

(No Model.)

H. S. SQUIER.  
SNAP HOOK.

No. 418,246.

Patented Dec. 31, 1889.

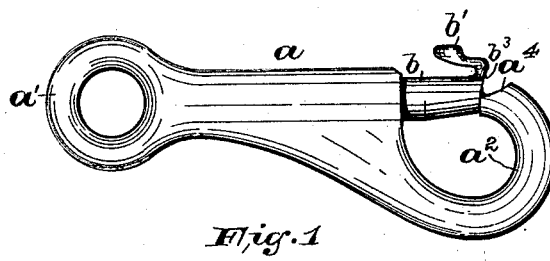


Fig. 1

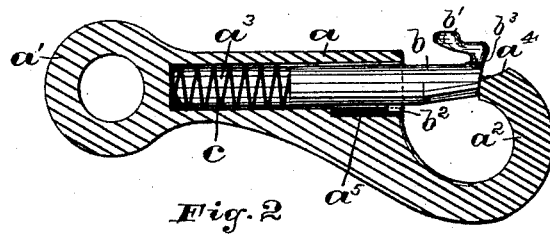


Fig. 2

WITNESSES:

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# UNITED STATES PATENT OFFICE.

HORACE S. SQUIER, OF NEWARK, NEW JERSEY.

## SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 418,246, dated December 31, 1889.

Application filed March 12, 1889. Serial No. 302,989. (No model.)

*To all whom it may concern:*

Be it known that I, HORACE S. SQUIER, a citizen of the United States, residing in the city of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Harness-Snaps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

15 This invention relates to improvements in snap-hooks, and is designed to provide a hook which is of great utility and of simple construction, and one which readily permits the insertion of a ring or like means, to which the hook is adapted to be secured therethrough.

In the drawings herewith accompanying similar letters of reference are employed to indicate corresponding parts in each of the several views.

25 In said views, Figure 1 is a side elevation of my improved harness snap or hook. Fig. 2 is a sectional view of Fig. 1, taken centrally therethrough.

In the said figures, *a* indicates the body portion of the harness-snap, provided at one end thereof with an eye or loop *a'*, for permanently securing the snap-hook to a strap or similar article. The other end of the hook is provided with a hook portion *a<sup>2</sup>*, cast integrally on the body portion *a*, which is provided with a bore or bolt-chamber *a<sup>3</sup>*, in which is arranged the bolt *b*, which projects therefrom at the open end of the bore across the opening formed by the body portion *a* and the hook *a<sup>2</sup>*, the end of the bolt engaging with the end *a<sup>4</sup>* of the hook *a<sup>2</sup>*, thereby acting to retain the fastening-ring in engagement with said hook.

As indicated in the figures, the locking-bolt *b* is provided at the extreme end thereof, projecting beyond the body portion *a* of the hook, with a finger-piece *b'*, which is of peculiar construction, being provided with an extension which extends back above the end of the bolt and in line with the axis of the greatest length of the bolt, and which conforms in shape to the form of the thumb or finger, to enable

the ready manipulation of the same when it becomes necessary to force the bolt back. As thus arranged, as is clearly evident from the drawings, the finger-piece extends back out of the way, thus enabling the ready insertion or removal of the fastening-ring over or from the hook *a<sup>2</sup>* with great ease and without inconvenience to the operator.

As indicated in Fig. 2, the body portion *a* is provided in the bore or bolt-chamber with a groove or recess *a<sup>5</sup>*, which extends back, as shown, and into which extends a rib *b<sup>2</sup>*, formed on the under side of the bolt *b*. The locking-bolt *b* moves reciprocally within the bore or bolt-chamber *a<sup>3</sup>*, formed in the body portion of the hook, and behind the bolt *b* within the chamber, and engaging with the end thereof, is arranged a spring *c*, which tends to force the locking-bolt from the chamber, and thus causes the normal engagement of the end of the bolt with the hook *a<sup>2</sup>*. As thus arranged the rib *b<sup>2</sup>* on the bottom of the bolt, and engaging with the recess or groove *a<sup>5</sup>* in the bolt-chamber, prevents the bolt from turning within said chamber, but at the same time permits the longitudinal sliding movement of the same.

The finger-piece, as has been stated, is formed on the extreme end of the bolt to avoid the necessity of an open slot in the body portion of the harness-snap, as has been the custom of making harness-snaps heretofore.

The great disadvantage in using an open slot is that the dirt and water have free access through the same into the bolt-chamber, and will very soon fill the same and render the bolt inoperative. Furthermore, in the winter water and snow will get into the bolt-chamber and freeze therein and prevent the bolt from being depressed. In my improved construction this difficulty has been avoided, and I have attained a device which is always operative, since there are no open slots in the body portion of the snap-hook into which dirt and water and other substances could pass to cause the inoperativeness of the bolt.

As heretofore made snap-hooks have been provided with a button or knob on the bolt directly over the body portion of the snap-hook, which have this objectionable feature, in that being formed with a head thereon

straps or other parts of the harness about the horse's head are apt to catch in the button and cause the bolt to be forced back and the unfastening or loosening of the horse.

5 In constructing my finger-piece on the end of the bolt and causing the same to extend backward gradually and providing the same with rounded corners the danger of any part of the horse's harness catching and becoming  
10 fast thereon is overcome, and the horse cannot become unfastened from the tying-post. By placing the finger-piece on the end of the bolt, as shown, beyond the body portion *a* of the snap-hook, another great advantage is at-  
15 tained in applying the hook to the fastening-ring, in that said ring need only be forced against the end of the finger-piece on the bolt, thus causing the bolt to be depressed and permitting the ready insertion of the fasten-  
20 ing-ring over the hook *a*<sup>2</sup>, as will be understood.

Having thus described my invention, what I claim is—

1. A snap-hook consisting of a solid body  
25 portion provided with a hook on one end and an eye or loop on the other, a socketed bore or bolt-chamber in said body portion provided with a groove therein, and a spring-actuated bolt in said bore provided with a rib extend-  
30 ing down therefrom and into said groove, for the purpose set forth.

2. A snap-hook consisting of a solid body portion provided with a hook on one end and a loop or eye on the other end and a spring-  
35 actuated locking-bolt moving reciprocally in a socketed bore or bolt-chamber formed in the body portion, said bolt extending therefrom and being provided with a finger-piece on the extreme end of the bolt on that part

thereof projecting from the chamber, sub- 40 stantially as and for the purposes set forth.

3. A snap-hook consisting of a solid body portion provided with a socketed bore hav- 45 ing a spring-actuated bolt therein and a groove in said bore or bolt-chamber near the opening thereof and provided with a hook *a*<sup>2</sup> and a loop or eye *a*' at opposite ends of the body portion, substantially as shown, a bolt arranged in the bolt-receiving chamber or bore, provided with a rib extending down with- 50 in the groove in said chamber, said bolt having a finger-piece on the extreme end of the bolt and extending backward therefrom and provided with a recess conforming with the shape of the thumb or finger, and a spring 55 arranged in said bolt-chamber engaging with said bolt, substantially as and for the purposes set forth.

4. The combination of a tubular or cham- 60 bered body portion provided with a groove therein and a hooked portion *a*<sup>2</sup>, extending therefrom, a locking-bolt arranged in and projecting from said chamber, provided with a rib sliding reciprocally in the groove *a*<sup>3</sup>, and a finger-piece on the extreme forward end of 65 the bolt, said finger-piece being provided with a recess conforming with the shape of the thumb or finger and extending back toward the body portion of the hook and in line with the line of movement of the bolt, for the pur- 70 poses set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 29th day of December, 1888.

HORACE S. SQUIER.

Witnesses:

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FREDK. C. FRAENTZEL.