

No. 679,782.

Patented Aug. 6, 1901.

G. L. REENSTIERNA.
PUZZLE.

(Application filed Nov. 22, 1900.)

(No Model.)

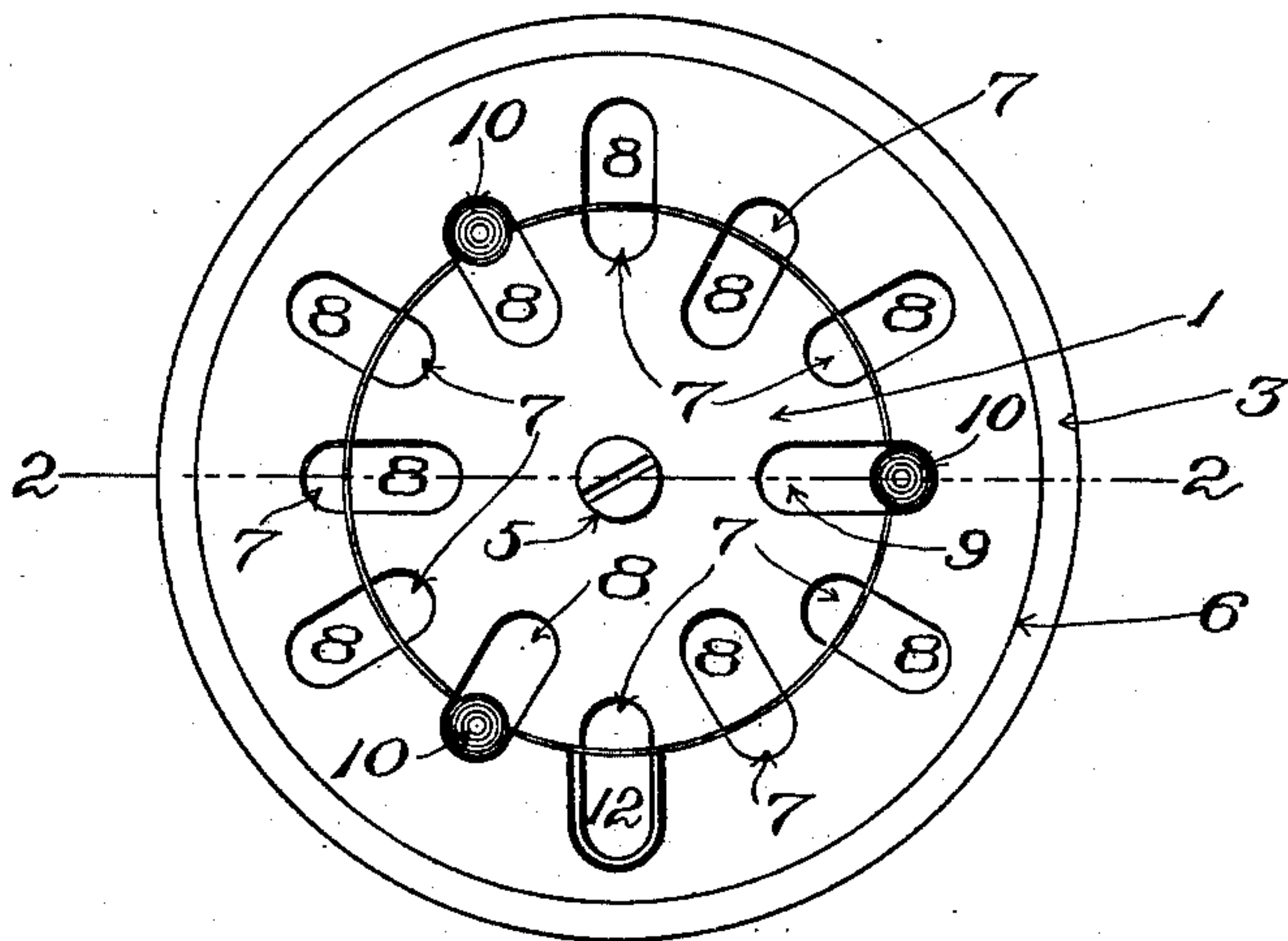


Fig. 1

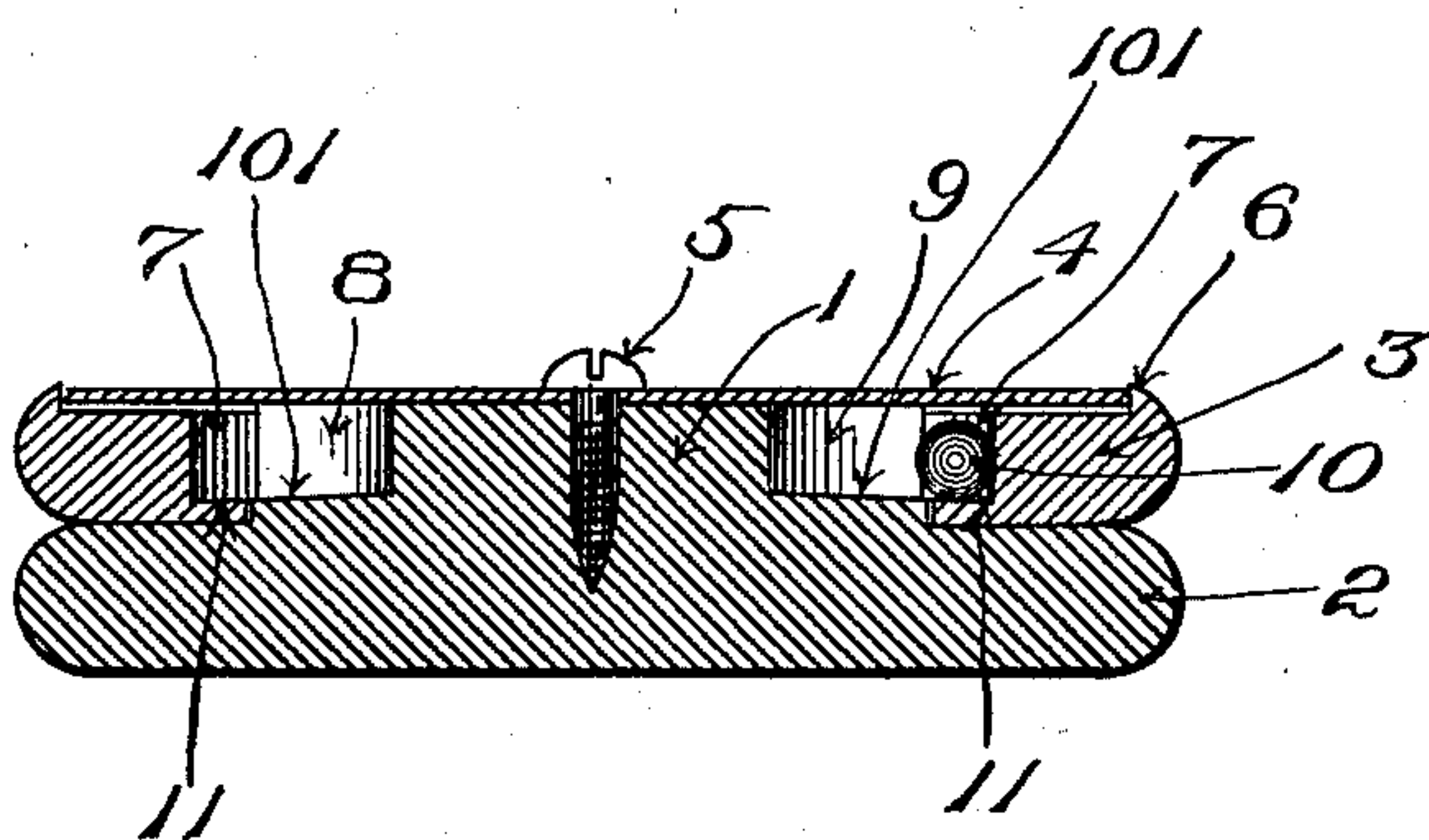


Fig. 2

Witnesses

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UNITED STATES PATENT OFFICE.

GUSTAF L. REENSTIERNA, OF WINCHESTER, MASSACHUSETTS.

PUZZLE.

SPECIFICATION forming part of Letters Patent No. 679,782, dated August 6, 1901.

Application filed November 22, 1900. Serial No. 37,339. (No model.)

To all whom it may concern:

Be it known that I, GUSTAF L. REENSTIERNA, a citizen of the United States, residing at Winchester, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Puzzles, of which the following is a specification, reference being had therein to the accompanying drawings.

In the drawings, Figure 1 is plan view of the puzzle. Fig. 2 is a section thereof on the line 2 2 of Fig. 1.

In generic terms the puzzle may be described as consisting of a circular block with peripheral cavities, a ring rotatable on the block and having corresponding cavities, and a plurality of balls located in the cavities and adapted to be shifted by rotation of the ring. Thus in the drawings 1 designates the circular block, which is provided with a base 2 of larger diameter than the block proper. The whole block, including the base, may be molded together from papier-mâché or may be otherwise formed as appears most desirable. Resting on the base, but free to rotate thereon and making approximate contact with the edge of the block, is the ring 3. In order to retain the ring upon the block, a disk 4 of transparent celluloid or the like is placed upon the upper surface of the block and secured thereon by a screw 5, entering the block centrally. The ring will preferably be provided with a raised rim 6 to protect the edge of the celluloid disk. The disk aids in preventing the ring from assuming an eccentric position and binding on the block. In the periphery of the block and correspondingly in the ring are formed cavities 7 8 9, which are adapted to be brought into registration with each other by rotation of the ring. In certain of these cavities balls 10 are placed, three of such balls being shown herein. The general object of the puzzle is to shift the balls into a certain specified cavity or certain specified cavities by means of skilfully rotating the ring on the block. This object is rendered difficult of accomplishment by reason of the fact that certain cavities (herein designated 7) are not deep enough to receive a whole ball, while other cavities (designated 8) are more than deep enough to receive

one ball, but not deep enough to receive two balls—that is to say, when a cavity 7 in the ring is brought into registration with a cavity 8 in the block, or vice versa, a single ball located in the latter cavity will not be able to pass wholly into the former, but will remain projecting across the contact-line between the ring and block, and consequently will temporarily lock the former from rotation on the latter.

In the illustrated embodiment the same number of cavities are provided in both the ring and block, and in each the deeper and shallower cavities alternate, so that in one position of the parts (shown in the drawings) the deeper cavities in the ring register with the shallower cavities in the block, and vice versa. It will be obvious, however, that other relative arrangements of the cavities might be made without essentially changing the nature of the puzzle.

In order to render still more difficult the manipulation of the puzzle, the bottoms of the deeper cavities 8 are made sloping downward from the rear or closed ends to the front or open ends thereof, as shown at 101. Preferably the slope is continued in the formation of the bottoms of the shallower cavities, as at 11. Thus the balls are caused to run toward the shallower cavities 7 when the puzzle is held in a horizontal position, and thereby to lock the ring from rotation, as already explained.

In the contemplated use of the puzzle it is intended that all three of the balls shall be brought into line with one particular cavity in the ring, herein marked by a border-line and designated 12—that is, that such balls shall at one and the same time be contained in the continuous cavity formed by bringing the marked cavity in the ring opposite the proper cavity in the block. To effect this special result, one of the deeper cavities in the block, as 9, is made slightly deeper than the rest, so that it will completely hold two balls at one and the same time. The slight difference in the depth is not readily distinguishable. By skilful manipulation of the puzzle one of the balls may be put into the marked cavity, the other two balls may be successively loaded into the cavity 9, and,

finally, the two cavities are brought into registration with each other, thereby accomplishing the result sought.

I claim—

- 5 1. In a puzzle, the combination of a plurality of movable pieces, a circular block with peripheral cavities, certain of which are less deep than one of such pieces, others thereof being deeper than one piece but less in depth
10 than two pieces, and a ring rotatable on the block and having corresponding cavities, one of said parts having also a cavity sufficiently deep to receive two pieces, substantially as described.
- 15 2. In a puzzle, the combination of a plurality of balls, a circular block with peripheral cavities of different depths, certain of which are less deep than one of the balls, others thereof being deeper than one ball but less
20 in depth than two balls, and a ring rotatable on the block and having corresponding cavities, one of said parts having also a cavity sufficiently deep to receive two balls, substantially as described.
- 25 3. In a puzzle, the combination of a plurality of balls, a circular block with peripheral

cavities of different depths, certain of which are less deep than one of the balls, others thereof being deeper than one ball but less in depth than two balls, the deeper cavities
30 having sloping bottoms, and a ring rotatable on the block and having corresponding cavities, one of said parts having also a cavity sufficiently deep to receive two balls, substantially as described.

35 4. In a puzzle, the combination of a plurality of balls, a circular block with peripheral cavities some of which are too shallow to wholly contain one ball, others relatively deep to contain one ball but not quite contain a
40 predetermined number greater than one, and a ring rotatable on the block and having corresponding cavities, one of such parts having also a cavity slightly deeper than the rest to contain the said predetermined number of
45 balls, substantially as described.

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

GUSTAF L. REENSTIERNA.

Witnesses:

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