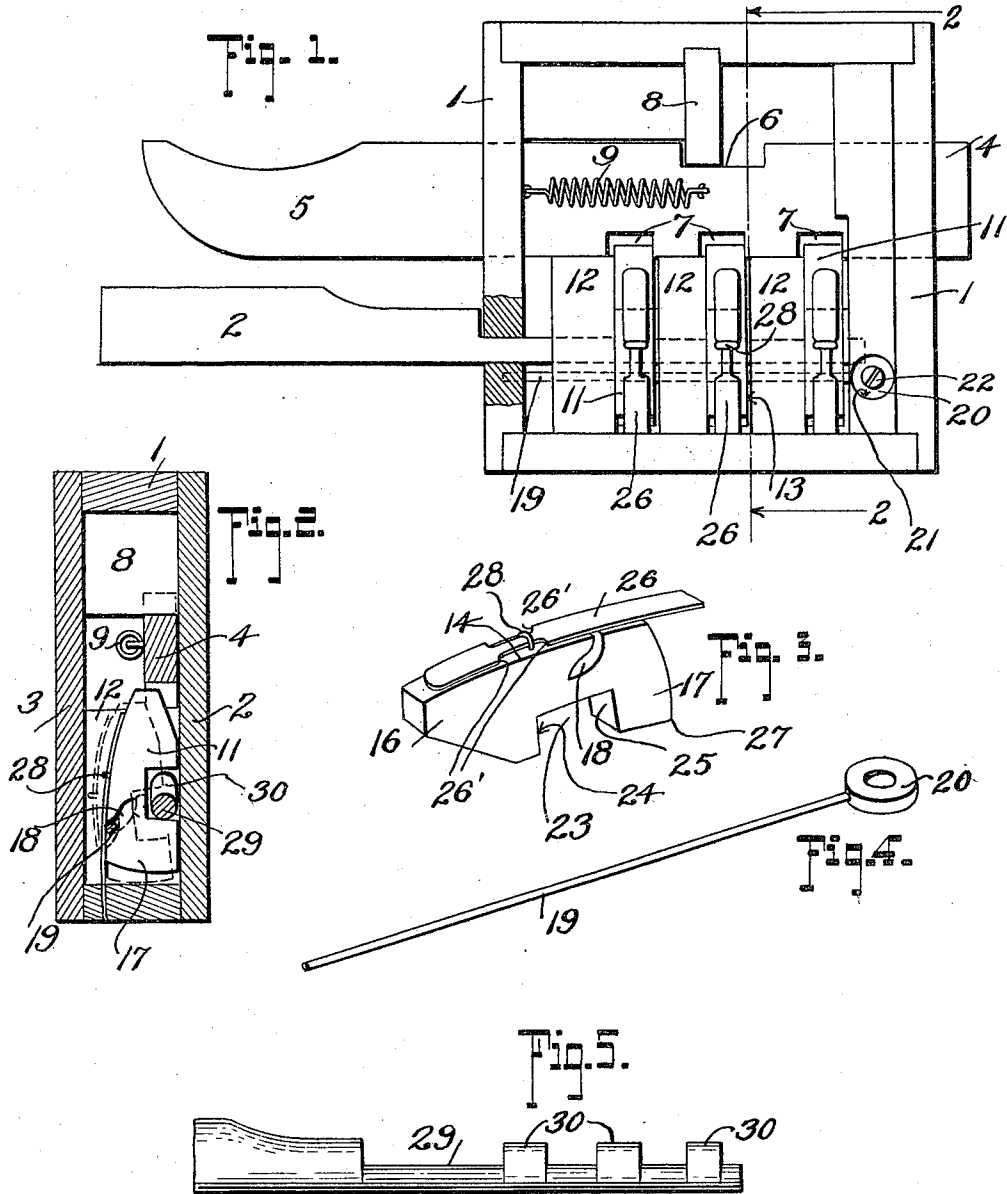


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DOOR LOCK.

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UNITED STATES PATENT OFFICE.

FRANK MONAS, OF GARFIELD, NEW JERSEY.

DOOR-LOCK.

1,006,971.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK MONAS, citizen of the United States, residing at Garfield, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Door-Locks, of which the following is a specification.

This invention relates to locks, the primary object of which is to provide a lock to be used for locking doors or the like, which is simple and durable in construction, and in which the bolt is held in locked position by several peculiarly arranged spring actuated tumblers, said tumblers being simultaneously acted upon by a key when operating the lock.

A further object is to provide a bolt engaging tumbler or locking member of peculiar construction and mounting.

With the above and other objects in view, this invention consists in the construction, combination and arrangement of parts, all as hereinafter more fully described, claimed, and illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of the lock, showing the interior parts thereof; Fig. 2 is a section on the line 2—2 of Fig. 1; Fig. 3 is a perspective of one of the tumblers; Fig. 4 is a perspective view of the pintle rod; and Fig. 5 is a detail view of the key.

Throughout the following detailed description and on the several figures of the drawings, similar parts are referred to by like reference characters.

1 designates the lock casing having rear and front walls 2 and 3 which have rectangular openings therethrough to receive a latch bolt 4. The latch bolt 4, which is formed with a handle 5 has a movement limiting recess 6 and a series of locking notches 7. Cooperating with the recess 6 is a lug 8 projecting from one side and the bottom of the casing, said lug limiting the inward and outward throw of the latch bolt in locking and unlocking. A tension spring 9 is connected at one end to the rear wall of the casing and at the other to the bolt, tending to normally hold the same in its innermost position. In the side of the bolt opposite the recess 6 are locking notches 7 which are adapted to be engaged by the several locking tumblers 11, thereby locking the bolt in its outermost position. The several

tumblers 11 are of the same construction and the description herein will therefore be limited to one of the same.

The casing 1 is provided with transverse partitions 12, thereby forming seats 13 and in each of these seats is located a tumbler or locking member 11. The tumbler 11 is of rectangular shape, the upper side 14 thereof being slightly curved from end to end and the bottom side 15 cut at an angle thereto, thereby forming a narrow and a wide end 16 and 17. A short distance from the wide end 17 at the top side of the tumbler is cut a transverse L-shaped slot 18 a short distance from the end 16 of the tumbler. The purpose of the slot 18 is to receive therein the pintle rod 19 which extends through all the partitions 12. The pintle rod has an eye 20 seated in a recess 21 in the front wall 3 of the casing 1 and removably held in place by a fastening 22. A key receiving recess 23 is formed in the bottom side of the tumbler, thereby forming shoulders 24 and 25. The narrow end 16 of the tumbler is normally pressed downwardly by the action of a leaf spring 26, one end of which is secured in a recess in the casing a suitable distance above the bottom thereof to receive the wide end 17 of the tumbler holding the corner 27 in contact with the bottom of the casing. As illustrated, the corner 27 is of acute angle for a purpose which will hereinafter be disclosed. The leaf spring 26 has a reduced portion, thereby forming shoulders 26' between which a keeper 28 is received.

A key 29 having lugs or points 30 is used for operating the lock.

In the operation of locking the door or the like, to which this lock may be applied, it is only necessary to push the latch bolt against the tension of the spring 9 until the spring actuated tumblers engage the locking notches in the bolt, thereby retaining the same in locked position. In the unlocking operation, the key is turned so that the points thereof come in contact with the bottom of the recess 23 and advances toward the shoulder 25 and creates a pressure on the latter, which operation will lift the tumblers to their maximum height and impart thereto a short sliding movement carrying the same out of engagement with the locking notches of the bolt which will then be withdrawn by the spring 9. It will be noted that this

operation will be facilitated by co-action of the pintle rod and the peculiar arrangement of the leaf springs.

Having thus fully described my invention, what is claimed as new is:—

5 1. In a lock, a casing, a latch bolt movably mounted therein, said bolt having a locking notch, a tumbler having a slot, a pintle rod
10 passing through the slot, a leaf spring having slidable connection with the tumbler, and means to impart a rocking movement to said tumbler, thereby releasing the aforesaid latch bolt.

15 2. In a lock, a casing, a latch bolt slidably mounted in said casing and having locking notches, a pintle rod, a leaf spring extending from one side of the casing and secured thereto, a tumbler having a narrow and a wide end and slot connection with said pintle
20 rod, said tumbler being slidably connected with the aforesaid leaf spring and adapted to engage said locking notch of the bolt at its narrow end, and means co-acting with said recess in the tumbler imparting thereto
25 a rocking movement and a subsequent sliding movement, thereby releasing the latch bolt.

3. In a lock, a casing, the casing having transverse partitions adjacent to one side thereof and a lug adjacent to the other side, 30 a latch bolt slidably mounted in the casing, the bolt having locking notches and a movement limiting recess co-acting with said lug, a pintle rod passing through aforesaid partitions, leaf springs extending from 35 the side of the casing between the aforesaid partitions, tumblers having wide and narrow ends and a slot connection with the aforesaid pintle rod, keepers slidably connecting the tumblers and springs, the wide end of the
40 tumbler being located toward the side of the casing and the narrow end adapted to engage the locking notches of said latch bolt, and means to move the tumbler out of engagement with the bolt, the sliding and slot
45 connections with the aforesaid leaf spring and pintle rod allowing such movement.

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

FRANK MONAS.

Witnesses:

JOSEPH BOLCAR,
JOSEPH DE ROSE.

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