

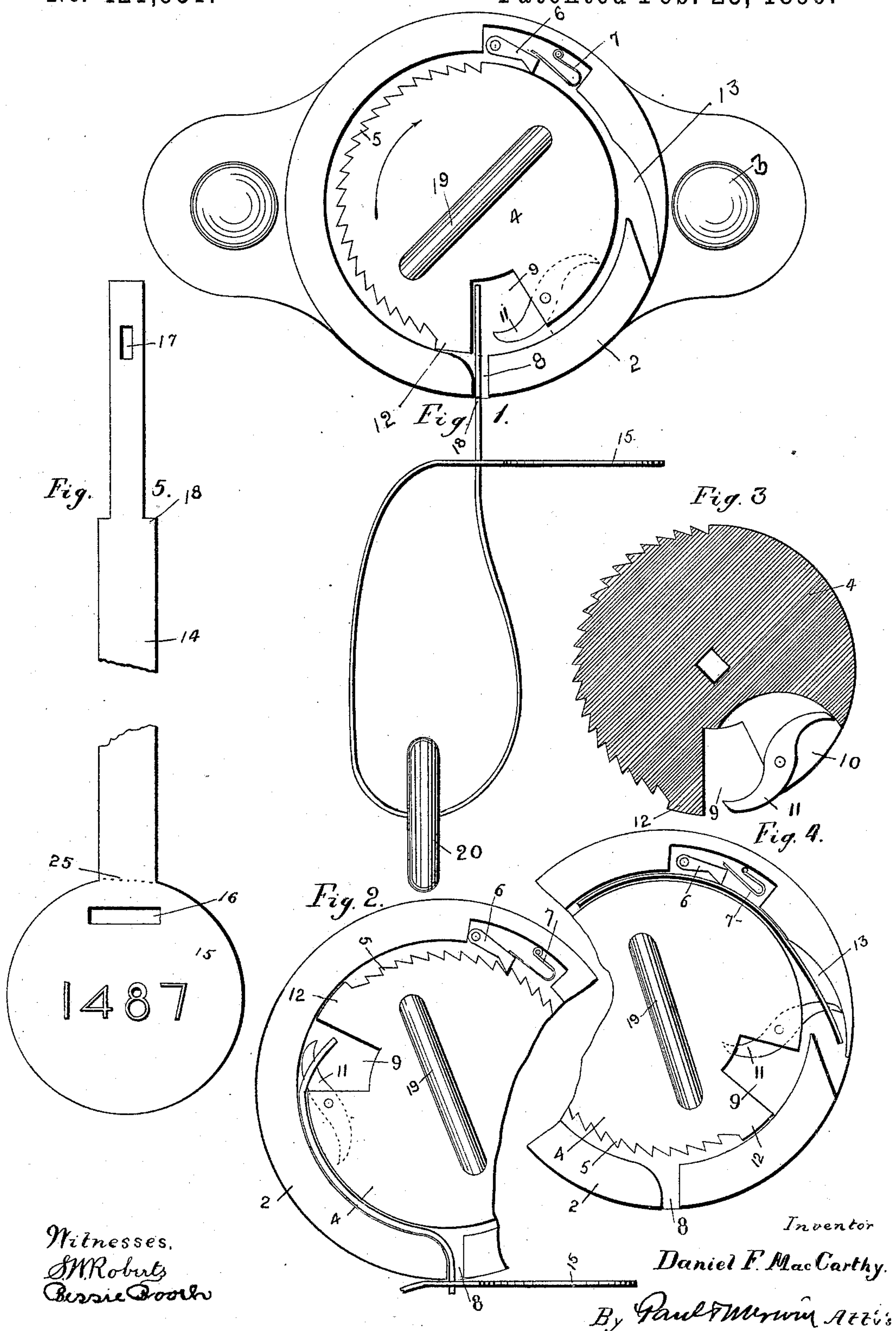
(No Model.)

D. F. MACCARTHY.

SEAL LOCK.

No. 421,951.

Patented Feb. 25, 1890.



UNITED STATES PATENT OFFICE.

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

SEAL-LOCK.

SPECIFICATION forming part of Letters Patent No. 421,951, dated February 25, 1890.

Application filed September 30, 1889. Serial No. 325,613. (No model.)

To all whom it may concern:

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

My invention relates to improvements in devices for sealing railway freight-cars; and it consists, generally, in the construction and combination hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is an elevation of my improved car-sealing device with the outer wall of the case of the locking mechanism removed in order to show the interior arrangement, the sealing-strip being shown in position so as to be engaged by the locking mechanism. Fig. 2 is a sectional view showing the position of the parts when the sealing-strip is secured in the locking mechanism or the car "sealed." Fig. 3 is a detail of the ratchet-wheel. Figs. 4 and 5 are other details.

In the drawings, 2 represents the case of the locking mechanism adapted to be permanently secured by means of bolts 3 to the car-body, the interior of the case being, preferably, substantially circular in form. Pivoted in the case is the ratchet-wheel 4, provided, preferably, with teeth 5 on about half of its periphery. Pivoted in the case is the pawl 6, provided with a spring 7, by means of which it is caused to engage with the teeth of the ratchet-wheel when turned past it. A narrow slot 8 is arranged in the peripheral wall of the case 2, adapted to receive the end of a metallic sealing-strip. A notch 9 is arranged in the ratchet-wheel, adapted also to receive the end of the sealing-strip when turned so as to register with the slot 8. A slotted cavity 10 is arranged in the ratchet-wheel opening into the notch 9, the side walls of the cavity being parallel with the sides of the wheel. Pivoted in this cavity is the dog 11, preferably provided with two oppositely-arranged slightly-hooked points, which in the rotation of the dog pass into the notch 9 and in position to engage a slot or hole 17 in the end of the sealing-strip inserted through the slot 8. The diameter of the ratchet-wheel is preferably slightly less than the interior of

the case 2, but is provided with a shoulder or stop 12, which projects from the periphery of the ratchet-wheel nearly to the inner wall of the case. The object of this stop or shoulder is to engage and carry forward and discharge from the case the pieces of sealing-strips which are left in the case on the breaking of the seal, a suitable side opening or slot 13 being arranged in the peripheral wall of the case, through which the pieces of the strips are discharged.

I prefer to use for a seal a strip of tin or other similar metal 14, having an enlarged portion 15 at one end adapted to receive the stamp or seal of the station, and provided also with a transverse slot 16 of sufficient width to receive the body of the strip when passed through it. The other end of the strip is provided with a longitudinal slot 17, which is adapted to be engaged by the dog 11 when inserted in the case. The strip is preferably formed with shoulders 18 a short distance from the slot 17, which engage with the walls of the slot 8 and prevent the strip being inserted or drawn into case farther than the shoulders, the strip being made from the shoulders to the enlarged part wider than the slot. The strip 14 is formed of sufficient length to be passed through the staple of the door-fastening, and the strip then is passed through the slot 16 of the enlarged part 15 and inserted through the slot 8, so as to be engaged by the dog 11 when the ratchet is turned. The ratchet is turned upon its pivot by means of a suitable permanent handle or key 19, arranged on the outside of the case.

In operation the ratchet 4 is set in the position indicated in Fig. 1, with its notch 9 registering with the slot 8. The sealing-strip 14 is passed through the staple 20 above the hasp. Then being passed through the slot 16 it is inserted into the case through the slot 8. Upon turning the ratchet forward in the direction indicated by the arrow the dog 11 enters and engages with the slot 17, drawing the strip into the case until the shoulders 18 strike upon the walls of the slot 8 and prevent its farther movement, as shown in Fig. 2, the pawl 6 engaging with the notches of the ratchet and locking it in its advanced position, so as to prevent the withdrawal of

the strip from the case. The car is thus sealed, and cannot be unsealed without severing the strip 14 between the slot 17 and the shoulders 18. When this is done, the fragment of the strip remaining in the case is carried forward by rotating the ratchet until it reaches the slot 13, when the dog turns on its pivot, as shown in Fig. 4, to automatically discharge the strip from the slot, the dog being turned a half-revolution, so that it is released from the strip and the opposite point is in position to engage another strip. Should the piece of the strip in the case become bent, so as not to fall out of the slot or opening 13, the shoulder 12 will in the next rotation of the ratchet carry it forward and force it out.

The various positions of the mechanism are shown in Figs. 1, 2, and 4, the position shown in Fig. 1 being that when the strip is first inserted, that in Fig. 2 when the device is locked, and that in Fig. 4 as the piece of strip is carried forward to be delivered from the case. The position of the ratchet-wheel in the case may be determined by the position of the handle on the outside of the case, or in any other preferred manner, indicating when the notch 9 registers with the slot 8, so as to receive a sealing-strip.

The locking mechanism may be inclosed in a case which is permanently fixed to the car-body, or the case may be made in any other preferred form and detachably connected with the car-body, or simply supported upon the strip or other connection to which it is secured or locked, so as to constitute it a tag in itself. The device may therefore be adapted for other uses than that of car-seals, as for the sealing of packages for long transit. It is evident also that other forms of strips or sealing devices may be used in connection with the locking mechanism, such as wire with suitable seal attachments or metallic strips of other preferred form for use wherever it is desired to securely fasten the said connections, so that they cannot be detached without being severed or without breaking the seal.

In order to preserve a record of the sealing and unsealing of a car, with the construction shown when each seal is broken the enlarged head or seal part of the strip may be severed, as by the dotted line 25, and the seal or part 15 then slipped upon another strip used in sealing the car, and thus a record kept of every seal which has been attached to the car during its transit. These seals may be preserved with such records thereon or attached thereto as may be desired, where this course is necessary in the transaction of the business regarding shipments in the car.

I claim as my invention—

1. In a car-seal, a locking mechanism adapted to secure said seal in place by engaging with the strip carrying the same, comprising a suitable case secured to the car-body, a slot in the wall of the same adapted to receive the sealed strip, a pivoted dog carried by a ratchet-

wheel pivoted in said case adapted to engage said strip and to draw the same into the interior of the case, and a pawl engaging with said ratchet between the periphery of said ratchet and the wall of the case, whereby said strip is tightly secured therein and cannot be withdrawn therefrom, substantially as described.

2. In a device of the class described, the combination, with a sealing-strip, of a slotted case adapted to receive the end of the strip, a ratchet pivoted to the said case, a pawl engaging said ratchet, a pivoted dog carried by said ratchet and adapted to engage said strip and to draw it into said case, and means for discharging said strip from said case when the seal is broken, substantially as described.

3. The combination, with the case 2, having the openings 8 and 13, of the ratchet 4, pivoted therein, means for turning said ratchet in said case, a pawl engaging the teeth of said ratchet, the double-pointed pivoted dog 11, carried by said ratchet, and a flexible sealing-strip adapted to be inserted into said case and to be engaged by said dog, adapted to be operated substantially as and for the purpose set forth.

4. The combination, with a sealing-strip, of the case 2, having the opening 8, the ratchet 4, pivoted therein and provided with the notch 9 and the shoulder 12, the pawl 6, adapted to engage the teeth on the ratchet, and the dog 11, pivoted to said ratchet and projecting into said notch, substantially as and for the purpose set forth.

5. In a car-seal, the combination, with the strip 14, having the seal 15, the transverse slot 16, the longitudinal slot 17, and the shoulders 18, of the case 2, secured to the car-body and provided with the slot 8, the ratchet 4, pivoted in said case, having the notch 9, the shoulder 12, the slotted cavity 10, the pawl 6, engaging the teeth of the ratchet, and the double-pointed dog 11, pivoted in said slotted cavity and projecting into said notch, and adapted to engage the slot of said strip when inserted in said case, substantially as and for the purpose set forth.

6. The combination, with a suitable case adapted to receive a flexible seal attachment, of a ratchet-controlled mechanism adapted to engage with and draw the same into said case, substantially as and for the purposes set forth.

7. In a device of the class described, the combination, with a sealing-strip, of a slotted case adapted to receive the end of the strip, a ratchet pivoted in said case, a pawl engaging said ratchet, and a pivoted dog carried by said ratchet and adapted to engage said strip and to draw it into said case, substantially as described.

In testimony whereof I have hereunto set my hand this 14th day of September, 1889.

DANIEL F. MACCARTHY.

In presence of—

A. M. GASKILL,
BESSIE BOOTH.