(No Model.)

G. H. BURT.

PROCESS OF CONSTRUCTING POOL BALLS.

No. 545,578. Patented Sept. 3, 1895.

Fig. 1.

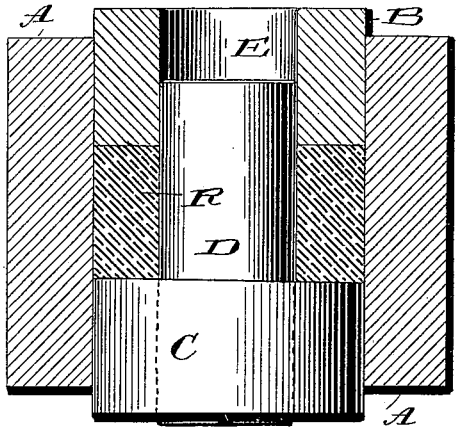


Fig. 2.

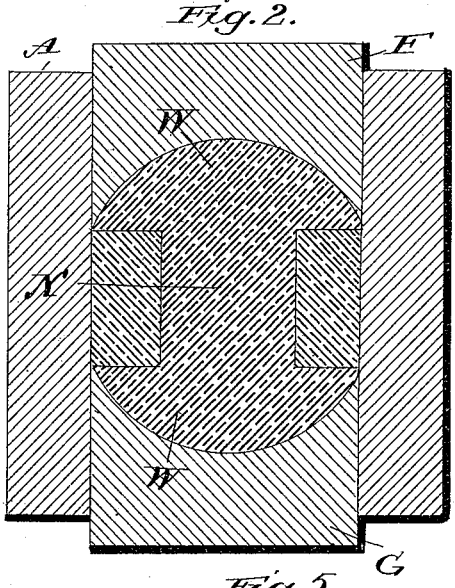


Fig. 3.

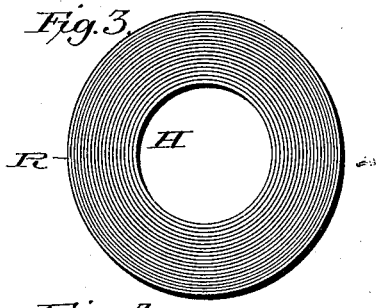


Fig. 4.

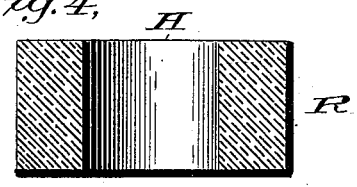


Fig. 5.

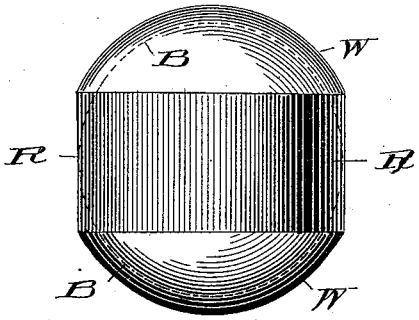


Fig. 6.

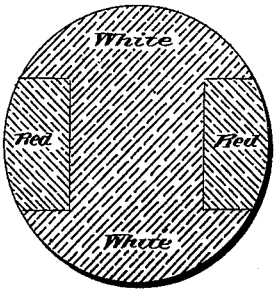
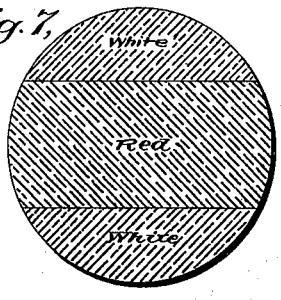


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE H. BURT, OF MILBURN, NEW JERSEY.

PROCESS OF CONSTRUCTING POOL-BALLS.

SPECIFICATION forming part of Letters Patent No. 545,578, dated September 3, 1895.

Application filed October 31, 1894. Serial No. 527,560. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. BURT, a citizen of the United States, residing at Milburn, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Processes of Constructing Pool-Balls; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates especially to improvements in pool-balls made of any suitable plastic material and prepared by subjecting such material to heat and high pressure, and its object is to effect, in as simple a manner as possible, the manufacture of such balls when constructed of materials of different colors.

The invention is clearly illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 illustrates, partly in section and partly in elevation, my improved mold, together with the material, in position for constructing the central or colored segment of the ball. Fig. 2 is a similar sectional view through the mold and a completed ball therein. Fig. 3 illustrates in plan view that portion of the ball which is shown as in process of construction in Fig. 1. Fig. 4 is a vertical sectional view taken through Fig. 3. Fig. 5 illustrates my improved pool-ball as the same appears after removal from the mold shown in Fig. 2. Fig. 6 shows in sectional view a completed pool-ball, showing the colored portions thereof. Fig. 7 is a vertical section through a modified form of pool-ball in which the ball is shown as composed of a central flat portion or disk, which forms a stripe of the ball, the white side portions being molded thereto while the material is in a powdered form.

Reference now being had to the details of the drawings by letter, A represents a mold, usually of cast-steel and of cylindrical form. B and C are movable parts fitting therein, the former being provided with an opening E, adapted to receive a neck or extension D which is integral with the upper surface of the latter, these portions being adapted to form the first or central segment of the ball. The plastic material R for this central segment is colored and is placed in the mold A, after which the movable portions B and C are inserted and the whole is subjected to a high degree of heat and hydraulic pressure, as well understood by those well skilled in the art, until the segment is compressed to the desired density. The parts B and C, together with the segment R, are then removed, said segment assuming the structure shown in Figs. 3 and 4, with a central opening H. This segment is now placed again in the mold A in the position shown in Fig. 2, and the additional plastic material W, preferably white material, carefully packed in position in the mold, after which the semispherical movable parts F and G are inserted, and these parts, together with the material, again subjected to heat and hydraulic pressure as before, thus causing the materials to assume the relative conditions shown at W and N in Fig. 2. The pressure is now removed, the parts F and G are disconnected and the ball ejected, it appearing as shown in Fig. 5. It is then placed in a turning-lathe and reduced to the required size and spherical condition, after which it is sand-papered and polished in the usual manner, the completed ball appearing as shown in cross-section in Fig. 6, the central segment being colored and the end segments being white, said white segments being united together in one integral piece by the shank N, and to the central segment as shown in Figs. 2 and 6.

I am aware that pool-balls having different-colored segments have heretofore been constructed by compression by subjecting the central segment to pressure in a mold and afterward turning dovetailed extensions upon the lateral faces thereof, finally compressing the white segments around these dovetailed extensions, as disclosed in Patent No. 507,880, granted to me October 31, 1893, and also that a pool-ball has heretofore been constructed of plastic material having a colored central segment with a hole through the central portion thereof and oppositely-disposed end segments which are held together

with a pin extending through the central or colored segment and the whole ball afterward subjected to pressure, as disclosed in my Patent No. 513,876, granted to me January 30, 1894, and in the present application I make no claim to any subject-matter shown or described in either of the patents above referred to. I do believe, however, that it is new with me to construct a pool-ball having segments of different colors by first subjecting the plastic material, which forms the central segment to pressure, and simultaneously removing a central core therefrom, so as to leave an opening therethrough, and to then subject this central segment—additional plastic material of a different color—to a second compression, whereby the two parts are united together in one integral mass, substantially as shown in Figs. 2 and 6 of the drawings.

I believe that I am the first to construct a pool-ball of different-colored plastic materials of two parts only, the one extending through the other, whereby they are united in one integral mass, and my claims are generic in this particular.

In Fig. 7 of the drawings I have shown a modification of the ball, in which the central segment is in the form of a disk having no central opening. In this case the powdered material used in the formation of the other sections is compressed, under heat and pressure, against the lateral faces of the first-named or central section.

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

1. The herein described process of constructing a pool ball, which consists in compressing a central segment and then removing a central core from the same, and finally pressing the material which forms the adjacent side segments through this central opening and causing said parts to be firmly united together.

2. The herein described process of constructing a pool ball which consists in first forming a central segment with an opening therethrough, and then compressing additional material through this opening and causing the parts to be integrally united together.

3. The herein described process of forming a pool ball having segments of different color, which consists in first compressing one segment and simultaneously forming an opening therethrough, and then forming the other segments by subjecting material of different color to additional pressure against the lateral faces of the first segment and through the central portion thereof.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE H. BURT.

Witnesses:
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LEONARD F. BOLLMAN.