

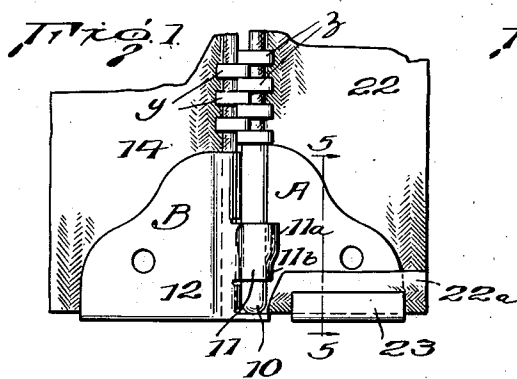
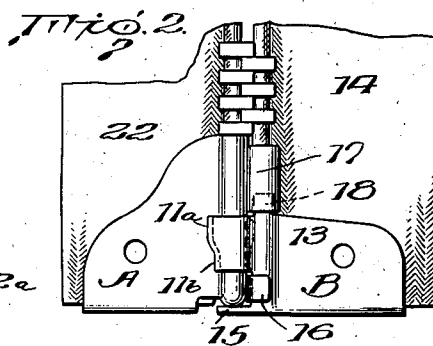
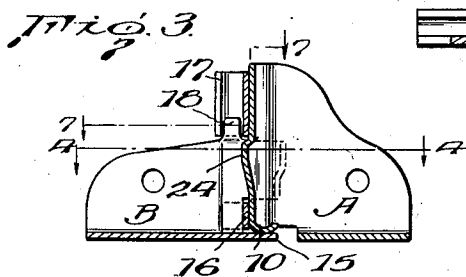
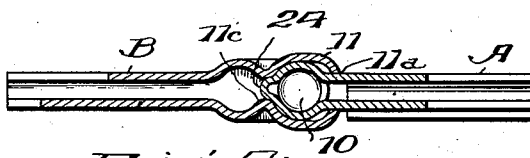
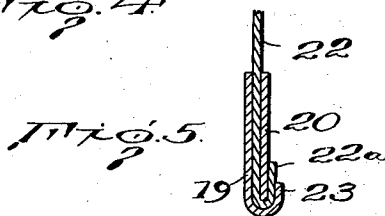
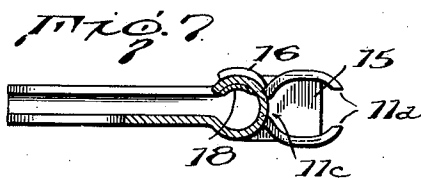
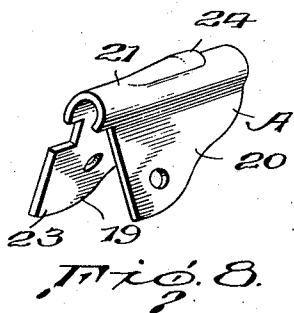
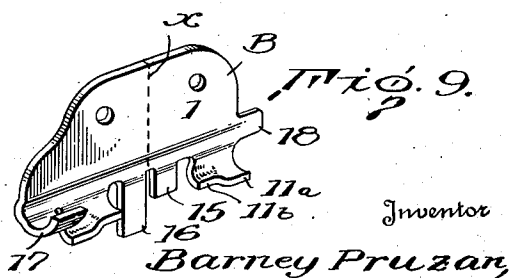
Nov. 14, 1939.

B. PRUZAN

2,180,167

SEPARABLE FASTENER

Filed Jan. 25, 1938



By

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His Attorney

UNITED STATES PATENT OFFICE

2,180,167

SEPARABLE FASTENER

Barney Pruzan, New York, N. Y.

Application January 25, 1938, Serial No. 186,876

18 Claims. (Cl. 24—205)

My invention relates to improvements in separable fasteners, and has to do, more particularly, with the construction of separable end connections for such fasteners.

While separable end connections or "bottom stops" for slide fasteners are well known in the art and are being furnished to the trade by a number of manufacturers, such existing constructions are characterized by certain objectionable manufacturing and structural features, the elimination and correction of which constitute the principal purpose of the present invention. More specifically, lack of rigidity is a recognized characteristic of separable bottom-stops heretofore devised. In no prior art construction with which I am familiar has lateral flexure or "hinginess" along the axis of fastening been eliminated to an extent sufficient to relieve the adjacent interlocked teeth of the fastener proper of torsional strains tending to cause their inadvertent dissociation.

Accordingly, it is a primary object of my present invention to provide a separable bottom-stop for slide fasteners which is characterized by greater rigidity and resistance to flexure than obtainable with previous constructions.

It is also an object of my invention to provide a separable bottom-stop for slide fasteners which may be more securely attached to the conventional stringer which carries the interlocking teeth of the slide fastener and which materially enhances the strength of the terminal portions of the stringers with which it is assembled.

It is another object of my invention to provide a novel, one-piece structural design for the female member of a bottom-stop for slide fasteners, which design is characterized by the unique fact that the stringer-clamping, pin-socket-constituting wing portions of the member extend longitudinally upward from a common fold which lies along the end edge of the associated stringer.

Further objects of my invention are to provide a separable bottom-stop construction for slide fasteners which is attractive, inexpensive to manufacture, easy to operate, and sufficiently rugged and wear-resistant to outlive the garment or other article with which it is adapted for use.

Still further objects, and objects relating to details and economies of construction, installation and use will more definitely appear to those skilled in this art upon familiarization with the detailed description to follow. In one instance, I accomplish the objects of my invention by the means and methods set forth in the following

specification. My invention is clearly defined in the appended claims. A structure constituting a preferred embodiment of my invention is illustrated in the accompanying drawing, in which—

Figure 1 is a plan view of one side of a slide fastener provided with a separable bottom-stop constituting a preferred embodiment of my invention;

Fig. 2 is a plan view of the other side of the same structure;

Fig. 3 is a longitudinal sectional view of the entire structure;

Fig. 4 is a transverse sectional view of the structure, taken on the line 4—4 of Fig. 3;

Fig. 5 is a detail sectional view through the male member of the structure, said view being taken on the line 5—5 of Fig. 1 and illustrating the manner in which the male member is secured to its associated stringer;

Fig. 6 is a detail sectional view through the female member of the structure, said view illustrating the manner in which the outer tongue of one wing portion is curled about a portion of the longitudinal edge of the female member and upon the opposite wing portion thereon;

Fig. 7 is a detail sectional view through the female member of the structure, said view being taken on the line 7—7 of Fig. 3 and illustrating the manner in which the inner tongue of one wing portion is curled about a longitudinally-inwardly-extending lug portion integral with the other wing portion of the female member;

Fig. 8 is a perspective view of the pre-formed blank for the male member preparatory to assembly with its stringer; and

Fig. 9 is a perspective view of the blank for the female member prior to folding and assembly with its stringer.

Figures 4, 6 and 7 are drawn on an enlarged scale.

The same reference numerals refer to the same parts throughout the several views.

In a broad sense, my invention is distinguished from prior art constructions in several aspects. Fundamentally, the male member and the female member which embody it are each of one-piece construction. The association of male with female member is characterized by the presence of a key and slot relationship along two longitudinal axes, one at each side of the pin axis of the male member, all three of which axes lie in what might be defined as the common plane of assembly of the two members. The direct result of this distinguishing feature of my invention is the material reduction or substantial elimination

of "hinginess" of such separable bottom-stops along their axis of connection, whereby localized piercing strains, to which the adjacent interlocked teeth of the slide fastener are frequently subjected, are more safely withstood. In the case of the "hingey" separable stop constructions of the prior art, a localized piercing strain upon, say, the first half dozen teeth, may easily "pop" these teeth apart, necessitating a difficult reassociation of the disengaged tooth elements. With my relatively rigid bottom-stop construction, the adjacent interlocked fastener elements or teeth are, in a sense, reinforced or protected against such strains, and inadvertent dissociation of the fastening at this point is substantially precluded.

The male and female elements which, when assembled, constitute my improved separable bottom-stop for slide fasteners are also individually distinguished from corresponding prior art elements. The female member of my construction consists of one piece of metal or the like which is folded along the end edge of its associated flexible stringer to form stringer-clamping wing portions. These wing portions are provided with lateral extensions formed into a split, pin-receptive socket disposed at the longitudinal or fastening edge of the stringer. Since the side edges of said wing portions are inherently unattached, the split or slotted socket may be die-formed without a slot-cutting operation. Though formed in the "open" side of the blank, my slotted socket is, nevertheless, sufficiently sturdy to resist spreading, due to the provision of unique clamping tongues integral with a wing portion of the female member, which tongues are curled about the longitudinal edge of the associated stringer clamping said wing portions together, adjacent each end of the socket. The clamping tongues mentioned also have utility in their relationship with the pin portion of the male member in that the lower clamping tongue serves as a cam which urges the lower end of the pin of the male member laterally outwardly as it approaches final assembly with the female member, thus "canting" the pin in the socket and bringing the adjoining terminal portions of the stringers into substantial parallelism and closure.

The male member of my preferred construction herein illustrated is also individually novel in that secure assembly thereof with the tape or stringer is possible without piercing the tape. In accordance with a concept of my invention, the tape is clamped upon the tape by laterally extending wing portions having the tubular longitudinal pin as their common fold, maintenance of clamped relationship being effected by a wide tongue integral with one of said wing portions and crimped over upon the other wing portion along the end edge of the associated tape or stringer. Preferably, and more specifically, the end of the tape is extended and folded back upon one wing member so that the extension of the tape is clamped between the outer surface of said wing member and the crimped tongue. The security afforded by such an association of male member with tape is unexcelled by any method of the prior art.

More specifically, and with reference to the accompanying drawing, my invention is preferably embodied in a separable bottom-stop for slide fasteners consisting of one-piece male and female members "A" and "B", respectively. These members are adapted to be associated in a common plane, as shown in Figs. 1, 2 and 3,

by longitudinal insertion of the pin 10 of the male member into the socket 11 of the female member. The socket of the female member is enlarged at its portion 11^a to facilitate such insertion, but the lower portion 11^b thereof is of a size such as to contact the fully seated pin 10 more snugly, due to opposing contact of the lower end of the pin with another portion of the member B, other functions of which are later to be described.

The female member B of the structure is formed from a single sheet of metallic or equivalent material and includes a pair of wing portions 12 and 13 formed by folding of the blank along the line x which corresponds, generally, to the end edge of the stringer 14 with which the female member is to be associated. The folded portion of the member is extended laterally beyond the longitudinal edge of the stringer 14 to constitute a pin stop 15. Each of the wing portions 12 and 13 is provided with laterally extending portions which are shaped to constitute the socket 11 previously described. This socket 11 is, being formed from extensions of the sides of the wing portions 12 and 13, open or "slotted" in character. The wing portions 12 and 13 are clamped flatly upon opposite faces of the stringer 14, and such clamped relationship is maintained by tongue portions 16 and 17 integral with the wing portion 12. The tongue portion 16 is curled about the longitudinal edge of the stringer 14 and bears upon the wing portion 13 adjacent the smaller end of the socket 11. The tongue portion 17 is similarly curled about the longitudinal edge of the stringer 14 and serves to clamp down a small lug 18 which is formed as a part of the wing portion 13 adjacent the socket thereof. Preferably, the lug 18 is of lesser thickness than the normal thickness of the wing portion 13, whereby the tongue 17 lies substantially even with the wing portion 13 of the finished article. Where the construction is adapted for use with stringers of the tape type provided with a beaded edge for the reception of interlocking fastener elements, the wing portions 13 and 14 are, at their line of association with said beaded edge, died into slightly tubular form. In such a construction, the lug 18 is, in a sense, a thin extension of the tubular portion of the wing portion 13, and the tongue 17 clipped upon said extension 18 has the appearance of a continuation of the tubular portion of the wing portion 13. It will be appreciated that, in the construction just described, the portion of the stringer 14 which is interposed between the wing portions 12 and 13 provides a definite spacing therebetween, and the tongues 16 and 17 which clamp the wings 12 and 13 prevent spreading thereof and insure maintenance of size in the socket 11. The slots 11^c and 11^d of the socket are inherent in the structure described, and a definite width for these slots may be readily established by the dies which are employed for the forming of the blank, consideration being given to the thickness of the stringer with which the structure is to be assembled.

The male member A of the construction illustrated is also formed from a single piece of sheet stock by suitable dieing operations. As distinguished from the female member, the wing portions 19 and 20 of the male member are joined by a common fold which lies along the longitudinal, commonly beaded edge of the stringer with which it is to be assembled. This common fold takes the form of a tubular pin portion 21 formed

about the beaded edge of the stringer and closed at its outer end. The stringer 22 which carries the male member is interposed between the wing portions 19 and 20 and is preferably extended over and folded back upon the wing portion 20 for a short distance, as shown. Upon this folded-back portion 22^a of the stringer, a wide tongue 23, integral with the end of the wing portion 19, is clamped. There is thus effected not only a clamping of the wing portions 19 and 20 upon the main body of the tape 22, but a clamping of the extension of the tape 22 between the wing portion 20 and the tongue 23. Obviously, as shown in Fig. 1, the portion 22^a of the tape is trimmed back slightly from the pin portion 21, in order to avoid interference with assembly of the pin 21 and the socket 11. Limitation of the extent of insertion of pin with socket is assured by the abutment of the closed end of the pin 21 with the stop 15 of the female member.

Apart from the novelty of the male and female members, considered individually, the structure disclosed in the drawing is characterized by a novel keyed relationship of male and female member, whereby hinge action between these members is substantially precluded, as distinguished from all prior art constructions for the same general purpose. Specifically, this elimination of "hinginess" is obtained by a keying of the male member in the diametrically opposed slots provided at opposite sides of the pin axis of the socket 11. The slot or key-way 11^d of the socket is formed with a definite width corresponding to, or slightly less than, the thickness of the male member along a line just inward of the pin portion proper 21. As a result, insertion of the pin 21 into the socket 11 is characterized by a light frictional contact of the walls defining the slot 11^d with the pin-adjacent surfaces of the wings 19 and 20 of the male member. A slight variation in size and thickness is characteristic of all small sheet metal articles formed by die-shaping operations. Hence, the fit of the tubular pin portion 21 with the portion 11^b of the socket cannot be relied upon to insure complete elimination of a tendency toward "hinginess" afforded solely by the fit of the wing portions 19 and 20 with the socket slot 11^d. Accordingly, I have provided additional key means which, in co-operation with the key and slot arrangement just described, precludes hinge action between pin and socket to such an effective extent as to eliminate a large portion of the strain otherwise frequently exerted upon the immediately adjacent interlocking fastener elements commonly mounted upon the beaded edges of the tapes 14 and 22. This supplementary or co-operative key means comprises a key portion 24 embossed out of or otherwise provided upon the pin portion 21 of the male member. This key portion 24 is, in the embodiment disclosed, diametrically opposed with respect to the wing portions 19 and 20 of the male member and is of a width corresponding to the width of the socket slot 11^c. The socket 11 of the female member is provided with an enlarged portion 11^a, as has been explained. Thus, as is conventional and desirable, the pin portion 21 of the male member may be longitudinally inserted into the socket 11 at an acute angle with respect to the true axis thereof. Because of this ability for initial insertion at an acute angle, the pin key 24 encounters no interference from the curled tongue 17 of the female member. However, as the up-

per end of the key 24 clears the tongue 17 and enters the socket, the lower or closed end of the pin 21 encounters the tongue 16 of the female member, urging said closed end laterally outwardly against the reduced portion 11^b of the socket. This laterally outward movement of the lower end of the male member effects lateral inward movement of the upper portion of the male member such as to induce engagement of the key 24 within the slot 11^c of the socket. Thus engaged, the relatively abrupt terminus of the key 24 precludes material retraction of the pin from the socket, due to the function of the curled tongue 17 as a stop for the key 24. In actual manufacturing practice, it has been found desirable to adjust the tongues 16 and 17 laterally with respect to the socket axis. This may be accomplished either in the actual operation of curling these tongues about the beaded edge of the associated stringer, or by a subsequent flattening pressure or blow administered to the tongues after they have been so curled. The proper disposition of the tongue 16 with respect to the socket is essential to insure snug association of the key 24 with the slot 11^c, and also to bring the upper portion of the pin 21 into close relation with the curled tongue 17. The tongue 17 may, if desired, be flattened slightly, after its curled disposition upon the boss 18 and the beaded edge of the tape 22.

The operation of the construction illustrated should be clear from the foregoing description. The male and female members are tightly clamped upon their respective tapes by the wing portions 19, 20, and 12, 13, respectively, due to the effectiveness of the tongues 23 and 16, 17, respectively. In practice, the width of the socket slot 11^d is proportioned to the thickness of the male member assembled with its stringer. Likewise, the key 24, embossed outwardly from the pin portion 21 of the male member, is of a width corresponding to the width of the inner socket slot 11^c. Substantially complete elimination of "hinginess" along the pin axis is thus assured. Guidance of the pin into proper keyed relationship with the socket is assured through the supplemental function of the lower tongue 16 as a cam surface coactive with the lower end of the pin during the final portion of the insertive movement of the pin into abutment with the stop 15. The stop 15, as is conventional in this art, assures proper alignment of the usual interlocking fastening elements Y and Z carried by the respective beaded edges of the stringer tapes 14 and 22.

The foregoing description of the illustrated embodiment of my invention is not to be construed as limitative with respect to the scope of my invention. Numerous changes and variations will appear to those skilled in the art upon familiarization with the herein disclosed concepts of my invention. For example, the novel means by which the male and female members are secured to their respective stringers is not essential to the realization of the keyed association of male and female members. For example, it is obvious that the tape might be clamped entirely between the wing portions 19 and 20 of the male member. While the tongues 16 and 17 of the female member are formed as extensions of its wing portion 12 and serve, not only to clamp the wings 12 and 13 of that member into securement with the interposed tape 14, but serve also as a cam and stop for the pin 21 and its key 23, these functions might be indi-

vidually accomplished by distinct instrumentalities, without departing from the basic principles of my invention. Further changes and variations should be obvious to those skilled in the art. Accordingly, I claim my invention broadly, as indicated by the appended claims.

What I claim is:

1. A disengageable end connection for a separable fastener having interlocking fastener elements mounted on flexible stringers and means for associating and dissociating said interlocking elements at will, comprising: a female member provided with a longitudinally-slotted socket portion, a male member provided with a pin portion associable with said socket portion by longitudinal insertion therein, means for limiting the extent of said longitudinal movement of said male member, and means for resisting rotation of said pin in said socket when thus associated, said means comprising substantially parallel outstanding key portions on said male member disposed along opposite sides of said pin portion, one said key portion being snugly received in the slot of said socket portion and the other being snugly received in another keyway formed in said socket portion.

2. A disengageable end connection for a separable fastener having interlocking fastener elements mounted on flexible stringers and means for associating and dissociating said interlocking elements at will, comprising: a female member having a lateral wing portion adapted for flatwise attachment to one stringer and provided with a longitudinally-slotted socket portion, a male member having a lateral wing portion adapted for flatwise attachment to the other stringer and provided with a pin portion associable with said socket portion by longitudinal insertion therein, means for limiting the extent of said longitudinal movement of said male member, and means for maintaining said winged male and female members in substantially inflexible planar association, comprising a portion of the wing portion of said male member snugly engaged with the slot walls of the socket portion of said female member and a diametrically-oppositely-opposed key extending laterally outwardly from said pin portion and snugly engaged in a keyway formed in said socket portion in the plane of and adjacent the wing portion of said female member.

3. A disengageable end connection for a separable fastener having interlocking fastener elements mounted on flexible stringers and means for associating and dissociating said interlocking elements at will, comprising: a female member having a pair of wing portions clamped longitudinally inwardly upon one end of one stringer, each said wing portion being provided with a lateral extension constituting, with that of the other wing portion, a slotted socket portion lying along the axis of fastening of its stringer, a male member having a pair of wing portions clamped upon the corresponding end of the other stringer and provided, along the axis of fastening of its stringer, with a pin portion associable with said socket portion by longitudinal insertion therein, means for limiting the extent of said longitudinal movement of said male member, and means for maintaining said winged male and female members in substantially planar association, comprising: slot walls of said socket portion snugly engaged with the wing portions of said male member adjacent the pin portion thereof and a diametrically-oppositely-disposed

key integral with said pin portion snugly received within a longitudinal keyway defined by the line of juncture of the wing portions of said female member with their socket-constituting lateral extensions.

4. A disengageable end connection for a separable fastener having interlocking fastener elements mounted on a pair of flexible tapes and means for associating said interlocking elements at will, comprising: a female member having a pair of wing portions clamped longitudinally inwardly upon the end edge of one tape, said wing portions having a common fold portion along said end edge and a lateral extension thereof constituting a terminal stop, a lateral extension on each of said wing portions constituting a slotted socket portion lying on the axis of fastening of the clamped tape, a male member having a pair of wing portions clamped upon the corresponding end of the other tape and provided, along the axis of fastening of the latter, with a pin portion associable with said stop and socket portions by longitudinal insertion into said socket portion, and means for maintaining said winged male and female members in substantially inflexible planar association, comprising: slot walls of said socket portion snugly engaged with the wing portions of said male member adjacent the pin portion thereof and a diametrically-oppositely-disposed key integral with said pin portion snugly received within a longitudinal keyway defined by the line of juncture of the wing portions of said female member with their socket-constituting lateral extensions.

5. A disengageable end connection for a separable fastener having interlocking fastener elements mounted upon a pair of flexible tapes and means for associating said interlocking elements at will, comprising: a female member having a pair of wing portions joined by a folded portion lying along the end edge of said tape, each of said wing portions being provided, along the fastening edge of its clamped tape, with a lateral extension constituting, with that of the other wing portion, a double-slotted socket lying on the axis of fastening of said interlocking elements, means for firmly clamping said wing portions upon said tape to secure said socket slots against spreading, said last means consisting of tongues integral with and bridging said wing portions adjacent each end of said socket, a male member having a pair of wing portions clamped upon the corresponding end of the other tape and provided, along the axis of fastening of the tape, with a pin portion associable with said socket by longitudinal insertion therein, means for limiting the extent of said longitudinal movement of said male member, and double key means on said male member snugly engageable in said socket slots for maintaining said winged male and female members in substantially inflexible planar association, said key means consisting of wing portions of said male member receivable in the outer slot and a diametrically-oppositely-disposed key outwardly embossed from said pin portion and receivable in the inner slot of said socket.

6. A disengageable end connection for a separable fastener having interlocking fastener elements mounted on flexible tapes and means for associating and dissociating said interlocking elements at will, comprising: a one-piece male element consisting of a pair of wing members sandwiched upon one tape at its initial fastening corner and inherently united along the longi-

itudinal fastening edge of said tape by a seamless web integral with both wing members and bent into tubular pin form, and means for securing said male element to said tape comprising a tongue on one of said wing members bent across the end edge of said tape and back upon the face of the other wing member clamping said wing members together upon the interposed portion of said tape, a one-piece female element consisting of a second pair of wing members sandwiched upon the other of said tapes at its initial fastening corner and inherently united along the end edge of the therebetween-interposed tape by a seamless tie portion integral with both wing members of said female element, an integral channel-shaped lateral extension on each of said wing members, said lateral extensions jointly constituting a longitudinally-slotted socket lying along the axis of fastening and adapted to snugly receive complementary pin and wing portions of said male element, means for securely clamping the wing members of said female element upon their interposed tape to maintain their socket-constituting extensions in rigidly-fixed spaced relation, and means for limiting the extent of insertive movement of said male pin portion into the socket of said female element.

7. A disengageable end connection for a separable fastener having interlocking fastener elements mounted upon a pair of flexible tapes and means for associating and dissociating said interlocking elements at will, comprising: a one-piece female member having a pair of integral wing portions joined by a folded portion lying along the end edge of one tape, a lateral extension on each of said wing portions jointly constituting a slotted socket lying on the fastening axis of said interlocking elements and means clamping the free ends of said wing portions together upon said tape to secure said socket against spreading, said last means comprising a tongue extending laterally outwardly from one of said wing portions, curled about the longitudinal edge of said tape and terminally engaged with the other wing portion and with said tape, a male member having a pin portion receivable within said socket and an integral key portion engageable with the slot of said socket to maintain said associated male and female members in planar association and stop means for limiting the longitudinal movement of said male member relative to said female member in one direction.

8. A disengageable end connection for a separable fastener having interlocking fastener elements mounted upon a pair of flexible tapes and means for associating said interlocking elements at will, comprising: a female member having a pair of wing portions joined by a folded portion lying along the end edge of one tape, each of said wing portions being provided, along the fastening edge of its clamped tape, with a lateral extension constituting, with that of the other wing portion, a double-slotted socket lying on the axis of fastening of said interlocking elements, means for firmly clamping said wing portions upon said tape to secure said socket slots against spreading, said last means consisting of tongues integral with and bridging said wing portions adjacent each end of said socket, a male member having a pair of wing portions clamped upon the corresponding end of the other tape and provided, along the axis of fastening of the tape, with a pin portion associable with said socket by longitudinal insertion thereinto, double key means on said male member snugly engage-

able in said socket slots for maintaining said winged male and female members in substantially inflexible planar association, said key means consisting of wing portions of said male member receivable in the outer slot and a diametrically-oppositely-disposed key outwardly embossed from said pin portion, said pin portion, embossed key, socket and tongues having such relative size, configuration and location as to positively induce said embossed key to move laterally into interlocked engagement with the inner slot of said socket during completion of said longitudinal insertive movement and means for limiting said longitudinal insertive movement of said male member.

9. A disengageable bottom stop for slide-actuated tape fasteners comprising: a female member having a spaced pair of tape-clamping wing portions joined by a fold lying along the end edge of the thus-clamped tape, a channel-shaped lateral extension on each of said wing portions, said extensions jointly constituting a double-slotted socket lying along the fastener axis, a male member having a spaced pair of tape-clamping wing portions joined by a tubular pin portion lying along the fastener axis of its clamped tape, said pin and its associated wing portions being insertable in said socket and the outer slot thereof respectively, means for limiting the extent of insertion of said pin into said socket, and means for detachably interlocking said male and female members comprising a tapered key on said pin portion snugly receivable within the inner slot of said socket and tongues bridging the wing portions of said female member at each end of its socket, the tongue at the entrant end of said socket constituting an end wall for said inner slot, and the tongue at the other end of said socket having the function of a cam cooperative with the walls of said socket and said pin and effective to induce entry of said pin key into said inner socket slot in abutting relation with said first-mentioned tongue.

10. A disengageable bottom stop for slide-actuated tape fasteners comprising: a female member having a spaced pair of tape-clamping wing portions joined by a fold lying along the end edge of the thus-clamped tape, a channel-shaped lateral extension on each of said wing portions, said extensions jointly constituting a double slotted tapered socket lying along the fastener axis, a male member having a spaced pair of tape-clamping wing portions joined by a tubular pin portion lying along the fastener axis of its thus-clamped tape, said pin and its associated wing portions being insertable in said socket and the outer slot thereof respectively, means for limiting the extent of insertion of said pin into said socket, and means for detachably interlocking said male and female members comprising a correspondingly tapered key on said pin portion snugly receivable within the inner slot of said tapered socket and means for guiding said key into interlocked association with the walls of said inner slot, said last means consisting of a pair of tongues bridging the wing portions of said female member at each end of its tapered socket, the tongue at the larger end of said socket constituting an end wall for said inner slot and the tongue at the smaller end of said socket serving, with the walls thereof, to induce entry of said pin key into said inner slot immediately upon its clearance of said end-wall-constituting tongue.

11. A disengageable bottom stop for slide-

actuated tape fasteners comprising: a female member having a spaced pair of tape-clamping wing portions joined by a tie portion lying along the end edge of the thus-clamped tape and extended laterally across the fastener axis to constitute a stop for the male member of the fastener, an integral channel-shaped lateral extension on each of said wing portions, said extensions jointly constituting a double-slotted tapered socket lying along the fastener axis, a male member having a spaced pair of tape-clamping wing portions joined by a tubular pin portion lying along the fastener axis of its thus-clamped tape, said pin portion being receivable within said socket in abutment with said stop and with the wing portions of said male member snugly received in the outer slot of said socket, and means for detachably interlocking said male and female members comprising: a key on said pin portion having a taper corresponding generally to that of said socket, an abutment constituting an end wall for the inner slot of said socket, said abutment consisting of a tongue integral with one wing portion of said female member, bridging said slot adjacent the larger end of said socket and clamped upon the other wing portion of said female member, and a similar bridging tongue intermediate the socket and stop of said female member, said pin and key being so proportioned and located with respect to said socket, stop and bridging tongues as to induce automatic entry of said key into said inner slot during final assembly of said male and female members limited by abutment of said pin portion with said stop.

12. In a pin and socket connection for slide-actuated tape fasteners, a one-piece socket construction comprising a spaced pair of wing members sandwiched upon the conventional tape at its initial fastening corner and joined by an integral tie portion lying along the end edge of said tape, an integral channel-shaped lateral extension on each of said wing members, said extensions jointly constituting a slotted socket extending beyond said tape and lying along the fastener axis, and means for clamping said wing members securely upon said tape and maintaining said extensions in substantially rigid, fixed relation with respect to each other.

13. In a pin and socket connection for slide-actuated tape fasteners, a one-piece socket construction comprising a spaced pair of wing members sandwiched upon the conventional tape at its initial fastening corner and formed by an integral tie portion lying along the end edge of said tape, an integral channel-shaped lateral extension on each of said wing members, said extensions jointly constituting a slotted socket extending beyond the longitudinal edge of said tape and lying along the fastener axis, and means for clamping said wing members securely upon said tape and maintaining said extensions in substantially rigid, fixed relation with respect to each other, said means comprising a second lateral extension on one of said wing members bridging the longitudinal edge of said tape and clamped upon the other wing member, said last-mentioned element being disposed adjacent the otherwise untied ends of said wing members.

14. In a pin and socket connection for slide-actuated tape fasteners, a one-piece socket construction comprising a spaced pair of wing members sandwiched upon the conventional tape at its initial fastening corner and joined by an integral tie portion lying along the end edge of

said tape, an integral channel-shaped lateral extension on each of said wing members, said extensions jointly constituting a slotted socket extending beyond the longitudinal edge of said tape and lying along the fastener axis, and means for clamping said wing members securely upon said tape and maintaining said extensions in substantially rigid, fixed relation with respect to each other, said means comprising laterally-extending tongues adjacent each end of said socket, each of said tongues being integral with one wing member, bridging the longitudinal edge of said tape and clamped upon the other of said wing members.

15. In a pin and socket connection for slide-actuated tape fasteners, a one-piece socket construction comprising a spaced pair of wing members sandwiched upon the conventional tape at its initial fastening corner and joined by an integral tie portion lying along the end edge of said tape, a bottom stop for the conventional pin portion of the other tape element of the fastener construction, said bottom stop consisting of a lateral extension of said tie portion, an integral channel-shaped lateral extension on each of said wing members, said last-mentioned extensions jointly constituting a slotted socket extending beyond the longitudinal edge of said sandwiched tape and lying along the fastener axis, and means for clamping said wing members securely upon said tape and maintaining said extensions in substantially rigid, fixed relation with respect to each other, said means comprising a second lateral extension on one of said wing members bridging the longitudinal edge of said tape and clamped upon the other wing member adjacent the otherwise untied ends of said wing members.

16. In a pin and socket connection for slide-actuated tape fasteners, a one-piece socket construction comprising a spaced pair of wing members sandwiched upon the conventional tape at its initial fastening corner and joined by an integral tie portion lying along the end edge of said tape, a bottom stop for the conventional pin portion of the other tape element of the fastener construction, said bottom stop consisting of a lateral extension of said tie portion, an integral channel-shaped lateral extension on each of said wing members, said last-mentioned extensions jointly constituting a slotted socket extending beyond the longitudinal edge of said sandwiched tape and lying along the fastener axis, and means for clamping said wing members securely upon said tape and maintaining said extensions in substantially rigid, fixed relation with respect to each other, said means comprising a laterally extending tongue intermediate said socket and said bottom stop, said tongue bridging the longitudinal edge of said sandwiched tape and clamped upon the other of said wing members, and another clamping tongue similar to the last and bridging said wing members adjacent the other end of said socket.

17. In a pin and socket connection for slide-actuated tape fasteners, a one-piece male element construction comprising a pair of wing members sandwiched upon the conventional tape at its initial fastening corner and inherently united along the longitudinal fastening edge of said tape by a seamless web integral with both wing members and bent into tubular form constituting the socket-engagable pin of the structure, and means for securing said male element to its tape comprising a tongue on one of said wing members bent across the end edge of said

tape and back upon the face of the other wing member clamping said wing members together upon the interposed portion of said tape.

5 18. In a slide-actuated fastener construction, a flexible tape provided, intermediate its ends, with fastener elements adapted to be interlocked with fastener elements of a complementary tape, a one-piece male connection element consisting of a pair of wing members sandwiched upon said
10 flexible tape at its point of initial fastening and inherently united along the longitudinal fastening edge of said tape by a seamless web integral

with both wing members and bent into tubular form constituting the socket-engageable pin of the structure, said tape having a short tail portion extending beyond said wing members, and means for securing said male element to said
5 tape comprising a wide tongue on one of said wing members bent back upon the other wing member clamping the tail of said tape thereupon and clamping said wing members together upon the sandwiched portion of said tape proper. 10

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