T. V. ALLIS.

Hasp-Lock.

No. 204,779. **Patented June 11, 1878.**

Fig. 1

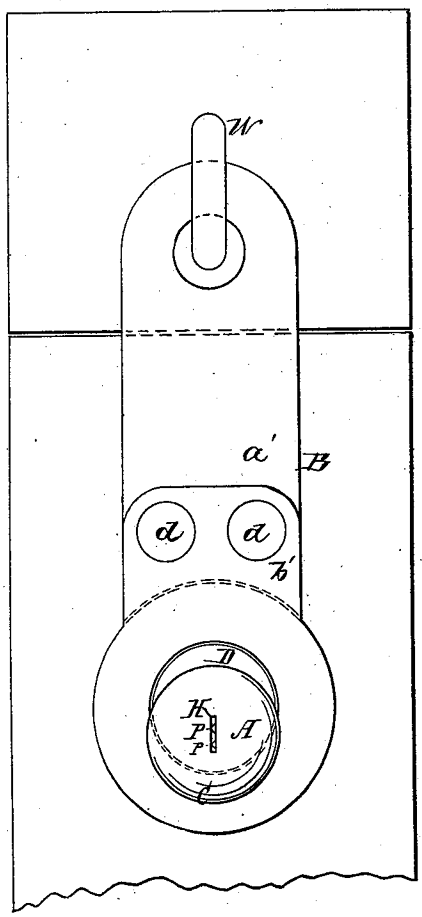


Fig. 2

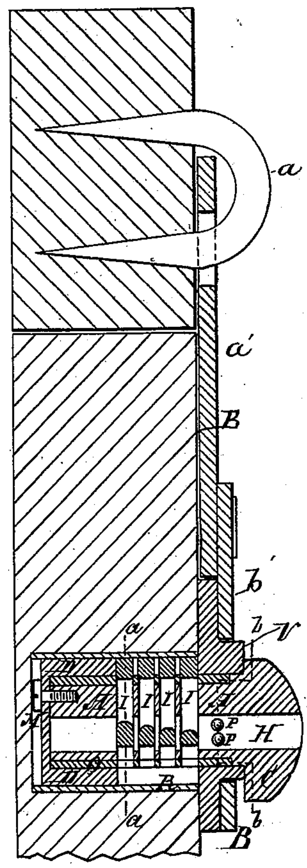


Fig. 7

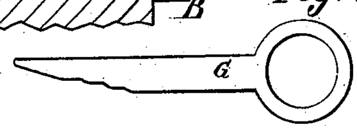


Fig. 3

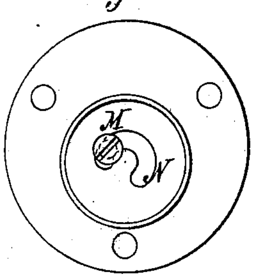


Fig. 4

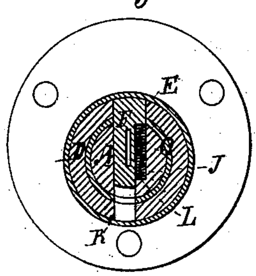
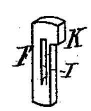


Fig. 5

Fig. 6



WITNESSES

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Charles Nilson

INVENTOR

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2 Sheets—Sheet 2.

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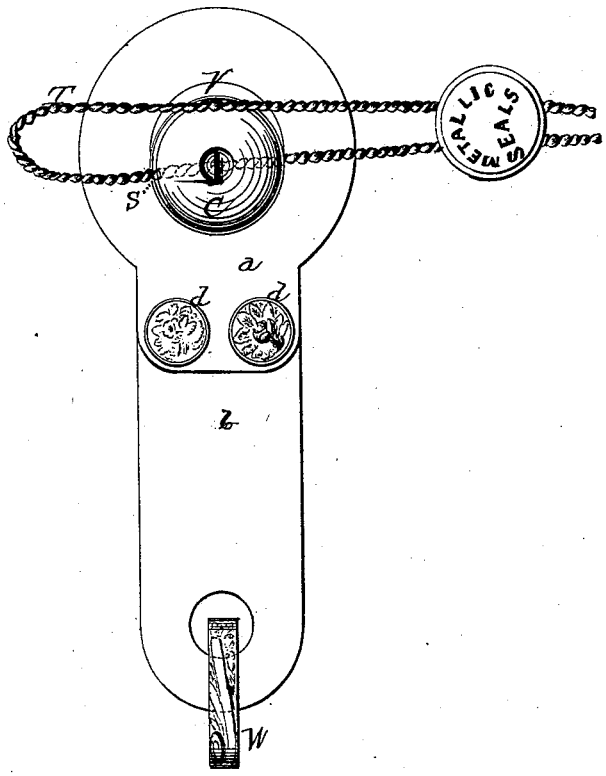
Fig. 3.



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UNITED STATES PATENT OFFICE.

THOMAS V. ALLIS, OF NEW YORK, N. Y.

IMPROVEMENT IN HASP-LOCKS.

Specification forming part of Letters Patent No. **204,779**, dated June 11, 1878; application filed April 30, 1878.

To all whom it may concern:

Be it known that I, THOMAS V. ALLIS, of New York, in the county of New York and State of New York, have invented a new and useful Improvement in Locks, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

This invention relates to that kind of locks in which there is a series of tumblers arranged transversely in a cylindrical revolving piece, which is employed to work the lock-bolt and to lock it by means of the tumblers, said piece being turned by the key, which enters a longitudinal hole to unlock the tumblers.

The invention consists of a round button-head to the projecting end of the locking-bolt, arranged eccentrically to the axis of the bolt for fastening a hasp; also, of a guard-pin contrivance to prevent picking the lock; also, of a neck around the bolt, arranged in relation with the button-head in such manner as to retain a detached hasp, or portion of a compound hasp, when detached from the other, to exclude water and dust; also, of a compound hasp in two or more parts, fastened with rivets, so that when it is desired to open the lock in the absence of the key it can be done by punching out the rivets, instead of breaking the hasp, as is commonly done; also, of figured rivets and staple for the hasp, to prevent destroying them and substituting others without detection.

Figure 1 is a front elevation of a hasp-lock constructed according to my invention. Fig. 2 is a section of the same. Fig. 3 is an inside elevation of the lock and the escutcheon-plate. Fig. 4 is a transverse section taken on the line *a a*, Fig. 2. Fig. 5 is a section on line *b b*, Fig. 2. Fig. 6 is a perspective view of one of the tumblers. Fig. 7 is a side elevation of the key. Fig. 8 is a front elevation, showing the seal and seal-rivets and staple.

A represents the cylindrical revolving bolt, employed in other locks to lock the bolt, but as here represented to lock the hasp B, which it accomplishes by its eccentric or button head C. To actuate a sliding bolt, it generally has an arm or other suitable connection with said bolt arranged inside of the case, say at its inner end.

D is the case, which is bored to receive the bolt A, and allows it to turn freely in said bore, and it has a mortise or notch, E, at one side to receive the heads of the tumblers F, which are carried in a slot in the bolt A. The latter is turned by the key G to lock and unlock, said key being inserted in the key-hole H and passed through the tumblers for that purpose, the tumblers being mortised at I to allow the key to pass through them; after turning the bolt A so that the tumblers coincide with the mortise, the key G is withdrawn, to allow the springs J to shoot the tumblers into said mortise, said springs being arranged in the slot of the bolt A along with the tumblers, one to each, so as to throw them out when so released by the key. The tumblers have each a ledge or shoulder, K, and the piece A has a shoulder, L, in the tumbler-slot for the springs, to cause them to act in this manner, which arrangement is very simple and cheap to make.

The positions of the mortises of the tumblers and the shapes of the key differ in respect to each other, as common in this class of locks, to make the combination.

M is a stop-pin, projecting from the inner end of the bolt A through the curved slot N of the case D, to limit the movements of the said bolt. In this example the case D has a lining-tube, O, which is not essential, but is represented as a convenient way of securing the guard-pins P and their springs Q, which are employed in the key-hole H to interfere with and prevent the picking of the lock by wires. They prevent the wires from being moved up to lift the tumblers, as the wires have not stiffening enough to press them back against the springs, while the key will readily do so.

The mortise R is another device to guard against picking the lock, by allowing the lower ends of the tumblers to drop into it when said tumblers are drawn down out of the locking-mortise E. Without this precaution the wall of the case D might serve as a gage with which the tumblers might be set by wires for unlocking. This mortise is not so wide as the

other, so that the heads of the tumblers will not enter it when the lock is unlocked; but it may be, and thus enable the lock to be locked at each half-turn.

For hasp-locks with a head, as represented in the drawing, it may be preferable not to allow the tumblers to lock in said mortise R, so that bolt A may be turned by the hand without the key and locked as a spring-lock; but it is optional for either way.

The hasp B is made in two parts, *a' b'*, which are fastened by the seal-headed rivets *d*, of soft material, that may be punched out to open the door without breaking the hasp, which is now the common practice when the key is lost or not at hand.

Hasp-locks of this description can readily be made by forming the head of the bolt in a T-shaped square, or any other form having corners which, by turning, would lock over the hasp; but it is evident that a bolt-head having one or more flat sides can be readily turned with a wrench, or by any object being placed against any of such flat sides, and then struck by a hammer or equivalent instrument.

In using my round or button-head bolt I obviate this difficulty, as there are no projecting points to form the required support for a wrench or similar tools.

It is very discernible, however, that a round head placed directly over the center of the bolt would present no locking-surfaces whatever; but to accomplish this I place the head to one side of the center of the bolt, or, in other words, make it eccentric, which gives all I desire—viz., the locking-surface combined with a round head, making it impossible or exceedingly difficult to get a strong enough hold upon the head to force or break the lock.

V is a boss or neck projecting from the face-plate, through which the bolt passes, the object of this neck being to keep the hasp from coming in contact with the bolt, thus preventing any strain upon it from lateral thrusts, and keeping water from working into the lock through the joint between the bolt and face-plate, which it would naturally do if there were no projection from said face-plate. This neck or projection also has another useful office, in retaining a portion of the compound hasp when severed by driving the rivets out, which, if not retained by the neck, could be easily shifted from over the head of the bolt and lost.

The compact form of this lock adapts it well to the use of railroads for locking their freight-car doors, and I have therefore made the following improvements in sealing and adjusting the same in such a manner that it cannot be tampered with without detection; and for the purpose of sealing I drill one or more holes, S, through the bolt-head, crossing the key-hole, through which the seal-wires T are passed, effectually obstructing the passage of the key except the wires be severed or the seal destroyed.

As previously mentioned, I provide my lock with a compound hasp when used for cars, which is in two parts, the object of this being, when a car arrives at a station which has no key, breaking the lock or hasp need not be resorted to, which is now the case in locks in use.

With my improvement it is simply necessary to drive the brass rivets through the holes in the hasp with a hammer, when it parts and gives access to the contents of the car; but the idea would naturally occur that illegitimate access might be had through destroying the rivets and replacing them. To prevent this the heads of the rivets have a design, belonging to the road owning the car, impressed upon them; and as these rivets, or the stamp which impresses them, cannot be obtained by any except those who are duly authorized, it is thus clear that the car cannot be entered by unauthorized persons without detection by destroying the rivets and replacing them with new ones, which might be done if the rivets had not some design impressed upon them.

With my arrangement the hasp is never destroyed or either part lost, the one remaining on the staple and the other on the neck projecting from the face-plate of the lock, and secured thereto by the eccentric bolt-head.

W is a staple having a device impressed thereon. With the ordinary plain staple now in use entrance is readily gained through the car-door by filing the staple, and, after robbing the car, replacing that destroyed by a new one, which can be procured at any hardware store or blacksmith-shop, and the car goes on its way, the robbery undetected until the destination is reached and the contents removed, which may be thousands of miles from where the pilfering took place, with no means of tracing the depredation to the road in whose custody the car was at the time the goods were stolen.

A car provided with my figured staples would not suffer in this manner. The perpetration of the theft would not be committed, the designing perpetrator well knowing he could not procure the staples having the device of the road imprinted thereon any more readily than he could the sealed rivets or the stamp which impressed the leaden seal. These numerous obstacles being placed in the would-be burglar's way prevents his committing the contemplated crime, knowing that entrance cannot be gained to the car without discovery.

I do not profess to have constructed a lock which cannot be forced or broken by proper tools and time to manipulate them, as is the case with all locks; but I do assert that my lock cannot be illegitimately entered without destroying or defacing one part or the other in such a manner that it is readily detected, and the responsibility placed upon the shoulders of those who have assumed protection of the goods while in their custody.

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

1. The pointed spring guard-pins P, arranged and combined with the keyway H, substantially as described.

2. The combination, with the revolving tumbler and key-bolt A, of the round head C, arranged eccentrically to the axis of the bolt, substantially as described.

3. The combination of the revolving keyhole and tumbler-bolt A, having a round and eccentrically-arranged head, C, with a hasp, B, substantially as described.

4. The combination of the neck or collar V, with bolt A and its head C, substantially as described.

5. The compound or two-part hasp with rivet-fastenings, substantially as described.

6. The figured rivets, in combination with a compound or two-part hasp, substantially as described.

THOMAS V. ALLIS.

Witnesses:
A. P. THAYER,
CHARLES NEILSON.