GEORGE LEIGH.

Improvement in Safety Hooks for Watch Chains.

No. 124,832. Patented March 19, 1872.

Fig 1.

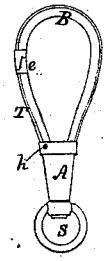

Fig 3.

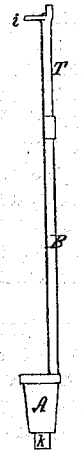

Fig 4.

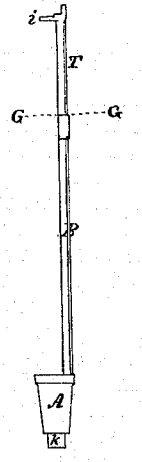

Fig 2.

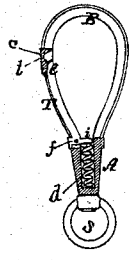

Fig 5.

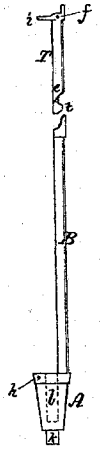

Fig 6.

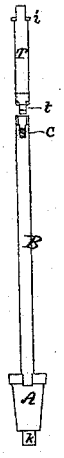

Fig 7.

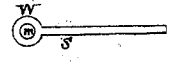

Fig 8.

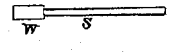

Fig 9.

Fig 10.

Witnesses.

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124,832

UNITED STATES PATENT OFFICE.

GEORGE LEIGH, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN SAFETY-HOOKS FOR WATCH-CHAINS.

Specification forming part of Letters Patent No. 124,832, dated March 19, 1872.

SPECIFICATION.

I, GEORGE LEIGH, of the city and county of Providence and State of Rhode Island, have invented a new and Improved Safety Snap-Hook and Swivel for Watch-Chains, Guards, &c., of which the following is a specification, reference being had to the accompanying drawing making part of the same, in which—

Figure 1 is a view of my improved snap-hook and swivel. Fig. 2 is a similar view and cross-section of the same, showing its construction. Fig. 3 is a longitudinal view of the casting, in one piece or blank, from which the snap-hook portion is made. Fig. 4 is the wrought casting, hereinafter specified. Fig. 5 is a side view, and Fig. 6 is a front view of the two parts of the snap-hook complete before bending, showing the locking device herein mentioned. Fig. 7 is a top view, and Fig. 8 is a side view of the casting or blank from which the swivel W and ring S is wrought. Fig. 9 is a side view, and Fig. 10 is a bottom view of the completed swivel-ring, separately.

Similar letters indicate corresponding parts in all the said figures.

The said snap-hook and swivel is, in the form shown in Figs. 1 and 2, in general use as a desirable means of securing a watch-guard or chain to the button-hole in a gentleman's vest, or to secure the guard or chain to the bow or ring of the watch. It is composed of a hook, B, on a shank, A, a hinged tongue, T, conforming to the bow-shape of the hook, and actuated by a spring, *d*, in the shank to hold its free end *e* in close contact with the end of the hook, so that said free end will yield to allow the hook to be caught in the button-hole, and then return by the action of the spring *d* and complete the bow of the hook, and prevent it from unhooking, except when pressed back with the intention of doing so. As heretofore made the tongue or snap was simply formed with an angular end or face, which was pressed by the spring against a corresponding angular face of the end of the hook to complete the bow of the link; but when thus made it was found that there was nothing either to prevent the hook from being straightened out by a forcible pull on the guard or chain, or to prevent the snap or tongue T from being pushed on one side or the other from the end of the hook, and thereby allow the hook to escape from the button-hole; and it is for remedying these two difficulties in the old construction that my said invention is in part designed; and the same consists in providing a locking device between the contiguous ends of the tongue and hook of a character that will confine the two ends from pulling apart by strain on the hook, or by lateral pressure on the free end of the tongue. This locking device is shown in Figs. 2, 5, and 6 of the drawing, and consists of a small hooked projection, *t*, on the free end of the tongue, that shuts into a correspondingly-shaped depression, C, in the end of the hook, as the tongue T swings into place by the action of the spring *d*, and thus confines the two parts together in a manner to prevent their separation from the causes above mentioned.

The other part of my invention relates to making the snap-hook and the swivel each from a blank consisting of one piece of cast or wrought metal, instead of making the same in many parts to be afterward united by soldering, as heretofore practiced.

In the drawing, Fig. 3 represents the blank, in one piece, from which the snap-hook is made; and Figs. 7 and 8 represent the blank from which the swivel, Figs. 9 and 10, is made. These blanks may be cast into the requisite form in a mold, or they may be struck, swaged, or rolled into form in a manner and by means well-known to workers in metals, and after the blank, containing the requisite quantity and disposition of the metal, is produced it may, after annealing, be brought quite near to the required shape by striking it into dies, after which it will present the appearance very nearly of that shown in Fig. 4. I then saw the piece in two at the line G, and, by means of suitable burring or milling instruments revolving in a lathe, I cut and form the hooked projection *t* at the sawn end of the shorter piece T, and, by like means or others adapted to the purpose, I form the depression *c* in the sawn end of the piece B to form the locking device above described. I then, by suitable means, shape the opposite end of the piece T to form the projection *i* for the spring *d* to press against, and drill the same at *f* to receive the pivot by which it is hinged to a similar drilled hole at *h* in the shank A. I

then drill a hole, *l*, Fig. 5, in the center of said shank to receive the spring *d*, and mill off the end *k* for the reception of the swivel W. I then insert the spring *d* in its hole, bend the part B into the form of the hook, pivot the joint or drilled end *f* to the shank at *h*, so that the projection *t* will swing and shut into the depression *c* of the end of the hook, when this part—viz., the snap-hook—is completed. Then, by similar means, I strike up, or cast, or roll the snap, Figs. 7 and 8, into form, drill the hole *m* in the center of the swivel, and bend up the projecting part *s* to form the swivel-ring, after which I place the swivel on the milled end *k* of the shank and secure it thereon by hammering and riveting over the protruding end of *k*, when the whole thing is complete.

The advantage of this mode of constructing the snap-hook and swivel from a blank in one piece is that the article so made is very much stronger—that is, it will resist a far greater strain to break or pull it apart; and besides that it can be made in one-third the time, and with a like saving in labor and expense, which, together with the advantage of safety resulting from the employment of the locking device, renders the whole thing far better and cheaper than the snap-hook and swivel of the old construction, in which the several parts—viz., the hook B and tongue T, the shank A, the end of the shank *k*, the joint *f* at the end of the tongue, the swivel W, and the swivel-ring S—were each wrought into form in separate pieces and then soldered together.

Claims.

I claim as my invention—

1. The snap-hook and swivel made from a blank or blanks consisting of single pieces of metal, having the requisite form and disposition of the metal, substantially in the manner described, as a new article of manufacture.

2. I also claim, in combination with such snap-hook, the locking device, substantially as described, for the purpose specified.

GEORGE LEIGH.

Witnesses:

GEORGE JONES,

BENJAMIN ELWELL.