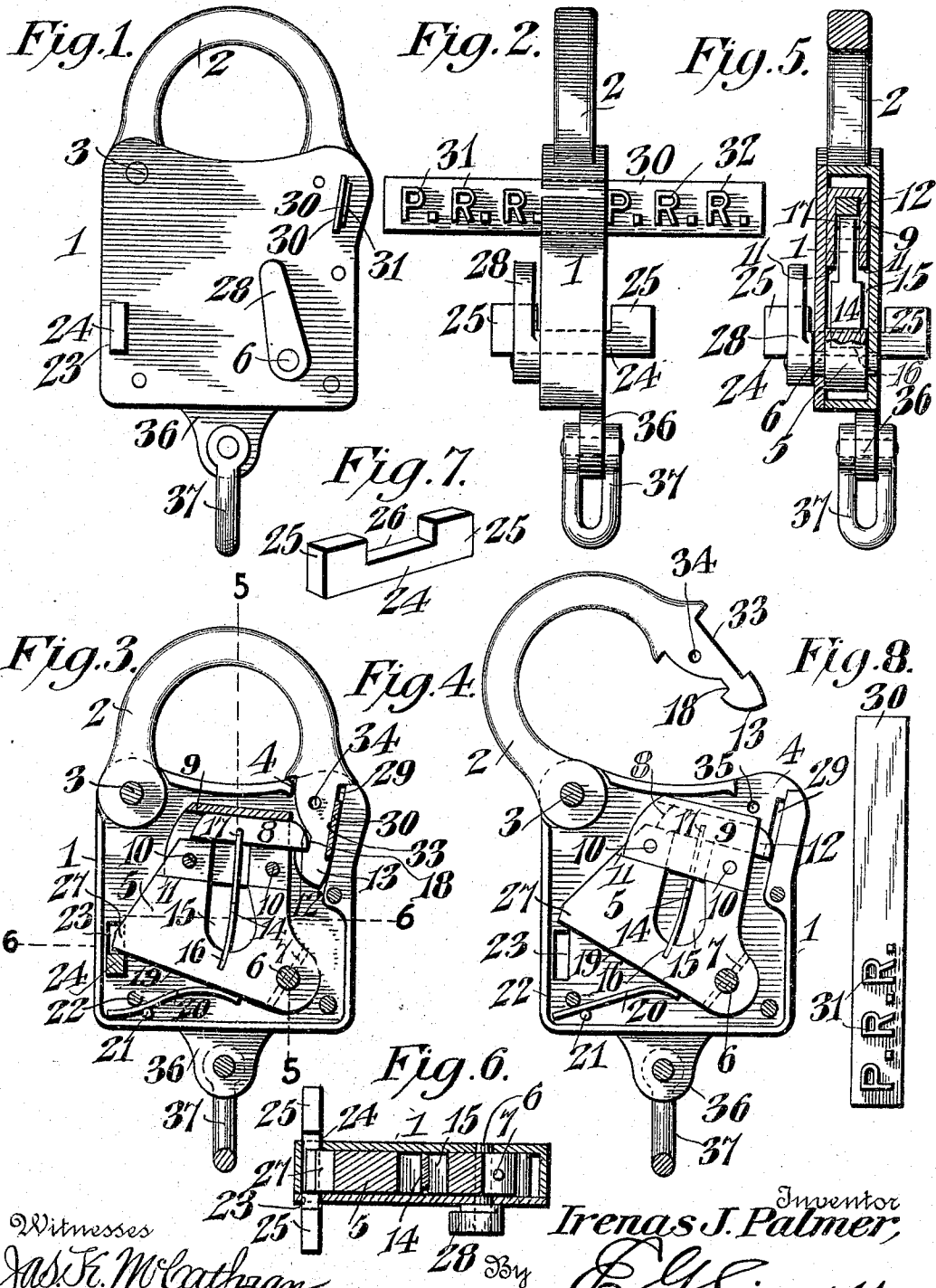


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SEAL LOCK.

APPLICATION FILED NOV. 9, 1908.

932,492.

Patented Aug. 31, 1909.



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# UNITED STATES PATENT OFFICE.

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## SEAL-LOCK.

932,492.

Specification of Letters Patent. Patented Aug. 31, 1909.

Application filed November 9, 1908. Serial No. 461,760.

*To all whom it may concern:*

Be it known that I, IRENAS J. PALMER, a citizen of the United States, residing at Olean, in the county of Cattaraugus and State of New York, have invented a new and useful Seal-Lock, of which the following is a specification.

The invention relates to improvements in seal locks.

The object of the present invention is to improve the construction of locks of the pad-lock type, and to provide a simple, inexpensive and efficient lock of great strength and durability, designed primarily for use on railroad cars and adapted to be either locked with a seal or with a key, and capable also of forming an efficient latch, when not sealed or fastened with a key.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a front elevation of a lock, constructed in accordance with this invention. Fig. 2 is an end view, showing both the seal and the key in engagement with the lock. Fig. 3 is a vertical longitudinal sectional view, illustrating the arrangement of the parts when the lock is sealed and fastened with a key. Fig. 4 is a similar view, showing the parts in their unlocked positions. Fig. 5 is a vertical sectional view on the line 5—5 of Fig. 3. Fig. 6 is a horizontal sectional view on the line 6—6 of Fig. 3. Fig. 7 is a perspective view of the key. Fig. 8 is a detail view of the seal before the same is applied to the lock.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

The lock comprises in its construction a lock case 1 and a shackle 2, pivoted at one end to the top of the lock case adjacent to one of the side edges thereof by means of a pin or rivet 3, and provided at its other end with a terminal portion adapted to extend into the

lock case 1 through an opening 4 in the top thereof adjacent to the opposite end edge or wall from that at which the shackle is pivoted. The lock case may be of any preferred construction, and it receives and houses a pivoted oscillatory locking member 5, consisting of a block or piece, pivoted at one side at the bottom to the lock case by means of a pin 6 and secured to the same by a suitable fastening device 7, piercing the adjacent portion of the pivoted member and the pin, as illustrated in dotted lines in Figs. 3 and 4 of the drawing.

The locking member 5 is capable of a limited pivotal movement between the opposite end edges or walls of the lock case 1, and it is equipped with an automatically operable locking device, adapted to engage the free end of the shackle and consisting preferably of a spring actuated bolt 8, but various other constructions may be employed for engaging the free end of the shackle. The bolt 8, which extends across the top of the pivoted member 5, is housed within a casing 9, consisting of a piece of sheet metal, or other suitable material bent into substantially U-shape and secured by rivets 10, or other suitable fastening devices to the side faces of the pivoted member, preferably in recesses 11 thereof, as clearly illustrated in Fig. 5 of the drawing. The recessed upper portion of the pivoted member fits between the sides of the U-shaped hood or casing and the engaging end 12 of the bolt is beveled or rounded at the top to enable it to be automatically engaged by the free end of the shackle, which is also beveled at 13 for this purpose. The bolt is normally maintained in an extended position by means of a flat spring 14, operating in an opening 15 of the pivoted member and secured at its lower end in a slot or kerf 16 of the same. The upper portion of the spring 14 is reduced and extends between the sides of the casing 9 and fits in a slot or kerf 17 of the bolt. The sides of the hood or casing prevent lateral displacement of the spring, and confine the latter within the opening 15 of the pivoted member. The free end of the shackle is provided at its inner side with a recess 18, arranged to receive the projecting engaging portion of the spring actuated bolt and forming a shoulder for engaging the lower edge of the said bolt, where-

by the free end of the shackle is held within the lock case.

The pivoted member has an inclined lower edge 19, and it is engaged by the free end of a spring 20, arranged transversely of the lock casing and secured at its outer portion to the same between a stud 21 and a rivet 22, but the spring may be fastened in any other manner, as will be readily understood. The free end of the spring bears against the lower edge of the member 5 adjacent to the pivot 6 thereof, and when the shackle is open, as illustrated in Fig. 4 of the drawing, the spring 20 operates to swing the pivoted member upwardly and forwardly to the right hand edge of the lock case to carry it clear of a vertical key-receiving opening 23, consisting of slots formed in the opposite sides or walls of the lock case. The opening 23 is of a size to permit the passage of a key 24, which is passed partially through it prior to closing the shackle of the padlock. The key 24 consists of an intermediate portion or stem and terminal heads 35, which may be of rectangular form, as illustrated in Fig. 7 of the drawing, but any other configuration of head may be provided, as will be readily understood.

When it is desired to use the key 24 for locking the shackle in its closed position, the key is first introduced into the opening with the recess or space 26 in position to receive the rear lower corner 27 of the pivoted member 5. The shackle is then engaged with the devices of the car and the car door, or other parts to be locked, and is closed, the closing movement of the shackle operating to swing the pivoted member into the space or recess 26 of the key, which is thereby prevented from being withdrawn from the opening of the lock case. Also the free end of the shackle forces the engaging end of the spring actuated bolt inwardly, and the shackle moves inwardly until the recess 18 arrives opposite the bolt 8, which is automatically carried into the same by the spring 14. The bolt prevents the outward movement of the shackle, which extends between the pivoted member and the adjacent end wall of the lock case, and prevents the said pivoted member from swinging out of engagement with the key. The pivoted member is thereby held against movement in either direction, the key preventing the pivoted member from swinging away from and releasing the shackle, and the shackle operating to retain the pivoted member in engagement with the recess or space 26 of the key and thereby preventing the withdrawal of the latter. When the parts are thus locked, it is necessary to cut or break off one end or head of the key to open the lock, which operation will permit the key to be withdrawn for allowing the pivoted member to swing rearwardly out of engagement with the shackle. The key may

be made of any suitable material, and the agents of railroads and express companies will be equipped with means for removing one end or head of the key to open the lock.

The pivot 6, which pierces the side walls of the lock case, is equipped with an exteriorly arranged head or operating arm 28, suitably secured to the pivot and adapted to be oscillated to swing the pivoted member to disengage its bolt from the recess of the shackle. When the pivoted member is swung outward and rearward after the removal of the key, the bolt is carried out of the recess 18 and the shackle may be swung open. This will afford access to the car, which may be relocked by placing a new key in the opening 23, and proceeding as before described. The lock is also provided at its front adjacent to the opening 4 with a narrow transverse seal-receiving opening 29, consisting of slots formed in the opposite side walls of the lock case and adapted to receive a seal 30, consisting of a narrow strip of sheet metal, or other flat material provided at one portion with raised letters 31, or other characters, which cause the metal to project a sufficient distance to form a stop at one side of the lock case to prevent the seal from being drawn entirely through the opening 29. The other portion of the sealing strip is blank before the seal is applied to the lock, as clearly illustrated in Fig. 8 of the drawing, and it is adapted to have letters 32, or other characters raised on it to form a stop at the opposite side of the lock case after it has been passed through the opening 23, whereby the seal will be effectually prevented from being withdrawn from the lock without being cut or mutilated sufficiently to flatten out the letters at one side of the lock case. The outer edge of the free end of the shackle is provided with a recess 33, forming inner and outer shoulders and registering when closed with the narrow seal-receiving opening, whereby the flat sealing strip is adapted to retain the shackle of the padlock in its closed position. The seal may, if desired, be passed through an opening in the free end of the shackle, or it may engage any other movable portion of the locking mechanism. This construction enables the shackle of the padlock to be secured in its closed position either by means of the seal 30, or the key 24. When neither the seal nor the key is employed, the lock is adapted to operate as an efficient latch for securing a car door in its closed position, and the pivoted member is adapted to be readily operated by the exteriorly arranged arm or head 28 for releasing the shackle.

In order to enable the seal lock to be advantageously employed by railroads and other companies supplied with a large quantity of car seals of the ordinary construction, the shackle is provided at its free end with a

perforation 34, registering with opposite perforations 35 of the side walls of the lock case when the shackle is closed. These perforations permit the wire of an ordinary car seal to be passed through the lock case and the shackle, so that the car may be sealed in the ordinary manner with a wire and lead seal. The lock while providing means for enabling a car to be effectively sealed is adapted to be securely locked by the key, which will effectually resist all efforts to pick the lock even should the seal be destroyed. When the device is locked, it is impossible to open the shackle without cutting or breaking the key, and when the shackle is closed and the seal affixed, it is impossible to open it without breaking or mutilating the seal to an obvious extent.

The lock case is provided at the bottom with a lug or ear 36 to which a link 37 is pivoted for enabling the lock to be connected with a car by means of a short chain.

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

1. A lock of the class described including a case, a pivoted shackle, a movable member provided with means for engaging the free end of the shackle and forming a latch for holding the same in its closed position, and a key arranged to lock the movable member in engagement with the shackle and retained in place by the said movable member, whereby the key must be broken to unlock the shackle.

2. A lock of the class described including a case, a pivoted shackle, a movable member provided with means for engaging the free end of the shackle and forming a latch for holding the same in its closed position, and a key passed through the lock and arranged to hold the movable member in engagement with the shackle and retained in its place by the movable member, whereby the key must be broken to unlock the shackle.

3. A lock of the class described including a case having an opening, a shackle, a movable member provided with means for engaging the shackle and forming a latch for holding the same closed and arranged to partially obstruct the opening when in engagement with the said shackle and movable away from the opening when the shackle is unlocked, and a key adapted to be passed through the opening of the case when the shackle is open and engaged by the movable member when the shackle is closed, whereby the key must be broken to release the shackle.

4. A lock of the class described including a case having an opening, a shackle, a movable member provided with means for engaging the shackle and forming a latch for holding the same closed and partially obstructing the opening when the shackle is closed, and a

key provided at its ends with heads or enlargements and adapted to be passed through the opening of the lock case when the shackle is open and engaged and held in its place by the said movable member when the shackle is closed.

5. A lock of the class described including a case, a shackle, a pivoted member provided with an automatic locking device for engaging the shackle, to form a latch for holding the same closed, and a key passed through the lock case and held in its place by the pivoted member when the shackle is closed.

6. A lock of the class described including a case, a shackle, a pivoted member, a spring actuated bolt mounted on the pivoted member and arranged to engage the shackle and forming a latch for holding the same closed, and a key passed through the lock case and arranged in the path of the pivoted member, the latter being carried into engagement with the key by the shackle, whereby the key is held in its place and must be broken to release the shackle.

7. A lock of the class described including a case, a shackle, a pivoted member provided with an automatic locking device for engaging the shackle and forming a latch for holding the same closed, a spring for actuating the pivoted member for holding the locking device thereof in position for engaging the shackle, and exteriorly operable means for actuating the pivoted member to carry the locking device thereof out of engagement with the shackle.

8. A lock of the class described including a case having an opening, a shackle, a pivoted member arranged to partially obstruct the opening and adapted also to swing clear of the same, a spring actuated bolt carried by the pivoted member to engage the shackle, a spring engaging the pivoted member for moving the same and the bolt toward the shackle, and a key of a size to be passed through the opening of the lock case when the same is clear and arranged in the path of and engaged by the pivoted member when the shackle is closed.

9. A lock of the class described including a case, a shackle, a pivoted member having an opening and provided with a substantially U-shaped hood or casing forming a housing, a bolt slidable in the hood or casing, a spring arranged in the said opening and connected with the pivoted member and with the bolt for actuating the latter, and a separate spring engaging the pivoted member for moving the same toward the shackle.

10. A lock of the class described including a lock case provided with opposite narrow aligned slots, and a shackle provided with a recess registering with the said slots when the shackle is closed, and a seal consisting of a flat strip of a size to pass through the said

openings and provided with a raised character or characters forming a stop to prevent the seal from being drawn through the openings, said seal having its other end blank to  
5 enable it to be passed partially through the opening and adapted to receive characters raised on it to prevent its removal from the openings.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature 10 in the presence of two witnesses.

IRENAS J. PALMER.

Witnesses:

MAE BILLINGTON,  
W. P. ROBERTS.