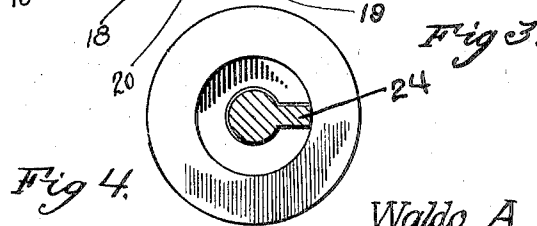
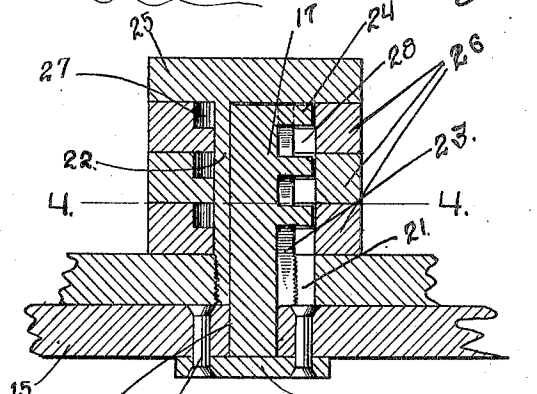
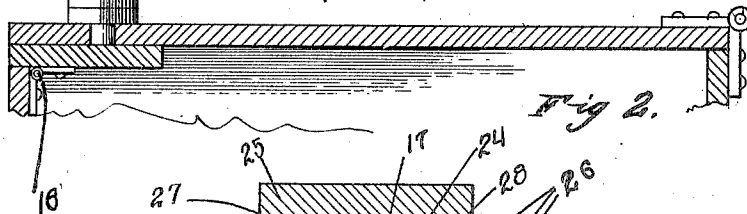
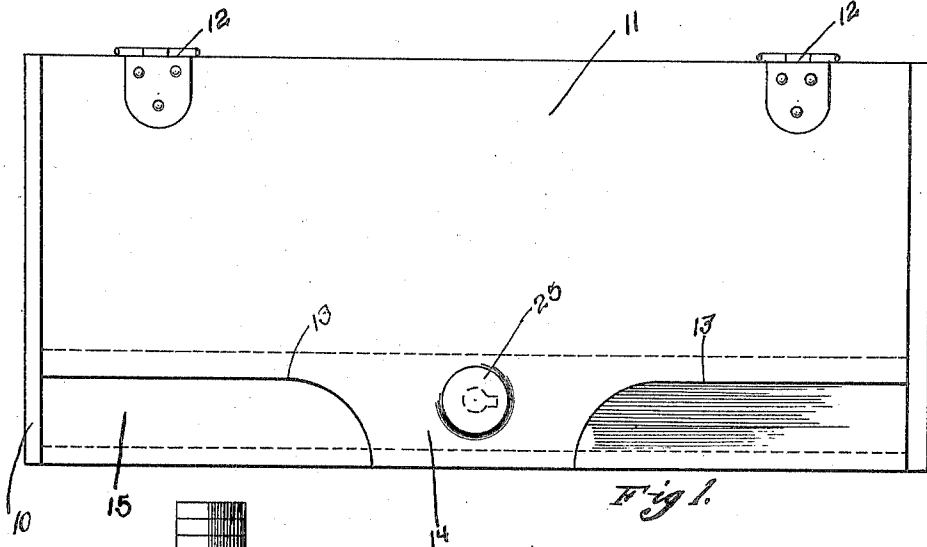


W. A. RIGAL.
COMBINATION LOCK.
APPLICATION FILED DEC. 3, 1917.

1,345,552.

Patented July 6, 1920.



INVENTOR

Waldo A Rigal.

WITNESSES

Albat Laris.
The Zeaman

BY

Richard E. Owen.

ATTORNEY

UNITED STATES PATENT OFFICE.

WALDO A. RIGAL, OF CORNING, NEW YORK.

COMBINATION-LOCK.

1,345,552.

Specification of Letters Patent.

Patented July 6, 1920.

Application filed December 3, 1917. Serial No. 205,179.

To all whom it may concern:

Be it known that I, WALDO A. RIGAL, a citizen of the United States, residing at Corning, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Combination-Locks, of which the following is a specification.

This invention has relation to post office lock boxes and has for an object to provide a lock box embodying a new type of permutation lock mounted on the lid whereby to securely lock the lid in place.

Another object of the invention is to provide a lock box for post offices of a novel character designed for coaction with the specific form of permutation lock herein disclosed.

In addition to the foregoing my invention comprehends improvements in the details of construction and arrangement of the correlative parts to be hereinafter more fully described and particularly set forth in the appended claim.

In the accompanying drawings in which similar and corresponding parts are designated by the same characters of reference throughout the several views in which they appear:

Figure 1, is a view in front elevation of a lock box constructed in accordance with my invention.

Fig. 2, is a view thereof in transverse section.

Fig. 3, is a detail view in section on an enlarged scale taken through the lock *per se*, and

Fig. 4, is a transverse section taken on the line 4—4 of Fig. 3.

With reference to the drawings 10 indicates a box which is provided with a lid 11 hingedly connected as at 12 to one longitudinal side of the box, the opposite longitudinal edge of the lid 11 being cut away from both ends as at 13 to define a lip 14 centrally located at said edge of the lid. The cut away portions 13 form openings which are covered by means of a strip 15 located beneath the lid within the box and hingedly connected to the box by means of hinges 16.

My lock mechanism includes a locking bolt 17 which enters an opening 18 in the strip 15 and projects outwardly. The inner end of said locking bolt is provided with a flange 19 whereby it may be secured to said

strip 15 through the medium of rivets 20. The locking bolt 17 projects through openings 21 in the lip 14 of the lid of the box which opening is internally threaded to receive the correspondingly threaded end of a sleeve 22 forming a part of the lock mechanism. The sleeve is designed to receive the locking bolt and is formed with longitudinally extending slots 23 to permit the passage therethrough of laterally directed lugs 24 arranged in spaced relation on said locking bolt. Formed on the outer end of the sleeve 22 is a disk head 25 to facilitate rotation of the sleeve when inserting the same in the lid of the box. A plurality of tumblers 26 are provided, in the form of disks apertured centrally to receive the sleeve 22 each disk being provided upon one face with an annular recess 27 to receive the lugs 24 of the locking bolt whereby to permit rotation of the disks relative to each other and to the locking bolt. It will be noted that the lugs 24 of the locking bolt project through the longitudinal slots 23 of the sleeve and into the annular recesses 27 of said tumblers, each tumbler is furthermore provided with a slot 28 of a size to permit the passage therethrough of the lugs 24. The periphery of each tumbler is moreover provided with inscribed characters whereby the position of one tumbler relative to another may be adjusted.

To unlock the box, the tumblers 26 are rotated until the notches 28 in each are brought in registration and in alinement with the lugs 24 of the locking bolt 17. It will thus be apparent that the structure including the lid, the sleeve 22, and the tumblers may be withdrawn from engagement with the locking bolt 17 and the strip 15 of the box. It will be noted that inasmuch as the cover 11 when opening moves in the arc of a circle the hinge mounting of the strip 15 readily permits of separation of the locking bolt from the permutation elements.

Thus it will be seen that I have provided a novel form of permutation lock adapted for use in connection with my specific form of box. The combination of the lock may be readily changed by interchanging the positions of the tumblers 26. The lock is moreover simple in construction and of a nature to permit durable construction.

While I have illustrated and described my invention with some degree of particularity, I realize that in practice various al-

terations thereover may be made, and I therefore desire to reserve the right and privilege of changing the form of the details of construction, or otherwise altering the arrangement of the correlative parts without departing from the spirit of the invention or the scope of the appended claim.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:—

In combination, a box, a lid hinged at one edge to a side of the box, and having a centrally disposed lip at the opposite edge which when the lid is closed provides openings at the sides of the lip, a strip within

the box and hinged at one edge thereof and adapted to underlap the said lip and close the openings at the sides thereof, a locking bolt carried by the said strip and adapted to pass through the said lip, a sleeve carried by the lip of the lid and adapted to receive the locking bolt, a tumbler mounted in the sleeve and adapted to co-act with the locking bolt to secure the same.

In testimony whereof I affix my signature in presence of two witnesses.

WALDO A. RIGAL.

Witnesses:

WM. J. FITZPATRICK,
M. J. BRANN.