Feb. 14, 1928. 1,659,480

J. F. CARPMILL

FASTENER

Filed March 30, 1927

Fig. 1

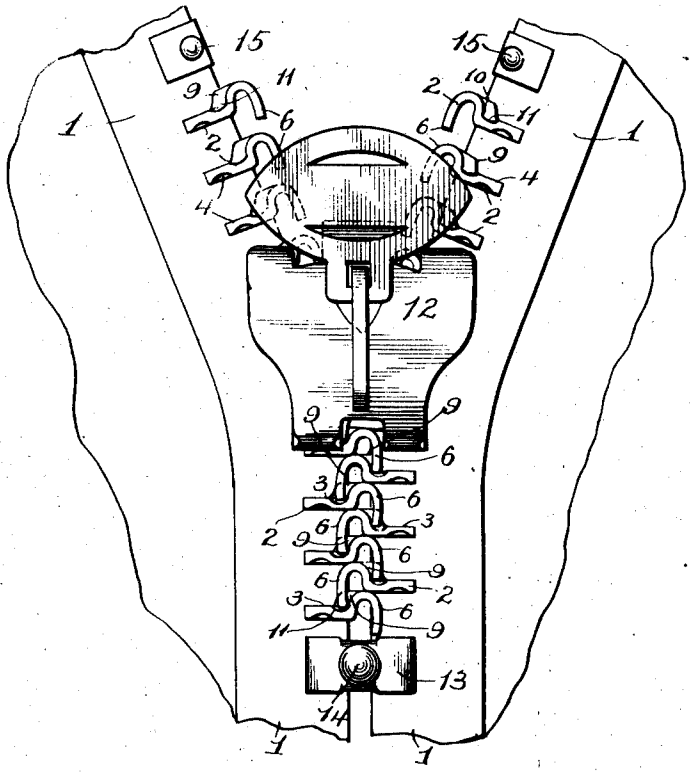
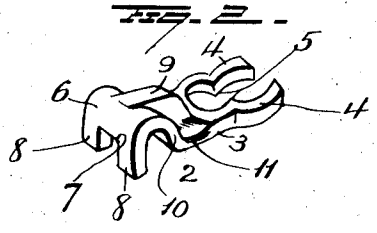



Fig. 2




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# UNITED STATES PATENT OFFICE.

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## FASTENER.

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This invention relates to improvements in fasteners and more particularly to that type which are adaptable for use on overshoes, traveling and other bags, and the like and in which two members are connected and a closure effected by means of interlocking units connected with the respective members, said units being operable to interlock or to be released with the use of a slide device.

An object of the present invention is to improve and simplify fasteners of the type specified and to so construct the interlocking units that hook portions of those on one supporting member shall readily ride over hook portions of units on another member of the closure and assume interlocking relation thereto; so that said units may be disengaged and the hook of one unit ride backwardly over the hook portion of an adjacent unit to permit separation of the closing members, so that lateral displacement of the units of one set relatively to those of the other set will be effectually avoided, and to construct the units of one set of fasteners that they will be permitted to have rocking movement relatively to the units of the other set and thus give flexibility to the structure when the sets of units are interlocking with each other.

With this and other objects in view, the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings;

Figure 1 is a view illustrating an embodiment of my invention, and

Figure 2 is a detail view illustrating the construction of one of the fastener units.

In the embodiment of the invention shown in the drawings, two supporting members, such as tapes or stringers which may form the closure portion of the article to which my improvements are applied, are shown at 1, 1, and these tapes or stringers carry the interlocking devices or fastener units 2. It will be understood that the tapes or stringers are suitably secured to the respective separable members to be fastened together. The fastener units on one tape or stringer are identical in construction to those on the other tape or stringer and the fasteners on one tape or stringer alternate with those on the other.

Each fastener unit 2 includes a body portion 3 which is bifurcated to form two clamping arms or members 4 and these are formed with teeth 5 to engage the tape or stringer entering between the arms or members 4, the fastener units being thus securely fastened to the tapes or stringers. The metal of each fastener unit projects first upwardly from one end of the body portion 2 and then downwardly to form a hook 6, the top of which projects above the horizontal plane of the body or clamp portion 3, and the free depending portion of the hook is disposed approximately at right angles to the body or clamp portion 2 and at its free lower end it is provided with a central notch 7, forming two small depending fingers 8. On the back of the hook, preferably at the juncture of the latter with the body portion 3, a centrally located knob or projection 9 is formed, and adjacent to this knob or projection, the forward or neck portion 10 of the body 3, is rounded or beveled transversely as at 11, at respective sides of the knob or projection 9.

A slider 12 is employed for causing the fastener units on one tape to be engaged with or disengaged from the fastener units on the other tape, and this slider may be of any preferred construction.

When the improvements are employed as closure fastening means for a shoe or other article in which one end portion of the opening should be permanently closed, the two tapes or stringers are permanently united by a connector 13 which may be suitably clamped to said tapes, and this connector may be provided with a projection to form a bottom stop 14 for the slider. Upward travel of the slider may be limited by stops 15 secured to the tapes or stringers.

When the slider is moved upwardly, the two tapes or stringers of the closure will be brought together and the fastener units on one tape or stringer to interlock with the fastener units on the other tape or stringer. In effecting such interlocking connection, the free end of the hook of each fastener on one tape or stringer will ride over the upwardly projecting hook of a fastener unit on the other tape or stringer, and the notched end of one hook will receive the knob or projection 9 on an adjacent hook, so that the small fingers 8 on one fastener unit will become disposed at respective sides of a knob 9 on an adjacent fastener unit

and the free depending portion of the hook of a fastener unit on one tape or stringer will become disposed behind the upstanding portion of the hook on adjacent fastener unit on the other tape or stringer and thus the tapes forming the closure will be locked together and lateral displacement of a fastener unit on one tape or stringer relatively to a fastener unit on the other tape will be prevented by the knob 9 of one fastener unit engaging fingers 8 on superimposed fastener unit. By the provision of the beveled or rounded portions 11, one fastener unit may have a rocking movement on an adjacent fastener unit and thus the fastening means as a whole is given adequate flexibility.

It is evident that downward movement will effect separation of the fastener units of the respective tapes or stringers, the hooks on one tape or stringer riding over the hooks on the other tape or stringer.

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is:—

1. Fastening means for separable members comprising two sets of fastener units, each fastener unit comprising a body portion for application to supporting means, and a hook portion having a part projecting upwardly above the plane of said body portion and having a free end portion terminating below the plane of said body portion, whereby the free end portion of the hook portion of one unit may engage behind the upwardly projecting hook portion of an adjacent unit.

2. Fastening means for separable members comprising two sets of fastener units, each comprising a body portion and a hook portion, the latter to have interlocking relation with the hook portion of an adjacent unit, each unit having a knob or projection between the body and hook portion and the hook portion of each unit constructed to engage over a knob or projection of an adjacent unit, whereby lateral displacement of the units will be prevented.

3. Fastening means for separable members comprising two sets of fastener units, each comprising a body portion and a hook portion, the latter to have interlocking relation with the hook portion of an adjacent unit, each unit having a knob or projection between the body and hook portions, the hook portion of each unit constructed with a bifurcated end to engage over said knob or projection of an adjacent unit, whereby lateral displacement of the units will be prevented, and each unit having beveled portions at respective sides of said knob or projection to permit rocking of the bifurcated end of the hook of an adjacent unit.

4. Fastening means for separable members comprising two sets of fastener units, each fastener unit comprising a body portion for application to supporting means, and a hook portion having the bight thereof projecting upwardly whereby the hook of one unit may engage over the hook of an adjacent unit, each fastener unit having transversely disposed beveled portions which will permit rocking movement transversely of the fastener units for giving flexibility to the fastening means.

5. Fastening means for separable members, comprising two sets of fastener units, each of said units comprising a body portion and a hook portion having an upwardly projecting part to be engaged by the hook portion of an adjacent unit, each unit also having a knob or projection between the body and said hook portions, the free end of the hook of each unit being bifurcated to engage over the knob or projection of an adjacent unit, and each unit having transverse rocking engagement with an adjacent unit.

In testimony whereof, I have signed this specification.

JOHN F. CARPMILL.