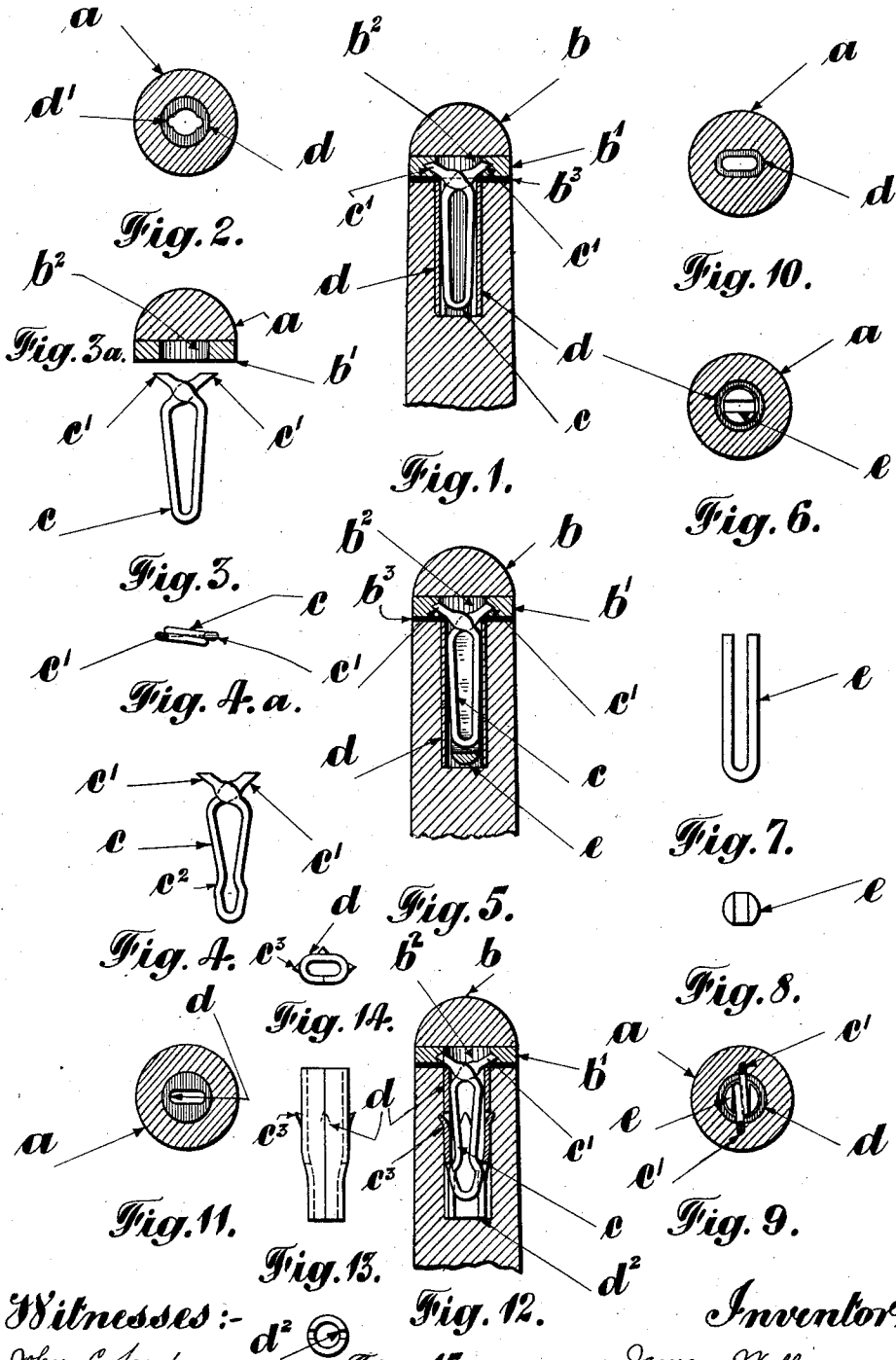


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 DEVICE FOR ATTACHING TIPS TO BILLIARD AND LIKE CUES.
 APPLICATION FILED MAY 20, 1911.

1,034,172.

Patented July 30, 1912.



Witnesses:-
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UNITED STATES PATENT OFFICE.

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DEVICE FOR ATTACHING TIPS TO BILLIARD AND LIKE CUES.

1,034,172.

Specification of Letters Patent.

Patented July 30, 1912.

Application filed May 20, 1911. Serial No. 628,400.

To all whom it may concern:

Be it known that we, JAMES WALLACE and HENRY CLARKE, both subjects of the King of Great Britain and Ireland, and residents of Bolton, Lancashire, England, have invented an Improved Device for Attaching Tips to Billiard and Like Cues, of which the following is a specification.

This invention refers to tip attachments or fasteners for billiard and like cues and consists in providing means whereby the tip or its backing may be readily and securely attached to the cue without the use of an adhesive and in such a manner that the improved tipped cue presents the outside appearance of an ordinary cue.

According to the invention the improved attachment comprises a spring device or fastener which is designed to be attached or secured to the back of the tip, or the hard backing thereof, and also to be introduced into a hole or opening formed in the end of the cue, or a bush placed within said opening, the shape of said device or fastener being such that while allowing of its being readily attached to the cue, will offer a firm resistance against accidental displacement.

Upon the accompanying drawing, Figure 1 illustrates a vertical section of the end of a cue showing a tip attached according to the present invention. Fig. 2 illustrates a sectional plan of a cue and bush therein for receiving the spring device or fastener. Figs. 3, 3^a, 4 and 4^a illustrate in elevation and plan respectively the cue tip and spring device or fastener separately. Figs. 5 and 6, which are similar views to Figs. 1 and 2 respectively, illustrate a slightly modified form of the attachment. Figs. 7 and 8 illustrate in elevation and plan a detail used with the modification shown in Figs. 5 and 6. Fig. 9 illustrates a plan of the cue with the spring device or fastener in position the tip being removed. Figs. 10 and 11 illustrate plans of cues with modified forms of bushes applied thereto. Fig. 12 illustrates a vertical section of the end of a cue and of a slightly modified form of the invention. Fig. 13 illustrates the bush used in Fig. 12. Figs. 14 and 15 being end views top and bottom of the bush.

a represents the cue, *b* the tip and *b'* the backing to which the tip is attached in the ordinary manner. *c* is the spring device or

fastener preferably made in the shape shown in full lines, see Figs. 3 and 4, with an elongated loop, the ends or extremities *c'* crossing each other, and being flattened or shaped to penetrate the backing *b'*. The tip or preferably the backing *b'* is formed with a groove or slot *b²* or notches into which the ends *c'* of the fastener are placed, see Fig. 1, any suitable tool or appliance being inserted, within that part of the loop adjacent to the ends *c'*, to force the points toward each other for the purpose of introducing them into the groove or slot. On withdrawing the tool or appliance the ends *c'* expand and become embedded in the back *b'*. Such ends *c'* are also so shaped that they preferably lie in alinement, see Figs. 4 and 9, while the loop form of the fastener is of taper formation, see Figs. 1, 3 and 5. With the fastener thus attached to a tip, the cue to which it is required to be secured is bored out with a hole slightly longer than the length of the fastener, and in one method of attachment is provided with a metal casing or tube *d* provided with grooves *d'* see Fig. 2.

With the fastener *c* introduced into the casing *d* its sides engage the grooves *d'* and, on being pressed down, the upper part of the loop becomes contracted and expands or forces the ends *c'* farther apart to cause them to penetrate and become firmly embedded in the tip backing *b'*.

While preferring to make the casing of cylindrical formation it may of course be made as shown in Fig. 10, the casing itself being of a shape suitable for receiving and holding the fastener. Or the casing may be formed from the solid and bored out to receive the fastener as shown in Fig. 11.

Instead of forming the casing *d* with grooves as shown in Figs. 1 and 2 a separate filling piece, see Figs. 7 and 8 may be employed, the filling piece being such that it will, when inserted in the casing, just leave sufficient space for the reception of the fastener *c*.

As a further modification the casing may be made in the form of a tube, with one part flattened to form the elongated opening and the other part circular, see Figs. 12 to 14. In the circular part are slits *d²*. The spring in this arrangement is formed with kinks or bends *c²* which on the spring being fully pushed into the casing engage the

shoulders formed by the slits. In the sides of the casing may also be small spurs c^3 for helping to prevent the withdrawal of the casing after once being inserted.

5 An india-rubber, cork or like yielding washer b^3 with elongated perforation, see Figs. 1 and 12 may be used between the tip and the cue, whereby the tip will be cushioned and be less liable to become dis-

10 connected by any jar on the spring. The casing may be omitted and the fastener may bear against the sides of the opening, which latter may be other than circular, for the purpose of attachment. With
15 a tip secured in the above manner to a cue or the like, a more firm and compact fastening is the result, and further, the fastening means being entirely hidden from view there are equal facilities afforded in use, as
20 with an ordinary cue.

The invention may be applied to cues of all kinds and by cues it is intended to include all devices used in games for striking a ball.

25 What we claim is:—

1. In means for securing tips to billiard and like cues, a tip, a backing with central slot secured to the tip, a length of spring wire bent to form an elongated loop with
30 kinks in its arms, such arms crossing each other, the ends of the wire pointed and bent to allow them to enter the slot in the backing and when the loop is contracted to engage the ends of said slot, in combination
35 with a cue in the end of which is a short open-ended boring slightly longer than the

said wire loop, a thin metal bush in such boring, said bush having slots forming shoulders in it at diametrically opposite points, and also having small spurs on its exterior by which it is prevented readily leaving the cue after once having been placed in the boring, the interior diameter of the bush being less than the width of the widest part of the loop and the kinks in the arms of the loop engaging the shoulders in the bush when the backing of the tip bears against the cue end, as set forth.

2. In means for securing tips to billiard and like cues, a fastener made of a length of wire and bent to form an elongated loop, the arms of the loop crossing each other and their extremities being bent and pointed, in combination with a tip having an elongated slot into which the extremities of the fastener may enter and act upon the ends of the slot, as set forth.

3. In means for securing tips to billiard and like cues, the combination with a cue having a short open-ended boring in one end, of a circular thin metal bush fitting said boring, and said bush having a portion of its length flattened and also having slots forming shoulders in the circular part and small spurs on its exterior, as set forth.

In witness whereof we have hereunto set our hands in the presence of two witnesses.

JAMES WALLACE.
HENRY CLARKE.

Witnesses:

P. D. BAILEY,
JOHN CAMP.

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