(No Model.)

M. M. RIGGLE.

SNAP HOOK.

No. 345,923. Patented July 20, 1886.

Fig. 1.

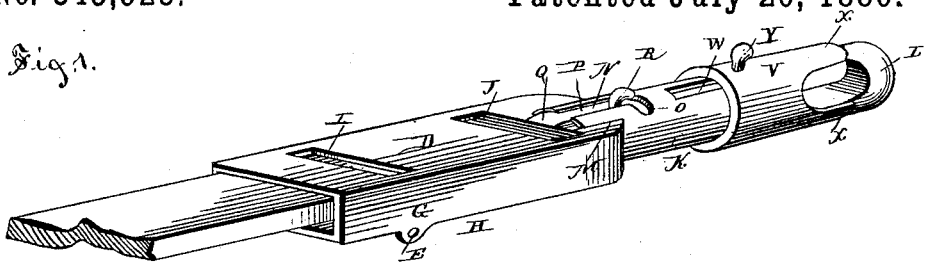


Fig. 2.

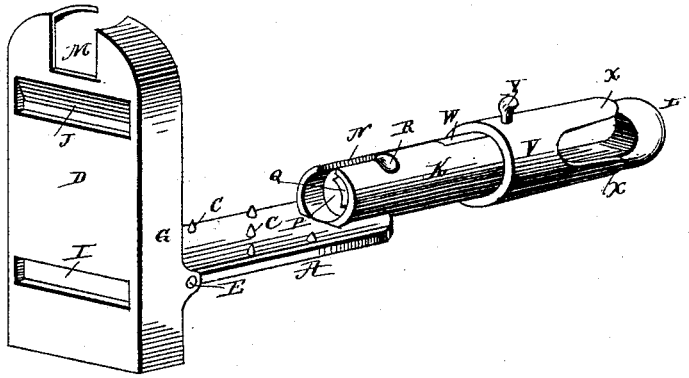


Fig. 3.

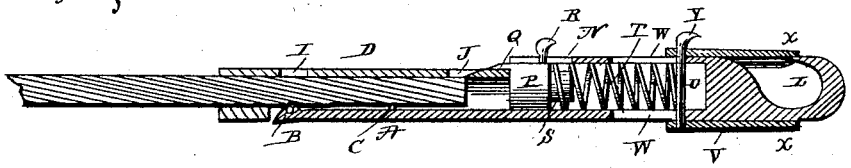
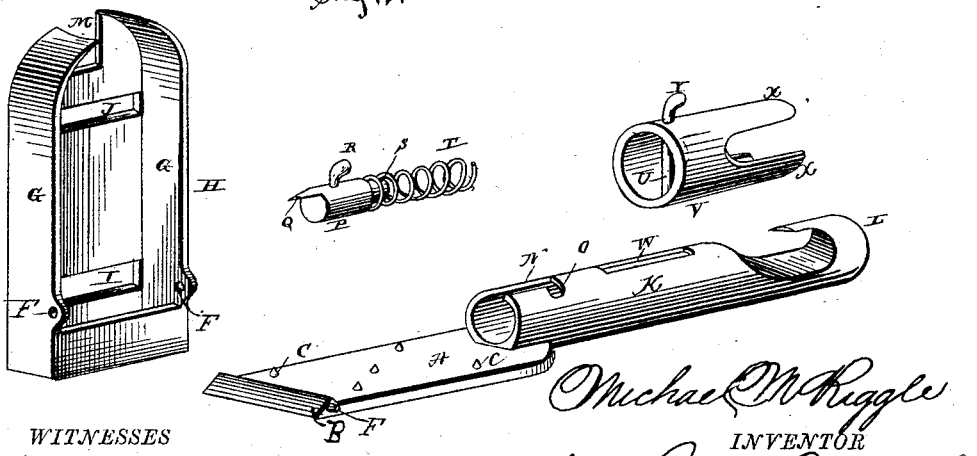


Fig. 4.



WITNESSES

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SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 345,923, dated July 20, 1886.

Application filed May 8, 1886. Serial No. 201,572. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL M. RIGGLE, a citizen of the United States, and a resident of Orleans, in the county of Orange and State of Indiana, have invented certain new and useful Improvements in Snap-Hooks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved snap-hook. Fig. 2 is a similar view showing it opened and the strap released. Fig. 3 is a longitudinal sectional view of the hook with the box closed, and Fig. 4 is a perspective detail view of all the several parts of the hook separated.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to snap-hooks; and it consists in the improved construction and combination of parts of a hook having a box at the rear end of its hollow shank or spring-casing, which box may be clamped upon the end of a strap, holding it, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates a plate having a transverse rib, B, at its rear end upon the inner side of the plate, and provided upon the inner side with a series of projecting teeth, C, and a cap, D, is pivoted upon laterally-projecting lugs, E, at the rear end of the plate, with perforations F in the inwardly-projecting flanges G of the cap. These flanges fit around the side edges of the plate, and at the rear end the flanges and the top of the cap are formed into a box, H, through which a strap may be passed. The top of the cap is provided with a transverse slot, I, registering with the transverse rib upon the rear end of the plate, and near the forward or free end the top of the cap is provided with another slot, J, through which the end of a strap which has been drawn through the box and between the plate and cap may pass. The tubular shank K of the hook L projects from the forward end of the plate, and the free end of the top of the cap is formed with a slot or notch, M, which may fit around the rear end of the tubular shank. The rear end of this shank is formed with a longitudinal slot, N, opening at the rear end, and having a notch, O, in the side of its inner end, and a bolt, P, slides in the inner end of the tubular shank, having a lip, Q, projecting from its end, which may rest over the inner end of the notch in the cap and hold the cap down, and with a stud, R, which serves to operate the bolt, and which may be engaged by the notch in the inner end of the slot when the bolt is rocked in the tubular shank. The inner end of the bolt is screw-threaded, as shown at S, and this screw-threaded end fits upon one end of a spiral spring, T, fitting within the shank, and the outer end of this coiled spring bears against a pin, U, which passes through the rear end of a sleeve, V, sliding upon the shank, and slides in longitudinal slots W in opposite sides of the shank, near the hooked end of the same. The sleeve is formed with two outwardly-projecting lips, X, one of which will bear against the back of the hook when the sleeve is forced forward by the spring, while the other lip will close the opening of the hook, bearing with its free end against the outer side of the end of the hook. The sleeve is provided with a lug or stud, Y, at the end of the pin, by means of which it may be handled and slid upon the shank, and it will be seen that when the sleeve is slid inward upon the shank the hook will be opened, and may be hooked into a ring, link, or similar object, whereupon the spring will force the sleeve outward again, causing the lip to close the aperture of the hook, while the other lip bears against the back of the hook and re-enforces it, the said lip at the same time serving as a reserve lip if the other lip should break, when the sleeve might simply be reversed and the lip at the back be utilized.

It will be seen that the end of a strap or rein may be inserted through the box at the rear end of the cap, and may be clamped within the casing formed by the plate and by the cap, the rib and the projecting pins serving to bite into the strap and hold it, and the cap may be locked in position bearing against the strap and plate by means of the lip upon the sliding bolt.

When the strap is to be inserted, the bolt

may be slid toward the inner end of the slot in the shank, and the stud upon the bolt may be tilted into the notch in the slot, holding the bolt locked back out of engagement with the cap until released, when the spring will force it toward the cap.

The bolt may have the spring screwed farther in or out upon the inner end of the bolt, rendering the force with which the spring will bear against the bolt and against the pin of the thimble greater or less, so that the strength of the spring may be regulated.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a snap-hook, the combination of a shank having an inwardly-bent hook at its end, with a sleeve sliding upon the shank and having two lips at its outward end, respectively bearing against the back of the hook and against the rearwardly-bent end of the hook, and having means for forcing it out and for stopping it, as and for the purpose shown and set forth.

2. In a snap-hook, the combination of a tubular shank having a rearwardly-bent hook at its outer end, and having longitudinal slots in opposite sides, with a sleeve sliding upon the shank and having two outwardly-projecting lips at its outer end bearing, respectively, against the back of the hook and against the rearwardly-bent end, a coiled spring within the tubular shank, and a pin inserted through the sides of the rear end of the sleeve and bearing against the end of the spring passing through the slots, as and for the purpose shown and set forth.

3. The combination of a snap-hook with a plate at the rear end of the shank of the hook formed with a transverse rib at the rear end of the inner side, and having projecting studs upon the inner side, a cap having the rear portions of the inwardly-projecting flanges pivoted at the rear ends of the side edges of the plate, and having the flanges fitting against the edges of the plate, and a latch in the rear end of the shank of the hook engaging the free end of the flanged pivoted cap, as and for the purpose shown and set forth.

4. The combination of a tubular shank having a rearwardly-projecting hook at one end and formed with longitudinal slots near the outer end, and with a longitudinal slot in the inner end, formed with a notch in the inner end of the side of the slot, with a plate at the rear or inner end of the shank, and having its inner face provided with projecting studs and formed with a transverse rib upon the rear end of the inner side, a cap having flanges at its sides fitting upon the side edges of the plate, and having the rear portion of these flanges pivoted at the rear end of the plate, and having the rear portion of the cap formed into a box, and formed with a transverse slot in the top above the transverse rib, and a transverse slot near the outer end and a notch in the outer end fitting upon the rear end of the shank, a spring within the tubular shank, and a bolt having its screw-threaded inner end fitting into one end of the coiled spring, and having a lip for engaging the notch of the cap and a stud for operating the bolt and engaging the notch in the slot, and a sleeve upon the shank having outwardly-projecting lips at its outer end bearing against the back of the hook and against the point of the hook, and having a pin projecting through the rear end and through the slots in the shank bearing against the end of the spring, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

MICHAEL M. RIGGLE.

Witnesses:

LABAN LINDLEY,

ROBERT WHITE.