W. BOHANNAN.

Latch.

No. 208,708. Patented Oct. 8, 1878.

Fig 1.

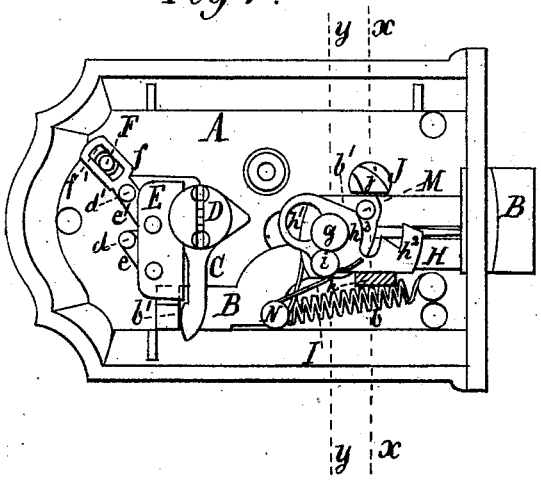


Fig 2.

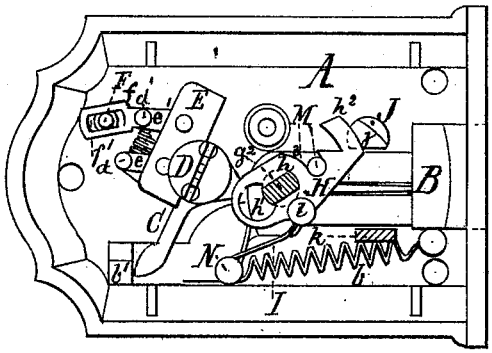


Fig 3.

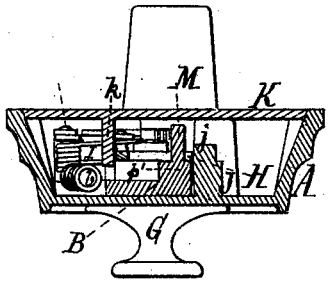


Fig 4.

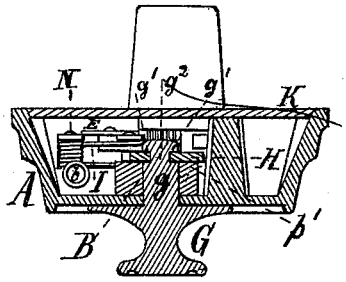


Fig 5.

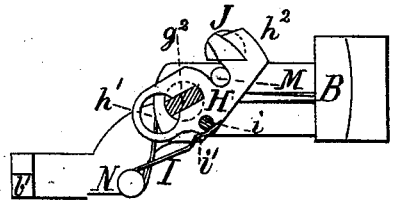
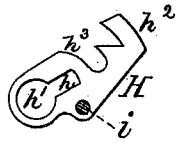


Fig 6.



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UNITED STATES PATENT OFFICE.

WILSON BOHANNAN, OF BROOKLYN, E. D., NEW YORK.

IMPROVEMENT IN LATCHES.

Specification forming part of Letters Patent No. **208,708**, dated October 8, 1878; application filed August 12, 1878.

To all whom it may concern:

Be it known that I, WILSON BOHANNAN, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Locks, which improvement is fully set forth in the following specification and accompanying drawings, in which latter—

Figure 1 is a plan view of my lock in its normal condition with the cap removed. Fig. 2 is a plan view of the same, showing the bolt withdrawn into the lock and checked. Fig. 3 is a transverse section of the same in the line *x x* of Fig. 1. Fig. 4 is a transverse section in the line *y y* of Fig. 1. Fig. 5 is a detail view of the bolt and vibrating check-plate as they appear when the lock is locked and the bolt checked. Fig. 6 is a detail view of the vibrating check-plate.

The nature of my invention consists, first, in a novel mode of attaching a vibrating check-plate to the knob which operates it and the bolt, whereby the necessity of screwing or riveting the parts together is avoided; second, in a novel means whereby the check-plate, secured in the manner I have shown to the knob, is prevented from moving longitudinally, and allowing the knob to fall out of the lock when the said plate is on a straight line with the bolt or latch; third, in a novel means whereby the check-plate is controlled and prevented from getting out of gear with the device which prevents longitudinal movement of the check-plate.

In the accompanying drawings, A represents the shell of a lock, B the bolt, and *b* its tension-spring. C represents the operating-lever of the bolt, which abuts against a lug, *b'*, at the rear end of the bolt. D is a hollow key-spindle containing a number of slides, which are depressed by a flat key with a stepped end. The lever C forms a part of the spindle, and said spindle is also provided with a safety-guard, E, swinging on arms *e e'* and pivots *d d'*, suitably secured to brackets of the spindle. One of these arms, *e'*, has a slotted extension, *f*, the slot *f'* of which slides on a rigid pin, F, of the shell A when the spindle is turned by the key, and moves the safety-guard E into a number of transverse notches in the depressed slides.

The mechanism so far described has already been patented to me under Letters Patent dated August 6, 1867; and I have improved the same by providing the bolt D with a knob, G, with a swinging check-plate or yoke, H, having an oblong slot, *h*, intersecting a hole, h^1. The cylindrical shank *g* of the knob is fitted into the bolt B, which is provided with a boss, *p'*.

The end of the shank *g* extends above the bolt, and is provided, between its terminus and the boss *p'*, with two parallel slots, g^1, forming a neck, g^2, on the shank, upon which neck the check-plate H is fitted by bringing the round hole of the plate directly over the shank *g* and forcing it longitudinally with said shank until the plate is in line with the slots g^1, and then sliding the plate until its oblong slotted portion stands under the terminus of the shank, as shown.

The plate H may be disengaged from the shank *g* by slipping it forward until the shank *g* is in the hole h^1 and then lifting it off.

The plate H is provided with a pin, *i*, against which a V-shaped offset, *i'*, of a spring, I, bears. This spring I is wound around a pin, N, of the bolt, (to which pin, also, the tension-spring *b* is fastened,) and its tail end bears against the boss *p'*.

The shell of the lock is provided with a post or stud, J, which has a beveled stop, *j*, upon a shoulder level with the boss *p'*. By means of this stop and a hook, h^2, at the forward end of the plate the bolt B can be checked, as seen in Figs. 2 and 5, by turning the knob to the right.

When the bolt B is in its normal position, as shown in Fig. 1, and the knob is turned to the right, the hook h^2 engages with the front of the stop *j*, as seen in Fig. 5. If the plate H is turned when the bolt is drawn back into the lock, the back of the hook h^2 engages with the inner side of the stop *j*, as seen in Fig. 2. In the former case the bolt is locked and checked, and cannot be unlocked with the key of the lock. In the latter case the bolt is unlocked and checked.

When the plate H is engaged with the stop *j*, the pin *i* is on the outer side of the vertex of the V-offset *i'*, and when the plate is disen-

gaged the pin *i* is on the inner side of the described vertex, and it is in both cases kept in place by the V-shaped offset of the spring I.

A lug, *k*, on the cap K of the lock serves to keep the plate H in such position that it is always in contact with a stud, M, of the bolt B by means of a curved bearing, h^3, of the plate, and thus it is prevented from accidentally slipping forward on the shank *g* until the round hole h^1 coincides with the shank, and thus allowing the knob C to fall out of the lock.

I am aware that oscillating knobs have been made and used for moving back the bolt of a lock and checking the same in its two main positions; and therefore the gist of my invention lies in the means employed for accomplishing this end.

By constructing and using the plate H and the lateral slots g^1 in the manner I show, the knob and plate are so united with the bolt that the lock is very durable, and at the same time the connection and disconnection of the parts may be readily effected without the aid of tools, as there are neither screws nor rivets used for the purpose of uniting those parts.

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

1. In a night-latch and lock, the bolt-operating knob G, having a shank, *g*, with an oblong neck or groove, g^2, in combination with a check-plate, H, having a slot, *h*, and hole h^1, whereby the check-plate is connected to the shank of the knob without riveting, pinning, or screwing, and the knob held in place, substantially as described.

2. The combination of the check-plate H, having a bearing, h^3, the stud M, and stud *k*, substantially as and for the purpose described.

3. The check-plate H, provided with the slot *h* and hole h^1, shoulder h^3, and hook h^2, for application directly to the shank of the knob G and use with the studs J and M, substantially as and for the purpose described.

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