

B. B. Hotchkiss,

Snap Hook.

N^o 61737.

Patented Feb. 5, 1867.

Fig. 1.

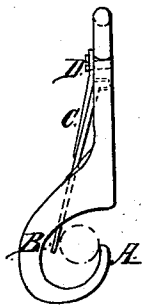


Fig. 2.

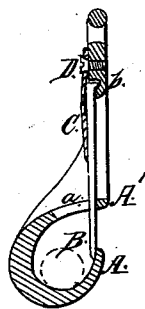


Fig. 3.

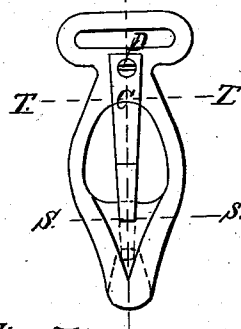


Fig. 4.

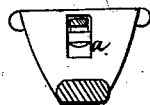


Fig. 5.



Fig. 8.



Fig. 6.

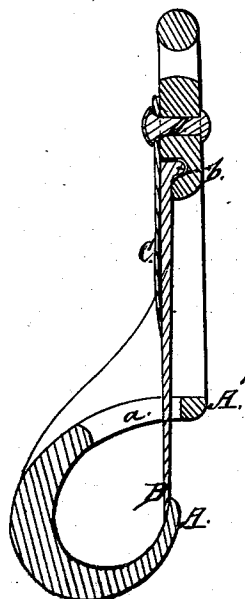
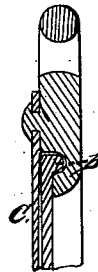


Fig. 7.



Witnesses;
W. Hulmery,
D. W. Stetson.

Inventor,
B. B. Hotchkiss.

United States Patent Office.

B. B. HOTCHKISS, OF NEW YORK, N. Y.

Letters Patent No. 61,787, dated February 5, 1867.

IMPROVEMENT IN SNAP-HOOKS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, B. B. HOTCHKISS, of the city, county, and State of New York, manufacturer of projectiles and hardware, have invented a certain new and improved Snap-Hook for use in harness and analogous situations; and I do hereby declare that the following is a full and exact description thereof. The accompanying drawings form a part of this specification.

Figure 1 is a side view.

Figure 2, a central longitudinal section.

Figure 3, a back view.

Figure 4, a cross-section on the line S S in fig. 3; and

Figure 5, a cross-section on the line T T in fig. 3.

Figure 6, a longitudinal section on a larger scale.

Figure 7, a corresponding partial section of a modification; and

Figure 8, a corresponding partial section of another modification.

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

The material which I prefer for the skeleton snap is malleable cast iron. The material of the tongue may be the same. The spring is by preference steel.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation by the aid of the drawings and the letters of reference marked thereon.

The front of the hook is indicated by A, and the point of the tongue by B. The spring is indicated by C, and the screw or rivet by which the latter is confined by D. On the face of the tongue, at the root, or the end farthest from the point B, is a spur or projection, indicated by *b*, which fits into a corresponding recess in the snap. The tongue is confined by this spur or projection in such a manner that it cannot move endwise or side-wise so long as the spring C is active in confining it firmly in its proper contact with the recess. The spring C is of sufficient tension to perform this function under all circumstances, and also to act as a spring in allowing the end *b* of the tongue to yield and move backward from the point A of the hook to allow of the introduction and removal of a link, ring, staple, or whatever the hook receives. The tongue is shielded near the point by the bridge A' on the skeleton frame. This bridge extends across over the face of the tongue, but at such a distance in front as allows the tongue always to move forward and come to a firm bearing against the point A of the hook. The tongue is guided as it moves backward and forward by contact with the sides of the slot *a* in the skeleton snap in which it travels, as will be obvious from the drawings. The root is also guarded against displacement sidewise by the form of the skeleton adjacent thereto in addition to the resistance to lateral movement offered by the spur *b*. The skeleton hook is widened and made open between the bridge A' and the root of the tongue, in order to allow the introduction of the thumb to press back the tongue whenever it is desired to liberate a ring, or the like, enclosed. The advantages due to my invention are, great safety from derangement or fracture, economy of construction, and great facility for operating it. The part of the snap which is adapted to receive the strap or attachment may be round instead of oblong, as represented, and the form of the hook generally may be modified greatly to suit any particular circumstance, or according to the taste of the constructor, as will be obvious to any mechanic. The spring C, and consequently the tongue B *b*, may be confined by a screw or other mechanical device in lieu of the rivet D; I prefer a rivet, as represented in fig. 6. In lieu of the single projection *b*, on the face of the tongue, I can employ two projections, one on each side, adapted to fit into corresponding grooves or recesses; one such side projection instead of two may be employed, but I prefer two. Two or more spurs on the face adapted to fit into a corresponding number of recesses in the skeleton may be used if preferred. I consider these obvious modifications of my invention, so also will be the employment of one or more recesses in the root of the tongue receiving corresponding projections from the skeleton hook, the object of my invention being accomplished in substantially the same manner as above described, whenever the root of the tongue is confined by grooves or cavities in the one part receiving projections from the other part, and held firmly in contact in all positions by the spring. I can, if preferred, employ a mere projection cast on the skeleton in lieu of the screw or rivet D, crushing or heading such projection upon the spring C like the head of a rivet, as shown in fig. 7. This will save somewhat in cost, but will make a weaker fastening than those represented.

I can also, if preferred, lock the root of the tongue B *b* to the spring C, instead of to the skeleton of the snap, letting the part *b* take hold of the spring C, as shown in fig. 8. This also is cheaper, but less strong. It will be obvious that the guiding of the tongue B near its point, by carrying it in the slot *a*, with parallel sides, as represented, greatly diminishes the risk of fracture or derangement from side strains.

Having now fully described what I claim as my improvement in snap-hooks, what I desire to secure by Letters Patent, is as follows:

1. I claim, in a snap-hook, having a rigid internal-tongue operated by a separate spring, the interlocking of the root of the tongue and the confining of the locked parts by the same spring which operates the tongue, substantially in the manner and for the purpose herein set forth.

2. I claim, in combination with a rigid tongue, mounted and operating in a hook, as described, the slot or recess *a* having parallel sides adapted to guide the tongue near its point and resist side strains, substantially as herein set forth.

Witnesses:

D. W. STETSON,
W. THILMANY.

B. B. HOTCHKISS.