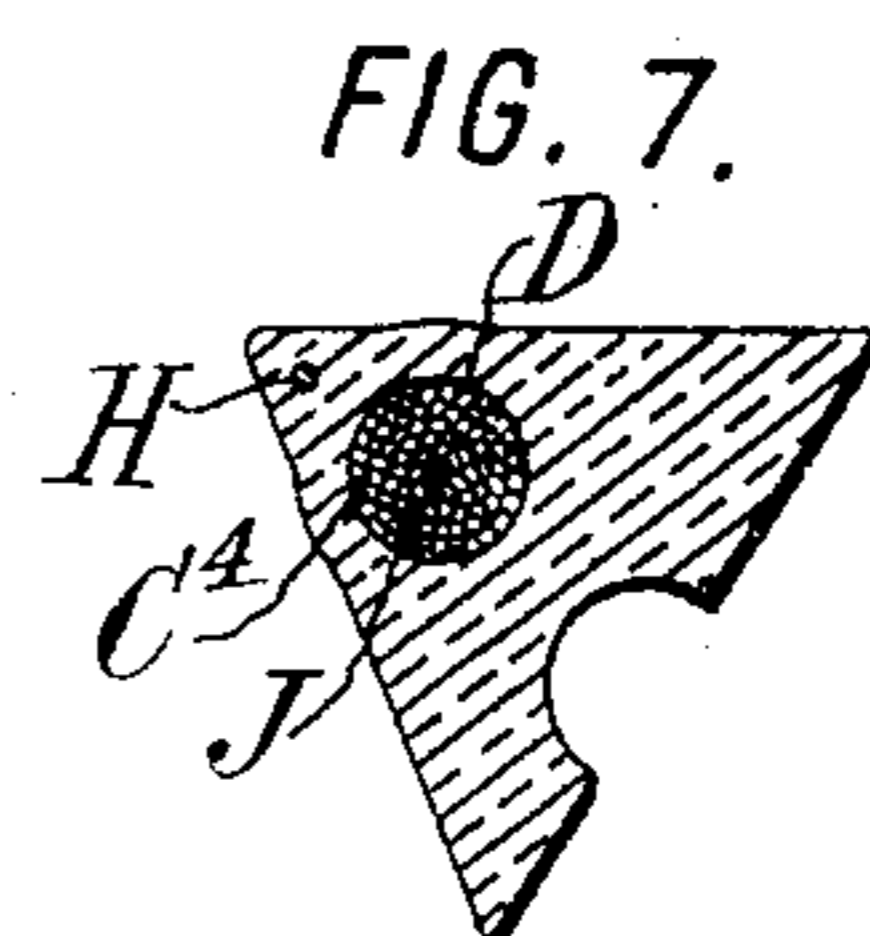
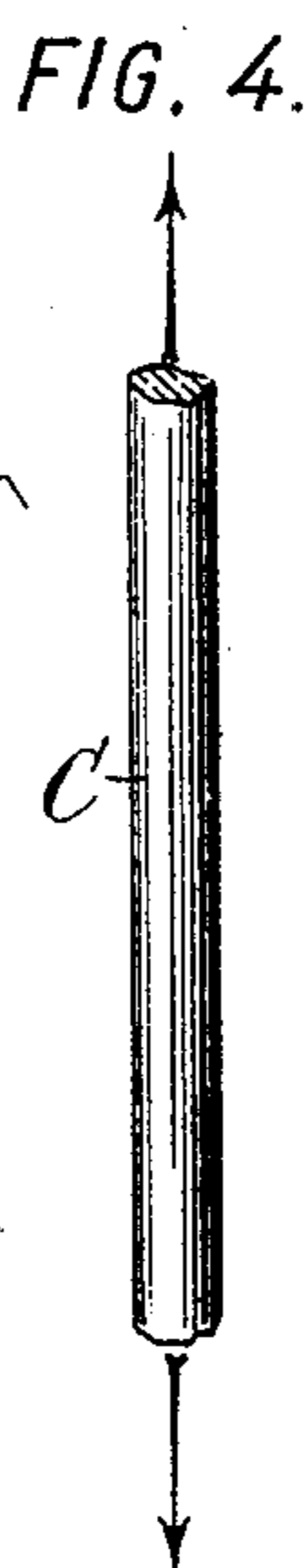
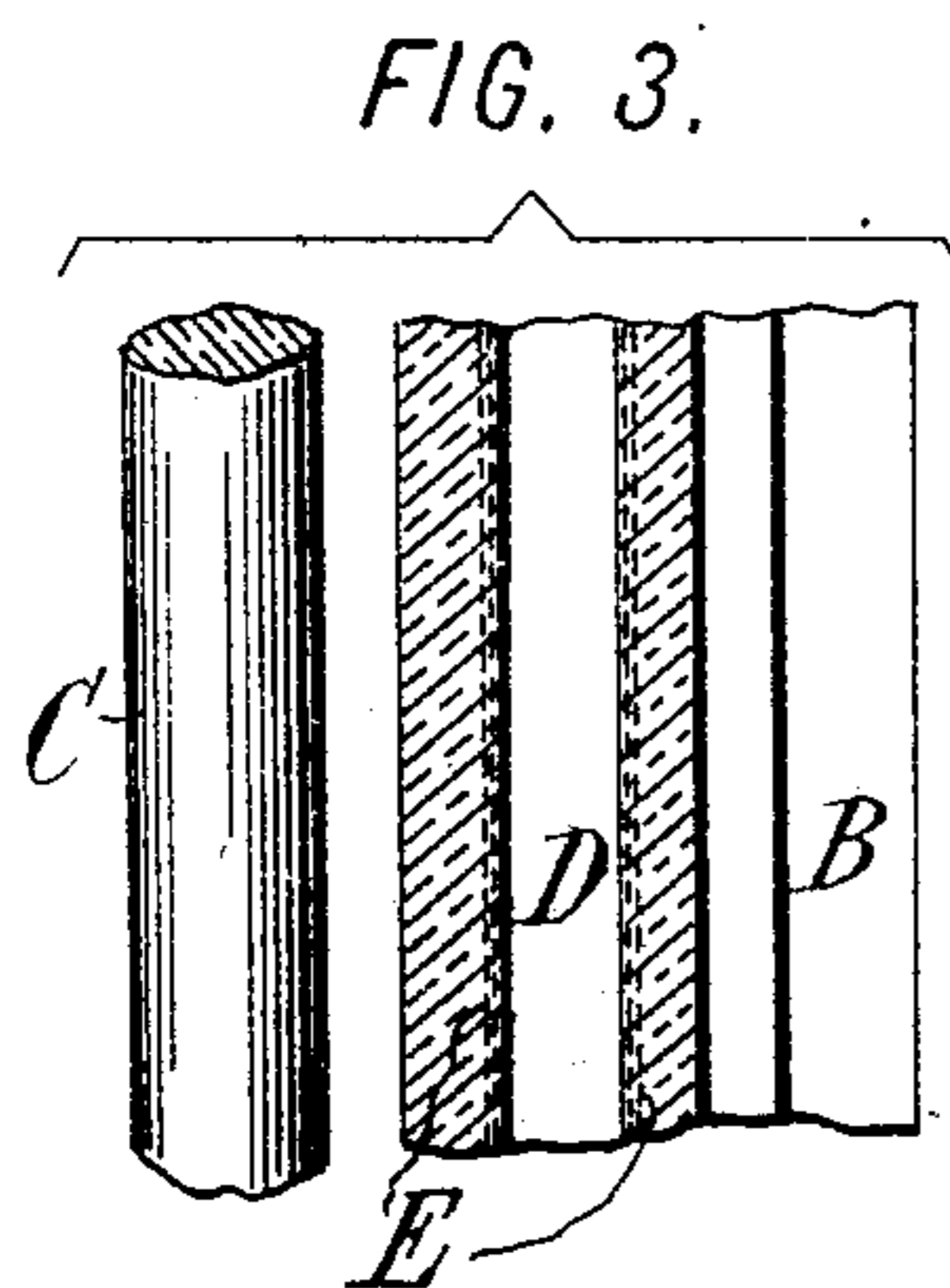
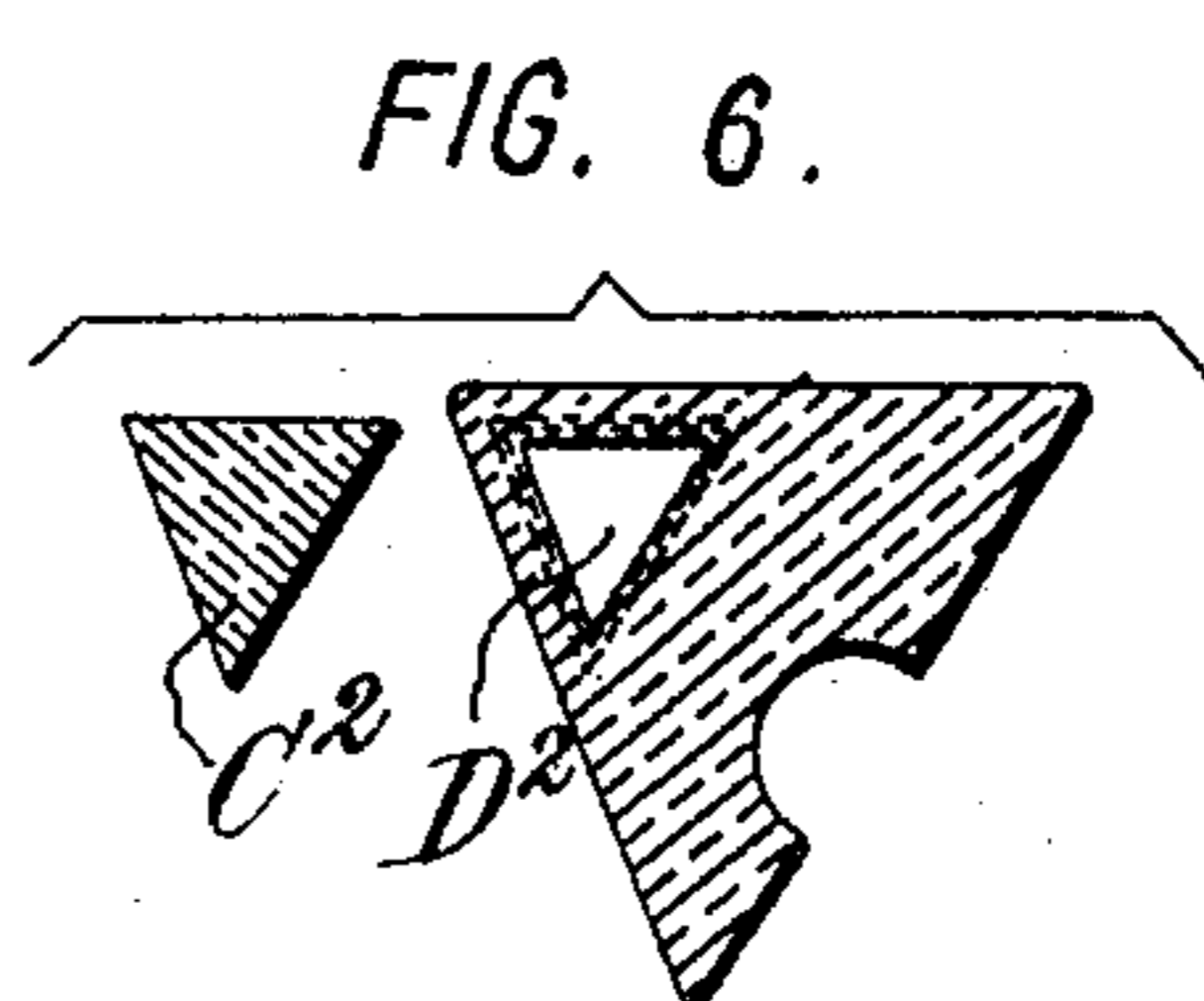
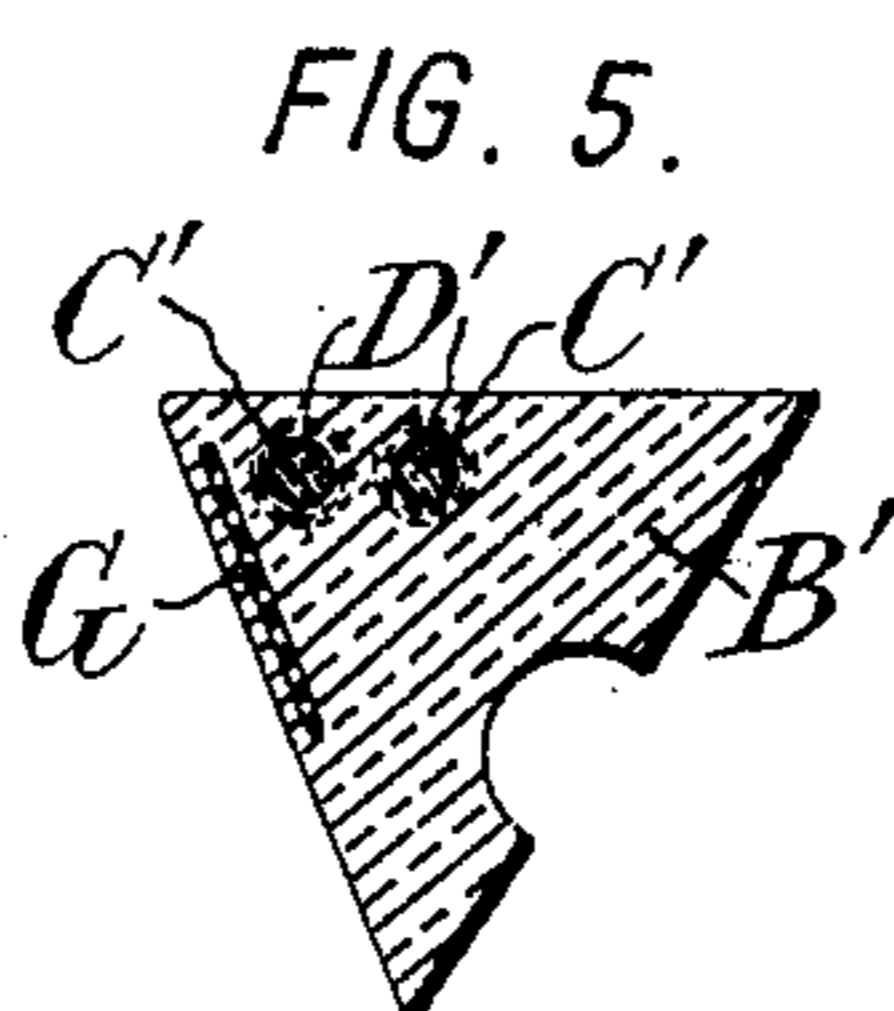
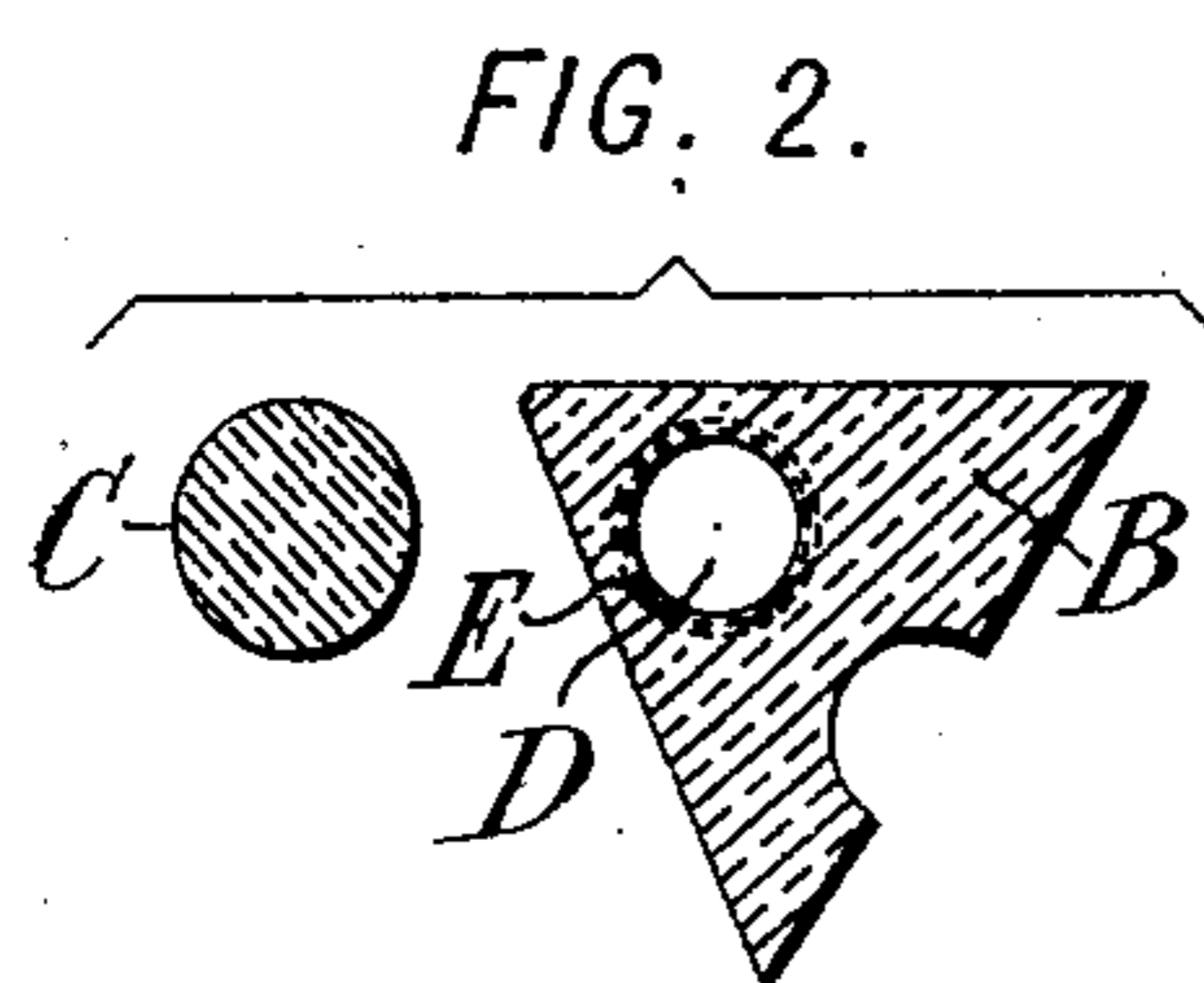
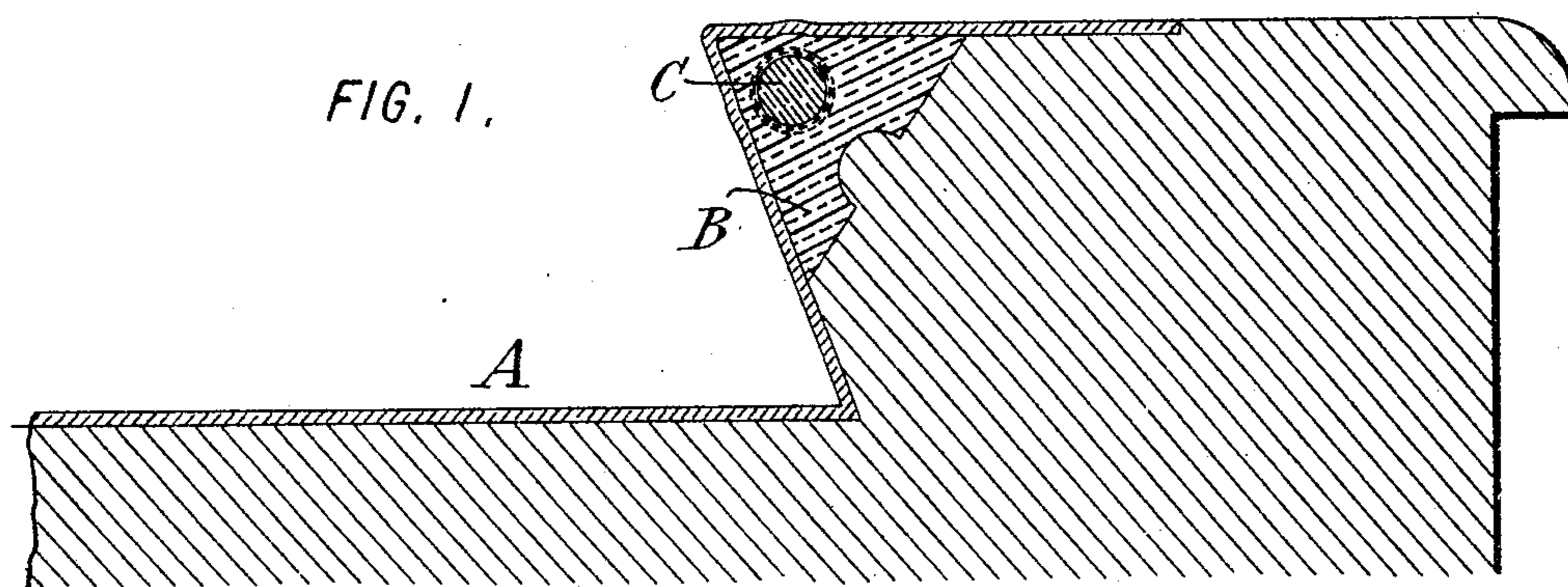


No. 803,780.

PATENTED NOV. 7, 1905.

J. S. PATTERSON.  
BILLIARD CUSHION.  
APPLICATION FILED FEB. 23, 1905.



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# UNITED STATES PATENT OFFICE.

JOHN S. PATTERSON, OF REVERE, MASSACHUSETTS.

## BILLIARD-CUSHION.

No. 803,780.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed February 23, 1905. Serial No. 246,979.

*To all whom it may concern:*

Be it known that I, JOHN S. PATTERSON, a citizen of the United States, residing in Revere, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Billiard-Cushions, of which the following is a specification.

This invention relates to cushions for billiard-tables, its object being to increase the resilience of such cushions in order that in making a carom shot the ball may receive on the rebound as nearly as possible all the energy which it transmitted to the cushion on striking the latter, or, in other words, to make the cushion as "quick" as possible.

According to my invention I employ as an essential part of the cushion a stretched piece of elastic rubber. Preferably the cushion is made with a longitudinal cavity or bore, in which is introduced a filling of elastic rubber, which is confined therein under transverse compression. This filling is first stretched to diminish its cross-section, is then introduced into said cavity, and then released to permit it to expand laterally until it fills the cavity. The filling is normally of larger cross-section than the cavity, so that when the filling is contracted to its utmost it is still held distended and tends to expand laterally. Preferably the cavity is lined with a textile or fibrous material. A cushion thus made possesses a resilience much greater than ordinary cushions of the kinds heretofore made.

Figure 1 of the accompanying drawings is a transverse section of a fragment of a billiard-table, showing my improved construction of cushion applied thereto. Fig. 2 is a transverse section of the cushion detached with its filling removed from the cavity. Fig. 3 is a plan view of the parts shown in Fig. 2. Fig. 4 is a plan of the filling, the cushion being partly in section in its stretched condition. Figs. 5, 6, and 7 are transverse sections of other or modified constructions.

Referring to the drawings, let A designate the billiard-table itself, which may be of any ordinary construction, and B the cushion. According to my invention the cushion, which may be of any suitable cross-section, has as an essential portion of it a stretched member or part of elastic rubber C. This stretched member may be variously applied, but in any event should be arranged as close to the edge of the cushion as is practical. The construction shown in Figs. 1, 2, and 3 is believed to

be the preferable one, the main portion B of the cushion, which is of molded rubber of the ordinary composition, being formed with a longitudinal cavity D, Fig. 2, preferably lined with a textile or fibrous lining E and with a cord or filling C, of soft elastic rubber, introduced into this cavity under longitudinal tension and lateral compression. This is accomplished by making the rubber cord or filling C normally of larger diameter than the cavity, as shown in Figs. 2 and 3, and then stretching it until its diameter is sufficiently reduced, as shown in Fig. 4, to enable it to enter the cavity, then drawing it longitudinally into the cavity while holding it thus stretched, and finally releasing it and permitting it to contract longitudinally until its lateral expansion causes it to so tightly fill the cavity that it can contract no further. In this condition it is still stretched to a considerable extent, while it is exerting a constant effort to expand laterally, so that it imparts to the cushion a high degree of resiliency. In this way I have constructed a cushion of greater life or quickness than any prior construction of which I am aware.

In the modification shown in Fig. 5 the main cushion B' is formed with two longitudinal cavities D' instead of one, these being of smaller diameter than in Fig. 2 and having each a rubber band or filling C' inserted under lateral compression in the same manner as already described.

In the construction shown in Fig. 6 the cavity D<sup>2</sup> is triangular and receives a filling C<sup>2</sup>, which is triangular in cross-section.

Instead of making the rubber filling C (C' or C<sup>2</sup>) of a solid cord or piece of rubber it may be built up of a greater or less number of threads of elastic rubber, as shown at C<sup>4</sup> in Fig. 7. This has the advantage that by varying the number of threads one may readily vary the size of the filling, and consequently its longitudinal tension and lateral compression, and hence the resiliency of the cushion.

My invention may be applied to various known makes of cushions—for example, to such as have a strip of textile fabric embedded in the front of the cushion, as shown at G in Fig. 5, or to those which have a wire embedded in the edge of the cushion, as shown at H in Fig. 7, or to other known constructions. A wire may even be embedded in the filling, as shown at J in Fig. 7.

My invention is susceptible of being other-

wisely modified in construction in many respects without departing from its essential features.

I claim as my invention—

1. A billiard-cushion having a longitudinal  
5 cavity with a filling therein of elastic material under longitudinal tension.

2. A billiard-cushion having a longitudinal  
cavity with a filling therein of elastic material  
confined therein under longitudinal tension  
10 and transverse compression.

3. A billiard-cushion having a longitudinal  
cavity with a filling therein of elastic rubber,  
normally of greater cross-section than said

cavity, and confined therein under transverse  
compression.

4. A billiard-cushion having a longitudinal  
cavity lined with fibrous material, and a filling  
therein of solid elastic material confined there-  
in under transverse compression.

In witness whereof I have hereunto signed 20  
my name in the presence of two subscribing  
witnesses.

JOHN S. PATTERSON.

Witnesses:

ARTHUR C. FRASER,  
FRED WHITE.