Jan. 3, 1939. E. G. WIED 2,142,770

SLIDING FASTENER

Filed Aug. 27, 1937

Fig. 3.

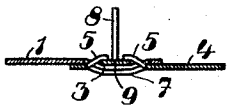


Fig. 2.

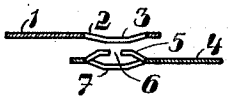


Fig. 1.

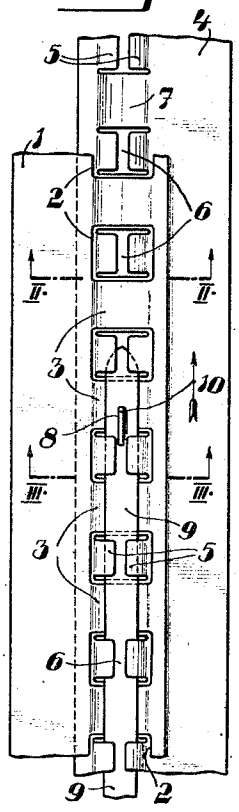


Fig. 5.

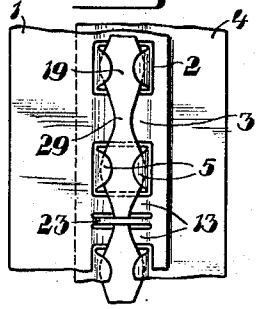


Fig. 4.

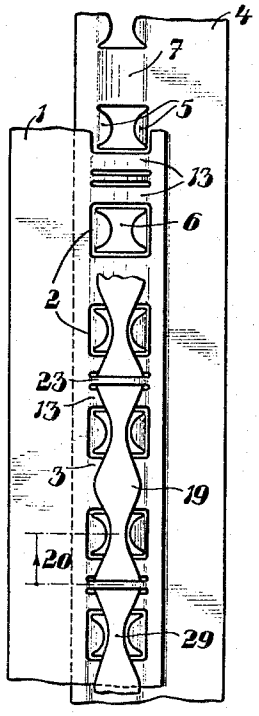


Fig. 8.

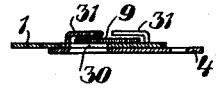


Fig. 7.

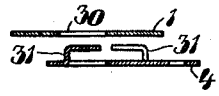
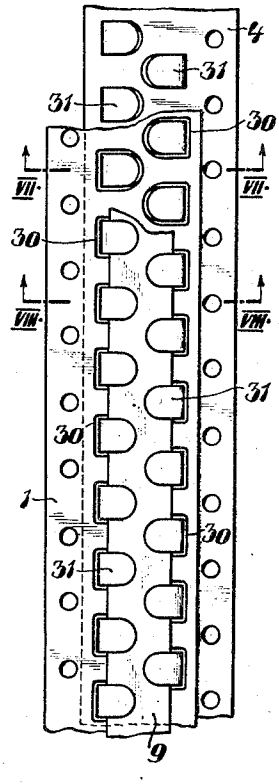


Fig. 6.



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Patented Jan. 3, 1939 2,142,770

UNITED STATES PATENT OFFICE

2,142,770

SLIDING FASTENER

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Application August 27, 1937, Serial No. 161,348
In Czechoslovakia August 14, 1936

2 Claims. (Cl. 24—205)

Sliding fasteners are at present known in four constructional forms. In one of these forms there are provided at the thickened edges of the material, which are to be connected together, slotted eye-like fastener members which by a sliding member actuating in the manner of the sliding member of a sliding clasp fastener are set one behind the other in the closing direction and through which a band or wire attached to the sliding member is drawn.

According to another constructional form the fastener members are fixed at definite distances apart on a band or wire and slidably embrace the thickened edges of the material, so that, on the band or wire being pulled in the closing direction, the material edges are held together at definite distances from the fastener members. In the third constructional form the thickened edges of the material are made hollow and are slotted at their facing sides and act as a guide for a fastener band provided with thickened edges, whilst in the fourth constructional form helical springs are fixed to each of the material edges which are to be connected, which springs must be pushed into one another so as to engage, being then connected with one another through the insertion of a bar into their convolutions.

These known sliding fasteners have the disadvantage that is some cases only an imperfect closure can be effected (gaping), in other cases a special treatment of the edges of the material is required and finally that they are not easy to make and fix at the edges of the material.

The sliding fastener according to the invention belongs to the last group, but differs from the known constructions in this, that it consists of a flexible, elastic perforated strip and of a second strip of similar material, on which pressed out lugs project, which are bent over towards one another, this strip being hereinafter referred to as the eye strip. These strips are fixed each to one of the edges of material to be connected together and, for effecting the closure, are placed one on the other in such a manner that the holes of the perforated strip frame the lugs of the second or eye strip and that the bent over parts of the lugs are at such a distance from the surface of the perforated strip that an elastic, flexible fastener band can be drawn through between them and the surface of the perforated strip and a closure thus effected.

In the accompanying drawing three constructional examples of the sliding fastener according to the invention are illustrated;

Figure 1 being a plan view of one constructional form;

Figure 2 a section on line II—II of Figure 1;

Figure 3 a section on line III—III of Figure 1;

Figure 4 a plan view of the second constructional form, the fastener band being shown in the position in which it does not yet connect the two edges;

Figure 5 a plan view of the same constructional form, the edges being already connected by the fastener;

Figure 6 shows a plan view of the third constructional form, and

Figures 7 and 8 are sections on lines VII—VII and VIII—VIII respectively of Figure 6.

In the constructional form shown in Figures 1 to 3, the strips 1 and 4 which are formed of elastic, flexible material, for instance thin sheet metal or some artificial substance, are fixed to the edges of the material by riveting, sewing, or the like.

The strip 1 (perforated strip) has punched out openings 2 separated from one another by bridging pieces 3, whilst out of the strip 4 (the eye strip) lugs 5 are pressed, which are separated by bridging pieces 7 and the lugs 5 are bent over towards one another to form a slot 6.

For effecting the closure the strips 1 and 4 are placed one over the other in the manner shown in Figure 1, so that the openings 2 frame the lugs 5 and their bent over part lies at a certain distance from the surface of the strip 1. The closure is effected by an elastic, flexible band 9, which is preferably provided with a handle 8, drawn through in the direction of the arrow 10 between the surface of the perforated strip 1 and the bent over parts of the lugs 5 and is fixed, releasably or otherwise, in any suitable manner to one of the parts to be connected.

The flexibility and elasticity of the strips and of the fastener band impart to the fastener the property of adapting itself to all stresses acting on the material edges, which are connected together without gaping.

In the constructional form shown in Figures 4 and 5, the perforated strip 1 is provided at the bridging pieces 13 lying between the openings 2 with pressed out eyelets 23, through which the fastener band 19 passes and which hold it in position. The fastener band 19 has regularly recurring marginal constrictions which provide narrow places 29 in the fastener band, which are spaced from one another by the distance between the openings 2 and the width of the band at the constrictions is narrower than the width of the

slots 6. The fastener band 10 can thus in this constructional form be placed together with the perforated strip 1 over the strip 4 and a displacement of the fastener band through half the distance between the openings 2 or the distance 20, will suffice for closing (Figure 5) or opening the fastener.

The constructional form shown in Figures 6 to 8 is characterized by the feature that the openings 30 of the strip 1 are arranged offset with respect to one another in two rows corresponding to the arrangement of the separate lugs 31 which are stamped out of the strip 4, offset with respect to one another in two rows. Each individual lug 31 is thus framed by an opening 30 and the fastener band 9 can be drawn through between the lugs 31 and the part 1 for effecting the closure.

The fastener may be secured in the closed state for instance by locking the fastener band at its handle 8.

I claim:—

1. A fastening device comprising, a flexible strip having openings therein arranged along one edge of the strip, a second flexible strip provided with a plurality of lugs each adapted to be framed by an opening when the first strip is arranged over the second strip, an elongated band carried by the first strip and arranged for longitudinal movement adjacent the openings, said lugs being bent towards each other and terminated to provide a space between the ends thereof, said band having constrictions arranged along the length thereof at spaced intervals and the width of said band at said constrictions being less than the distance between the ends of said lugs.

2. A fastening device comprising, a flexible perforated strip having the openings thereof arranged along one edge of the strip at spaced intervals, a second flexible strip provided with a plurality of pressed out pairs of lugs each adapted to be framed by an opening when the first strip is arranged over the second strip, eyelets arranged in the first strip between the openings, an elongated band extending through said eyelets and adapted to be longitudinally moved, each pair of lugs being bent towards each other and terminated to provide a gap between the ends thereof, said band having constrictions arranged along the length thereof at spaced intervals which are substantially equal to the distance between said openings, and the width of said band at the constrictions being less than the distance between the ends of said lugs.

ERNST GEORG WIED.