(No Model.)

E. MARX.

BUCKLE.

No. 435,880. Patented Sept. 2, 1890.

Fig. 1.

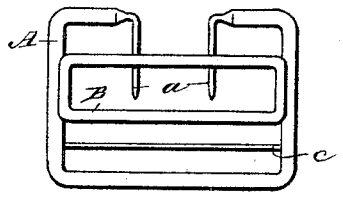


Fig. 2.

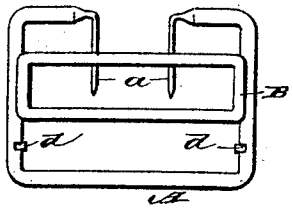


Fig. 3.

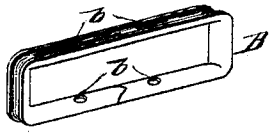


Fig. 4.



Fig. 5.



Fig. 6.

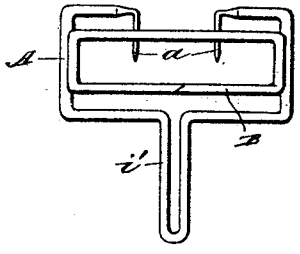


Fig. 7.

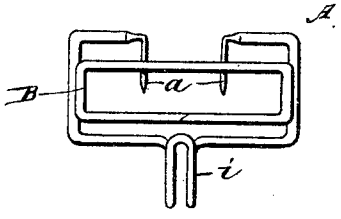
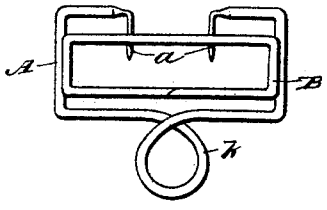


Fig. 8.



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UNITED STATES PATENT OFFICE.

ERNEST MARX, OF BROOKLYN, NEW YORK.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 435,880, dated September 2, 1890.

Application filed April 15, 1890. Serial No. 347,996. (No model.)

To all whom it may concern:

Be it known that I, ERNEST MARX, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Buckles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings forming a part of this specification, and to the letters of reference marked thereon.

My present invention relates to improvements in that class of buckles employing a frame having points formed integral with or rigidly fastened thereto in the plane of the frame, and a movable guard or frame sliding on the main frame and serving to force the fabric into engagement with the points or cause the release of the same, as the case may be, such, for instance, as described in my prior patent, No. 356,772, dated February 1, 1887.

In the practical manufacture of buckles such as above described the necessity of compensating for or overcoming any spring in the metal has become apparent, as well as the great desirability of giving the frame the greatest possible strength; and therefore it is the object of my invention to produce a buckle at the lowest cost and least possible number of parts, which shall combine the maximum strength with the greatest certainty and ease of operation, all as will be hereinafter described, and pointed out particularly in the claims at the end of this specification.

Referring to the accompanying drawings, Figure 1 is a side elevation of a buckle having a cross-bar for limiting the movement of the sliding frame. Fig. 2 is a similar view of a buckle without the cross-bar, but with inward extensions of the frame for limiting the movement of the sliding frame. Fig. 3 is a perspective view of the sliding frame. Fig. 4 is an edge view of the same. Fig. 5 is a sectional view showing the method of attachment, and Figs. 6, 7, and 8 show modifications of the buckle-frame.

Like letters of reference in all the figures denote the same parts.

A indicates the frame of the buckle, which I form preferably of a single piece of metal or wire bent into shape around a central or sliding frame B, the ends *a* being turned in parallel with each other in the plane of the buckle-frame and in position to enter apertures or perforations *b* in the frame B. The parts are so proportioned as that when the rectangular sliding frame is at one extreme of its movement the points pass way across the same, but when at the other extreme of its movement they are entirely withdrawn from the central opening, the extreme points being just within and protected by the perforations in the sliding frame, so as to firmly hold the engaging web or release the same, said fabric or strap being passed through the sliding frame and the portion to which the buckle is permanently attached being passed around the horizontal bar of the buckle-frame, as shown in Figs. 1 and 5, or connected to the ring or hook, as shown in Figs. 7 and 8.

In Fig. 1 the sliding frame is limited in its outward movement by the cross-bar *c*, which is secured in apertures in the buckle-frame at the proper point, as in my prior patent; but in the other forms of buckle, instead of perforating and weakening the frame for the reception of the ends of the cross-bar, the buckle-frame forms the stops, little inwardly-extending projections *d* being struck up on the inner surface of the side pieces of the frame, against which the sliding frame abuts and which, as they do not remove any material and are so very small, do not weaken the structure in the least; or else, as shown in Figs. 6, 7, and 8, the central portion of the frame is formed into a hook *i* or a ring *k*, for the attachment of the end of the fabric, in which instances the inwardly-extending portions of the buckle-frame constitute the stops for the sliding frame, which then moves clear across the rectangular portion of the buckle-frame. The said rectangular sliding frame B is preferably formed of a section of concavo-convex wire bent into shape, with the concavity outward, forming channels for the side pieces of the buckle-frame; but it is obvious that it may be struck up in any well-known manner.

As before mentioned, the buckle-frame is bent into shape around the rectangular frame; but it is found that if the ends of the sliding frame are united, as has heretofore been usual, thereby forming an inflexible and rigid frame, before the buckle-frame is bent around the

same the side pieces of the buckle-frame will spring back or away from the sliding frame, leaving the latter loose and of course increasing the danger of the accidental escape of the engaging strap, as well as forming a loose and undesirable buckle, which defect I overcome by forming the abutting ends of the sliding frame V-shaped, thereby preventing any independent lateral movement and leaving said ends otherwise unconfined, by which construction it is found that there is sufficient elasticity in the sliding frame to allow for the spring of the buckle-frame, causing the frame to fit tightly and work smoothly at all times, although requiring a positive movement to release the strap engaged by the points.

In Fig. 6 the tongue *i'* is shown straight out or in the plane of the buckle-frame, and in Fig. 7 the same is shown bent into hook form, while in Fig. 8 the wire or metal of the frame is simply crossed and formed into a ring or loop.

The buckle as thus constructed, it will be seen, consists of but two parts, easily fitted together, and capable of being produced with great rapidity by proper special machinery, no hand-work being necessary to fit or join any delicate or complicated parts.

Having thus described my invention, what I claim as new is—

1. In a buckle such as herein described, the combination, with the buckle-frame formed of a single piece of metal having the points formed thereon, of the sliding frame formed of a single piece, having the concavities embracing the side pieces of the buckle-frame and having its ends disconnected, whereby it is capable of a limited spring, substantially as and for the purpose specified.

2. In a buckle such as herein described, the combination, with the buckle-frame formed of a single piece of metal bent into shape with its ends turned inward and forming engaging points, of the sliding frame around which the buckle-frame is bent, formed of a single piece, with the ends cut V shape and disconnected, substantially as described.

ERNEST MARX.

Witnesses:
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CHAS. SCHOUFARBER.