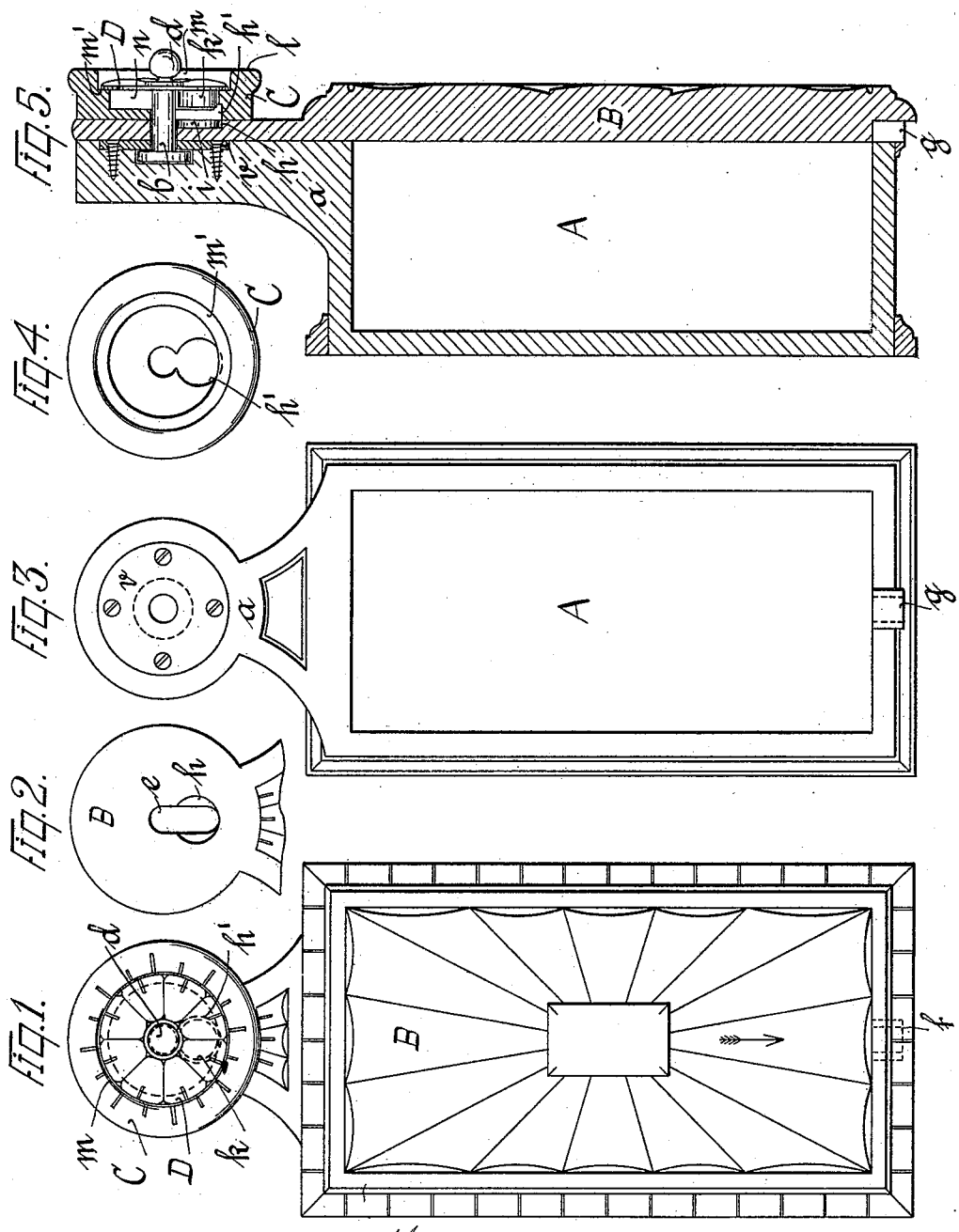
No. 616,104. Patented Dec. 20, 1898.

H. HINTERHOLZNER.

PERMUTATION LOCK FOR BOXES.

(Application filed Jan. 10, 1898.)

(No Model.)



Witnesses
John A. Paulson.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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PERMUTATION-LOCK FOR BOXES.

SPECIFICATION forming part of Letters Patent No. 616,104, dated December 20, 1898.

Application filed January 10, 1898. Serial No. 666,124. (No model.)

To all whom it may concern:

Be it known that I, HENRY HINTERHOLZNER, a citizen of the United States, and a resident of New York, county and State of New York, have invented certain new and useful Improvements in Permutation-Locks for Boxes, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings, wherein—

Figure 1 is a front elevation; Fig. 2, a front view of the upper part of the lid; Fig. 3, a front view of the box with the lid removed; Fig. 4, a front view of the locking-head with part of the block removed, and Fig. 5 a sectional view of my improved box provided with the locking devices in accordance with my invention.

Similar letters of reference indicate corresponding parts in all views of the drawings.

My invention relates to so-called "safe-boxes;" and it consists of a receptacle for valuable papers, documents, jewels, and the like that may be immured in a wall or embedded in a piece of furniture and of mechanism for locking the lid upon it.

The construction of the receptacle and also of the mechanism for locking thereupon the lid is disclosed in the sectional view, Fig. 5. The receptacle or box A may be of any shape—square, oblong, circular, or elliptical—and is provided on one end with an extension which I call "head-piece" *a* and on the opposite end with a dovetailed trunnion *g*, projecting above the plane of the box. Lid B corresponds in shape to the box, including the head-piece *a*, and is provided on its lower end with a dovetailed recess *f*, fitted to receive the correspondingly-shaped trunnion *g* of the box. Box A and lid B are hinged together by pivot *b*, rotatably secured in the head-piece *a* by plate *v* and passing through slot *e*, provided in the head-piece of the lid. Pivot *b* is provided on its upper end with a flanged knob *d* and serves as means for holding the disk D and lock-block C in place. Slot *e* (shown in Fig. 2) permits the lid to be shifted on pivot *b* to engage trunnion *g* in recess *f*. A circular recess *h* on the lower end of slot *e* is provided to receive the tumbler *i*, which is a disk of soft iron fitted to snugly fill the recess *h* and when dropped into this recess closes up slot *e*, and thereby prevents shifting of the lid B, which then cannot be disengaged from the trunnion *g*, and consequently cannot be swung aside.

The mechanism for operating the tumbler *i* consists of the lock-block C, disk D, magnet *k*, and knob *d*. Lock-block C corresponds in shape and size to the circular head-piece *a* and turns on pivot *b*. It is provided with recess *m* to receive disk D, track *n*, wherein magnet *k*, affixed to disk D, moves, and bore *h'*, serving to receive tumbler *i* when lifted by the magnet *k*. Disk D is secured to the flanged knob *d*, which in turn is safely riveted to the pivot *b*. Magnet *k* is of about the same size and shape as the tumbler *i*, but as thick as the recess *n* is deep, and of sufficient strength to lift tumbler *i* into the bore *h'*. When the tumbler *i* is attached to the magnet and disk D turned, the tumbler *i* cannot be carried into the track *n*, but is brushed off of the magnet and drops into bore *h'* and eventually back into recess *h*, when lock-block C is placed in proper position.

To lock the box, lid B is first swung upon it and then shifted so that recess *f* is brought in engagement with trunnion *g*. Then the block C is turned in position to drop tumbler *i* into recess *h*. All parts of the lock are then displaced in relation to each other.

To open the lock, it is necessary to place lock-block C in such position that the bore *h'* coincides with the recess *h* and then to set disk D in such position that the magnet *k* will stand exactly above the bore *h'*. In such position the magnet lifts the tumbler *i* into the bore *h'*, and thereby opens slot *e*. Lid B can then be shifted in the direction indicated by the arrow in Fig. 1 and, when disengaged from trunnion *g*, swung around to open the box.

It is advisable to turn lock-block C, together with disk D, either way when the tumbler *i* is lifted into the bore *h'* and then to shift the disk D with relation to block C. By this shifting the tumbler is brushed off of the magnet and retained in the bore *h'* ready to drop into the recess *h* when block C is placed in the required position for locking the box.

The surface of disk D does not indicate the position of the magnet *k*, nor is the position

of bore h' visible upon the block C. The edge of the disk D and the flanges l of the block C are, however, marked with corresponding graduations, by means of which block C and disk D may be set in exact position. The marking of the edge of the disk D and of the flange l may be varied at will, and thus the combination of the lock varied indefinitely.

The relative position of block C and lid B, which must also be determined before the lock can be opened, is indicated in similar manner by marks on flange l and corresponding marks on the lid B. These marks may be produced by suitable ornaments.

I claim as my invention and desire to secure by Letters Patent—

1. A locking device for locking a shiftable lid upon a box comprising a base, integral with the box, a pivot turnably secured in the base, a slot and a circular recess at the end of the slot provided in the lid; a soft-iron tumbler fitted into the circular recess, a block turnably mounted upon the pivot and provided with a bore corresponding in size and position relatively to the pivot with the circular recess in the lid; a disk or cover secured to the pivot, and a magnet affixed to the disk in corresponding position with the bore in the block.

2. The combination with a device for shiftably attaching a lid to a box, of a lock for securing the lid when attached to the box in its position, comprising a base, integral with the box, a pivot turnably secured therein, a slot and a circular recess at the ends of the slot provided in a corresponding position in the lid, a soft-iron tumbler fitted into the circular recess, a flanged block turnably mounted upon the pivot above the lid and provided with a bore corresponding in size and in position relatively to the pivot with the circular recess provided in the lid, a disk rigidly secured to the pivot above the block, a magnet affixed to the base of the disk and a flanged knob holding the parts upon the pivot.

In witness that I claim the improvements described in the foregoing specification I have signed my name in the presence of two subscribing witnesses.

HENRY HINTERHOLZNER.

Witnesses:
HENRY SCHREITER,
ROBERT VAN IDERSTINE.