No. 607,257. Patented July 12, 1898.

H. D. MARTIN.

PUZZLE APPARATUS.

(Application filed Oct. 16, 1897.)

(No Model.)

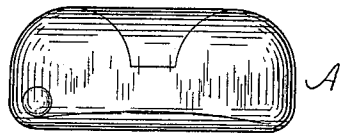

Fig. 1.

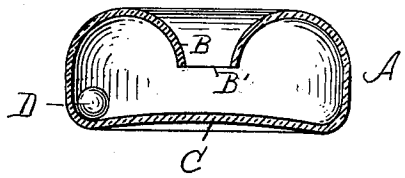

Fig. 2.

WITNESSES

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PUZZLE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 607,257, dated July 12, 1898.

Application filed October 16, 1897. Serial No. 655,422. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. MARTIN, a citizen of the United States, residing at Shirley, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Puzzle Apparatus, of which the following is a specification.

This is a puzzle or game apparatus belonging to that class in which a ball freely rolling by gravity is employed. In my device the ball is inclosed in a receptacle of the peculiar shape below described, such receptacle being, preferably, of transparent substance; and the puzzle consists in releasing the ball from the receptacle through the only opening or outlet therein without the use of any appliance. This may be done by a chance movement of the receptacle, or it may be accomplished scientifically by working the ball directly under the opening and then suddenly lowering the receptacle vertically away from the ball.

The nature of the invention is fully described in detail below, and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of my improved device. Fig. 2 is a central vertical section of the same.

Similar letters of reference indicate corresponding parts.

A represents a receptacle or bottle made, preferably, but not necessarily, of transparent glass. This is formed into the shape shown, in which its upper surface is provided with an inverted or reversed neck B—that is to say, a neck which is, so to speak, like the neck of a bottle turned "outside in." This neck, therefore, has its outlet B′ facing downward and extending centrally into the receptacle or bottle, thus providing a tubular mouth or passage flaring away from its lower end. The bottom of the receptacle is formed up centrally at C, so as to be convex on its upper surface, the highest point of the convexity being directly under the center of the opening B′. A free ball D, which may be of any desired shape, but is preferably round, or approximately so, lies within the receptacle. The diameter of the ball is usually almost as great as that of the opening B′.

The game or puzzle is to so move the bottle or receptacle as to free the ball therefrom and cause it to pass through the opening or mouth B′. This may be accomplished by shaking about the receptacle in different directions until the ball happens to pass through the opening. The scientific method is to tip that side containing the ball up slightly and then tap the receptacle or bottle on the opposite side until the ball has moved in a substantially straight line to the exact center—that is to say, to the highest point of the bottom C. Then suddenly drop the receptacle vertically away from the ball, so that, relatively speaking, the ball passes through the mouth B′ and out of the bottle.

The device, as shown in the drawings, is round and is of a convenient shape to carry in the pocket. I do not confine myself, however, to a circular shape nor to the relative depth shown. While a transparent substance is preferable, the device will operate if the receptacle or bottle is made of opaque material. As many balls may be employed as desired.

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

1. In a puzzle apparatus, the receptacle or bottle A provided with a downwardly-extending reversed neck or tube B with its lower end or mouth B′ opening into the bottle or receptacle; and a ball as D within said receptacle and adapted to move freely therein, the diameter of said ball being no greater than the diameter of said mouth, substantially as described.

2. In a puzzle apparatus, the receptacle or bottle A provided with a downwardly-extending reversed neck or tube B the lower end or mouth B′ of which opens into the bottle or receptacle over the center of the bottom thereof, the bottom of said receptacle being formed up centrally so that its highest point is directly beneath the center of said mouth; and a ball as D within said receptacle and adapted to move freely therein, the diameter of said ball being no greater than that of said mouth, substantially as set forth.

HENRY D. MARTIN.

Witnesses:
HERBERT V. MARTIN,
JONAS LONGLEY.