

(No Model.)

C. G. LUNDBORG.  
SNAP HOOK.

No. 437,380.

Patented Sept. 30, 1890.

Fig. 1.

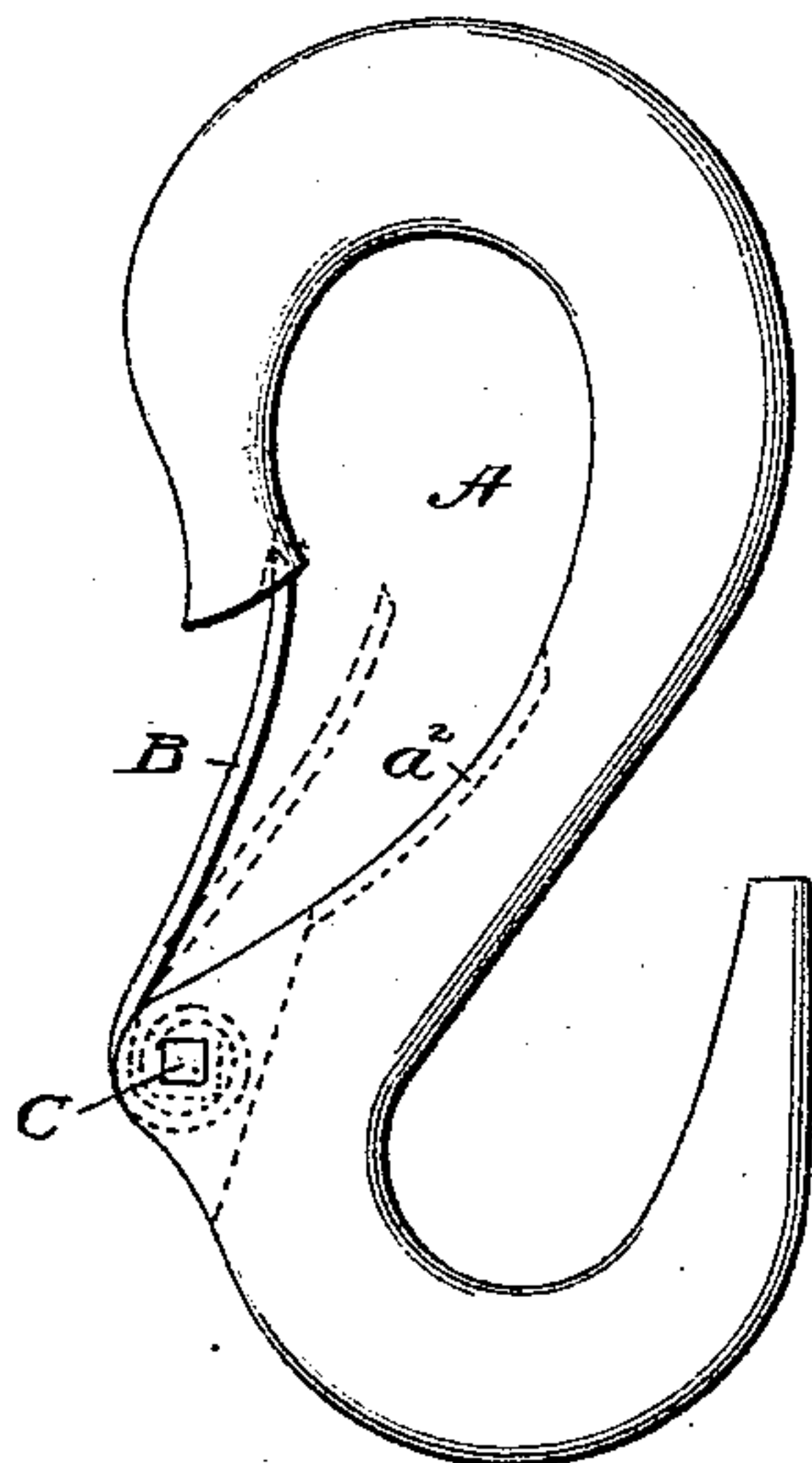


Fig. 2.

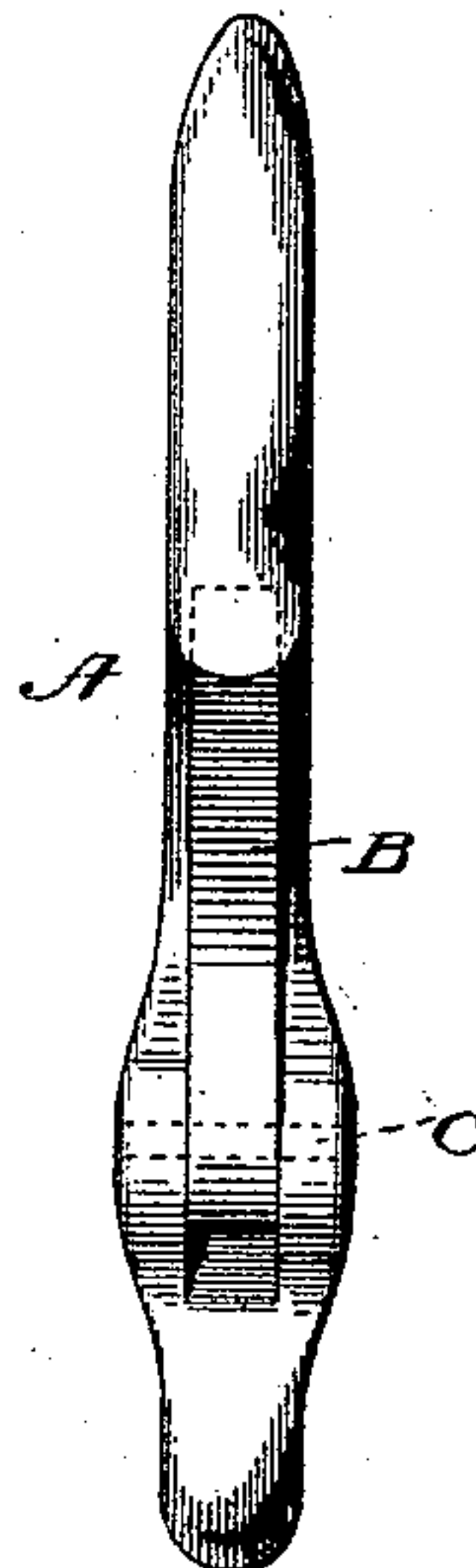
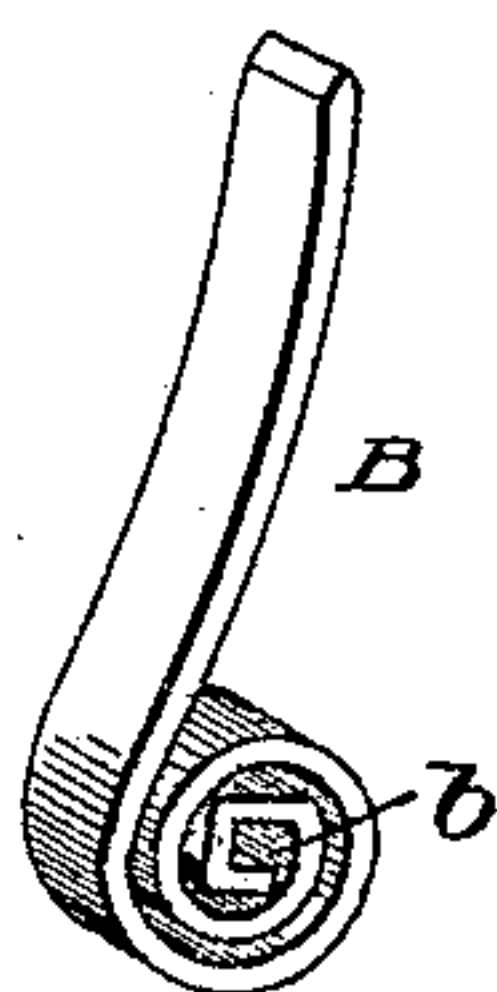


Fig. 3.



Witnesses:

William M. Mortimer.  
A. R. Kennedy.

Inventor:

C. G. Lundborg  
By P. J. Dodge  
Atty.

# UNITED STATES PATENT OFFICE.

CHARLES G. LUNDBORG, OF NEW YORK, N. Y.

## SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 437,380, dated September 30, 1890.

Application filed February 21, 1890. Serial No. 341,358. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES G. LUNDBORG, of New York, in the county of New York and State of New York, have invented certain  
5 Improvements in Snap-Hooks, of which the following is a specification.

The aim of this invention is to provide a simple and inexpensive snap-hook with a  
10 spring-tongue which shall be less liable to break, set, or otherwise become inoperative than those in general use. To this end I combine with the body of the hook a spring  
15 tongue or latch, one end of which rests movably against the inside of the hook, while the opposite end is spirally coiled and secured to a central non-rotating pin or support.

The special advantage of the construction lies in the fact that the slight flexion required is distributed throughout the entire length of  
20 the coil, so that the elasticity and strength of the metal are but slightly taxed in operating the tongue.

My improvement may be embodied in hooks of various forms and for various purposes.

25 In the accompanying drawings, Figure 1 is a side view of a hook constructed in accordance with my invention. Fig. 2 is an edge view of the same. Fig. 3 is a perspective view of the spring-tongue.

30 Referring to the drawings, A represents the body of the hook, and B the spring-tongue, which spans or closes the mouth or opening of the hook. The tongue is made in one piece, of flat spring-steel or equivalent metal,  
35 and bears at one end against the inside of the nose of the hook, while its opposite end is coiled and formed with a square central eye *b*, to receive a non-rotating square pin C, by which the coil is secured in place in a recess in the body of the hook. The pin, seated  
40 at its ends firmly in the sides of the hook, serves the double purpose of keeping the tongue in place and of maintaining the coil under tension so as to hold the free end of  
45 the tongue normally against the nose of the hook.

A moderate pressure serves to force the tongue inward, as shown in dotted lines.

The nose of the hook is preferably recessed

to admit the end of the tongue, as shown, and, 50 if desired, the body may be grooved, as shown in dotted lines at *a*<sup>2</sup>, to admit of the tongue closing therein. The last-named groove will hold and protect the tongue so that it may not be broken or displaced laterally when 55 thrown back.

I am aware that snap-hooks have been provided with pivoted tongues combined with coiled-wire springs to actuate them, and I am also aware that an elastic tongue has been se- 60 cured at one end to the body of a snap-hook.

My invention consists, therefore, not broadly in a coiled spring to actuate a tongue, or in a tongue which is in itself elastic, but consists in combining with the body of the hook 65 a tongue the elastic end of which is of convolute form and fixed rigidly at the extremity, so that it presents several coils or convolutions through which the flexion of the metal is distributed when the hook is opened. Be- 70 ing thus formed, the spring receives but slight flexion at any one point, or, in other words, the flexion is distributed over the entire length of the convolute portion, so that the metal is not strained in such manner as 75 to render it liable to fracture.

What I claim is—

1. In a snap-hook, the hook proper, in combination with the tongue, one end of which is formed with an elastic convolute and at- 80 tached rigidly to the hook.

2. The snap-hook having a recess therein, in combination with the pin of angular section fixed in said recess and the spring-tongue having the convolute end and angular eye 85 closely fitted to the pin, whereby the pin is caused to serve the double purpose of connecting the tongue to the hook and of maintaining the coiled end of the tongue under tension. 90

In testimony whereof I hereunto set my hand this 12th day of February, 1890, in the presence of two attesting witnesses.

CHARLES G. LUNDBORG.

Witnesses:

W. R. KENNEDY,  
F. STANLY ELMORE.