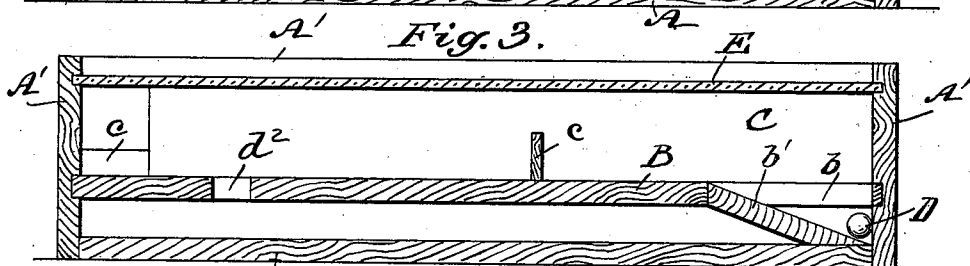
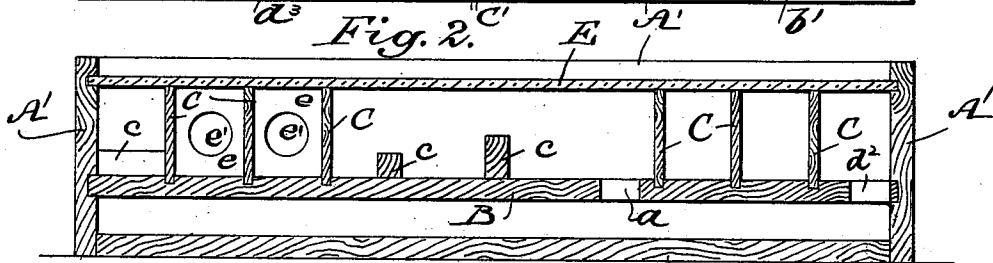
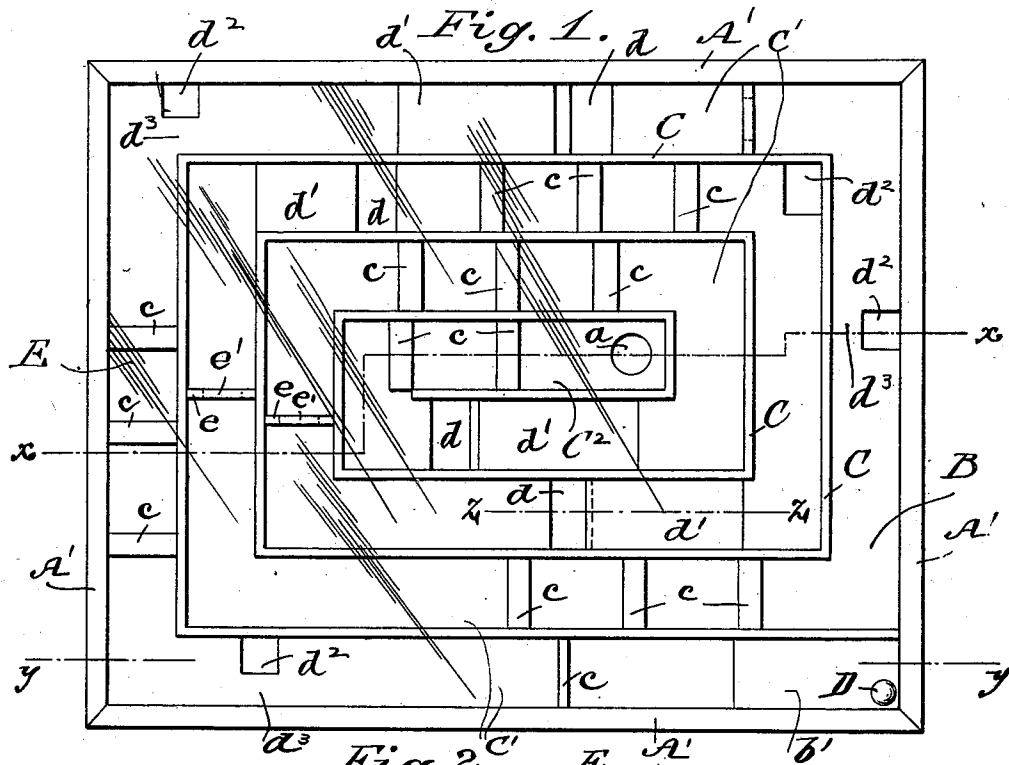


(No Model.)

A. H. KOELLER.
PUZZLE.

No. 540,917.

Patented June 11, 1895.



WITNESSES:
John H. Deemer
Ray J. Griffith

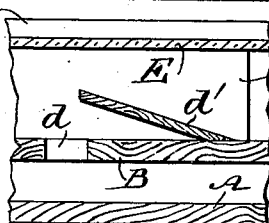


Fig. 4. INVENTOR
C. Alfred Koeller
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ATTORNEYS

UNITED STATES PATENT OFFICE.

ALFRED HERMAN KOELLER, OF NEW YORK, N. Y.

PUZZLE.

SPECIFICATION forming part of Letters Patent No. 540,917, dated June 11, 1895.

Application filed November 17, 1894. Serial No. 529,115. (No model.)

To all whom it may concern:

Be it known that I, ALFRED HERMAN KOELLER, a citizen of the United States, and a resident of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Puzzles, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts in all the figures.

This invention relates to puzzles and has for its object to provide a simple, cheap and readily constructed device which will comprise a continuous or winding passage leading to a central opening or goal, through which passage a ball is rolled, with interspersed barriers in imitation of hurdles, inclined guards with openings behind, in imitation of fences and ditches, and vertical blocking partitions with apertures extending therethrough, in imitation of thickets, a casing to prevent the ball from leaping over the frame or walls of the passage or over the thicket partitions; and a false bottom to return the ball to its starting place.

The invention consists in the novel construction and arrangement of parts whereby the above-mentioned and other desirable results are attained and hereinafter more fully described.

In the accompanying drawings, Figure 1 is a plan view of a puzzle embodying my invention. Fig. 2 is a longitudinal vertical section thereof on the line $x x$, Fig. 1. Fig. 3 is a similar section on the line $y y$, Fig. 1. Fig. 4 is a detail sectional view on the line $z z$, Fig. 1.

In the practice of my invention, I construct a rectangular base-piece A, with four upwardly projecting sides A', in which, somewhat above said base, I insert a false bottom B. To the upper surface of this false bottom B, I secure or sink therein a winding angular partition or wall C, commencing at one end of the box where it abuts against the side A' and extending at equal distance from the sides of the box or from the next adjacent section of said wall C, to form a continuous equi-diametrical passage C'. The said wall ends at the approximate center of the false bottom, where it forms a terminal recess C²,

at the inner or closed end of which is an aperture a , communicating with the interior of the box between said false bottom and the base A. Between the outer or initial end of the wall C, and the next adjacent parallel or front side A' is an oblong opening b , formed in the false bottom B, projecting downward from which is a short inclined plate or guide b' , extending toward the corner of the box and beveled to reach an approximate level with the base A. In this passage C' I place a ball or other rolling or movable body D, and in order to confine said ball in the passage and prevent its leaping the wall C, I secure in the sides A', preferably in close contact with said wall, a glass cover E. At intervals, in each section or branch of the passage C', I secure to the false bottom B barriers or upwardly ranging vertical projections c , of varying heights, representing hurdles and preferably extending from the sides A' to the wall, or from one section of said wall to another, to prevent the ball D from rolling around the same at either side. I also form in said bottom B openings d through which the ball may fall, representing ditches, and as the said openings extend wholly across the passage, I secure in front of the same inclined planes or guards d' representing fences and serving to prevent the puzzle from being too difficult of accomplishment. I also form at intervals, openings d^2 , arranged against one of the sides A' or branches of the wall C, thereby leaving an adjacent path d^3 for the ball; and as the tendency of said ball on the turn or bend of the wall is to seek the corner, the openings d^2 may be formed at one or all of said corners, as shown.

In one or more of the branches of the passage C', I secure vertical partitions e wholly closing said passage at such point or points, except for a central aperture e' therein, through which the ball D may be passed, which said apertured partitions represent thickets.

The operation of the device will be readily understood from the foregoing description taken in connection with the accompanying drawings. The ball D resting upon the guide b' at the starting point, as shown in Fig. 3, is caused to roll through the passage C' toward the center, the box being oscillated, inclined

and shaken vertically, to cause the ball to traverse said passage, leaping over the barriers *c*, rolling upwardly over the inclined guards *d'* to clear the openings *d*, through the paths *d*³ to pass the openings *d*², and through the apertures *e'* in the blocking partitions *e*, until the terminal *C*² is reached, in which also the barriers *c*, are placed the ball eventually dropping through the aperture *a* at the closed end thereof to the base *A*, when the puzzle or game is won or accomplished, whereupon the ball is rolled to the starting point and upon the guide *b'*. Should said ball fall through the openings *d* or *d*², it is similarly returned to the starting point, as the game must then be re-commenced, the object being to accomplish a continuous and uninterrupted traversing of the passage *C'*; and as the ball in leaping over the barriers and through the partitions *e* not infrequently given such movement as to propel it directly into or toward the openings, some skill is necessary to successful operation of the puzzle. It is to be

understood that the obstacles need not necessarily be considered as hurdles, ditches, and thickets, and I claim the general features of inventive construction embodied in this puzzle irrespective of their specific form or arrangement.

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

A device of the class described, comprising a board having a raised edge and a rectangular spiral wall within said edge, forming a similar passage to the center of the board, a series of inclines in said passage, and an opening in the board adjacent the upper edge of each incline.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two witnesses.

ALFRED HERMAN KOELLER.

Witnesses:

FRANK M. WEST,
JOHN J. SCULLY.