

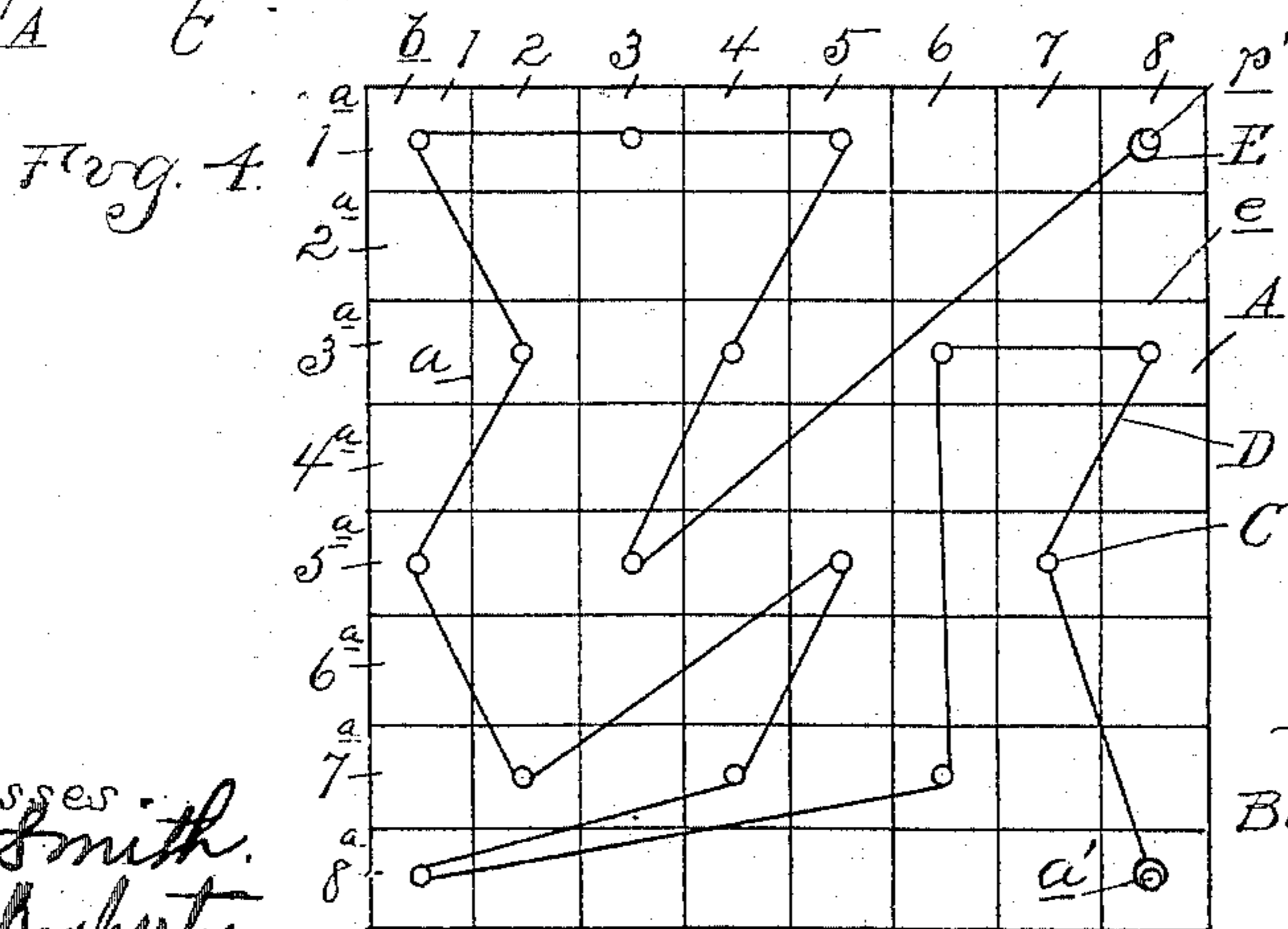
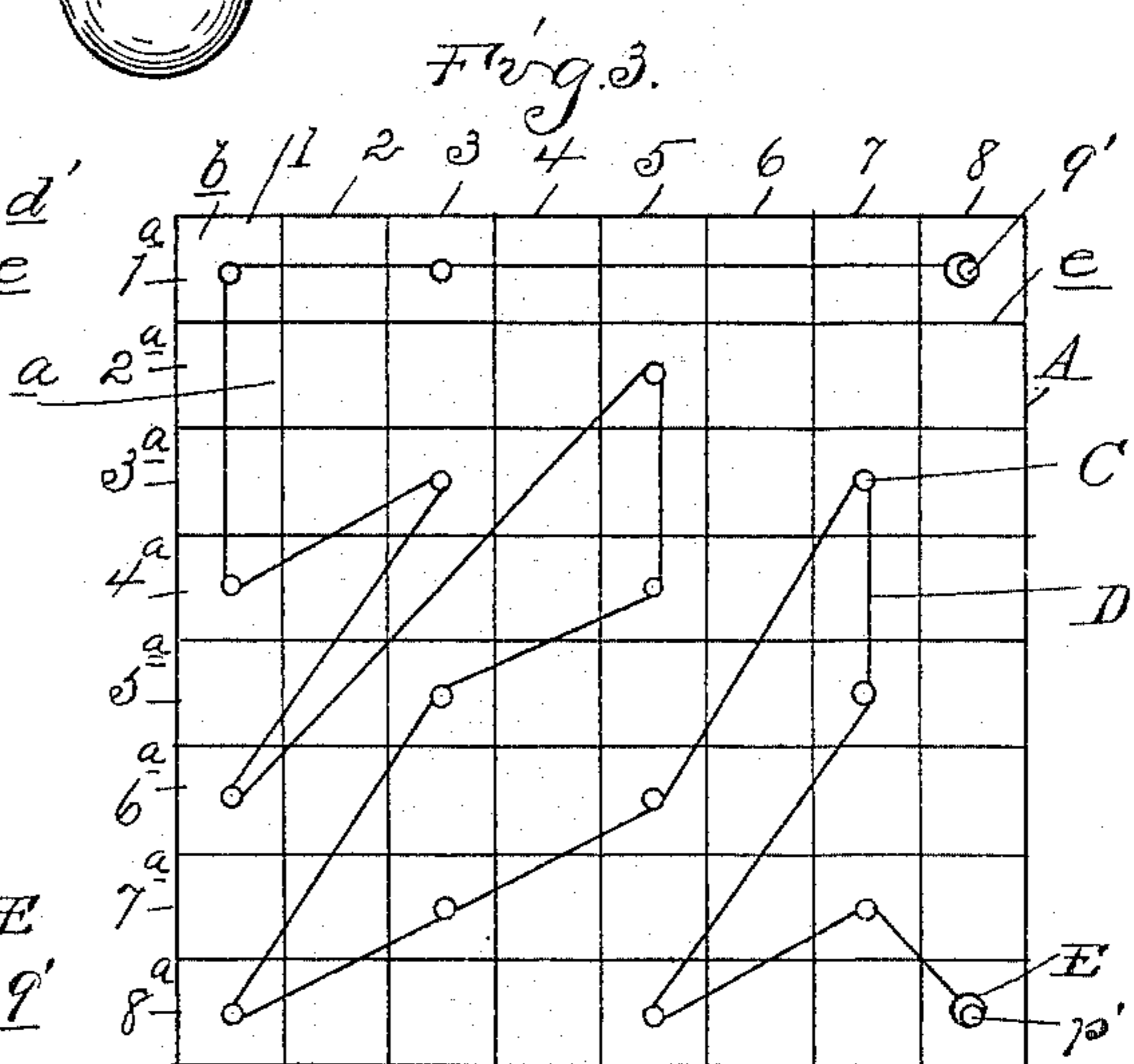
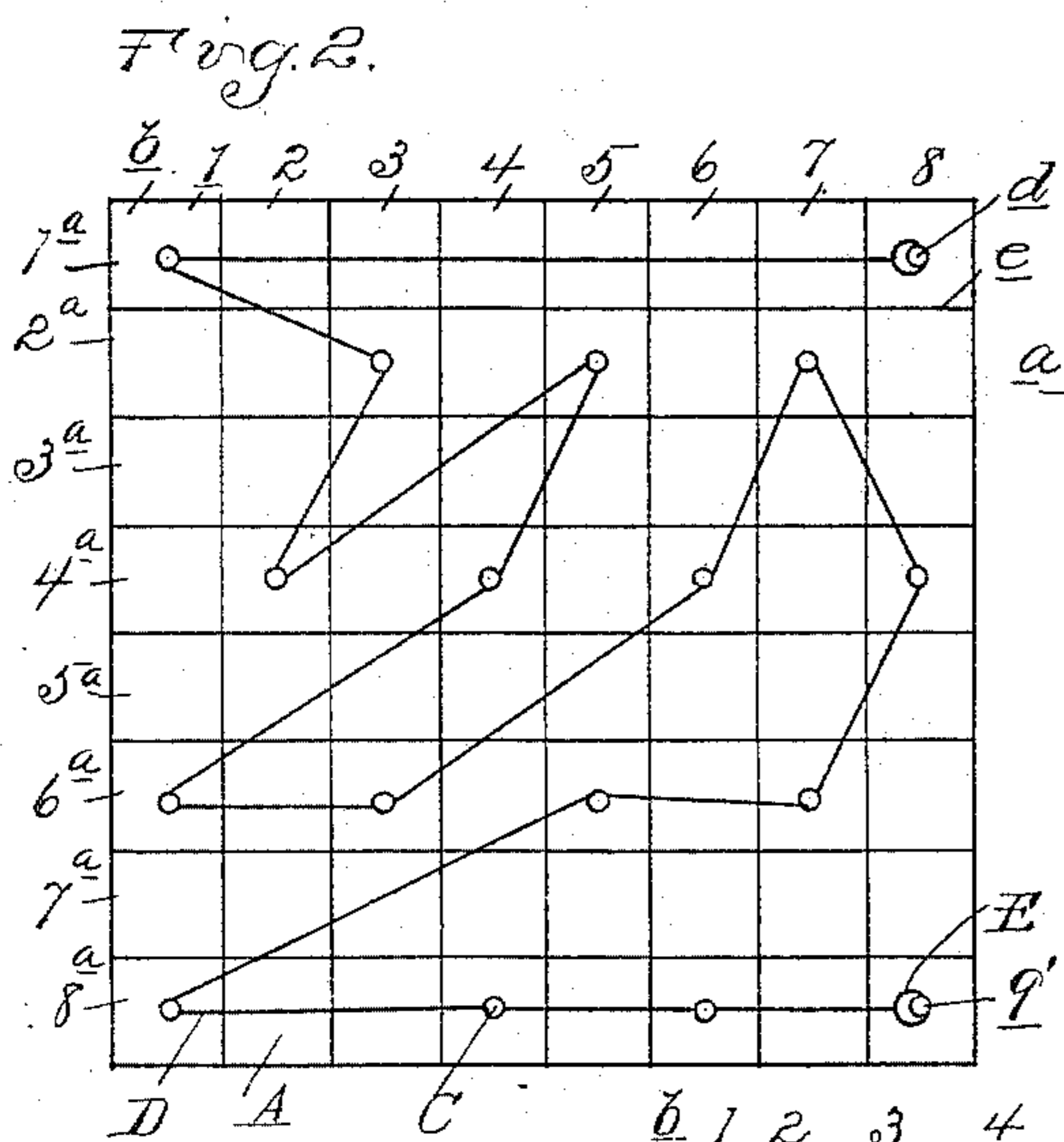
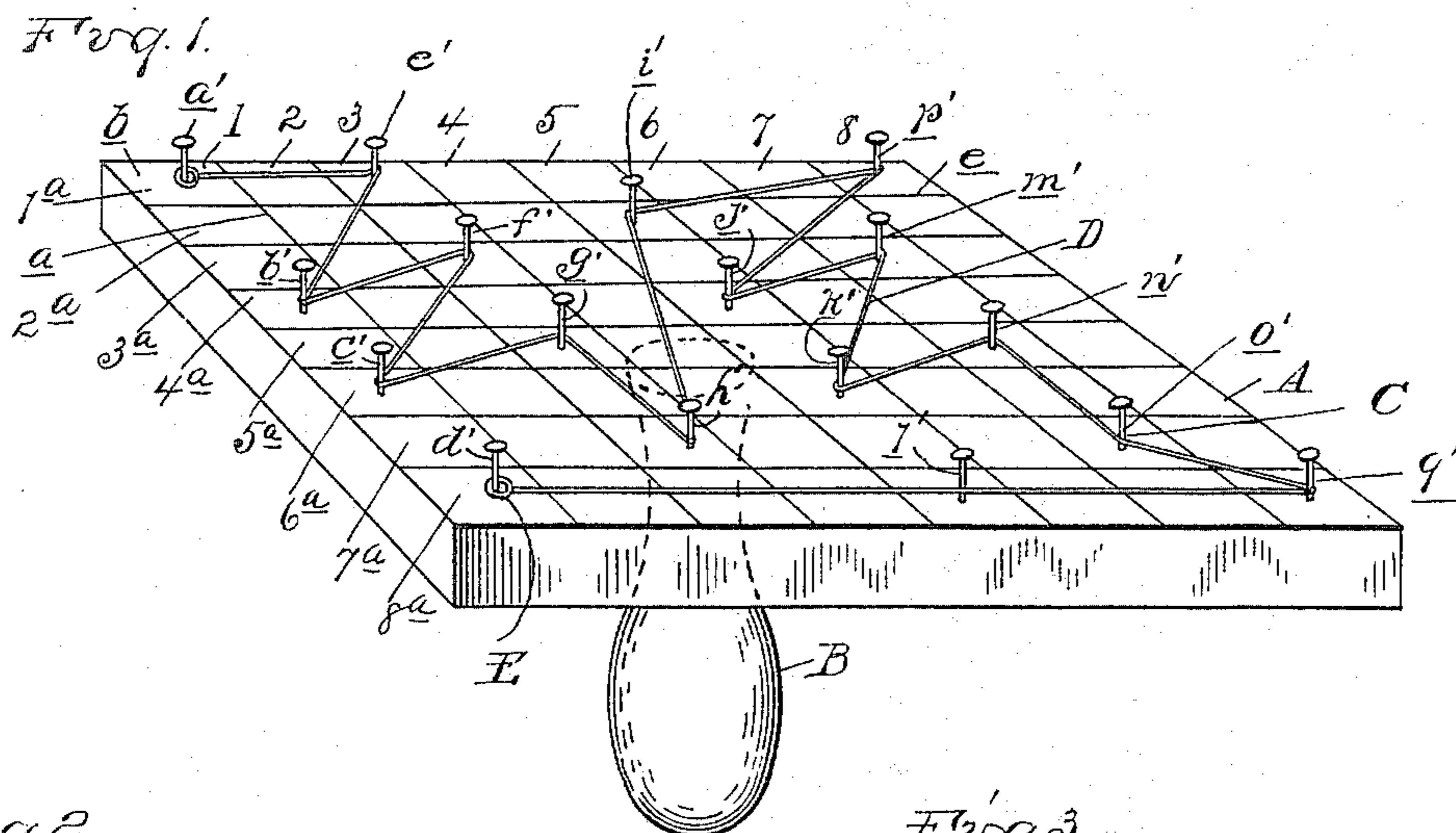
No. 640,555.

Patented Jan. 2, 1900.

D. FULLER.
PUZZLE.

(Application filed Nov. 27, 1899.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

DONALD FULLER, OF DETROIT, MICHIGAN.

PUZZLE.

SPECIFICATION forming part of Letters Patent No. 640,555, dated January 2, 1900.

Application filed November 27, 1899. Serial No. 738,436. (No model.)

To all whom it may concern:

Be it known that I, DONALD FULLER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Puzzles, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to a novel type of puzzle; and it consists in the peculiar construction thereof as shown and described.

In the drawings, Figure 1 is a perspective view of a device constituting my improved puzzle, showing one solution thereof. Fig. 2 is a plan view of the puzzle, illustrating another solution. Fig. 3 is a view similar to Fig. 2, showing a third solution; and Fig. 4 is a plan view illustrating the fourth solution.

The device which constitutes my puzzle consists of a support in the form of a board or plate, provided with a series of projections or pins distributed over the top and a cord or band adapted to be wound or woven through and around the pins.

The puzzle consists in entwining the cord around all of the pins, commencing with the pin at one corner of the board and terminating with a pin at an adjacent corner, without completely encircling any pin, touching the same pin twice, or crossing the strands, and at the same time to use the entire length of cord without slack.

In the drawings above referred to the letter A designates a board, preferably square in configuration, provided with a handle B, depending centrally from the under face thereof, as shown in Fig. 1. Upon the upper face or board-top is arranged a series of straight lines *a*, preferably seven in number and spaced at equal distances from each other, forming a series of columns *b*, numbered in the manner shown, the numbers ranging from 1 to 8, inclusive. *c* designates a similar series of parallel lines arranged transversely upon the board-top which intersect the series of lines *a*, dividing each of the columns into eight squares, numbered 1^a to 8^a, inclusive, and the board-top into sixty-four squares, as shown in the several figures. Within a certain number of the squares are located a like number of pins C, one pin being allotted to each square, and D designates the cord which is adapted

to be entwined or woven around the pins, as above described.

E designates rings attached to the cord ends, which are adapted to engage over the corner-pins.

The particular arrangement of the pins is as follows: In the column numbered 1 are arranged the pins *a' b' c' d'*, four in number and located, respectively, in the squares numbered 1^a 4^a 6^a 8^a. Column 3 is provided with a like number of pins, designated by the letters *e' f' g' h'*, arranged, respectively, in the squares 1^a, 3^a, 5^a, and 7^a in said column. Four pins *i' j' k' l'* are located, respectively, in the squares 2^a 4^a 6^a 8^a of column 5. Column 7 contains three pins *m' n' o'* in squares 3^a 5^a 7^a of said column, and finally the balance of the pins, two in number and lettered *p' q'*, are arranged in the corner-squares 1^a 8^a of the eighth and last column.

In Fig. 1 I have shown one solution of the puzzle when the corner-pins *a' d'* are employed, respectively, as the terminal and starting pins of the cord.

It will be obvious, in view of the fact that there are four corner-pins, that there will be three other solutions, making a total of four in all, the different solutions depending upon the particular pair of corner-pins that are employed as the starting and terminal pins of the cord.

It is my intention in the manufacture of this puzzle to publish one solution—as, for instance, that shown in Fig. 1—in order that the manner of operation of the puzzle may be known. The puzzle will then consist in obtaining the three other solutions when the other posts are employed.

In Fig. 2 I have shown a solution of my improved puzzle when the posts *d'* and *q'* are employed as the terminal posts of the cord.

Fig. 3 shows a solution of the puzzle when the posts *q'* and *p'* are used, and finally Fig. 4 illustrates the last solution of the puzzle, the posts *p'* and *a'* being used.

It will be plainly apparent from the several figures precisely what particular pins the cord must pass around in order that the puzzle may be properly solved, and it will likewise be apparent that in the several solutions the cord is not crossed upon itself, each pin is only partly encircled, no single pin is

touched twice by the cord, and finally the entire length of the cord is used without slack.

What I claim as my invention is—

1. In a puzzle, the combination of a board,
5 a multiple of projections or pins distributed over and secured upon the board-top, a cord, and means for detachably securing the cord at its ends to two of the pins, the portion of the cord intermediate the ends being adapted
10 to be partly wound without slack about each of the remaining pins, and the arrangement being such that the winding may be effected without touching any pin twice or crossing the strands.
- 15 2. In a puzzle, the combination of a board having marked upon its upper surface or top a plurality of squares arranged in equal columns, a multiple of pins or projections secured to the board, one pin being located in
20 each corner-square and the balance of the pins being arranged within the columns of squares specified and in the order described, a cord, and means for detachably securing the ends thereof to two of the corner-pins,
25 the portion of the cord intermediate the ends being adapted to be partly wound without slack about each of the remaining pins, and

the arrangement being such that the winding may be effected without touching any pin twice or crossing the strands. 30

3. In a puzzle, the combination of a board, square in configuration and having marked upon its upper surface or top a multiple of squares arranged in equal columns, a multiple of pins fixedly secured upon the board,
35 one pin being arranged in each corner thereof within one of the corner-squares, and the balance of the pins being arranged within the columns of squares specified, and in the order described, a cord, and rings upon the
40 cord ends for detachably securing the latter to a pair of adjacent corner-pins, the portion of the cord intermediate the ends being adapted to be partly wound without slack about each of the remaining pins, and the ar-
45 rangement being such that the winding may be effected without touching any pin twice or crossing the strands.

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

DONALD FULLER.

Witnesses:

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H. C. SMITH.