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Fig. 1. Fig. 2. Fig. 3. Fig. 4. Fig. 5. Fig. 6. Fig. 7. Fig. 8. Fig. 9. Fig. 10. Fig. 11. Fig. 12.

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SEAL-PADLOCK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, OTTO SOHNI and HENRY MEHL, citizens of the United States, residents of Buffalo, in the county of Erie and State of New York, have made a certain new and useful Invention in Seal-Padlocks; and we declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a central vertical section of our padlock. Fig. 2 is a side view of the same. Fig. 3 is a sectional view similar to Fig. 1 with the seal broken and one branch of the hasp turned half around. Fig. 4 is a section of the padlock, taken on the line 4-4 Fig. 1. Fig. 5 is a section on the line 5-5 Fig. 3. Fig. 6 is a detail perspective view of the block and attached pawls. Fig. 7 is a central vertical section of a modified form of the invention. Fig. 8 is a similar view of a second modification of the invention. Fig. 9 is a detail sectional view of the block and plate-spring of a third modification of the invention. Fig. 10 is a detail perspective view of the plate spring in such third modification. Fig. 11 is a central vertical section of a fourth modification of the invention. Fig. 12 is a detail perspective view of the block and spring in such fourth modification.

The invention has relation to seal padlocks, designed for sealing freight or box cars, and which cannot be broken without the use of a bolt cutter or similar tool of comparatively large or clumsy character and operating with considerable noise.

Other objects and advantages will herein-after appear.

In the accompanying drawings, illustrating the invention, the letter *a*, indicates the incasement or body of the padlock, having two parallel longitudinal cylindrical perforations *b, b*, one at each side, and provided at one end with a recess *c*, between said perforations and communicating at each side therewith at *c', c'*. In the recess *c*, is fitted a block *d*, which is secured to the body *a*, by two rivets *e, e*, said block carrying two pivoted pawls *f, f*, having a light coil-spring *g*, engaging studs *f', f'*, of the pawls and holding the same normally thrust outward

away from each other into the perforations *b, b*.

h, is a staple-form hasp or shackle, having two parallel legs *h', h'*, of equal length which engage the perforations *b, b*, and are provided each with a series of sharp ratchet teeth *i*, having shoulders *z*, at right angles to the axis of the leg, and inclined sides *i'*, three such teeth being shown. This shackle is usually formed of a cylinder bar of malleable iron bent centrally and having the teeth thereof forged or filed therein.

In the use of the device, the hasp or shackle has the legs thereof pushed within the perforations of the body *a*, one leg *h'*, being previously engaged with the staple *j*, of the car door over which the usual pivoted slotted hasp *j'*, fits, such legs as they pass within the perforations *b, b*, having aligned teeth of the opposite legs engaged by the end faces *f'*, of the pawls *f, f*, which are first pushed back by said legs without such perforations and then spring within the same again when the notches above the ratchet teeth and between the same come into alignment with the pawls. In order to relieve the pivot-pins *f', f'*, of the pawls of strain when the shackle is pulled or pried upward with the object of breaking the seal, said pawls have transverse slots *f'', f''*, of slightly larger diameter than and loosely engaging such pivot-pins, the pawls being provided with lateral shoulders *f'', f''*, which are adapted to take a bearing against the lower face of the block *d*.

Should any of the ratchet teeth *i*, become worn or dulled, other teeth thereof may be employed for engagement with the pawls, the object being to obtain quick sharp action of the pawls in engaging the teeth.

When the legs of the staple-form hasp or shackle are pushed through the perforations *b, b*, the perforated ends thereof, shown at *b', b'*, may be connected with the usual wire and lead seal, whereby it is made apparent if the device has been tampered with.

When it is desired to break the seal, a bolt cutter or other suitable tool is employed to cut through one branch of the staple-form shackle *h*, when upon turning a leg *h'*, of the shackle within its cylindrical seat, the tooth *i*, thereof will be turned out of engagement with pawl *f*, engaging the same, such pawl being at the same time pressed inward within the seat in the block *d*, when the separated legs of the shackle may be pulled out

of the body perforations. It is thus necessary when resealing the car to substitute a new staple-form shackle for the one destroyed. The cost of this substitution is nominal.

In Fig. 7 of the drawings a modified form of the invention is shown, wherein the block d , is provided with a transverse cylindrical aperture k , a shallow open-ended notch or recess k' , at one side communicating with said aperture and a shallow open-ended notch or recess k'' , at the opposite side and end of the block also communicating with said aperture.

A coiled spring m , is seated in the aperture, opposite outturned end portions l' , l'' , thereof being located in the notches or recesses k' , k'' , and normally projecting at their extremities l , l' , beyond the ends of the block into the perforations b , b' . Thus when the legs of the staple shackle are passed within the perforations, the outturned end portions l' , l'' , of the coil spring will be engaged with alined teeth thereof to securely hold the staple and seal the padlock and car door. In this form of the device when it is desired to break the seal, the body of the padlock is driven by suitable implements downward from the staple shackle, which is secured to the car by means of an eye P , at its upper end having chain connection P' , with the car when the end portions l' , l'' , of the spring will bear against the upper walls k' , k'' , of the notches k' , k'' , and the extremities l , l' , of such end portions become sheared or broken off by the end walls k' , k'' , of the block d , in its downward movement with the padlock body. It will thus only be necessary when the padlock is to be resealed to replace the spring m , in the block d , by a new spring, the staple shackle not being injured. This can be readily accomplished by driving out the rivets of the block d , and removing such block from the padlock body for the insertion of the new spring, when it is replaced in the padlock body and again riveted.

In Fig. 8 of the drawings is shown a further modification of the invention wherein the block d , is provided with a transverse cylindrical aperture n , in which is seated a coil spring n' , the outturned end portions n'' , of which lie below the block d , and closely adjacent thereto. The operation of the invention in this modified form is similar to the operation thereof in the first modification hereinbefore described.

In Fig. 9 of the drawings a third modification of the invention is shown, wherein the block d , is provided with a transverse opening o , wherein is seated the cylindrically bent central portion of a flat plate spring o' , having outturned end portions o'' , lying below the block d , and closely adjacent thereto, and the extremities of which project hav-

mally beyond the ends of the block within the perforations b , b' , into engagement with alined teeth of the staple shackle legs. The operation of the invention in this form thereof is similar to the operation thereof in the other modifications referred to.

A fourth modification is shown in Fig. 11 of the drawings, wherein a post p , is seated removably in the padlock body at p' , said post carrying at its upper end in a slot p'' , thereof, a coil spring q , the outturned end portions q' , of which are designed for engagement with the teeth of the staple shackle as before described. A removable block r , is fitted in a recess r' , of the padlock body above the post p , and the spring q , the lower surface of said block lying closely adjacent to the end portions q' , of the spring and acting to shear off the extremities q'' , of said end portions when the padlock body is driven downward as before described, to break the seal thereof.

It will be noted that the seal of our padlock cannot be broken silently or in a short time, but requires comparatively large and forceful implements which operate with considerable noise and need some time for the necessary working thereof.

The padlock embodying our invention may be made quite cheaply, the parts thereof being of simple nature and capable of being readily made and put together.

The legs of the staple-form shackle may each be provided with one or more teeth as will be readily apparent.

In the fourth modification of the invention, described and shown in Fig. 11, the coil spring may be substituted by a flat plate spring such as is shown in Fig. 10, with but little alteration of the parts.

In the main form of the invention, wherein the staple shackle is cut through and destroyed in order to break the seal, a sufficient number of new staple-shackles are provided at the different stations, so that when the padlock is to be resealed it is only necessary to draw a new staple-shackle from stock.

In the modified forms of the invention, wherein the spring is the only part destroyed, a sufficient number of new padlock bodies are provided at the different stations for the necessary renewal in resealing the padlocks and the old padlock bodies having broken springs therein allowed to accumulate until a sufficient number are on hand for economical repairing.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. In a seal padlock, the combination with a solid body provided with parallel longitudinal seats, a recess between said seats, a block seated in said recess and having connection with said body, and spring catch devices having bearing against said block, of a

staple-form shackle having legs engaging said seats, and provided with notches having engagement with said catch devices.

2. In a seal padlock, the combination with
5 a solid body provided with parallel longitudinal perforations, a recess between said perforations, a block seated in said recess and having connection with said body, and spring catch devices having bearing against
10 said block, of a staple-form shackle, having legs engaging the perforations of the padlock body and provided with notches having engagement with said catch devices.

3. In a seal padlock, the combination with
15 a solid body provided with parallel longitudinal perforations, a recess between said perforations, a block seated in said recess and having connection with said body, and spring catch devices having bearing against
20 the lower portion of said block, of a staple-form shackle having legs engaging the padlock perforations, adapted to project below the same, and provided with notches having engagement with said catch devices.

25 4. In a seal padlock, the combination with a body provided with parallel longitudinal seats, a recess between said seats, a block seated in said recess and having connection with said body, and pivoted pawl devices

carried by said block and having spring
30 means for holding the same normally separated, of a staple-form shackle having legs engaging said seats, and provided with notches having engagement with said pawl devices.

5. In a seal padlock, the combination with
35 a body provided with parallel cylindrical perforations, a recess between said perforations, a block seated in said recess and having riveted connection with said body, and pivoted
40 pawl devices carried by said block and having spring means for holding the same normally separated, of a staple-form shackle having cylindrical legs engaging said perforations and provided each with a plurality
45 of notches for engagement with said pawl devices, said legs being adapted to project below the padlock body and having perforated end portions for connection of the
50 usual wire and lead seal.

In testimony whereof we affix our signatures, in presence of two witnesses.

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Witnesses:

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