(No Model.)

R. C., H. M. & L. W. ELDRIDGE.

SNAP HOOK.

No. 528,270. Patented Oct. 30, 1894.

Fig. 1.

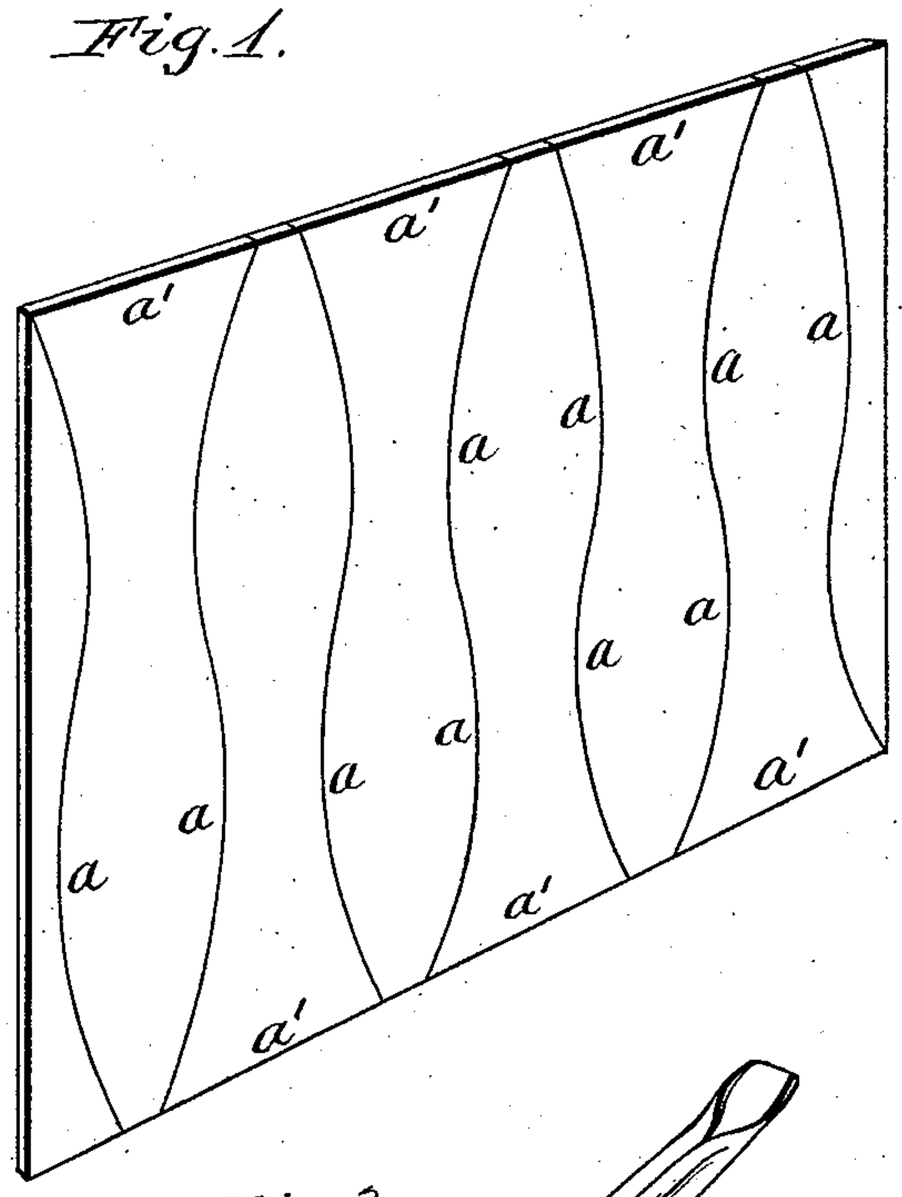


Fig. 2.

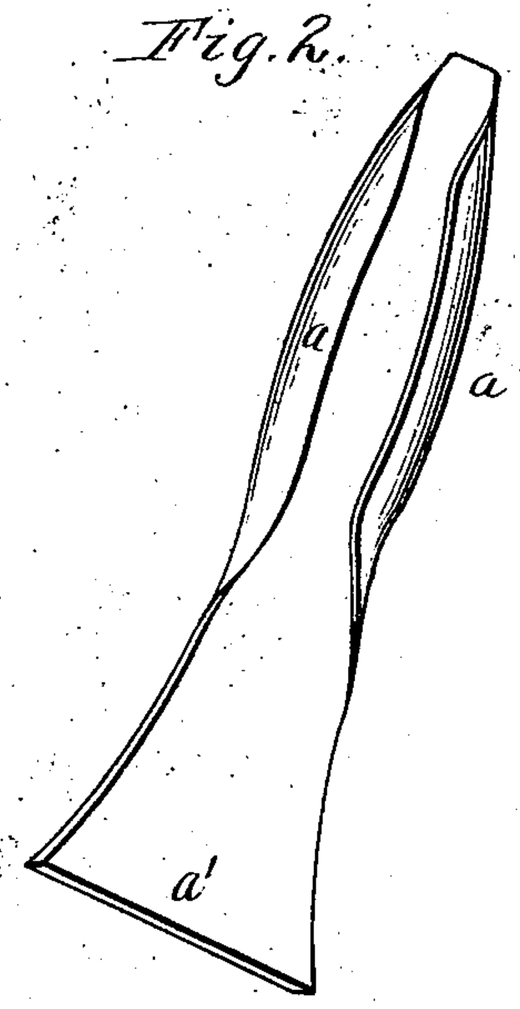


Fig. 3.

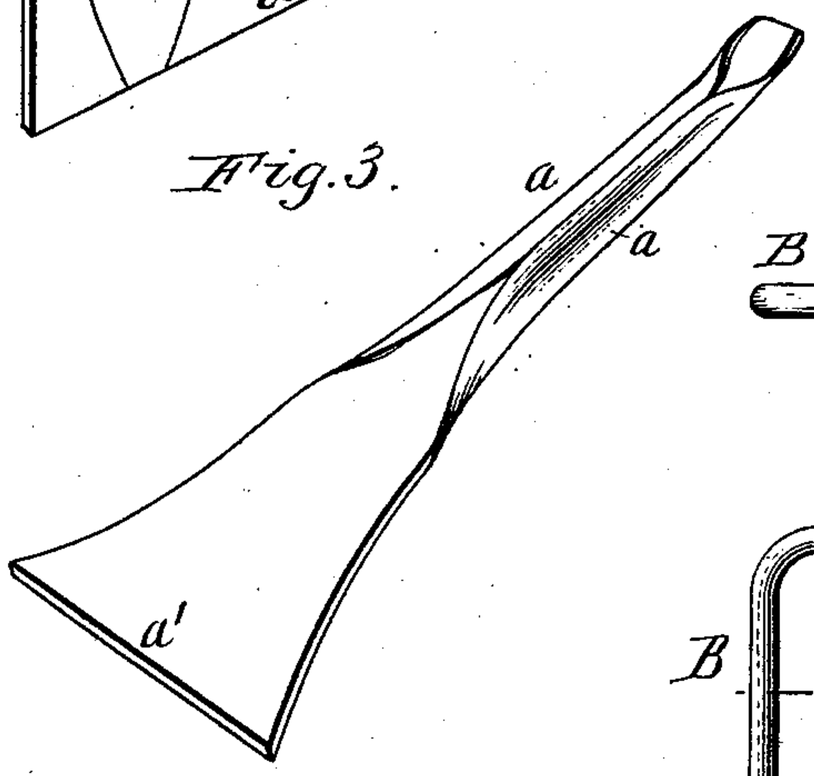


Fig. 4.

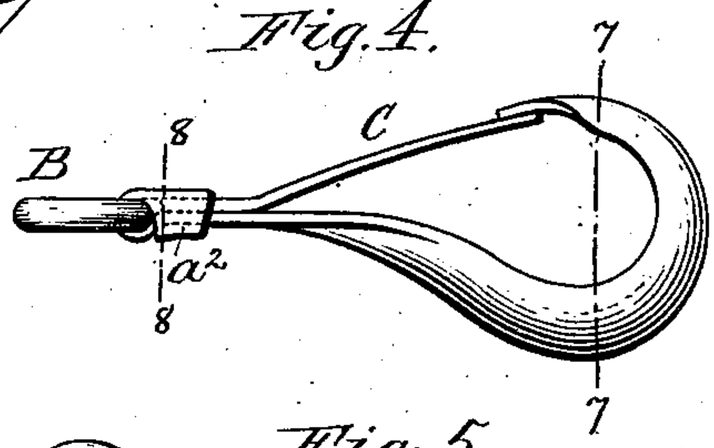


Fig. 5.

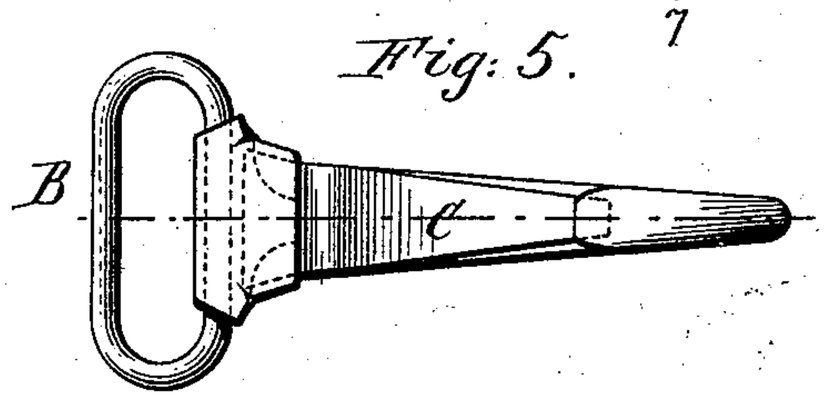


Fig. 7.

Fig. 8.

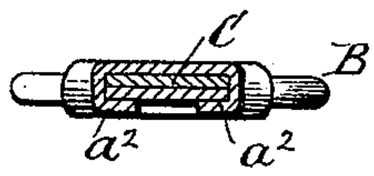
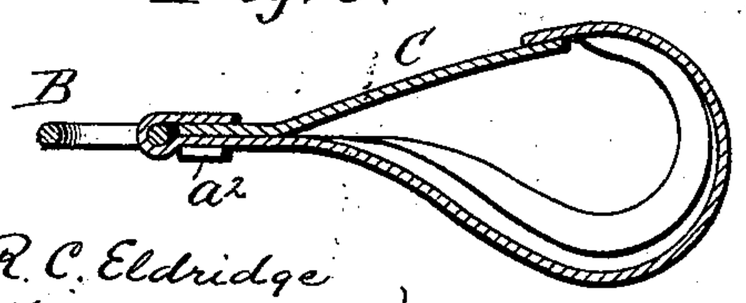


Fig. 6.



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UNITED STATES PATENT OFFICE.

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OF NIAGARA, CANADA.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 528,270, dated October 30, 1894.

Application filed January 22, 1894. Serial No. 497,585. (No model.)

To all whom it may concern:

Be it known that we, REUBEN C. ELDRIDGE, a citizen of Canada, and HERBERT M. ELDRIDGE and LOUIS W. ELDRIDGE, citizens of the United States, all residing at Niagara, in the county of Welland and Province of Ontario, Canada, have invented new and useful Improvements in Snap-Hooks, of which the following is a specification.

This invention relates to snap hooks which are constructed of sheet metal and it has for its object to produce a strong snap hook of this class in which the use of rivets is dispensed with and which involves a minimum amount of scrap or waste stock in its manufacture.

In the accompanying drawings, Figure 1 is a perspective view of a sheet of metal, cut into a number of blanks of the proper shape for forming our improved snap hook. Fig. 2 is a perspective view of one of the blanks, showing the longitudinal edges of its hook portion folded inward. Fig. 3 is a similar view, showing the form of the blank preparatory to bending it into hook form. Fig. 4 is a side elevation of our improved snap hook. Fig. 5 is a top plan view thereof. Fig. 6 is a longitudinal section of the snap hook. Fig. 7 is a cross section thereof in line 7—7, Fig. 4. Fig. 8 is a similar section in line 8—8, Fig. 4.

Like letters of reference refer to like parts in the several figures.

The hook is formed from a flat sheet metal blank cut to the form shown in Fig. 1, the portion of the blank which forms the hook being bulged at its opposite edges, as shown at a, and the portion which forms the shank of the hook being widened or of substantially dovetailed form, as shown at a'. In forming the hook from this blank, the bulging portions a are first bent or folded inwardly against the body of the blank, as shown in Fig. 2, and the hook portion of the blank is then depressed or doubled lengthwise at its middle, as shown in Fig. 3, so as to impart to the same a U-shaped cross-section, as shown in Fig. 7. The doubled portion of the blank is next bent into hook form, as shown in Fig. 4. Any suitable dies may be employed for folding over the bulging edges of the blank, doubling the same at the hook portion and curving the latter to form the hook. When the hook is constructed in this manner it contains four thicknesses of metal, rendering it very strong, and as its folded edges face each other, a smooth edge is produced on the inner side of the hook.

After the hook has been formed, the same is preferably flattened on opposite sides by suitable dies under a heavy drop hammer. This stiffens and condenses the metal and gives the hook a smooth and finished appearance.

B is the attaching loop of the snap hook which is constructed separate from the body of the hook and secured thereto by passing the dovetailed shank of the blank upward through the loop and bending it around its adjacent inner bar and toward the upper side of the blank, so as to form a transverse eye which receives said bar, as shown in Figs. 4, 5 and 6. The ears or lips a^2 formed by the corners of the dovetail shank are bent down over opposite edges of the body and clinched against the under side of the latter, as most clearly shown in Fig. 8. The loop is thus securely attached to the body of the hook without the use of rivets or other separate fastenings, forming a very simple and cheap construction.

The loop may be held from swiveling on the body of the snap hook by flattening, corrugating or indenting its inner cross bar and the eye of the body, under a drop press.

C represents a flat spring tongue which closes the mouth of the hook. This tongue bears with its free end against the nose of the hook, while its opposite end is confined between the body of the hook and the folded end portion of the shank. The attached end of the spring tongue is flared or widened toward the loop of the snap hook, as shown by dotted lines in Fig. 5, and the clinched ears of the dovetail shank are bent snugly around the converging edges of the tongue. The folded end portion of the shank with its clinched ears thus forms a dovetail seat or socket for the spring tongue which effectually prevents detachment of the latter, without requiring the use of a rivet or other additional fastening.

By cutting the hook blanks as shown, and bending and doubling the same in the manner described, very little scrap is produced, while the hook is reinforced at the bend or bight which receives the greatest strain and no unnecessary metal is employed in any part of the body.

We claim as our invention—

1. In a snap hook, the combination with an attaching loop, of a sheet metal body formed at one end with a hook and at its opposite end with an integral shank portion which is folded around a cross bar of said loop and provided with ears or lips which are bent around the edges of the body and clinched against the latter, substantially as set forth.

2. In a snap hook, the combination with an attaching loop, of a sheet metal body formed at one end with a hook and at its opposite end with an integral shank portion which is folded around a cross bar of said loop and provided with ears or lips which are bent around the edges of the body and clinched against the latter and a spring tongue having a flaring attaching end which is confined between the body of the snap hook and its folded shank portion, substantially as set forth.

Witness our hands this 17th day of January, 1894.

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