No. 615,556. Patented Dec. 6, 1898.

G. M. HUBBARD.

SNAP HOOK.

(Application filed Oct. 18, 1897.)

(No Model.)

Fig. 1

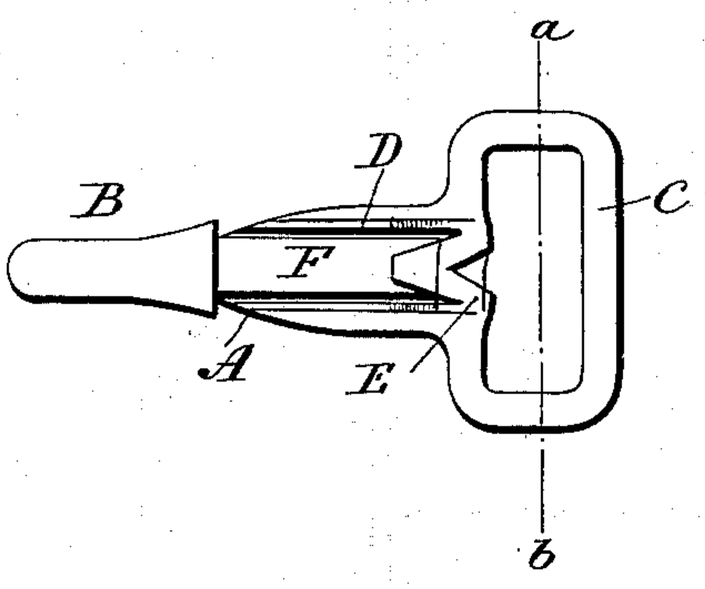


Fig. 2

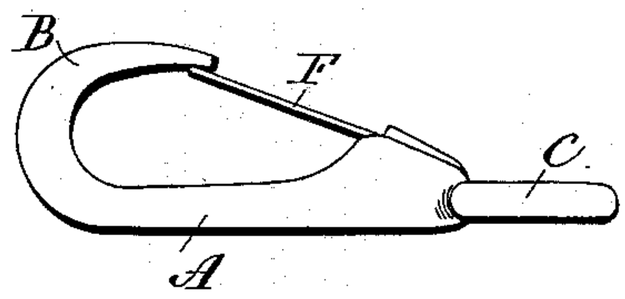


Fig. 3

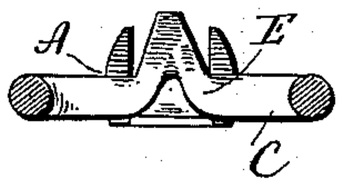
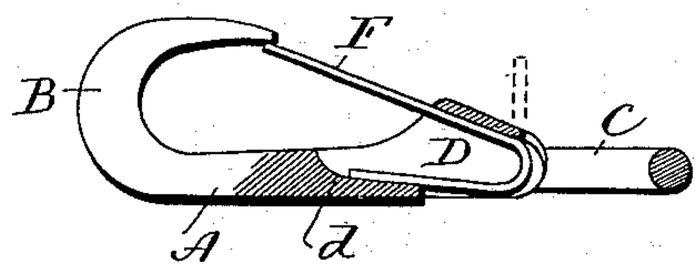


Fig. 4



Witnesses.
J. H. Shumway
Lillian D. Kelsey.

George M. Hubbard.
Inventor.
By Atty's Church & Seymour

UNITED STATES PATENT OFFICE.

GEORGE M. HUBBARD, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE W. & E. T. FITCH COMPANY, OF SAME PLACE.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 615,556, dated December 6, 1898.

Application filed October 18, 1897. Serial No. 655,521. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. HUBBARD, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Snap-Hooks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a top view of a snap-hook constructed in accordance with my invention; Fig. 2, a side view of the same; Fig. 3, a sectional view on line *a b* of Fig. 1; Fig. 4, a side view, partially in section, indicating the manner of forming the hook.

This invention relates to an improvement in snap-hooks of that class in which a sheet-metal U-shaped spring-tongue is employed.

The essential features of snap-hooks of this character are constructions which permit the spring to be readily inserted into its seat and from which when so inserted it is not liable to accidental displacement.

Another and very important feature is to so construct the snap that it may be readily cast with the minimum possibility of imperfect castings and which in rolling or finishing are not liable to breakage.

The object of this invention is to produce a snap-hook embodying these features, and it is an improvement upon the snap-hook shown and described in United States Patent No. 554,489, granted February 11, 1896, to my assignees. The construction shown in that patent necessitates a transverse bridge, beneath which the lower member of the spring-tongue will extend, to form which requires great care in casting; and a further object of the invention is to avoid the necessity of this bridge; and it consists in the construction, as hereinafter described, and particularly recited in the claim.

As herein shown, the body A is formed at one end with a hook B and at the opposite end with a loop C, as usual in snap-hooks. Extending through the body A is a recess or chamber D, open at the top and bottom and extending at the rear into the said loop. The forward end of this chamber is shaped to form a spring-seat *d*, and the rear of the chamber is partially closed by a retaining-finger E, formed integral with the body and loop and extending across the chamber, as shown in Fig. 3, and the central portion of the said finger extending upward and forward over the chamber between the side walls thereof, as shown in Fig. 1. This finger may be cast in a forwardly-projecting position, as shown, or, if preferred, for convenience in casting the finger may extend upward, as shown in Fig. 4. The spring F, which is a strip of sheet metal bent into substantially U shape, is inserted into the recess, so that its short end rests upon the seat *d* and its long upper end projects forward for engagement with the nose of the hook, it being understood that in casting the nose of the hook is distorted or turned to one side and bent into proper position after the spring is inserted into its seat. After the spring is inserted the finger E if cast in an upright position is bent down, so as to bear upon the upper face of the spring, or if cast forward is given a slight rap, if necessary, to seat it upon the top of the spring; but in neither case is it forced downward sufficiently to keep the forward end of the spring out of engagement with the nose of the hook. The finger thus formed acts to prevent the rearward movement of the spring, and also by extending over its upper surface prevents the possibility of the spring being twisted out of engagement with the nose of the hook and thereby displaced.

It will be seen that a snap-hook thus constructed is readily cast and the finger is of sufficient size to allow the perfect running of the metal in molding and withstand the possibility of breaking in tumbling or finishing.

I am aware that snap-hooks have been constructed with the upper edge of their cheek portions bent over the upper member of the spring-tongues. I am also aware that snap-hooks comprising a flat spring have been formed with a finger adapted to be bent down over the rear end of the spring, and therefore do not wish to be understood as claiming such as my invention.

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

A snap-hook composed of a cast-metal body having a nose at one end and a loop at the opposite end, and formed with a chamber at its loop end open at the top and bottom and extending into the said loop, and also formed with an integral retaining-finger which connects the rear walls of the chamber so as to partially close the open end thereof, and which also extends upward and forward over the chamber between its side walls, and a U-shaped sheet-metal tongue in said chamber, the upper member of which extends forward beneath said finger into contact with said nose, its bowed section abutting against the base of the said finger, whereby the tongue is retained in the chamber without transverse bars in or small projections from the upper walls of the chamber, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE M. HUBBARD.

Witnesses:

JOHN B. FITCH,

FREDK. F. BREWSTER.