July 4, 1939. W. A. BEHRENS 2,164,488

TOP STOP FOR SLIDE FASTENERS

Filed April 30, 1938

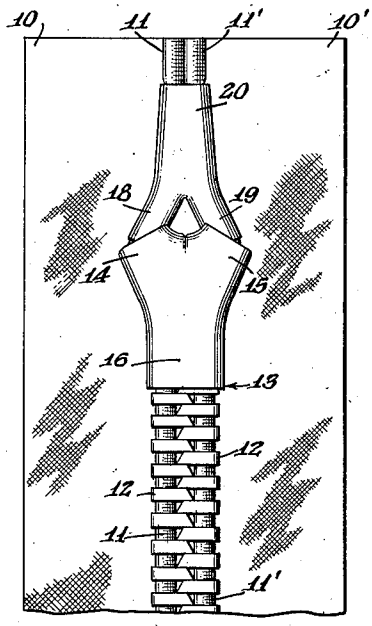


Fig. 2

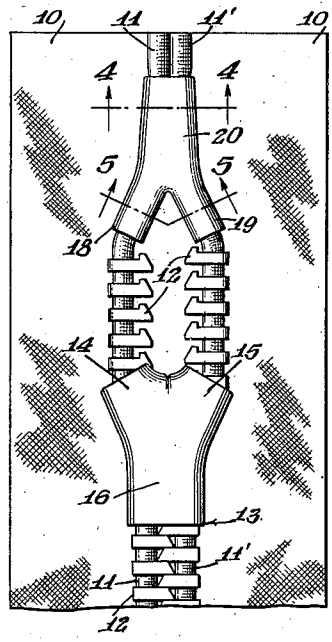


Fig. 3

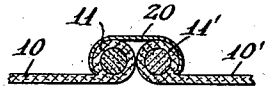


Fig. 4

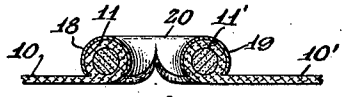


Fig. 5

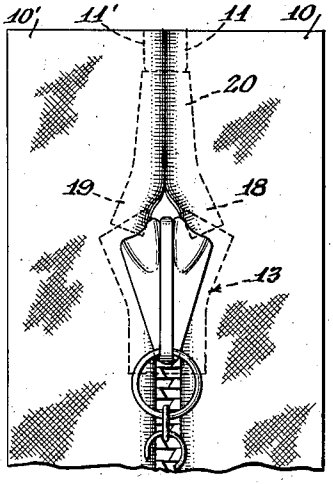


Fig. 1

INVENTOR.
Walter A. Behrens
BY
ATTORNEY.

Patented July 4, 1939

2,164,488

UNITED STATES PATENT OFFICE

2,164,488

TOP STOP FOR SLIDE FASTENERS

Walter A. Behrens, New York, N. Y., assignor to Ideal Fastener Corporation, Brooklyn, N. Y., a corporation of New York

Application April 30, 1938, Serial No. 205,236

5 Claims. (Cl. 24—205)

This invention relates to improvements in slide fastener assemblies, being particularly directed to a top or end stop therefor.

Up to the present time, considerable difficulty has been entailed in the use of slide fastener assemblies for garments or the like, particularly wherein the tapes are required to be attached to the apex or closed end of a slit; the common type of stop or bridge member serving to limit the movement of the slider and to rigidly fasten opposing tapes, but having no provision for setting the opposing tapes in a neat and orderly arrangement leading to the apex of the slit.

Broadly, it is an object of this invention to provide an end or top stop of a conformation to bridge opposing tape edges or beads at such tape edges, at the end of a row of fasteners while at the same time providing a socket formation to dispose the tape edges or beads thereon in parallelism and in adjacency beyond the bridge portion.

Further, it is an object of this invention to provide an end or top stop in the nature of a bridging element for application to opposing stringers carrying slide fastener elements, wherein such end or top stop is in the nature of a channeled Y-shaped element, the diverging arms of which enclose and clamp in angular relationship the edges or bead formations thereon adjacent the furthermost fastener elements of the stringers, to close the slit defined by the stringers, and wherein the stem of such top stop into which the edge or bead formation of the tape is guided from the diverging arms encloses in parallelism and adjacency the tape edges or beads thereon to provide a neat and orderly arrangement of the stringers or the tape edge or beads thereof, with respect to the apex of the slit portion of the garment to which they are attached.

Still further, it is an object of this invention to provide a novel form of end or top stop for application with a slide fastener assembly of the offset type exemplified by the Poux Patent No. 1,817,839, wherein such end or top stop serving as a bridging device, provides a Y-shaped socket formation for the bead edges of the stringers at the under or rear side of the same, so as to provide a neat and orderly appearance of the tape portions of the slide fastener adjacent the apex of the slit in the garment to which it is applied.

These and other advantages, capabilities and features of the invention will appear from the subjoined detailed description of one specific embodiment thereof illustrated in the accompanying drawing, in which

Figure 1 is a front view of a portion of a slide fastener assembly incorporating the top stop as applied to the opposing tapes.

Figure 2 is a rear view of a portion of a slide fastener assembly with the fasteners in interlocked position and the slider acting on the top stop.

Figure 3 is a rear view of a portion of a slide fastener assembly similar to Figure 2, with the slider displaced.

Figure 4 is a plan view in section taken along lines 4—4 of Figure 3.

Figure 5 is a plan view taken in section along lines 5—5 of Figure 3.

Referring to the reference characters in the drawing, numerals 10 and 10' represent tapes having at their cooperating edges projecting beads 11 and 11' upon which are carried depending spaced fastener elements 12, the tapes and fastener elements being disposed in offset relationship with respect to one another, exemplifying a stringer formation of the character shown in Letters Patents to Noel Poux, 1,817,837 and 1,817,839. A slider 13 having diverging channels 14 and 15 leading into merging channel 16 is adapted to cooperate with the fastener elements to interlock and separate the same upon reciprocation, to close and open a slit defined thereby.

The end or top stop forming the subject matter of this invention, comprises a channeled Y-shaped metallic stamping, having diverging arms 18 and 19 leading to merging stem 20. The diverging arms of the end or top stop are of cross-section to accommodate the beads of the respective tapes and to direct the same angularly towards the merging stem, which is of cross-section to accommodate the beads of both of the tapes in parallelism and adjacency (see Figures 1, 3, 4 and 5). The stem extends to an extent sufficient to enclose a substantial length of the respective beads and to cause the bead portions of the tape and the tape extending beyond the stem to maintain their positions of parallelism and adjacency with respect to one another.

To apply the end or top stop to the slide fastener assembly, the beads of the respective tapes are disposed in the sockets formed by the channels defining the diverging arms and stem, and pressure is applied to the opposing walls of the arms and stem, whereby a permanent gripping and locking is attained.

By virtue of the Y configuration of the end or top stop, a minimum of displacement through its gradual angular direction is imparted to the tape beads from the normal position thereof at the

fastener carrying portion along their length and the position in parallelism and adjacency within and beyond the stem, thereby minimizing stresses or strains against the tapes as the same are separated or drawn together upon reciprocation of the slider to close or open the slit defined by the slide fastener assembly.

Although the end or top stop herein has been shown as a substantially U-channeled stamping to accommodate the offset beads with respect to the tapes, as exemplified in the Poux patents above mentioned, it is within the province of this invention to provide an end or top stop of substantially circular cross-section to accommodate the beads of stringers of the Kuhn-Moos type, wherein the bead is in the same plane and forms a continuation or edge of the body portion of the tape so long as the Y-configuration incorporating diverging arms leading to a merging stem is applied to bridge the slit end as defined.

It is obvious that various changes and modifications may be made to the details of construction without departing from the general spirit of the invention as set forth in the appended claims.

I claim:

1. In a separable fastener assembly incorporating opposing stringers having beads carrying interlocking fastener elements; a top stop comprising a Y-shaped member, the diverging arms of which provide sockets for the reception of the beads of opposing stringers to angularly direct the same towards one another and the stem of which provides a socket into which the angularly directed stringer beads are led from the diverging arms and disposed in parallelism and adjacency to one another.

2. In a separable fastener assembly, incorporating opposing stringers having beads carrying interlocking fastener elements; a top stop comprising a metal stamping of Y configuration, providing diverging channels leading to a merging channel, the diverging channels serving to provide sockets for the beads of opposed stringers at one end of the fastener, and to direct the beads into the merging channel, said merging channel serving to provide a socket for the beads of the opposing stringers to dispose the same in adjacency and parallelism.

3. In a separable fastener assembly, incorporating opposing stringers having beads carrying interlocking fastener elements; a top stop comprising a metal stamping of Y configuration, providing diverging channels leading to a merging channel, the diverging channels serving to provide sockets for the beads of opposed stringers at one end of the fastener, and to direct the beads into the merging channel, said merging channel serving to provide a socket for the beads of the opposing stringers to dispose the same in adjacency and parallelism, the walls of the channels being compressible to grip and clamp the lengths of the stringer beads disposed therein.

4. An end stop for use in separable fasteners, of a character having opposed series of fastener elements, flexible stringers supporting said series of fastener elements and a channeled slider reciprocable to interlock and separate the same, said stop comprising a Y-shaped member, of cross-section such that the arms of the same provide sockets for the reception of the edges of the respective stringers and angularly direct the same towards one another and into the stem, said stem providing a socket for the edges of both of the stringers to dispose such edges in parallelism and adjacency, the arms of said stop being spaced and directed to provide an obstruction for the channeled slider to limit the movement of the latter upon contact therewith.

5. In a slide fastener assembly, incorporating opposing stringers comprising tapes having depending beads at the edges thereof, fastener elements mounted in spaced relationship along said beads; and a slider acting on said fastener elements to interlock or separate the same, a top stop for said stringers comprising a Y-shaped member providing diverging arms leading to a merging stem, the arms being adapted to envelope the respective beads of the tapes and lead the same into the stem, said stem being adapted to envelope both beads in adjacency and parallelism.

WALTER A. BEHRENS.