L. CIARLELLI.

BILLIARD CUE TIP FASTENER.

APPLICATION FILED NOV. 15, 1913.

1,139,340. Patented May 11, 1915.

Fig. 1

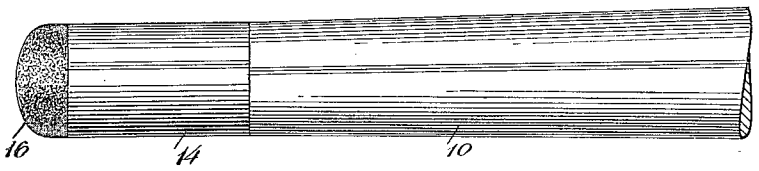


Fig. 2

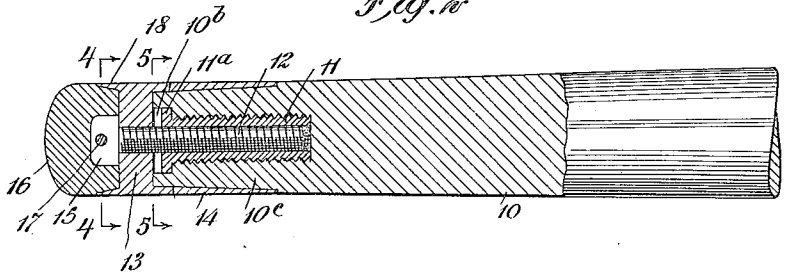


Fig. 3

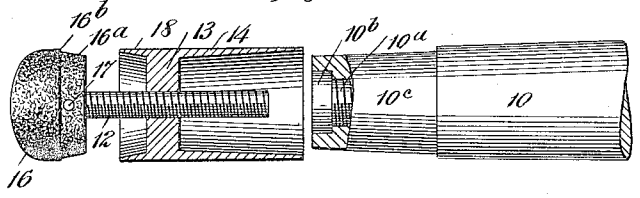


Fig. 4

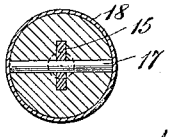


Fig. 5

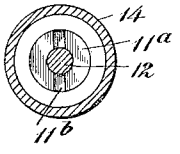
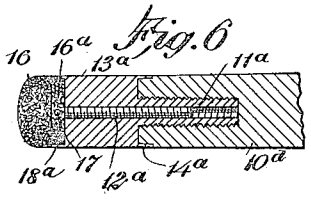


Fig. 6



WITNESSES

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BILLIARD-CUE-TIP FASTENER.

1,139,340. Specification of Letters Patent. Patented May 11, 1915.

Application filed November 15, 1913. Serial No. 801,174.

To all whom it may concern:

Be it known that I, LEO CIARLELLI, a citizen of the United States, and a resident of Bristol, in the county of Bristol and State of Rhode Island, have invented a new and Improved Billiard-Cue-Tip Fastener, of which the following is a full, clear, and exact description.

My invention relates to a novel means for fastening the tip to cues, the object being to provide for the secure holding of the tip, while permitting of its ready removal and renewal.

The invention will be particularly explained in the specific description following.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the front end of a billiard cue embodying my invention; Fig. 2 is a longitudinal section thereof; Fig. 3 is a partly sectional side elevation showing the fastener elements partly assembled; Fig. 4 is a cross section on the line 4—4 of Fig. 2; Fig. 5 is a cross section on the line 5—5 of Fig. 2; and Fig. 6 is a view similar to Fig. 2, but showing a modification.

Referring particularly to Figs. 1 to 5, the invention is shown applied to an ordinary cue 10, and has formed in one end an axial recess 10^a, which receives a bushing 11, said bushing being threaded exteriorly to take into the threaded recess 10^a, and having an annular flange or head 11^a at its outer end which is received in a counterbore 10^b of the cue, the head being formed with a slot 11^b to receive a screw driver for screwing and unscrewing the bushing.

The threaded interior of the bushing 11 receives the inner end of a threaded spindle 12, which has also threaded engagement with a disk or horizontal partition 13 in a ferrule 14. On the outer end of the spindle 12 a transverse flattened head 15 is formed, which is received in a corresponding recess formed in the back of the billiard cue tip 16. A transverse pin 17 extends through the reduced rear portion 16^a of the tip 16, and through the said threaded head 15 on the spindle, thereby firmly uniting the tip to the spindle. The reduced portion 16^a is desirably slightly tapered, and it is received in a tapering, annular flange 18 on the forward end of the bushing 11. The forward edge of the flange 18 is protected by an overhanging shoulder 16^b on the tip 16, in order to form a guard for the said flange and prevent the latter from contacting with and damaging the billiard cloth. The ferrule 14 tapers rearwardly from the disk 13, thereby producing a conical socket within the ferrule, and the end of the cue 10 is similarly reduced and tapered as at 10^c, to correspond with said socket.

With the described construction, the bushing 11 having been screwed into place in the end of the cue, the tip 16 is secured to the spindle 12 by means of the head 15 and pin 17, and the spindle is screwed into the disk 13 of the ferrule until the tip is firmly seated against the outer face of the said disk, with the rear tapered portion 16^a of the tip within the annular flange 18. The fastening pin 17 will then be also within the flange and be held against accidental withdrawal due to jar and shock when the cue is in use. The rear end of the spindle is then entered in the bushing 11 and screwed tightly therein, thereby drawing the ferrule 14 onto the tip, the tapered socket of the ferrule and the tapered end of the cue serving to give a tight fit to the ferrule. The latter will thus form a protection against the splitting of the recessed end of the cue.

The described construction results in a proper fastening of the tip and in a way that it will be solidly backed by the disk 13; at the same time the construction makes it possible to readily renew the tip when required.

In the construction shown in Fig. 6, the ferrule 13^a is in the form of a cylindrical block presenting a rear flange 14^a to receive the forward end of the cue 10^d, and with a forward flange 18^a which receives the tapered rear end 16^a of the cue tip 16. In this construction also the ferrule 13^a has a rearwardly extending integral stem 11^a, which is exteriorly threaded to take into an axial recess in the cue 10^d, and is interiorly threaded to receive the threaded shank or spindle 12^a which is formed with a stem as in the other figures, embedded in the tip 16.

The stem of the spindle 12ª is fastened by a pin 17, as in the first described construction.

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

A fastener for billiard cue tips, comprising a ferrule having near the front end a transverse portion formed with an axial threaded orifice, and having means at the rear of the partition to engage the cue, the ferrule furthermore having at the front of the partition an annular, tapered flange forming a tapered socket, a cue tip tapered at its rear portion to fit within the annular flange of the ferrule, there being a shoulder at the front of the tapered portion of the tip to protect the end of the flange, a threaded spindle having a flattened head, the back of the tip being recessed to receive said head, a transverse pin extending removably through the tapered portion of the tip and through the flattened head of the spindle within the flange of the ferrule, the spindle having threaded engagement adjacent to the head with the partition of the ferrule, and means to effect threaded engagement between the rear end of the spindle and the cue.

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

LEO CIARLELLI.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."