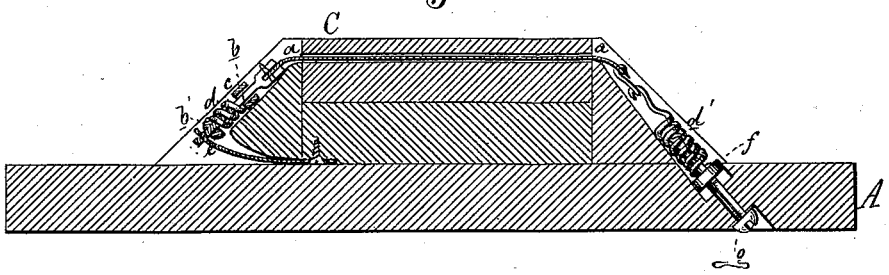


Fig: 2

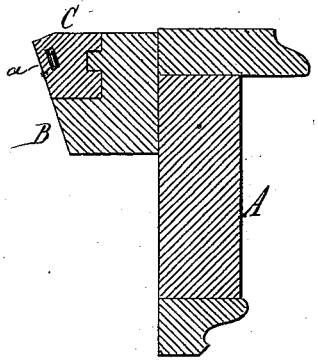


Fig: 3.

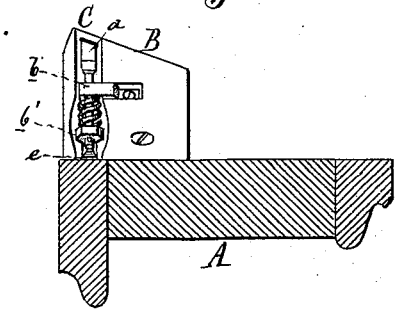
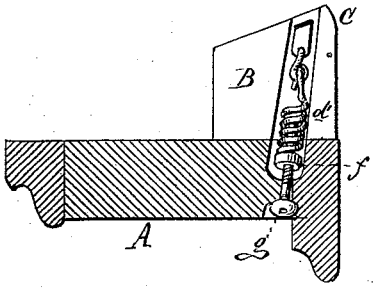


Fig: 4.



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UNITED STATES PATENT OFFICE.

FREDERICK E. HELD AND MOSES BENSINGER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN BILLIARD-CUSHIONS.

Specification forming part of Letters Patent No. **161,880**, dated April 13, 1875; application filed December 21, 1874.

To all whom it may concern:

Be it known that we, FREDERICK E. HELD and MOSES BENSINGER, of Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Billiard-Cushions, of which the following is a specification:

Our invention relates to an improvement in billiard-table cushions of that class wherein a narrow and thin steel ribbon is run through the rubber cushion to make it more elastic and lively, said ribbon being secured to a spring to compensate for the varying tension caused by difference of temperature, and its tension being changed on the outside edge of the cushion-frame when it is desired to make the cushion harder or softer; and it consists in the use of a leaf-spring at one end, and spiral springs at both ends of the ribbon to maintain an equal tension under variations of temperature, and a screw for adjusting the tension of the strip accessible from the outside of the table.

Figure 1 is a horizontal section of a cushion at the plane of the ribbon. Fig. 2 is a cross-section at *x x*. Figs. 3 and 4 show in elevation the devices at the ends of the ribbon, and the cushion-rail in cross-section.

Like letters refer to like parts in the several figures.

In the drawing, A represents a portion of the cushion-frame of a billiard-table, to the upper inner edge of which the cushion-rail B is secured, and to it, in turn, is secured the beveled rubber cushion C, through which a thin and narrow steel ribbon, *a*, is run. Near the corner at one end it is pinned in a slot in the head of a screw-bolt, *b*, which passes through a forked guide-plate, *c*, let into the beveled end of the cushion-rail. Between the guide-plate and the nut *b'* a strong spiral spring, *d*, is sleeved on the bolt, and a leaf-spring, *e*, has one end hooked into a hole at the extremity of the bolt, while the other end is screwed into back of the cushion-rail. The purpose of the leaf-spring is to assist the spiral spring in keeping an equal tension on the ribbon. At the other end of the ribbon a spiral spring, *d'*, is secured thereto by a wire hook. At the outer end of the spring a nut, *f*, is soldered or welded thereto. An ornamental socket-headed screw, *g*, is inserted through a diagonal hole in the table-cushion frame, and tapped into the nut *f*.

When the table is set up and the cushions in place the tension of the ribbon should be adjusted as nearly as possible by the nut on the bolt *b*, after which any change of tension in the said ribbon can be made by screwing in or out the screw *g* on the outside of the cushion-frame.

The springs keep an equal tension on the steel ribbon under the changes of its length from varying tempreatures.

We are aware that a wire has before been used for the same purpose, with an attachment to change its tension from the outside of the table, and that a metallic ribbon has been used, with one end attached to a spring for preserving its tension under varying temperatures, and we do hereby disclaim the same as our invention; but

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination of the metallic ribbon *a*, inserted in a billiard-table cushion, having one end attached to a bolt, *b*, which passes through a guide-plate, *c*, and has a nut, *b'*, spiral spring *d*, and leaf-spring *e*, for preserving an equal tension on the ribbon, and the other end attached to a spiral spring, *d'*, having a nut, *f*, and screw *g* inserted through the table-cushion frame for changing the tension of the ribbon, substantially as described and shown.

FREDERICK E. HELD.
MOSES BENSINGER.

Witnesses:
THOS. J. WOODCOCK,
SIMON WEIS.