(No Model.)

F. B. PURDY.

CLAMP FOR BILLIARD CUE TIPS.

No. 562,973. Patented June 30, 1896.

Fig. 1.

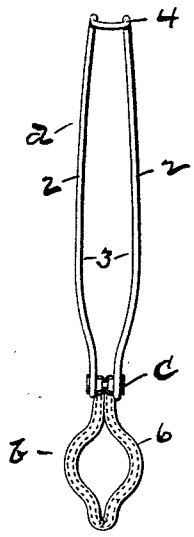
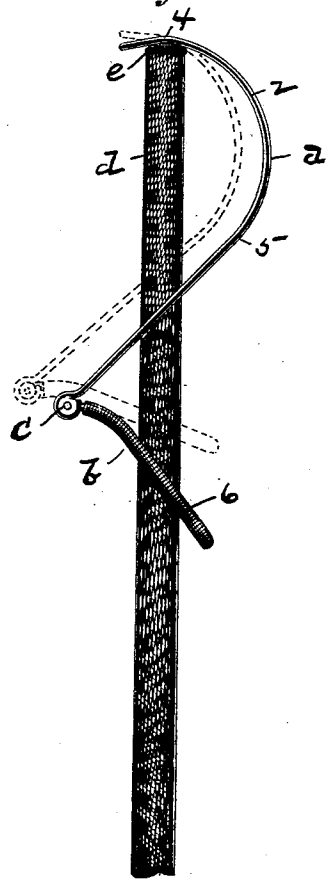


Fig. 2.



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CLAMP FOR BILLIARD-CUE TIPS.

SPECIFICATION forming part of Letters Patent No. 562,973, dated June 30, 1896.

Application filed December 31, 1895. Serial No. 573,935. (No model.)

To all whom it may concern:

Be it known that I, FRED B. PURDY, a citizen of the United States, residing at Belchertown, in the county of Hampshire and State of Massachusetts, have invented a new and useful Improvement in Clamps for Billiard-Cue Tips, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

My invention relates to devices for clamping the leather tips to the ends of billiard-cues to enable the glue or other adhesive material by which they are permanently secured in place to become set or hardened, and the object of the invention is to provide a simple and inexpensive device for this purpose, which can be quickly and conveniently operated, which will securely hold the tip in position, and which will not mar the surface of the cue when applied to the latter.

To these ends my invention consists in the clamping device constructed and operating as hereinafter fully described, and particularly pointed out in the claims.

Referring to the drawings, in which like letters and numerals designate like parts in the several views, Figure 1 is a front view of the clamp. Fig. 2 is a side view thereof applied to a cue.

The clamp devised by me is composed of two members *a* and *b*, which are connected together by the pivot-joint *c*, as shown. The member *a* is preferably composed of a single piece of steel or other wire, which is first bent at a point midway between its ends to a **U** form, and the two prongs or legs 2 2 thus formed are slightly bowed near their lower end, as shown at 3, to permit the upper end of the cue *d* to pass easily between them. The upper closed end of said member is bent laterally to form the seat 4 for the tip *e*, and the prongs 2 extend by a sweeping curve from said seat to the point 5, from which point they extend in substantially a straight line to their lower end, as shown. The member *b* is also preferably composed of a single piece of wire bent to a substantially oval shape, as shown, its free ends as well as the free ends of the upper member being united by the pivot-pin *c* in such manner as to permit a free pivotal movement of one member upon the other. The transverse diameter of said member *b* is but slightly greater than the diameter of the cue *d* near the upper end of the latter, so that while the cue will pass freely through said member when the latter stands at a right angle to the former a slight endwise tilting movement of the member will cause it to tightly grip the cue in such manner as to lock the former against movement upon the latter. To increase the frictional hold of said member upon the cue in its locked position and also to obviate any marring of the surface of the cue, I prefer to provide said member *b* with a covering 6 of soft rubber, as shown, which can, if desired, be applied to the wire in the form of a rubber tube before bending the member to its final shape.

The tip *e* having been applied to the end of the cue with the interposed coating of glue or other adhesive material, the end of the cue is thrust through the member *b*, the latter being held at a right angle thereto, and also between the prongs 2 of the member *a*, until the outer face of the tip rests in the seat 4 of member *a*, the parts then occupying substantially the position indicated by broken lines in Fig. 2. The clamp is then grasped with the fingers of one hand at the pivot-joint *c*, and with the fingers of the other hand at the outer end of member *b*, and is drawn to substantially the position shown by full lines in Fig. 2, and the member *b* is moved to its locking position, as shown, thereby securely fastening the clamp against movement and binding the tip firmly against the end of the cue. After the glue is set, the clamp is released by forcing upwardly the outer end of the member *b* and withdrawing it from the cue.

It will be observed that the clamp thus constructed can be quickly and conveniently operated for the purpose for which it is designed, and that it cannot possibly mar the surface of the cue, as do most of those now used. The clamp, furthermore, is very strong and durable in its construction, and can be manufactured at a comparatively small cost. The peculiar shape of the member *a* and the manner in which the strain is exerted thereby upon the tip insures a true and accurate fit of the latter upon the cue, the strain being exerted in a line with the axis of the cue. I do not, however, wish to confine myself to the exact shape and relative proportions of the two members of the clamp, as herein shown and

described, as modifications therein can be made without departure from the spirit of the invention.

A further advantage incident to the form of clamp devised by me is that the open and curved form of the member *a* enables the cue having the clamp applied thereto to be readily suspended from a nail or hook without affecting the holding action of the clamp.

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

1. A clamp for billiard-cue tips composed of two members connected together by a hinge-joint, one of said members being composed of wire bent to a substantially U shape and terminating at its upper end in a seat to receive the tip, and the other member being also composed of wire bent to substantially an oval shape, substantially as described.

2. In a clamp for billiard-cue tips, the combination with one member composed of wire bent to substantially a U shape and then bent at its closed end to form a laterally-projecting seat for the tip, of a second member composed of wire bent to a substantially oval shape and having its transverse diameter but slightly greater than the diameter of a billiard-cue near the tip end thereof, the two ends of the wire composing one of said members and the two ends of the wire composing the other member being connected together by a pivot-joint, substantially as described.

3. The clamp for billiard-cue tips herein described, consisting of the member *a* composed of a wire, bent to form the seat 4 and prongs 2 2 curved as described, and member *b* composed of a wire bent to substantially an oval shape as described and covered with soft rubber, said members being connected together by the pivot-joint *c*, substantially as described.

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