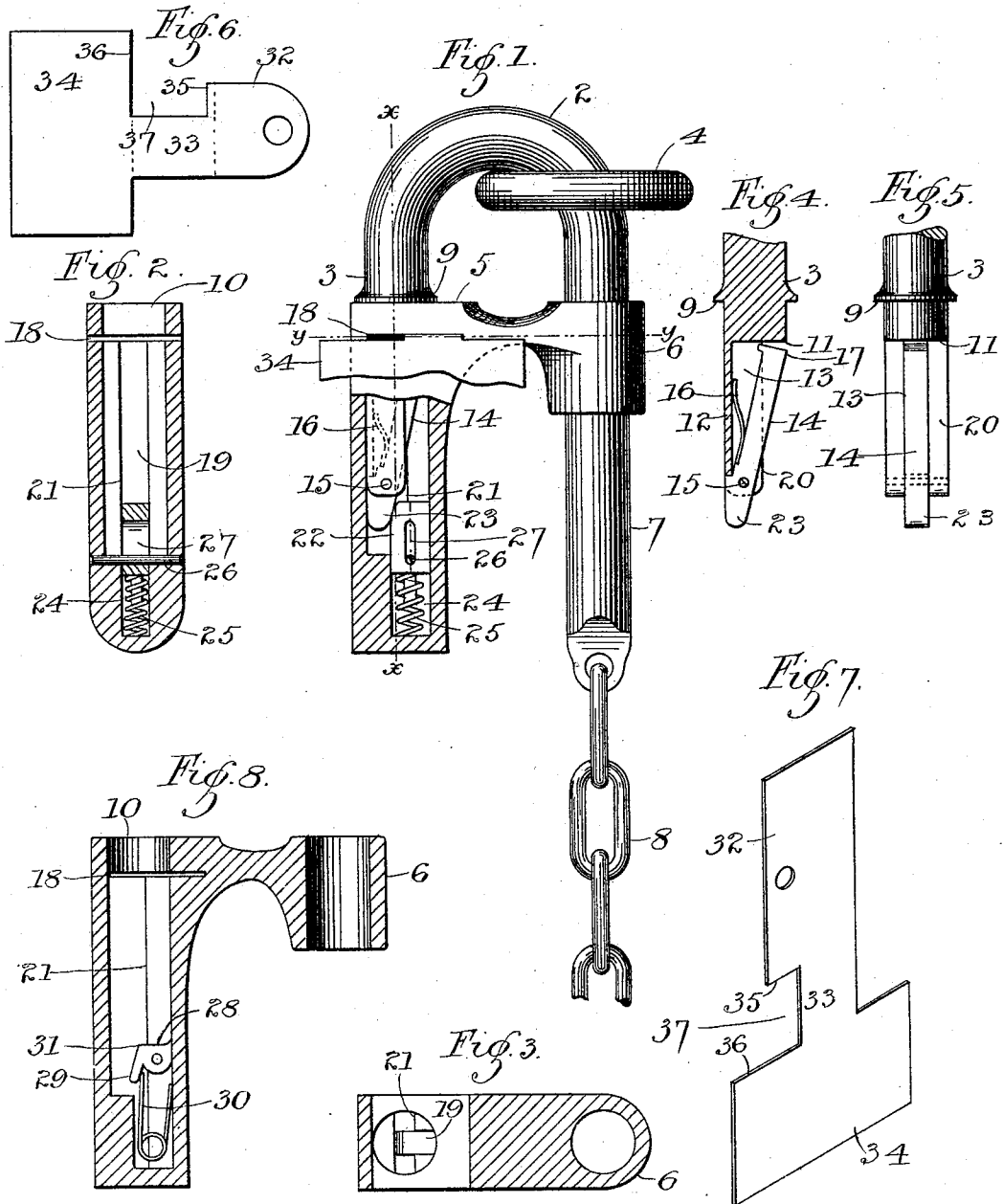


(No Model.)

D. F. MACCARTHY.
SEAL LOCK.

No. 495,097.

Patented Apr. 11, 1893.



Witnesses:
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UNITED STATES PATENT OFFICE.

DANIEL F. MACCARTHY, OF ST. PAUL, MINNESOTA.

SEAL-LOCK.

SPECIFICATION forming part of Letters Patent No. 495,097, dated April 11, 1893.

Application filed December 7, 1891. Serial No. 414,310. (No model.)

To all whom it may concern:

Be it known that I, DANIEL F. MACCARTHY, of St. Paul, Ramsey county, Minnesota, have invented certain Improvements in Seal-Locks, of which the following is a specification.

My invention relates to improvements in seal locks designed specially for the securing of the doors of railway freight cars, the same being an improvement upon my prior patent issued December 2, 1890, No. 441,770, its object being to provide a seal attachment for the securing bolt or pin in which the sealing strip may be secured and locked, and consists in providing a socketed head to receive the end of the bolt or pin after it is inserted through the staple of the car door fastening, the head being provided with a transverse slot intersecting the socket and through which the sealing strip is passed and the end of the bolt being provided with a spring catch or dog which will engage and lock the sealing strip when the bolt is inserted in the head.

My invention further consists in an improved form of sealing strip adapted to be used in connection with my improved lock.

My invention further consists in the construction and combination hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification, Figure 1 is a front elevation of my improved seal lock with a portion of the socket broken away to show the internal arrangement. Fig. 2 is a section of the socket part on line *x, x*. Fig. 3 is a section of the socket part on line *y, y*. Fig. 4 is a section of the locking end of the pin or bolt showing the arrangement of the dog. Fig. 5 is a side view of the same. Figs. 6 and 7 are views of the sealing strips, and Fig. 8 is a longitudinal section of the socket part of a lock showing a modified construction for locking the dog of the locking pin or bolt.

In the drawings, 2 represents the door securing bolt or pin formed preferably hooked shaped, the point 3 of the hook being adapted to pass through the staple 4 of the door fastening and inserted into a socketed head 5 which is preferably firmly attached to the bolt by means of an off set portion or arm 6 through an opening in which passes the shank 7 of the bolt and securing chain 8 being pref-

erably secured to the shank and also to the car. The point or end 3 of the bolt is provided preferably with a shoulder 9 which abuts against the end of the head 5 and covers the opening to the socket 10. The point of the bolt is partially cut away longitudinally to a square shoulder 11, the narrowed extension 12 of the point being provided with a longitudinal slot 13. In this slot is arranged the dog or catch 14 being secured therein by means of a pivot pin 15 and adapted to lie in the slot and provided with a spring 16 arranged beneath it in the slot which tends to turn it on its pivot and hold the inner end thrown outward from the slot as clearly shown in Fig. 4. The inner end 17 of the dog lying close to but not in contact with the shoulder 11.

The head 5 is provided with a transverse slot 18 which intersects the socket 10 preferably at right angles and at the same distance from the opening to the socket as the shoulder 11 is from the shoulder 9 of the pin. This slot is preferably of greater width than the diameter of the socket, one end of the slot extending to the outside wall of the socket and the other extending through the wall and into the body of the head, as shown in detail Figs. 8 and 9. The inner portion of the socket beyond the slot 18 is narrowed to fit to the narrowed neck or extension of the bolt, but provided with the groove 19 to receive the dog 14 as thrown outward by its spring, the adjacent faces 20 of the bolt extension lying upon the side walls 21 of the slot 19.

At the bottom of the socket 10 is arranged a securing block or stop 22 adapted to engage the projecting point 23 of the dog and to lock it so that it cannot be turned upon its pivot into the groove 13. This block is preferably arranged to slide in the socket 24 of the head against the tension of the spring 25 which tends to hold the block thrust outward to meet the bolt as shown in Fig. 1, the block being permanently secured preferably by means of a pin 26 passing through a slot 27 in its body. This construction permits the block 22 to slide backward when struck by the point 23 of the dog 14 as the bolt enters the socket with the dog pressed into the groove 13 by the sealing strip as hereinafter described. The spring 25 throws the block outward as soon as the

dog is turned on its pivot to turn the point 23 aside and permit the block to advance when the block advancing under or alongside of the point and locking it in place with the outer end 17 of the dog thrown outward from the slot.

In Fig. 8 is shown a modified construction of means for locking the dog in which a pivoted block or tumbler 28 provided with a finger or projection 29 which is engaged by a spring 30 as shown. As the bolt is inserted in the socket provided with this tumbler, the point 23 of the dog strikes against the shoulder 31 of the tumbler turning it on its pivot against the tension of its spring, until the dog is released from engagement with the sealing strip as hereinafter described, permitting it to turn on its pivot when the spring 30 will reverse the tumbler and lock the point 23 of the dog against the wall of the socket in the same manner as the block 22.

Figs. 6 and 7 represent improved forms of sealing strips designed to be used in connection with my improved seal lock. The width of the body 32 of the strip is substantially equal to the length of the slot 18, so that it fills the entire slot in passing through. The strip is notched on one side so as to form the neck 33 leaving the head 34 which is of greater width than the body of the strip, thus forming a square shoulder 35 at the junction of the strip with the neck and the shoulder 36 at each side of the neck at its junction at its head. The width of this notch 37 is less than the thickness of the head 5 so that when the strip is inserted into the slot 18 until the shoulders 36 abut against the outer wall of the head, the shoulder 35 will stand within the wall of the head and preferably flushed with the side wall of the socket as indicated by the dotted lines in Fig. 6. The head 34 of the strip is adapted to receive a sealing mark and also when desired the body 32 may be left of sufficient size as shown in detail in Fig. 7 to duplicate the seal number on the head, so that the seal will be exposed to view on each side of the lock.

In operation, the bolt is hooked over the staple 4. A sealing strip is then inserted into the slot 18 of the head 5 until the shoulders 36 abut against the head. The head is then slipped along the shank 7 of the bolt, the point of the bolt entering the socket passing through the notch 37 of the strip. The dog 14 strikes upon the edge of the neck 33 and is turned into its groove against the tension of its spring, the point 23 striking against the block or tumbler at the bottom of the socket and forcing it inside or back. When the bolt has fully entered the socket, so that the end 17 of the dog has passed over the strip, its spring 16 throws the dog outward from its groove behind the sealing strip and the tumbler or block is released and turns or

slides underneath the point 23 of the dog, thus locking it in place. The sealing strip can then be removed from the head only by breaking or cutting the same at the junction of the neck 33 with the head 34. If the strip be broken on the opposite side of the head, it still leaves the shoulder 35 connected to the strip and inside of the head, thus preventing the strip being removed from the slot.

I claim—

1. In a seal lock, the combination of the securing pin, the seal holder having a socket to receive said pin and a transverse slot intersecting said socket, a seal strip adapted to be inserted into said slot having a notch to receive said pin, and a spring controlled dog pivoted near the point of said pin and adapted to be carried by said pin over and past said strip, and to abut against said strip and lock said pin in said socket, substantially as described.

2. In a seal lock, the combination with the securing pin and a seal holder having a socket to receive said pin, and a transverse slot intersecting said socket, of a seal strip adapted to fit into said slot having a head wider than the length of the slot, and a notch next to said head of less length than the diameter of the seal holder to permit the pin to pass by said strip, and a spring controlled stop upon said pin adapted to be carried past said strip into the socket, and to abut against the strip so as to lock the pin therein substantially as described.

3. In a seal lock, the combination of the securing pin, the seal holder slidably secured thereto, provided with a socket to receive said pin and a transverse opening to receive a seal strip, a spring actuated dog carried by said pin adapted to be brought into engagement with a seal strip in the holder to lock the pin therein, and means arranged in said socket for automatically locking said dog in engagement with said strip, substantially as described.

4. The combination of the securing pin having a reduced point with a longitudinal groove on its reduced side, the seal holder socketed to receive said pin, and having a transverse seal opening, a dog pivoted to said pin point and lying in said groove, a spring for turning said dog out from said groove, so as to engage said seal a spring controlled block in the bottom of said socket adapted to yield to allow said dog to pass over the seal but locking the same in engagement with said seal, substantially as described.

In testimony whereof I have hereunto set my hand this 21st day of November, 1891.

DANIEL F. MACCARTHY.

In presence of—

T. D. MERWIN,
A. MAE WELCH.