Aug. 7, 1923.   1,464,424

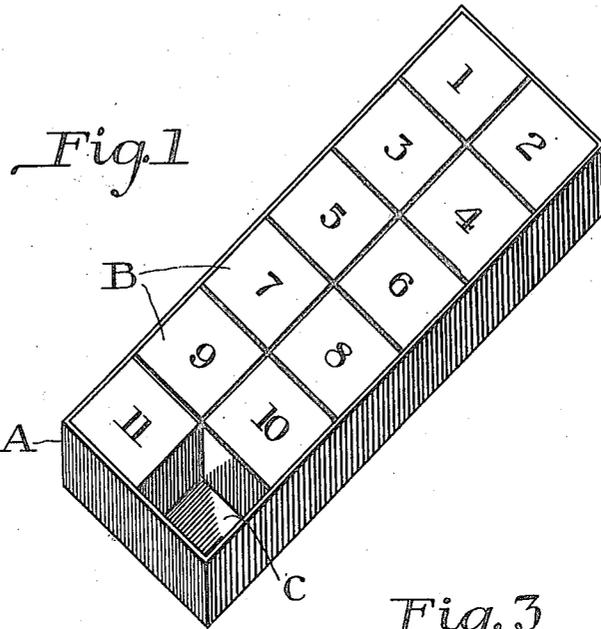L. H. HARTMAN
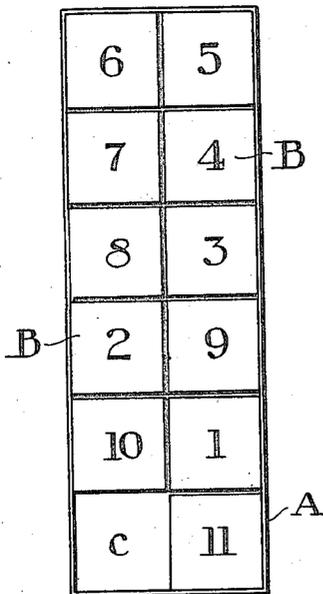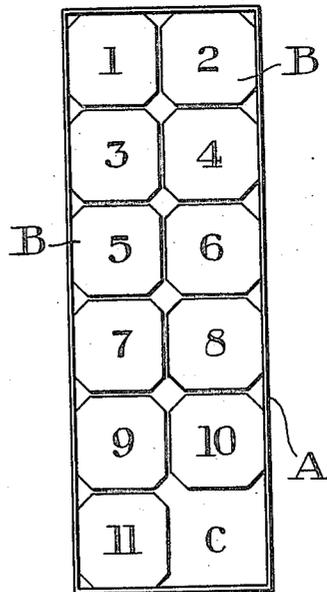
PUZZLE

Filed March 17. 1921

Fig.1

Fig.2   _Fig.3_

INVENTOR.
Louis H. Hartman
BY
W. G. Doolittle
ATTORNEY

To all whom it may concern:

Be it known that I, LOUIS H. HARTMAN, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and
5 State of Pennsylvania, have invented certain new and useful Improvements in Puzzles, of which the following is a specification.

This invention relates to puzzles of the
10 kind in which a given number of blocks having characters thereon are arranged in a holder in such manner that they may be shifted around to accomplish a desired result, and has for its object to provide a
15 puzzle which will be both entertaining and instructive.

According to this invention, a plurality of blocks having numerals thereon are placed in a container, in which they may
20 be moved about to a limited extent, the object being to shift the blocks around so that the sums of the numerals on any two of the blocks placed side by side across the container is equal to the highest numeral appearing on one of the blocks, and the sum
25 of the numerals on the blocks in each row longitudinally of the container is a given amount, preferably a multiple of the highest number of the series.

30 My invention may be readily understood by reference to the accompanying drawings, in which,—

Fig. 1 is a perspective view of a puzzle made in accordance with my invention, with
35 the blocks arranged in starting position;

Fig. 2 is a plan view of the puzzle, with the blocks re-arranged to accomplish the object of the puzzle;

Fig. 3 is a modification.

40 The invention comprises a rectangular container box A, in which are placed an odd number of blocks B. The blocks are preferably square or octagons of the same size, and their dimensions are such that,
45 when arranged in rows across the box, the row may extend completely across the box and there will be substantially no space at the ends of the rows, and, when arranged in longitudinal rows, a row may be formed
50 extending the complete length of the holder, and there will be substantially no space at the ends.

In the device illustrated, where eleven blocks are used, two blocks will just evenly
55 extend across the box, and six blocks arranged in a longitudinal row will extend

just the length of the holder, there being just sufficient play or looseness to permit the easy manipulation of the block. The top faces of the blocks are provided with 60 consecutive numbers or suitable characters. In the device shown, the blocks are numbered from one to eleven inclusive.

With eleven square blocks in a container or holder, as shown, there may be formed 65 five complete cross rows with two blocks in each, and one complete longitudinal row of six blocks. A space C is thereby provided which is of just sufficient size to accommodate one block. In other words, there 70 is one less block in the holder than the holder will contain.

In the device as shown, it is the object to arrange the blocks as shown in Fig. 2, in which the sum of the two blocks in each 75 of the cross rows equals eleven, the number on the last block of the series and the sum of the numbers in each of the horizontal rows is thirty-three. The blocks are first arranged in numerical order, as shown in 80 Fig. 1. In working out the puzzle, the blocks may not be lifted out of the holder, but the re-arrangement is effected by properly sliding the blocks. By reason of the empty space being provided, such sliding 85 of the blocks may be effected.

With the blocks as arranged in Fig. 1, the blocks must be so manipulated that block No. 1 may be placed beside block No. 10. This would be done by sliding block 90 No. 10 next to block No. 11, changing the position of space C, and then suitably shifting the other blocks. By sliding the blocks around, one at a time, blocks with the numerals 1 and 10 may be placed side by 95 side, and in like manner blocks 2 and 9; 3 and 8; 4 and 7; and 5 and 6 may be arranged side by side.

Considerable skill and practice is necessary, however, before one can manipulate 100 the blocks to re-arrange them in this manner, with blocks having numbers 6, 7, 8, 2 and 10 in the same row so that the sum of the numbers in that row is thirty-three, and the other blocks having numbers 11, 1, 105 9, 3, 4 and 5 are in the other row, their sum also being thirty-three. Thirty-three is a multiple of the highest number 11.

In the modification shown in Fig. 3, the blocks are rectangular in shape, but have 110 the corners cut, rather than being square. This adds to the attractiveness of the puzzle,

especially where the top faces of the blocks are different colors.

It will thus be seen that I have provided a unique puzzle which, while being entertaining, will be of educational value, especially for children, the numbers being those used in simple problems of addition.

I claim as my invention:

1. A puzzle comprising a holder, a plurality of blocks in the holder of the same size, there being one less block than the holder will accommodate in order to provide a space capable of accommodating a single block, which space permits all of the blocks to be moved around in the container but only one at a time, said blocks being consecutively numbered so that when arranged to solve the puzzle, the sums of the numbers on any transverse row of blocks in the container is equal to the highest number of the series.

2. A puzzle comprising a rectangular holder, a plurality of blocks arranged in the holder, said blocks having the same size and shape, said holder permitting the blocks to be arranged in transverse rows of two blocks in each row, thereby forming two longitudinal rows, one of said rows extending the length of the holder, and the other row having one block less to provide a space sufficient to accommodate one block to thereby permit the blocks to be shifted about while remaining in the holder, said blocks being consecutively numbered, and when properly arranged the sums of the numbers in each transverse row should equal the highest number of the series.

3. A puzzle comprising a rectangular holder, a plurality of blocks arranged in the holder, said blocks having the same size and shape, said holder permitting the blocks to be arranged in transverse rows of two blocks in each row, thereby forming two longitudinal rows, one of said rows extending the length of the holder, and the other row having one block less to provide a space sufficient to accommodate one block to thereby permit the blocks to be shifted about while remaining in the holder, said blocks being consecutively numbered, and when properly arranged the sums of the numbers in each transverse row should equal the highest number of the series and the sum of the numbers in each longitudinal row is equal.

4. A puzzle comprising a rectangular holder, an odd number of blocks of the same size and shape in the holder, said holder permitting the blocks to be arranged in two longitudinal rows, one of the rows having one more block in it than the other, said blocks also forming a plurality of transverse rows of two blocks each, a space sufficiently large to accommodate one block being formed by reason of the odd number of blocks, said space permitting the blocks to be shifted about while remaining in the holder, said blocks having different numerals thereon which are consecutive, the numerals being such that when the blocks are properly arranged, the sums of the numerals on each two blocks in every transverse row will be equal to each other and to the numeral on the odd block.

5. A puzzle comprising a rectangular holder, eleven consecutively numbered blocks in the holder, said blocks being of substantially the same size and shape, and being of such size that six of them may be placed longitudinally of the holder and two of them placed transversely in the holder, said blocks being adapted to form two longitudinal rows, one of which has six blocks and the other five, and five complete transverse rows at all times, a space being formed capable of accommodating one block to permit of the positions of the blocks being shifted, the numerals on the blocks being such that when properly arranged, the sum of the numerals in each transverse row will be equal to each other and to the numeral on the odd block which is not in one of the five transverse rows.

6. A puzzle comprising a rectangular holder, eleven consecutively numbered blocks in the holder, said blocks being of substantially the same size and shape, and being of such size that six of them may be placed longitudinally of the holder and two of them placed transversely in the holder, said blocks being adapted to form two longitudinal rows, one of which has six blocks and the other five, and five complete transverse rows at all times, a space being formed capable of accommodating one block to permit of the positions of the blocks being shifted, the numerals on the blocks being such that when properly arranged, the sum of the numerals in each transverse row will be equal to each other and to the numeral on the odd block which is not in one of the five transverse rows, and the sum of the numbers in each row will be equal and be a multiple of the highest number of the series.

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

LOUIS H. HARTMAN.

Witnesses:
LOIS WINEMAN,
W. G. DOOLITTLE.