

(No Model.)

A. W. BARTHOLOMEW.
PUZZLE.

No. 474,941.

Patented May 17, 1892.

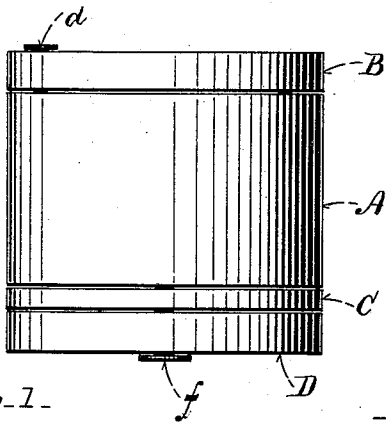


Fig. 1.

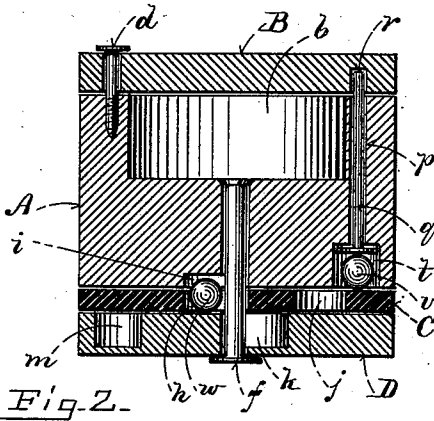


Fig. 2.

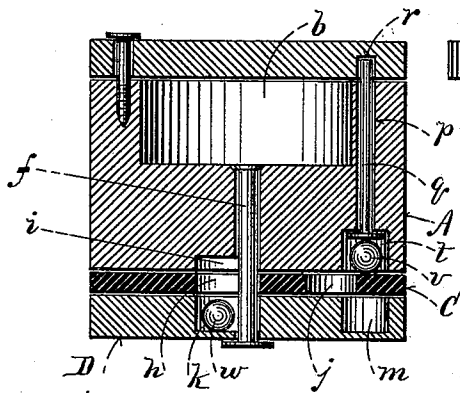


Fig. 3.

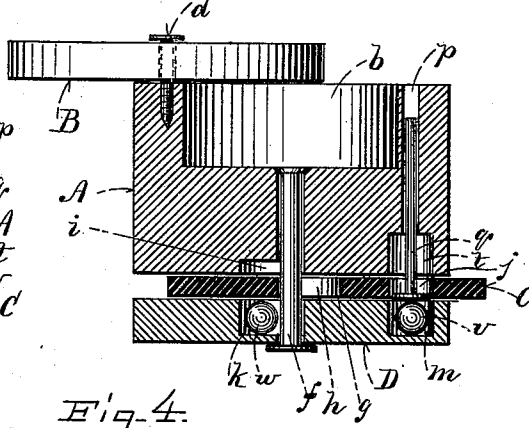


Fig. 4.

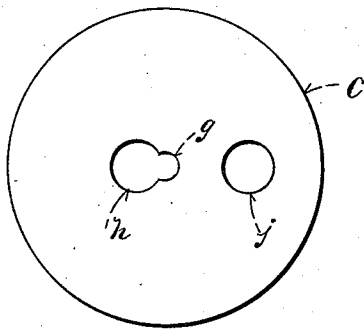


Fig. 5.

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ALBERT W. BARTHOLOMEW, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF
ONE-HALF TO THOMAS B. KENNEDY, OF SAME PLACE.

PUZZLE.

SPECIFICATION forming part of Letters Patent No. 474,941, dated May 17, 1892.

Application filed January 18, 1892. Serial No. 418,395. (No model.)

To all whom it may concern:

Be it known that I, ALBERT W. BARTHOLOMEW, of Boston, in the county of Suffolk, State of Massachusetts, have invented certain new and useful Improvements in Puzzles, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 as a side elevation of my improved puzzle; Fig. 2, a vertical transverse section of the same; Fig. 3, a vertical transverse section showing the position of parts after the first move for opening the box; Fig. 4, a like view showing the box open, and Fig. 5 a plan view of the locking-disk.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates especially to a box or receptacle locked and unlocked by peculiar movements of the parts constituting the same, and which is designed particularly as a toy bank or puzzle; and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A represents the body of the box, which consists of a cylindrical block of wood or other material, chambered in one end at *b* to receive articles. A disk B, pivoted by a pin *d* eccentrically to the top of the body, closes the chamber *b*. A pivot-pin *f* passes vertically and centrally through the bottom of the chamber *b*. A locking-disk C, of the same diameter as the body, is mounted to rotate freely on the pin *f*. Said disk is shown in detail in Fig. 5 and is provided centrally with an opening *g*, through which the pin *f* passes. A larger circular opening *h* is formed in the disk transsecting the opening *j*. The bottom of the body A has a circular countersink *i*, which opens into its pivot-opening

and is adapted to register with the opening *h* in the disk. The disk has also an opening *j* of diametrical line with the opening *h* and disposed on the opposite side of the pivot-opening *g*. A thicker disk or false bottom D is mounted centrally to rotate on the pivot *f* below the locking-disk C. The disk D is provided with a countersink or chamber *k* in the same relative position as the opening *h* of the disk C. A similar chamber *m* is formed in the disk or bottom D, nearer its periphery than is the opening *j* of the disk C, or normally out of line with said opening *j*. The body A is provided with a vertical hole *p* in the wall of the chamber *b*, opposite the cover-pivot D. A bolt *q* is fitted to slide vertically in said hole, and the cover B is provided with a socket *r* near its free end, adapted to receive the point of said bolt. The head of the bolt *q* plays freely in a countersink *t* in the lower face of the body A and is located in such position that the chamber *m* of the bottom D will register therewith, as hereinafter described. A ball *v* is disposed in the countersink *t* and normally rests on the upper face of the locking-disk C, the head of the bolt *q* resting on said ball when the bolt is projected to lock the cover. A ball *w* is normally disposed in the countersink *i* of the body and opening *h* of the locking-disk C and rests on the upper face of the bottom D. The parts being in the position shown in Fig. 2, the cover B is locked by the bolt *q* and the box presents the appearance shown in Fig. 1, nothing being exposed but the smooth surface of the wood other than the heads of the pivots *d* and *f*.

To unlock the box, the bottom D is rotated until its chamber registers with the opening *h* of the locking-disk C, the ball *w* meanwhile rolling freely on the bottom D. As said opening and chamber thus register the ball *w* falls into the chamber *k*, as shown in Fig. 3. The ball *v*, meanwhile in the countersink *t*, has worked on the top of the disk C and is held by said disk supporting the bolt *q*, as shown in said figure. The disk C is now pushed laterally between the body A and disk or bottom D, the pivot *f* entering the opening *h* of said disk C. The opening *j* of the disk C is thus disposed on the same arc in which the countersink *t* of the body and chamber *m* of the

bottom D are rotated. By holding the disk C and bottom in this position and rotating the body until its countersink *t*, the chamber *m*, and the opening *j* register the ball *v* falls through said opening *j* into the chamber *m*, as shown in Fig. 4. The bolt *q* follows said ball *v*, leaving the socket *r* in the cover, when said cover may be swung laterally on its pivot, opening the box.

To lock the box, the cover B is readjusted and the box inverted, so as to throw the point of the bolt *q* into the cover-socket *r*, when by slightly rotating the disks C D the ball *w* will fall back into the countersink *i*, or the position shown in Fig. 2, securely locking said cover.

Having thus explained my invention, what I claim is—

1. A puzzle comprising a box, a cover pivoted thereon, a bolt concealed in said body and locking said cover, a disk pivoted to the bottom of said body, a ball disposed in a countersink in said body and supporting said bolt, said ball rolling on the inner face of said disk, an extension to the pivot-opening of said disk, whereby it may be moved laterally, and an opening in said disk adapted to register with said countersink upon said lateral movement, substantially as described.

2. A puzzle comprising a body, a cover pivoted thereon, a concealed bolt normally lock-

ing said cover, a disk pivoted to the bottom of said body, a ball disposed in a chamber formed by an extension of the pivot-opening of said disk and a countersink in said body, a countersink for the head of said bolt in said body, a ball disposed in said countersink and resting on said disk, an opening in the disk on a different arc from said countersink, a bottom disk mounted on the first disk-pivot, and provided with a chamber registering with the pivot extensions and with a second chamber on the same arc as the bolt-countersink, all being arranged to operate substantially as described.

3. A puzzle comprising the body A and pivoted cover B, the locking-disk C, pivoted on said body and provided with the openings *h j*, the countersinks *i t* in said body, the balls *w v*, normally disposed in said countersinks, the bolt *q*, normally supported on the ball *v* and locking said cover, the bottom D, fitted to rotate on the pivot of said disk, and provided with the chambers *k m*, adapted, respectively, to register with the openings *h j* of said disk, all being arranged to operate substantially as specified.

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Witnesses:

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