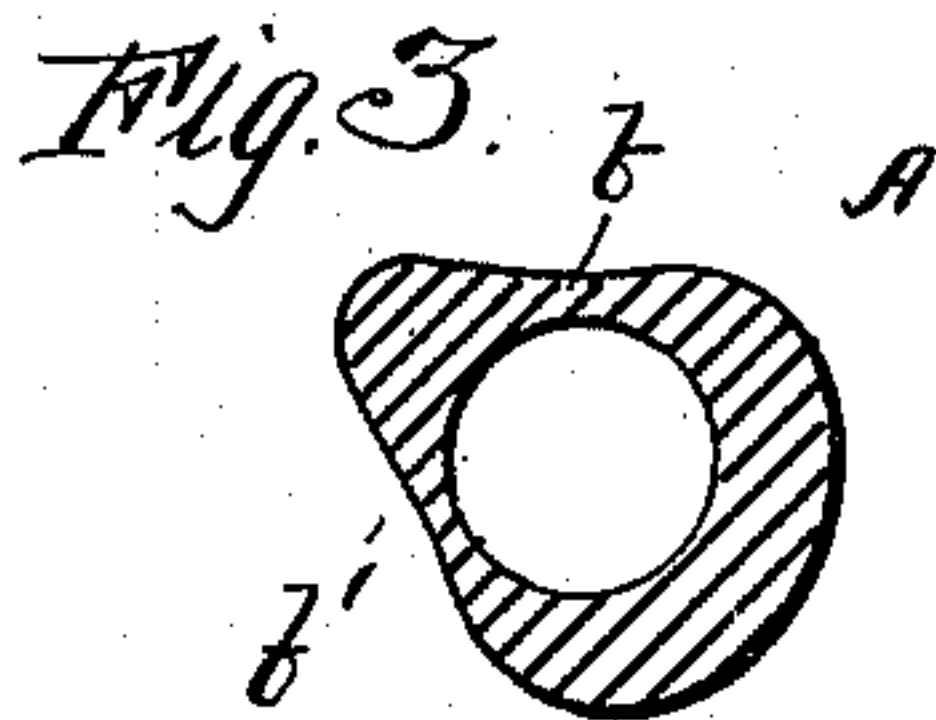
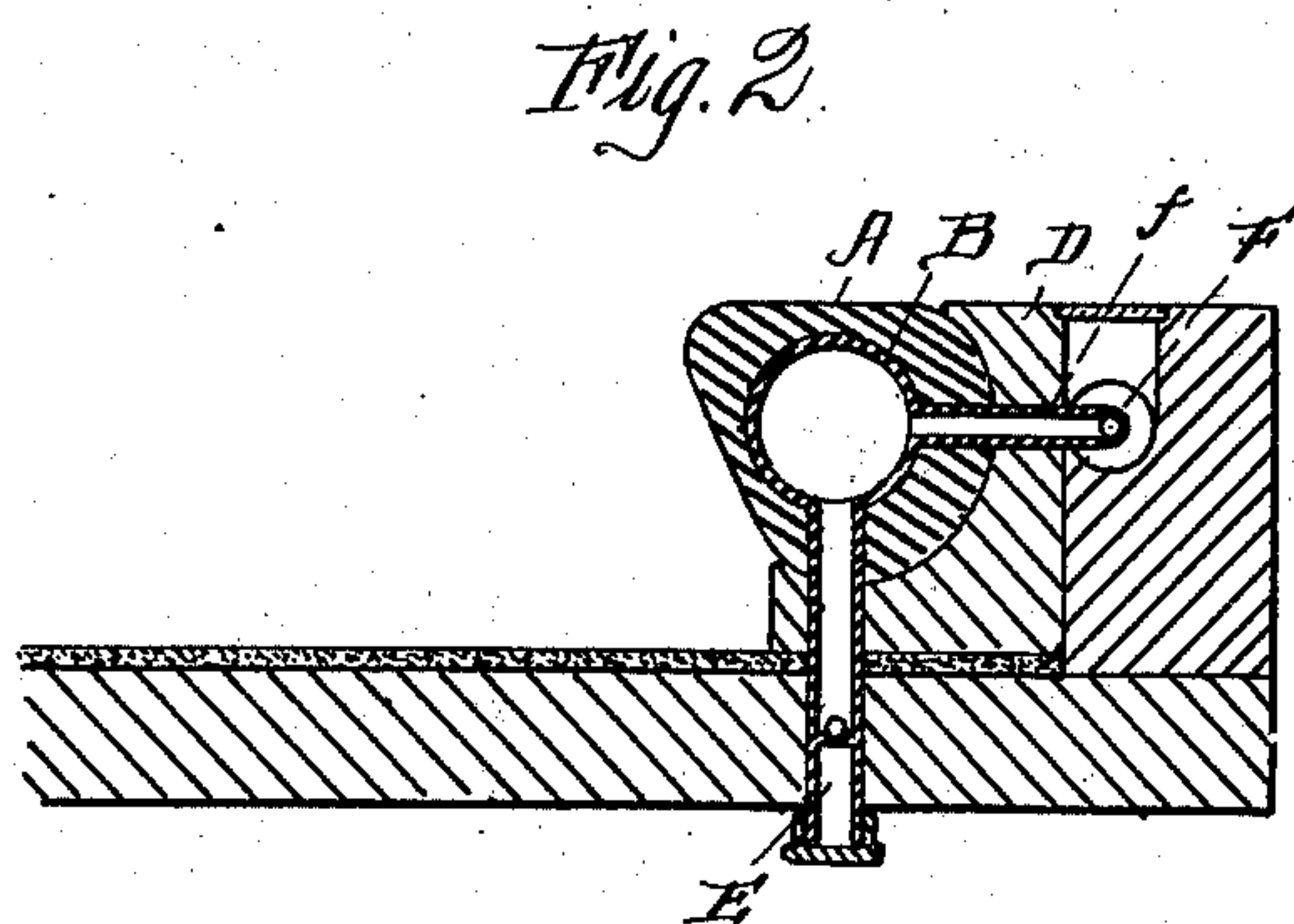
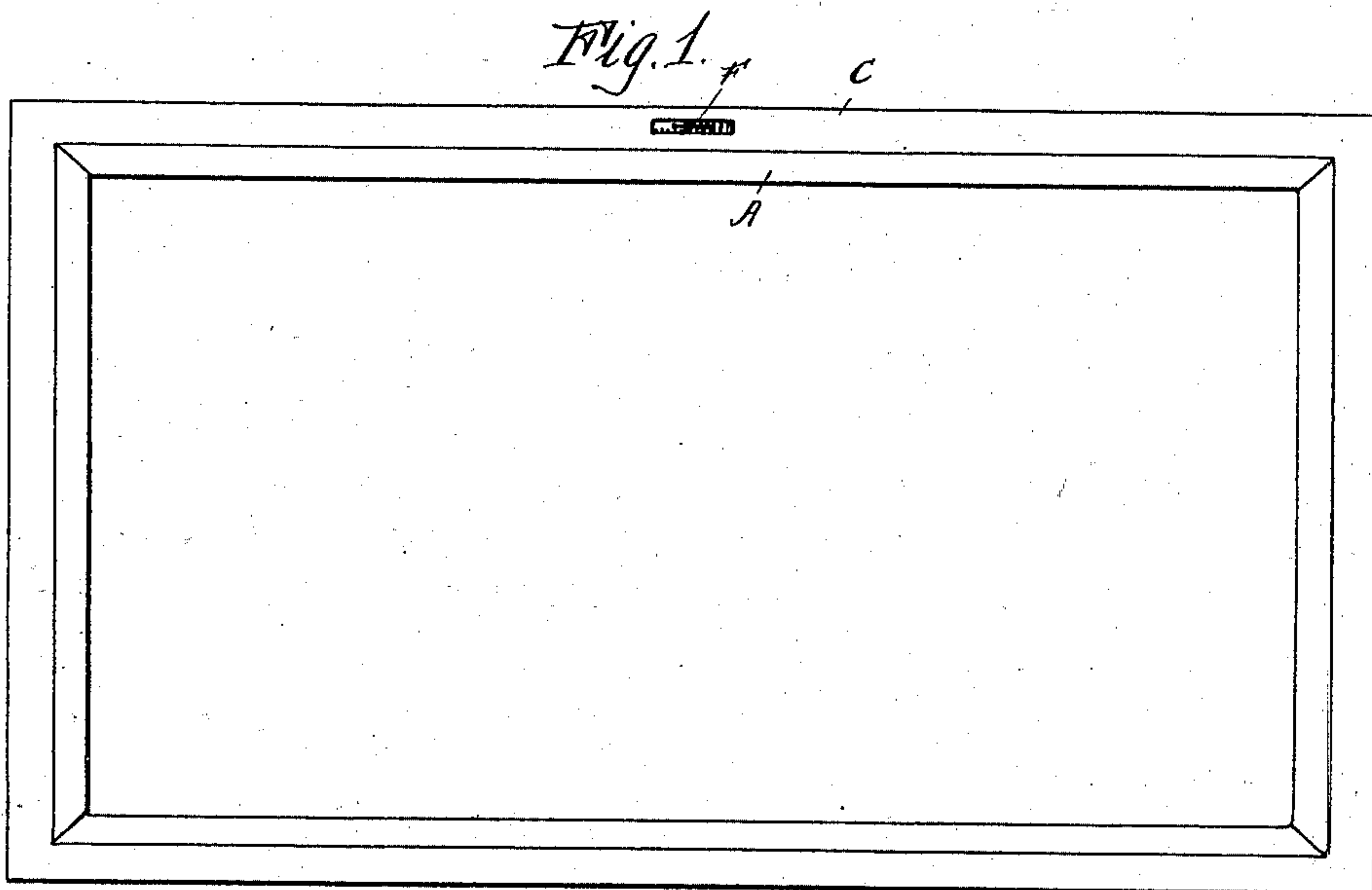


(No Model.)

H. A. BIERLEY.
PNEUMATIC BILLIARD CUSHION.

No. 558,892.

Patented Apr. 21, 1896.



WITNESSES

Geo. M. Anderson
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UNITED STATES PATENT OFFICE.

HENRY AUGUST BIERLEY, OF PORTSMOUTH, OHIO, ASSIGNOR OF ONE-HALF
TO SAMUEL HARCHAW, OF SAME PLACE.

PNEUMATIC BILLIARD-CUSHION.

SPECIFICATION forming part of Letters Patent No. 558,892, dated April 21, 1896.

Application filed February 26, 1895. Serial No. 539,782. (No model.)

To all whom it may concern:

Be it known that I, HENRY AUGUST BIERLEY, a citizen of the United States, and a resident of Portsmouth, in the county of Scioto and State of Ohio, have invented certain new and useful Improvements in Billiard-Tables; and I do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a plan view of billiard-table with invention applied thereto. Fig. 2 is a cross-section through edge portion of same. Fig. 3 is a cross-section through outer hollow cushion uninflated.

The object of this invention is to provide an improved cushion for billiard-tables which is capable of giving a quicker and better action to the balls than those heretofore in use, and which will not become impaired in its action or "dead" after being in use for a time; and the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claim.

My invention more particularly consists in providing a pneumatic inflatable cushion, such as shown in the accompanying drawings, wherein—

The letter A designates an outer tube or hollow strip of rubber, inside of which is placed an inner inflatable tube B of similar but thinner material. This cushion may be secured to the cushion-rail C of the table in any suitable manner. I prefer, however, to cement the outer part A to a strip D, as shown, such strip being suitably secured to the table or to the rail C.

E is a valved nipple or tube by means of which the tube B is inflated. This may be located at any suitable point.

F is a pressure-gage which is connected with the inner tube, as indicated at *f*. This gage is preferably seated in a cavity of the rail C and is protected by a glass G, through which the degree of pressure can be ascertained.

The outer part A is preferably of triangu-

lar or sector shape in cross-section, with its convex face seated in the concavity of the strip D in such a position that its upper side is horizontal and substantially flush with the upper surfaces of the rail F and strip D, while its third side forms a receding cushion-face. The angle or corner formed by the upper and cushion sides of the strip is usually rounded off, as indicated.

The cavity for the tube B is of comparatively small diameter in proportion to the total cross-sectional area of the strip and is so disposed therein as to leave the thickest wall at the convex side. The cushion and upper walls are of substantially the same thickness, in order to secure uniformity of expansion. Inasmuch, however, as these walls are necessarily thinnest at the points *b b'*, I prefer to make the surfaces at these points somewhat hollowing or concave, in order that when expanded they will not project beyond the planes of the respective sides of the strip, but will expand flush therewith. Such projection or undue expansion is undesirable upon the cushion or contact face of the strip for the reason that it would be apt to cause too large an area of contact with the balls, and it is also objectionable at the top for the reason that it is desired to have a perfectly level surface for the cue to slide on or for the hand to rest upon. These objections are overcome by the hollowing or concave construction described. Moreover, I am enabled to employ an inflatable tube of larger diameter relatively than would otherwise be possible, since the increased expansion at the points *b b'* is compensated for by the said feature of construction.

The cushion may be made in sections suitably united, the air-chamber of the inner tube being continuous around the table. This cushion can always be kept inflated to the proper degree, and its action upon the balls is much superior to that of the ordinary cushion owing to its great "sensitiveness" or elasticity.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The herein-described improved pneumatic cushion for billiard-tables and the like, con-

sisting of an outer hollow strip of rubber of triangular or sector shape in cross-section, and having the outer surfaces of its expansible upper and cushion walls slightly hollow or concave, to compensate for the undue expansion of such walls, and whereby, when the strip is inflated the said surfaces will not project beyond the planes of the respective sides of the strip, but will expand flush therewith, and an

inflatable tube within the said strip, substantially as specified.

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

HENRY AUGUST BIERLEY.

Witnesses:

WM. H. WILLIAMS,
J. P. PENDUM.