No. 614,770. Patented Nov. 22, 1898.

R. M. SHEPHERD.
PUZZLE.

(Application filed Sept. 17, 1898.)

(No Model.)

Fig. 1.

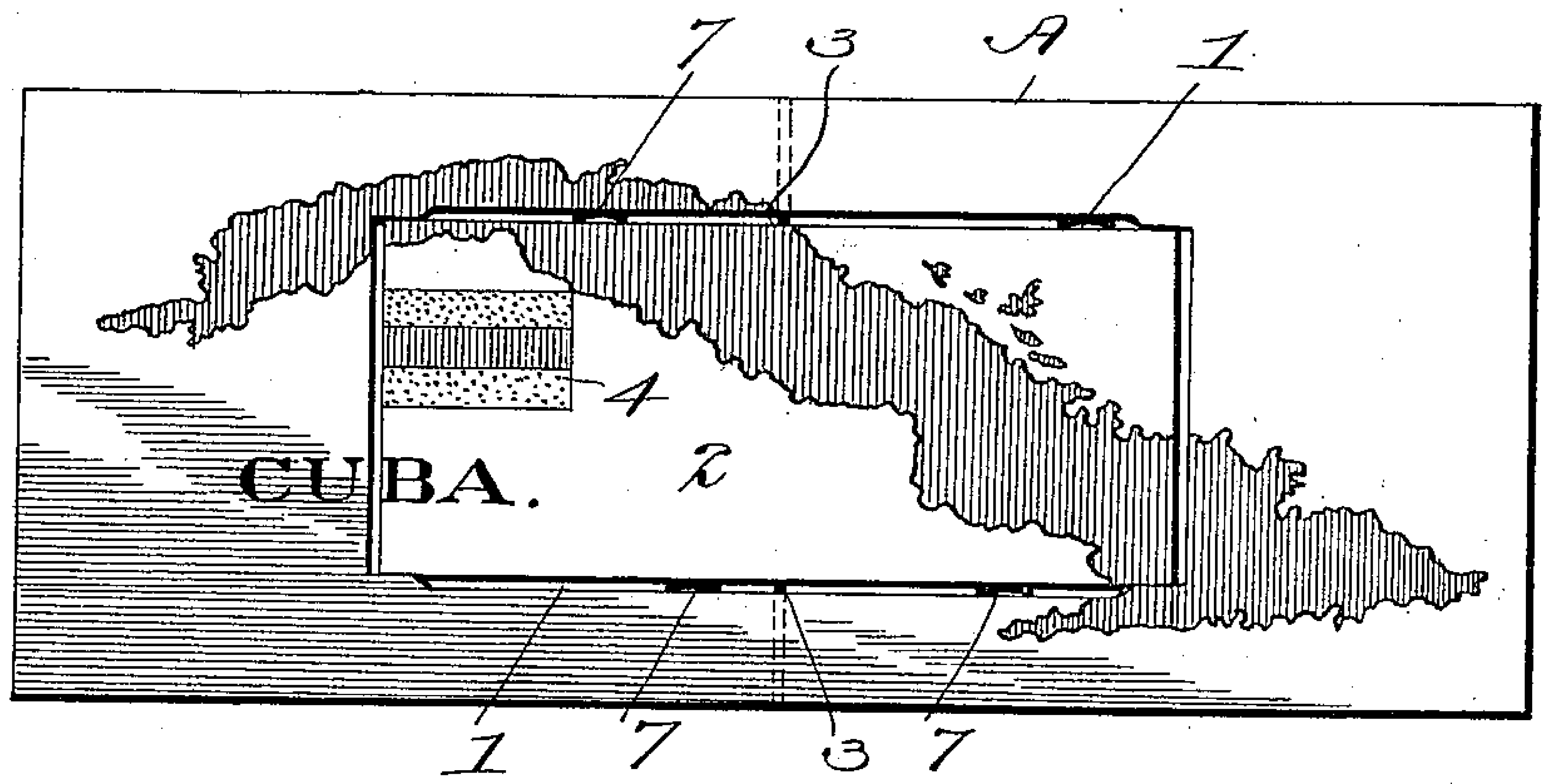


Fig. 2.

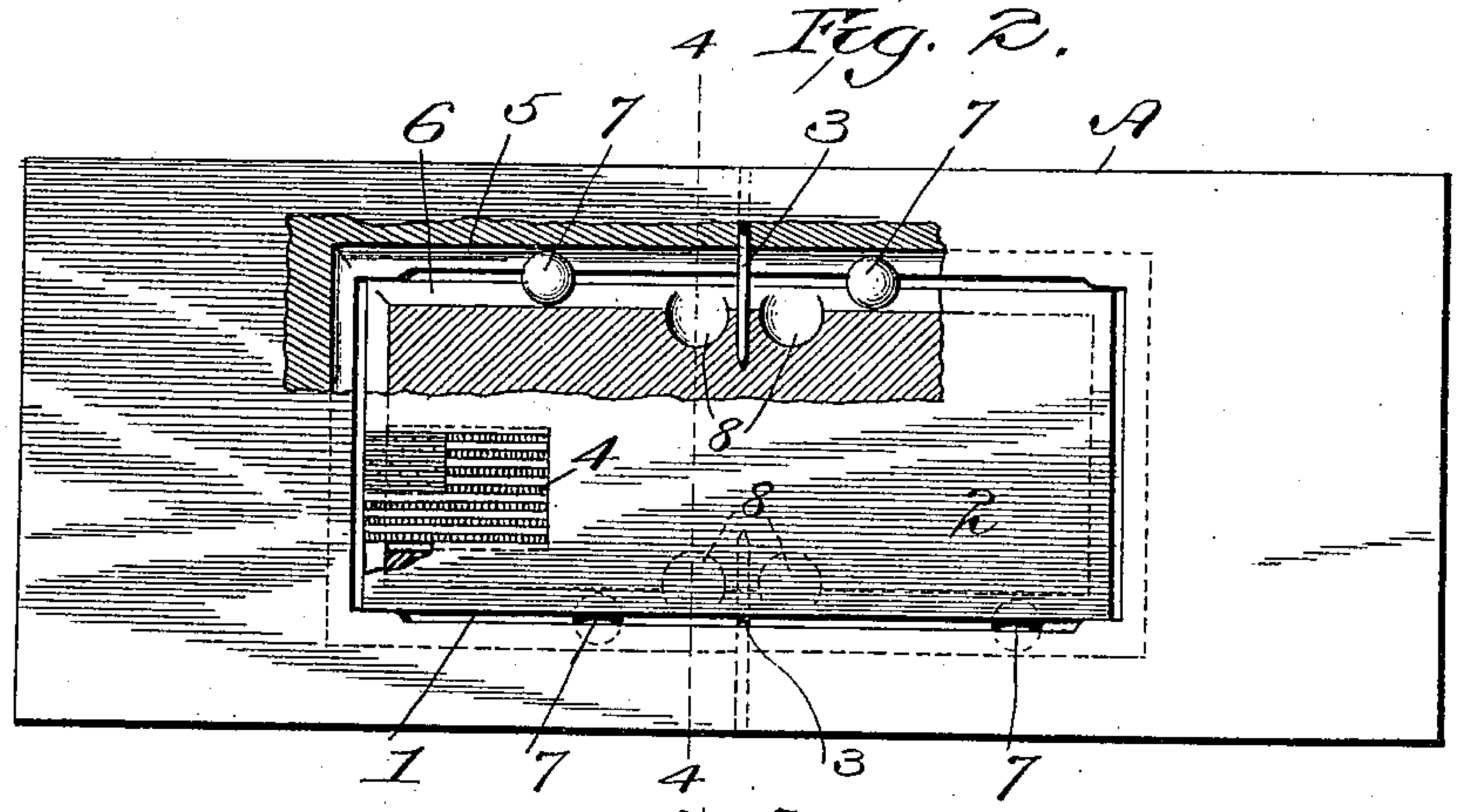


Fig. 3.

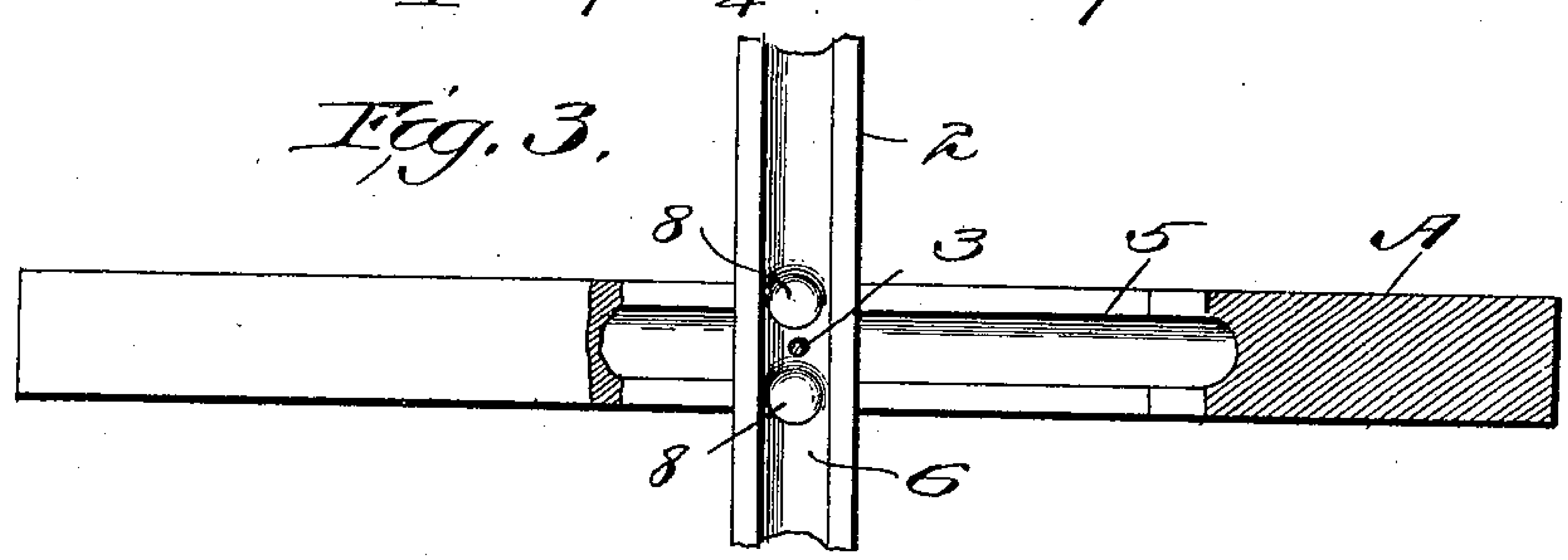
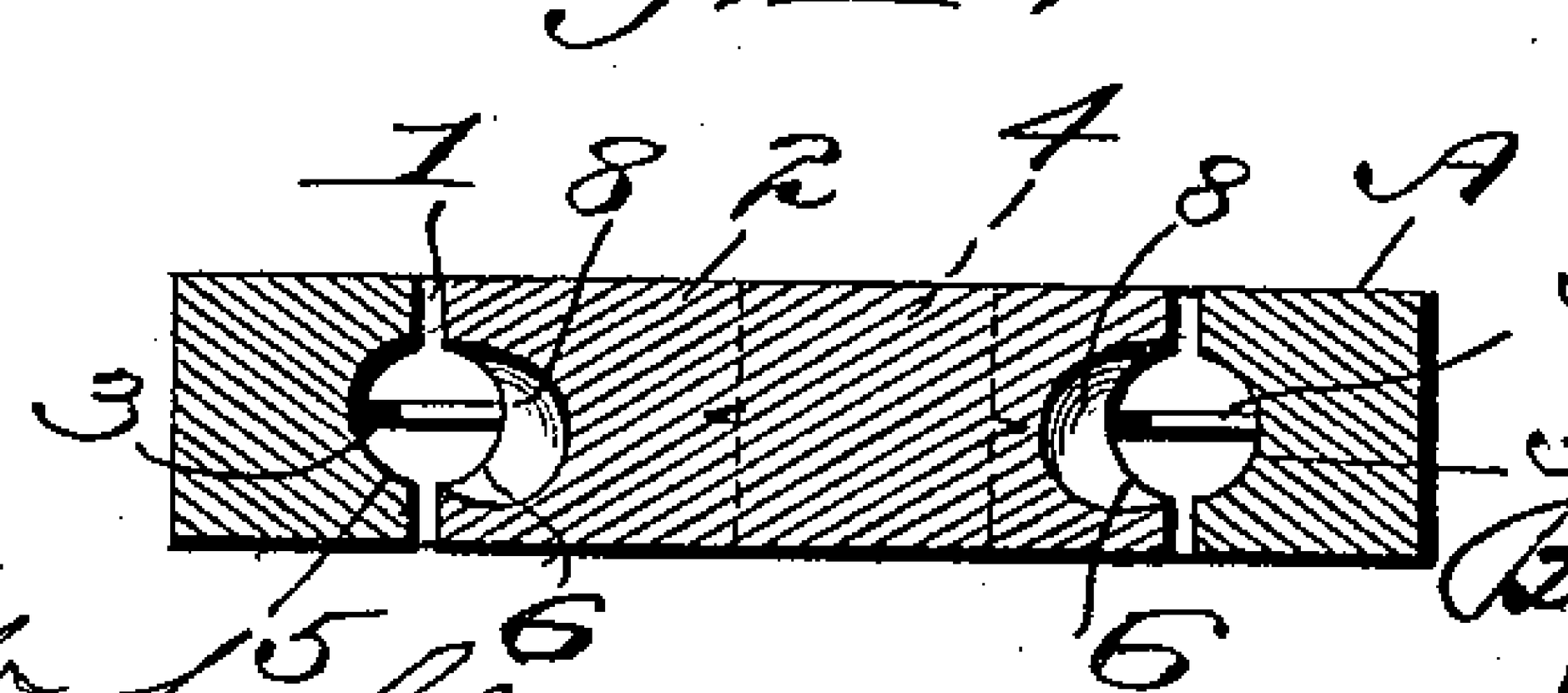


Fig. 4.



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UNITED STATES PATENT OFFICE.

RUSSEL MAXWELL SHEPHERD, OF CARBONDALE, PENNSYLVANIA.

PUZZLE.

SPECIFICATION forming part of Letters Patent No. 614,770, dated November 22, 1898.

Application filed September 17, 1898. Serial No. 691,231. (No model.)

To all whom it may concern:

Be it known that I, RUSSEL MAXWELL SHEPHERD, a citizen of the United States, residing at Carbondale, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Puzzles, of which the following is a specification.

My invention relates to an improvement in puzzles, the object being to provide a device of the character named which will be sufficiently puzzling to one unfamiliar with it to arouse interest and afford amusement and which at the same time can be easily and quickly solved by one acquainted with its *modus operandi*.

A further object is to provide a puzzle which can be cheaply made and placed upon the market at a small initial cost.

With the above objects in view my invention consists in a combination of elements which must be manipulated in a certain predetermined way to make the operation of the puzzle possible.

It further consists in certain novel features of construction and combinations of parts, which will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a top view, Fig. 2 is a bottom view, and Fig. 3 is an edge view with portions broken away, and Fig. 4 a transverse section of the device inverted on line 4 4 of Fig. 2.

The mechanical features are in general as follows, although subject to much variation:

A represents a flat strip of wood or other material, preferably oblong. This strip has a slot 1 cut therein. A block 2 is pivoted usually at its transverse axis in this slot by means of pins 3 3, which constitute an axis on which the block may turn. In one end of this block a removable and reversible section 4 is mortised or otherwise held. The inner wall of the slot 1 and the outer edge of the block and removable section are provided with the half-round grooves 5 and 6, respectively, which when the block is in its normal position in the slot coöperate to form a path for balls 7 7, which number four in all, two on each side of the axis, and operate to lock the block against turning on the axis by extending partly into the groove in the block, the space or crack between the slot and block being just sufficient to disclose the movement of the balls to the operator.

Pockets 8 8 are formed on each side of and adjacent to each axis, and these are sufficiently deep to receive the balls. These pockets are not visible from the outside through the space between the slot and block; but it is the object of the game to work the four balls into their respective pockets, so that the block can be reversed or turned over and the removable section can be taken out and reversed. These pockets incline upward slightly toward their inner ends in the direction of the face of the device, so that when the face is upward, as in Fig. 1, it is impossible to get the four balls into the four pockets and consequently to turn the block and remove and reverse the section; but to work the puzzle it must be turned over bottom upward, and even then a certain amount of skill in the manipulation of the device is still necessary to successfully pocket the balls and work the puzzle. When the balls have thus been located, the block is still held horizontally and the outside is turned, and the balls are prevented from escape by reason of the trap formed by the slot-grooves setting crosswise of the pockets, which latter are immediately adjacent to the axis. The top face is purposely made the more attractive, so that the operator will naturally turn it that side up to work the puzzle and a major portion of the working of the puzzle is of course to discover that it must be operated upside down. Once this is known the rest is simple enough and only requires a steady hand.

I have illustrated the map of Cuba on the device and on the removable section the United States and Spanish flags. In the present instance the ostensible object is to raise the American flag in Cuba; but this is only one of many designs or maps for that matter to be employed, as the puzzle is still to turn the block or unlock it.

It is evident that slight changes might be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A puzzle consisting of two parts pivotally connected together side by side and provided with grooves on adjacent edges which constitute complements of each other when the parts are in their normal positions, said grooves provided with a pocket which extends toward the outer surface of one of the parts as it extends inward and a movable device located in the grooves and adapted to be directed into the pocket whereby to admit of the two parts of the device being turned with respect to each other.

2. A puzzle consisting of two parts pivotally connected and provided on adjacent edges with grooves which constitute the complement of each other, and a pocket formed at the end of the grooves adjacent to the axis upon which the parts are pivotally connected together and a movable device operating in the grooves and adapted to be guided into the pocket, said pocket of greater depth at its inner end than at its outer end.

3. A puzzle consisting of an outer block having a slot extending transversely therethrough, a smaller block pivotally supported in the slot, the outer edge of the latter and the inner edge of the slot having a groove which grooves constitute complements of each other, two balls on each side of the pivot operating in the grooves, and pockets formed adjacent to the pivots for the retirement of the balls whereby the turning of the blocks with respect to each other is made possible.

4. The combination with an outer block having a grooved slot extending transversely therein, an inner block having a grooved edge and pivotally supported in the slot, the pivots stopping the continuity of the groove formed between the slot and inner block, pockets adjacent to the axis to which the grooves lead, said pockets being of greater depth as they extend inward, and movable devices in the grooves adapted to enter the pockets whereby to admit of the blocks turning with respect to each other and a reversible section removable when the blocks swing out of their normal positions, said section being held in place when the parts are in normal adjustment.

RUSSEL MAXWELL SHEPHERD.

In presence of—
H. G. BAKER,
F. J. THOMAS.