C. H. SWARTWOOD.

PUZZLE.

APPLICATION FILED MAY 10, 1915.

1,218,014. Patented Mar. 6, 1917.

Fig. 1.

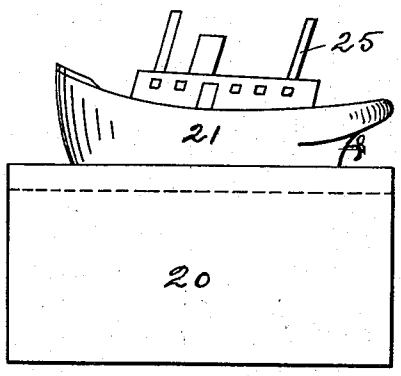


Fig. 2.

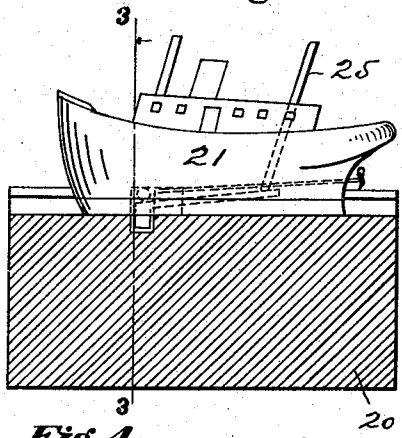


Fig. 3.

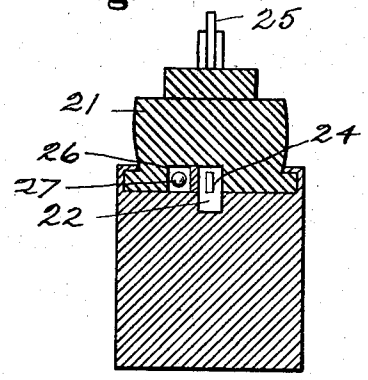


Fig. 4.

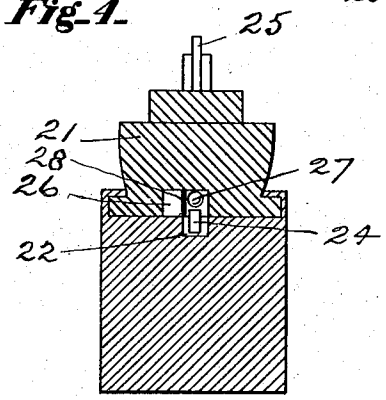


Fig. 5.

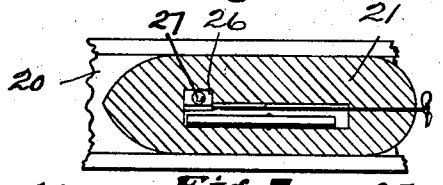


Fig. 6.

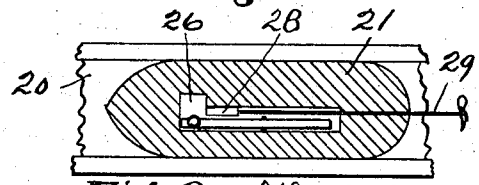


Fig. 7.

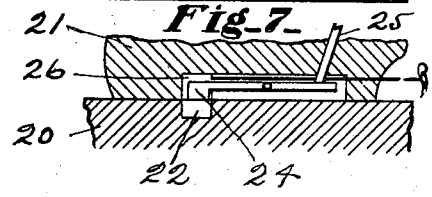
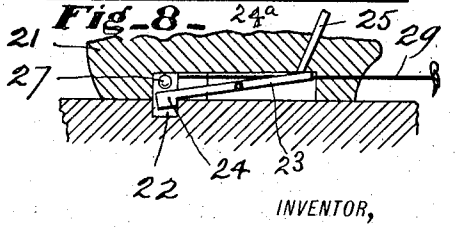


Fig. 8.



WITNESS

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PUZZLE.

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To all whom it may concern:

Be it known that I, CHARLES H. SWARTWOOD, a citizen of the United States, residing at Everett, in the county of Middlesex, in the State of Massachusetts, have invented a certain new and useful Improvement in Puzzles, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to a novel type of puzzle which I term the "Panama Canal Puzzle," in-as-much as it illustrates an attempt to pass a vessel through a canal lock, during which passage the movement of the vessel is obstructed; the object of my said invention being to not only amuse, but also to stimulate thought and a knowledge of mechanics on the part of the solver of the puzzle as he or she attempts to get the vessel past the said obstruction.

My said puzzle is illustrated in the annexed drawings, Figure 1 being a side elevation of a diagrammatic representation of a canal lock, with a vessel therein. Fig. 2 is a similar view showing the vessel in the lock and the obstruction in its operative (locking) position. Fig. 3 is a transverse vertical sectional view taken on the line 3—3 of Fig. 2, showing the obstruction removed and Fig. 4 is a similar sectional view, showing the obstruction in its locking position. Figs. 5 and 6 are horizontal sectional views taken on a line with the screw shaft, and Figs. 7 and 8 are vertical sectional views of the lower portion of the vessel and of the engaging portion of the lock, taken on a line with the said screw.

Briefly described my improved puzzle includes a notched lock, and a vessel adapted to pass through the said lock; the bed of the lock being notched and the vessel carrying a block which will drop by gravity into the said notch as the vessel attempts to pass through the lock. Means is also provided for locking the said block in the notch, as well as concealed means whereby the block may be released from the notch if one discovers the said concealed means.

Referring to the annexed drawings, the numeral 20 indicates the lock and 21 denotes a vessel having the lower portion of its hull adapted to interlock with the undercut sides of the lock, as will be understood by reference to Figs. 3 and 4 of the drawings.

The bottom wall of the lock is formed with a depression or notch 22 and the boat is provided, in its lower portion, with a lever 23 which is fulcrumed at 24^a, one end of said lever being formed with a weighted enlargement 24 which is adapted to drop by gravity into the notch 22 and the other end of said lever is engaged by a false mast 25 in such manner that, if the mast is pushed downward, the lever 23 will be rocked on its fulcrum so as to lift the block out of the notch 22, and thus permit the boat to pass on through the lock.

Within the hull of the vessel, alongside of the opening in which the block 24 is located, is a pocket 26 which is adapted to receive a ball, or shot 27, (see particularly Fig. 3 of the drawings). Between the pocket 26 and the opening in which the block 24^a is located, is a plate 28 which is attached to the propeller shaft 29; the said shaft and plate 28 being capable of endwise movement. It will now be understood that when the shaft and plate are drawn rearward the pocket 26 will be open to the opening in which the block 24^a is located and, when the said block drops by gravity into the notch 22, the ball may pass laterally from its heretofore confined position in the pocket 26 to a position over the block 24^a, as seen in Fig. 4, thus locking for the time being, the block in the notch 22.

Assuming that we have a puzzle of the described construction and that the boat has been moved forward in the lock until the block 24^a has dropped into the notch 22 and that the ball 27 is in its locking position over the block 24: the shaft 29 is then pushed forward in the boat, thus moving the plate 28 into position to prevent the ball from leaving its position over the block 24.

The puzzle is thus set and ready for solution. Obviously, the block 24 cannot be raised out of the notch 22 until the ball is removed and the ball cannot be removed until the plate 28 is withdrawn. The puzzle is to discover, first, how to remove the ball and, second, how to rock the lever 23 so to lift the block 24 out of the notch 22. In order to remove the ball the shaft 29 and attached plate 28 must first be drawn rearward thus permitting the ball to move laterally into the pocket 26, as seen in Fig. 6, and then the mast 25 must be pushed downward in the hull of the vessel thus rocking the lever 23 and raising the block 24 out of notch 22, when the vessel may be passed on freely through the lock.

Having thus described my invention, I claim as new and wish to secure by Letters Patent:—

A puzzle of the type described, including two elements slidably arranged with respect to each other, one having an undercut base receiving laterally extended base portions of the other, one of said elements having a longitudinal groove opening through its lower surface and terminating at one end in a lateral pocket, the other element having a notch opening through its upper surface and coincidently with said pocket, a shaft having attached thereto a plate intermediate said pocket and said notch, a lever fulcrumed intermediate the two first referred to members and having a lateral enlargement at one end arranged to be received by said notch, an endwise movable element arranged in one of said first-referred to elements and adapted to engage said lever, and a spherical member received within said pocket and adapted to be brought into a position over the enlargement of said lever.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."