

July 21, 1936.

K. M. FRITTS

2,048,544

SEPARABLE FASTENER

Filed Oct. 12, 1933

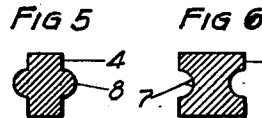
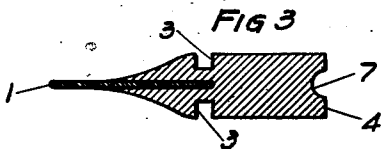
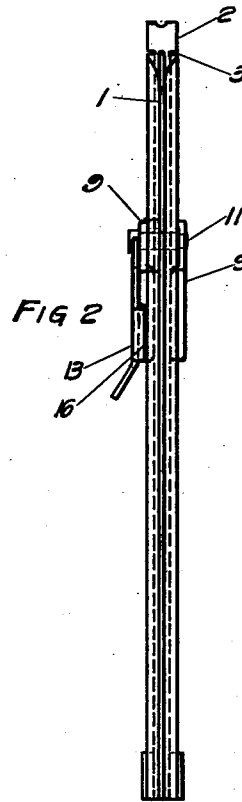
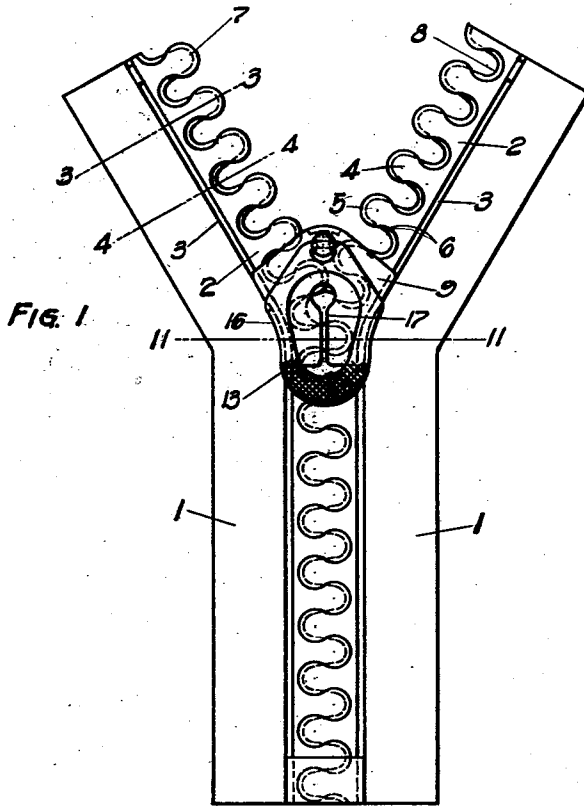


FIG. 6

FIG. 11

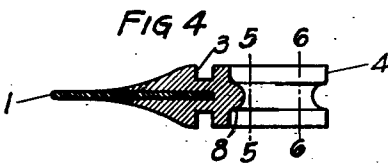


FIG. 9

FIG. 10

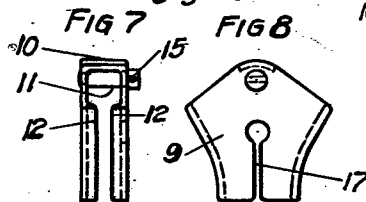
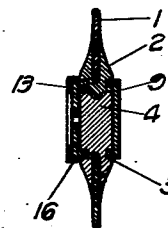
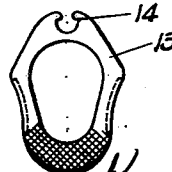
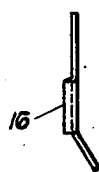


FIG. 8



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UNITED STATES PATENT OFFICE

2,048,544

SEPARABLE FASTENER

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Application October 12, 1933, Serial No. 693,299

5 Claims. (Cl. 24—205)

The present invention is designed to simplify separable fasteners. In carrying out my invention preferably I provide a resilient strip on which the interlocking members are formed integrally and from which they project. The members are swung into and out of engagement, by the usual fanning action through the distortion or resilience of the strip on which the members are formed. The invention contemplates a convenient form of members simplifying their fabrication and supplying an efficient structure. The invention also contemplates forming the strips with interlocking members and attaching the same to a stringer, or tape, in one operation—if rubber is used, during the vulcanization of the rubber. Features and details of the invention will appear from the specification and claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing as follows:—

Fig. 1 shows a front elevation of a fastener.
Fig. 2 a side elevation of the same.
Fig. 3 a section on the line 3—3 in Fig. 1.
Fig. 4 a section on the line 4—4 in Fig. 1.
Fig. 5 a section on the line 5—5 in Fig. 4.
Fig. 6 a section on the line 6—6 in Fig. 4.
Fig. 7 a side elevation of the slider.
Fig. 8 a front elevation of the same.
Fig. 9 a side elevation of the slider tab.
Fig. 10 a front elevation of the slider tab.
Fig. 11 a section on the line 11—11 in Fig. 1.

1 marks the stringers, 2 a rubber strip extending along the edge of the stringers and preferably secured thereto during a vulcanization of the rubber. The strip is provided with a longitudinally extending guide groove 3. Interlocking members 4 project integrally from the strip. These members are of bulbous form having an enlarged outer end 5 and necks 6 and when swung into engagement the enlarged, or bulbous ends engage the necks of the opposing members, thus locking these members against separation in a direction in the plane of the stringers. The members are provided with interfitting ribs and grooves. A groove 7 extends around the outer parts of the projection and a rib 8 extends around the connected bases of the members, the grooves being adapted to receive the ribs as the stringers are moved into closed position. These ribs form interlocking surfaces preventing the disengagement of the members by a movement at right angles to the plane of the stringers. Thus through these interengaging surfaces the members are locked against disengaging movement in all directions.

A slider is formed of opposing plates 9 having a connecting neck piece 10. The neck piece is re-enforced by a rivet 11. The slider has the in-turned flanges 12 which are flaring with relation to each other and adapted to operate in the guide grooves 3, the operation of the slider being to fan out the members to separate them and to swing them together as the slider is drawn over them to lock them.

A tab 13 has pivot projections 14 which are adapted to extend into an opening 15 in the rivet so as to form a pivotal support for the tab. The tab is provided with flanges 16 at each side and the slide plates 9 have the slots 17 rendering them compressible edgewise. The flanges 16 are so proportioned that when the tab is forced down to place it compresses the flanges of the slider edgewise and forms a sufficient engagement to lock the slider in position.

In forming this structure the rubber strips with their interlocking projections are preferably vulcanized in an integral whole and secured to the tape during the vulcanizing operation.

The resilient nature of the strips permits the formation of the strip as a whole integrally with the projecting interlocking members and the strips through their resiliency may be sprung, or bent, to afford the necessary fanning action of the members to separate and move them into interlocking engagement. Various shapes of interlocking members may be used, but the shape illustrated as an example is preferable in that it may be readily molded and removed from the mold.

What I claim as new is:—

1. A separable rubber fastener comprising a pair of rubber strips each having a series of similarly shaped interlocking members of rubber integral with the strip and separable through a fanning action of the members, said members having interlocking surfaces said surfaces providing interlocking shoulders facing edgewise and crosswise and locking the members against disengaging movement in all directions.

2. A separable fastener comprising a pair of strips each having a series of interlocking members of resilient distortable material; said members having bulbous ends and relatively narrow necks, the bulbous ends of each series interfitting with the necks of the opposed series, the engaging surfaces of said members having inter-engaging ribs and grooves.

3. A separable fastener comprising a pair of rubber strips and interlocking members formed integrally with and projecting from each of said strips, said members having bulbous ends and

relatively narrow necks, the bulbous ends of each series interfitting with the narrow necks of the opposed series, the engaging surfaces of said members having inter-engaging ribs and grooves.

- 5 4. A separable fastener comprising interlocking members; a slider having flanges operating on the members, said slider being compressible edgewise permitting a movement of the flanges toward and from each other; and a tab on the slider engaging the flanges of the slider and adapted to compress
10 the same to lock the slider.

5. A separable fastener comprising a pair of resilient strips having guide shoulders thereon, interlocking members projecting therefrom, a slider having flanges operating on the guide shoulders for actuating the members, said slider
5 being compressible edgewise, permitting a movement of the flanges toward and from each other; and a tab mounted on the slider and engageable with the flanges of the slider to compress the
10 same.

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