

H. A. CRABBE.
 CUE FOR BILLIARDS, BAGATELLE, AND THE LIKE.
 APPLICATION FILED JUNE 27, 1911.

1,054,830.

Patented Mar. 4, 1913.

Fig. 1.

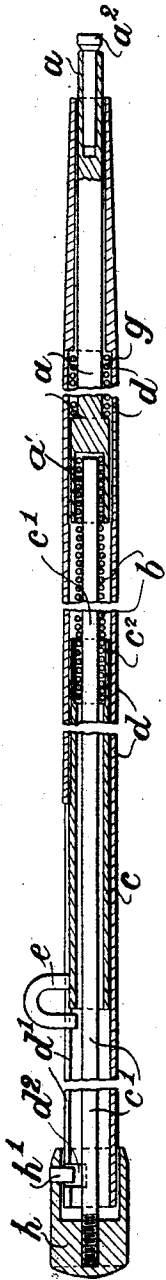


Fig. 2.

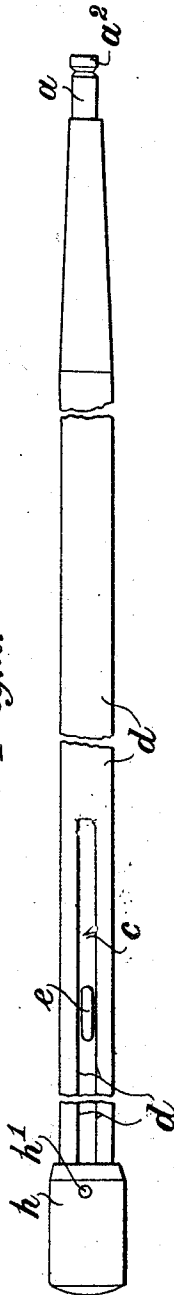
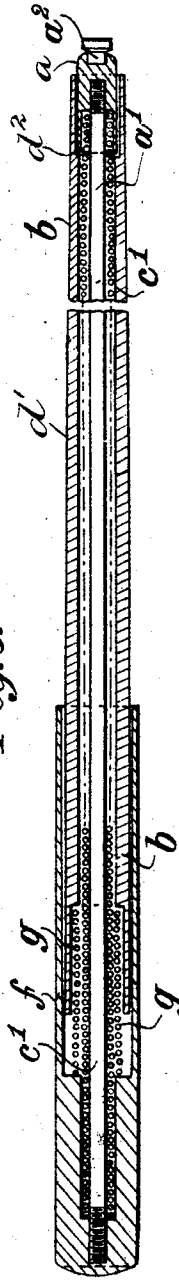


Fig. 3.



Witnesses:
 E. L. Hawley
 C. T. Dublin

Inventor:
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 Atty.

UNITED STATES PATENT OFFICE.

HUGH ALEXANDER CRABB, OF STREATHAM, ENGLAND, ASSIGNOR OF ONE-THIRD TO CHARLES HILTON HUTCHINSON AND ONE-THIRD TO ALBERT HENRY FRANKS PERL, BOTH OF THEOBALD'S ROAD, COUNTY OF LONDON, ENGLAND.

CUE FOR BILLIARDS, BAGATELLE, AND THE LIKE.

1,054,830.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed June 27, 1911. Serial No. 635,592.

To all whom it may concern:

Be it known that I, HUGH ALEXANDER CRABB, a subject of His Majesty the King of England, residing at 4 Greyswood street, Streatham, in the county of London, Kingdom of England, have invented certain new and useful Improvements in Cues for Billiards, Bagatelle, and the Like, of which the following is a specification.

This invention relates to improvements in mechanical spring cues for billiards, bagatelle and the like and has for its object to provide a cue wherein the momentum or recoil of a spring is utilized in improved manner for projecting or striking the balls. It is especially suitable for obtaining the desired movements on a table of small dimensions such as toy tables.

It has heretofore been proposed to provide a mechanical cue comprising a tubular casing having a fixed cue tip at one end and partially inclosing a sliding cue rod having a tip at its outer end, the said rod having a collar about its middle, and a spring on each side thereof. In such case however the cue rod is slid back against the pressure of the main spring and when released by a catch, is directly propelled thereby when it is desired to use the said sliding cue rod and tip, the other and weaker spring acting as a buffer. The fixed cue tip can also be made use of in a similar manner by relying on the recoil of the case.

According to the present invention we provide means for tensioning the main spring and a stop member for preventing the inward movement of the cue tip rod which is projected on the release of the said spring, by the gathered momentum of the spring and its impact on closing up and abutting on the cue tip rod.

I will now describe my invention, with reference to the accompanying drawings which show two methods of construction and in which drawings:—

Figure 1 is a broken longitudinal section of one form of construction of our improved cue; Fig. 2 is a broken elevational view of the same, and Fig. 3 shows a broken longitudinal section of a modified form.

Referring particularly to Figs. 1 and 2 and according to the simplest way of carrying out this invention, a cue tip holder *a*

is connected to one end of a closely coiled helical spring *b*. An actuator, in the form of an operating draw tube *c*, is attached at one of its ends to the spring *b*. A guide rod abutment *c'* is attached to the butt end of the cue and disposed inside of the helical spring and draw tube *c*, to form a stop for the holder *a* so that upon manual retraction of said operating tube *c*, by the player, the rod *c'* will form a stop or abutment limiting retraction of the tip holder *a*, inwardly, and thereby causing expansion of the spring *b*. When the actuated tube *c* is released, the spring *b* will recoil and cause the cue tip holder *a* to be yieldingly projected so as to strike a ball close to or against which the cue is held. The momentum of the spring against itself, when closing up, is sufficient to cause the tip holder to move even if this part is held in the player's hand. The cue tip holder *a* is preferably slidably mounted in the outer, or cue end of the tubular barrel or casing *d* and an external finger piece *e* is provided and connected with the draw tube *c* so as to slidably move in a slot *d'*, in the outer casing. A buffer spring *g* is provided to insure the proper return of the cue tip holder *a* and lessen and damp the blow. The sleeved portion *a'* may be shrunk over or otherwise suitably connected with one end of the spring *b*, and likewise the end *e'*, of the tube *c*, may be shrunk over or otherwise connected with the other end of the spring *b*.

In Fig. 3 a cap or sleeve *f* is shown connected to the end of the spring *b* which sleeve is slidably movable over the end of the casing *d'* and a suitable light returning spring *g* is also provided to insure the return of the parts, and also in some cases to check the force of the main spring *b*. As also shown in Fig. 3 we may provide an internal extension *a'* of the cue tip holder *a* which enters the end of the coiled spring *b* and coöperates with the end of the draw rod *c'* which is extended in length so as to abut thereon, and transmit the momentum of the spring to the movable cue tip holder *a*. Thus in this latter case the blow is a positive one, metal to metal, while in the former case Figs. 1 and 2, it is due only to the closing up of the coils of the spring *b*. The metal to metal construction, also

prevents the spring jamming or the coils over-riding as might be the case where the spring continually returned on itself alone. The casing d' is provided with a shoulder d^2 to prevent retraction of the tip holder a , inwardly into the casing, beyond a predetermined point.

I may in some cases arrange the cue tip holder externally of the outer casings, and I may also so arrange the spring that it is partly inclosed and partly open in which latter case an operating knob connected with the outer end of the spring would be arranged to slide on a central rod connected with the cue tip holder, the movement being transmitted to the central rod by a collar thereon against which the inner or free end of the spring would abut when released. The exposed end of the rod and the spring and knob would be arranged between the end guides of a suitable handle grip or holding device.

In another modification I may arrange for the spring when pulled back on a central cue tip rod, to abut against another fixed collar on the rod and drive it forward together with the rod, cue tip and spring; the whole device in such case sliding in a pair of spaced guide members.

The cue rod a is shown fitted with a renewable leather, gut, or other tip a^2 fitted into a hole in the rod and in Figs. 1 and 2 a terminal or cap h is fitted on the end of the casing d by means of a pin h' engaging a slot d^2 . In this case the cap h carries the guide rod c' .

It will be understood that other modifications may be made for instance a sleeve may be fitted to the draw tube c , Figs. 1 and 2 instead of the finger piece e , said sleeve being slidable over the outer casing.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A game cue comprising in combination, a barrel, a cue tip holder slidably mounted in the barrel, an abutment carried

by the barrel and adapted to engage the tip holder to limit retractive movement inwardly from the tip holder end of the barrel, an actuator adapted to be manually retracted with respect to the tip holder end of the barrel, and a contractile spring connected with said actuator and tip holder and serving upon release of said actuator to recoil and yieldingly to project the tip holder from the barrel, substantially as described.

2. A game cue comprising in combination, a barrel, a cue tip holder slidably mounted in the barrel, an abutment carried by the barrel and adapted to engage the tip holder to limit retractive movement inwardly from the tip holder end of the barrel, an actuator adapted to be manually retracted with respect to the tip end of the barrel, a contractile spring connected with said actuator and tip holder and serving upon release of said actuator to recoil and yieldingly to project the tip holder from the barrel, and a buffer spring carried by the barrel for cushioning the blow of said tip holder, substantially as described.

3. A game cue comprising in combination, a barrel, a cue tip holder slidably mounted in the barrel, means adapted to engage the tip holder to limit retractive movement inwardly from the tip end of the barrel, an actuator adapted to be manually retracted with respect to the tip end of the barrel, a contractile spring connected with said actuator and tip holder and serving upon release of said actuator to recoil and cause the tip holder to be projected from the tip end of the barrel, and a bumper spring carried by the barrel for cushioning the flow of said tip holder, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses this 12th day of June 1911.

HUGH ALEXANDER CRABB.

Witnesses:

J. S. WITHERS,
Y. BEAKEY.