

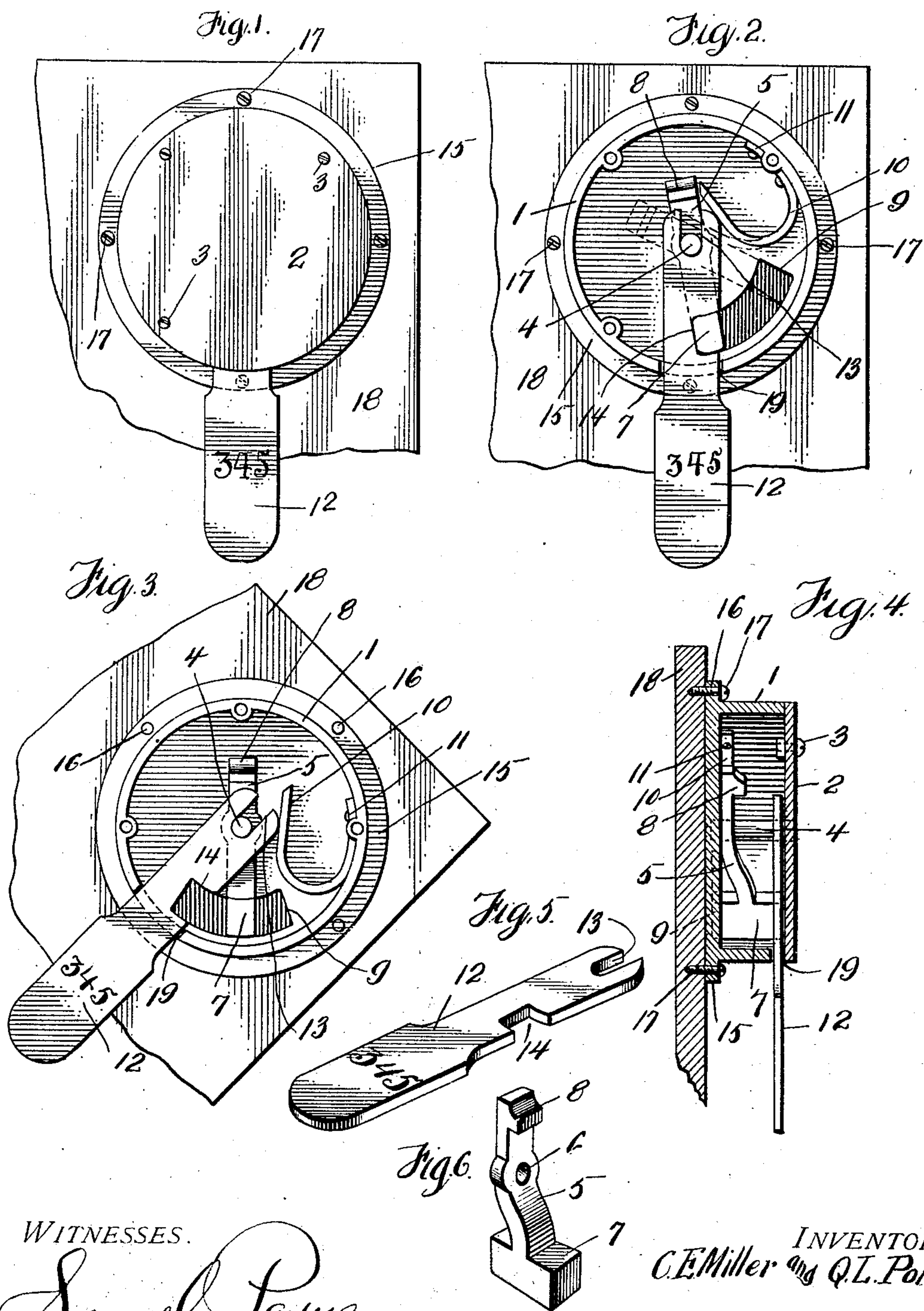
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MINER'S LOCK.

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WITNESSES.

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MINER'S LOCK.

No. 865,792.

Specification of Letters Patent.

Patented Sept. 10, 1907.

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To all whom it may concern:

Be it known that we, CLARENCE E. MILLER, of Fairmont, in the county of Marion and State of West Virginia, and QUINCY L. PORE, of Connellsville, in the

5 county of Fayette and State of Pennsylvania, citizens of the United States of America, have invented certain new and useful Improvements in Miners' Locks, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to miners' locks, and has for its object the provision of a novel lock that is adapted to receive a numbered key or check to be placed by a miner in the lock when he loads a car and to be removed at the tippie when the car has been dumped.

15 Under ordinary circumstances, and as is the present practice, a miner hangs a check bearing a distinctive number or character, in a coal car at a point where it will be covered by the load of coal, and this check is removed by the check weighman at the tippie and
20 preserved by him until the end of the day, when it is handed to the miner, the number of checks which a miner receives indicating the number of cars he had loaded and despatched to the tippie. These checks are frequently lost in the dumping of the car, and their
25 loss constitutes a source of great annoyance to the miner and the check weighman.

In carrying our invention into effect, we provide a small device which we call a lock and which is adapted to be placed at any convenient position in or on the car
30 and this lock is so constructed and arranged that a key, which at the same time constitutes a check, being provided with suitable numbers or characters, when inserted in the lock will be automatically secured therein and can only be released and removed by the dumping
35 of the car.

We have illustrated our improvement in the accompanying drawings, in which:—

Figure 1 is a front view of a lock with a key inserted therein, Fig. 2 is a similar view with the front of the
40 lock removed, Fig. 3 is a similar view showing a portion of a car tilted, Fig. 4 is a vertical transverse sectional view of the lock, Fig. 5 is a perspective view of a key, and Fig. 6 is a perspective view of a tumbler.

The body of the lock is a circular casing designated
45 1 in the drawing, and is provided with a lid 2 securely fastened in position by screws 3. The casing 1 is provided with a central pin 4, seated in the casing 1 and the lid 2, and upon this pin is hinged a swinging tumbler 5, this tumbler as shown in the perspective
50 view Fig. 6, consisting of a curved body portion apertured at 6 for the passage of the pin 4, and having a head 7 at its lower end and a hook 8 at its upper end. The head 7 extends on opposite sides of the shank of the tumbler thus forming a rearwardly-projecting lug,

and a forwardly-projecting lug, the functions of which 55 will presently appear. The bottom of the casing 1 is provided with a curved slot 9, in which the rearwardly-projecting lug on the head 7 moves, and a spring 10 is fastened to the casing at 11, and extends to a point adjacent to the upper hooked end 8 of the
60 tumbler 5.

The key 12 is a flat piece of metal, carrying distinctive characters or numbers by which it can be indentified, and is formed with a slot 13 in its inner end, this slot serving to receive the pin 4 when the key is in the
65 lock casing. The key is also formed with a notch 14 that receives the forwardly-projecting lug of the head 7, when the key is in the lock casing.

The casing 1 is formed with a flange 15, pierced at 16, 16, for the reception of screws 17 by means of which the
70 casing may be conveniently secured to the body 18 of the car. The cars with which our lock is intended to be operated, are those known as tilting or dumping cars, the body of the car being mounted on a central pivot, so that the car can be tilted to discharge a load
75 at the tippie, either out of the end or side of the car, according as the car is constructed to tilt at the end or the side. The lock casing is provided with a key slot 19, in its side, and when the lock is arranged in position on a car the slot 19 is at the bottom of the casing. 80

The parts being constructed as above described and shown are operated in the following manner: With the key 12 removed from the lock-casing, the tumbler 5 is held in the unlocked or dotted line position shown in Fig. 2, by means of the spring 10. 85 When a miner desires to place his key or check in the lock, he inserts the same through the key slot 19, the slot 13 in the inner end of the key or check receiving pin 4. By reason, however, of the inner end of the key engaging with the spring 10, the key must be
90 forced inwardly to overcome the resistance of the spring until the latter is forced away (as shown in full lines in Figs. 2 and 3) from its normal position. This forcing inwardly of the key frees the tumbler, and positions notch 14 in the key opposite the segmental slot 9 in
95 the lock-casing, and, as the tumbler swings to the vertical position, the forwardly-projecting lug of the head 7 engages in the notch 14 of the key and locks the latter in the lock-casing. When the car arrives at the tippie and is tilted, the casing partaking of the movement of
100 the car body moves substantially as shown in Fig. 3. This movement of the car body 18 throws the head 7 out of the notch 14, and the key can then be easily drawn from the lock by the check weighman.

This device is perfectly adapted for the intended 105 purpose and will prevent accidental loss or the removal of the key from the lock until such time as the car has been dumped at the tippie.

What I claim and desire to secure by Letters Patent, is:—

1. In a miners lock, the combination with a car body, of a circular lock casing, said casing having slots formed therein, a pin carried by said casing, a tumbler pivotally mounted on said pin within said casing and having a lug adapted to engage in one of said slots, a key adapted to extend in the other of said slots and embrace said pin, said key having a slot formed therein to receive the end of said tumbler, a spring normally engaging the opposite end of said tumbler and adapted to be moved by the end of said key, and a lid secured upon said casing.

2. A miners lock embodying a casing having slots formed therein, a tumbler pivotally mounted in said casing, a lug carried by the lower end of said tumbler and extending in one of said slots, a key adapted to extend in the other of said slots and having a notch to receive the end of said tumbler, and a spring normally bearing against said tumbler and adapted to be engaged by said key to be moved away from said tumbler.

3. A miners lock embodying a casing having a spring pressed tumbler pivotally mounted therein, a key adapted to be inserted in said casing to release said tumbler, and means carried by said tumbler to engage said key and retain the same within said casing.

4. In a lock of the type described, a lock-casing, having two slots, one in the rim and the other in the bottom of the casing, a pin carried by said bottom, a tumbler pivotally-mounted on said pin within the casing and having one end thereof engaging in the slot in the bottom of said casing, means engaging said tumbler for normally maintaining the slot-engaging end at one end of the slot in the bottom of the lock-casing, and a key adapted for insertion through the slot in the rim of the lock-casing and having

a notch to receive the tumbler by which it is locked in the lock-casing. 35

5. In a miner's lock, a lock-casing having a key-slot, a tumbler pivotally-mounted within the lock-casing, a spring for normally holding said tumbler in the unlocked position, and a key for insertion through said key-slot to engage the spring and free the tumbler, said tumbler when freed engaging the key to lock the latter in the lock-casing. 40

6. In a miner's lock, a pivotally-mounted tumbler adapted for locking engagement with a key, means for normally holding said tumbler in unlocked position, and a key for actuating said holding-means to free the tumbler and permit the latter to move into locking-engagement with said key. 45

7. In a miner's lock, a pivotally-mounted tumbler yieldably held in unlocked position and adapted to move by gravity to locked position, a spring for holding the tumbler in unlocked position, and a key for actuating the spring to free the tumbler, said key having a notch to receive the tumbler. 50

8. In a miner's lock, a lock-casing having a key-slot, a tumbler pivotally mounted within the lock-casing yieldably held in unlocked position and movable to locked position, means for normally holding said tumbler in unlocked position, and a combined key and check insertible through the key-slot into said lock-casing for actuating said tumbler and permit the latter to drop into engagement with the key and check and lock the same in the lock-casing. 55

In testimony whereof we affix our signatures in the presence of two witnesses. 60

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Witnesses:

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