Nov. 16, 1943. H. KONIKOFF 2,334,677

SNAP HOOK

Filed Dec. 12, 1942

Fig. 1

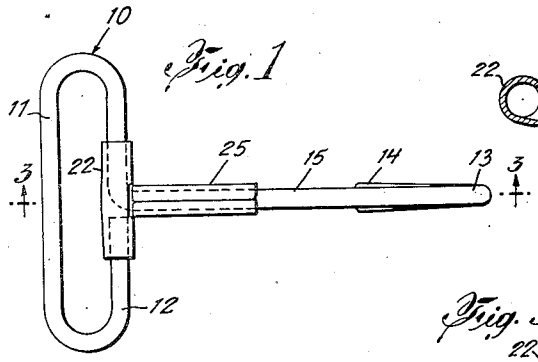


Fig. 4

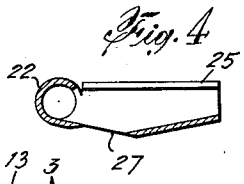


Fig. 5

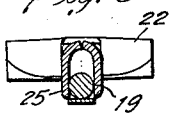


Fig. 3

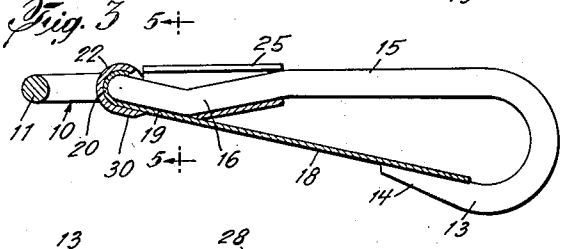


Fig. 2

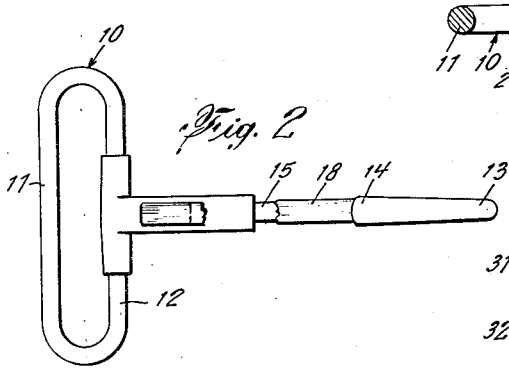


Fig. 6

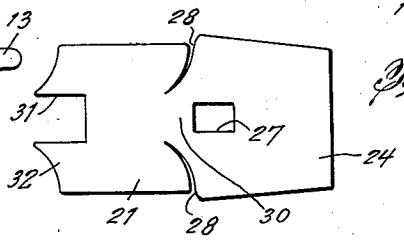


Fig. 7

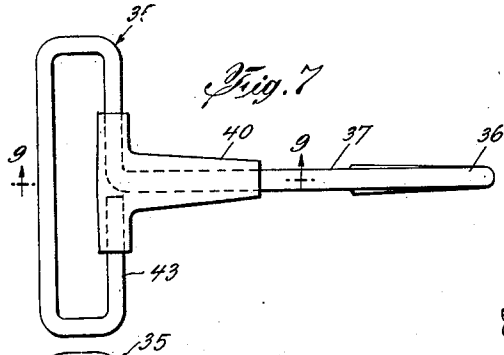


Fig. 9

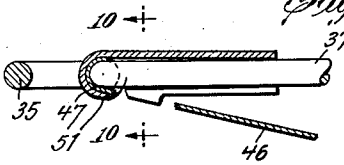


Fig 10

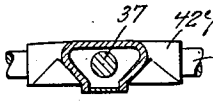


Fig. 8

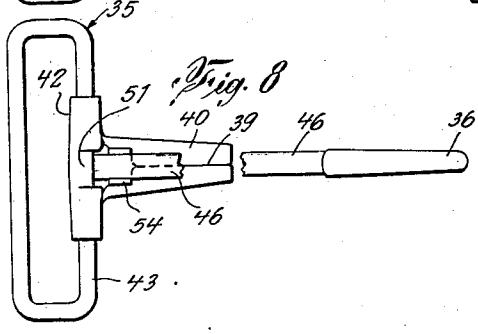
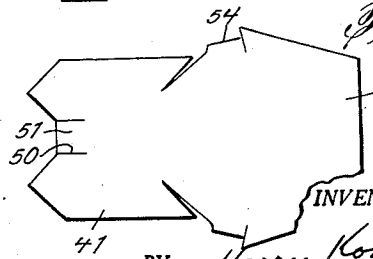


Fig. 11



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SNAP HOOK

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Application December 12, 1942, Serial No. 468,780

2 Claims. (Cl. 24—236)

This invention relates to new and useful improvements in snap hooks having a spring tongue and also a loop to serve as a strap terminal. Snap hooks of this general character are well known in the art and serve a large variety of purposes. Among the many forms of such snap hooks, the most common has been one in which the hook element is fashioned from a short length of heavy wire which is force-fitted, or otherwise secured, in an opening formed in a casting, which includes the loop which receives the strap terminal. The casting also has an opening for the reception of the spring tongue.

One of the principal objects of the present invention is to provide an improved snap hook wherein the hook element and the loop element are formed from a single length of wire. The spring tongue is secured adjacent the junction of the hook shank and the loop by a novel retaining means formed from a blank of flat sheet metal which is appropriately bent to provide a sleeve portion which encircles the loop, and another sleeve portion which encircles the hook shank. The snap hook of the present invention, in addition to being much stronger than the earlier one formed with the casting just described, is much less expensive to construct and gives a neater appearance.

The total weight of metal used in the hook of the present invention is less than in the older types, and the improved snap hooks can be turned out much more rapidly than can the cast variety.

Another object of the present invention is to provide an improved snap hook wherein the spring tongue is much more firmly anchored than in the earlier devices of the art. The anchoring means, formed from a blank of sheet metal, as aforesaid, in addition to firmly securing the spring tongue, also imparts additional strength and rigidity to the entire structure, giving it greater tensile strength per unit of weight than the conventional devices possess.

In the drawing:

Fig. 1 is a bottom plan view of one embodiment of the present invention.

Fig. 2 is a partially broken top plan view thereof.

Fig. 3 is a longitudinal section taken on line 3—3 of Fig. 1.

Fig. 4 is a longitudinal section taken through the spring-tongue-retaining element.

Fig. 5 is a transverse section taken on line 5—5 of Fig. 3.

Fig. 6 is a plan view of the blank used in forming the spring-tongue-retaining element.

Fig. 7 is a bottom plan view of a modified form of the present invention.

Fig. 8 is a partially broken top plan view thereof.

Fig. 9 is a broken section taken on line 9—9 of Fig. 7.

Fig. 10 is a transverse section taken on line 10—10 of Fig. 9.

Fig. 11 is a plan view of the spring-tongue-retaining element.

In accordance with the present invention, both the hook and the loop are formed from a single length of wire. The gauge of wire used is, of course, a matter of choice, depending upon the tensile strength desired. One end of the wire is bent to form the loop 10, which, in the form shown, is generally rectangular in shape and comprises an outer portion 11 and an inner portion 12. It will be appreciated that the loop may be circular or any other desired shape. The opposite end of the wire is bent to form the hook portion 13, which is preferably flattened at its terminal, as shown at 14. The intermediate or shank portion 15 is desirably straight through the greater portion of its length, but may also be appropriately bent to form an offset portion 16 between the main shank portion 15 and its point of junction with the loop portion 10, all as shown in Fig. 3.

The spring tongue 18 engages the inner surface of the hook terminal at its outer end, and surface 19 formed by offset portion 16 serves as a seat for the spring adjacent to its inner terminal, which latter is curved, as shown at 20, and encircles the inner portion 12 of loop 10. The spring tongue is firmly secured in the position shown in Fig. 3 by means of the novel anchorage element which is formed from a blank of flat sheet metal, one form of which is illustrated in Fig. 6. This blank is composed of two integral portions, one portion 21 of which is bent to form a sleeve 22 which lies transversely of the blank and which encircles the inner portion 12 of loop 10 and firmly secures the inner terminal 20 of the spring tongue, as aforesaid. It will also be noted that this sleeve 22 firmly secures the free end of the wire in axial alignment with the opposite end of portion 12 of the loop, and thus imparts a high measure of rigidity to the loop 10.

The opposite portion 24 of the blank is appropriately bent to form another sleeve 25 which lies longitudinally of the blank, and which embraces the offset shank portion 16. The blank is

further formed with an opening 27 which receives the spring tongue, and cut-out portions 28 which permit the sleeve portions 22 and 25 to be formed at substantially right angles to each other. The spring tongue is firmly held against seat 19 by portion 30 of the blank. The substantially square cut-out 31 in portion 21 of the blank forms extension portions 32 which are bent around portion 12 of the loop, thus completely encircling the same.

It will be appreciated that the precise shape of the metal blank may vary considerably without departing from the spirit of the invention, as defined by the appended claims. In certain instances, for instance, it may be desirable to provide a longer sleeve 22, and it also may be desirable to extend the length of sleeve 25. This is all within the skill of the die-maker, the essential feature being to provide integrally-connected loops lying at right angles to each other and forming a firm connecting element between the shank of the hook and the strap-receiving loop, as well as providing means for firmly anchoring the spring tongue.

In the modified form of the invention shown in Figs. 7–11, inclusive, the loop 35 and the hook 36, with the intermediate shank portion 37, may be formed as in the first embodiment of the invention. In this instance, the aperture shown at 27 in the blank of Fig. 6 is eliminated, and portion 38 of the blank of Fig. 11 is bent to form the seam 39 of sleeve 40 on the top, rather than on the bottom, of the device. Portion 41 of the blank is bent to form sleeve 42 which encircles portion 43 of loop 35. In this embodiment, spring 46 is provided at its inner end with the circular portion 47 which encircles inner portion 43 of loop 35, and if desired, portion 41 of the blank may be so cut along lines 50 as to form finger portion 51 which engages spring tongue 46 and retains it in engagement with its seat. The blank may further have ears 54 which engage the opposed edges of spring 45. In this form of the invention, the blank forming the anchorage element may also differ considerably in shape from that shown in Fig. 11.

What I claim is:

1. A snap hook comprising hook and loop elements formed from a continuous length of material, a spring tongue engaging the hook element at its outer end and encircling a portion of the loop element at its inner end adjacent to the point of connection between the loop and hook elements, and combined means for securing the tongue and for strengthening the two elements, such means being formed from a blank of sheet metal shaped to form a sleeve at one end thereof which encircles the loop adjacent to the mounting of the inner end of the spring, and being further shaped at the opposite end thereof to form a sleeve disposed at substantially right angles to the first-mentioned sleeve, and which encircles the shank of the hook element, the blank having a central opening therein through which the spring tongue passes.

2. A snap hook comprising hook and loop elements formed from a continuous length of wire, a tongue engaging the hook element at its outer end and engaging a portion of the loop element at its inner end adjacent to the point of connection between the loop and hook elements, and retaining means for the tongue, such means being formed from a blank of sheet metal shaped to form a sleeve at one end thereof which encircles the loop and the inner end of the spring, such sleeve also retaining the terminal of the wire in alignment with the adjacent portion of the loop, such blank being further shaped at the opposite end thereof to form a sleeve disposed at substantially right angles to the first-mentioned sleeve, and which encircles the shank of the hook element, the blank having an opening therein at a point between the two sleeves through which the tongue passes.

HARRY KONIKOFF.