No. 874,438. PATENTED DEC. 24, 1907.

Z. RAUTBORD.

LOCK.

APPLICATION FILED JUNE 8, 1907.

Fig. 2.

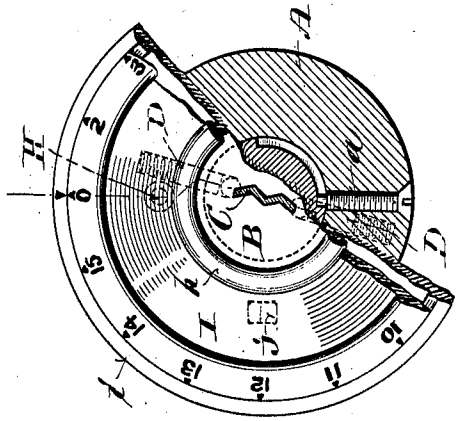
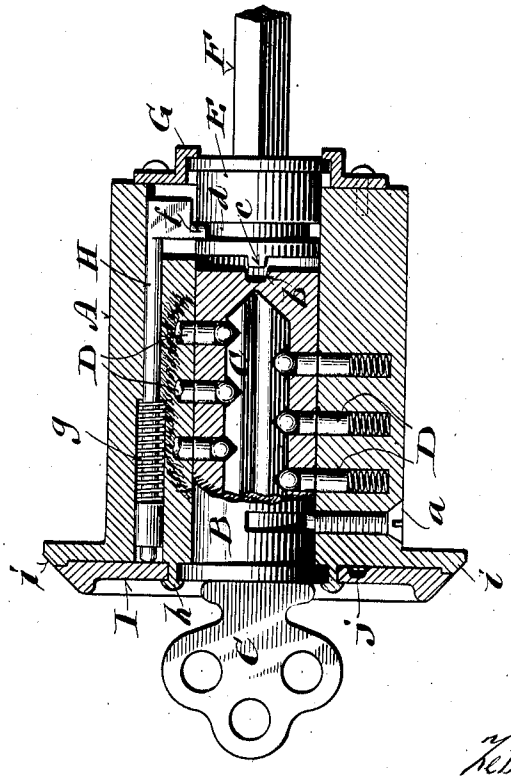



Fig. 1.




Witnesses:
Fred Palm
George Telber

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# UNITED STATES PATENT OFFICE.

ZEBULON RAUTBORD, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO SAMUEL BERLOWITZ AND DAVID ROTHMAN, OF MILWAUKEE, WISCONSIN.

## LOCK.

No. 874,438. Specification of Letters Patent. Patented Dec. 24, 1907.

Application filed June 8, 1907. Serial No. 377,862.

*To all whom it may concern:*

Be it known that I, ZEBULON RAUTBORD, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Locks; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to provide a combination mechanism in connection with the ordinary "Yale" type of lock, whereby the same can not be unlocked by its key unless the combination is known and correctly set.

The invention therefore consists in various details of construction and combination of parts as hereinafter fully described with reference to the accompanying drawings and subsequently claimed.

In the drawings: Figure 1 is a longitudinal sectional view of a lock embodying the features of my invention, with parts broken away to better illustrate the details, and Fig. 2, a face-view of the same with parts broken away and in section.

Referring by letter to the drawings, A indicates a casing centrally bored to receive the usual barrel B, the same being provided with a key-way and for the reception of a notched key C of any desired construction. In this instance the key is preferably notched upon both edges, the notches being so arranged as to operate a double row of spring-controlled plugs D, sections of which plugs; when said key is inserted, register with the circumferential bore of the casing and permit the barrel to turn therein. Said barrel is prevented from rotating more than a quarter turn by means of a set-screw *a* engaging a quadrant slot in the barrel the screw being in threaded-engagement with the casing. The inner end of the barrel is provided with a clutch recess *b*, adapted to receive a male clutch member *c* of a supplementary barrel E. The supplementary barrel is seated in the bore of the casing and forms a continuation of the barrel B, said supplementary barrel being adapted to be coupled to the same before the mechanism can be actuated to unlock. Said barrel-section E carries a lock-actuating rod F, which may be attached to any suitable locking device or tumbler not shown. Lateral play of the rod and its connected section E being limited between the adjacent clutch end of barrel B and a ring G secured to the rear end of the casing. The barrel-section is also provided with an annular groove *d* into which projects a finger *f* of a bolt H, the bolt being reciprocative in a longitudinal opening of the casing and is forced forward by a spring *g* against the face of a dial I. The spring is arranged to abut the end of an enlarged portion of the bolt-opening and a corresponding enlarged head of the bolt. The dial I is revoluble upon a ring *h* of the casing and is nested into a flange *i* thereof, which flange is marked with an indicator-dash, the dial being similarly marked with a series of dashes and characters equidistant apart, there being, in this instance, as shown, from 1 to 15, although the number may be varied indefinitely.

If the combination of this lock should be 12, the dial on its inner face is gouged out to form a recess *j* directly back of the figure 12, and when it is desired to unlock the mechanism, the dial must be turned until its number 12 is opposite the indicator-dash of the casing-flange, the bolt being just in line with said dash, it will be seen that said bolt will immediately enter the recess *j*, its spring forcing the same forward together with the barrel-section E. This causes the clutch-members of the barrel-sections to engage, and the key may now be turned to unlock the mechanism. Should the key however be manipulated without the combination being known, it is evident that it would only turn the forward section of the barrel B, and have no effect upon said locking-mechanism.

By notching both edges of the key and constructing the lock with a double set of plugs, it will be seen that the lock-casing may be materially shortened and yet have a greater number of plugs than would be the case where only one row of the same are used.

While I have shown a form of bolt for actuating the supplementary barrel-section, it is obvious that other forms may be utilized in connection with the dial and barrel to accomplish the same result.

From the foregoing description it will be seen that the notch in the dial may be placed to correspond with any number on the dial-face and the combination changed by filling up the notch, a new notch being then cut, thus transforming an ordinary "Yale" lock into a combination lock which can not be opened by its own key unless the combination of the dial is known.

I claim:

1. A key-actuated lock comprising a casing, a rotatable barrel and spring-controlled plungers in connection with the casing and barrel, in combination with a supplementary barrel-section, a rotatory dial in connection with said casing, and locking-means in connection with the barrel and supplementary barrel section the locking means being controlled by the dial.

2. A key-actuated lock comprising a casing, a rotatable barrel having a clutch-faced end, and spring-controlled plungers in connection with the casing and rotatable barrel, in combination with a supplementary barrel-section, having a clutch-face adapted to engage the clutch-face of the aforesaid barrel, a spring-controlled bolt in connection with the barrel-section, a rotatory dial carried by the casing, and actuating means for the bolt carried by the dial.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

ZEBULON RAUTBORD.

Witnesses:
GEO. W. YOUNG,
GEORGE FELBER.