

No. 835,736.

PATENTED NOV. 13, 1906.

F. W. SCHROEDER.
BILLIARD CUE TIP.
APPLICATION FILED NOV. 2, 1905.

Fig. 1

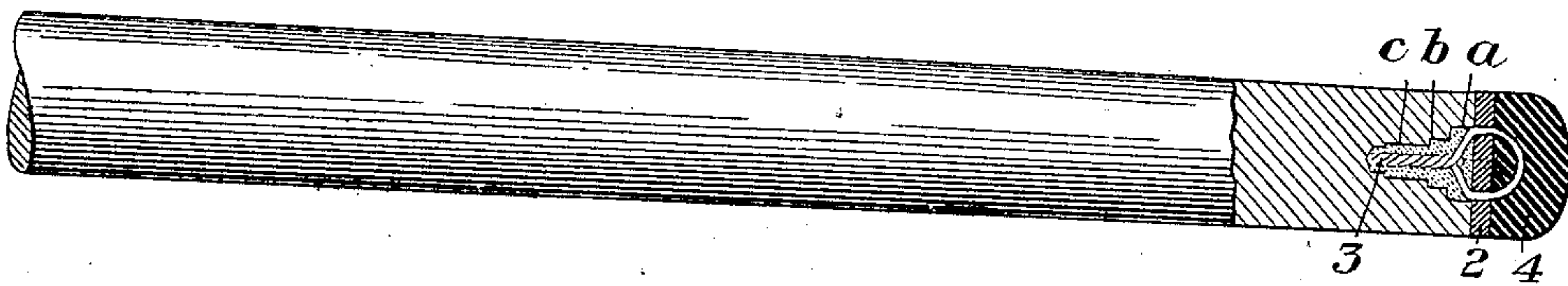


Fig. 2.

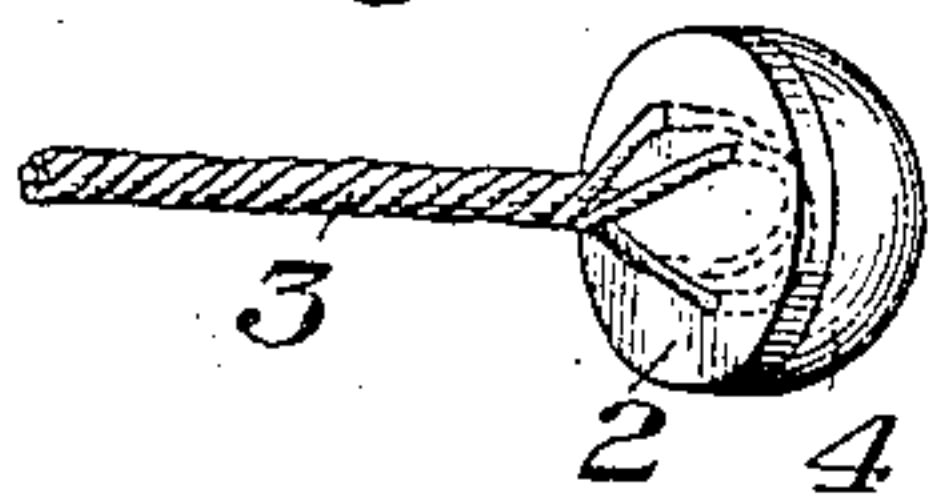


Fig. 3.

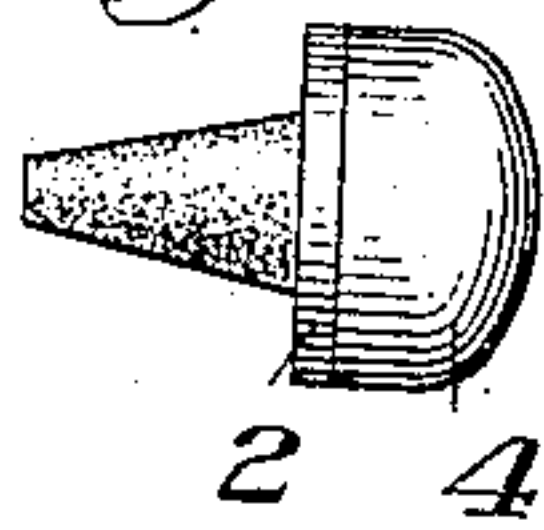


Fig. 4.

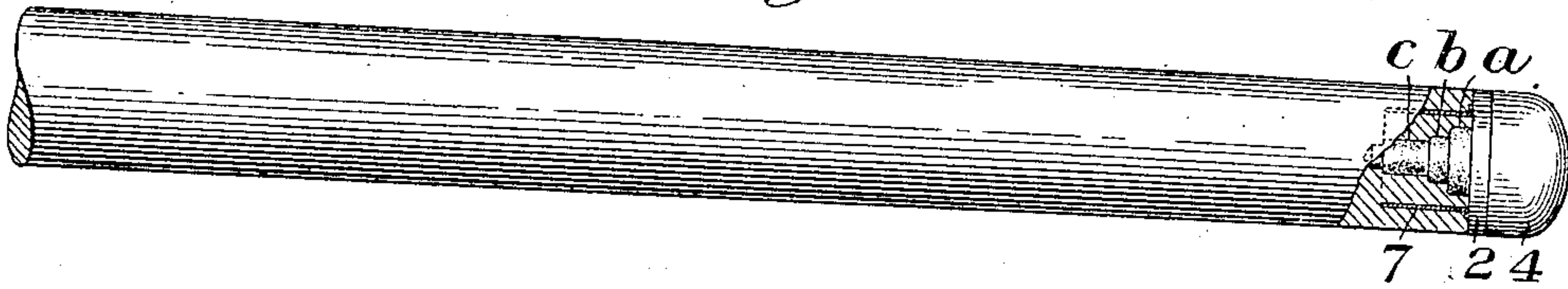
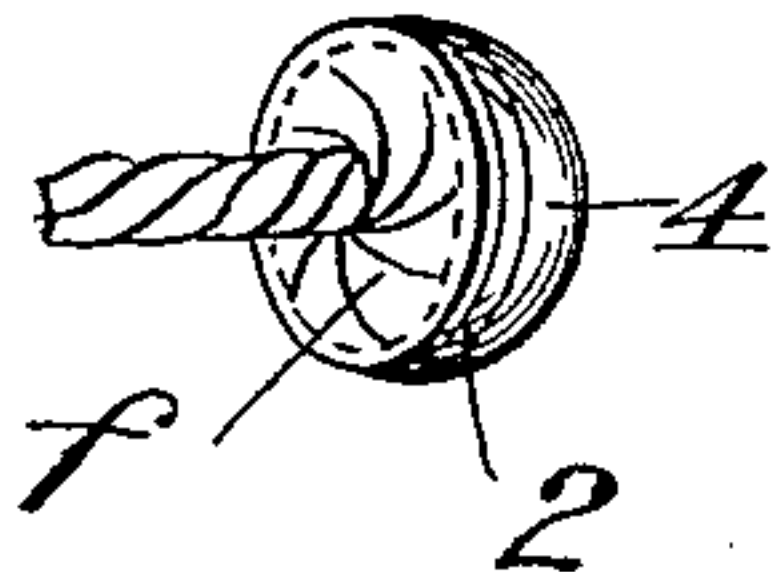


Fig. 2^a



WITNESSES

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UNITED STATES PATENT OFFICE.

FREDERICK W. SCHROEDER, OF LONDON, ENGLAND.

BILLIARD-CUE TIP.

No. 835,736.

Specification of Letters Patent.

Patented Nov. 13, 1906.

Application filed November 2, 1905. Serial No. 285,528.

To all whom it may concern:

Be it known that I, FREDERICK W. SCHROEDER, of London, England, have invented a new and useful Billiard-Cue Tip, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal section of the end portion of a billiard-cue constructed in accordance with my invention. Fig. 2 is a perspective view showing the tip in its intermediate stage. Fig. 2^a is a similar view showing a slightly-modified construction. Fig. 3 is a side elevation showing the tip ready for application; and Fig. 4 is a side elevation, partly in section, showing a modified form.

My invention relates to billiard-cues, and is designed to provide an improved construction of the tip and also of the coacting portion of the cue.

The object of the invention is to effectually secure the tip to the cue, so that there will be no danger of its dropping off, also to avoid liability of splitting of the cue proper.

In carrying out my invention I form the top by taking a round washer, of dense leather 2, and perforating it with holes, of which I have shown four, two waxed cords being sewed through the soft-leather tip and passed through the four holes in crossed position with their ends projecting to one side. The ends are twisted together, as shown at 3, and the tip proper, 4, of soft or sponge leather, is glued or cemented to the face of the washer, covering the holes and thread portions. The twisted cord is then dipped into suitable cement and pressed into a mold, the lower portion of the cord being cut off, thus giving the finished tip of Fig. 3.

The cue instead of being made with a continuously-tapered hole of funnel shape is formed in a series of steps. These steps *a b c* give a succession of cylindrical walls, which take the place of the tapering walls heretofore used. I thus obtain a hole with enlarged portions, but without a taper, and thus avoid the bursting pressure which tends to split the cue. This hole may be formed by a bit having a stepped edge or in any other suitable manner.

In applying the tip the cement is merely heated by hot water or in any other suitable way, and its shank portion is then forced into the stepped hole in the cue, thus forming

a series of steps in the cement of the shank. The tip is thus firmly and rigidly secured in the cue in such a manner that there is no liability of displacement or dropping out.

In Fig. 4 is shown a form of cue in which a short metal sleeve or ring 7 is forced into the cue end around the hole for the tip. This gives additional protection against splitting and may or may not be used, as desired.

Instead of passing the threads or cords through the leather disk I may form a net 8, of cord or thread, surrounding the washer 2, the loose part of which net is twisted together, as shown in Fig. 2^a, and embedded in the cement. In such case the soft tip would be circumferentially sewed to the washer.

The advantages of my invention result from the peculiar construction of the tip and also from the step formation of the hole receiving it.

Variations may be made in the form and arrangement of both the cue and the tip without departing from my invention.

I claim—

1. A tip for billiard-cues comprising a perforated washer, cords extending through holes in the washer and having their projecting portions forming a shank, and a tip portion fastened to the washer; substantially as described.

2. In a tip for billiard-cues, a soft tip, a leather washer having perforations, crossed cords sewed through the soft tip and extending through the perforations, with their ends assembled together, and a cushion portion cemented to the washer; substantially as described.

3. A billiard-cue tip having a shank consisting of cords secured to the tip and fastened together with cement, forming a tapering shank; substantially as described.

4. A tip for billiard-cues having a perforated washer, crossed cords having their rear portions twisted together and embedded in cement, and a cushion or tip proper secured to the front face of the washer; substantially as described.

5. A billiard-cue having a hole with stepped sides and a tip adapted to be secured in said hole; substantially as described.

6. A billiard-cue having a hole with stepped sides, the walls of each step being substantially cylindrical and a tip adapted to be secured in said hole; substantially as described.

7. A billiard-cue having a stepped hole

and a tip having a shank of cords and cement forced into the stepped hole; substantially as described.

8. A billiard-cue having a stepped hole,
5 and a tip having a shank forced into the hole and cemented therein; substantially as described.

9. A billiard-cue having a hole to receive

the tip-shank, and a metal sleeve forced into the wood around said hole. 10

In testimony whereof I have hereunto set my hand.

F. W. SCHROEDER.

Witnesses:

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FREDERICK H. DAVIS.