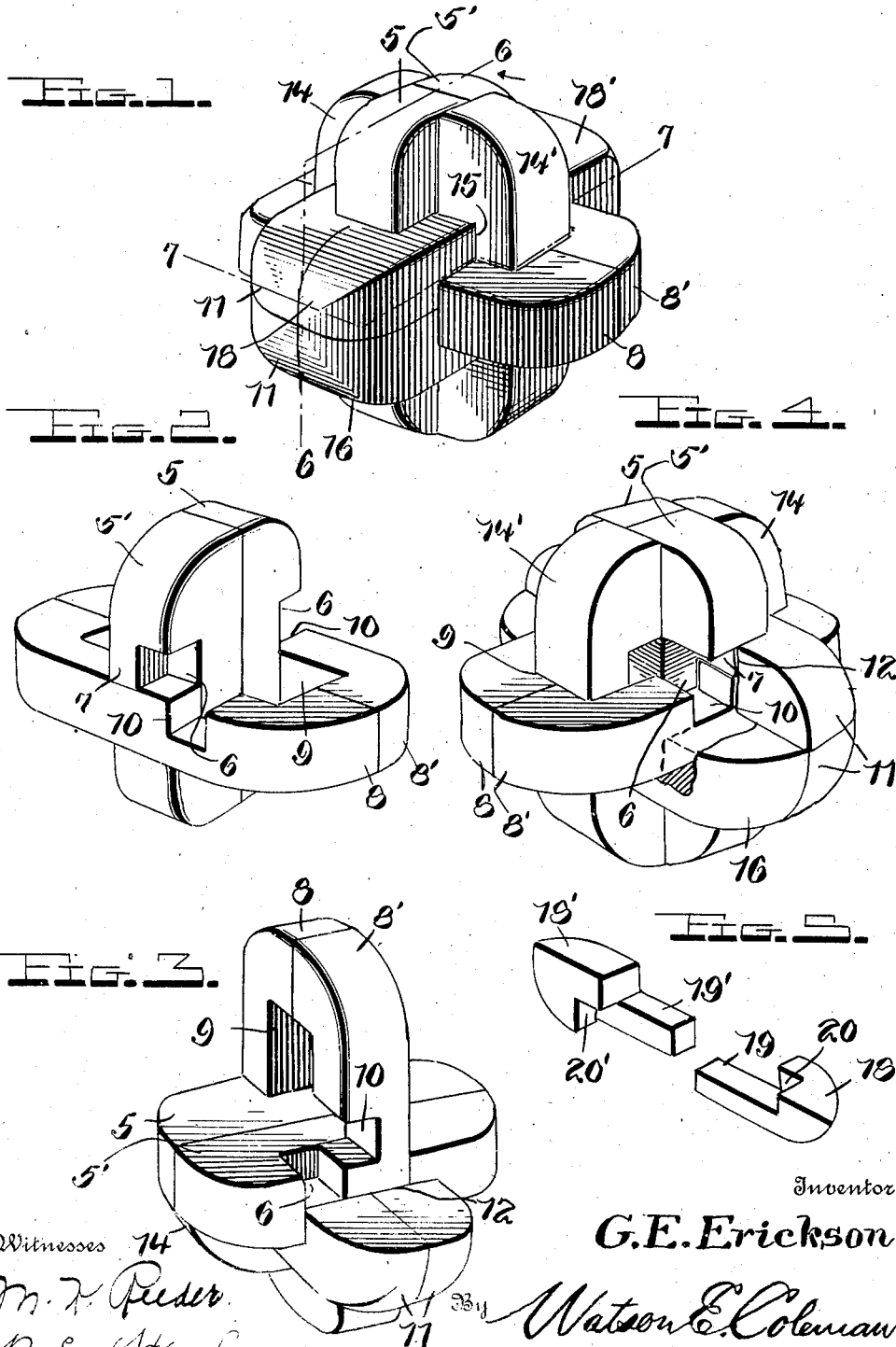


G. E. ERICKSON.  
 PUZZLE.  
 APPLICATION FILED AUG. 10, 1910.

985,253.

Patented Feb. 28, 1911.

2 SHEETS—SHEET 1.



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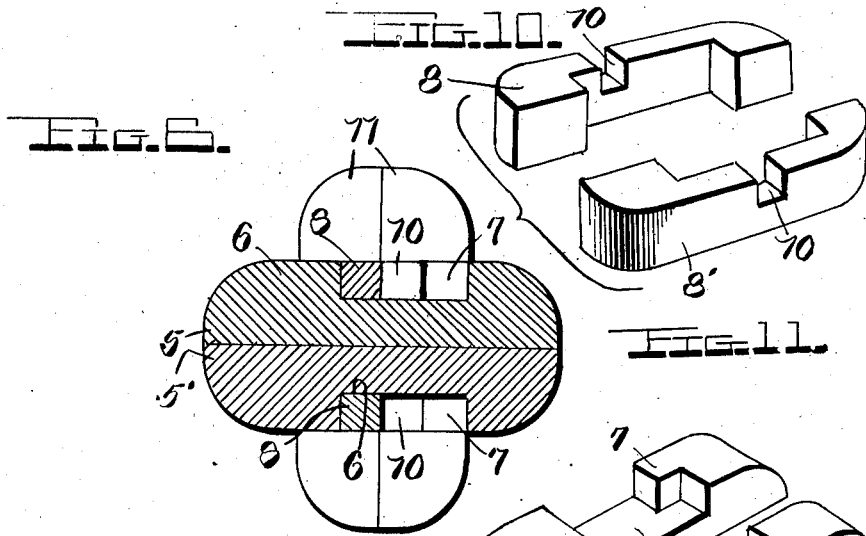


Fig. 6.

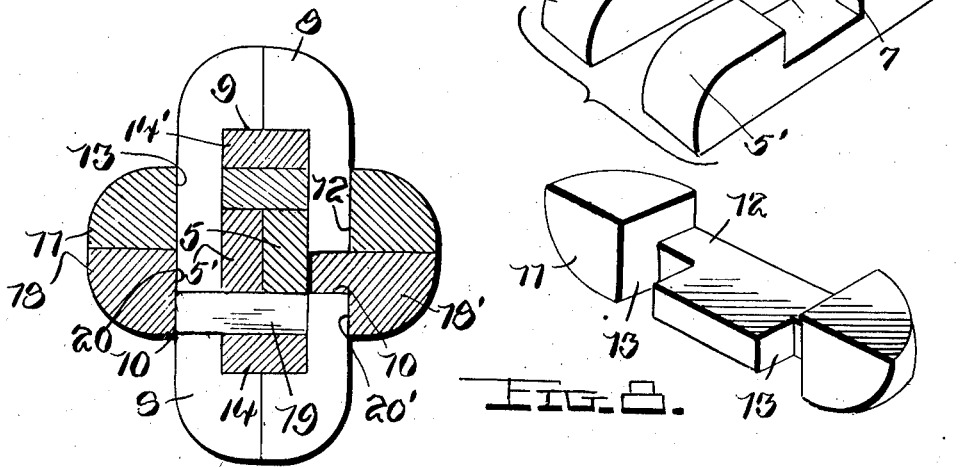


Fig. 7.

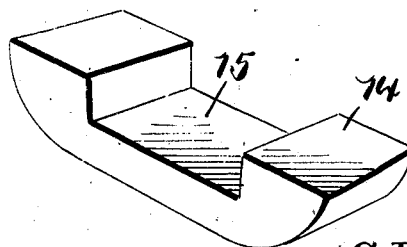


Fig. 9.

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# UNITED STATES PATENT OFFICE.

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## PUZZLE.

985,253.

Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed August 10, 1910. Serial No. 576,461.

*To all whom it may concern:*

Be it known that I, GUSTAF E. ERICKSON, a citizen of the United States, residing at Iron Mountain, in the county of Dickinson and State of Michigan, have invented certain new and useful Improvements in Puzzles, of which the following is a specification, reference being had to the accompanying drawings.

10. This invention relates to an improved puzzle and more particularly to puzzles of that character commonly known as "block puzzles".

The object of the present invention resides in the provision of an exceedingly perplexing and intricate puzzle of the above character which will provide a severe test for the ingenuity of one attempting to solve the same, and consists of a plurality of blocks or bars formed with co-engaging mortises and lugs, and a sectional key block adapted when properly fitted with the assembled blocks or bars to lock the whole together and form a symmetrical geometrical figure.

A further object of the invention is to provide a puzzle which may be manufactured at a slight cost and one which will afford considerable amusement and pleasure, while at the same time it is sufficiently difficult of solution to require considerable manipulation of the various elements before success is obtained.

With these and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

40 Figure 1 is a perspective view of a puzzle constructed in accordance with the present invention, showing the parts assembled. Figs. 2, 3 and 4 are similar views illustrating successive steps in the solution of the puzzle. Fig. 5 is a detail perspective view of the sectional key block. Fig. 6 is a section taken on the line 6—6 of Fig. 1. Fig. 7 is a section taken on the line 7—7 of Fig. 1. Figs. 8 and 9 are detail perspective views of certain of the puzzle blocks, and Figs. 10 and 11 illustrate detail perspective views of the pairs of blocks 5, 5<sup>a</sup> and 8, 8<sup>a</sup> respectively.

Referring more particularly to the drawing 5, 5<sup>a</sup> indicate the two base pieces upon which the puzzle structure is adapted to be built. These base pieces are provided in

their outer edges with the mortises or recesses 6, and a lug 7 is also formed on each base piece and extends into one end of the recess 6. In assembling the blocks, the base pieces are adapted to be arranged with their plane surfaces together, as clearly shown in Fig. 2. The first step in the assemblage of the puzzle blocks is to arrange the pieces 8, 8<sup>a</sup> in the mortises 6 of the base blocks 5, 5<sup>a</sup>. The opposed faces of the pieces 8, 8<sup>a</sup> are longitudinally recessed or cut-away, as shown at 9, the said cut-away portions extending substantially one half of the thickness of the block and terminating a short distance from each end thereof. One edge of the pieces 8, 8<sup>a</sup> is notched, as indicated at 10. These notches are adapted to receive portions of suitable key pieces whereby the several blocks are held in their assembled positions, as will be more fully hereinafter set forth. After these four pieces have been arranged, as shown in the drawing, the two similar blocks 11 are next placed in position. These blocks are cut-away longitudinally, as shown at 12, in a similar manner to the blocks 8, 8<sup>a</sup> and in these cut-away portions of said blocks 11, the base blocks 5, 5<sup>a</sup> are received. The blocks 11 are, however, unlike the blocks 8, 8<sup>a</sup> also cut out or mortised longitudinally between their ends in their opposed edges, as shown at 13. In the ends of these cut-away edges the blocks 8, 8<sup>a</sup> are disposed, the end portions of the blocks 11 extending upon the outer faces of the blocks 8, 8<sup>a</sup>. The next step in the formation of the figure is illustrated in Fig. 4 and consists in the placing of the block 14 in position between the opposed inner cut-away faces of the blocks 8, 8<sup>a</sup> and beneath the base pieces 5, 5<sup>a</sup> and the blocks 11, the said block 14 being also longitudinally cut-away upon one face, as indicated at 15, to receive the blocks 11, the ends of the cut-away faces of the blocks 14 abutting closely against one side of the base pieces 5, 5<sup>a</sup>. The last step in assembling the puzzle is the insertion of the block 14', similar in all respects to the aforementioned block 14, between the opposed inner cut-away faces of the blocks 8, 8<sup>a</sup> at their upper ends. Before the insertion of the block 14' in position, the block 16 is seated in one end of the cut-away face 15 of the block 14' and moves inwardly upon the faces of the base blocks 5, 5<sup>a</sup> as the block 14' is moved to position. This movement of the block 14' positions the ends of the blocks 16

upon the ends of one of the blocks 11 when the extremities of the base blocks 5, 5<sup>a</sup> and the blocks 14 and 14' are disposed in line. It will be seen from reference to Fig. 4 of the drawing that when the pieces are assembled, as has been thus far described, a portion of the cut-away face of the block 14', the cut-away sides 6 of the base blocks 5, 5<sup>a</sup> into which the lugs 7 extend, and the notches 10 of the blocks 8, 8<sup>a</sup> are exposed or have no parts of other blocks engaged therewith. Into these mortises a sectional key block is adapted to be fitted to lock the whole structure together and prevents its accidental disassemblage. For convenience in description, I have designated these key pieces 18 and 18' respectively. The piece 18 is formed with a rectangular lug 19 and an L-shaped recess 20 in the key piece at the juncture of the lug 19 therewith. This lug 19 is adapted to be inserted into the notch 10 of the block 8 and to be received in the inner portion of the cut-away face of the block 14'. The reduced end portion of the body of the key section 18 fits into the end of the cut-away side 6 of the base block 5, the recess 20 receiving the block 8. The other of the key sections 18' is also formed with a lug 19' and a recess 20'. The lugs and recesses on the latter key section are formed upon opposite portions thereof to those of the first described section. The lug 19' is inserted into the end of the cut-away face 15 of the block 14' from the opposite side of said block to the key section 18, said lug entering between the base blocks 5, 5<sup>a</sup> and the block 14' upon one side of the lug 19 of the key section 18 with which it closely engages. The body of the key section 18' fits into the notch of the member 8<sup>a</sup> and the recessed portion of the base block 5<sup>a</sup> in a similar manner to the other key section. The insertion of these key sections completes the assembling of the various puzzle blocks, and it will be seen that owing to the provision of the large number of recesses and lugs, a very confusing array of plane surfaces is provided, the interengagement of which is a matter requiring considerable study. In order to provide a symmetrical figure resembling somewhat a ball in general outline, the ends of the various puzzle blocks are curved or rounded. It will be obvious, however, that this forms no essential feature of the invention and that the ends of the blocks may be otherwise formed if found desirable. It will be noted that the blocks 8, 8<sup>a</sup> engage over the blocks 14 and 14', and the blocks 11, 16 and the key sections 18 and 18' engage over or embrace the blocks 8, 8<sup>a</sup>. The ends of the blocks 14 and 14' also extend over the edges of the blocks 11 and 16 and the key sections. Thus each of the blocks acts to hold one of the other blocks in its assembled

position, while, by the insertion of the key sections, they are all closely united.

From the foregoing, it is believed that the construction and manner of assembling the device will be readily understood. The puzzle is one which may be manufactured at a slight cost and yet is sufficiently difficult to those who are not familiar with the manner of assembling the same, to afford a very intricate puzzle and one which will severely test the ingenuity.

Having thus described the invention what is claimed is:—

1. A block puzzle comprising a plurality of interfitting blocks consisting of two base blocks adapted to be arranged upon each other in opposed relation, the outer edges of said blocks being longitudinally recessed, other blocks adapted for engagement in the recesses of the base blocks and for engagement with each other, additional blocks engaging said base blocks and the last named blocks, and a key block adapted to be fitted between the base blocks and certain of the other blocks and having portions engaging in one end of the recesses in the base blocks to lock the blocks in their co-engaged relative positions.

2. A block puzzle comprising a plurality of rectilinear blocks including several base blocks arranged in opposed relation and each having a recess in its outer longitudinal edge and a lug extending into one end of the recess, blocks arranged at right angles to the base blocks and engaging with the lugs thereof, the said latter blocks being notched, other blocks provided with longitudinal recesses in oppositely extending faces thereof for engagement with the base blocks and said notched blocks, blocks arranged between the opposite faces of the base blocks and the ends of the notched blocks, the said latter blocks having one of their edges longitudinally recessed, and a sectional key block adapted to be inserted between the latter blocks and the base blocks and into the notches of said notched blocks to lock said blocks together in their relative assembled positions.

3. A block puzzle comprising a plurality of blocks adapted for arrangement in co-engaged pairs to form substantially a rectangle in cross section, one of said blocks being formed in two sections and comprising a key, two separate pairs of blocks extending through the first named blocks at right angles thereto and at right angles to each other, and other blocks provided with recesses for engagement over the first named pairs of blocks and upon the faces of one of said last named pairs of blocks, the blocks of the other of said last named pairs having their ends engaged over the last mentioned blocks and upon each other, said sectional key block of the first named pairs of blocks

engaging with each of the aforementioned blocks to closely unite the same.

4. A block puzzle comprising base blocks adapted to be arranged upon each other, 5 other blocks adapted to be disposed upon opposite faces of the base blocks and over their engaged edges, said latter blocks and the base blocks being provided with recesses, a plurality of blocks to be received in said re- 10 cesses and extending at right angles to the aforesaid blocks, said last named blocks being also recessed, additional blocks ex-

tending through said recesses and the recesses of the base blocks and engaging over the second named blocks, and a key block 15 engaging each of said blocks to lock the same in their assembled positions.

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

GUST. E. ERICKSON.

Witnesses:

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ROSE D. RAYOME.