May 11, 1948. F. R. TABERLET 2,441,377

ADJUSTABLE FASTENER

Filed Nov. 11, 1944 2 Sheets-Sheet 1

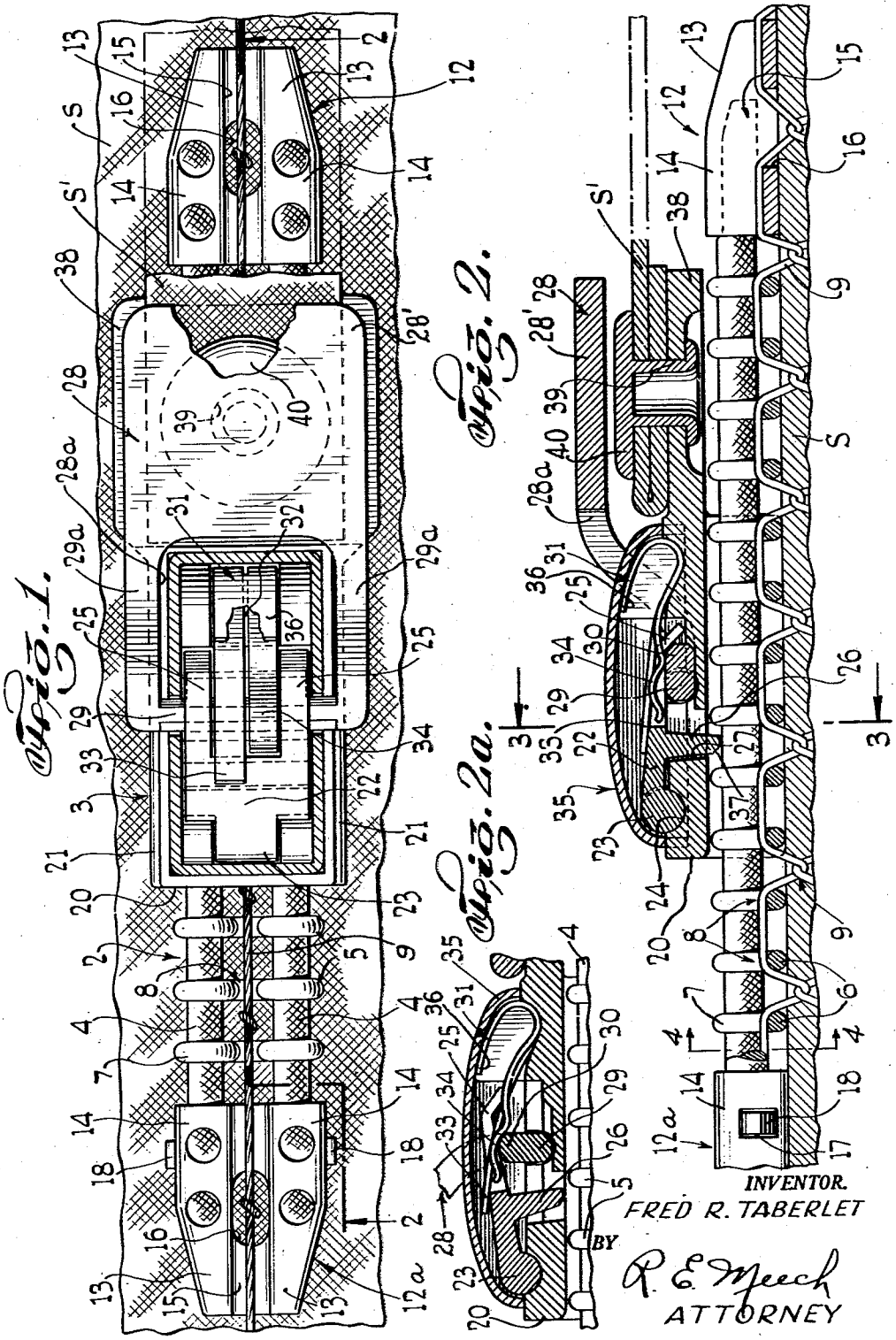


Fig. 1.

Fig. 2.

Fig. 2a.

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May 11, 1948. F. R. TABERLET 2,441,377

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Filed Nov. 11, 1944 2 Sheets-Sheet 2

Fig. 3.

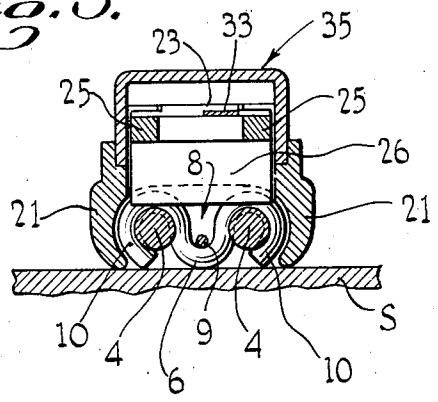


Fig. 4.

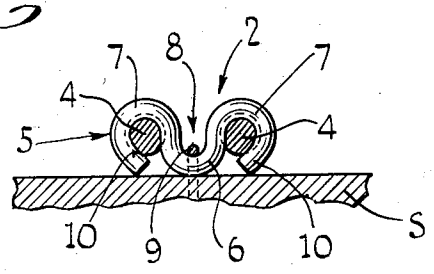
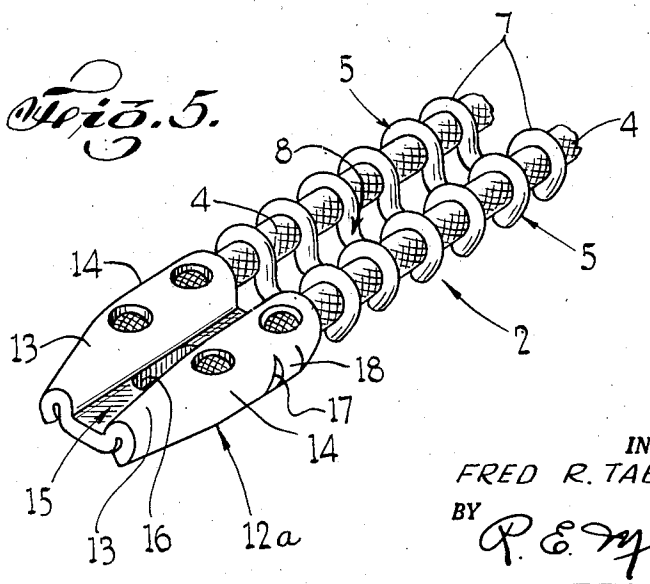


Fig. 5.



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UNITED STATES PATENT OFFICE

2,441,377

ADJUSTABLE FASTENER

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Application November 11, 1944, Serial No. 562,990

22 Claims. (Cl. 24—206)

1

This invention relates to adjustable fasteners of the type comprising a flexible track including a series of spaced-apart stops or the like supported in a flexible manner and a cooperating slide member which is movable along the track and is adapted to be locked selectively in various adjusted positions thereon.

Heretofore, various types of flexible tracks have been suggested for adjustable fasteners. Usually such a track consisted of a plurality of spaced-apart stops which were clamped, sewn or otherwise attached to a flexible supporting member consisting of a tape or stringer. The flexible track was sewn or otherwise attached to the article with which the fastener was to be used by means of the tape or stringer. In applying a fastener constructed in such a manner to the article, if it were desired to cover the tapes or stringers so as to provide a neat application, it was necessary to slit or cut the material of the article and position the fastener therein with the stops extending through the slotted opening. It will be seen that the slitting or cutting of the material of the article for the application of such a fastener was not only an extra operation and laborious, but, in addition, inconvenient and expensive; also an adjustable fastener applied in such a manner presented a bulky application which oftentimes interfered with efficient operation and use of the fastener, and diminished the normal flexibility of both the fastener and the article which, of course, was objectionable.

According to my invention, there is provided an adjustable fastener wherein the flexible track consists of a plurality of spaced-apart stop members attached to a pair of spaced-apart flexible cord members so as to provide a construction wherein a tape mounting or supporting member is dispensed with and, consequently, all of the above mentioned disadvantages eliminated.

It is one of the objects of the present invention to provide an adjustable fastener embodying a new and improved track construction which is simple and inexpensive and at the same time, one which can be easily and conveniently applied to the article or closure with which it is adapted to be used.

It is another object of the invention to provide an improved adjustable fastener having a track which is more flexible than the tracks of other adjustable fasteners heretofore proposed and a track which can be applied to the article with which it is to be used without diminishing the normal flexibility either of the material of that article or the fastener.

2

It is a further object of this invention to provide an improved adjustable fastener which presents a neat and attractive appearance, and, at the same time, one that is effective and efficient in its use.

It is still another object of my invention to provide an improved stop element or member for the flexible track of an adjustable fastener which can be easily and inexpensively formed and attached to the flexible track members.

It is still a further object of this invention to provide an improved end member for the flexible track of an adjustable fastener which may be used selectively either as a slider guide member or a slider stop member.

Various other objects and advantages of this invention will be more apparent in the course of the following specification, and will be particularly pointed out in the appended claims.

In the accompanying drawings, there is shown for the purpose of illustration, one embodiment which my invention may assume in practice.

In these drawings:

Fig. 1 is a plan view partly in section of the improved adjustable fastener of my invention;

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1;

Fig. 2a is a longitudinal fragmentary section through the slider, similar to Fig. 2, showing the locking member thereof in unlocked position;

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2;

Fig. 4 is a sectional view taken on line 4—4 of Fig. 2 showing the flexible track in accordance with the present invention; and

Fig. 5 is a perspective view of my improved flexible track for adjustable fasteners.

The adjustable fastener shown in Fig. 1 is of the general type illustrated in the patent to Noel Statham, No. 1,887,826, granted November 15, 1932, in that it comprises a track generally designated at 2, which is secured to the article, or garment, for example, one end of a belt, and which track is adapted slidably to support a slider, generally designated at 3, which is secured to another part of the article or garment or to the other end of the belt, and which slider may be selectively adjusted longitudinally of the track and locked in any desired position therealong.

Referring more particularly to the drawings, the improved track, in accordance with the present invention, comprises a pair of spaced-apart substantially parallel, longitudinally extending flexible members 4, each of which consists of a fabric or metallic cord, wire or the like. Ex-

tending between the flexible members or cords 4 substantially perpendicular thereto, there is positioned a series of spaced substantially parallel stop elements or members 5, which are attached to the flexible members in a manner hereinafter to be described. Each of the stop elements 5 consists, preferably, of a round piece of metallic wire bent so as to form a central substantially U-shaped connecting portion 6 and a substantially loop-shaped clamping or attaching portion 7 on each end thereof, with the loop-shaped portions being bent so as to be curved reversely from the U-shaped connecting portion 6 and extending thereabove. The extreme ends of the wire are bent and arranged preferably so as to extend to a point adjacent the bottom of the central connecting portion 6 substantially flush and in alignment therewith for a purpose to be described and the center connecting portion 6 and the loop-shaped clamping portions 7 of each of the elements are disposed substantially in the same plane. The clamping portions 7 of each of the elements 5 are bent around the flexible members or cords 4 so as to form loop-shaped portions through which the flexible members extend and by means of which they are securely attached thereto. In such a construction it will be seen that the stop elements 5 are in alignment with each other and that there is provided centrally of the track, a channel 8 extending therealong between the loop-shaped portions 7 of the stop elements and between the flexible members 4.

The flexible track is attached to the article or supporting member with which it is to be used by means of the central connecting U-shaped portions 6 of each of the stop elements 5. The track is positioned on the article or supporting member and is attached thereto preferably by means of stitching 9 extending over and around the central connecting portions of the stop elements, as more clearly shown in Fig. 2 of the drawings, so that the track is attached to the article or supporting member throughout the length thereof. In other words, the stitching 9 is disposed in the channel 8 between the flexible members 4 and extends successively over the central connecting portions 6 of the succeeding stop elements. In applying the track to the article or supporting member, it will be understood that the ends 10 of the wire which are disposed substantially in under the loop-shaped portions 7, rest upon the surface of the article or supporting member, as shown in Fig. 2 of the drawings, so as to stabilize the track, thereby preventing it from turning or twisting relative to the article or supporting member.

At the end of the flexible members or cords 4 there is arranged, if desired, end members 12 and 12*a* in accordance with the present invention, which are adapted to act either as a guide for threading the slider 3 on to the track 2, or as a stop member for limiting the longitudinal movement of the slider therealong, so as to prevent unintentional removal of the slider therefrom. Each of the end members 12 and 12*a* consists of an elongated body member preferably made from sheet metal and having preferably tapered portion 13 arranged on the outer end thereof. Each of these end members, like each of the stop elements 5, also has preferably a loop-shaped clamping portion 14 arranged to either side thereof by means of which the end member is securely clamped to the ends of the flexible members or cords 4. Between the loop-

shaped clamping portions 14, there is provided centrally of the body member extending longitudinally thereof, a channel 15 so as to provide a member having substantially the same cross-section as each of the stop elements 5. In the bottom wall of the channel 15 of each of the members 12 and 12*a*, there is provided preferably an opening or holes 16, through which the stitching 9 passes for securing these end members to the article or supporting member. Each of the end members 12 are spaced from the endmost fastener element 5 of the track substantially the same distance that each of the stop elements 5 are spaced from each other.

In each of the outer side walls of each of the end members 12 adjacent the inner end thereof, there is provided a rectangular-shaped slot or recess 17 which is formed by cutting or striking from the material of the end member, a rectangular-shaped finger-like portion 18. These finger-like portions 18 are adapted, if desired, to be bent so as to extend or project outwardly from the sides of the end member and track, as shown in Fig. 1 of the drawings, for limiting the movement of the slider along the track in a manner to be described.

The slider or locking member 3 may be of any suitable construction whereby it may slide over the track or stop elements and is provided with means whereby it may be lockingly engaged between any two adjacent stop elements or between the endmost stop element at either end of the track and the adjacent end stop member. The slider preferable for use and as illustrated herein, is of the same construction as disclosed in my co-pending application Serial No. 562,991, filed November 11, 1944. Such a construction comprises an elongated body member 20, preferably die cast, having arranged on one side thereof a pair of spaced-apart curved flange portions 21 which are disposed along the marginal edge of the slider body so as to provide a longitudinally extending channel on this side thereof for slidably receiving the stop elements 5 of the track 2.

On the opposite side of the body member 20 there is arranged at one end thereof, a locking member 22 having an enlarged bearing portion 23 arranged on one end thereof which is journalled or pivoted in a recess 24 in that end of the body member so as to provide substantially a knuckle joint. Extending outwardly from the enlarged journal portion 23 of the locking member, there is provided a pair of spaced-apart arm-like members 25 which extend toward and beyond the center of the body member. Between the enlarged bearing portion 23 of the locking member and the outer ends of the arm-like portions 25 thereof, there is carried thereby a locking projection 26, which is disposed transversely of the slider body and extends through an opening 27 therein and which projects into the channel on the opposite side of the slider body, for a purpose hereinafter to be described.

There is provided a pull or slider actuating member 28 in the form of a substantially rectangular plate and having on the inner end thereof a rectangular aperture 28*a* which forms at the end, a pair of spaced legs 29*a* and a transversely extending trunnion or pivotal portion 29, which is disposed centrally of the body member 20 and has a cam portion 30 arranged integrally therewith on the inner side thereof. The pivotal portion 29, together with the cam portion 30, is positioned between the slider body 20 and the

arm-like portions 25 of the locking member 22 and cooperates therewith for a purpose and in a manner hereinafter to be described.

On the opposite end of the body member 20, there is arranged a U-shaped spring 31, having one leg thereof split as at 32 substantially centrally thereof, so as to provide a relatively long leaf-like spring portion 33 and a relatively short leaf-like spring portion 34. Both these leaf-like portions 33 and 34 extend preferably between the arm-like portions 25 of the locking member. The longer leaf-like portion 33 is of such length as to rest on the upper side of the locking member 22 adjacent the locking projection 26 thereof, as shown in Figs. 1 and 2 of the drawings. It is one of the purposes of this longer leaf-like spring portion to urge and maintain the locking projection 26 in locked position in the channel of the slider body. The shorter leaf-like portion 34 of the spring 31 extends over and is disposed on the pivotal portion 29 together with the cam portion 30 of the pull member 28, and is adapted to urge and maintain the pull member 28 to position against the slider body substantially parallel thereto when the pull member is disposed in either direction, so as to prevent accidental movement of the pull member.

There is provided a cap or housing member 35 preferably made of sheet metal, which is assembled on and attached to the body member in any suitable manner, preferably by indentations and projections (not shown) on the slider body and cap member, respectively, so that the cap member can be merely snapped into position on the slider body. This cap or housing member encloses the locking member 22, the pivotal portion 29 together with the cam portion 30 of the pull member 28, and the spring 31. The outer leg portion 36 of the spring 31 is forced against the inner side of the cap member 35 when it is assembled and attached to the slider body so as to make the spring effective. It will be seen that this cap or housing member not only encloses all of the above members, but also cooperates with the slider body to maintain them in their operable positions, so as to prevent any one of the members from being displaced from its operable position.

It will be understood that the flexible track and slider are applied to members that are usually under tension and, accordingly, it will be seen that it is necessary that the slider be locked only against movement in one direction along the track or in the direction of the tension. In such a case, one side of the locking projection 26 is relieved or bevelled, as at 37, so that the locking projection will ratchet over the stop elements 5 when the slider is moved in one direction, whereby the locking projection is ineffective when the slider is moved in such direction. By providing a locking projection of such construction, it will be seen that the slider can be easily moved along the track merely by pushing the slider along the track in that direction.

At one end of the slider body 20, there is provided an extended portion 38, preferably having a hole or aperture 39 arranged therethrough to which the other side or part of the article or supporting member, is attached by means of a grommet or eyelet 40 or any other suitable attaching means.

The improved fastener of my invention is used and functions in the following manner. After the flexible track 2 has been attached to one part of the article or supporting member S by means of stitching 9 and the slider 3 has been attached to the other part of the article or supporting member S' as hereinbefore described, the fastener is ready for use.

The slider is then threaded on to the track 2 over one of the end members 12 at one end thereof, with the tapered portion 13 of the end member acting to thread and guide the stop elements 5 into the channel of the slider body, due to the cooperation of the circular flange portions 21 thereof with the outer sides of the loop-shaped clamping portions 7 of the stop elements. The end member 12 at the outer end of the track is usually adapted to act as a stop for limiting the outward movement of the slider therealong. In such case, the finger-like portions 18 on either side of this end member, are bent outwardly from the recesses 17 so as to project to either side of the end member, as shown in Fig. 1. When these finger-like portions are disposed in such extended position, it will be seen that the outer ends of the flange portions 21 of the slider body will strike the same when and if the slider body is moved to the outer end of the fastener, thereby preventing removal of the slider from that end of the track. Also, if desired, the finger-like portions 18 of the end member 12 at the inner end of the track may be bent outwardly from the sides of the member, in order to prevent displacement or removal of the slider from either end of the track, which may be desirable in certain applications of the fastener.

As the slider body passes over the track, it will be seen that the flange portions 21 of the slider body cooperate wtih the loop-shaped clamping portions 7 of the stop elements 5 as the slider is moved along the track, so as to guide the slider in its movement therealong. In other words, the circular flange portions 21 conform substantially to the shape of the outer side portions of the loop-shaped clamping portions 7 with which they cooperate to guide the silder, as shown in Fig. 3. When the slider is disposed on the track, it will be understood that the transverse locking projection 26 of the locking member 22 extends normally through the recess 27 in the slider body and projects into the channel thereof so as to be disposed between any two adjacent stop elements 5 thereby locking the slider against movement in one direction along the track. It will be seen that the slider can be moved along the track in a direction toward the outer end thereof without manipulating the pull member 28, that is, merely by pushing the slider body therealong. This is due to the fact that the outer side of the locking projection 26 is bevelled at 37 which permits the locking member to ratchet over the loop-shaped clamping portions 7 of the stop elements against the action of the leaf spring portion 33 of the spring 31 when the slider is moved in such direction. However, when the slider is again brought to rest with the locking projection 26 extending into the slider channel, it will be seen that while the slider may be continually moved in that direction along the track, that is, in a direction toward the outer end of the track, it is prevented from moving in the opposite direction due to the abruptness of the inner side of the locking projection which cooperates with the adjacent stop element to lock the slider. Thus, it will be seen that the slider may be moved in one direction along the fastener track to any selected point of adjustment and is prevented from

moving in the opposite direction due to the action of the locking member.

When it is desired to move the slider along the track by means of the pull member **28**, the pull is lifted from its extended position at either end of the slider so as to be disposed substantially perpendicular to the slider body and the track, as shown in Fig. 2*a* of the drawings. In moving the pull to such position, it will be seen that the cam portion **30** of the pivotal portion **29** thereof cooperates with the arm-like portions **25** of the locking member **22**, thereby moving the locking arm about its pivotal connection at **23** and the locking projection **26** carried thereby out of the channel of the slider body, and, of course, out of engagement with the stop element disposed therein. It will be seen now that the slider is unlocked and free to move in either direction along the track. If it is desired again to lock the slider, the pull member is moved about its pivotal connection toward the slider body and when the pull reaches an angle in the vicinity of 45 degrees, it will tend to be snapped downwardly against the slider substantially parallel thereto and to the track, as shown in Fig. 2 of the drawings. After the pull member is released and assumes such inoperative position against the slider, it will be seen that the locking member **22** is moved about its pivotal connection at **23**, due to the action of the leaf portion **33** of the spring **31**, thereby moving the locking projection **26** again into the channel of the slider and in engagement with the stop elements disposed therein. It will be understood that the pull member is constructed and arranged with respect to the slider body so that it can be arranged in extended position to either end thereof substantially flat against the slider body.

It will be seen that the arm-like portions **25** of the locking member **22** rest at all times upon the pivotal portion **29** together with the cam portion **30** of the pull member. In other words, the arm-like members **25** act as followers for the cam **30** throughout the manipulation of the pull member **28**. It is the dual purpose of the leaf-spring portion **33** of the spring **31**, to urge and maintain the locking projection **26** in extended position in the channel of the slider body and to maintain the arm-like members **25** in contact with the cam portion **30** of the pull member. If desired, the tab portion **28'** of the pull member **28** may be offset from the pivotal portion **29** thereof, as shown in Fig. 2 of the drawings, so that the tab portion will cover the extended portion **30** of the slider body and point of attachment of the slider to the article and, at the same time, not interfere with the movement or locking action of the slider.

By providing such a construction, it will be seen that the flexible members or cords **4** act as spacers for the stop elements **5** and that when the slider is locked in position, that the pulling force exerted by the locking projection thereof, is distributed throughout both of the flexible members. It will be seen also that the central connecting portions **6** of the stop elements together with the two ends of the wire thereof, rest upon the material of the article or supporting member, thereby tending to stabilize the track and also aiding in preventing displacement of the stop elements along the flexible members **4**.

As a result of my invention, it will be seen that there is provided an adjustable fastener having a flexible track which can be inexpensively and conveniently applied to the article or supporting

member with which it is adapted to be used, namely, by means of stitching disposed in the channel in the track formed between the loop-shaped clamping portions of the stop elements. Also, it will be seen that a fastener of such construction can be readily removed and replaced in different positions, if desired, on the article, or it can be easily applied by the amateur or home sewer without the need of any special equipment or tools.

While I have shown and described one embodiment which my invention may assume in practice, it will be understood that this embodiment is merely for the purpose of illustration and description, and that 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 an adjustable fastener of the class described, a flexible track comprising a pair of spaced-apart substantially parallel flexible members, a series of spaced-apart substantially parallel stop elements extending between and attached to said flexible members, each of said stop elements having a central connecting portion disposed between said flexible members and an attaching means arranged to each side of said connecting portion by means of which said stop elements are securely attached to said flexible members.

2. In an adjustable fastener of the class described, a flexible track comprising a pair of spaced-apart substantially parallel flexible members, a series of spaced-apart substantially parallel stop elements extending between and attached to said flexible members, each of said stop elements having a central connecting portion disposed between said flexible members and a substantially loop-shaped clamping portion arranged to each side of said connecting portion with the flexible members extending through said loop-shaped clamping portions.

3. In an adjustable fastener of the class described, a flexible track comprising a pair of spaced-apart substantially parallel flexible members, a series of spaced-apart substantially parallel stop elements extending between and attached to said flexible members, each of said stop elements having a central substantially U-shaped connecting portion disposed between said flexible members and a substantially loop-shaped clamping portion arranged to each side of said connecting portion substantially in the plane thereof with said flexible members extending through said loop-shaped clamping portions.

4. In an adjustable fastener of the class described including a track having a slider mounted thereon for longitudinal movement therealong and adapted for selective adjustment thereon, said track comprising a pair of spaced-apart substantially parallel flexible members having a series of spaced-apart substantially parallel stop elements extending therebetween and attached thereto, each of said stop elements having a central connecting portion disposed between said flexible members and a substantially loop-shaped clamping portion on each end of said connecting portion substantially in the plane thereof by means of which said elements are securely attached to said flexible members and with which the slider cooperates to guide it in its movement along the track.

5. An adjustable fastener of the class described, as defined in claim 4, wherein the loop-shaped clamping portions of each of the stop elements

extend above and outwardly from the central connecting portion.

6. In an adjustable fastener of the class described including a track having a slider mounted thereon for longitudinal movement therealong and adapted for selective adjustment thereon, said track comprising a pair of spaced-apart substantially parallel flexible members having a series of spaced-apart substantially parallel stop elements extending therebetween and attached thereto, each of said stop elements having a central substantially U-shaped connecting portion disposed between said flexible members and a reversely curved substantially loop-shaped clamping portion on each end of said connecting portion substantially in the plane thereof by means of which said elements are securely attached to said flexible members, and with which the slider cooperates to guide it in its movement along the track.

7. An adjustable fastener of the class described, as defined in claim 6, wherein the reversely curved loop-shaped clamping portions of each of the stop elements extend above and outwardly from the central connecting U-shaped portion.

8. In an adjustable fastener of the class described which is adapted to be attached to a supporting member, a flexible track comprising a pair of spaced-apart substantially parallel flexible members, a series of spaced-apart substantially parallel stop elements extending between and attached to said flexible members, each of said stop elements having a central connecting portion disposed between said flexible members and a clamping portion on each side of said connecting portion by means of which said elements are securely attached to said flexible members, said flexible track attached to said supporting member by the central connecting portions of said stop elements between said flexible members.

9. In an adjustable fastener of the class described which is adapted to be attached to a supporting member, a flexible track comprising a pair of spaced-apart substantially parallel flexible members, a series of spaced-apart substantially parallel stop elements extending between and attached to said flexible members, each of said stop elements having a central connecting portion disposed between said flexible members and a substantially loop-shaped clamping portion on each side of said connecting portion by means of which said elements are securely attached to said flexible members, said loop-shaped portions extending above said connecting portion and disposed substantially in the same plane, said flexible track attached to said supporting member by the central connecting portions of said stop elements between said flexible members.

10. In an adjustable fastener of the class described which is adapted to be attached to a supporting member, a flexible track comprising a pair of spaced-apart substantially parallel flexible members, a series of spaced-apart substantially parallel stop elements extending between and attached to said flexible members, each of said stop elements having a central substantially U-shaped connecting portion disposed between said flexible members and a reversely curved substantially loop-shaped clamping portion on each side of said connecting portion by means of which said elements are securely attached to said flexible members, said flexible track attached to said supporting member by the central U-shaped connecting portions of said stop elements between said flexible members.

11. In an adjustable fastener of the class described which is adapted to be attached to a supporting member, a flexible track comprising a pair of spaced-apart substantially parallel flexible members, a series of spaced-apart substantially parallel stop elements extending between and attached to said flexible members, each of said stop elements being a piece of wire formed so as to provide a central substantially U-shaped connecting portion which is disposed between the flexible members and a reversely curved substantially loop-shaped clamping portion arranged on each side of said connecting portion by means of which said elements are securely attached to said flexible members, said flexible track attached to said supporting member by the central U-shaped connecting portions of said stop elements between said flexible members, with the extreme ends of each of said wire stop elements disposed adjacent the bottom of said U-shaped connecting portion and abutting the face of the supporting member so as to stabilize the track.

12. In an adjustable fastener of the class described adapted for attachment between a pair of supporting members subject to tension having a track and a slider mounted thereon for longitudinal movement therealong and adapted for selective adjustment thereon, said track comprising a pair of spaced-apart substantially parallel flexible members having a series of spaced-apart substantially parallel stop elements extending therebetween and attached thereto, each of said stop elements having a central connecting portion disposed between said flexible members and a substantially loop-shaped clamping portion arranged on each side of said connecting portion by means of which said elements are securely attached to said flexible members, said flexible track attached to one of said supporting members by the central connecting portions of said stop elements between said flexible members.

13. In an adjustable fastener of the class described adapted for attachment between a pair of supporting members subject to tension having a track and a slider mounted thereon for longitudinal movement therealong and adapted for selective adjustment thereon, said track comprising a pair of spaced-apart substantially parallel flexible members having a series of spaced-apart substantially parallel stop elements extending therebetween and attached thereto, each of said stop elements having a central substantially U-shaped connecting portion disposed between said flexible members and a reversely curved substantially loop-shaped clamping portion arranged on each side of said connecting portion by means of which said elements are securely attached to said flexible members, said flexible track attached to said supporting member by the central U-shaped connecting portions of said stop elements between said flexible members.

14. In an adjustable fastener of the class described adapted for attachment between a pair of supporting members subject to tension having a track and a slider mounted thereon for longitudinal movement therealong and adapted for selective adjustment thereon, said track comprising a pair of spaced-apart substantially parallel flexible members having a series of spaced-apart substantially parallel stop elements extending therebetween and attached thereto, each of said stop elements being a piece of wire formed so as to provide a central substantially U-shaped connecting portion disposed between said flexible members and substantially a reversely curved

loop-shaped clamping portion on each side of said connecting portion by means of which said elements are securely attached to said flexible members, said flexible track attached to said supporting member by the central U-shaped connecting portions of said stop elements between said flexible members with the extreme ends of each of said wire stop elements disposed adjacent the bottom of said central connecting portion and abutting the face of the supporting member so as to stabilize the track.

15. In an adjustable fastener of the class described, a stop element comprising a central connecting portion and an attaching portion arranged to each side of said connecting portion integral therewith, each of said attaching portions being substantially loop-shaped with the bottom thereof being substantially flush with the bottom of said central connecting portion so as to be in alignment therewith.

16. In an adjustable fastener of the class described, a stop element comprising a central connecting portion and an attaching portion arranged to each side of said connecting portion integral therewith, each of said attaching portions being substantially loop-shaped and extending outwardly and above said central connecting portion substantially in the same plane with the bottom thereof being substantially flush with the bottom of said central connecting portion so as to be in alignment therewith.

17. In an adjustable fastener of the class described, a stop element comprising a central substantially U-shaped connecting portion and an attaching portion arranged to each side of said connecting portion integral therewith, each of said attaching portions being substantially loop-shaped and curved reversely relative to said connecting portion with the bottom thereof being substantially flush with the bottom of said central connecting portion so as to be in alignment therewith.

18. In an adjustable fastener of the class described, a stop element comprising a piece of wire having a central substantially U-shaped connecting portion and an attaching portion on each end of said wire, each of said attaching portions consisting of a reversely curved loop formed in the end portion of the wire to either side of the U-shaped connecting portion substantially in the plane thereof with the extreme ends of the wire terminating adjacent the bottom of said U-shaped connecting portion so as to be flush and in alignment therewith.

19. In an adjustable fastener of the class described, as defined in claim 4, an end member which is adapted to be positioned at either end of the track, said end member being elongated and tapered at one end and having substantially the same cross section as the track and adapted to be arranged selectively as a guide for threading the slider onto the track and as an end stop member to prevent unintentional removal of the slider from the track.

20. In an adjustable fastener of the class described, as defined in claim 4, an end member which is adapted to be positioned at either end of the track and having substantially the same

cross section as the track, said end member having at least one finger-like portion arranged in a recess in the side thereof and adapted to act as a guide for the slider when the finger-like portion is disposed in the recess and adapted to act as an end stop member for the slider when the finger-like portion extends outwardly and protrudes from the side of the end member so as to be disposed in the path of the slider whereby the finger-like portion prevents unintentional removal of the slider from the track when disposed in such position.

21. In an adjustable fastener of the class described, as defined in claim 6, an end member which is adapted to be positioned at either end of the track and attached to the flexible members, said end member having substantially a U-shaped central connecting portion which is adapted to be aligned with the U-shaped connecting portion of the elements of the track and having the attaching portion arranged to either side thereof by means of which said member is adapted to be attached to the flexible members, said end member adapted to be arranged selectively as a guide for the slider and as an end stop member to prevent unintentional removal of the slider from the track.

22. In an adjustable fastener of the class described, as defined in claim 6, an end member which is adapted to be positioned at either end of the track and attached to the flexible members, said end member having substantially a U-shaped central connecting portion which is adapted to be aligned with the U-shaped central connecting portions of the elements of the track and an attaching portion arranged to either side of the central connecting portion by means of which the member is adapted to be attached to the flexible members, said end member having at least one finger-like portion arranged in a recess in the outer side of one of the attaching portions thereof, said end member adapted to act as a guide for the slider when the finger-like portion is disposed in the recess and adapted to act as an end stop for the slider when the finger-like portion extends outwardly and protrudes from the side of the end member so as to be disposed in the path of the slider whereby the finger-like portion prevents unintentional removal of the slider from the track when disposed in such position.

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