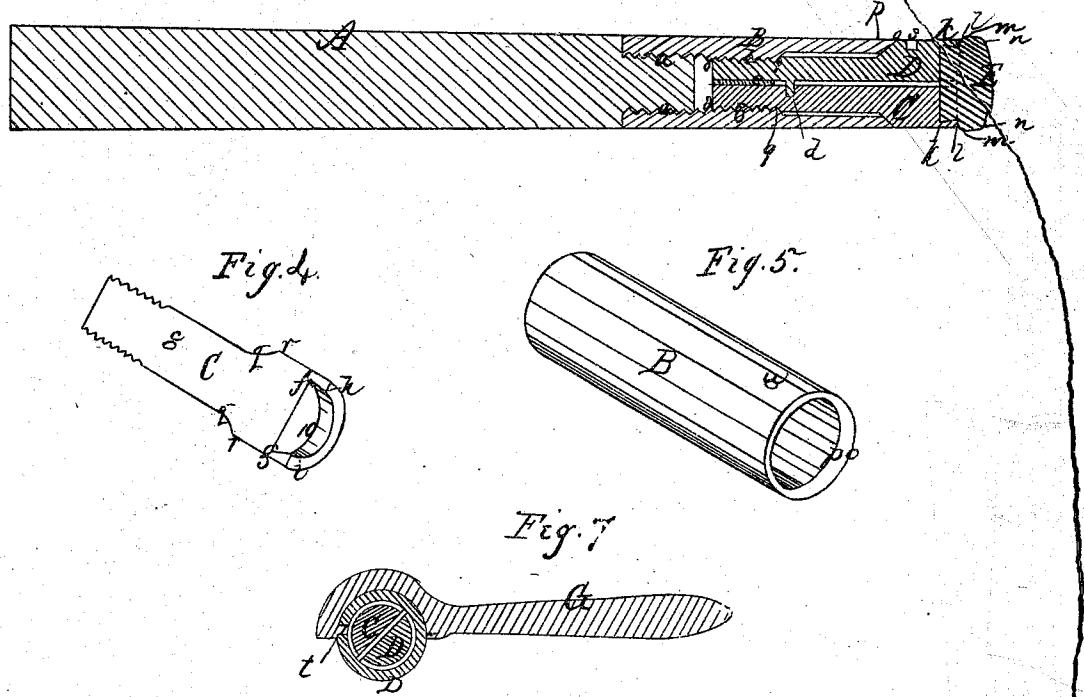
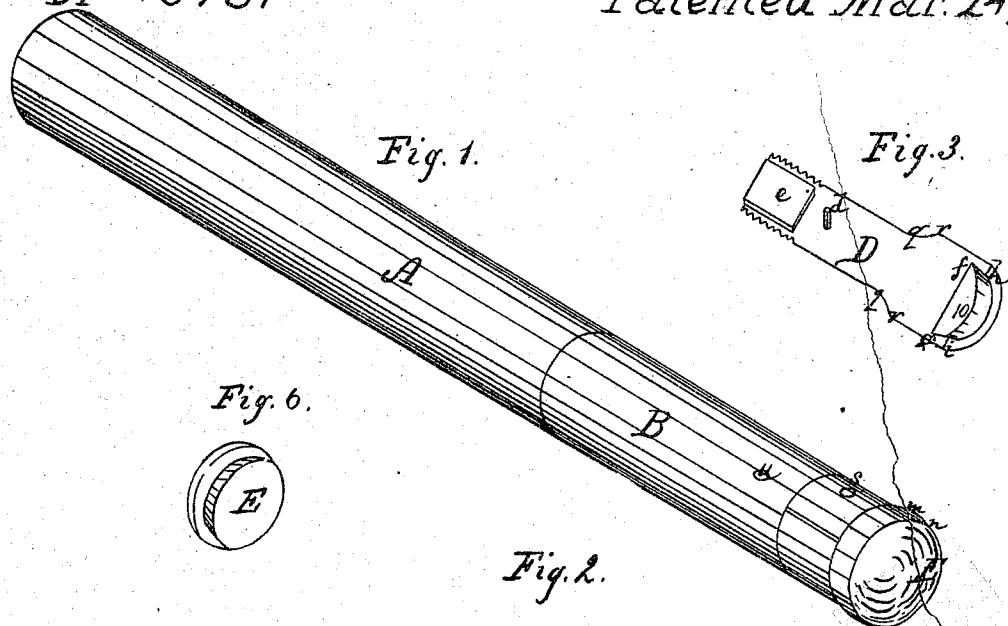


H. C. Griffin
Billiard-Cue.

No 75751

Patented Mar. 24, 1868



Witnesses.

C. H. Sanborn

G. L. Sanborn

Inventor

Heber C. Griffin

United States Patent Office.

HEBER C. GRIFFIN, OF FRANKLIN, NEW HAMPSHIRE, ASSIGNOR TO HIMSELF, GEORGE W. GRIFFIN, AND JOHN N. HOWE.

Letters Patent No. 75,751, dated March 24, 1868.

IMPROVEMENT IN BILLIARD-CUES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HEBER C. GRIFFIN, of Franklin, in the county of Merrimack, and State of New Hampshire, have invented certain Improvements in Billiard-Cues, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the end of a billiard-cue with my improvements applied thereto.

Figure 2 is a longitudinal section through the centre of the same.

Figures 3 and 4 are perspective views of two jaws forming portions of my improvements.

Figure 5 is a socket for receiving the two jaws when closed together.

Figure 6 represents a "tip" of a cue detached.

Figure 7 is a section illustrating the manner in which the jaws are loosened or tightened within their socket.

The billiard-cue of the ordinary construction is provided with a leather shield or "tip," which is glued to its outer end. When a tip is injured or is worn away from use, it is removed by cutting it off at the wooden end of the cue, and a new "tip" is glued thereon, which operations are somewhat inconvenient and tedious to perform, and before the cue can be again used, it must be laid aside until the glue has "set." Furthermore, the tip is frequently attached in an insecure or improper manner, and is liable to be knocked off accidentally while in use.

To remove the above-mentioned difficulties is the object of my invention, which consists in a pair of jaws, which screw into a socket at the end of the cue, and serve to hold the tip firmly in place.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents a portion of a wooden billiard-cue, the outer end of which is turned down and provided with a screw-thread, *a*, over which fits a corresponding screw-thread on the interior of the inner end of a metal socket, B. A screw-thread, *b*, of smaller diameter than that, *a*, is cut within the socket from 8 to 9 for the reception of a similar screw-thread formed on the inner end of each of a pair of metal jaws, C D, which, when united together, may be turned, so as to snugly fit therein. The inner flat face of the jaw C is provided with a hole, *c*, for receiving a small pin, *d*, projecting from the corresponding face of the jaw D, for holding them together in a position to be screwed into their socket, or for keeping them in place when removed therefrom. The inner end of the flat face of the jaw D is also provided with a flat strip or cleat, *e*, which holds the two jaws a short distance apart at their lower ends, and allows the outer ends, which hold the tip, to be closed in a manner now to be explained.

Within each of the outer ends of the two jaws C D is formed a semicircular cavity, 10, which, when the jaws are closed together, form a frustum of a cone, the diameter of which, at *f g*, is but slightly greater than that *h i*. This cavity is intended for the reception of a "tip," E, composed of one or more pieces of leather or other suitable elastic material, made in the form shown in figs. 2 and 6, it being bevelled from *h* to *l*, at an inclination corresponding to that, *f h* or *g i*, of the sides of the interior of the cavity 10, the portion of the outer end of the tip from *m* to *n* being rounded off and made slightly larger than the diameter of the outside of the jaws C D, so as to extend over their edges, thus preventing the liability of the ball coming in contact therewith. The outer end of the socket is bevelled inward from *o* to *p*, to receive a similarly-shaped portion, *q r*, of the exterior surface of the jaws C D, by which construction, when the "tip" is in place within the cavity 10, it is firmly grasped by the jaws when received sufficiently within their socket to cause the bevelled edge *q r* of the jaws to coincide with that, *o p*, of the socket. The inner ends of the flat faces of the jaws C D being separated by the cleat *e*, and the jaws being gradually turned down in place within the socket, their outer edges commence to be sprung together at the moment the incline *q r* is brought down against the incline *o p*, and the tip is firmly held as required.

When a tip has been worn out, or is defective and requires to be removed, it is simply necessary to employ a wrench, G, of the form shown in fig. 7, and unscrew the jaws from their socket, one or both of the jaws being provided with a hole, *s*, for the reception of a pin, *t*, projecting from the inner curved surface of the wrench.

The socket may also be removed from the wooden portion, A, of the cue, if desired, by applying the wrench to a hole, *u*, similar to that, *s*, and made to receive the projection *t*.

In order to render the socket B and jaws C D as light as possible, they may be made either of thin metal, or of hard rubber, or of any other suitable material possessing the requisite strength.

By the above-described construction, the elasticity of the tip is insured, and as it is more firmly held by the jaws than by the ordinary process of gluing, it is consequently more durable, and much inconvenience and delay incident thereto are avoided.

Claim.

What I claim as my invention, is—
The billiard-cue A, composed of two separate jaws C and D, and tip E, and socket B, constructed and arranged substantially as and for the purpose described.

HEBER C. GRIFFIN.

Witnesses:

N. H. SANBORN,
L. L. SANBORN.