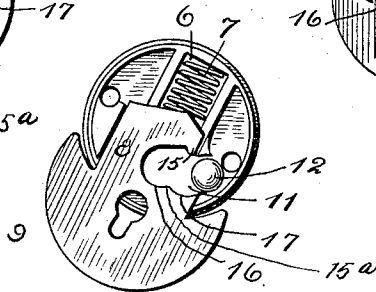
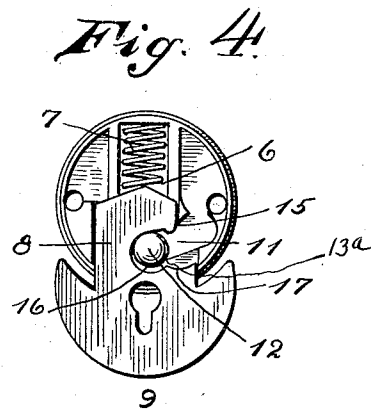
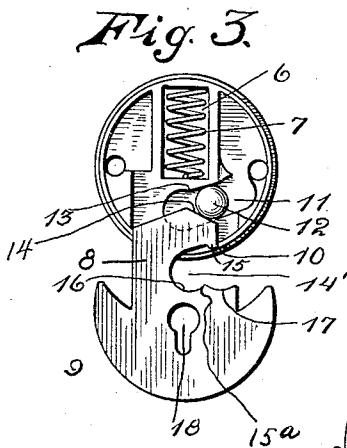
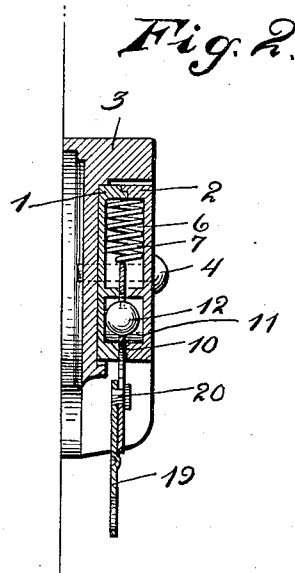


1,065,403.



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Fig. 5.

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UNITED STATES PATENT OFFICE.

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CHECK-LOCK.

1,065,403.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed October 14, 1911. Serial No. 654,656.

To all whom it may concern:

Be it known that I, SCOTT STEWART, a citizen of the United States, residing at Rivesville, in the county of Marion and State of West Virginia, have invented certain new and useful Improvements in Check-Locks, of which the following is a specification.

This invention relates to a check lock, designed to be used in connection with mining cars, which are tipped or tilted when being unloaded.

An important object of this invention is to provide a device of the above character, whereby a check may be readily and easily attached to a car in such a manner that said check can not be removed therefrom until the car is tipped or tilted, subsequent to which the check may be easily removed.

A further object of this invention is to provide a check lock of the above character, which is positive in its operation, simple in construction and cheap to manufacture.

A further object of this invention is to provide a novel form of casing for the lock.

Other objects and advantages of this invention will be apparent during the course of the following description.

Figure 1 is a front view of my improved check lock, showing the casing or housing for the same, partly in section, Fig. 2 is a transverse sectional view taken on line 2—2 of Fig. 1, Fig. 3 is an inside view of one of the casing-members forming a portion of the lock, the detachable check being shown as being inserted into the device, Fig. 4 is a similar view, showing the detachable check in its locked position, and Fig. 5 is a similar view showing the casing-member tilted, whereby the ball is disposed to one side of the check, which may now be removed.

In the drawings wherein is illustrated a preferred embodiment of my invention, the numerals 1 and 2 designate preferably cylindrical twin casing-members, having their inner adjacent edges provided with inter-fitting flanges, as shown. The casing-members 1 and 2 form the housing or body portion of the lock, which housing is disposed within a protecting casing 3, and secured therein by bolts 4, which also serve to hold the casing-members 1 and 2 in locked engagement. The protecting casing 3 is provided with a number of laterally extending ears 4', adapted to be engaged by screws 5, whereby the protecting casing may be attached to a car. The casing-members 1 and

2 are provided with semicylindrical recesses 6, which are in registration, as shown in Fig. 2 and serve the function of holding a compressible coil spring 7. A space is provided between the walls of the recesses 6, when the casing-members 1 and 2 are assembled, so that a shank 8 of a detachable check 9 may pass therebetween and engage the spring 7. The casing-members 1 and 2 have their material provided with recesses or openings 10 extending through their peripheries for forming a suitable opening for the reception of the shank 8. The casings 1 and 2 are further provided with registering openings 11, which are inclined when the entire device is in its normal position, and form a tortuous ball receiving runway, there being upper and lower opposed inwardly extending shoulders 13 and 13^a. Within the runway is disposed a ball 12, which is adapted to travel longitudinally therein, when the device is tilted, as will be explained. The shank 8 has its upper end beveled, as shown, and said shank is provided upon one side with a cut out portion or tortuous runway 14', there being upper and lower opposed inwardly extending shoulders 15 and 15^a. When the check 9 is moved to occupy either its uppermost or lowermost position so that the two tortuous runways do not perfectly register, it is obvious that the ball 12 can not possibly move out of the runway 14' so that the tag may be removed. When the two tortuous runways are in perfect registration, as shown in Fig. 5, the ball can run out of the runway 14' when the device is tilted, but can not be jarred out of the same when the device is in its vertical position by striking the car with a sledge hammer or the like. It is thus seen that the device includes two relatively movable tortuous runways, which must be moved into registration before the ball is free to roll, upon the device being tilted. The function of these two tortuous runways is to prevent the improper movement of the ball when the car is in its vertical position. The detachable check 9 is provided with a key hole opening 18.

Attention is called to the enlarged opening 3^a of the casing 3, which receives the shank 8 and portions of the check 9, as shown. This opening 3^a provides overlapping ears 4^a, which protect the shank 8 and portions of the check 9, preventing the same from being broken off.

The numeral 19 designates a second check, which carries a headed stud 20, adapted for insertion within the key-hole opening 18 and serves to lock the check 19 with the check 9.

5 The check 9 may be provided with any suitable inscription thereon and is used or placed on the car by the shoveler, while the check 19 is used by the machine man or cutter, said check 19 being also provided with
10 any suitable inscription placed thereon.

In the use of my check lock, the check 19 is secured to the check 9, before the shank of the check 9 is inserted within the casing-members 1 and 2. It is to be understood
15 that the casing-members 1 and 2 and the protecting casing 3 in their assembled form, as shown in Figs. 1 and 2, are rigidly attached to a mining car so that the same will occupy their normal vertical positions, until
20 such car is tilted for the purpose of unloading. The operator then inserts the shank 8 of the check 9 into the openings 10, whereby the beveled end 14 of the shank will cause the ball 12 to move longitudinally within
25 its opening to clear said shank. After the shank has been inserted a proper distance the ball 12 will travel downwardly and fit within the cut-out portion 14', as clearly illustrated in Fig. 4. The spring 7 engages
30 the upper end of the shank 8 to force the same downwardly whereby the two tortuous runways are out of perfect registration, as shown in Fig. 4. The shoulders 15 and 13^a are now disposed before the ball 12 to positively prevent its rotation. When the shank
35 8 is moved to its uppermost position whereby the two tortuous runways are again out of perfect registration, the shoulders 15^a and 13 engage before the ball 12 to prevent its
40 movement. It is thus seen that the ball can only be made to roll to release the check 9 when the two runways are in perfect registration and the device is tilted, as clearly shown in Fig. 5. If the device is in its vertical
45 position with the two runways in perfect registration, the ball can not be made to roll out of the runway 14' by striking the car with a sledge hammer or the like, since said ball would engage the shoulders 15 and
50 15^a and hence return to the inner end of the runway 14'. It is almost impossible to get the two tortuous runways in perfect registration to allow the ball to roll, unless the car is previously tilted, so that the ball may roll the instant
55 said runways are moved into perfect registration upon the slow upward movement of the shank 8.

Attention is called to the fact that the protecting casing 3 has the lower portion thereof
60 of slotted, as shown, for receiving the check

9, whereby the check is protected and can not be readily broken or otherwise injured.

I wish it understood that the form of my invention herewith shown and described is to be taken as a preferred example of the
65 same and that certain changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the sub-joined claims.
70

Having thus described my invention, I claim:—

1. A check lock of the character described, comprising a casing provided with an opening
75 extending therein, a check for insertion within the opening and provided with a key-hole opening so arranged thereon that its large portion will be located in the casing
80 when the check is in its locked position, means for locking the check with the casing, and a second check provided with a headed stud, which stud is adapted for insertion
within the key-hole opening.

2. The combination with an outer casing
85 having a main recess, of a locking device including a shell mounted in the recess, a check for detachable connection with the locking
90 device and including a large body portion having a reduced shank for insertion within the shell while the large body portion remains exposed exteriorly of said shells,
95 and ears formed upon the outer casing and over-lapping portions of the shank and large body portion, to protect said shank and body portion and prevent the check from
being broken off adjacent the base of the shank.

3. In a check lock, a casing to be attached to a tilting car body for bodily movement
100 therewith and provided with a normally inclined tortuous ball receiving runway, a ball permanently mounted in said tortuous runway, a check having a portion provided with a normally inclined tortuous
105 runway adapted to be moved into and out of perfect registration with the first named tortuous runway when said ball is in both
runways, whereby the ball is positively held against movement when said runways are
110 out of perfect registration and prevented from forced rotation by jars or the like when the two runways are in perfect registration and said device is in a vertical position.

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

SCOTT STEWART.

Witnesses:

HENRY MILLER,
B. D. SATTERFIELD.