(No Model.)

E. J. MILLER.

SNAP HOOK.

No. 327,008. Patented Sept. 29, 1885.

Fig. 1.

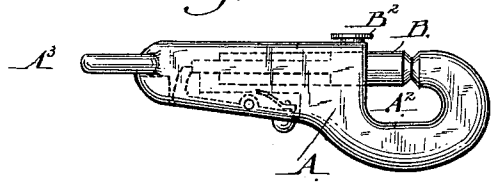


Fig. 2.

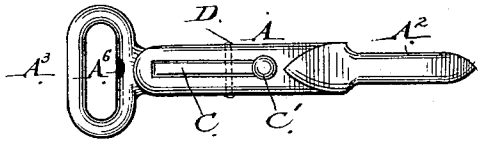


Fig. 3.

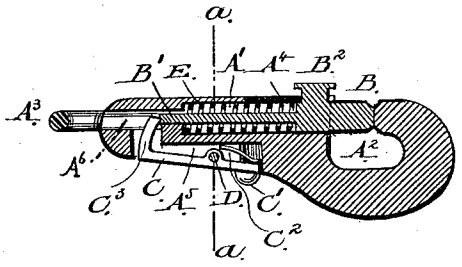


Fig. 4.

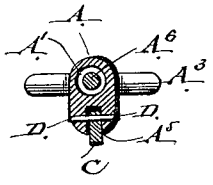
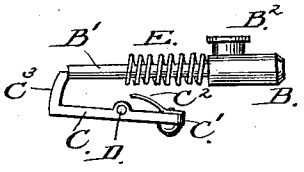


Fig. 5.



WITNESSES

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SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 327,008, dated September 29, 1885.

Application filed June 23, 1885. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. MILLER, a citizen of the United States, residing at Farmersville, county of Lancaster, State of Pennsylvania, have invented a new and useful Improvement in Snap-Hooks, of which the following is a specification.

This improvement relates more particularly to snaps for reins, hitching-straps, and analogous purposes.

The object of the improvement is to supply a snap as readily attached to a strap as the ordinary snap, and that will lock as readily to any ring or point for attachment, and that will automatically lock the spring-bolt itself, so that all efforts of the animal to release itself will be ineffectual. At the same time the additional security gained is secured at a trifling cost.

The drawings herewith, forming a part of this specification, disclose very fully the salient points of my improvement, like letters of reference indicating similar parts throughout.

Figure 1 represents in side elevation the improved snap. Fig. 2 is a plan of the back of the same. Fig. 3 represents in longitudinal section the construction of the improved snap. Fig. 4 is a transverse section of the body of the snap on the line *a a* of Fig. 3. Fig. 5 represents in side elevation a detached view of the center bolt and the sub-locking device in combination therewith.

A represents the body of the snap; A′, the bore for the reception of the spring-bolt; A^2, the usual head; A^3, the strap-loop; A^4, a slot provided for the bolt-slide; A^5, a recess provided at the back for the reception of the sub-locking device; B, the spring-bolt, provided with a reduced stem, B′, and having a sliding head, B^2, engaging with the slot A^4 of the snap-body.

C represents the automatic sub-lock, which has a head, C′, spring C^2, tail C^3, and fulcrum D. The tail, as shown, drops within the bore A^6, in the rear of the stem B′ of the spring-bolt B, being retained in said position by the outward pressure of the spring C^2. The tail may be shortened and made to drop into a recess in the bolt, the sub-lock being reversed in its position upon the back of the snap without affecting the principle of the lock. I give preference to the arrangement as shown, as the most convenient for handling.

D is the fulcrum of the sub-lock, and E is a spiral spring wound around the stem of the spring-bolt, the front end of the spring bearing against the shoulder of the bolt, and the rear end abutting against the base of the bore A′. A perforation, A^6, in the rear end of the snap, steadies the stem as the bolt is operated.

In the use of the ordinary spring-bolt snap there is always danger of the animal releasing itself by the catching of the head B^2 against some obstruction; but in a snap constructed according to my improvement this cannot occur, as there can be no withdrawal of the spring-bolt without a simultaneous depression of the head C′ of the sub-lock C and the outward movement of the tail C^3, and to do that requires the application of human intelligence and action.

The construction of the body of the snap is similar to the majority of those on the market, except that to adapt them to my improvement the body is made slightly wider, so as to secure room for the application of the sub-lock C, the rear or back of the snap being cast with a mortise-recess for that purpose. When cast, the head A^2 is turned to one side sufficient to clear the line of entrance to the bore A′, and when assembling the hooks the spiral spring E is first inserted within the bore, the spring-bolt B is then introduced, with the web of the head B^2 lying in the slot A^4, the bolt is then drawn back until the web contacts with the rear of the slot, and the head A^2 is then twisted into line with the bore of the snap and the bolt released. The resilience of the spring E will throw the bolt forward until it strikes against the return of the head A^2.

The sub-lock C is so arranged that the tail C^3 shall fall in the rear of the stem as it is shot forward by the spring E, which thus automatically locks the bolt B in place. The flat spring C^2 exerting its force upward against C′, keeps the tail C^3 depressed, and the bolt can only be withdrawn to release the snap by pressing upon the head C′ at the same time that a sliding force is applied to the head B^2 of the bolt, which is easily done while the snap is held in the hand.

Having shown the security to be gained by the use of my improvement, and detailed its construction, I desire to secure by Letters Patent the following claims thereon:

1. As an improved article of manufacture, a spring-bolt snap-hook having said bolt automatically locked upon contact between the front end of the bolt and the open end of the head A^2 by a sub-lock having a tail dropped within a recess in said bolt or in the rear of the bolt-stem, and provided with a spring at its front or head to retain the sub-lock in place, substantially as shown and for the purpose set forth.

2. As an improvement in snap-hooks, the bolt B, having a reduced stem portion, B′, forming a shouldered seat for a spiral spring, E, a guide-perforation, A^6, provided for said stem at the base of the bolt pocket or bore A′, in combination with the bolt-head B^2, slot A^4, sub-lock C, and tail C^3, as described, and for the purpose set forth.

EDWARD J. MILLER.

Witnesses:
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A. E. BURKHOLDER.