(No Model.)

F. ARMSTRONG.

SNAP HOOK.

No. 311,941. Patented Feb. 10, 1885

Fig. 1.

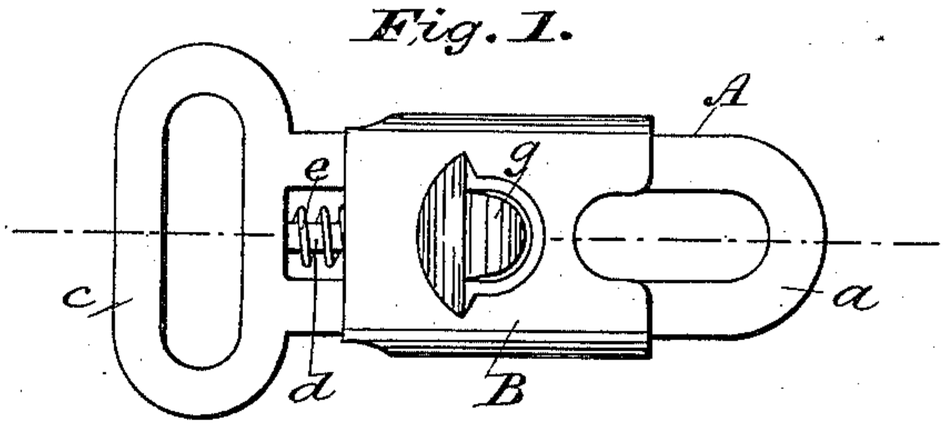


Fig. 2.

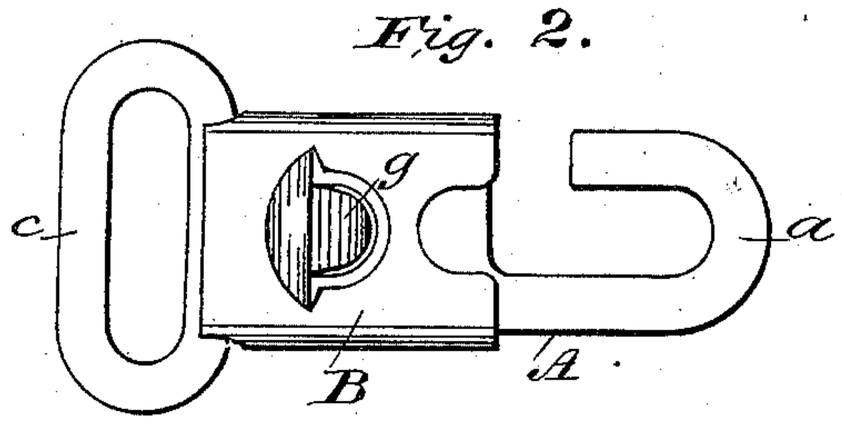


Fig. 3.

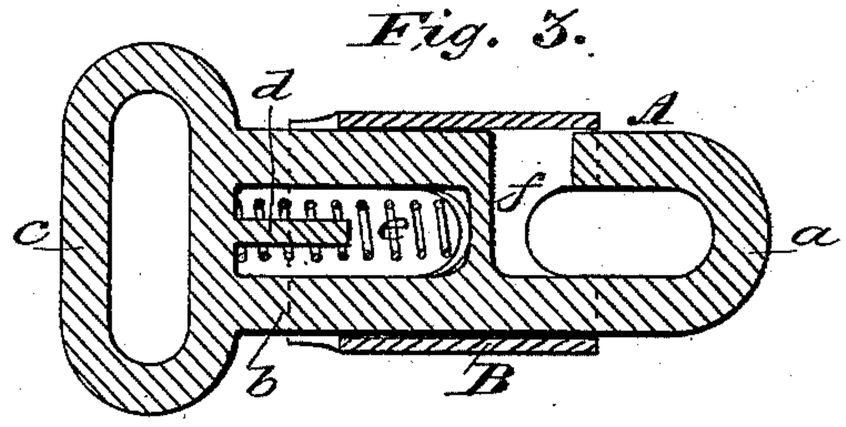
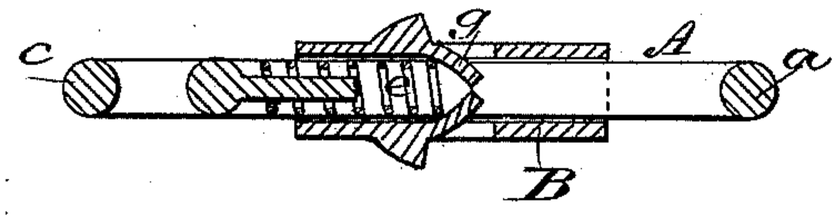


Fig. 4.



Witnesses:
T. C. Brecht.
David T. Mead.

Inventor:
Frank Armstrong
By Wm S. McIntire
Attorney.

UNITED STATES PATENT OFFICE.

FRANK ARMSTRONG, OF BRIDGEPORT, CONNECTICUT.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 311,941, dated February 10, 1885.

Application filed October 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, FRANK ARMSTRONG, a citizen of the United States, residing at Bridgeport, Connecticut, have invented new and useful Improvements in Snap-Hooks, of which the following is a specification.

My invention relates to certain new and useful improvements in snap-hooks.

The objects of the invention are to produce a hook which shall be cheap and simple in construction, having more strength than these articles usually possess, and one from which it is impossible for the ring or the like to which the hook is secured to become detached by rattling or strain in any direction.

With these objects in view my invention consists of a hook formed preferably in one piece with the shank, having a spring-actuated overlapping sleeve sliding over the surface of the said hook to expose or cover the opening for the reception of the ring or the like to which the hook is attached.

In order that those skilled may know how to construct my improved hook, I will now particularly describe the construction of the same in connection with the accompanying drawings, in which—

Figure 1 is a side elevation, showing the sleeve in position to cover the opening in the hook through which the body to be secured is inserted. Fig. 2 is a similar view showing the sleeve pushed back to expose the opening in the hook. Fig. 3 is a central vertical section of the hook, showing the spring which actuates the sleeve, and showing the interior disposition of parts; and Fig. 4 is a central horizontal section.

In these figures, A represents the hook proper, which is composed of the front portion, *a*, bent back upon itself to form the space into which the ring or the like to which the hook is attached is inserted, the central portion, *b*, formed with the space in which is situated the spring which holds the sleeve in position to cover the opening in the hook end, and the rear portion, *c*, which is a loop to which is secured the strap or the like to which the hook is attached. This hook is preferably made of malleable cast-iron, though any other desired metal may be employed when a more expensive, ornamental, or strong hook is desired.

B represents the sleeve which surrounds the hook, and is free to slide back and forth thereon to expose or close the opening. The portion *b* of the hook is provided at its rear end with a pintle, *d*, around which rests the spiral spring *e*, and by which the spring is retained in position. The forward division between the parts *a* and *b* is the cross-piece *f*, which preferably extends at right angles to the parallel sides of the hook.

As a convenient means of securing the sleeve upon the hook and forming a bearing for the end of the spring, I preferably punch from each side of the said sleeve small portions *g*, which are each bent inwardly and meet to form a V-shaped central portion. The hollow part forms a receptacle for the end of the spring *e*, and the point or apex bears against the cross-piece and limits the forward movement of the sleeve.

Although I have particularly described this means of adapting the shell for the reception and retention of the springs, I do not of course wish to be understood as limiting myself to the exact form shown, and hereinbefore described.

Instead of the inwardly-extending portions, a pin of a suitable shape may be used to retain the spring side of the shell, and accomplish the same end as the means shown. The sides of the sleeve are preferably provided with ears or lugs for convenience in grasping when it is desired to draw the sleeve back to permit the entrance of a ring into the hook. The forward portion of the sleeve is cut away to give the confined ring the necessary play. Should extraordinary backward pressure be exerted upon the ring to which the hook is attached sufficient to force the sleeve backward, the escape of the ring will not be possible, because the said ring will come into contact with the cross-bar, and thus have further progress rendered impossible before the extreme end of the sleeve is removed from the end of the hook and the opening exposed.

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

1. In a snap-hook, the hook portion A, the sleeve B, surrounding and adapted to slide upon the said hook, and a spring arranged within said sleeve bearing at one end against

the sleeve and at the other against the hook portion.

2. In a snap-hook, the hook portion A, provided with the cross-piece *f*, extending across the same, the sleeve B, extending entirely around the said hook portion, and a spring arranged within the said sleeve and bearing at one end against the hook and at the other against the sleeve.

3. The combination of the hook portion A, the sleeve B, having the inwardly-bent portions *g*, and the spring *e*, substantially as and for the purpose set forth.

4. The combination of the hook portion A, having the pintle *d*, the sleeve B, having the inwardly-bent portions *g*, or the equivalent, and the spring *e*, the whole combined and operating as described.

5. The combination of the hook portion A, having the bent end, a cross-piece, *f*, and the seat for the spring of the sleeve B, having the parts *g* bent inwardly, or the equivalent, to form a seat for the spring on one side and bear against the cross-piece on the other.

6. The combination of the hook portion A, the sleeve B, having the inwardly-bent portions *g* and the outwardly-extending ears, and the spring, all substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRANK ARMSTRONG.

Witnesses:
ALFRED B. BEERS,
DAVID B. LOCKWOOD.