

(No Model.)

V. AJELLO.
BILLIARD CUE.

No. 573,845.

Patented Dec. 29, 1896.

Fig 1

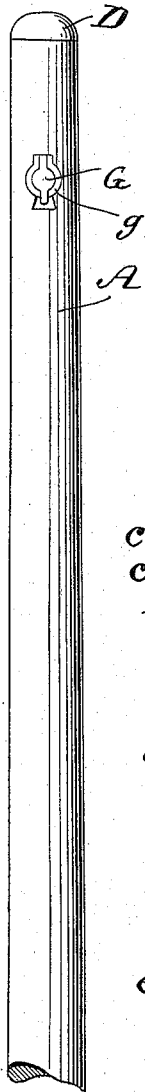


Fig 3.

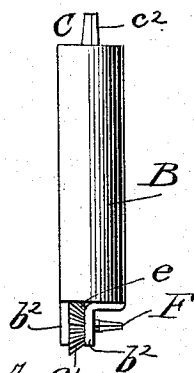


Fig 2.

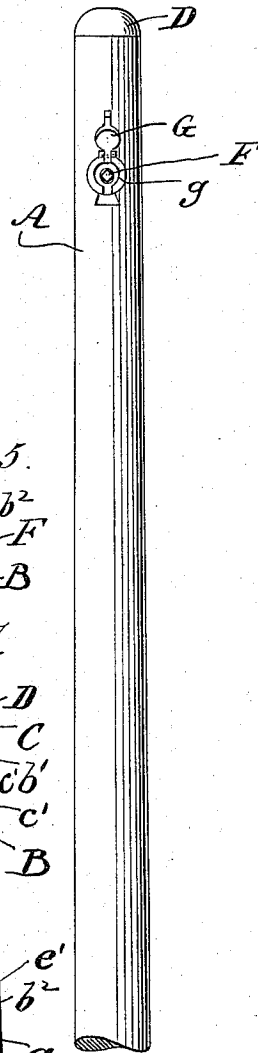


Fig 4.

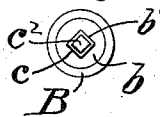


Fig 5.

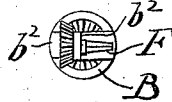


Fig 6.

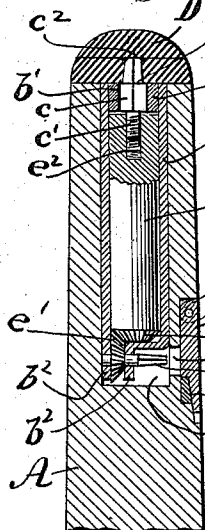
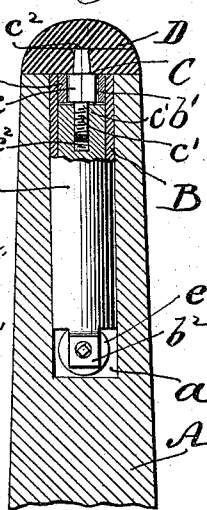


Fig 7.



WITNESSES:

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UNITED STATES PATENT OFFICE.

VINCENT AJELLO, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO
FELIX MAINELLA, OF SAME PLACE.

BILLIARD-CUE.

SPECIFICATION forming part of Letters Patent No. 573,845, dated December 29, 1896.

Application filed May 16, 1896. Serial No. 591,783. (No model.)

To all whom it may concern:

Be it known that I, VINCENT AJELLO, a citizen of the United States, and a resident of New York city, county of New York, and State of New York, have invented certain new and useful Improvements in Billiard-Cues, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to an improvement in billiard-cues, the object of the invention being to provide an article of this character with a removable tip and mechanical means for securely attaching the said tip, whereby cues may have new tips secured to them in a rigid manner without the use of glue or cement. The mechanical parts are located within the cue out of the way when the cue is in use and they cannot be reached or tampered with without the aid of a specially-formed key.

The invention will be hereinafter fully described, and specifically set forth in the annexed claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical elevation of the end portion of a cue having my improvement attached thereto. Fig. 2 is a similar view. Fig. 3 is a detached view of the operative portion of my cue. Fig. 4 is a plan view thereof; Fig. 5, an inverted plan view; and Figs. 6 and 7 are vertical sectional elevations of the upper end of the cue, taken from different points of view.

In the practice of my invention a cue A is provided through its outer or small end with a socket or recess *a*. Into this recess is tightly fitted a cylinder B, which said cylinder is provided at its outer end with a securely-attached head *b*. This said head is provided through its center with a squared aperture *b'*, which engages with a spindle C. This said spindle comprises a squared portion *c*, a depending threaded portion *c'*, and an upwardly-projecting squared portion *c''*. To the squared portion *c''* of the said spindle C is attached a tip D, which is preferably composed of leather and which is securely attached to the said spindle.

Engaging with the threaded portion of the spindle C is an upright shaft E, which fits

snugly within the cylindrical casing B. Upon the lower end of this said shaft is formed a beveled gear-wheel *e*, which said wheel engages with a similar beveled wheel *e'*, which said wheel *e'* is mounted upon a spindle F, which is journaled through bearings *b''* of the cylinder B.

At a point opposite to the spindle F, extended through the cue A, is an aperture *a'*, which said aperture is normally closed by a door G, which is mounted upon a framework *g*, this said framework being embedded or countersunk into the cue A, whereby a smooth surface is maintained upon said cue.

In the operation of the device the cylinder B with its connected parts is inserted within the aperture *a* of the cue A, as illustrated in Figs. 6 and 7. A tip D, which has a spindle C securely attached thereto, is then brought into engagement with the outer end of the cue, the squared portion *c* of the said spindle C being placed within the opening *b'* of the head *b* of the cylinder B, with the threaded portion *c'* of the said spindle resting upon the upper edge of the shaft E and its threaded aperture *e''*. It will thus be seen that rotary motion of the tip will be prevented owing to the fact that the squared portion *c* of the spindle C is in engagement with the head *b*. In order to secure the said spindle to the shaft E, rotary motion must be imparted to said shaft. This motion is applied through the medium of the beveled wheels *e* and *e'* by attaching a suitable key to the squared end of the spindle F. When the key is turned to the left, the shaft E will be revolved around the threaded portion *c'* of the spindle C until the tip D is brought into tight engagement with the outer end of the cue A.

Should it be desirable to remove the tip, rotary motion is applied to the beveled wheel *e'* in a reverse direction until the tip is forced upwardly and out of engagement with the shaft E.

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

1. A removable tip for billiard-cues comprising a cylindrical casing resting in a socket in the cue, said casing having a vertical shaft journaled therethrough, said shaft having a beveled pinion upon its inner end which en-

gates with a similar beveled pinion which is mounted upon a longitudinal spindle, which spindle has a squared end, said spindle being journaled through bearings upon the said casing; and a tip proper which has a squared spindle depending therefrom provided with a threaded portion for engagement with the said vertical shaft, substantially as shown and described.

10 2. As an attachment for billiard-cues, the combination with the socket in the cue of the cylindrical casing having a squared aperture in the head thereof and a vertical shaft journaled through the body thereof, said shaft

15 having a threaded aperture, in its outer end and a beveled pinion upon its inner end which pinion engages with a similar pinion mounted

upon a horizontal spindle having a squared end, and a removable tip having a squared spindle extended therefrom which forms part of a depending screw, said squared spindle and screw engaging respectively with the squared aperture of the said head and with the threaded aperture of said shaft, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 14th day of May, 1896.

VINCENT AJELLO.

Witnesses:

M. G. MACLEAN,
EMILY SEIDLER.