

No. 864,943.

PATENTED SEPT. 3, 1907.

V. AJELLO.
DETACHABLE BILLIARD CUE TIP.
APPLICATION FILED MAY 20, 1905.

Fig. 1

Fig. 2

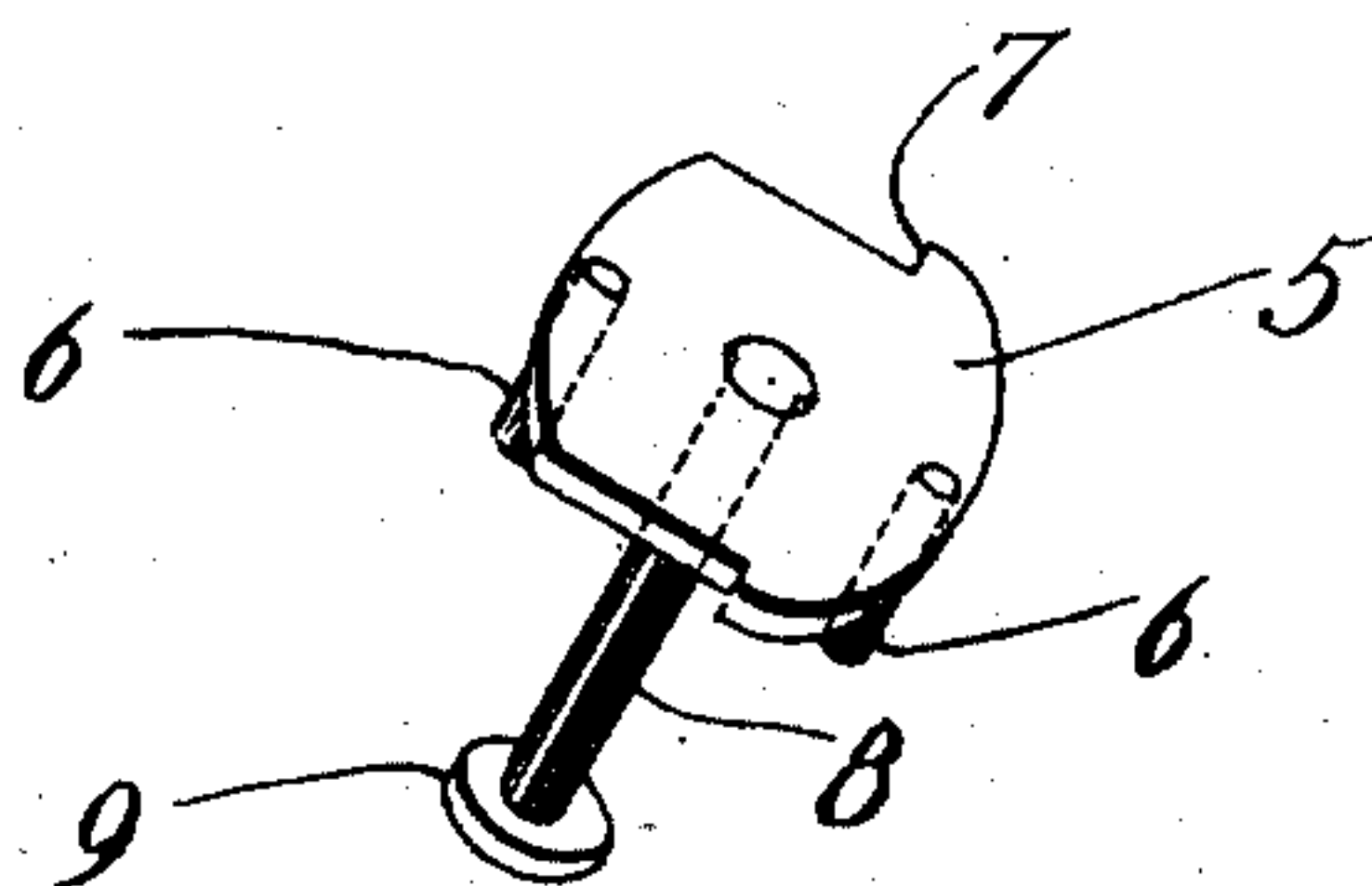
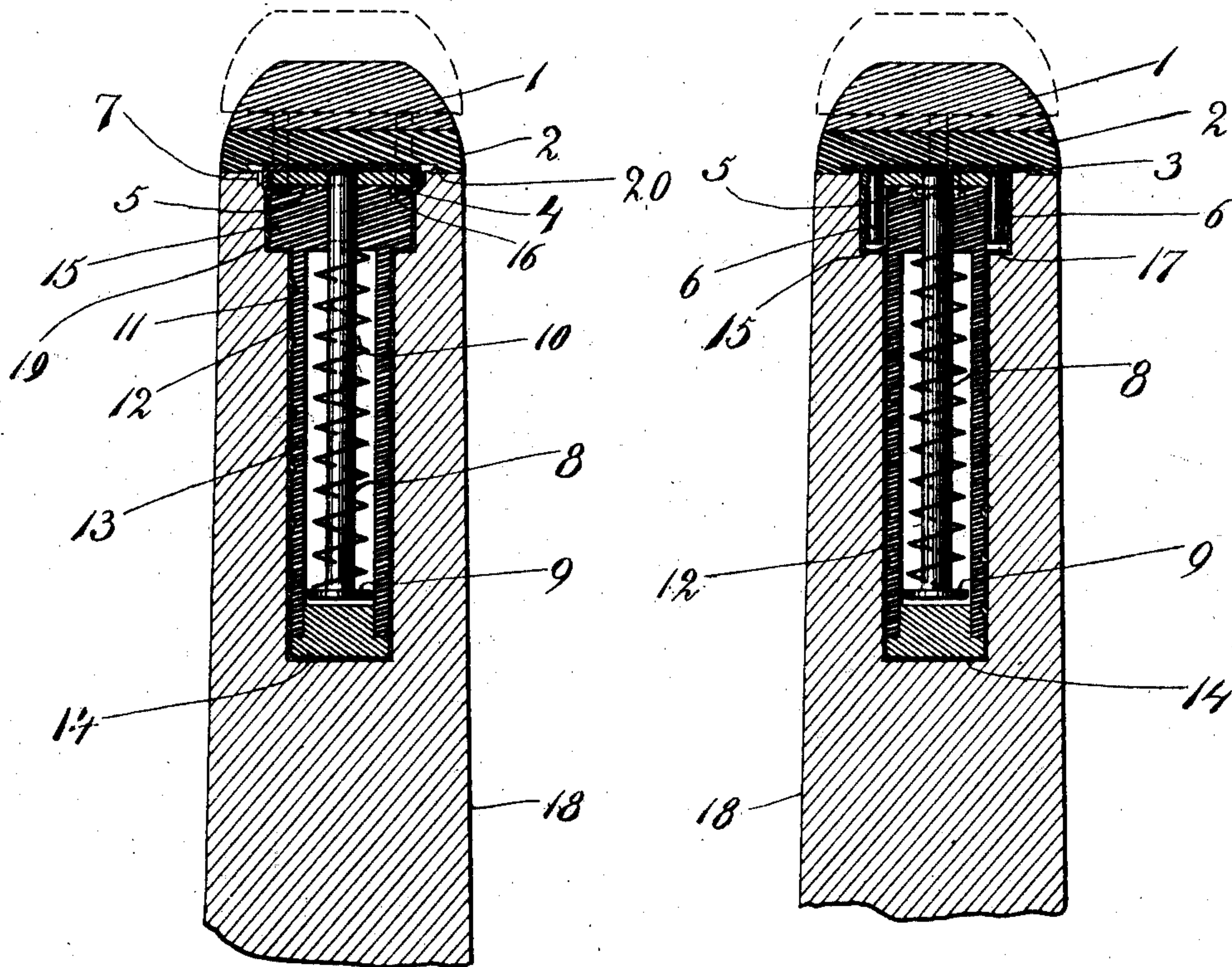


Fig. 3

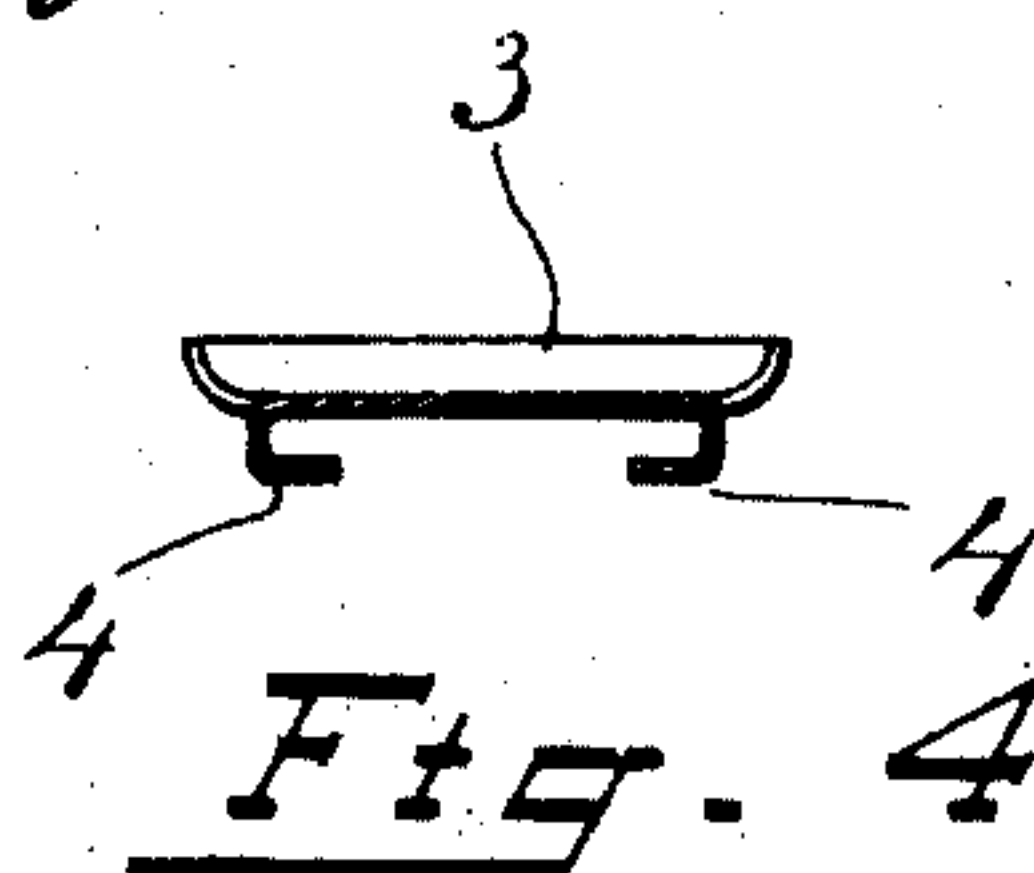


Fig. 4

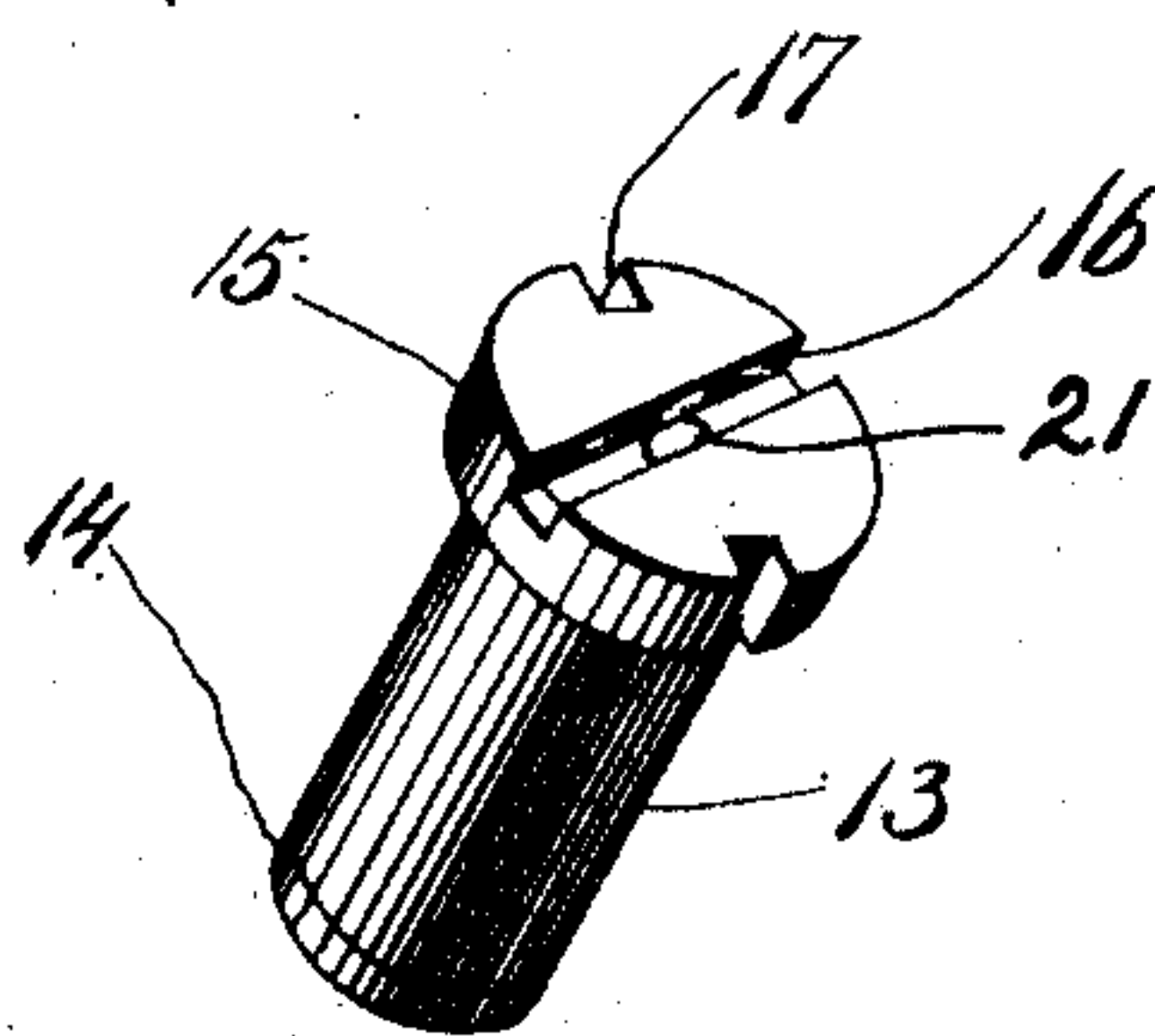


Fig. 5

Witnesses
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UNITED STATES PATENT OFFICE.

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DETACHABLE BILLIARD-CUE TIP.

No. 864,943.

Specification of Letters Patent.

Patented Sept. 3, 1907.

Application filed May 20, 1905. Serial No. 261,344.

To all whom it may concern:

Be it known that I, VINCENT AJELLO, a citizen of the United States, and a resident of the borough of Manhattan, in the county of New York, city and State of New York, have invented certain new and useful Improvements in Detachable Billiard-Cue Tips, of which the following is a specification.

My invention relates to the caps or tips of cues adapted to be used in the game of billiards or pool or other similar games.

These tips or caps are usually made of an outer layer of leather secured to a disk of hard rubber or fiber or some similar substance, and my improvement is designed to be used in connection with tips of this character or of any other ordinary construction. The tip is usually secured to the end of the cue by means of glue, cement or other adhesive substance. This is a method which has long been in use but is open to a number of objections. In the first place, it involves the use of a clamp or other appliance for the purpose of holding the tip in position until the glue or cement "sets". This also consumes a considerable amount of time. Again, the gluing process is attended with a number of difficulties incident to the use of glue or the like and does not enable the person applying the tip to the cue to do so with absolute accuracy. Then again, the glue is apt to become softened by atmospheric moisture and allow the tip to become displaced or to break and allow the tip to fall off while the cue is in use.

The objects of my invention are to overcome the objections above enumerated, among others, and to provide a means for attaching the tip to the cue which shall be of simple, strong and durable construction, afford a secure fastening which may be quickly and accurately made and which will enable the said tip to be removed and replaced at will. In accomplishing these objects, my improvement also saves the wear on the end of the cue incident to the scraping necessitated by the presence of the hardened glue, when it is desired to apply a new tip. It also economizes the tips and enables the user to employ tips of the highest quality at a very small expense and permits the use of tips of different composition on one cue, if desired, and these tips may be interchanged by very simple manipulation occupying a few seconds only, thus making the exchange possible without interruption of the game.

My invention consists of the combination of parts and arrangement of details hereinafter described and claimed and illustrated in the accompanying drawings.

In the said drawings, Figure 1 is a vertical medial section of the point or small end of a cue with my improvements applied thereto. Fig. 2 is a similar section taken at right angles to the section shown in Fig. 1. Fig. 3 is a perspective view of one of the parts, slightly enlarged. Fig. 4 is a vertical section of one of the parts, similarly enlarged, and Fig. 5 is a perspective view of

another part enlarged and in the same relative position as the part shown in Fig. 3.

The outer end or contact surface of the tip 1 is secured to the back plate or disk 2 by any suitable means, such as gluing or cementing, and is of the usual form. The under side of the back plate or disk is provided with a recess having inwardly beveled or undercut edges 20, adapted to receive and hold the outer edges of the metal plate 3 which are caused to expand and enter the said undercut edges of the recess by being subjected to suitable pressure applied, by means of a punch or similar device, to the central portion thereof. This operation makes a strong and permanent connection between the tip and the metal plate, and through the metal plate the connection between the tip and the other parts of my device is secured.

The plate 3 is provided with prongs or fingers 4 preferably integral therewith and formed by punching up small strips of the metal at the edges of the plate. These prongs or fingers 4 are adapted to receive the edges of the plate 5, which will slide therethrough until the step 7 on said plate comes in contact with said fingers. The plate is provided with a plurality of pins or lugs 6. In the drawing they are shown as circular in cross section, but they may be square or other desired form. They are adapted to enter the notches 17 in the vertical edges of the head 15 and to prevent the plate from having any lateral or rotary movement.

The head 15 is located on the upper end of the tube 13 and closes the said tube save for the small bore 21 through which the stem 8 secured centrally to the plate 5 passes. The stem has a head or disk 9 at its opposite end and a helical spring strung thereon intermediate its end and located within the tube 13. The tube 13 is closed at its lower end by a plug 14, and is secured within the recess 12 of the cue 18 by cement or other suitable substance; the notches or scores 11 being provided for the purpose of affording a hold for the cement. The recess 12 of the cue has an enlarged portion 19 at its upper end for the purpose of accommodating the head 15. The groove 16 in the outer surface of the head is adapted to receive the inturned portions of the fingers 4 and thus provide additional security against the turning of the tip while in its normal position, and to prevent said tip from accidentally slipping off. It will be apparent that the form of this groove is not material as it is only necessary to provide some suitable recess to receive the said finger ends.

In operation, when it is desired to remove a tip and replace it, the said tip is taken hold of by the fingers and drawn out a short distance against the pressure of the spring 10 on the rod 8, which is collapsed to a certain extent by this motion, between the head or disk 9 and the head 15. After the tip has been drawn out a sufficient distance to remove the pins 6 from the notches 17, it is rotated slightly and then released.

This causes the pins 6 to come in contact with the outer surface of the head 15 and to hold the tip separated a short distance from the end of the cue and out of contact therewith. The tip may then be slipped off sideways and another one applied to the cue by sliding its fingers 4 over the edges of the plate 5 until they come in contact with the step 7. The plate 5 is then rotated by means of the tip until the pins 6 again enter the notches 17, when the expansive action of the spring 10 will cause the parts to snap into their proper position and remain in such position until removed therefrom by the fingers of the operator. It will be understood that the step 7 is so located with reference to the fingers 4 and the notches 17 with reference to the pins 6 that the application of the tip to the cue with the greatest accuracy is thereby insured.

It will also be understood that the plates 3 may be applied to the tips and the tips sold in any desired quantity to persons using cues with the improved attachment herein described. The plate, as illustrated in Fig. 4, has not been applied to the tip, and its edges are therefore disposed at an angle to the body thereof or turned in. When the said plate is applied to the tip it assumes the position shown in Figs. 1 and 2 of the drawings and is in close contact throughout its entire area with the under-side of the back plate 2 of said tip.

It will also be apparent that the under edges of the tip near the periphery are in direct contact with the outer end of the cue and that the central portions of the said tip are also in close contact with the parts of the attaching device fixed in the end of the said cue. It is important that this close contact should not be in any way impaired, and it is one of the objects of my invention to provide means for attaching and detaching the tip while at the same time preserving such contact or its equivalent.

What I claim is:

1. The combination of a cue, a tip, a connecting piece permanently secured thereto, a plate adapted to engage with said connecting piece, a stem extending from said plate into the end of the cue and rigidly connected to said plate, notches within the cue, and pins adapted to engage said notches, and means for normally holding the same in engagement. 40
2. The combination of a cue, a tip, a connecting piece permanently secured thereto, a plate adapted to engage with said connecting piece, a stem extending from said plate into the end of the cue, notches within the cue, and pins adapted to engage said notches, and means for normally holding the same in engagement. 45 50
3. The combination of a cue, a tip, a connecting piece permanently secured thereto, a plate adapted to engage with said connecting piece, a stem extending from said plate into the end of the cue, a notch within the cue, and a pin adapted to engage said notch, and means for normally holding the same in engagement. 55
4. A device of the character described comprising a tip and a cue provided with contact surfaces, a spring adapted to hold the same normally in contact and to permit the removal of the tip by manipulation of the same, and means interior to said contact surfaces for positively preventing lateral and rotary movement while the parts are in their normal position. 60
5. The combination with a tip and a cue of a connecting piece and means connected therewith for holding the parts in their normal position, said connecting piece being provided with means interior to the tip and cue for engaging the tip and cue and for positively preventing lateral and rotary movement of the cue and connecting piece with respect to each other while in normal position, the connection between the tip and said connecting piece being separable. 65 70

Witness my hand this 15th day of May 1905, at the city of New York, in the county and State of New York.

VINCENT AJELLO.

Witnesses:

S. J. CON,
ALAN McDONNELL.