

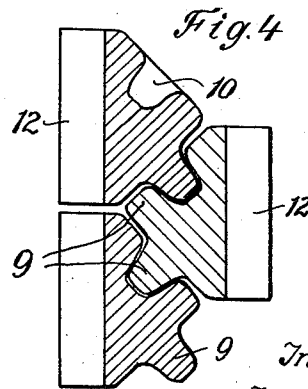
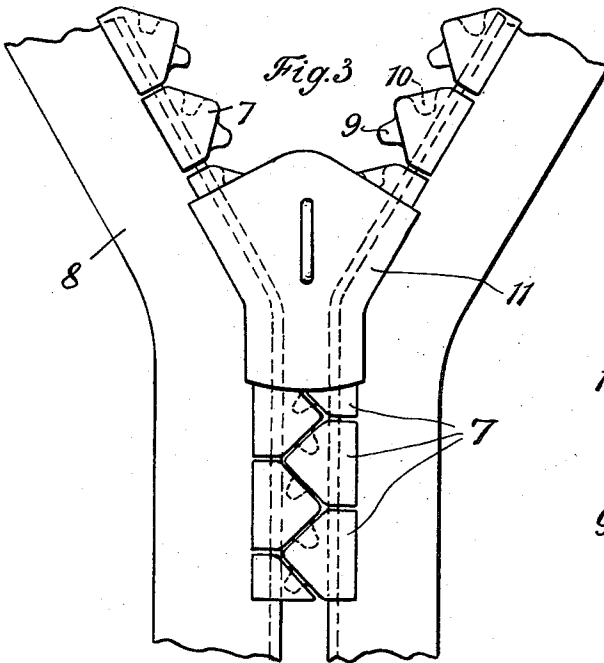
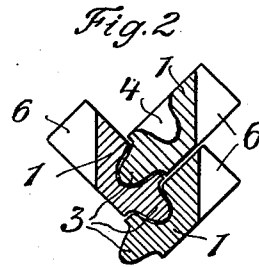
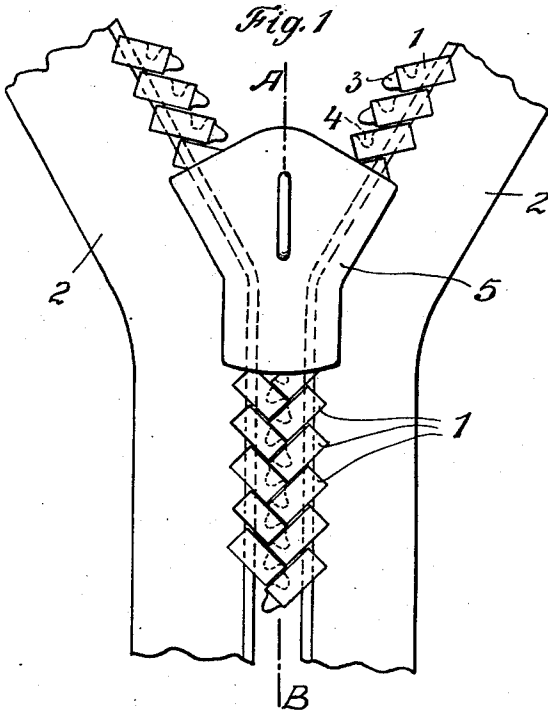
May 9, 1939.

J. KUNA

2,157,828

SLIDING CLASP FASTENER

Filed Sept. 15, 1937



Inventor:
Josef Kuna
By *Edmund*
his Attorney.

UNITED STATES PATENT OFFICE

2,157,828

SLIDING CLASP FASTENER

Josef Kuna, Prague, Czechoslovakia

Application September 15, 1937, Serial No. 163,903
In Germany June 12, 1937

5 Claims. (Cl. 24—205)

The present invention relates to slide fasteners and more particularly to slide fasteners in which the fastening members of one row are staggered longitudinally of the fastener relative to the fastening members of the opposite row.

One object of the invention is to provide a fastener of this type which, in closed position, forms a substantially continuous strip in which the members of the two rows lie snugly against one another to form a continuous strip, each member being locked to the preceding and succeeding member of the opposite row.

Another object of the invention is to produce a slide fastener with individual fastening members having a considerable strength.

Still another object of the invention is to provide a slide fastener which can be easily secured to the edges of any desirable material.

A still further object of this invention is to produce a slide fastener which can be cheaply manufactured, is highly reliable in use, and has a pleasing appearance.

According to the invention, these and other objects, which will appear as the specification proceeds, are accomplished by means of the arrangement and combination of elements pointed out in the following description, set forth in the appended claims, and illustratively exemplified in the accompanying drawing, in which:

Figure 1 is a plan view of one embodiment of the invention;

Figure 2 is an enlarged sectional view of three interlocked fastening members of the embodiment of Figure 1, the section being taken on a plane halfway between the upper surface of the fastening members visible in Figure 1, and the lower surface of said members;

Fig. 3 is a plan view of a second embodiment of the invention, and

Figure 4 is a sectional view of three interlocked fastening members of the said second embodiment, taken on a similar plane as Figure 2.

Referring now to the drawing—

Reference numeral 1 denotes the individual fastening members constructed in the form of oblong rectangular plates which are attached, by means of a slot disposed in their outer end, side by side to the edges 2 of a fabric with their sides at an angle of approximately 45° to the longitudinal axis A—B of the fastener. Each fastening member has, in closed position of the fastener, one of the sides adjoining its inner corner over its entire length in contact with the adjacent side of the preceding member of the

opposite row, while the other side adjoining said inner corner contacts with part of its length the adjacent side of the succeeding member of said opposite row. One of said contacting sides of each member carries a tapering conical interlocking element 3 projecting at right angles from said side and the other contacting side is provided with an appropriate recess 4 at right angles to said interlocking element 3. Each member is staggered longitudinally of the fastener relative to the preceding member of the opposite row a distance substantially equal to the projection of the side being over its full length in contact with the adjacent side onto the longitudinal axis of the fastener. By actuation of the slider 5 which is constructed in the usual manner the fastener can be opened and closed. As may be seen from Fig. 1, the fastener presents, when closed, the attractive and pleasing appearance of a continuous strip having serrated outer edges.

As may be seen from Figure 2, each fastening member 1 engages with its interlocking element 3 the appropriate recess 4 of the succeeding fastening member 1 of the opposite row, while its recess 4 is engaged by the interlocking element 3 of the preceding member 1 of the opposite row. Thus, each member is securely interlocked with the preceding and succeeding members of the opposite row. At their rear ends the members are provided with a slot 6, with the aid of which they can be attached to the strips 2.

According to the further embodiment of the invention shown in Figures 3 and 4 the fastening members 7 comprise a rectangular base portion having its outer edge, in closed position of the fastener, disposed parallel to the longitudinal axis of the latter and taper inwardly to substantially right angled isosceles head portions having, in closed position of the fastener, their sides disposed at approximately 45° to the longitudinal axis of the latter. They are attached to the strips 8 by means of slots 12 provided in the outer edges of the base portions and disposed parallel to the longitudinal axis of the fastener. The fastening members are provided on one side of each head portion with a tapering projection 9 which is disposed obliquely, preferably at an angle of 45°, to the longitudinal axis of the fastener, and on the other side of the head portion with an appropriate recess 10. This form of construction has the advantage of a specially pleasing appearance, since the closed fastener has the form of a continuous strip, with parallel edges.

I claim:

1. In a slide fastener, two rows of fastening members, the successive fastening members of each row following one another substantially continuously and being staggered longitudinally of the fastener with respect to the fastening members of the other row, each fastening member terminating inwardly in an angle having, in closed position of the fastener, its sides disposed parallel to and at least partly in contact with the adjacent sides of the preceding and succeeding members of the opposite row and each individual fastening member of one row being staggered relative to said preceding member of the opposite row a distance substantially equal to the projection of the contacting portions of the adjacent angle sides onto the longitudinal axis of the fastener, whereby, in closed position of the latter, the two rows complement each other to a substantially continuous strip, each of said angles carrying on one side thereof an interlocking element projecting towards the succeeding member of the opposite row and being provided on its other side with a recess to receive the interlocking element disposed on the adjacent side of the preceding member of said opposite row.

2. In a slide fastener, two rows of fastening members, the successive fastening members of each row following one another substantially continuously and being staggered longitudinally of the fastener with respect to the fastening members of the other row, each fastening member terminating inwardly in a right angle having, in closed position of the fastener, its sides disposed at approximately 45° to the longitudinal axis of the fastener and at least partly in contact with the adjacent sides of the preceding and succeeding members of the opposite row, and each individual fastening member of one row being staggered relative to said preceding member of the opposite row a distance substantially equal to the projection of the contacting portions of the adjacent angle sides onto the longitudinal axis of the fastener, whereby, in closed position of the fastener, the two rows complement each other to a substantially continuous strip, each of said right angles carrying on one side thereof an interlocking element projecting towards the succeeding fastening member of the opposite row at an angle of approximately 45° with respect to the longitudinal axis of the fastener and being provided on its other side with a recess at right angles to said interlocking element to receive the interlocking element carried by the preceding fastening member of the opposite row.

3. In a slide fastener, two rows of fastening members, the successive fastening members of each row following one another substantially continuously and being staggered longitudinally of the fastener with respect to the fastening members of the other row, each fastening member comprising a rectangular base portion having its outer edge, in closed position of the fastener, disposed parallel to the longitudinal axis of the latter and tapering inwardly to a substantially right angled isosceles head portion having, in closed position of the fastener, its sides disposed at approximately 45° to the longitudinal axis of the latter and in contact with the adjacent sides of the preceding and succeeding members of the opposite row and each individual

fastening member of one row being staggered relative to said preceding member of the opposite row a distance substantially equal to the projection of one of said contacting sides onto the longitudinal axis of the fastener, whereby, in closed position of the latter, the two rows complement each other to a substantially continuous strip with parallel edges, each of said head portions carrying on one side thereof an interlocking element projecting towards the succeeding fastening member of the opposite row at an angle of approximately 45° with respect to the longitudinal axis of the fastener and being provided on its other side with a recess at right angles to said interlocking element to receive the interlocking element carried by the head portion of the preceding fastening member of the opposite row.

4. In a slide fastener, two rows of fastening members, the successive members of each row following one another substantially continuously and being staggered longitudinally of the fastener with respect to the fastening members of the other row, each fastening member consisting of a rectangular plate having, in closed position of the fastener, its sides disposed at approximately 45° to the longitudinal axis of the latter, and the two sides adjoining its inner corner at least partly in contact with the adjacent sides of the preceding and succeeding members of the opposite row, and each fastening member of one row being staggered relative to said preceding member of the opposite row a distance substantially equal to the projection of the contacting portions of the adjacent sides onto the longitudinal axis of the fastener, whereby, in closed position of the latter, the two rows complement each other to a substantially continuous strip with serrated outer edges, each of said fastening members carrying on one of the sides adjoining its inner corner an interlocking element projecting towards the succeeding fastening member of the opposite row at an angle of approximately 45° with respect to the longitudinal axis of the fastener and being provided on the other side adjoining said inner corner with a recess at right angles to said interlocking element to receive the interlocking element carried by the preceding fastening member of the opposite row.

5. In a slide fastener, two rows of fastening members, the members of each row being staggered longitudinally of the fastener with respect to the fastening members of the other row, each fastening member consisting of a substantially rectangular plate having, in closed position of the fastener, its sides disposed at approximately 45° to the longitudinal axis of the latter, and the two sides adjoining its inner corner at least partly in contact with the adjacent sides of the preceding and succeeding members of the opposite row, each of said fastening members carrying on one of the sides adjoining its inner corner an interlocking element projecting towards the succeeding fastening member of the opposite row at an angle of approximately 45° with respect to the longitudinal axis of the fastener and being provided on the other side adjoining said inner corner with a recess at right angles to said interlocking element to receive the interlocking element carried by the preceding fastening member of the opposite row.

JOSEF KUNA.