

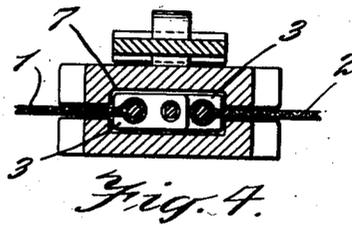
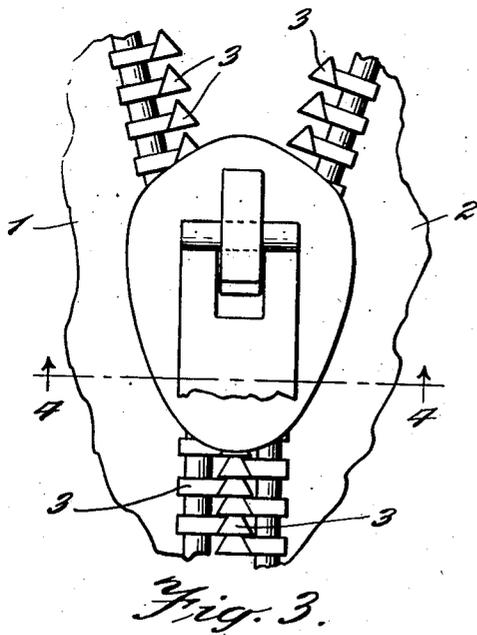
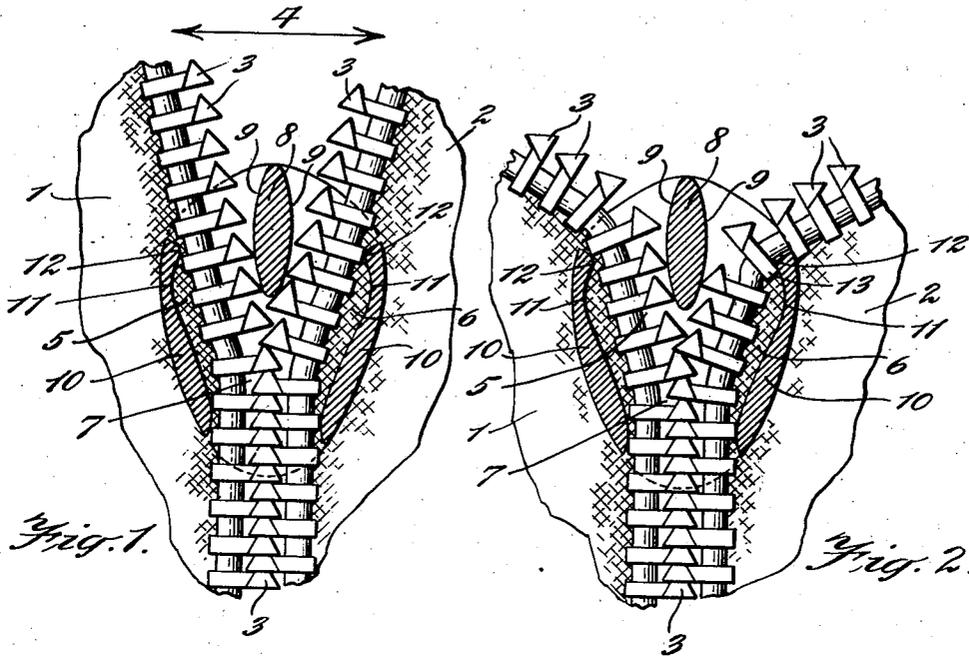
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2,265,327

SLIDER FOR SEPARABLE FASTENERS

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SLIDER FOR SEPARABLE FASTENERS

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1 Claim. (Cl. 24—205.5)

This invention relates to a novel and improved form of slider for use with separable slide fasteners, and the novel features will be best understood from the following description and the annexed drawing, in which I have shown a selected embodiment of the invention and in which:

Fig. 1 is a view of a portion of a separable fastener having my slider applied thereto, the slider being shown in section;

Fig. 2 is a view similar to Fig. 1, but showing parts in different relation to each other;

Fig. 3 is a view similar to Fig. 1, but showing the slider in elevation;

Fig. 4 is a section approximately on the line 4—4 of Fig. 3.

The separable fastener shown herein is one of the well-known type employing two stringers 1 and 2, each of which has thereon a multiplicity of fastening elements, sometimes referred to as links, and which are indicated by the numeral 3. These links mesh with each other through the operation of a slider which has a single channel connecting the two diverging channels, as well known in the art.

Oftentimes where a strain takes place tending to separate the sliders, as indicated by the double pointed arrow 4, the slider will be cammed downwardly, as viewed in Fig. 1, and thus open the fastener by the movement of the slider in an opening direction. Various attempts have been made to provide a means which will automatically lock the slider when such a movement starts and it is to such means that my invention relates.

Preferably, I form the slider with two diverging channels 5 and 6 merging into a single channel 7, the single channel 7 being of such a width as to prevent unmeshing of the end links, as known in the art, and the diverging channels being separated by a cam 8.

The cam 8 is shown as being elliptical in form, with smooth outer surfaces 9 which are convex towards the centers of the diverging channels, and opposite these surfaces the outer wall 10 of each diverging channel is provided with a surface 11 which is on a curve that is concave towards the center of the channel. The single channel is provided with surfaces 12 on opposite sides thereof, which are on curves convex towards the center of the channel and which extend in a smooth curve which is ultimately reversed into the concave curve forming the surface 11 and, as noted, this concave curve is adjacent the wide end of the slider. The concave curve of the surface 11 preferably is reversed again into a smooth convex surface 12, the convexity being towards the center of the channel.

By the above arrangement, when the slider is

in the position shown in Fig. 1 and when no strain is put on the stringers, the slider will remain in position. However, when a strain in the direction of the double pointed arrow 4 is placed on the stringers, then the links will assume some such position as that shown in Fig. 2, where it will be seen that at least one of the links, for example that shown at 13, will be so placed that its outer end will move into the concavity formed by the concave surface 11 and thus will prevent further downward or opening movement of the slider. At the same time the engagement between the slider and one or more of the links is not a sudden one, such as in prior art devices, but may take place anywhere along the concave surface 11. In other words, instead of providing an abrupt shoulder on the outer wall of the channel as has been tried, I provide an arrangement whereby one or more links will engage the nearest part of a smooth concave surface and thus avoid the wearing which inevitably takes place where a sharp shoulder is provided. When such a sharp shoulder once wears away, then it ceases to form its locking function, whereas with the arrangement which I have disclosed herein, such shoulders are avoided and the device will function for a much longer time.

While I have shown the invention as embodied in a specific form, it is to be understood that various changes in details may be made without departing from the scope of the invention as defined by the appended claim.

I claim:

A slider for a separable slide fastener having depending flanges forming elliptically shaped lateral walls, each wall having external and internal surfaces, the internal surfaces of said walls partly defining, with a separating element, a pair of channels merging into a single channel for the passage of stringers carrying links; each internal surface having a portion concave toward the adjacent channel reversing into a cam portion convex toward said channel and terminating by intersection with an adjacent external surface of said wall which external surface is concave toward said channel, said convex surface of each internal wall forming with the adjacent concave surface of the adjacent external wall, a cam over which the links freely ride in normal operation, the surface of which cam however terminates in an edge portion formed by the intersection of said convex cam surface and concave adjacent external surface, said edge portion engaging a link and preventing relative movement of the slide and links upon the application of force tending to separate the stringers.

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