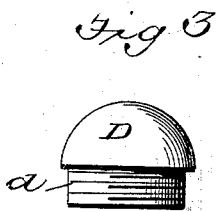
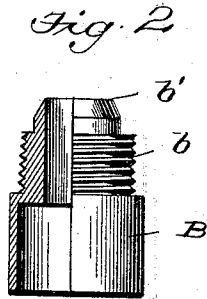
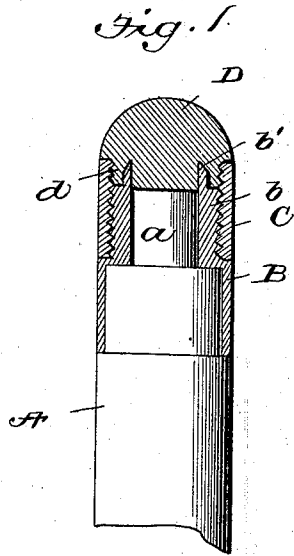


(No Model.)

L. K. SPRAGUE & F. W. BAJUS.
BILLIARD CUE.

No. 524,871.

Patented Aug. 21, 1894.



Witnesses

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UNITED STATES PATENT OFFICE.

LINUS K. SPRAGUE AND FREDERICK WILLIAM BAJUS, OF NEW HAVEN,
CONNECTICUT.

BILLIARD-CUE.

SPECIFICATION forming part of Letters Patent No. 524,871, dated August 21, 1894.

Application filed June 2, 1894. Serial No. 513,291. (No model.)

To all whom it may concern:

Be it known that we, LINUS K. SPRAGUE and FREDERICK WILLIAM BAJUS, citizens of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Billiard-Cues; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to billiard cues.

The object of the invention is to produce a billiard cue provided with such means for attaching the tip that possibility of the tip becoming separated from the cue, in use, will be avoided.

Further the object of the invention is to produce a billiard cue having combined therewith means for attaching the tip to the cue in a manner to prevent possibility of the tip becoming separated from the cue in use, and by which means the rapid substitution of a new tip for a worn one may be accomplished.

Further the object of the invention is to produce a billiard cue provided with means for attaching the tip; and by which means the end of the cue to which the tip is attached will be strengthened, and prevented from splitting.

With these objects in view the invention consists essentially of a billiard cue provided at its upper end with a cylinder or ferrule, having a sharpened upper edge, a ring designed to surround the cylinder or ferrule, and a tip provided with a depending portion to be confined between the cylinder or ferrule and the ring.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of the end of a billiard cue constructed in accordance with the invention, and showing a tip in position on the cue. Fig. 2, is a view partly in side elevation and partly in section, showing the cylinder or ferrule to be attached to the end of the cue. Fig. 3, is a side elevation of the tip.

In the figures A, represents the upper end of a billiard cue, which is of the usual form in ordinary use, except that it has a reduced end *a*. The cue is usually made of wood, and

therefore in the usual form of device for attaching the tip, is liable to split. In the present device, there is attached to the upper end of the cue the cylinder or ferrule B, of metal, fiber or other suitable substance, held in place on the cue in any suitable way, as by driving it upon the cue. The lower portion of the cylinder or ferrule, is of a diameter corresponding to that of the upper portion of the cue, and the upper portion *b*, of the ferrule is reduced to fit the end *a*, of the cue. The upper end of the cylinder is beveled from outside to inside, forming a sharp edge *b'*. The reduced portion of the cylinder or ferrule B, is externally screw-threaded for the reception of an internally screw-threaded ring C. The ring C, is of a thickness to fill out the reduced portion of the cylinder or ferrule B, and having its face flush with the face of the lower larger part of the cylinder or ferrule, forms a smooth surface. The upper end of the ring extends a short distance above the top of the cylinder or ferrule, for the purpose of confining the outer edge of the tip to be held in place.

The tip D, which is preferably of leather, although rubber may be used if desired, consists of an upper rounded main portion, and a lower reduced portion *d*. The diameter of the base of the upper portion corresponds to the diameter of the ring C, and the diameter of the reduced portion is such as to be received by the ring.

In assembling the parts, the cylinder or ferrule is driven on the upper end of the cue; the reduced end of the tip is placed in the ring C, and retained in place by a suitable clamp, the ring C, the screw-thread of which engages the tip, is then screwed down carrying with it the tip D; as the lower end of the tip is forced against the sharp upper edge of the cylinder or ferrule, it will be cut, and at the same time it will be forced, by reason of the tapering annular opening around the cylinder or ferrule, tightly between the cylinder or ferrule and the ring. From this it will be seen that by reason of the contact of the tip with the screw-thread on the ring and on the cylinder or ferrule, and the wedging of the lower part of the tip, the tip will be held firmly in place.

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

1. A billiard cue provided at its upper end
5 with a cylinder or ferrule having a sharpened upper edge, a ring designed to surround the cylinder or ferrule, and a tip having a depending portion confined between the cylinder or ferrule and the ring, substantially as described.
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2. A billiard cue provided at its upper end with a cylinder or ferrule having a sharpened

upper edge, and provided with external screw-threads, a ring having internal screw-threads, and a tip provided with a depending portion 15 confined between the cylinder or ferrule and the ring, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

LINUS K. SPRAGUE.

FREDERICK WILLIAM BAJUS.

Witnesses:

W. J. SMITH,

FRANK S. BISHOP.