June 13, 1933. F. A. SCHAEFER 1,913,413

BUCKLE

Filed April 9, 1929

FIG. 1.

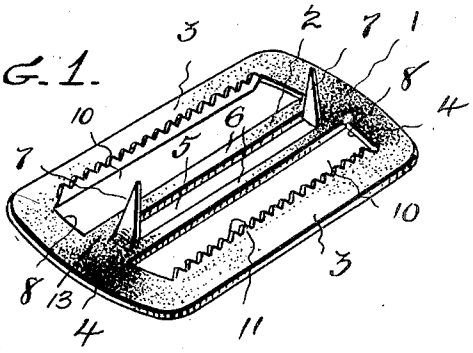


FIG. 2.

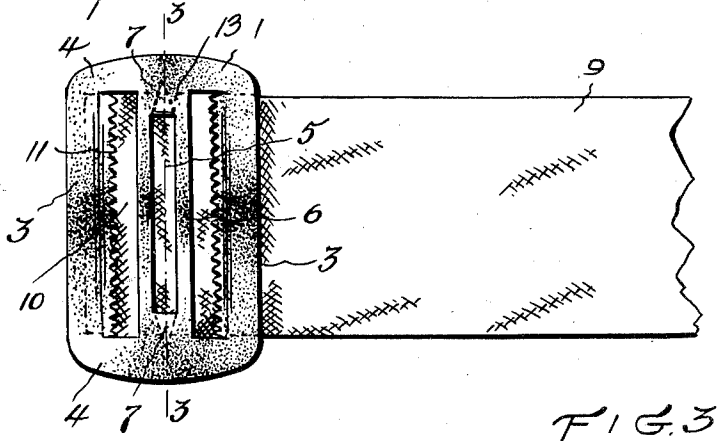


FIG. 3.

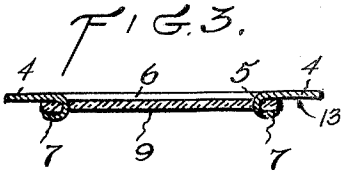


FIG. 4.

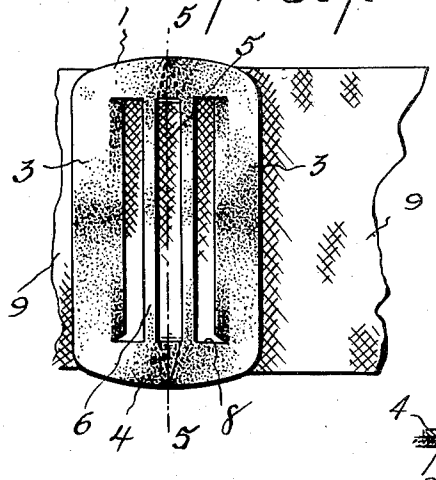


FIG. 5.

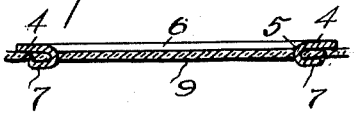
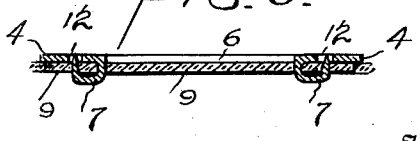


FIG. 6.



Inventor

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Patented June 13, 1933 1,913,413

UNITED STATES PATENT OFFICE

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BUCKLE

Application filed April 9, 1929. Serial No. 353,745.

My invention relates to one piece buckles and more particularly to those having integral prongs for attachment to a fabric or other material.

I am aware that the use of prongs on buckles is not novel. My invention consists in cutting two prongs transversely out of the middle of the blank and in positioning and adapting these prongs to overcome the objections to the old four prong type of buckle.

The use of prongs on buckles obviates the necessity of riveting or sewing them on garments, and is specially adapted for use in the knickers trade.

In my invention I am not limited by lack of metal in the shape or size of the prongs, or in having a suitable backing for their points in the crimping. The danger of the buckle pulling off is overcome since the prongs can be made longer. Moreover any strain on the buckle when worn on a garment being longitudinal cannot tend to straighten the transverse prongs and is distributed along the entire length of the strip of fabric clinched. The two points bearing snugly against the underside of the buckle cannot work free and stick the wearer. The prongs are positioned so that in crimping outwards they cannot interfere with each other.

Other advantages of my invention are:

That the buckle when fastened to a garment closely resembles a sewed on buckle, the prongs being concealed. Moreover they can be crimped to lie almost flat against the underside of the buckle. A simple punch or a suitable plate and hammer is all that is required to accomplish this.

In the accompanying drawing:

Fig. 1 is a perspective view showing the preferred form of buckle.

Fig. 2 is a top plan view showing the buckle fastened to the end of a strap or belt.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a top plan view of an alternative form.

Fig. 5 is a sectional view taken on line 5—5 of Fig. 4.

Fig. 6 is a view similar to Fig. 3 of a modified form. Irrespective of the relative dimensions, the distance from end to end of the buckle is its length, and from side to side is its width. Though in the drawing the buckle is shown fastened to a strap, in common use, it would be fastened to a garment.

In Fig. 1 the preferred form of buckle 2 is shown formed out of a single blank with the closed frame 1 consisting of the ends 3 and the sides 4. From the inner edge of the sides extend the two central transverse bars 6 between the two end slots 10, and the center slot 5. According to another nomenclature 6 can be called a single bar cut away between its edges to form the two integral prongs 7. The two sharp-pointed prongs 7 formed of metal from the center slot being cut to point inward and to parallel the sides of the transverse bar or bars and bent at the bases, adjacent the inner edges of the sides so as to project perpendicularly downward. In Figs. 2 and 3 this buckle is shown fastened to the strap 9 the prongs being crimped outwardly, so that their bodies and points rest snugly underneath the sides.

In Figs. 1 to 3 the sides on which the prongs are based are widened opposite the center slot by extending them inward at 13, thus shortening by a corresponding amount the center slot. This extension of the inner edges of the sides from which the prongs project downwardly removes them sufficiently away from the outer edge of the buckle to make it impossible for the points to project beyond the outer edge of the sides when the prongs are flattened. This positioning of the prongs also insures sufficient metal for the points to take against at a safe distance from the outer edge, as shown in Fig. 3. Moreover, this extension of the inner edge of the sides enables this buckle to be used with narrow sides. The inner portions of the ends are shown bent downward and serrated on their edges 11.

The entire length of the prongs is forced through the material until the buckle lies close against it. Each prong is then bent outwardly through another 90 degrees until they lie substantially parallel to and underneath the buckle, each prong clinching a

transverse strip of the material of the same size as the prong, firmly underneath the buckle.

A foot press fitted with a suitable punch and die is commonly used to automatically fasten the pronged buckle permanently to the garment or other article, by clinching the prong, after the buckle has been placed at the desired position on the garment. The free end of the strap can then be fastened in the adjusted detachable position on the buckle by passing the strap end up through one end slot, over the transverse bar or bars, and down through the other end slot.

Figs. 4 and 5, show an alternative form, in which the central slot 5 is the same length as the outer slots, extending to the inner edges 8 of the sides 4 to which inner edge the two prongs 7 are based. The strap 9 is pierced twice by the prongs, first downwardly when the buckle is placed in position on the strap and a second time upwardly on bending the prongs outwardly and clinching the points against the under surface of the sides of the buckle.

In Figs. 5 and 6 the buckle is shown fastened to a garment. The prong piercing the fabric twice; first, downwardly after the garment is suitably placed under the buckle, and then upwardly when the prongs are crimped outwardly. The strain on the prongs is transverse and is distributed along the entire length of the fabric held under the prong. The crimping is preferably done on a foot press though a suitable plate and hammer suffices.

In Fig. 6, small holes at 12 are punched in suitable places on the side bars to receive and hold the points of the prongs on clinching.

If preferred the buckle may be simply indented at this point.

I claim as my invention and desire to be protected by Letters Patent:

1. A buckle formed from a single blank, having sides and ends forming a closed frame, and at least one transverse bar parallel thereto connecting the sides and separated by slots from the ends, and provided with two prongs of substantial length, cut adjacent and parallel to the transverse bar and bent downwards substantially perpendicularly and shaped and adapted to be entirely forced through a piece of fabric, when placed in position thereon, and then to be bent through a further angle, until the body of the prongs lie substantially parallel to the frame of the buckle clinching against its under surface strips of fabric extending from the base of the prongs to their points, these points piercing the fabric a second time and bearing against and concealed beneath the under surface of the buckle at a substantial distance from the base of the prongs, whereby the buckle is permanently fastened to the fabric so that any longitudinal strain on the buckle is distributed along the entire length of the strip.

2. A buckle formed out of a single blank having a closed frame consisting of two sides and two ends and two transverse bars forming two end slots and one center slot, and provided with two prongs cut transversely from the metal of the center slot, projecting downwardly from adjacent the inner edge of the sides opposite the center slot, and positioned and adapted to be further bent upwardly and outwardly of the buckle frame until the points of the prongs take against the under surface of the sides of the buckle, so that a strap or garment on being suitably placed to be pierced downwardly by the prongs is on clinching the prongs upwardly pierced by the points and permanently held to the buckle.

3. A buckle formed out of a single blank having a frame consisting of two sides and two ends and two transverse bars forming two end slots and one center slot, with two prongs cut transversely from the metal of the center slot based on and projecting from an extension inward of the sides opposite the center slot and positioned and adapted to be further bent transversely and outwardly to overlap such extension.

4. A buckle having sides, ends and a transverse bar separated by slots from the ends and connecting said sides and provided with integral prongs cut from between the edges of the transverse bar and turned downwardly at points adjacent to said sides and adapted to be driven through material to which the buckle is applied and turned up laterally beneath said sides, thereby to fasten the buckle to an article and prevent vertical and lateral movement of the buckle while concealing the points of the prongs.

5. A buckle formed from a single blank having a frame of two ends and two sides and a transverse bar dividing the interior of the buckle into a plurality of slots and two sharp-pointed prongs of substantial length cut from the interior of the blank parallel to the ends of the buckle and projecting downward substantially perpendicular to the frame of the buckle, and adapted, after penetrating a garment throughout the entire length of the prongs, to be bent outwardly, and upwardly so that the point of each prong is harbored underneath opposed sides of the buckle, thereby clinching a substantial transverse strip of the garment and thus fastening the buckle permanently thereto, and having means for holding the loose end of a strap passed through the slots, in adjustable, detachable position thereon.

6. A buckle having a frame consisting of sides and ends and at least one transverse bar, separated by slots from the ends, and provided with two integral transverse prongs

of substantial length cut parallel to and adjacent the transverse bar and bent at their bases laterally downwards approximately 90 degrees, and adapted on being forced upward laterally to flatten underneath the buckle and to clinch a strip of fabric lying under and adjacent the transverse bar, thereby fastening the buckle permanently to said fabric.

7. A single-piece buckle having sides and ends and two transverse bars forming two end slots and one center slot, with two sharp-pointed prongs cut from the metal of the center slot, parallel and adjacent to the two transverse bars and based on the inner edges of the sides of the buckle, and bent downward therefrom and adapted to be further bent outwardly away from the center slot to lie under the sides of the buckle opposite the center slot.

8. A one-piece buckle having sides and ends and a transverse bar extending from side to side dividing the interior of the buckle into two slots, and two oppositely disposed sharp-pointed integral transverse prongs of substantial length cut parallel to and adjacent the transverse bar, each prong bent laterally at its base downwards at an angle of approximately 90 degrees and shaped and adapted to penetrate through a piece of fabric until the fabric lies up against the under side of the buckle and then to be further bent laterally at its base away from that part of the blank from which it was cut until each prong is flattened underneath the buckle and clinches a transverse strip of fabric against the under side of the buckle whereby the buckle is held in permanent, adjusted position on the fabric.

9. A one piece buckle with a closed frame formed of two ends and two sides, and having at least one transverse bar, forming a plurality of slots, and at least one transverse integral sharp pointed prong of substantial length cut parallel to the transverse bar and bent in such manner at its base laterally until perpendicular to the plane of the buckle, said prong being first forced through a piece of material, then bent laterally and upwardly to pass through the material a second time into engagement of its point with the underside of the buckle, whereby the buckle is anchored permanently in set position on the material.

10. A method of fastening a buckle, having two sharp pointed transverse integral prongs projecting perpendicularly therefrom permanently to the body of a garment, consisting in first placing the buckle in the desired position on the garment, then forcing the entire length of the prongs through the garment until the buckle is in close contact therewith, then bending the prongs at their bases laterally upwards until the prongs are flattened out underneath the garment and two transverse strips of the garment of the approximate size of the prongs are clinched between the under side of the buckle and the prongs, and finally upsetting upwards the points of the prongs, until they pass through the garment a second time, and rest securely housed under the buckle.

In testimony whereof I affix my signature.

FERDINAND A. SCHAEFER.