

(No Model.)

J. W. HALE.
PUZZLE APPARATUS.

No. 423,381.

Patented Mar. 11, 1890

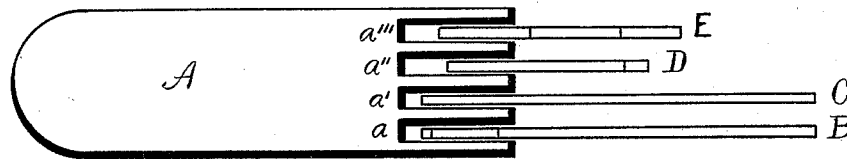


Fig. 1.

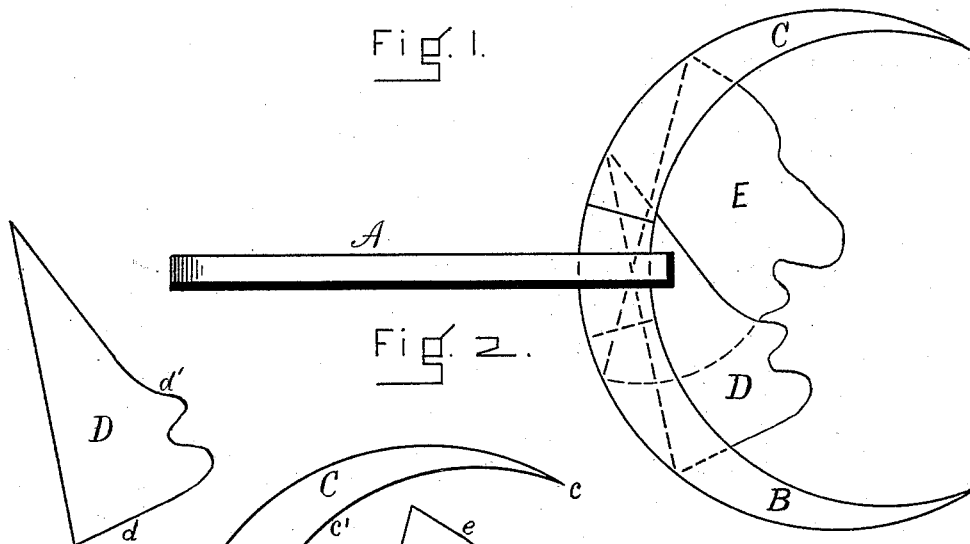


Fig. 2.

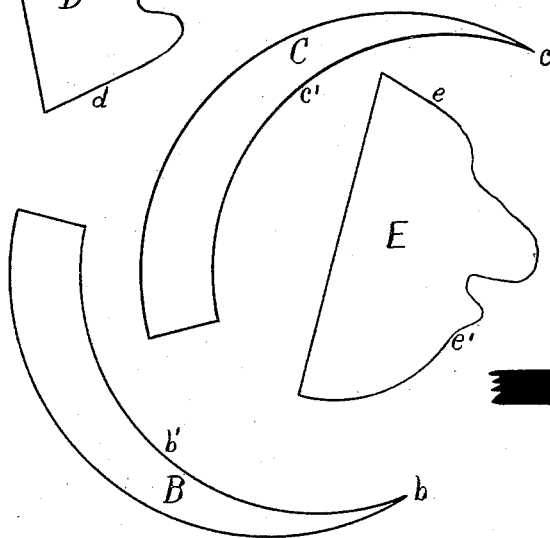


Fig. 3.



Fig. 4.

WITNESSES

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PUZZLE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 423,381, dated March 11, 1890.

Application filed December 14, 1889. Serial No. 333,775. (No model.)

To all whom it may concern:

Be it known that I, JAMES WHITE HALE, of Newburyport, in the county of Essex and State of Massachusetts, have invented a new and Improved Puzzle Apparatus, of which the following is a specification.

In this device a number of pieces of card-board or other suitable material are adapted to be assembled and supported in notches provided in a handle or support with the effect that when arranged properly with relation to each other they are capable of casting a shadow which will be a representation of a particular design or object, such figure or object illustrating the solution of the puzzle. A portion (or portions) of the perimeter of each piece forms, when the pieces are properly assembled, a portion of the outline of the figure to be represented by the shadow cast; and to so assemble the pieces with relation to each other that the effect will be to cast a shadow which will represent perfectly the design or object desired is the puzzle.

In order to illustrate my invention, I have selected a design or representation of the "man in the moon." (Of course any other would answer equally well.)

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a plan view of my puzzle apparatus with the parts arranged so as to cast a shadow which will represent the man in the moon. Fig. 2 is a side elevation of the same. Fig. 3 is a view of the pieces employed and assembled in Figs. 1 and 2 separated. Fig. 4 represents the shadow cast by the device as arranged in Figs. 1 and 2.

A represents a handle or support constructed of wood or other suitable material and with its end provided with notches sufficient in number to receive the pieces below described. In this instance these notches are four in number a a' a'' a''' .

B, C, D, and E are the different pieces which are to be placed in the notches.

In order to cast the desired shadow, the

pieces B and C are placed, respectively, as shown, in the notches a and a' , and the pieces D and E are placed, respectively, as shown, in the notches a'' and a''' . Of course the puzzle consists in first selecting the proper notches for the pieces and next in moving them up, down, forward, back, and rotatively therein until the proper effect is produced. It will be seen that the outline of the shadow is produced by the convex edge of the piece B, the convex edge of the piece C to the point where it underlaps the piece B, the concave edge of the piece B from b to b' , the concave edge of the piece C from c to c' , the edge of the piece D from d to d' , and the edge of the piece E from e to e' . The other portions of the perimeters of the pieces (shown mostly in broken lines in Fig. 2) cast no shadow, and hence may be made of any shape desired and calculated to mislead or puzzle the person using the device.

It will readily be seen that almost any design may be selected and as many pieces used as desired to produce the effect in shadow, or pieces could be so formed as to produce more than one design.

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

A puzzle apparatus consisting of a number of pieces of card-board or other material formed into such relative shapes that when the said pieces are assembled in the manner described and so placed as to cast a shadow a portion of the perimeter of each piece will produce and correspond with a portion of the outline of the said shadow, thereby producing a given design or shape in shadow, and a handle provided with means for supporting said pieces in their proper relation, substantially as set forth.

JAMES WHITE HALE.

Witnesses:

LUCY B. HALE,
CHARLOTTE E. MACE.