

(No Model.)

W. A. SPRINGER.
SUSPENDER BUCKLE.

No. 473,409.

Patented Apr. 19, 1892.

FIG. I.

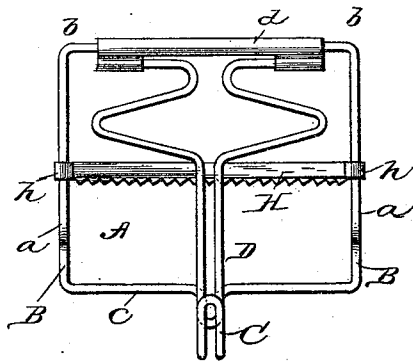


FIG. II.

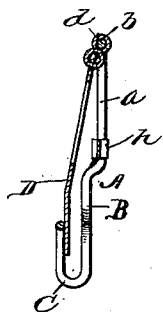
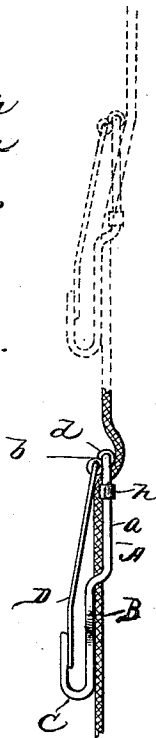


FIG. III.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM A. SPRINGER, OF DES MOINES, IOWA, ASSIGNOR TO THE DIAMOND
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SUSPENDER-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 473,409, dated April 19, 1892.

Application filed July 31, 1890. Serial No. 360,590. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. SPRINGER, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented certain new and useful Improvements in Suspender-Buckles, of which the following is a specification.

My invention relates to a suspender-buckle having a sliding toothed bar; and my invention consists in certain details of construction, which will be hereinafter fully described, and particularly pointed out in the claims.

In order that my invention may be fully understood, I will describe the same with reference to the accompanying drawings, in which—

Figure I represents the buckle in front elevation. Fig. II is a vertical section through a buckle, illustrating the novel feature of the grip; and Fig. III is a view showing the buckle in use, the position of the parts when the grip-bar is disengaged from the webbing being shown in dotted lines.

A represents the frame of the buckle, which is preferably made of a single piece of wire bent to form the parallel side bars *a*, the top bar *b*, and the bottom bar *c*.

Between the side bars and the top bar of the frame is a simple right-angle bend at each corner; but between the side bars and the bottom bar are formed the offsets or double elbow-bends B. The object and effect of thus connecting the sides with the top and bottom is to make the side bars and top bar lie in one plane and the bottom bar in front of said plane, for the reason hereinafter stated.

The buckle may be provided with a cast-off hook C and a spring-tongue D, forming together the snap-hook for holding the cast-off ring. The hook is preferably formed integral with the frame by bending the wire in the proper shape, and the spring-tongue is connected by means of a sleeve *d*, of sheet metal, surrounding a part or all of the top of the frame, and thereby constituting a hinge. In the construction last mentioned the spring-tongue is held in proper relation to the hook and rendered resilient by means of the toothed bar when in its uppermost position, as will hereinafter appear.

H represents the sliding grip-bar, which may

be of any suitable and well-known form and provided with bearings *h*, formed around the side bars *a* of the frame, whereby it is free to slide from the elbow or offset B to the upper part of the frame, where it approaches so closely to the top *b*, which confines the web and carries the tongue, that the webbing will be securely gripped between the sliding bar and top bar and the tongue will be forced outward against the upper end of the hook and retained in its operative normal condition. By the term "front" I mean that face of the buckle which is on the outside in use, and by the term "back" I mean that face of the buckle which is presented next to the person in use.

The mode of operation and the great advantages of my invention will be clearly understood upon reference to Figs. II and III. The webbing is confined in front by the top bar *b* and bottom bar *c* of the frame, behind both of which it is passed, and at the back by the toothed bar H. It will therefore be seen that when the bar H is in the position shown it is so far removed from the bottom bar of the frame as to permit the webbing being passed through with comparative ease in an almost straight line without being woven back and forth between the respective parts of the grip, as is the case with those buckles heretofore used for the purpose. It will further be seen that with my construction it is only necessary to take hold of the lower end of the webbing and pull it downward relatively to the buckle in order to release it, and then by holding the grip-bar the webbing can readily be moved up and down with very little abrasion or wear of the material. On the other hand, in order to grip the material it is simply necessary to draw it upward, when the cross-bar will move upward and gradually tighten by virtue of the inclined sides until it securely binds the webbing against the top bar and forces the tongue out into place. In this position it is retained by the tension it receives when in use.

I do not herein claim the combination, with the buckle having the grip and cast-off hook, of the spring-tongue extending downwardly from the top bar and engaging the cast-off hook, inasmuch as this forms the subject-mat-

ter of a co-pending application filed by me on February 10, 1891, Serial No. 380,934.

I claim as new and of my invention—

1. A suspender-buckle comprising a top
5 cross-bar and side bars in substantially the same plane, a lower cross-bar in front of said plane, carrying the hook for the cast-off, a sliding bar on the frame, and a spring-tongue carried by the frame and engaged with the hook,
10 substantially as set forth.

2. In a buckle, the combination of the top

bar, the bottom bar, the parallel sides connected to the top bar, the offsets connecting the parallelsides with the bottom bar, the sliding grip-bar on the parallel sides, the cast-off 15 hook, and the spring-tongue engaging said hook, substantially as and for the purpose set forth.

WILLIAM A. SPRINGER.

Witnesses:

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