No. 702,188. Patented June 10, 1902.

J. ELLIOTT.

PUZZLE.

(Application filed Feb. 21, 1902.)

(No Model.)

Fig. 1

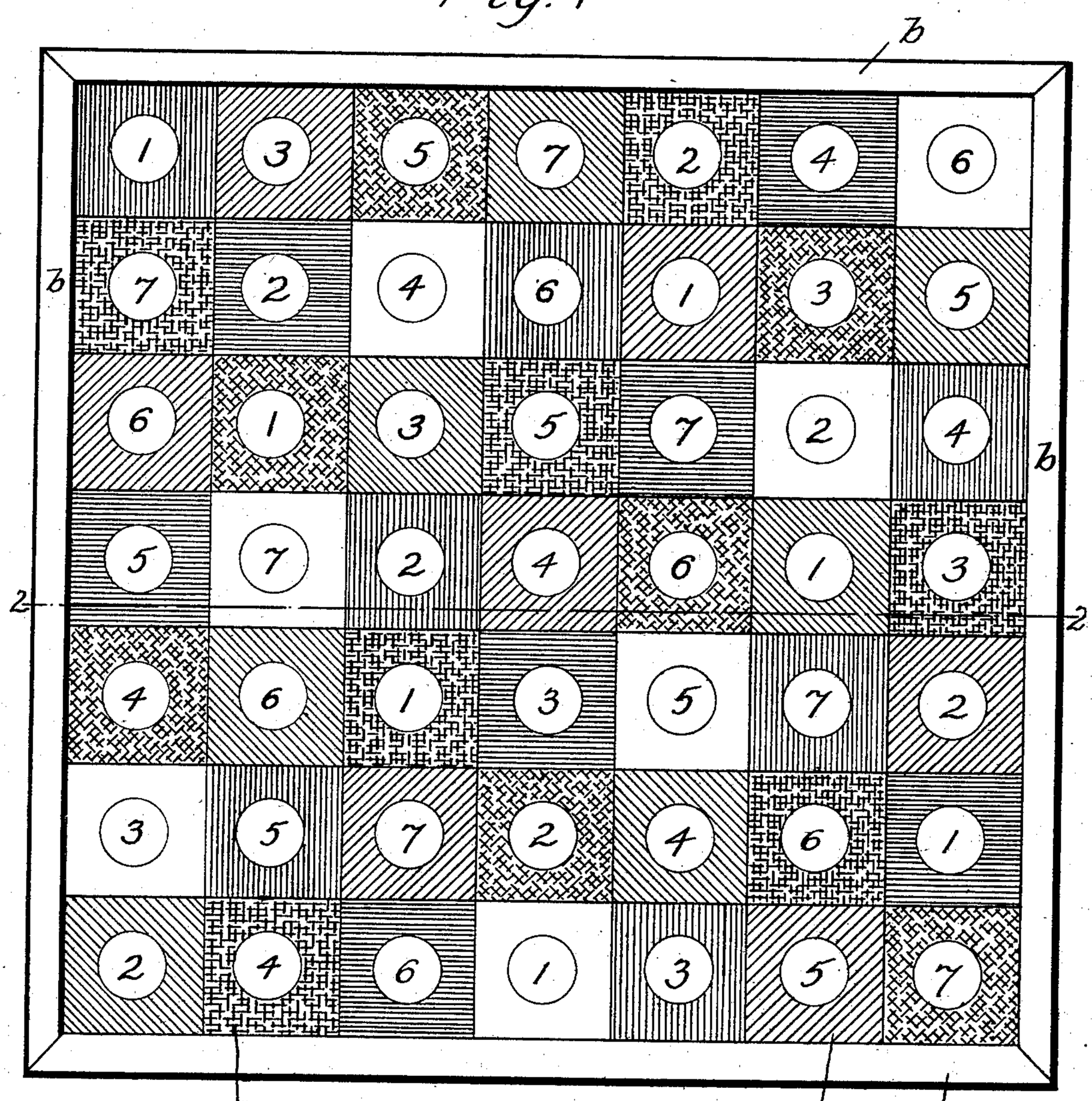
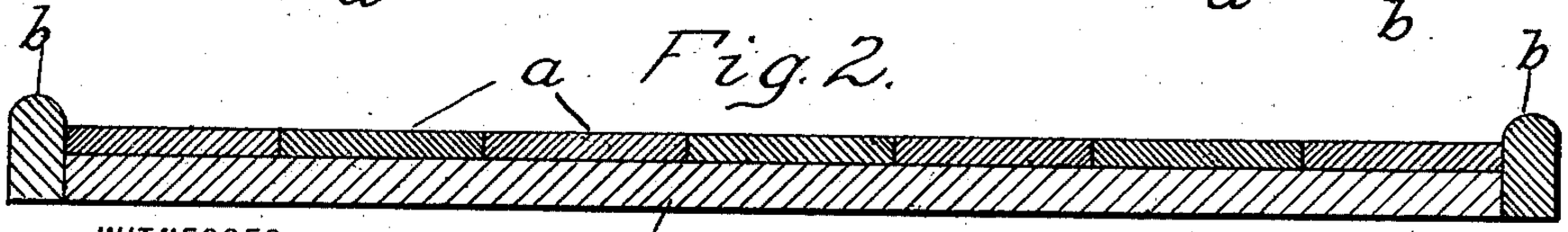


Fig. 2.



WITNESSES

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PUZZLE.

SPECIFICATION forming part of Letters Patent No. 702,188, dated June 10, 1902.

Application filed February 21, 1902. Serial No. 95,015. (No model.)

To all whom it may concern:

Be it known that I, JOHN ELLIOTT, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Puzzles, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide a puzzle the solution of which is exceedingly difficult, but may be accomplished by the exercise of care and skill in the manipulation of the separate parts thereof, a further object being to provide a puzzle the solution of which is controlled by a fixed rule and is comparatively simple when the rule is known.

My improved puzzle comprises a plurality of blocks or cards which are preferably rectangular in form and the number of which is the square of some prime number from which, as will be understood, the blocks or cards are divided into separate series, the number of which is controlled by the number which is squared to determine the number of blocks or cards employed, and the separate blocks or cards of each series is also separately or distinctly colored, and said cards of each series are also numbered from one upwardly, and the solution of the puzzle consists in placing said blocks or cards in a square comprising vertical and horizontal rows and arranging said blocks or cards in such manner that no two blocks or cards of the same color nor of the same number shall appear in any one horizontal or vertical row or in any one diagonal row, the arrangement of said blocks or cards being also such that when the rows are added either horizontally or vertically the result will be the same, a similar result being also obtained by adding the parts of the longest diagonal rows.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by the same reference characters in each of the views, and in which—

Figure 1 is a plan view of a box or casing which I preferably employ and showing the arrangement of the cards or blocks in the solution of the puzzle, and Fig. 2 a section on the line 2 2 of Fig. 1.

For the purposes of this description I select the number "49," which is the square of the number "7," and I therefore employ forty-nine blocks or cards *a*, and this number is made up of seven separate series, the blocks of each series being separately numbered from "1" to "7" and being also separately and distinctively colored. In practice I prefer to place these blocks or cards in a box comprising a bottom *b*, having side and end walls b^2, and in practice the separate blocks or cards are arranged indiscriminately either in a receptacle, box, or casing, or on a table or other support, and the solution of the puzzle consists in placing said blocks or cards in the position shown in Fig. 1, in which position the separate horizontal and vertical rows when added will amount to the number "28," which number will also be the result of adding the longest diagonal rows. In order to accomplish this result, I first arrange the left-hand vertical column by taking the block No. 1 of any color and place six other blocks in regular order thereunder, the number decreasing by one from the top to the bottom except in the case of the last number, as "1, 7, 6, 5, 4," &c., no one color being used more than once. As "7" follows "1" in any arrangement of these blocks or cards, it will be seen that notwithstanding the fact that the numbers decrease by one, as a rule, a block or card numbered "7" must follow that numbered "1," after which the blocks or cards decrease by one in regular order, and this is true whether the series be an increasing series or a decreasing series. I next arrange the top horizontal row by taking the above-mentioned block "1" as a base, the face-numbers of this row increasing from left to right by twos, as "1, 3, 5, 7," &c., and the color of each block in each row must correspond to the color of the block in the left-hand vertical column occupying the position counting from the top toward the bottom indicated by the face-number of the desired block. As the face-number of the second block in the first horizontal row is "3," so it must be the color of the third

block from the top to the bottom in the left vertical row, therefore using all the colors and face-numbers in the left vertical row once and no one color or face-number being used more than once, the succeeding vertical rows being arranged by placing six blocks beneath the top block already in position in the top horizontal row of each vertical row, the face-numbers of each block in each row decreasing by one from the block next above it and the colors of the blocks of the next vertical row to be in the same order or sequence as in the left vertical row when once started on any color. When all the blocks are arranged according to these directions, the totals of each vertical and horizontal and each longest diagonal row will be the sum of "28," and each color and face-number will appear but once in each vertical, horizontal, and diagonal line.

Although in the foregoing description I have selected the number "49" as representing the number of blocks or cards employed, it will be evident that other numbers, such as "25" or "81," may represent the total number of blocks or cards, these numbers being the squares of "5" and "9," respectively, and in such case the solution will be the same as that herein described.

By following the foregoing directions the solution may be easily accomplished; but otherwise the said solution is exceedingly difficult, and it would require great time and study to accomplish the same.

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

A puzzle comprising a plurality of blocks or cards which equal in number the square of a predetermined number, whereby a number of blocks or cards are employed and divided into a predetermined number of equal series, the blocks of each series being separately numbered from one upwardly and being also separately or distinctively colored, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 15th day of February, 1902.

JOHN ELLIOTT.

Witnesses:
L. O. GRAMBS,
E. C. DEAN.