May 19, 1936. W. J. REUTER 2,041,149

SLIDE FASTENER

Filed Sept. 15, 1933

Fig. 1.

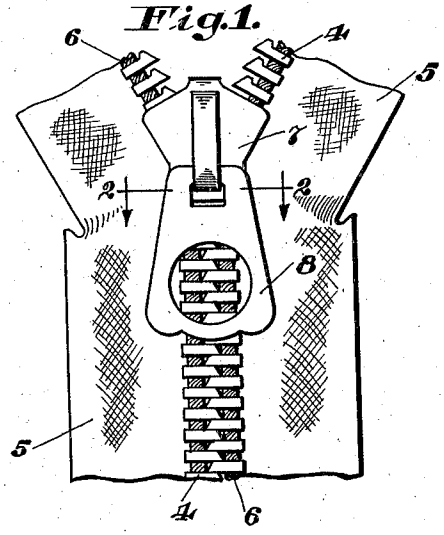
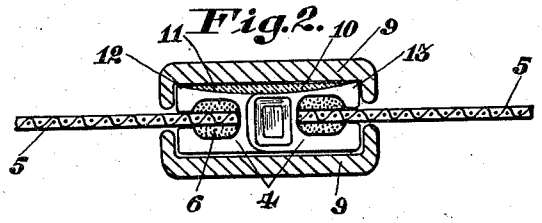


Fig. 2.



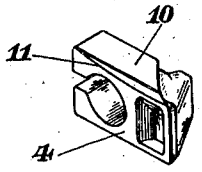


Fig. 3.

INVENTOR.
William J. Reuter
BY Kelley & Chisholm.
ATTORNEYS.

Patented May 19, 1936 2,041,149

UNITED STATES PATENT OFFICE

2,041,149

SLIDE FASTENER

William J. Reuter, Meadville, Pa., assignor to Hookless Fastener Company, a corporation of Pennsylvania

Application September 15, 1933, Serial No. 689,615

3 Claims. (Cl. 24—205)

My invention relates to slide fasteners of a type which has been on the market for many years. More recently slide fasteners have been made with decorative coatings so as to overcome the objection to the metallic appearance in fine articles of wearing apparel, ladies' hand bags, etc.

Some of the coatings which have been used to give a brown or black appearance are oxides of the metal of which the fastener elements are made, but more commonly the coating is a lacquer having the desired characteristics. The principal difficulty in the use of such coatings is that the slider must slide along the flexible surfaces of the fastener elements. The object of my invention is to provide an improved construction whereby the abrasive action of the slider on the flexible surfaces on the fastener elements is avoided as much as possible.

In the accompanying drawing I have shown for purposes of illustration, one form which my invention may assume in practice. In this drawing:

Fig. 1 is a plan view of a part of a fastener embodying my invention;

Fig. 2 is a cross-section on line 2—2 of Fig. 1; and

Fig. 3 is a perspective view of an individual fastener element.

The fastener illustrated is one which is well known commercially but it will be understood that my invention is applicable to fasteners of this general type regardless of details of construction.

The rows of fastener elements 4 are mounted on flexible fabric tapes 5, having beaded edges 6. A slider 7 is mounted to slide along the rows of fastener elements and is manually operated by means of the pull tab 8. The slider has an interior channel formed by upper and lower wings 9 having flanges at the sides which engage over the ends of the fastener elements. The coating is shown exaggerated in thickness at 10 and is applied usually only to the one side of the fastener which will be visible in the article to be fastened. The end surfaces of the fastener elements must take the bearing load of the slider in pulling the fastener together and since they are not prominently visible it is not a serious objection if the finishing material wears off this surface. However, the broad surface of the fastener which is most prominent in use does not necessarily bear against the slider to any considerable extent. In this case these surfaces of the fastener elements are concavely formed as indicated at 11 so that the thickness of the fastener elements is substantially reduced except at the ends. Since the inner surface of the slider channel is straight, therefore, the slider will have only line contacts with the fastener as appears at 12 and 13.

After continued use the finishing material will wear off along the corners of the fastener elements as well as at the ends but this will not be seriously objectionable since it will be only a minor part of the visible surface and the finishing material will not be removed over large surfaces so as to make it noticeable.

While I have shown and described in this application one embodiment which my invention may assume in practice, it will be understood that this embodiment is merely for the purposes of illustration and description and various other forms may be devised within the scope of my invention as defined in the appended claims.

What I claim as my invention is:

1. In a slide fastener, the combination of rows of fastener elements having their entire outer visible surfaces concavely curved, a slider mounted to slide on said fastener elements and having a straight inner surface covering said concave surfaces, and having contact with each of the fastener elements along the edge thereof whereby the concave surfaces are supported out of contact with the slider, and a finishing coating on said curved surfaces.

2. In a slide fastener the combination of rows of interlocking fastener elements each having a side surface adapted to be exposed to view in normal use of the fastener, a thin finishing coating on said surfaces, and a slider enclosing the elements, the slider contacting with one edge of each side surface and exerting force on said elements in a direction substantially perpendicular to said face in interlocking the elements, each side surface being out of contact with the slider throughout its entire area except at said edge.

3. In a slide fastener the combination of rows of interlocking fastener elements each having a side surface adapted to be exposed to view in normal use of the fastener, a thin finishing coating on said surfaces, and a slider enclosing the elements and having a flat inner surface contacting with one edge of each element and exerting a force on each element substantially perpendicular to the side surface in interlocking the elements, the side surfaces being concave to prevent contact betwen said coatings and flat inner surface of the slider except at said edges.

WILLIAM J. REUTER.