P. A. CAMPBELL.

JOURNAL BOX.

APPLICATION FILED APR. 2, 1908.

922,083.

Patented May 18, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

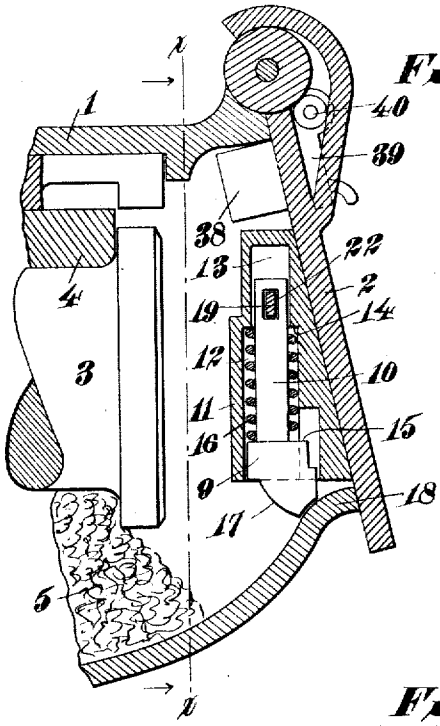


Fig. 3.

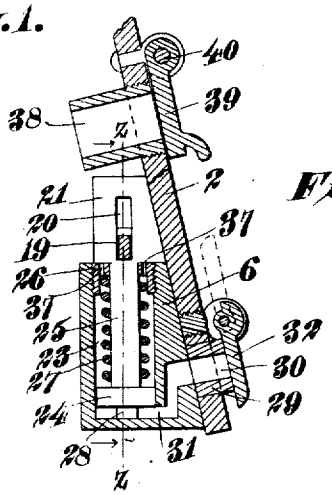
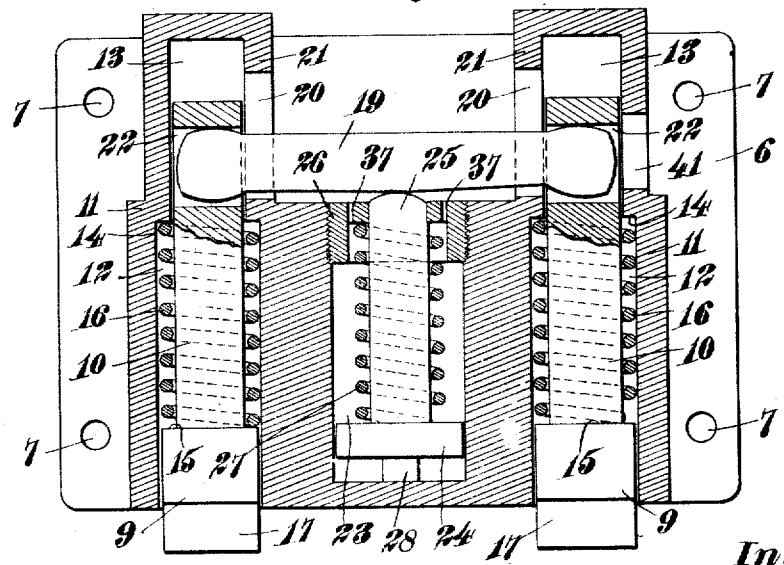


Fig. 5.



Witnesses;

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Inventor;

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by Joshua R. H. Potts

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2 SHEETS—SHEET 2.

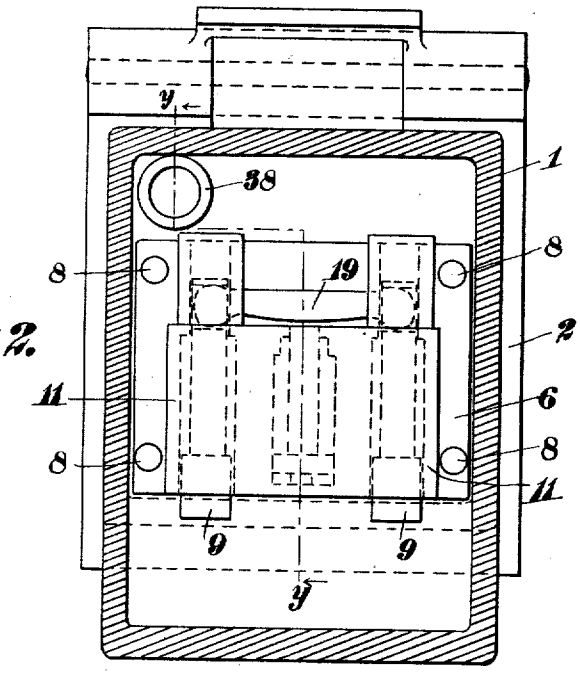


Fig. 2.

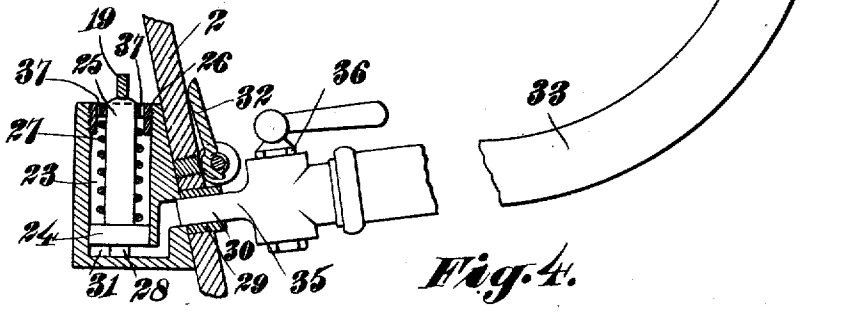


Fig. 4.

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UNITED STATES PATENT OFFICE.

PETER A. CAMPBELL, OF CHICAGO, ILLINOIS.

JOURNAL-BOX.

No. 922,083. Specification of Letters Patent. Patented May 18, 1909.

Application filed April 2, 1908. Serial No. 424,788.

To all whom it may concern:

Be it known that I, PETER A. CAMPBELL, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Journal-Boxes, of which the following is a specification.

My invention relates to car journal boxes and the object of my invention is to provide means for locking the door of the journal box in order to prevent persons from wrongfully removing the brasses or waste which is frequently done by improper persons resulting in injury to the journals or even wrecking the train. The wrongful removal of the brasses or waste is usually done while the car or cars are detached and upon a siding.

A further object of my invention is to provide means for automatically locking the journal box doors as they are closed, and to provide an automatic locking device which can be unfastened only when coupled to the compressed air system of the train or when in the shop, and that by the trainmen or other employees of the road provided with necessary coupling device.

A further object of my invention, is to provide a lock as mentioned, which shall be of simple construction and which may be readily applied to the door of any ordinary journal box.

Other objects will appear hereinafter.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a vertical longitudinal section through the front end of a journal box illustrating the door equipped with a locking device embodying my invention, Fig. 2 is a transverse section of the box on the line *x*—*x* of Fig. 1, Fig. 3 is a section of the door on substantially the line *y*—*y* of Fig. 2, Fig. 4 is a detail section similar to Fig. 3 illustrating the device for unlocking the door in position, and Fig. 5 is a section of the lock on the line *z*—*z* of Fig. 3 and upon an enlarged scale.

Referring to the drawings 1 indicates a journal box of any ordinary or preferred construction, 2 the door, 3 the journal and 4 the brass.

5 indicates the usual waste arranged within the box to keep the journal properly lubricated. These portions of the device are old and may be of any preferred construction and in the drawings I have illustrated an M. C. B. journal box.

In carrying out my invention, I provide a spring latch or bolt arranged upon the inner face of the door 2 and arrange the same so that it can only be opened by compressed air, hence persons cannot improperly open the door and remove the brass or waste. Although one latch may be employed upon each door, I prefer to provide two so that if one refuses to work, the other will secure the door in closed position. These I equip with a single unlocking device.

Referring now to the drawings 6 indicates a plate having a plurality of holes 7 for the rivets 8 by which it is secured to the inner face of the door 2. Arranged upon the plate are a pair of spring latches or bolts 9—9 having the parallel stems 10—10 arranged in a casing 11 formed integrally with the plate 6. The casing is provided with the recesses 12 to receive the bolts and their stems, and the recesses terminate in the reduced portion or bores 13 to receive the upper end of the stems, forming the shoulders 14 between which, and the shoulders 15 on the bolts 9 are interposed the springs 16. The inner edge or faces of the bolts 9 are beveled or curved as at 17 to engage the lip 18 of the box as the door is closed. It is obvious that when the doors are closed, the spring pressed bolts 9 automatically lock the same in closed position. The upper ends of the stems 10 are connected by a link or bar 19 which extends through slots 20 in the walls 21 of the bores 13 and into recesses 22 in the upper ends of the stems. It is evident that by raising the bar 19, the latches 9 will be raised to unlock the door. Arranged centrally between the recesses 12 and in the casing 11 is a cylinder or cylindrical bore 23 in which is arranged a piston 24 having a stem 25 extending vertically upward and impinging against the under-edge of the bar 19 at substantially its central point. The cylinder 23 and the stem 25 are parallel with the stems 10 of the latches or bolts.

26 indicates a plug closing the upper end of the cylinder and between which and the piston is arranged a spring 27 which normally keeps the piston and its stem in lower or depressed position. 28 indicates a lug on the bottom of the piston to limit the same in its downward movement. This also limits the downward movement of the bolts.

The plate 6 is provided with a sleeve 29 which extends through the door 2, the door being drilled to receive the same and said sleeve is provided with a passageway 30 which extends beneath the piston 24. It is to prevent the piston from closing the port 31 of the passageway that the lug 28 is provided. By admitting air under pressure through the passageway 30, the piston 24 is raised unlocking the door, and this is the only manner in which the door may be unlocked. 32 indicates a hinged closure arranged upon the outer face of the door of the passageway 30. The compressed air necessary for unlocking the door may be readily supplied from a compressed system of a train or at the shops where the car may be taken for repairs, but it is obvious that it is practically impossible to supply the necessary air to the device when detached and upon a siding, hence the door cannot be opened at such times.

33 indicates a flexible pipe or hose having the coupling 34 by which it may be attached to the train pipes or other source of compressed air. The opposite end of the hose is provided with a nozzle 35 having a stop cock 36. To unlock the door, the hose is coupled to the train pipe and the nozzle 35 inserted in the passageway 30 after which, the stop cock 36 is opened. This raises the piston 24 which in the manner before described, raises the latches and unlocks the door.

37 indicate apertures in the plug 26 for maintaining constant atmospheric pressure on the upper face of the piston. The apertures 37 also permit the escape of any air which passes by the piston 24.

38 indicates a sleeve tapped through the door and through which the spout of an oil can may be inserted to lubricate the journal, and 39 a closure for the same hinged as at 40 to the door 2.

41 indicates an aperture in the outer wall of one of the bores 13 through which the bar 19 is inserted in assembling the device.

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

1. A journal box and the usual door in combination with a pair of spring pressed bolts arranged upon the inner face of the door and adapted to automatically lock said door as the same is closed, a bar connecting said bolts, a piston arranged beneath said bar and having a stem impinging against the lower edge thereof and means for admitting compressed air beneath said piston, substantially as described.

2. A journal box and the usual door in combination with a pair of spring pressed bolts arranged upon the inner face of the door and adapted to automatically lock said door as the same is closed, a bar connecting said bolts, a piston arranged beneath said bar and having a stem impinging against the lower edge thereof, means for admitting compressed air beneath said piston and means for maintaining constant atmospheric pressure upon the upper face thereof, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PETER A. CAMPBELL.

Witnesses:
HOWARD S. AUSTIN,
HELEN F. LILLIS.