No. 690,945. Patented Jan. 14, 1902.

A. J. GRAY.

GAME CUE.

(Application filed May 8, 1900.)

(No Model.) 2 Sheets—Sheet 1.

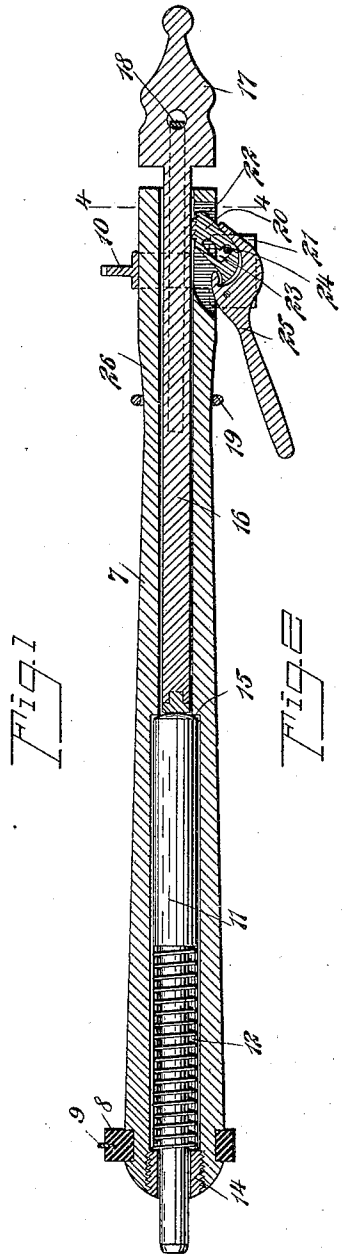


Fig. 1

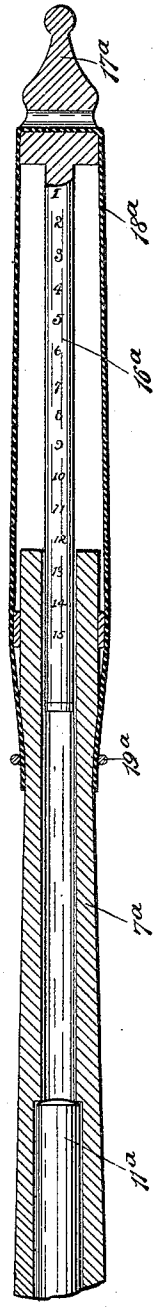


Fig. 2

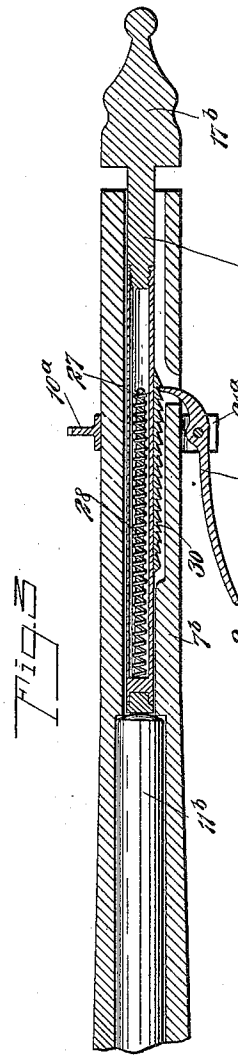


Fig. 3

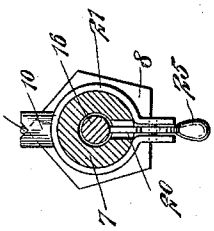


Fig. 4

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Fig. 5

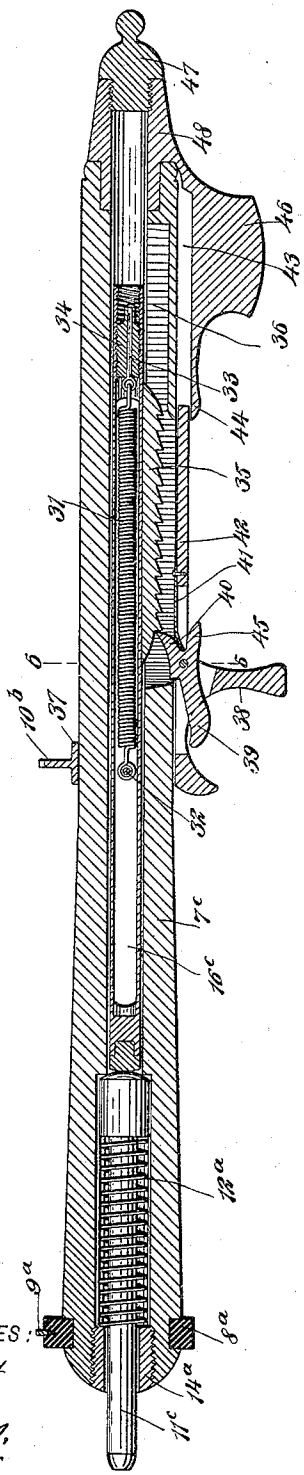
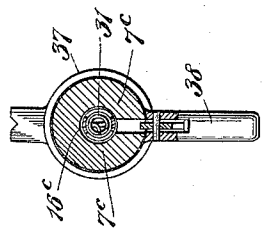


Fig. 6



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UNITED STATES PATENT OFFICE.

ALMON J. GRAY, OF PEPIN, WISCONSIN, ASSIGNOR OF ONE-HALF TO NORMAN A. GRAY, OF ST. PAUL, MINNESOTA.

GAME-CUE.

SPECIFICATION forming part of Letters Patent No. 690,945, dated January 14, 1902.

Application filed May 8, 1900. Serial No. 15,889. (No model.)

To all whom it may concern:

Be it known that I, ALMON J. GRAY, a citizen of the United States, residing at Pepin, in the county of Pepin and State of Wisconsin, have invented a new and Improved Game-Cue, of which the following is a full, clear, and exact description.

This invention relates to a cue for playing various games, the object being to provide a cue comprising a mobile striking-pin which is actuated by a hammer the force of which is derived from a spring, either metallic or rubber, as desired. With this instrument the player may hold the body of the cue perfectly stationary and upon actuating the hammer strike a blow upon a ball or other game apparatus in connection with which the cue is used.

My invention may be embodied in various forms, all of which contemplate the employment of the striking-pin and the hammer which actuates it, by which device a sharp, quick, and thoroughly-effective blow may be administered.

This specification is the disclosure of several forms of the invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal sectional view of one form of the invention. Fig. 2 is a longitudinal sectional view of a modification. Fig. 3 is a longitudinal sectional view of another modification. Fig. 4 is a cross-section on the line 4 4 of Fig. 1. Fig. 5 is a longitudinal sectional view of a further modification, and Fig. 6 is a cross-section on the line 6 6 of Fig. 5.

The cue shown in Figs. 1 and 4 comprises a barrel or body 7, provided at its forward end with a head or enlargement for the purpose of raising the outer end of the cue and elevating the striking-pin 11, projecting therefrom, out of contact with the game-board and bringing its extreme end or tip in contact with the ball or counter to be driven at or near its perpendicular center. The barrel is preferably provided near its forward end with a collar 8, of rubber or other suitable material, which may have flat surfaces which rest upon the game-board to steady the cue and keep it from slipping or sliding thereon and damaging the surface of the board. I prefer to make the collar of a yielding material to permit the operator to more readily hold the cue in place on the board. This collar also elevates the striking-pin out of contact with the game-board and causes its tip to strike the ball to be driven near its center, as referred to above. This construction of the outer end of the cue and the collar employed to elevate the end of the sliding pin and to aid in rigidly holding the cue is preferable; but I do not limit myself to the form shown herein, as it is susceptible of various modifications. The collar may be provided with a sight 9, which may be used with a companion sight 10, located near the rear end of the barrel. Within the barrel is arranged a striking-pin 11, normally retracted and held therein by an expansive spiral spring 12, bearing against a shoulder on the striking-pin, and a ferrule 14, that is secured in the end of the barrel. This spring is of sufficient tension to normally hold the striking-pin against an internal shoulder 15, provided within the barrel and which limits the inward movement of the pin and prevents it from vibrating.

A hammer 16 is arranged in the rear portion of the barrel in position to strike the pin 11 and drive the same forward to administer a blow. This hammer is provided with a finger-piece 17, which projects outside the barrel. The diameter of this finger-piece at the point where it engages the end of the barrel is preferably the same as the diameter of the barrel, and said finger-piece is preferably tapered toward its rear end, terminating in the small ball-shaped finger-grip. This construction of the finger-piece is preferable; but I do not limit myself to the form shown herein, as it is susceptible of various modifications. The finger-piece is provided near its outer end with a transverse passage, through which is extended a band 18, of rubber or other suitable material, that passes longitudinally along the barrel on opposite sides thereof, its ends being held thereon by a ring 19, of metal or other suitable material, that is adapted to slide on a tapered portion

26 of the barrel. This tapered portion is preferably enlarged toward the rear end of the barrel, so that when the ends of the band are placed within the ring the operator may slip the ring along the barrel over its tapered surface and firmly grip the ends of the band thereon. The ends of the band are thus firmly held during the extension of the same by the withdrawal of the finger-piece 17, and whenever desired the operator may move the ring toward the forward end of the cue and release the ends of the band. For holding the hammer 16 at any point in its upper position I prefer to provide a dog 20, carried by a collar 21, secured to the rear end of the barrel and fitting within a recess 22 in the barrel to permit the serrated edge of the dog 20 to engage the hammer 16. The dog 20 is preferably provided with a bayonet-slot 23 therein to receive a pin 24, carried by the collar 21 and on which the dog is mounted. The dog is thrown into active or inactive position by a finger-piece or trigger 25, pivoted in the collar 21 and having a recessed portion to receive said dog. The dog may be engaged with the hammer to hold it at any desired point and by operating the trigger may be released and permitted to fly forward and actuate the striking-pin. The hammer may be used without the dog and trigger, in which case it will be simply drawn out and permitted to instantly fly back and engage and actuate the striking-pin. Fig. 2 illustrates this construction, wherein the barrel 7^a has a striking-pin 11^a and a hammer 16^a, with its head 17^a recessed to receive a band of rubber or other suitable material 18^a, said band being secured on the barrel by a ring 19^a, as hereinbefore described. With this construction the hammer 16^a is simply drawn out and then released to permit it to fly back instantly and actuate the striking-pin. The hammer may be provided with graduations, as shown in Fig. 2, to permit the operator to regulate the force of the blow administered. It is possible to actuate the hammer by means of a metallic spring, and such an arrangement is shown in Fig. 3. Here the barrel 7^b has a striking-pin 11^b and a hammer 16^b, provided with an enlargement or head 17^b. The hammer 16^b is preferably provided with a hollow portion having a slot through which a pin 27, carried by the barrel, projects into the hollow portion of the hammer. This pin's surface has an abutment for one end of an expansive spiral spring 28, fitting within the hollow portion and having its outer or forward end in engagement with the end wall of the hammer. It is clear that when the hammer is drawn inward or away from the barrel the spring 28 will be compressed between the end wall of the hammer and the pin 27, so that when the hammer is released the expansive force of the spring will drive the hammer into the barrel to strike and actuate the pin. To hold the hammer back in position to move into engagement with the striking-pin, I may provide a finger-dog or trigger 29, mounted on a collar 21^a, encircling the barrel 7^b, said dog engaging a ratchet 30, provided on the hammer. By moving the dog or trigger into engagement with the ratchet the hammer may be held back, and when the trigger is tripped the hammer will be released and permitted to spring forward.

In Figs. 5 and 6 I have shown an arrangement by which the hammer is arranged entirely within the barrel and is moved back into position to be shot forward by a slide-pin or trigger on the barrel, which for that purpose may be engaged with the hammer. To admit of this construction, the barrel 7^c is enlarged at its forward end and provided with a collar 8^a, preferably of rubber, a ferrule 14^a, striking-pin 11^c, and spring 12^a, all substantially as heretofore described with reference to Fig. 1. The hammer 16^c is hollow and slotted on each side, as shown in Fig. 6. Within said hammer is arranged a retractile spring 31, one end of which is held by a pin 32, provided in the barrel and projecting through the slotted walls of the hammer 16^c, while the opposite end of said spring is connected with a pin 33, that is held within a block 34, that is screwed or otherwise secured within the rear end of the hollow hammer. The pin 33 turns freely in the plug and is provided with a head to limit its insertion therein and prevent twisting of the spring 31 when the plug is turned in or out to vary the tension of the spring. The hammer is provided with a ratchet-plate 35, extending longitudinally thereof and secured thereto and slidable in a longitudinally-disposed groove 36, provided on the interior of the barrel. A collar 37 is provided to slide on the barrel and carries a finger-piece 38, on which a trigger 39 is pivoted, said trigger having a dog 40 to engage the ratchet-plate 35. A spring 41 is carried by a plate 42, which forms a part of the finger-piece 38. The spring 41 actuates the trigger 39 to throw the dog 40 normally into engagement with the ratchet. The plate 42 slides in a recess 43 in the rear portion of the barrel, which is provided with a projection 44, that is adapted to engage a lip 45 on the trigger 39 when the finger-piece 38, with its attached parts, is moved rearward. Upon the engagement of the projection 44 with the lip 45 the trigger is automatically actuated to disengage the dog 40 from the ratchet-plate 35 and permit the spring 31 to drive the hammer forward and actuate the striking-pin 11^c. The rear portion of the barrel 7^c is preferably provided with an enlarged portion 46, forming a grip, and also with a cap 47 to close the rear end of the barrel. The enlarged portion 46, forming the handle or grip of the barrel, may be attached thereto by a ferrule 48, secured by any suitable means on the rear end of the barrel and provided with a suitable cap 47. With this arrangement the hammer may be drawn back and the spring 31 put under tension, so that when the trig-

ger is tripped the hammer will be instantly released and driven forward. It will be noted that the force of the blow to be administered by the hammer may be regulated by the adjustment of the finger-piece 38 with respect to the ratchet-plate 35, and it will also be noted that when the finger-piece is drawn back the dog 40 will engage the ratchet-plate, drawing back the hammer and releasing it automatically when the lip 45 engages the projection 44.

This device is useful in games of various kinds, as will be obvious to persons skilled in the art, and by this means an effective forcible accurate blow may be administered to the cue-ball, counter, or other device employed in the game.

Various changes in the form, proportions, and details of my invention may be made without departing from the spirit and scope thereof, and hence I do not wish to be confined to the specific construction herein shown and described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A game-cue, comprising a barrel, a collar having one or more flat faces provided near the forward end of said barrel, a striking member provided within said barrel and normally held out of contact with the game-board by said collar, and means for operating said striking-pin.

2. A game-cue, comprising a barrel having a tapered surface, a striking-pin, a hammer to engage and actuate said striking-pin, an elastic band connected with said hammer, and a ring slidably arranged on said barrel and adapted to clamp the ends of said band on said tapered surface, substantially as described.

3. In a game-cue, the combination, with a barrel, of a yieldingly-held striking-pin therein, a hammer slidably arranged in said barrel and spring-actuated to operate said pin, a pivoted dog having a serrated face to engage said sliding hammer, and a finger-piece for operating said dog, substantially as described.

4. A game-cue, comprising a barrel, a striking-pin, a hammer to engage and actuate said striking-pin, an elastic band connected with said hammer, and means provided on said barrel and adapted to clamp said band thereon, substantially as described.

5. In a game-cue, a barrel, a striking-pin, a hammer adapted to actuate said pin, and a flexible ring or collar provided on said barrel near said pin, for the purpose specified.

6. A game-cue, comprising a barrel, a striking-pin in the forward end thereof, a hammer for actuating said pin, and a collar provided on said barrel near said pin, for the purpose specified.

7. A game-cue, comprising a barrel having an annular groove near one end, a ring fitting therein and projecting beyond the surface of said barrel, a striking-pin, and a hammer adapted to actuate said pin.

8. A game-cue, comprising a barrel having its point of greatest diameter near one end, a striking-pin provided in said end and elevated above the game-board thereby, and a hammer in the opposite end of said barrel and adapted to actuate said pin.

9. A game-cue, comprising a barrel, a head or enlargement provided thereon near one end, said head being formed by tapering the barrel from one end toward the other, a striking-pin provided in the end of said barrel near said head and adapted to be elevated above the game-board thereby, and a spring-actuated hammer for operating said pin.

10. A game-cue, comprising a barrel, a normally-retracted striking-pin provided in the forward end thereof, a correspondingly-retracted hammer in the rear end of said barrel, a finger-piece provided on said hammer projecting through said rear end to permit the withdrawal of said hammer to adjust it in position to actuate said pin when released, and means for raising the contacting end of said pin up away from the game-board, for the purpose specified.

11. In a game-cue, the combination, with a barrel having a head or enlargement at its forward end, of a striking-pin normally retracted within said forward end and having its tip raised out of engagement with the game-board by said head and adapted to strike the counter at or near its perpendicular center, and a hammer provided in said barrel for actuating said pin.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALMON J. GRAY.

Witnesses:
E. A. MURRAY,
CLYDE MILLIREN.