Aug. 19, 1952 D. A. LINGNER 2,607,097

FASTENER

Filed Oct. 28, 1949

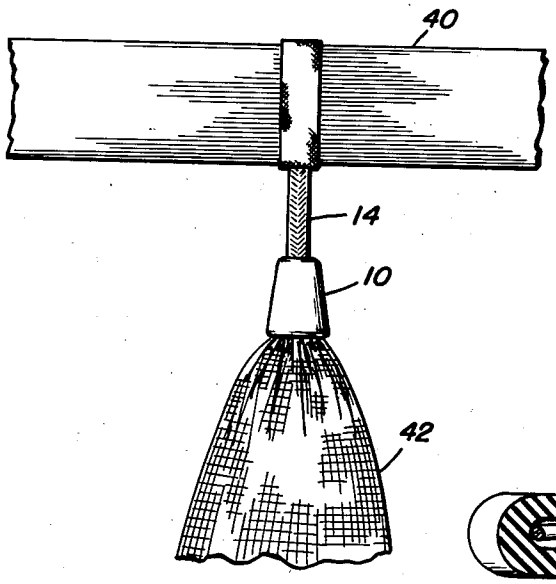


Fig. 1.

Fig. 2.

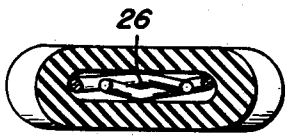
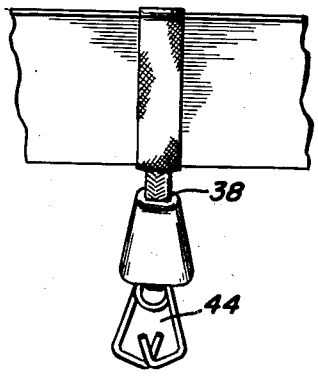


Fig. 3.



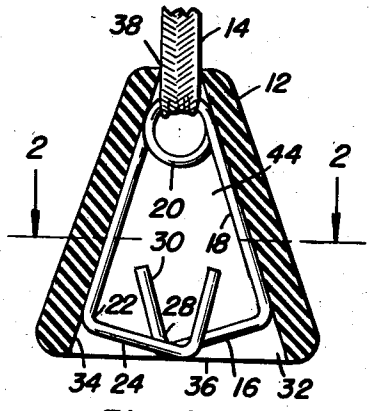


Fig. 4.

Inventor

Dora A. Lingner

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

Patented Aug. 19, 1952 2,607,097

UNITED STATES PATENT OFFICE

2,607,097

FASTENER

Dora A. Lingner, Cloverdale, Calif.

Application October 28, 1949, Serial No. 124,140

2 Claims. (Cl. 24—243)

1

This invention comprises novel and useful improvements in fasteners, and more specifically relates to a fastener for fabrics and the like.

The principal object of this invention is to provide a simple, but effective, fastener.

A further object of the invention is to provide a fastener which will not irritate or injure upon contact with a person, or tear garments upon contact with them.

An additional object is to provide a fastener for fabrics which has means for locking the fabric thereto.

Yet another object of this invention is to provide a fastener for fabrics which has means for locking fabric thereto, and which will not irritate or injure a person upon contact therewith, or tear or snag garments upon contact.

An important feature of this invention resides in the provision for an improved fastener having fabric engaging fingers laterally separable for locking fabric entwined over them.

Another feature of this invention resides in the provision for an improved fastener formed from a unitary strip, having fabric locking fingers laterally separable for locking fabrics entwined over them.

An additional feature of this invention resides in the provision for a resilient sheath for the fastener, thereby protecting the user from the fastener.

A further feature of this invention resides in the provision for a resilient sheath which will compress the sides of the fastener, thereby laterally separating the fingers into their fabric locking position.

The final feature of this invention, in conjunction with the foregoing features, resides in the provision for a resilient means folding the sides of said fastener together, thereby permitting the resilient sheath to compress the sides, thereby laterally separating the fingers to the fabric locking position.

These, together with various ancillary objects and features of the invention which will later become apparent as the following description proceeds, are attained by this device, a preferred embodiment of which has been illustrated by way of example in the accompanying drawings, wherein:

Figure 1 is a side elevational view of the fastener supported by a belt, showing the sheath enclosed fastener applied to a piece of fabric.

Figure 2 is a horizontal sectional view taken substantially on the plane 2—2 of Figure 4, showing a sectional view of the resilient sheath enclosing the fastener with the arms and the fingers of the fastener in their juxtaposed overlying relation to each other.

2

Figure 3 is a side elevational view of the fastener supported by a belt, showing the fastener in its open position with the sheath slidably raised relative to the fastener, the fingers of the fastener being in their non-locking position.

Figure 4 is a vertical sectional view of the fastener showing the resiliently connected sides compressed by the resilient sheath in its enclosing position, and the fingers laterally separated into their fabric locking position.

Referring now more specifically to the accompanying drawings, wherein like numerals designate similar parts throughout the various views, the numeral 10 refers to the fastener generally. The fastener as best shown in Figure 4, comprises a substantially triangular, flat resilient sheath 12 slidably mounted upon a suspension strap or band 14 enclosing the substantially V-shaped, resilient wire clasp or connector indicated generally by the number 16.

The clasp 16 has diverging legs or sides 18 resiliently connected by a coil or loop 20, formed in the material of the sides, the upper portion of the loop 20 providing means for attaching the supporting band 14. Angularly attached to the sides of the clasp, as at 22, are inwardly extending arms 24 overlying each other as at 26. Attached to said arms, as at 28, are upwardly extending free end portions or fingers 30, shown in Figure 2 in their fabric locking position.

The resilient sheath 12 has a hollow core 32, the edges 34 of the core being less divergent than the sides 18 of the clasp 16, when the latter sides are in their non-compressed position. The sheath 12 has an aperture 36 in its lower end, said aperture permitting the insertion of the wire clasp 16, the upper end of said sheath having an aperture 38 at its upper end for permitting the supporting band 14 to be attached to the clasp 16 by means of the resilient connection 20 for the sides 18.

As will be seen from Figure 1, the fastener 10 is attached to the supporting belt 40, by means of a band 14, thereby showing the use of the fastener in conjunction with a sanitary belt.

In operation, a piece of fabric is shown as indicated generally by the numeral 42, is entwined through the aperture 44 within the fastener 16. The fabric 42 is drawn over the fabric engaging fingers 30, and downwardly thereupon until the fabric is supported by the arms 24, the material 42 being further constrained by the sides 18 of

the clasp 16. The sheath 12 is then slid downwardly toward the clasp 16, the lower aperture 36 of the sheath passing over the clasp 16, and the upper aperture 38 of the sheath 12 being guided by the supporting band 14. Since the sides 34 of the sheath 12 are less divergent than the sides 18 of the clasp 16, the downward movement of the sheath 12 will cause the sides 18 of the clasp 16 to be compressed toward each other, the compression of the sides 18 being permitted by the resilient connecting means 20. It may be noted at this time, that the resilient connecting means 20 may be constructed in various ways, such as a resilient spring, or a resilient U-shaped member connecting the sides, the loop-shaped resilient connecting means shown being but the preferred construction.

As the sides 18 are compressed toward each other, the fingers 30 are laterally separated, thereby causing the fabric lying between the fingers 30 to be tensioned, the fabric lying between the fingers 30 and the sides 18 being compressed. Upward movement of the fabric, entwined over the fabric engaging fingers 30, is prevented by the sideward deflection of the upwardly turned fingers 30. Locking of the fabric entwined over the fabric engaging fingers 30 is thereby secured by the positive action of the fabric engaging fingers 30 inserted through the fabric, and also by the constriction of the fabric due to the lateral separation of the fabric engaging fingers 30. Further, the resilient sheath 12, when in its down, side compressing position, also serves to retain the fabric, entwined over the fabric engaging fingers 30, against the same 28, thereby further preventing the fabric from rising upon the fabric engaging fingers 30, enhancing the locking features of the fastener.

It will be appreciated that the sheath 12, in addition to providing the locking means for the fastener 16, also acts as a protective shield.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary.

However, since numerous modifications and changes will readily occur to those skilled in the art after a consideration of the foregoing specification and accompanying drawings, it is not desired to limit the invention to the exact construction shown and described, but all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A fastener of the character described comprising a suspension strap, a substantially V-shaped, resilient connector on the lower end of said strap, said connector including means for anchoring fabric thereto, and a substantially triangular, flat, resilient sheath slidable on the strap and adapted to enclose the connector, said means including inturned arms on the legs of the connector terminating in upturned free end portions engageable with the fabric.

2. A fastener of the character described comprising a suspension strap, a substantially V-shaped connector on the lower end of said strap, said connector being formed from a single length of resilient wire and including a coil, divergent legs on the ends of the coil, inturned lapped arms on the free ends of said legs terminating in upturned free end portions engageable with fabric for anchoring same to the connector, and a resilient, substantially triangular sheath slidable on the strap and adapted to enclose the connector and retain the fabric thereon.

DORA A. LINGNER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
590,401	Morgan	Sept. 21, 1897
779,311	Pithey	Jan. 3, 1905
1,689,889	Nunes	Oct. 30, 1928
2,144,897	Salinger	Jan. 24, 1939
2,224,626	Marcus	Dec. 10, 1940
2,301,029	Falcetti	Nov. 3, 1942
2,524,537	Osmonson	Oct. 3, 1950