(No Model.)

W. A. CUNNINGHAM.

CUE.

No. 583,009. Patented May 18, 1897.

Fig. 1.

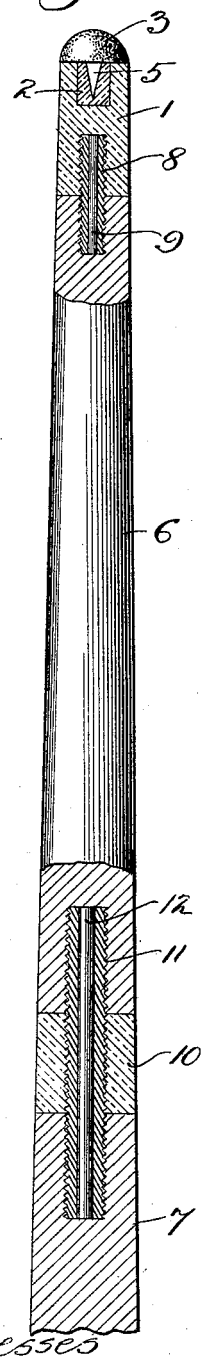


Fig. 2.

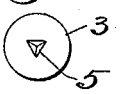


Fig. 3.

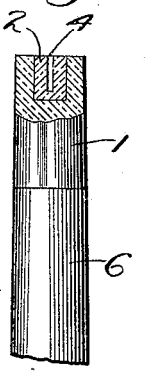


Fig. 4.

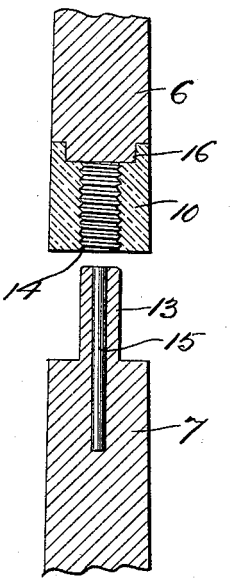
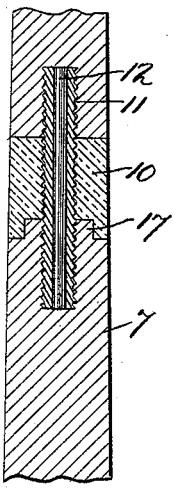


Fig. 5.



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WILLIAM A. CUNNINGHAM, OF CHICAGO, ILLINOIS.

CUE.

SPECIFICATION forming part of Letters Patent No. 583,009, dated May 18, 1897.

Application filed August 10, 1896. Serial No. 602,254. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. CUNNINGHAM, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cues, of which the following is a full, clear, and exact specification.

My invention relates to billiard or pool cues; and it has for one of its objects to provide the tip of the cue with means whereby it may be readily and securely attached and as readily removed when it is desired to replace the same by a new or different tip.

With sectional or jointed cues as heretofore constructed the concussion occasioned by the cue striking the ball causes the screw-threads of the metallic screw by which the connection or joint is effected to strip the threads in the wooden portion, and thus in a short while to work loose. This is especially the case should the user fail to turn the parts until the abutting ends come snugly together, and even then the user is liable to turn the screw too far, and thus injure the threads in the wooden portion.

Another object of my invention, therefore, is to avoid this defect of the prior constructions and to provide the sections of a cue with a rigid, durable, and light connection or joint.

With these ends in view my invention consists in certain features of novelty shown in the drawings, described in the specification, and more particularly pointed out in the claims.

In said drawings, Figure 1 is a partially-sectioned view of a cue provided with my improvements. Fig. 2 is a bottom view of the cue-tip. Fig. 3 is a detail view of the upper end of the cue proper, partly in section, with the tip removed. Fig. 4 is a longitudinal sectional view of a cue, illustrating certain modifications hereinafter explained; and Fig. 5 is a similar view illustrating still further modifications, hereinafter described.

In describing my invention I will first explain the means whereby the tip is removably secured to the end of the cue. It is customary in the construction of billiard-cues of the better quality to provide the end of the cue at a point immediately adjacent to the tip with a bone or ivory section, which is represented in the drawings at 1, and in applying my improvements to a cue of this character I provide the extremity of this ivory or bone tip 1 with a socket or cavity, in which I insert a block 2, which is preferably constructed of horn or some other material of a like character, horn being preferred on account of its great tenacity and property of adhering to or causing friction with any point or object that might be inserted into it. This horn block 2 constitutes a means for holding the tip 3 in place on the end of the cue, and before or after the block 2 has been inserted it is provided with a cavity or bore 4, and the under side of the tip 3 has secured to it in any suitable manner a point or spike 5, which is angular in cross-section, preferably triangular, as shown in Fig. 2, and which when driven or forced into the cavity 4 will so firmly adhere to the horn as to remain in place during the ordinary usage of the cue, but when it is desired to remove the tip it is only necessary to insert a knife-blade or other similar instrument between the end of the portion 1 and the under side of the tip, and then by a prying action force the spike 5 out of the socket 4; but this does not destroy the usefulness of the socket 4 for receiving and holding another tip, because the character of the horn is such as to firmly engage with the triangular edges of the spike 5 and cause sufficient friction therewith to prevent the substitute tip from being dislodged during the ordinary use of the cue. Moreover, spike 5 being triangular or having sharp edges, as described, it is always possible to find a new surface in the socket 4 for the edges of the spike 5 to engage with, and thus, if necessary, avoid inserting the edges of the spike 5 in the grooves or cuts of the socket 4 occasioned by the insertion of the preceding tip.

In forming the spike or pin 5 its sides and sharp edges may be perfectly plain and smooth and will yet cling to the horn with sufficient tenacity; but, if desired, the sides of the spike 5 may be filed transversely, so as to slightly roughen them and at the same time roughen the triangular edges, thus increasing the friction and avoiding any possibility of accidental displacement of the tip. It is of course very obvious that in the event the ivory or bone tip 1 should not be employed the horn block 4 of the cue would be

inserted directly in the end of the cue proper. The means of attachment between this ivory or bone tip 1 and the section 6 of the cue proper has given rise to considerable difficulty, owing to the threads of the metallic dowel-screw heretofore employed cutting away the wooden threads of the section 6, as well as destroying the threads formed in the ivory 1. This difficulty also occurs in jointed or sectional cues where the section 6 is joined to the section 7, and the means which I have employed for joining the ivory tip 1 to the section 6 may also, if desired, be employed for connecting the sections 6 and 7 together; but for this latter purpose I prefer to employ the special construction shown in the drawings. I will first describe, however, the means for joining the tip 1 and section 6, and which primarily consists of a screw-threaded dowel 8, which is partly threaded in the ivory tip 1 and partly in the wooden section 6, so as to bring the tip 1 and section 6 firmly into abutment. This dowel 8 as heretofore constructed has been composed of metal, and by reason of its unyielding and sharp character has heretofore destroyed the threads in the softer portions into which it was screwed; but in my invention the dowel 8 is composed of bone, gutta-percha, or any suitable composition capable of having the screw-threads formed thereon and of screwing into the complementary threads in the portions 1 and 6 and at the same time will be sufficiently yielding or sufficiently like the character of the sections 1 and 6 as to avoid destroying the threads in the latter when concussion is produced on either end of the cue. This bone or composition dowel, however, is not of itself sufficiently stout to prevent a side strain from breaking the cue at the joint, and in order that the proper degree of strength may be imparted to it, so as to render the joint sufficiently rigid, I provide the same with a central core 9, composed of steel or metal, and which, while imparting the requisite degree of rigidity to the dowel 8, cannot in any manner produce the described ill effects of the prior construction.

In joining the sections 6 and 7 of the cue proper together it is customary and desirable to interpose an ivory or bone section 10 between the ends of the sections 6 7, and when this is done the three sections 6, 7, and 10 are firmly secured together by a dowel 11, having a steel core 12 and being constructed like dowel 8 and 9, before described, and which passes entirely through the ivory section 10 and engages in each of the sections 6 7.

In the form of my invention shown in Fig. 4 I have shown a wooden nib or dowel 13, which is formed directly on the end of the section 7, and which, when the sections 6 7 are secured together, screws into a screw-threaded socket 14, formed in the ivory section 10, the dowel 13 when first constructed being, if desired, formed with a plain surface, as shown in the drawings, and afterward provided with threads by being screwed into the socket 14. The wooden dowel 13, however, is not of sufficient strength in itself to withstand transverse strains, and in order that it may be I drive a steel core or dowel 15 from its upper end downward into the main body of the section 7, such dowel 15 being driven into section 7 and the latter then turned down to form the dowel 15, or, if desired, the dowel 13 may first be formed and the dowel or core 15 afterward driven into it.

In Fig. 4 I have also illustrated a slight modification in the manner of attaching the ivory section 10 to the section 6, which consists in providing the ivory section with a socket and the section 6 with a reduced nib 16, which fits into said socket, the parts, if desired, being secured together by glue or other suitable adhesive.

The form shown in Fig. 5 differs from that shown in Fig. 1 only in that the ivory section 10 is provided on one end with a socket which receives a reduced nib 17 on the section 7.

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

1. The combination with a cue provided in one end with a horn block having a bore or socket therein, of a cue-tip provided with an angular spike adapted to be inserted in said socket, substantially as set forth.

2. The combination with a cue having a horn block inserted in one end thereof and being provided with a bore or socket, of a cue-tip having a pointed spike triangular in cross-section adapted to be inserted into said socket, substantially as set forth.

3. The combination with the sections of a cue, of a dowel securing said sections together and consisting of a threaded exterior composed of a comparatively soft or yielding substance and a metallic core passing through said dowel, substantially as set forth.

4. The combination with the sections of a jointed cue, of a dowel having its ends screwed into the contiguous ends of said sections and being composed of a bone exterior and a metallic core, substantially as and for the purpose set forth.

5. The combination of a cue-section provided on one end with a dowel, a metallic dowel or core driven into said dowel and passing into the main body of said section, and a second section having a screw-threaded socket adapted to receive said dowel, substantially as set forth.

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