

Nov. 17, 1925.

1,562,253

G. E. PRENTICE
SLIDE CONSTRUCTION
Filed March 23, 1925

Fig. 1

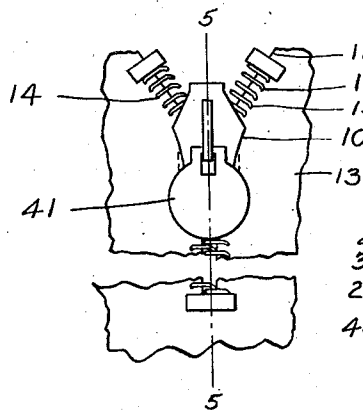


Fig. 2

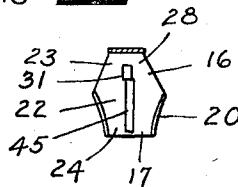


Fig. 4

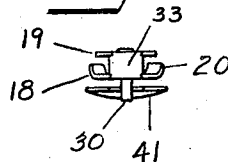


Fig. 3

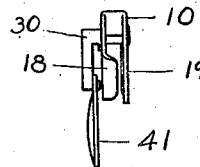


Fig. 5

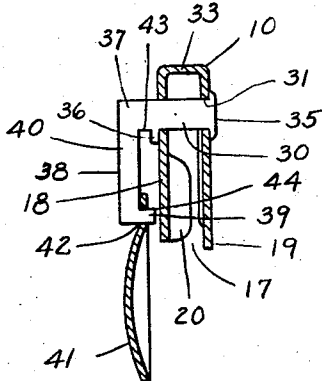
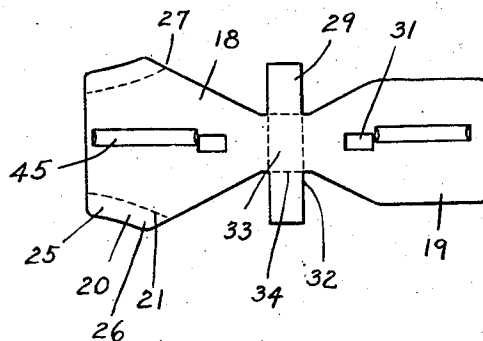


Fig. 6



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UNITED STATES PATENT OFFICE.

GEORGE EDWARD PRENTICE, OF BERLIN, CONNECTICUT.

SLIDE CONSTRUCTION.

Application filed March 23, 1925. Serial No. 17,500.

To all whom it may concern:

Be it known that I, GEORGE E. PRENTICE, a citizen of the United States, residing at Berlin, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Slide Construction, of which the following is a specification.

My invention relates to improvements in slide construction, of the form that is used to effect the connection and disconnection of interlocking fastener devices that are disposed along the opposed edges of fabric strips or the like and which edges define the borders of a gap or opening in a garment, shoe, or container or the like, and of the general form as the slides that are shown and described in my co-pending applications filed April 28, 1924, Serial No. 709,643, and August 29, 1924, Serial No. 735,014, and the object of my improvement is to provide a form of construction involving the usual wings that are opposed and spaced one from the other to cooperate with the fastener devices and in which the pull or handle structure is so mounted as to reduce to a minimum the tendency under operating conditions for the plates to open out or spread apart and thereby increase the spacing of the plates beyond the normal and desired spacing for proper operation.

In the accompanying drawing:—

Figure 1 is a front elevation, as viewed in a vertical position, of part of the gap structure in a piece of fabric or the like that is equipped with a set of interlocking fastener devices and a slide for cooperating therewith and embodying my invention.

Figure 2 is a front elevation, on an enlarged scale, of the slide shown in Fig. 1, and with the upper plate removed.

Figure 3 is a top view of the slide.

Figure 4 is a bottom view of the same.

Figure 5 is a sectional view on the line 5—5 of Fig. 1.

Figure 6 is a plan view of the blank for the plate member.

My improved slide 10 operates substantially in the same manner as the slides that are shown and described in the different applications referred to above for the purpose of bringing into interlocking engagement and for disengaging interlocking fastener devices 11 that are disposed along the border edges 12 of strips 13 of fabric or the like by means of a sliding movement in one direc-

tion or the other. The fastener devices 11 in each case are parts of a single coil spring, comprising the left spring 14 as shown in Fig. 1 and the right spring 15, the said springs being threaded through the material of the strip 13 so that the parts 11 of the springs that serve as to active interlocking parts or devices 11 overhang the edge 12 as mentioned.

The upper portions of the springs 14 and 15 are separated, as shown, and the lower parts, below the slide 10 are interengaged. Movement of the slide 10 upwardly serves to bring together into locking engagement the parts of the springs that are housed within the slide. The springs 14 and 15 emerge from the upper end portion of the slide 10 through individual openings 16, one for each of said springs, and which openings 16 are spaced laterally one from the other. At the lower end portion of the slide 10 is a single opening 17 in which is positioned the interlocked structure that consists of the adjacent interlocked portions of the two springs.

The openings 16 and 17 are defined at the front and back respectively by the front plate 18 and the back plate 19, said plates being positioned in spaced relation.

Pendant flanges 20 are provided along the lateral edges 21 of the upper plate 18, extending from the upper openings 16 to the lower opening 17, and said flanges 20 cooperate with the adjacent portions of the plates 18 and 19 to form an operating channel on each side for the corresponding spring 14 or 15 for use when the slide is moved in one particular direction. The particular channels 22 referred to may be designated as the lower channels 22 and they function when the slide 10 is lifted or moved upwardly so as to bring the springs 14 and 15 together, and in which movement the springs engage with the pendant flanges 20 and the adjacent and cooperating portions of the plates 18 and 19 operate as lateral guides for the springs.

The upper end portions 23 of the channels 22, adjacent the upper spring receiving openings 16, are convergent, extending downwardly and inwardly, and the lower end portions, adjacent the lower opening 17, and extending upwardly from said lower opening 17, overlap one another, as do the springs or the parts thereof that are housed therein. The two channels 22 merge to form

a relatively wide channel 24 that has parallel side walls, as defined by the adjacent portions 25 of the flanges 20. The upper portions 26 of the flanges 20 are convergent from the upper ends downwardly and meet the lower parallel portions 25 at the corner or junction 27 on each side and the elevation of said corners or junctions 27 corresponds substantially to the position at which the two lower channels 22 intersect or merge one with the other.

The disengagement of the interlocking devices 11 is effected through the medium of a pair of upper channels 28 that are defined in part by the upper portions of the top and bottom plates 18 and 19 and that have effective bottoms or end walls.

Said bottoms are defined at the upper ends, from the sides of the openings 16 inwardly, by the inwardly directed wings 29 and the junction of the two upper channels 28 is virtually determined by the centrally disposed pin or post 30 that constitutes the body portion of a rivet structure that passes through openings 31 in the two plates 18 and 19 and which will be more fully described.

The upper plate 18 and lower plate 19 are parts of a blank 32 of sheet metal that is provided with a return bend along a neck structure that serves to interconnect the two plates. The wings 29 above referred to are connected with the neck 33 along the lateral edges 34 thereof and are turned inwardly to the guiding position for cooperating with the springs 14 and 15.

The rivet body 30 has a head 35 at the rear end that is opposed to the rear plate 19 and opposed to the front plate 18 there is a cooperating head-like structure that is defined as a shoulder or overhanging part 36. Said rivet body 30 and the holes 31 therefor are of square form so as to positively position the rivet structure 37 as a whole relatively to the plates 18 and 19. Said rivet body is projected forwardly from the shoulder 36 and the front plate 18 and at the forward end comprises a downwardly directed branch 38 that extends along in front of the front plate 18 and in spaced relation thereto and which at its lower end is provided with an inwardly or rearwardly directed tip or point 39. Thus the part 40 of the rivet structure 37 in front of the shoulder 36 is of a modified U-shape and on this part is mounted for substantially free

movement the handle or finger-piece 41 by means of the opening 42 provided therein, said handle being generally in the form of a disc of sheet metal.

Under conditions of use the handle 41 will be slipped along from one end to the other of the U-shaped structure 40 for changing the direction of movement of the slide 10, the longitudinally directed branch 38 serving as a guide-way for changing the position. For upward movement contact is made with the end wall 43 adjacent the shoulder 36 and for downward movement contact is made with the tip or nose 39.

Said tip or nose 39 has the free end 44 opposed to the face of the front plate 18, and is free from any direct or positive connection therewith.

Thus in the cases of the different movements and manipulations of the handle for moving the slide all of the strain will be confined to the structure of the rivet and there will follow no tendency to distort the plates or the general structure of the slide.

The plates 18 and 19 are provided, as shown, each with a longitudinally directed strengthening rib 45 that is formed by indenting the material of which said plates are formed.

I claim as my invention:—

1. In interlocking fastener construction, a pair of opposed fabric edge structures provided with interlocking fastener devices and a slide for cooperating with said devices for connecting and disconnecting the same comprising a pair of opposed plates that are separated by a space for admitting said devices, a rivet structure having a body that cooperates with the outside faces of said plates so as to tend to limit the outward spacing thereof, a handle for operating said slide, a part of said rivet structure serving as the support for said handle, and said part being of U-shape and extended over an appreciable part of the length of one of said plates and with the free end opposed to said last named plate.

2. In interlocking fastener construction as described in claim 1, said body of the rivet structure being entered into holes in said plates, the cross-section of said body and the walls of said holes being of non-circular form so as to prevent relative rotative movement.

GEORGE EDWARD PRENTICE.