

C. MARX.
 BILLIARD CUE TIP AND FASTENER.
 APPLICATION FILED MAR. 27, 1908.

943,360.

Patented Dec. 14, 1909.

Fig. 1,

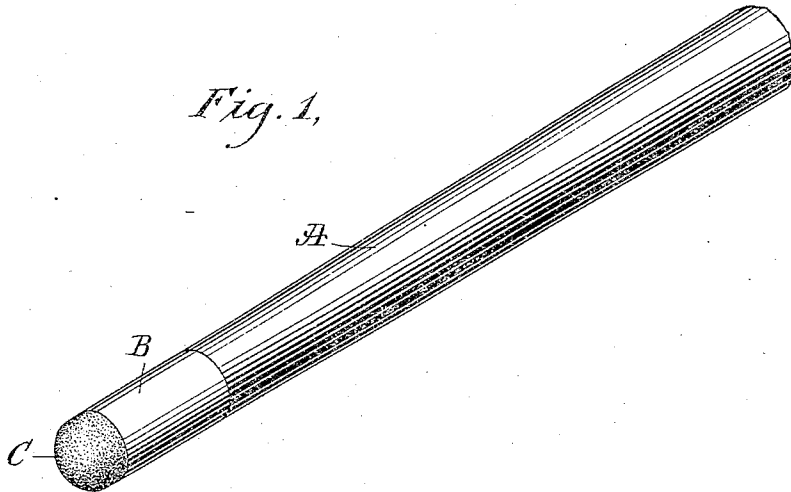


Fig. 2,

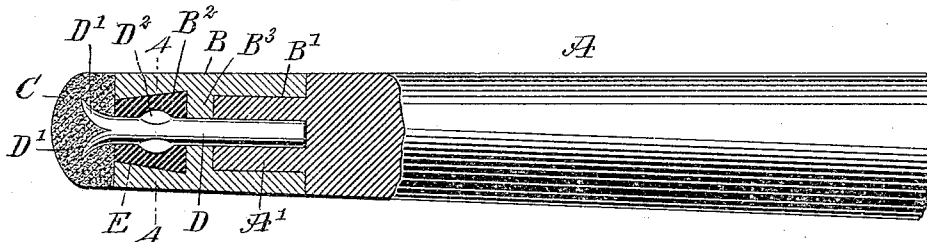


Fig. 3,

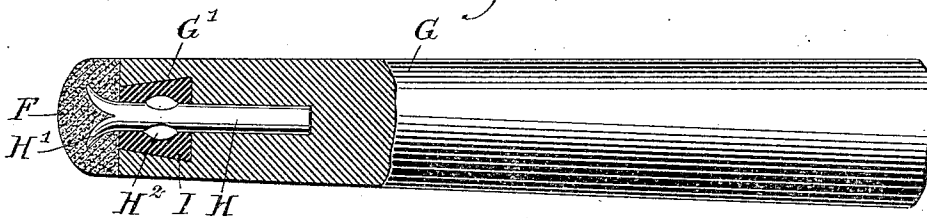
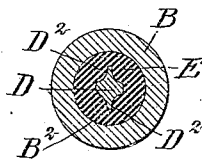


Fig. 4.



WITNESSES

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BILLIARD-CUE TIP AND FASTENER.

943,360.

Specification of Letters Patent.

Patented Dec. 14, 1909.

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To all whom it may concern:

Be it known that I, CONRAD MARK, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Billiard-Cue Tip and Fastener, of which the following is a full, clear, and exact description.

10 The object of the invention is to provide a new and improved billiard cue tip and fastener for use on cues with or without ferrules, and arranged to securely hold the tip in position and to allow convenient replacing of a worn out tip.

15 The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claim.

20 A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

25 Figure 1 is a perspective view of the improvement as applied to a billiard cue having a ferrule on the tip end; Fig. 2 is a partial longitudinal central section of the same; Fig. 3 is a like view of the improvement as applied directly to the end of a stick without the use of a ferrule; and Fig. 4 is a cross section of the improvement on the line 4—4 of Fig. 2.

30 The stick A of the billiard cue shown in Figs. 1 and 2 is provided at its tip end with a reduced portion A', fitting into a recess B' formed in the inner end of the ferrule B, on the outer end of which rests the base of the tip C made of leather or other suitable material.

40 The tip C is provided with a shank D, preferably made of metal, and formed at one end into outwardly curved prongs D' driven into the base end of the tip C, so as to securely fasten the shank D to the tip C. The shank D extends through a bushing E made of soft rubber or other suitable elastic material, fitting into a recess B² formed in the outer end of the ferrule B. The recess B² is preferably in the form of a frustum of a cone, so that when the bushing E is forced into the said recess then it is held against outward movement thereof by the inclined walls of the recess B². The diameter of the shank D is somewhat in excess of the diameter of the bore of the bushing E,

and when the shank D is pushed through the bushing E then the material thereof is compressed, as it is confined within the recess B², and hence the bushing E by its inherent elasticity firmly clamps the shank D, thus holding the same securely in position.

The shank D extends through a central aperture in a partition B³ formed in the ferrule B and separating the recesses B' and B² from each other, and the shank also extends with its inner end into a central recess formed in the reduced portion A' of the stick A, as plainly indicated in Fig. 2. By the arrangement described the shank D is held against sidewise movement owing to its bearing in the partition B³, and the reduced end A' of the stick A, and lengthwise movement of the shank D is prevented by the clamping action of the compressed elastic bushing E.

In order to increase the holding action of the bushing E on the shank D, the latter is provided with sidewise extending lugs D² surrounded by the elastic material of the bushing E and forming an additional retaining means for securely holding the shank D and consequently the tip C against longitudinal movement.

As illustrated in Fig. 3, the leather tip F is held directly on the tip end of the stick G, and is provided with a shank H having prongs H' driven into the tip F. The shank H extends centrally through a bushing I of rubber or other elastic material, and also extends into a central recess formed in the stick G, so as to hold the shank H against sidewise movement. The shank H is also provided with retaining lugs H² within the rubber bushing I.

From the foregoing it will be seen that the billiard cue tip and fastener described is very simple in construction, and the several parts can be readily placed in position, and in case the tip C or F is worn out it can be conveniently replaced by a new one by simply pulling the tip C or F with its shank D or H out of position and placing a new tip with a shank D or H in position on the billiard cue. The reduced end A' of the stick A and the bushing E may be cemented or otherwise fastened in their respective recesses B' and B² and the base of the tip C or F may be cemented or glued to the end of the ferrule B or the tip end of the stick G.

The parts of the cue are assembled in the form shown in Fig. 2 by placing the bushing

in the recess, with the shank in place, the bushing being forced into the recess. The tip is now forced on to the end of the shank which extends through the bushing causing
5 the prongs to enter the material of the tip, and the pressure used in forcing the tip in place, causes the prongs to diverge as shown in Figs. 2 and 3.

Having thus described my invention, I
10 claim as new and desire to secure by Letters Patent:

A billiard cue having at the tip end thereof an undercut recess, and a bore in axial alinement with the recess, an elastic bushing

in the recess, and a shank extending through 15 the bushing into the bore, the outer end of the shank being provided with separated prongs upon which the tip may be forced to cause the prongs to diverge said shank having within the bushing laterally extending 20 lugs for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CONRAD MARX.

Witnesses:

JAMES W. RANDOLPH,
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