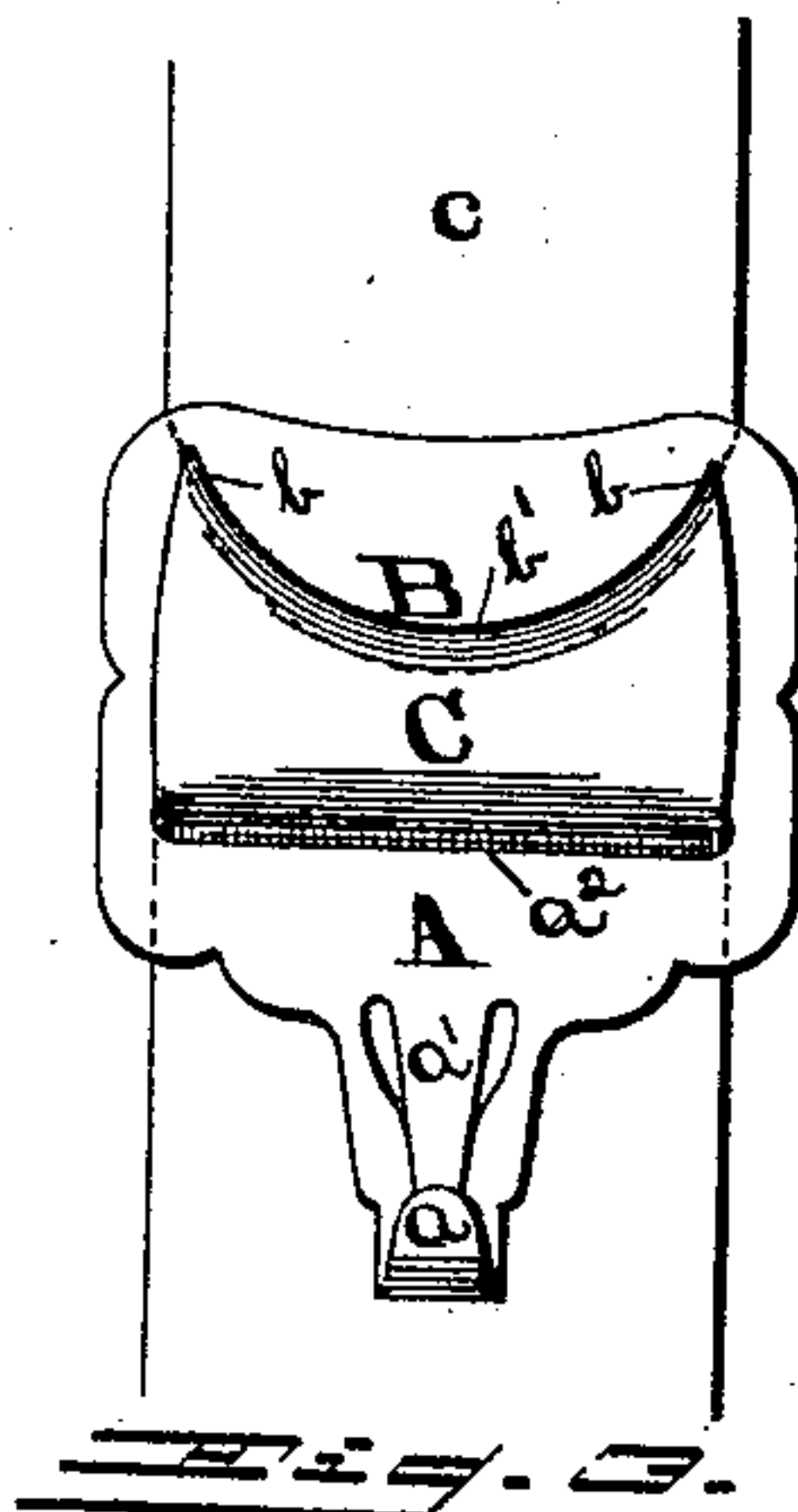
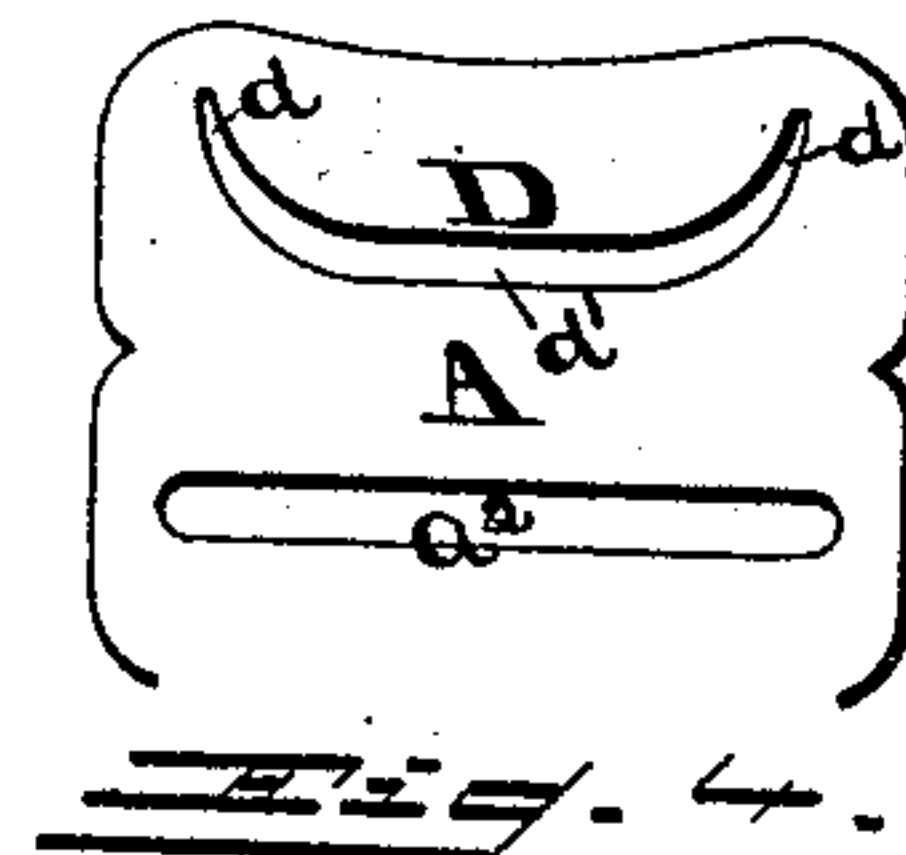
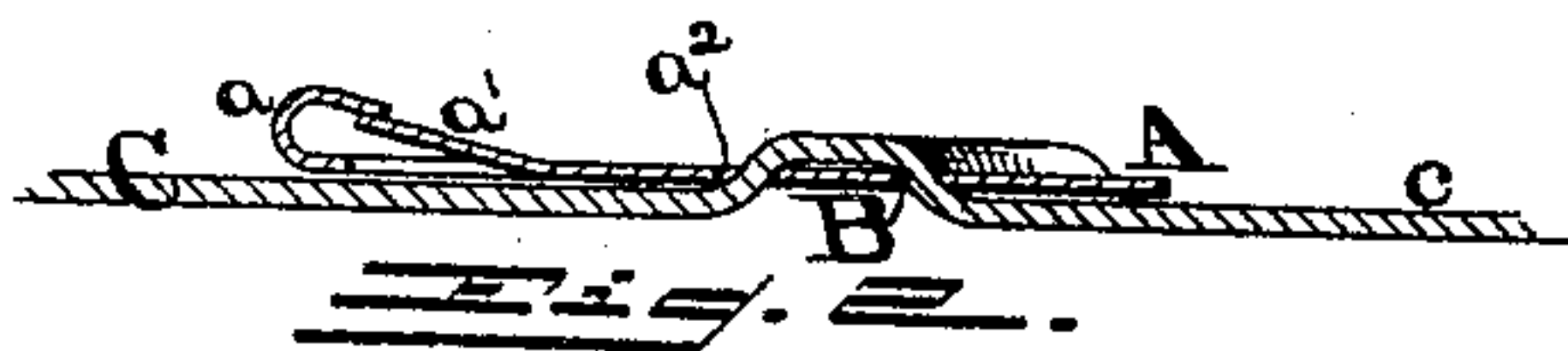
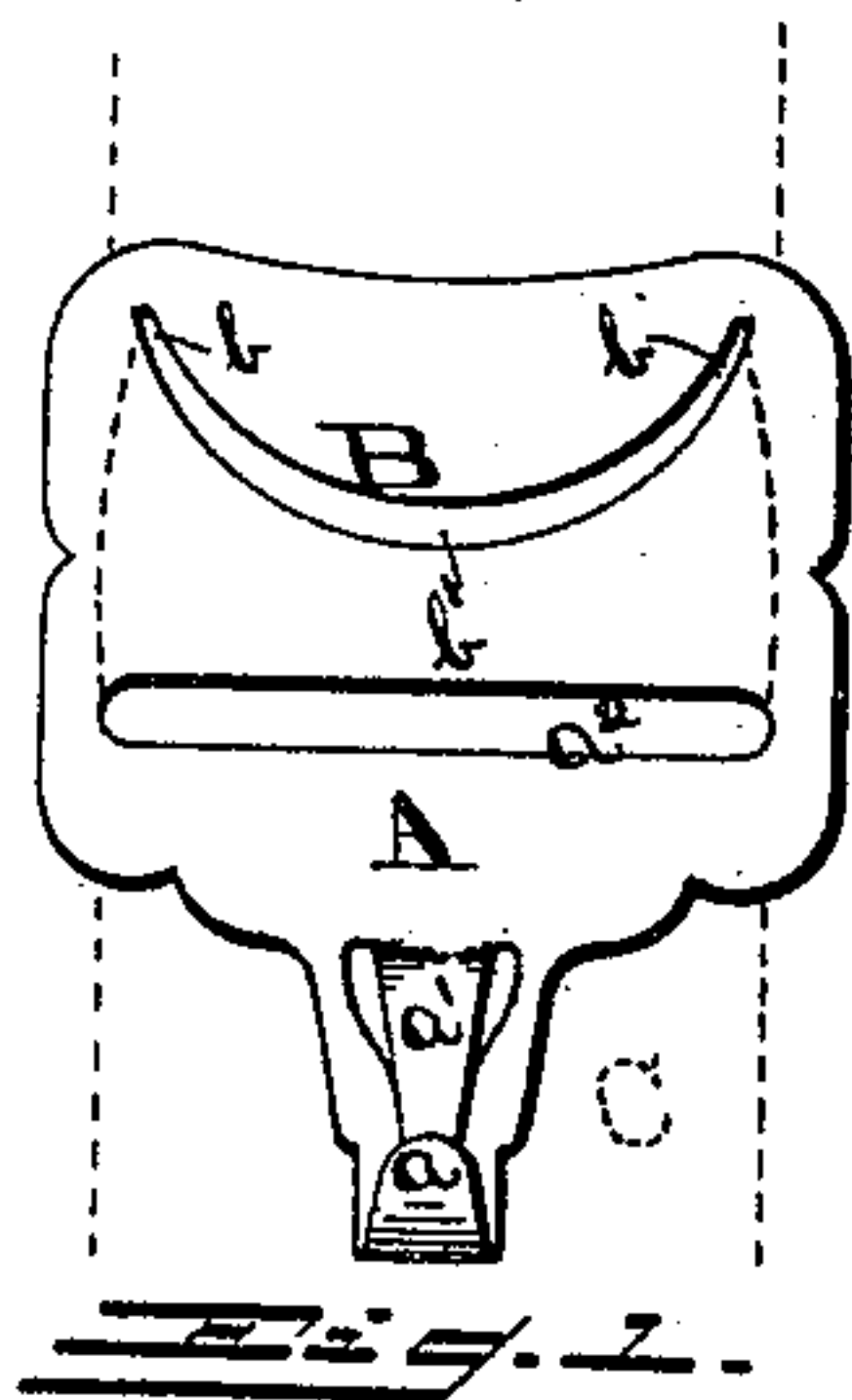


(No Model.)

W. E. T. MERRILL.  
SUSPENDER BUCKLE.

No. 437,498.

Patented Sept. 30, 1890.



WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM E. T. MERRILL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY  
DIRECT AND MESNE ASSIGNMENTS, TO JOHN W. BRUFF, MAURICE LOEB,  
JACOB M. WALDAUER, AND DAVID BACHRACH, ALL OF SAME PLACE.

## SUSPENDER-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 437,498, dated September 30, 1890.

Application filed April 16, 1890. Serial No. 348,179. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM E. T. MERRILL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Suspender-Buckles, of which the following is a specification.

My invention has relation to buckles for suspenders, belts, and other articles of wearing-apparel employing such a device, and has for its object the provision of a buckle for the aforesaid purpose, in which are combined novelty, simplicity, and efficiency.

My invention, broadly speaking, consists in the formation of a slot with its ends upturned or higher than its center or main portion and diminishing in width or tapering from said center or main portion to said ends in a flat metallic plate forming the buckle-frame, the particular shape of such slot being, preferably, crescent-like, the result being that after a piece of webbing or other textile material has been passed through said slot at right angles with the face of the plate or straight through the same, and such piece then drawn taut, or approximately so, into a plane parallel with said face, it will at its edges be crowded into the narrow portion of the slot by such upward draft, and the walls of such narrow portion will in effect bite or grip the webbing and prevent its slipping through the slot as long as it is maintained in its taut condition, at the same time not in the slightest degree injuring said webbing. The plate or frame, of course, is provided with the usual straight transverse slot for the passage of the webbing after being secured, also a snap or other catch for the suspender-loop.

The details of my invention will be more particularly described hereinafter, and will be clearly understood upon referring to the accompanying drawings, wherein—

Figure 1 is a face view of the buckle complete, the webbing being indicated by dotted lines. Fig. 2 is a vertical longitudinal section of the above with the webbing showing in full lines; and Fig. 3 is a face view, like unto Fig. 1, with the webbing, however, illustrated in full lines. Fig. 4 is a face view of a portion

of a buckle frame or plate provided with a modified form of slot.

A represents a flat metallic plate, which may be of any design in configuration, having its lower end curled up, as at *a*, and contiguous thereto the tongue *a'*, which curled end and tongue form conjointly the usual form of snap-hook. It is quite obvious, however, that any other form of catch or retainer may be used to the same advantage in lieu of the one illustrated for purposes other than in connection with suspenders, in which case the webbing would be secured permanently at one end to the plate.

*a*<sup>2</sup> represents the usual slot for the passage of the webbing after being secured in the plate or frame, which slot is of usual form and purpose and need not be particularly described.

B represents the curved crescent-shaped slot formed in the upper part of the plate A and having its ends *b* extending laterally and upward, so that they are considerably higher than its central portion *b'*. The walls of said slot lie in the same plane and are continuous—that is, without sharp turns or angles—and gradually approach each other, so that the slot diminishes in width or tapers from said central portion to said ends, the effect being that when the webbing C is placed in the position shown in the drawings and draft is exerted on the end *c* the edges of said webbing will be crowded or jammed into the narrow or tapered ends of slot B and wedged therein to such extent that slipping thereof is an impossibility, no matter how much force be exerted. In fact, the harder the pull on the end *c* the farther in the narrow ends of the slot will the webbing be forced, and consequently the more tightly gripped. Although the slot is preferably as long as the web is wide or longer, yet the ends lie closer together than the width of the web. They are also closer together than the ends of the slot *a*<sup>2</sup> when the plate is provided with the two slots, so that in addition to the pinching of the web within the tapering ends of the slot the contraction of the web or the forcing of its edges toward each other also assists in holding the web from slipping through the slot when the draft is applied to it. At the same time the adjustment of the



buckle to any position on the webbing is but a moment's work, involving nothing more than the mere passage of the webbing straight through the curved slot, instead of at an angle, until the desired position is attained, whereupon the gripping or biting action is produced in the manner above mentioned.

While the exact form of the tapered slot, as shown in Figs. 1, 2, and 3 of the drawings, is preferred, yet this form is by no means essential. In fact, the central portion of said slot takes no part in the biting action. Consequently such central portion may just as well be straight, or nearly so. The essential feature is, however, the tapered upturned ends, so that the upward draft on the webbing will operate to force the edges of the latter in said tapered ends of the slot.

In Fig. 4 I have shown a slot possessing the modifications in the form of the slot suggested, which slot is lettered D and has the upturned ends tapering, as at  $d$ , and the straight portion  $d'$  of uniform width. The form of the complete slot is capable of further modification; but in all cases the upward tendency of the tapered ends of the slot must be sufficient to cause the webbing to be forced into such ends when draft is exerted on the webbing, in order to attain a perfect and the desired result.

Inasmuch as the slot  $a^2$  performs no part in the gripping operation, the same plate, if desired, may be merely formed with the tapered end slot and a retainer for the suspender-loop or belt-webbing. Furthermore, as the particular character of the part in which said tapered end slot is formed is immaterial to the

attainment of the end for which my invention is designed, it may be found preferable to take a piece of metal of suitable stiffness and bend it into such shape as to leave an opening of the form hereinbefore described and turning up the ends to form a hook, such ends being secured together by soldering or otherwise, thus forming a skeleton frame. Such a frame can be formed to advantage of wire, in which case the edges of the slot will be round, as may be the edges of the slot B, if desired.

What I claim as my invention is as follows:

1. A buckle provided with a fastener or retainer at one end and having a substantially crescent-shaped transverse slot at the opposite end, the walls of which are in the same plane and continuous and gradually approach each other, so that the ends of the slot taper or diminish in width, substantially as described.

2. A buckle provided with a fastener or retainer at one end and having a substantially crescent-shaped transverse slot at the opposite end, the walls of which are in the same plane and continuous and gradually approach each other, so that the ends of the slot taper or diminish in width, and a straight transverse slot intermediate the fastener and the crescent-shaped slot for the passage of the webbing, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of April, A. D. 1890.

WILLIAM E. T. MERRILL.

Witnesses:

WM. H. POWELL,  
R. DALE SPARHAWK.