July 3, 1951 W. GADOMSKI 2,559,293

FABRIC CLASP CONSTRUCTION

Filed April 28, 1950

Fig. 1.

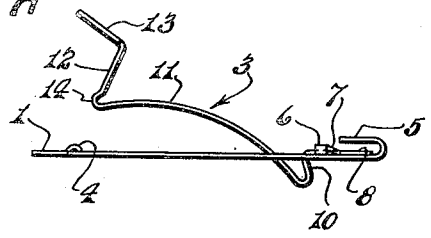


Fig. 2.

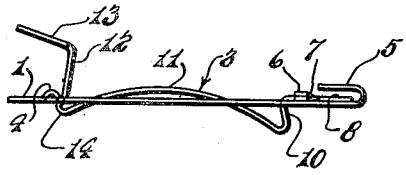


Fig. 3.

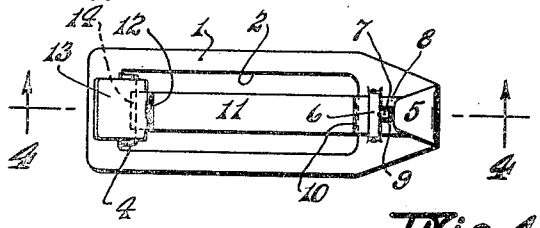


Fig. 4.

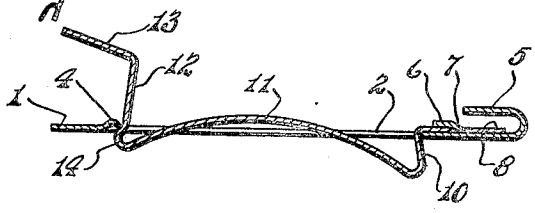
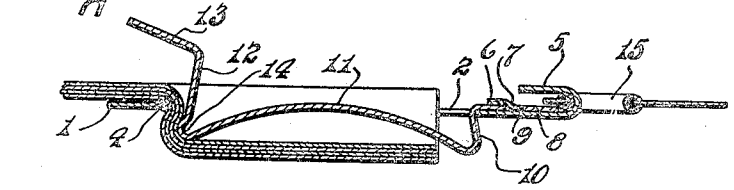


Fig. 5.



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FABRIC CLASP CONSTRUCTION

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Application April 28, 1950, Serial No. 158,685

1 Claim. (Cl. 24—259)

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This invention relates to an improved clasp fastener construction and has for a general object to provide a clasp for engaging and holding together several thicknesses of fabric as in an infant's diaper clasp.

Another object is to provide such a clasp with means to anchor the same to an adjacent piece of clothing.

Another object of the invention is to provide a clasp construction of the class described which is easily manipulated and is of sturdy and durable construction.

A further object is to provide a fabric clasp which tends to increase the security of its grasp with relatively greater thicknesses of fabric.

These and other objects and advantages of the invention will be apparent from the following description of the new fastener which is illustrated in the accompanying drawings, in which:

Fig. 1 is a side elevation of the new clasp construction in open position;

Fig. 2 is a similar view with the clasp in closed position;

Fig. 3 is a top plan of the clasp in closed position;

Fig. 4 is a longitudinal section on an enlarged scale taken on line 4—4 of Fig. 3; and

Fig. 5 is a similar view with several thicknesses of fabric secured in the clasp.

As shown by Figs. 1–4, the new clasp comprises two elements, a frame plate 1 having an elongated opening 2 therein, and a clasp tongue member 3 attached at one end thereto. A lip 4 protrudes inwardly of the opening 2 at the foremost end edge thereof. The rearmost end of the frame plate 1 is tapered beyond the opening 2 to provide a rounded tip 5 which is rebent to overlie the plate.

Both the plate and the clasp member are made preferably of tempered spring steel. When utilized for holding fabrics of the type made into infant's diapers it has been found desirable to have the metal limited in thickness to approximately 0.014 or 0.015 inch. Clasping elements substantially thinner than these dimensions have been found lacking in resiliency, while those of greater dimension may lack flexibility.

A narrow transverse strap 6 is upset in the tapered portion of the plate 1 adjacent the rearmost edge of the opening 2. The strap has an offset integral tab 7 remote from the opening 2 the free end of tab 7 being angled downwardly toward the plate to provide a retainer tab for the tongue member 3.

The tongue 3 comprises essentially an arched

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leaf spring which is anchored to the plate 1 at one end and which extends longitudinally through the elongated opening 2 in the frame and is adapted to be passed back and forth, under the influence of appropriate finger pressure, through the plane of the frame plate, at the other end of the opening.

A rearwardly extending ear 8 of the tongue 3 is provided with an opening 9 and is adapted to lie on the plate 1 under the upset strap 6, with the tab 7 received in the opening 9 to hold the tongue against longitudinal movement forwardly on the frame. An abutment 10 extends downwardly from the ear 8 past the plate 1 immediately adjacent the rear edge of opening 2, to hold the tongue against longitudinal movement rearwardly on the frame.

An arcuate intermediate portion 11 of the tongue 3 extends from the lower extremity of abutment 10 to closely adjacent the lip 4 at the front end of opening 2. A second abutment 12 there extends upwardly from the intermediate portion 11 and terminates in an offset finger piece 13 which overlies the end of plate 1. Between the intermediate portion 11 and the second abutment 12, an outwardly distended roll 14 is provided. From a consideration of the drawings, it will readily be appreciated that the roll 14 serves to yieldably hold the free end of the tongue 3 on either side of the lip 4 of frame plate 1. This construction is to prevent casual opening of the clasp and will contribute to the security of the device as will be described.

As shown by Fig. 5, the clasp may be hooked by rebent tip 5 into an eyelet 15 as is commonly found in an infant's fabric shirt. The fabric of the diaper or other garment to which the shirt is to be attached by means of the clasp is then slidingly inserted in the open clasp, between the tongue 3 and the plate 1. When the fabric is inserted as far as desired, the free end of the tongue, with the roll 14, is pushed downwardly by pressure on finger piece 13 past the lip 4 through the opening 2. The fabric is carried through the opening with the tongue, and is secured between the second abutment 12 and lip 4 as is shown by Fig. 5.

It will be noted (Fig. 2) that without a piece of fabric in the clasp, the roll 14 normally bears against the frame 1 at the forward edge of opening 2 and the abutment 10 bears against the rear edge of the opening, when the clasp is closed. When a piece of fabric (which in a clasp for diapers will include several thicknesses) is secured in the closed clasp as above described, it is

evident that the roll 14 and second abutment 12 will be forced back from the lip 4 at the forward edge of the opening 2. This tends to secure the fabric more firmly in the clasp, by the following described reaction: the greater the thickness of the fabric secured between the frame 1 at the front edge of opening 2 and the tongue 3, the farther away from the lip 4 will the abutment 12 and roll 14 be forced; the farther away from the lip these elements are forced, the greater will be the distortion of the intermediate portion 11 of tongue 3; the greater this distortion (since portion 11 is positively held against the frame 1 at the rear edge of opening 2 by abutment 10) the greater is the force tending to drive the abutment 12 toward lip 4 at the forward edge of opening 2; and the more firmly is the fabric held in the clasp.

It will be appreciated that a clasp construction of novel design has been provided which is sturdy and easily manipulated, and which is at the same time secure against casual separation. Moreover, the new clasp is so constructed that it increases the firmness of its grip when fastened on relatively thicker pieces or plies of fabric. Not only does the two piece construction of the clasp result in improved efficiency, but it should also be noted that the parts may be readily assembled by sliding the end 8 under the strap 6. The construction may thus be manufactured in an economical manner.

What is claimed is:

A clasp for diapers and the like comprising a frame plate of thin resilient spring metal having an elongated opening and an inwardly protruding lip edge at the outer end edge of said opening and an elongated spring metal tongue member of less transverse width than the width of said opening

extending longitudinally of said frame, said member having a flat inner end portion lying at the inner end of said plate adjacent the inner end edge of said slot with interlocking means at said end holding the flat relationship of said end portion against said plate, an integral abutment portion downwardly angled from said end in acute angular relationship therewith, a central portion arcuately curved from the end of said abutment in acute angular relation therewith and extending forwardly and upwardly through the slot, a forward abutment in acute angular relation with the central portion extending upwardly therefrom and having a pronounced forwardly distended rolled portion integrally connecting said central portion and abutment as a beaded edge, the upper end of said forward abutment extending forwardly and overlying the outer end of said plate, the inner end of said central portion being maintained in a downwardly offset position from the plane of said plate for holding said forward abutment in releasable engagement against the forward edge of said slot with said beading below said forward slot edge.

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