E. A. Cooper,

Snap Hook,

No. 83,134, Patented Oct. 20, 1868.

Fig. 2

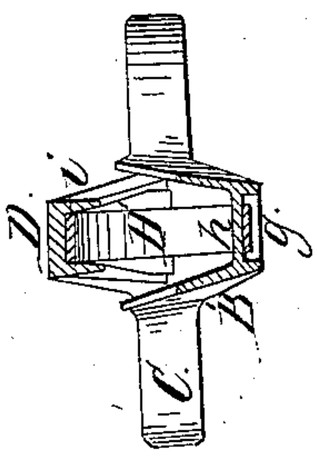


Fig. 3.

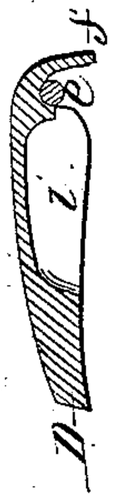


Fig. 1.

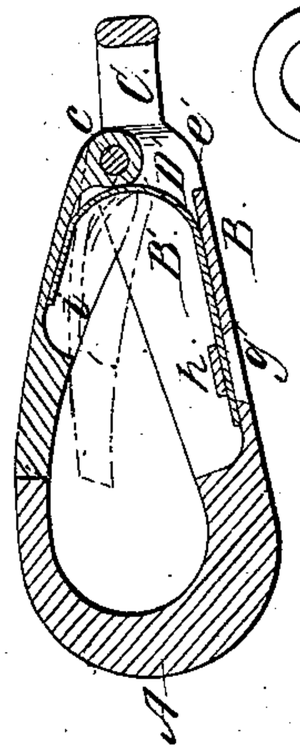
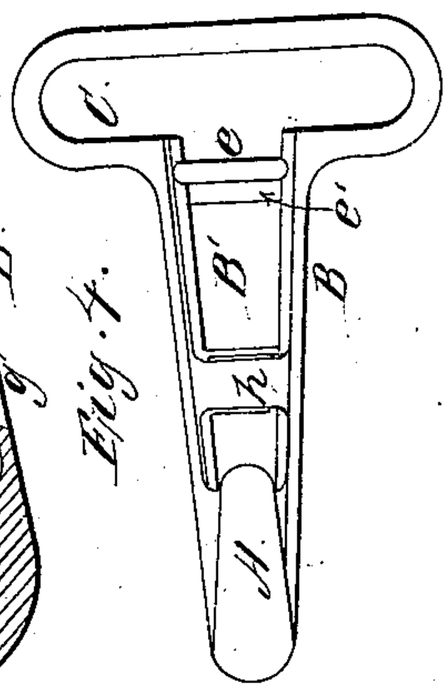


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD A. COOPER, OF BUFFALO, NEW YORK.

IMPROVED SNAP-HOOK.

Specification forming part of Letters Patent No. 83,134, *dated October* 20, 1868.

To all whom it may concern:

Be it known that I, EDWARD A. COOPER, of the city of Buffalo, county of Erie, and State of New York, have invented certain new and useful Improvements in Snap-Hooks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure I is a longitudinal section. Fig. II is a cross-section. Fig. III is a sectional view of tongue before its connection with the hook. Fig. IV is a plan of the hook with the tongue removed,

Like letters refer to like parts in each of the figures.

My invention consists in the special construction and arrangement of a snap-hook, as hereinafter set forth.

A represents the hook; B, the shank thereof, and C the loop by which the hook is connected to the desired part of the harness. D represents the tongue hinged to the shank, and closing the mouth of the hook, the tongue-spring D′ keeping the tongue in place.

The shank B is cast with a longitudinal groove or chamber, B′, for the reception of the spring D′, and to allow the required movement of the tongue to unclose the mouth of the hook. The hinge-pin *e*, to which the tongue is jointed, extends across the groove B′, and is rigidly connected at both ends to the sides of the groove by being cast in the same piece with the shank. The groove is made to cut entirely through the shank opposite this hinge-pin *e*, as shown at *e′*, so that the hook may be molded without the use of cores.

The tongue is cast in the form shown in Fig. III, the eye by which it is connected to the hinge-pin being open, so that it may be applied to said hinge-pin, and the connection formed by bending the end *f* of the tongue around the hinge-pin, as seen in Fig. I. A most cheap, simple, and durable hinging of the tongue to the shank is accomplished in this manner.

An opening, *g*, is made from the groove B′ through the shank, which opening is partially covered by a cross-bar, *h*, cast with the shank, the opening *g* allowing it to be so cast without coring. One end of the semi-elliptic spring D′ is inserted between this cross-bar and the bottom of the groove, and securely fastened by simply setting down said cross-bar.

The inside of the tongue is grooved, as shown at *i*, to receive and protect the other end of the spring D′, and retain the same laterally in position.

It is apparent that one end of the spring might be attached to the tongue instead of the shank by the same means as above described.

The great desideratum in the manufacture of harness-snaps, in addition to strength and durability, is cheapness of construction, which can only be obtained by reducing the amount of labor required to mold and cast the parts and put them together to the minimum.

It is believed the above-described device fully meets the want, both as to strength, durability, and cheapness, as no cores are required in the molding and no rivets in the putting together.

Having thus described my invention, what I claim as my invention, and desire to secure by Letters Patent, is—

The hook A, cast with hinge-pin *e* and cross-bar *h*, in combination with the grooved tongue D and bow-spring *h*, when the parts are arranged and secured together in the manner described.

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Witnesses:

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