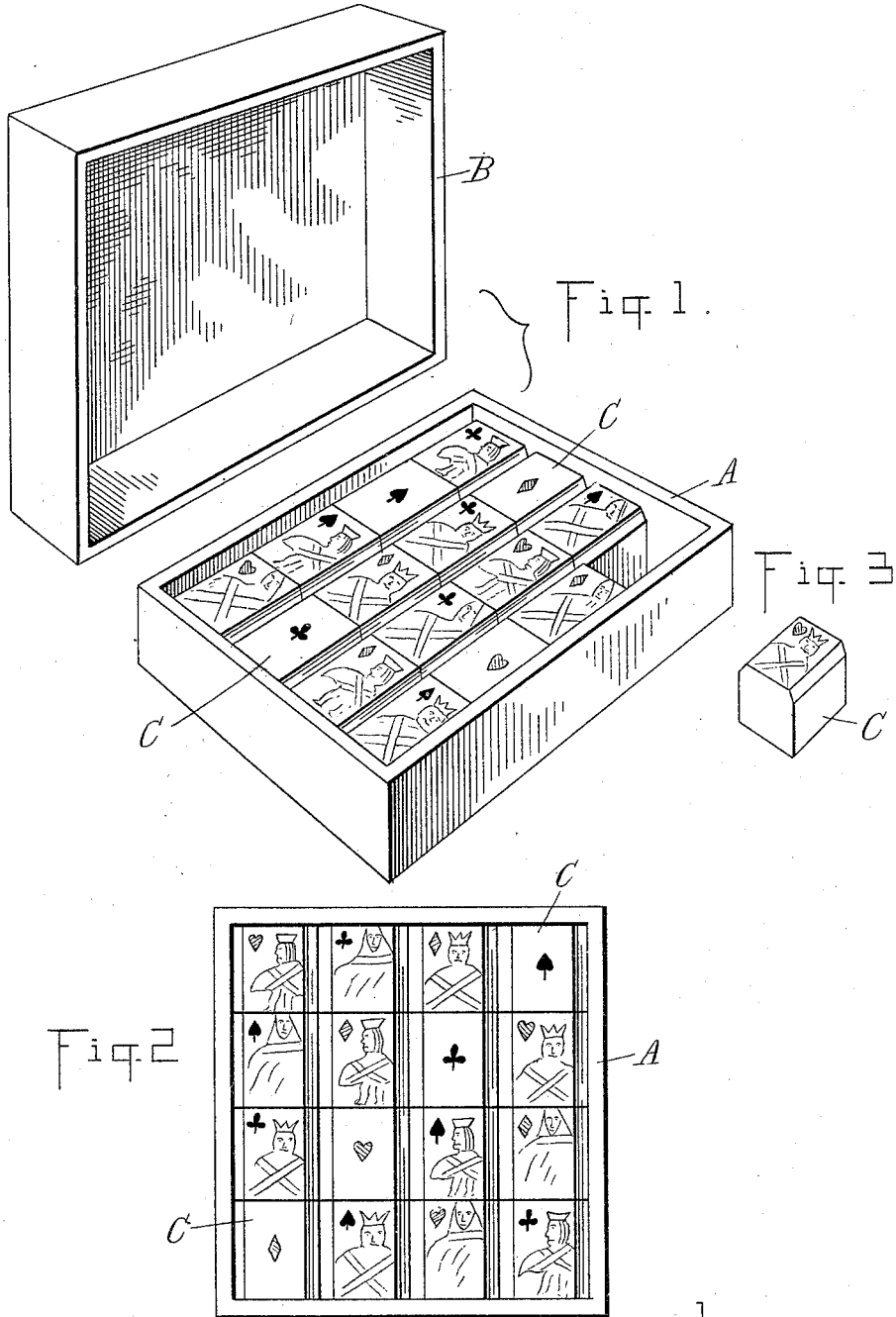


(No Model.)

J. W. BROWN.
PUZZLE.

No. 433,444.

Patented Aug. 5, 1890.



Witnesses:
D. M. Hulbert
J. Paul Mayer

Inventor:
John W. Brown
By *Thos. S. Sprague & Son*
Atty.

UNITED STATES PATENT OFFICE.

JOHN W. BROWN, OF DETROIT, MICHIGAN.

PUZZLE.

SPECIFICATION forming part of Letters Patent No. 433,444, dated August 5, 1890.

Application filed April 22, 1889. Serial No. 308,185. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. BROWN, 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.

This invention relates to new and useful improvements in puzzles; and the invention consists in the peculiar arrangement and construction in a suitable receptacle of blocks containing the representations of playing-cards, designed to be moved in any other peculiar arrangement of the cards, all as more fully hereinafter described.

In the drawings which accompany this specification, Figure 1 represents my puzzle as arranged ready for solution. Fig. 2 is a plan view of the same, showing the puzzle solved; and Fig. 3 is a perspective view of one of the blocks removed.

A is a suitable box having the cover B. In this box I place the blocks C. Upon each of these blocks is printed, pasted, or otherwise secured a representation of a playing-card, each block having a representation of a different card.

In the arrangement of the sixteen cards, as shown in Fig. 1, there are four of each kind of cards—that is, four cards of hearts, four of spades, four of clubs, and four of diamonds, each suit or kind having one of each of the following denominations: ace, king, queen, and jack or knave.

I arrange the blocks in the box in the following manner, as shown in Fig. 1: in the first or top row, commencing at the left hand and going toward the right hand, the jack of clubs, ace of diamonds, queen of spades, and king of hearts; the second line, the ace of spades, the king of clubs, jack of hearts, and queen of diamonds; the third line, jack of spades, king of diamonds, queen of clubs, and ace of hearts; the fourth line, queen of hearts, ace of clubs, jack of diamonds, and king of spades. It will be seen that in this arrangement there is one of each suit in each line horizontally across the box. It will also be observed that in the vertical direction the first and last columns have three de-

nominations represented, two cards being alike and two dissimilar, while in the second column there are but two denominations represented, there being two of each kind. The blocks being thus arranged, the king of hearts in the upper right-hand corner is removed, leaving a space in which to move one block at a time, either vertically or horizontally. The blocks are to be moved without jumping one block over the other until the cards are so arranged that the four aces and the four jacks or knaves are diagonally placed in the box, and so that no two of the same suit will be in either a vertical or horizontal line. The puzzle, as solved, is shown in Fig. 2. Forty-one moves are required to accomplish this result. I select this arbitrary arrangement of the cards to commence with, for the reason that it requires the largest number of moves of any combination which I have been able to discover and yet be solvable.

In order to solve the puzzle, the blocks must be moved in the following order: queen of diamonds to king of hearts, ace of hearts to queen of diamonds, king of spades to ace of hearts, jack of diamonds to king of spades, queen of clubs to jack of diamonds, jack of hearts to queen of clubs, ace of hearts to jack of hearts, king of spades to ace of hearts, jack of hearts to king of spades, ace of hearts to jack of hearts, queen of spades to ace of hearts, queen of diamonds to queen of spades, king of spades to queen of diamonds, jack of hearts to king of spades, ace of hearts to jack of hearts, queen of spades to ace of hearts, jack of hearts to queen of spades, king of clubs to jack of hearts, ace of diamonds to king of clubs, queen of diamonds to ace of diamonds, king of clubs to queen of diamonds, ace of hearts to queen of spades, king of clubs to ace of hearts, ace of diamonds to king of clubs, ace of spades to ace of diamonds, jack of spades to ace of spades, queen of hearts to jack of spades, ace of clubs to queen of hearts, king of diamonds to ace of clubs, ace of spades to king of diamonds, jack of spades to ace of spades, queen of hearts to jack of spades, ace of clubs to queen of hearts, king of diamonds to ace of clubs, ace of spades to king of diamonds, jack of spades to king of diamonds, ace of spades to king of diamonds.

monds, ace of clubs to ace of spades, king of diamonds to ace of clubs, ace of spades to king of diamonds, and then replace the king of hearts in the only vacant space in the box.

- 5 I am aware that it is not new to form a puzzle by placing in a box a series of movable blocks having letters or numbers on their faces.

What I claim as my invention is—

- 10 The puzzle herein described, consisting of a box, sixteen blocks with the representation of the ordinary playing-cards thereon in the

box, arranged in the sets of four blocks, and each set representing four like cards of the same value and differing in value from the other sets, substantially as described. 15

In testimony whereof I affix my signature, in presence of two witnesses, this 6th day of April, 1889.

JOHN W. BROWN.

Witnesses:

JAMES WHITEMORE,
J. PAUL MAYER.