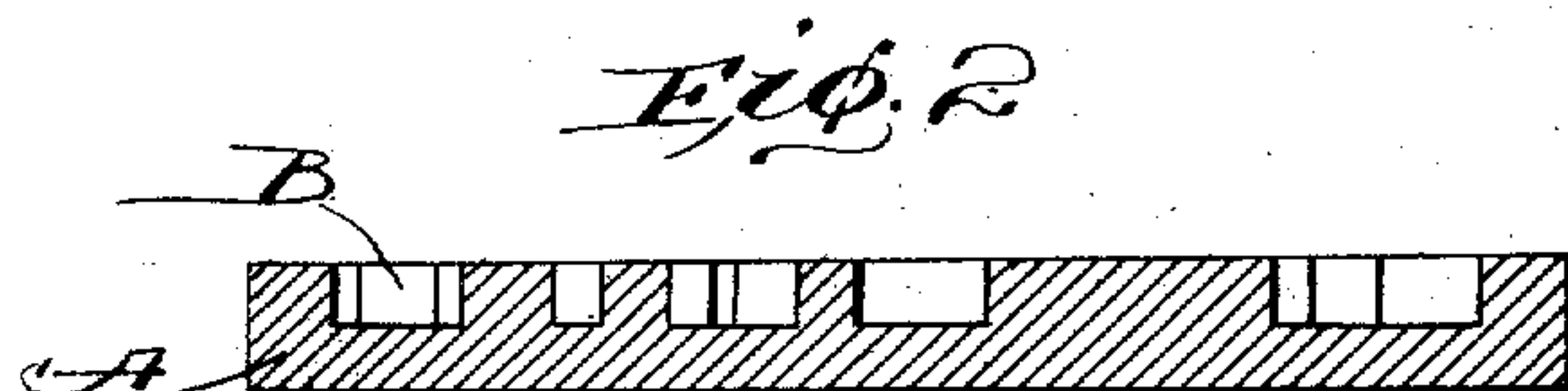
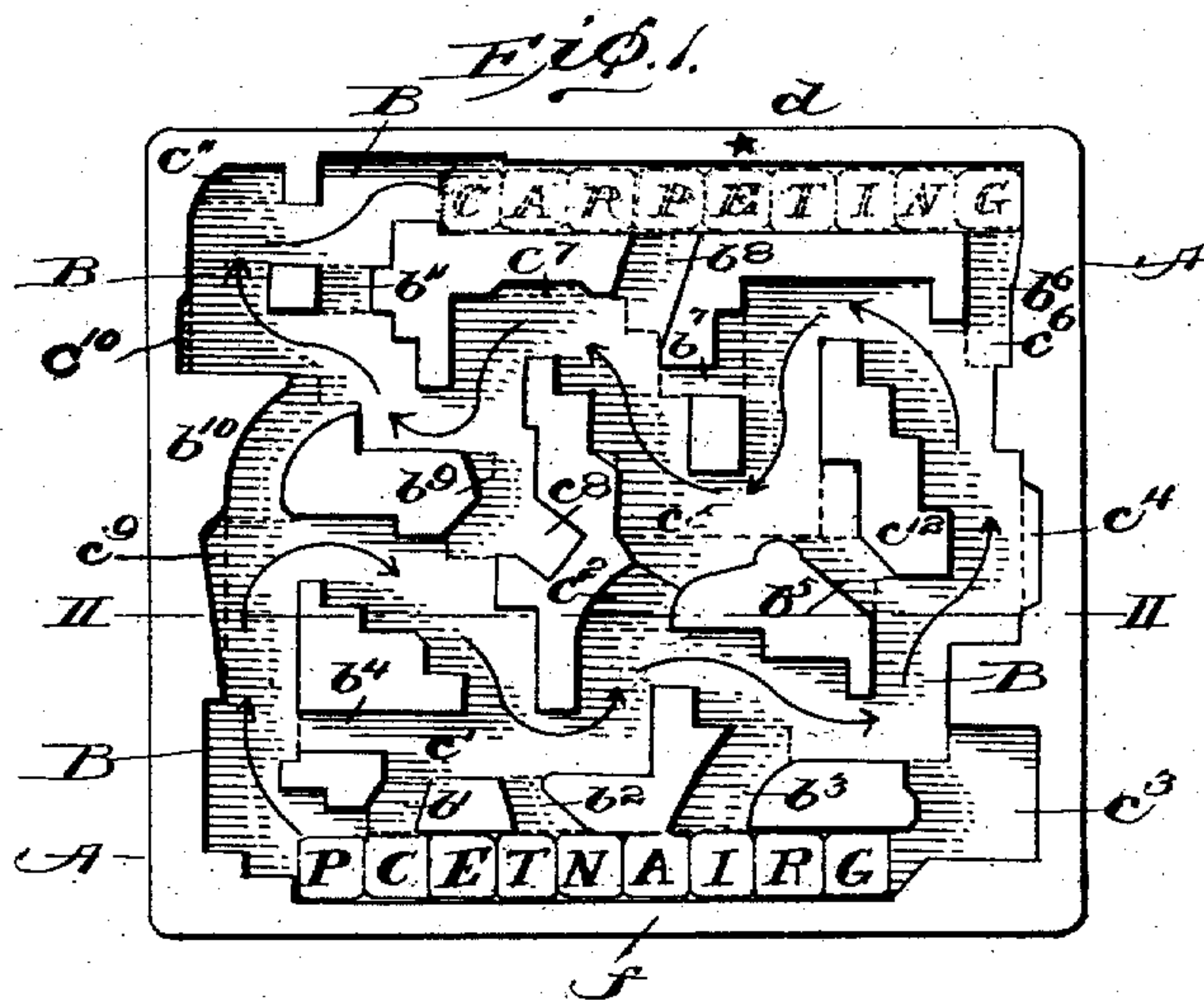


No. 737,899.

PATENTED SEPT. 1, 1903.

J. BIGHAM.  
SLIDING BLOCK PUZZLE.  
APPLICATION FILED JULY 2, 1903

NO MODEL.



Witnesses *Michael Noonan*  
*John McGee*

*John Bigham*

Inventor

# UNITED STATES PATENT OFFICE.

JOHN BIGHAM, OF PITTSBURG, PENNSYLVANIA.

## SLIDING-BLOCK PUZZLE.

SPECIFICATION forming part of Letters Patent No. 737,899, dated September 1, 1903.

Application filed July 2, 1903. Serial No. 164,029. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN BIGHAM, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Puzzle, of which the following is a full, clear, and exact description.

This invention relates to sliding-block puzzles, the purpose being to furnish amusement and instruction in the solution of the same; and to this end it consists, broadly, of a body portion or base-piece having a tortuous guideway or channel and of a series of detached blocks, distinguished from each other in any desired manner, which are intended to be slid along the channel or guideway.

I will now describe my invention by reference to the accompanying drawings, in which—

Figure 1 is a top plan view of the puzzle, and Fig. 2 is a section taken on the line II II of Fig. 1.

In the drawings, A represents the body portion or base-piece, preferably square in shape and of uniform thickness and made of wood, pasteboard, papier-mâché, metal, hard rubber, or any other suitable material. In this base a sunken channel B, of a shape as indicated, is molded, pressed, or otherwise formed or the channel may be made separately of thin metal or any appropriate material and then be properly and firmly fixed within the supporting-base, said channel being flat bottomed and preferably of a uniform depth throughout and continuous with interconnecting parts  $b^1 b^2 b^3 b^4 b^5 b^6 b^7 b^8 b^9 b^{10} b^{11}$  tortuous in direction and of varying width, with numerous recesses or bays  $c^1 c^2 c^3 c^4 c^5 c^6 c^7 c^8 c^9 c^{10} c^{11} c^{12}$  opening into it, the whole forming a bewildering maze, through which maze each of the blocks must slide in its passage along the main route. The upper terminal part of the channel may be indicated in any desired manner, as by an asterisk at the point  $d$ , so as to distinguish it from the lower part or beginning of the channel at the point  $f$ . The peculiarities of this sunken channel are several, among them being these distinctive features: First, a main route of uniform width, as indicated by the dotted lines in Fig. 1, allowing the blocks to slide easily from end to end of the channel, is concealed by and merged with the narrower and wider parts of the channel;

second, the channel is nowhere wide enough to allow the blocks to pass by one another; and, third, a single recess or bay  $c^1$ , of sufficient size, shape, and accessibility to contain one block and only one, and thus hold it aside from the main route, so that the other blocks may pass it in turn, is among and is hidden among the numerous recesses or bays of various sizes and shapes, all of which open into the main channel. This one special recess by retaining one of the blocks, and thus permitting the rest in their turn to pass it and so change the relative positions of any or all the blocks, is the key to the puzzle.

To be placed and started in the lower part of the channel at  $f$  is a series of two or more blocks C, of any suitable shape to fit snugly into the channel, all being alike in shape and size, preferably square, with rounded corners and of a thickness substantially equal to the depth of the channel. In size the blocks are very slightly smaller than the width of the channel, so as to slide easily along it. These blocks may be made of any suitable material, though in practice I prefer them to be of the same substance used in making the channel or the base-piece. Upon or in each one of the said blocks is printed, impressed, embossed, or otherwise properly marked or formed some letter, word, figure, picture, geometrical form, or other representation distinguishing it from other blocks in the series. It will be understood that the box may or may not be provided with a closure subserving the ordinary functions of a lid or cover.

In operation the blocks are placed in any desired order in the lower part of the channel, and by means of the fingers, a pencil, or in any practicable way each of the blocks is in turn moved along the channel without being removed from it until they all rest in the upper terminal part, but in an order of arrangement which must vary from their relative starting positions. Therefore the distinctive novelty and peculiarity of the puzzle consists in these three circumstances and conditions: First, none of the blocks must be lifted or removed out of the channel; second, the channel is only wide enough to permit one block at a time to slide along within it; third, certain blocks must pass by certain others *en route* and must change places in the



serial order, arriving at the upper terminal in an order differing from their arrangement when started, and since certain blocks are required to pass by certain others the final arrangement of all the blocks can never be simply the reverse of their first arrangement. An original and a final order are indicated in the drawings, in which the arrangement at starting is indicated by full lines and when the puzzle has been solved by dotted lines, the distinguishing representations being certain letters of the alphabet. Hence it is clear that the puzzle could not be solved at all but for the one special bay or recess *c'*, previously described as opening into the main channel, which recess will retain one block out of the way of the others, allowing them to pass it, and the discovery of this recess among the numerous recesses and channels and its proper use is the solution of the puzzle.

In case the blocks are marked with letters of the alphabet, as in practice I prefer them to be marked, letters must be used which if correctly arranged will spell some word or words, and the puzzle consists in arranging the blocks at starting in some confused and meaningless order of the letters, excepting only the reverse of their correct orthographic order, and in requiring that their final arrangement be that which spells the designated word or words. In this case several of the blocks may be marked with the same letter as it may recur in the word—for instance, I have shown nine blocks marked with the letters "P" "C" "E" "T" "N" "A" "I" "R" "G," the blocks being arranged at starting in any chaotic order from left to right, such as shown, and the puzzle consists in requiring their final arrangement in the upper terminal

to be in the order in which they spell the word "Carpeting."

I claim—

1. In a puzzle, a body portion provided with a tortuous channel having a number of recesses of different sizes and shapes irregular extending therefrom, and a series of blocks adapted to be slid along said channel, one of said recesses being of such size and shape as to contain one of said blocks; substantially as described.

2. In a puzzle, a body portion provided with a main tortuous channel having a number of recesses of different sizes and shapes irregular extending therefrom, and a series of blocks adapted to be slid along said channel, one of said recesses being of such size and shape as to contain one and only one of said blocks; substantially as described.

3. In a puzzle, a body portion provided with a sunken tortuous channel having a number of connecting parts and recesses or bays of varying sizes and shapes extending therefrom forming a maze and serving to disguise the main route which is of a width only sufficient to accommodate one block at a time, and a series of blocks adapted to be slid along said channel, one only of said recesses or bays being of such size and shape as to contain one and only one of said blocks so as to permit the other blocks to pass by it; substantially as described.

In testimony whereof I have hereunto set my hand.

JOHN BIGHAM.

Witnesses:

MICHEAL NOONAN,  
JOHN MCGEE.

Corrections in Letters Patent No. 737,899.

It is hereby certified that in Letters Patent No. 737,899, granted September 1, 1903, upon the application of John Bigham, of Pittsburg, Pennsylvania, for an improvement in "Sliding-Block Puzzles," errors appear in the printed specification requiring correction, as follows: In lines 45 and 53-4, page 2, the word "irregular," following the word "shapes," should be stricken out and inserted immediately before the said word "shapes" in each of said lines; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 6th day of October, A. D., 1903.

[SEAL.]

F. I. ALLEN,  
Commissioner of Patents.



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