(No Model.)

A. SCHNEIDER.

BILLIARD CUE TIP FASTENING.

No. 522,305. Patented July 3, 1894.

FIG. 1.

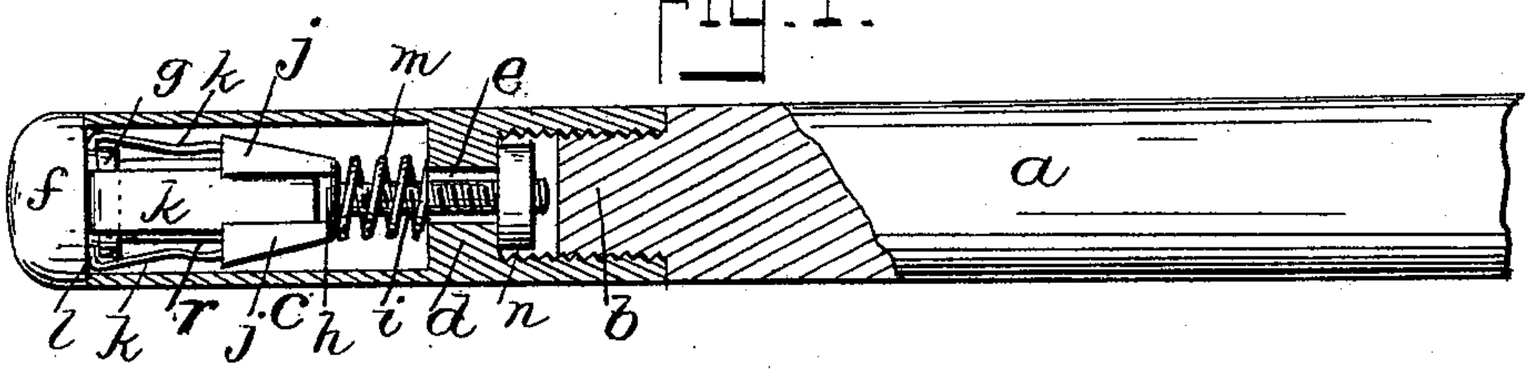


FIG. 2.

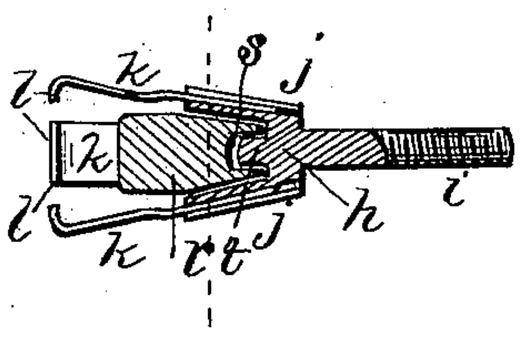


FIG. 3.

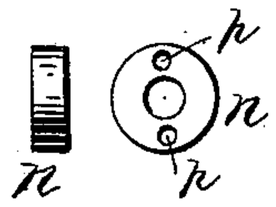


FIG. 4.

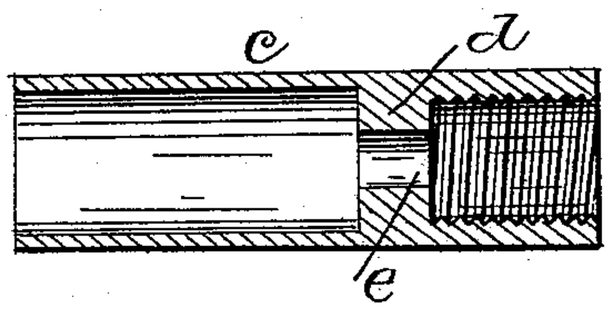


FIG. 5.

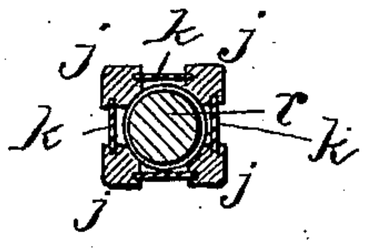


FIG. 6.

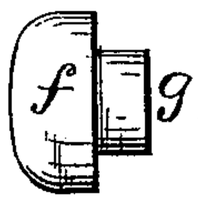
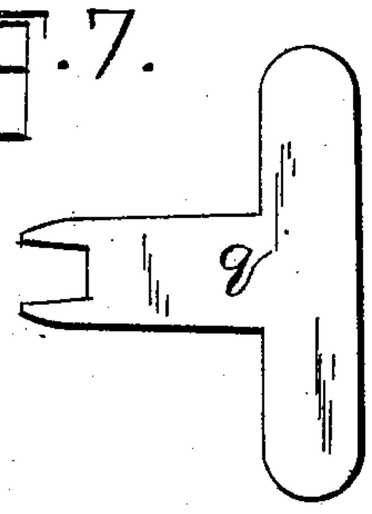


FIG. 7.



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AUGUST SCHNEIDER, OF LEXINGTON, KENTUCKY, ASSIGNOR OF ONE-HALF TO CHARLES NEWBOLD, OF WASHINGTON, DISTRICT OF COLUMBIA.

BILLIARD-CUE-TIP FASTENING.

SPECIFICATION forming part of Letters Patent No. 522,305, dated July 3, 1894.

Application filed February 4, 1891. Serial No. 380,125. (No model.)

To all whom it may concern:

Be it known that I, AUGUST SCHNEIDER, a subject of the Emperor of Germany, residing at Lexington, in the county of Fayette and State of Kentucky, have invented certain new and useful Improvements in Billiard-Cue-Tip Fastenings; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has relation to devices whereby leather tips are secured to billiard cues and has for its object to furnish a more complete and reliable device of this kind, than is now in use, the special aims being to make an entirely reliable fastening which can be manipulated for securing and removing the tip, by unskilled persons without the necessity of wasting time with glues, cements, screws or tacks, so that the full supply of cues on hand may always be in use, and when required can be re-tipped in a very short space of time, in the billiard room, by the user, if necessary.

With these objects in view my invention consists in the improved construction, arrangement and combination of parts hereinafter fully described and afterward specifically pointed out in the subjoined claims.

In the accompanying drawings: Figure 1 is a view showing the mechanism by which I secure a tip to a billiard cue, being partly in side elevation and partly in section, the cue being broken off. Fig. 2 is a central sectional view through the securing device, removed from its case. Fig. 3 is a side elevation and an end elevation of the securing nut. Fig. 4 is a longitudinal central sectional view of the case in which the fastening devices are held. Fig. 5 is a transverse section through the devices shown in Fig. 2. Fig. 6 is a side elevation of the leather tip, detached, and Fig. 7 is a side elevation of the wrench used to manipulate the fastening devices.

Like letters of reference mark the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings by letters of reference, *a* is the smaller end of an ordinary billiard cue which at its extreme point is cut down leaving about half an inch, as at *b*, of a smaller diameter, as shown, the difference in the diameter between the parts *a* and *b* being equal to the thickness of the material of which a case or tube *c*, which holds the fastening mechanism is made. This case may be made of brass or other metal, celluloid, bone, ivory or any other suitable material, and is formed with a diaphragm *d* having a central bore *e*, and an interior screw thread to engage an exterior screw thread on the point *b*, of the cue *a*. The tip *f*, made as usual of leather, is provided with a knob or projection *g* on its inner end which is of a diameter slightly less than the interior diameter of the case *c*.

h is a block of metal (preferably brass, steel or iron) which is provided with a threaded stem *i* and four projecting pillars or posts *j*. To each of the pillars is secured the inner end of a spring jaw *k* whose outer end at *l* is bent at substantially a right angle to the body, as shown in Figs. 1 and 2.

m is a spiral spring of a suitable diameter to encompass the stem *i* of the block *h*, and *n* is a nut to engage on the threads of the aforesaid stem. This nut may be turned in any desirable way or by any tool suitable, but in this instance I have shown the nut as having two holes *p* in which the points of a wrench *q*—shown in Fig. 7—may be inserted for that purpose, as probably the best means for turning the nut.

r is a block of wood, rubber or other suitable material which is cylindrical in form and of a length to reach from the inside of the leather tip when in position on the cue, to the block *h*. Its outer end is flat, for the inside of the knob of the leather tip to have a flat bearing against and its inner end may be provided with a hollow *s* to fit over a teat *t* on block *h*, if deemed beneficial.

To adjust a tip to a cue by my devices, the following is the method of procedure: The case *c* being removed from the cue, the block *h* is placed in the case *c*, with the stem *i* with the spring *m* around it, projecting into or through the bore *e*, and the jaws *k* projecting slightly beyond the end and outside the periphery of the case. While they are in this

position, the block *r* is placed in position between the jaws *k*, with its inner end resting against block *h*. The knob or projection *g* of the tip *f* is now inserted between the inner edges of the bent ends *l* of the jaws *k* with its inner end resting against the outer end of block *r*, and the nut *n* placed in position in the case to engage the threads on stem *i* of block *h*, on the inner side of diaphragm *d* of case *c*. The wrench *q* is now inserted in the inner end of case *c* with its points in the holes *p*, of nut *n*, and the nut turned up on the stem *i*. As this is done the whole fastening mechanism is drawn toward the nut, the jaws bearing against the inner edges of the end of the case and their bent ends being forced toward each other tightly squeezing the knob *g* of tip *f*, and drawing it into the case *c*, until the inside of the body of the tip *f* rests on, and in close contact with, the outer end of case *c*. In the meantime, the spring *m* is compressed between the diaphragm *d* of case *c*, and the block *h*. The tip is now secured to the case *c* reliably, and the next and last step is to screw the case *c* upon the point *b* of cue *a*, when the cue is ready for use.

The reverse movements for removing the tip will be understood without further explanation.

From the foregoing it will be seen that the tip has a bearing on its inner side almost as large as the said inner side itself, the knob *g* bearing against the block *r*, and it, in turn, bears at its inner end against the block *h*. The flange of the tip, around the projection, bears against the outer end of case *c* and is thus fully supported. The block *h* bears inward against the spring *m*, which may be of any desired strength to suit the user of the cue.

The leather tip possesses a certain amount of elasticity, the block *r*, being of wood or rubber, adds to this as desired, and the metal block *h*, which is the foundation of all the structure, has an elastic bearing against the spring *m*, which, as before stated, may be varied, by using springs of different strengths.

All the fastening mechanism is entirely concealed when the cue is in position for use, such concealment being so perfect that its presence would not be suspected by the uninformed user. The parts are simple in construction, easily manipulated, so light as not to overweight the point of the cue, and so arranged with relation to, and in connection with each other, that there will be absolutely no rattle, a very disagreeable feature in some cues.

The device may be made of ordinary materials, very cheaply, but is capable of any desired amount of elaboration or ornament. The case may be made as valuable, or as beautiful, as will suit the tastes, or pecuniary abilities of the purchaser and the act of removal and replacement need not occupy more than a minute or two. I have shown four grasping jaws but I desire it to be understood that I do not confine myself to that number, as more or less may be used at will.

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

1. In combination the case shaped at one end to fit the point of the cue and having a centrally bored diaphragm, the block *h* carrying the jaws *k* and having threaded stem *i* projecting through the diaphragm, the spring *m* around said stem between the diaphragm and block *h*, and the nut engaging the threaded stem on the opposite side of the diaphragm, as set forth.

2. In a billiard cue tip fastening, the combination with a block and a set of spring jaws carried thereby, of an elastic or semi-elastic block to be inserted between said jaws and having a bearing at its inner end against the jaw carrying block and adapted at its outer end to support the inner end of the leather tip, substantially as set forth.

3. The combination in a billiard cue tip fastening of a block carrying spring jaws for grasping the leather tip, a spring or elastic inner support for said block, a block forming the connection between the jaw carrying block and the leather tip, and means for securing the parts in position, substantially as and for the purpose set forth.

4. In combination the case *c* having diaphragm *d*, centrally bored at *e*, the block *h* having stem *i* projecting through the bore *e*, the spring *m* around said stem between block *h* and diaphragm *d*, the nut *n* engaging the stem on the opposite side of the diaphragm, the spring jaws *k* carried by the block *h*, the block *r*, and the leather tip *f* with projection *g*, substantially as set forth.

5. The combination with the tubular case, of the tip on the forward end thereof having the knob on its inner side, the stem within the case, the jaws carried thereby which grasp the knob on the tip, and the elastic or semi-elastic block between the knob and the stem, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

AUGUST SCHNEIDER.

Witnesses:
J. F. JAEGER,
J. F. OVERSTREET.