No. 861,148. PATENTED JULY 23, 1907.

O. E. SMITH.

BILLIARD CUSHION.

APPLICATION FILED APR. 30, 1906.

Fig. 1.

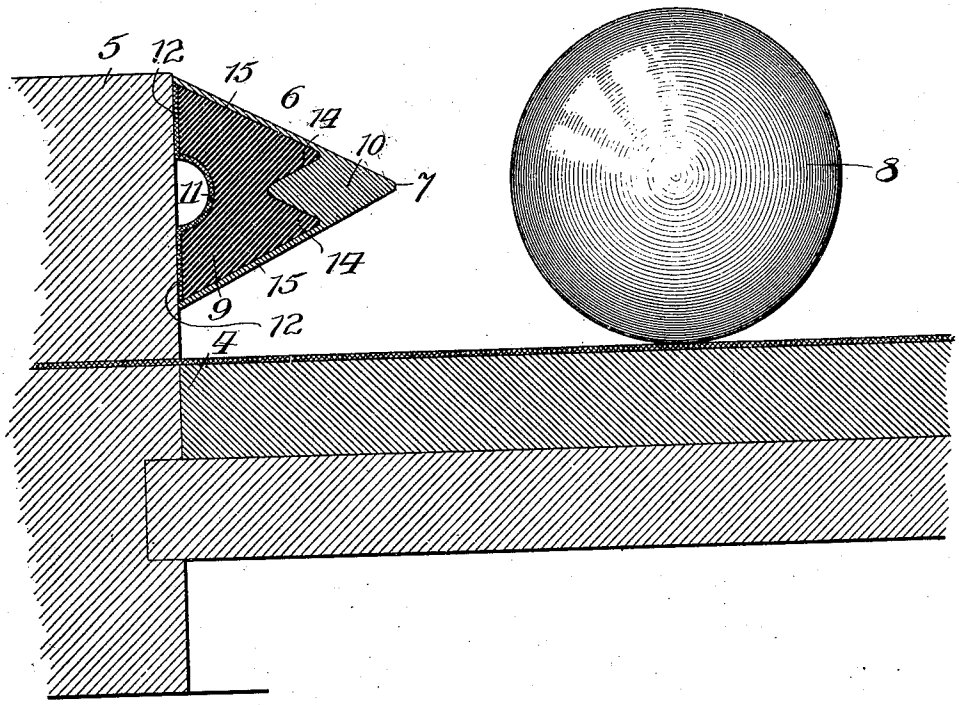


Fig. 2.

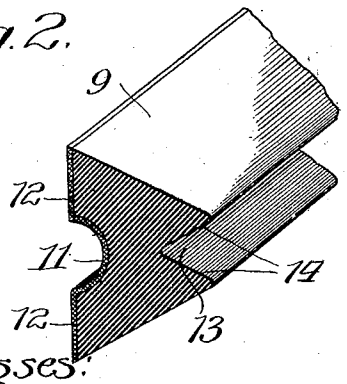
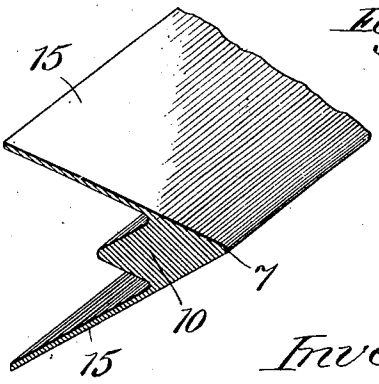


Fig. 3.



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BILLIARD-CUSHION.

No. 861,148. Specification of Letters Patent. Patented July 23, 1907.

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To all whom it may concern:

Be it known that I, OSCAR E. SMITH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Billiard-Cushions, of which the following is a specification.

My invention relates to an improvement in billiard-cushions of the variety in which the facing or impact section of the cushion is made of a highly resilient, relatively superior, grade of rubber, and the back of a relatively inferior and harder or less elastic grade of rubber. In this construction of billiard-cushions, a metal strip is interposed between the two grades of rubber, so that the impact of the ball against the apex or pointed edge of the cushion is transmitted against the flat backing of metal with the result of impairing, rather than enhancing, the resilient action of the cushion, inasmuch as the distribution of impact is general throughout the relatively superior rubber facing backed by the metal strip, instead of being confined to a substantially perpendicular line, so that the reaction of the rubber from the impact is dissipated throughout the entire body of the cross-section of the soft rubber portion of the cushion, without any supplementary resilient action being exerted by the backing. Furthermore, in the construction referred to, the cushion is formed with its apex in a substantially horizontal plane with its upper side, whereby there results a tendency to produce a jumping of the balls in reacting against it.

My object is to provide an inexpensive construction of billiard-cushion which shall enhance its resilient quality, and, therefore, its efficiency, and by which the disadvantages referred to shall be overcome. I accomplish these objects by the construction hereinafter described and illustrated in the drawing, in which—

Figure 1 is a broken view in vertical section of a portion of a billiard-table equipped with my improved cushion; Fig. 2, a broken perspective view of a portion of the backing forming a portion of the cushion; and Fig. 3, a similar view of a portion of the soft rubber facing adapted to be secured to the backing to form the impact surface of the cushion.

The billiard-table represented at 4 is provided with the usual rail 5. Secured to the inner side of the rail is a cushion 6, tapering or V-shaped in cross-section, with its apex 7 intermediate its upper and lower edges and preferably in the same horizontal plane as that occupied by the center of a billiard-ball 8. The cushion consists of a back 9, at which it is secured to the rail 5, and a facing 10 of soft rubber forming the impact-surface for the balls. The back 9 is provided on its rear side with a longitudinal groove 11 for receiving the excess glue when the cushion is glued to the rail, and with a covering 12, of canvas or other suitable material for enhancing the adhesion of the cushion to the rail. A longitudinal groove 13, preferably of the V-shape in cross-section represented, and forming upper and lower walls 14, of approximately equal depth, is provided in the face of the back 9, which may be of wood or any other suitable material, but which I prefer to form of a relatively inferior and cheaper grade of vulcanized rubber. The facing 10 is a strip of relatively superior vulcanized rubber possessing resilient properties in a high degree and of general rhombic-shape in cross-section, with diverging wings 15. The portion of the facing embraced between the wings 15 fits into the groove 13 and the wings 15 overlap the sides of the back 9, in which assembled condition the back and facing may be secured together as by vulcanizing, or otherwise, and thus form a practically integral construction of cushion. The provision of wings serves to insure a more nearly perfect union of the cushion-sections.

The principal feature of my invention is the provision of a longitudinally extending groove in the outer face of the back for receiving and retaining the rubber-facing 10. By thus forming the cushion, the impact of the ball against the apex causes the crowding of the particles of rubber toward the bottom of the groove and consequently the compression of the rubber adjacent thereto, the sides of the groove, being of relatively non-resilient material, preventing free lateral spreading of the soft rubber of the facing, which thereby is compressed in the groove with the greatest potential reactive force in the rubber adjacent to the bottom of the groove, thus producing strong reaction, this reactive force being transmitted to the apex of the cushion where it acts horizontally against the ball. When the back is constructed of wood, metal, or other material than rubber, as it may be, the resilient action of the cushion is somewhat less than when a relatively inferior grade of rubber, having comparatively slight resilient quality, is employed.

What I claim as new, and desire to secure by Letters Patent, is:

1. A billiard-cushion comprising a backing provided in its face with a longitudinal groove, and an impact strip of highly resilient rubber fitting along its back-portion and secured in said groove and having the part which projects inwardly beyond said retaining groove of triangular shape in cross-section with its apex coincident with the longitudinal center of said groove, and in the same horizontal plane therewith.

2. A billiard-cushion comprising a backing having its upper and lower sides converging toward each other at equal angles toward the central horizontal plane of the backing and provided in its face with a longitudinal

groove, and an impact strip of highly resilient rubber fitting along its back-portion and secured in said groove and having the part which projects inwardly beyond said retaining groove of triangular shape in cross-section with its apex coincident with the longitudinal center of said groove and in the same horizontal plane therewith.

3. A billiard-cushion comprising a backing provided in its face with a longitudinal groove, and an impact-strip of highly resilient rubber provided with diverging wings secured in said groove with the wings embracing the backing.

4. A billiard-cushion comprising a backing having its upper and lower sides converging toward each other and at equal angles toward the central horizontal plane of the backing and provided in its outer face with a longitudinal groove, of general V-shape in cross-section, and an impact-strip, of general rhombic-shape in cross-section, secured in said groove.

5. A billiard-cushion comprising a backing having its upper and lower sides converging toward each other and at equal angles toward the central horizontal plane of the backing and provided in its outer face with a longitudinal groove of general V-shape in cross-section, and an impact-strip of general rhombic-shape in cross-section provided with diverging wings secured in said groove with the wings embracing the backing.

OSCAR E. SMITH.

In presence of—
A. U. THORIEN,
J. H. LANDES.