

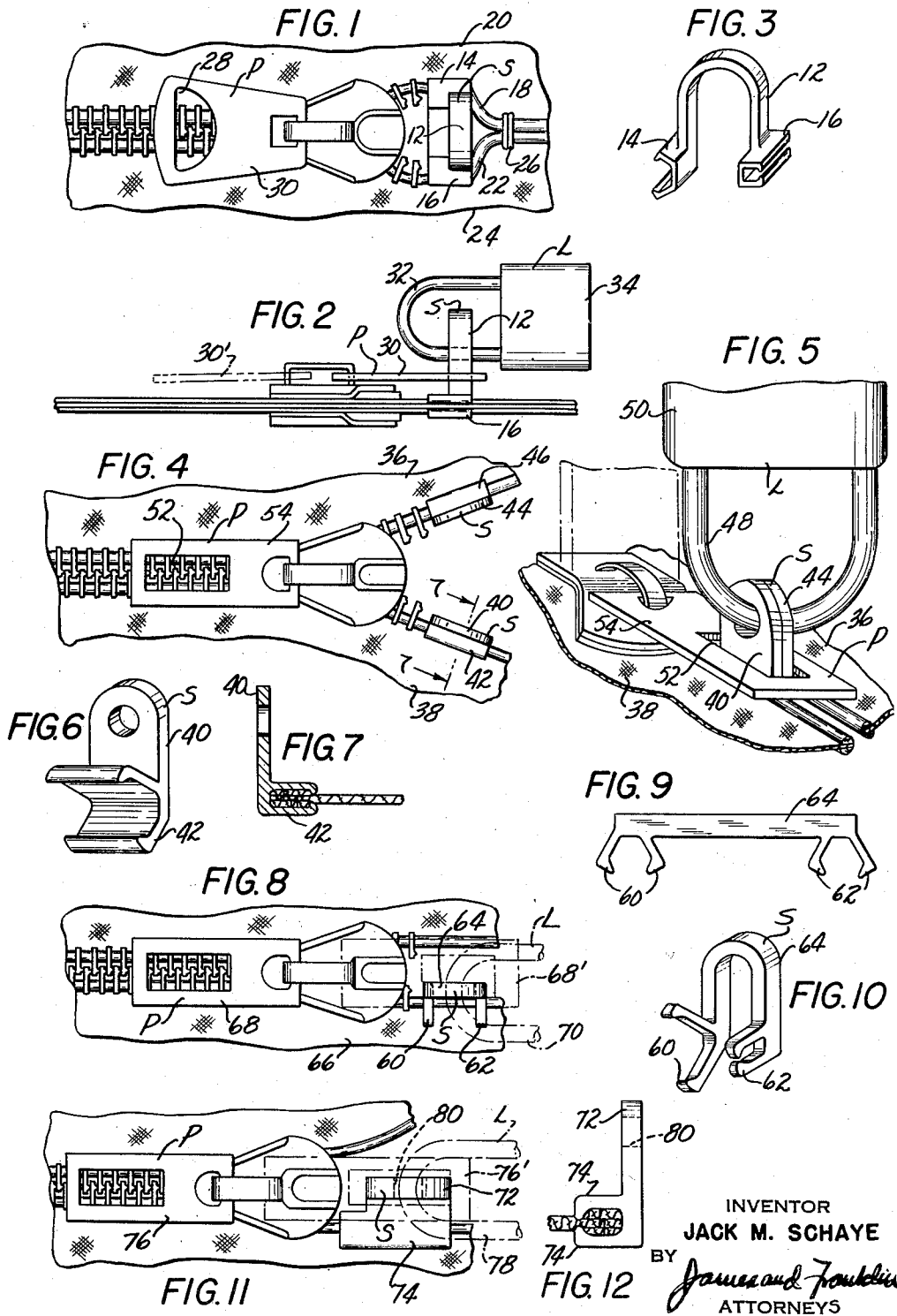
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PADLOCK SLIDE FASTENER

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PADLOCK SLIDE FASTENER

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This invention relates to slide fasteners, and more particularly to slide fasteners arranged to be secured by means of a padlock.

The primary object of the present invention is to generally improve slide fasteners of the character specified. Heretofore, padlock slide fasteners have required a special modification of the article on which the fastener is used. This will be seen by inspection of the receptacles shown in a number of issued patents, for example, Schmidt 1,759,283 and 1,759,284; Walrath 1,819,449; Legat 1,898,974; Rifkin 1,950,414; and Strayer 2,112,795. In these patents it will be seen that the slide fastener is linear, there being a bottom end toward which the slider is moved to open the fastener, and a top end toward which the slider is moved to close the fastener, the said bottom and top ends being remote from one another. One object of the present invention is to provide a padlock slide fastener which is complete as fabricated and sold by the slide fastener manufacturer (except that the padlock may be supplied separately). The manufacturer of the envelope bag or handbag or the like merely sews the slide fastener into the article, much as is done with ordinary slide fasteners not having a padlock.

A further object of the present invention is to provide modified structures for fasteners used for widely different purposes, or made by different methods of manufacture.

To accomplish the foregoing general objects, and other more specific objects which will hereinafter appear, my invention resides in the slide fastener and locking elements, and their relation one to the other as are hereinafter more particularly described in the following specification. The specification is accompanied by a drawing, in which:

Fig. 1 is a fragmentary plan view showing one end of a slide fastener embodying features of my invention, with the pull in unlocked position;

Fig. 2 is a side elevation of the same in locked condition;

Fig. 3 is a perspective view of a bridge end stop which acts as a staple to receive the pull and the padlock;

Fig. 4 is a fragmentary plan view of a modified form of the invention using separable top stops, with the pull in unlocked position;

Fig. 5 is a perspective view, showing the pull locked to the top stops;

Fig. 6 is a perspective view of one of the top stops before it is attached to the tape;

Fig. 7 is a section through one of the top stops, taken on the line 7—7 of Fig. 4;

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Fig. 8 is a fragmentary plan view of a modification of the invention using a single top stop formed of sheet metal;

Fig. 9 illustrates the blank used to make the stop shown in Fig. 8;

Fig. 10 is a perspective view of the stop;

Fig. 11 is a fragmentary plan view of a modification having a single molded top stop; and Fig. 12 is an end view of the top stop.

Referring to the drawing, the invention in all its forms comprises generically a slide fastener the slider pull P of which is appropriately apertured to act as a hasp fitting over a top stop having a staple S which is adapted to receive the shackle of a suitable lock L. The lock prevents lifting of the pull from the stop, and so prevents opening of the slide fastener. The fastener is complete as fabricated by the fastener manufacturer, and the manufacturer of the bag or other product using the fastener need merely sew the fastener into his product.

In the first form of the invention, shown in Figs. 1, 2 and 3, the top stop is of the bridge type, that is, it extends across and is secured to both tapes of the fastener. In Fig. 3 it will be seen that the stop takes the form of an inverted U-shaped projection 12, having jaws 14 at one end and jaws 16 at the other. The jaws 14 are shown in open position and the jaws 16 in closed position. The beaded edge 18 of tape 20 is clamped within the jaws 14, and the beaded edge 22 of tape 24 is clamped within the jaws 16. The edges of the tape may be brought together above the bridge stop by suitable means, such as the stitching indicated at 26.

It will be seen that in the present case the upward projection 12 of the staple extends transversely of the longitudinal axis of the fastener, and transversely of the plane of the tapes. The aperture 28 in the pull 30 is dimensioned to fit over the projection 12, this being indicated in Fig. 2 by the change from the broken line position 30' to the solid line position 30. The projection 12 together with the pull 30 extending across the open bottom of the same then define a closed aperture, through which the shackle 32 of padlock 34 may be passed.

Figs. 4 through 7 of the drawing illustrate a modification of the invention in which the upper ends of the tapes 36 and 38 are separable, instead of being secured together by a bridge top stop. For this purpose, the beaded edges of tapes 36 and 38 each have a top stop, the general nature of which will be clear from an inspection of Figs. 6 and 7. Each stop has a projection or staple portion 40, with jaws 42 at its lower end,

As before, the projection extends transversely of the plane of the fastener tapes, but in this case it extends parallel to instead of transversely of the longitudinal axis of the fastener. The other tape has a similar projection or staple 44 (Fig. 4) with jaws 46. When the projections 40 and 44 are brought into face to face relation, as is best shown in Fig. 5, the holes therethrough register. The aperture 52 in pull 54 is dimensioned to fit over the projections, following which the shackle 48 of lock 50 is passed through the holes in the stops.

It is not essential to employ two top stops, one being sufficient for the present purpose. A fastener employing such a stop is shown in Figs. 8, 9 and 10. In this case the top stop is formed of sheet metal. A blank is first stamped of approximately the shape shown in Fig. 9, this having open jaws 60 and 62 at the ends of a strip 64. The strip 64 is then bent to inverted U shape, as shown in Fig. 10. One set of jaws is shown open and the other closed, but it will be understood that they are both open until after application to the tape. In Fig. 8, the stop has been applied to the tape 66. The pull 68 is shown in open position, but may be swung to the broken line position 68', at which time it fits over the stop 64, which is then ready to receive the shackle 70 (shown in broken lines) of a conventional padlock (not shown).

In the modification shown in Figs. 11 and 12 the fastener again employs only a single stop, but in this case the stop is die cast instead of being formed of sheet metal. It comprises a projection or staple portion 72 having jaws 74 at its lower end. Here again the pull 76 is shown in solid lines in its open position, but when swung to the broken line position 76' it acts as a hasp fitting over the staple 72. The shackle 78 of a padlock is then passed through the hole 80 in the projection 72.

It is believed that the construction and operation of my improved padlock slide fastener, as well as the advantages thereof, will be apparent from the foregoing detailed description. The top stop of the fastener is used as a staple, and the pull of the slider is employed as a hasp which fits over the staple, following which the shackle of a padlock is passed through the staple. Thus the padlock slide fastener is complete as sold by the fastener manufacturer, and no special changes are needed in the article using the fastener. Precise adjustment of the location of the fastener relative to the bag or other article in which it is used is of no consequence, whereas in most prior padlock systems accurate location was important in order to provide for registration of parts of the fastener with eyelets or a staple or the like forming a part of the bag. The stop which is used as a staple may be of the bridge stop type, or may be separable. In the latter case either one or two stops may be used. The stops may be formed by stamping or coining operations, or by die casting or molding.

It will be understood that the sheet metal construction shown in Fig. 10 may be used for the double stop arrangement shown in Fig. 5, or with slight modification in design, may be used for the bridge stop shown in Fig. 3.

It will be apparent that while I have shown and described my invention in several preferred forms, changes may be made in the structures disclosed, without departing from the spirit of the invention as sought to be defined in the following claims.

In the claims the term "top stop" is used in

its conventional sense, that is, it means the stop at that end of the fastener toward which the slider is moved to interlock the fastener elements or close the fastener. The term is so used regardless of the position of the fastener.

I claim:

1. In a slide fastener having a top end and a bottom end remote from said top end, and including fastener tapes and a slider with an apertured pull arranged to be locked by means of a padlock, a pair of top stops secured to the tapes by means localized at the beaded edges of the tapes, one top stop being clamped on one tape and the other top stop being clamped on the other tape, and each having a projection parallel to the longitudinal dimension of the fastener and transverse of the plane of the tapes of the fastener, said projections being dimensioned to lie face to face and together to be received upwardly from the bottom through the aperture of the pull, and said projections preventing above said pull registering apertures dimensioned to receive the shackle of a padlock.

2. A slide fastener arranged to be locked by means of a padlock, said slide fastener having a top end and a bottom end remote from said top end, and comprising tapes with interlockable fastener elements thereon, a slider for engaging and disengaging said elements, an apertured pull on said slider for operating the same, and a pair of top stops clamped one around the beaded edge of one tape and the other around the beaded edge of the other tape at the top end of the fastener, and each having a projection parallel to the longitudinal axis of the fastener and transverse of the plane of the tapes, said projections lying face to face and together acting as a staple over which the pull acting as a hasp is received preparatory to passing the shackle of a padlock through both of said projections.

3. A slide fastener arranged to be locked by means of a padlock, said slide fastener having a top end and a bottom end remote from said top end, and comprising tapes with interlockable fastener elements thereon, a staple at the top end of said fastener acting also as a top stop, a slider for engaging and disengaging said elements, and an apertured pull on said slider for operating the same, said slider being disposed in that direction which engages the elements when moved from the bottom end of the fastener toward the staple at the remote top end, said staple forming a part of said slide fastener and being secured to one of said tapes by means so localized at the edge of the tape as not to interfere with sewing of the fastener into an article, said staple comprising a projection transverse to the plane of the tapes over which the pull acting as a hasp is received preparatory to passing the shackle of a padlock through said projection.

4. A slide fastener arranged to be locked by means of a padlock, said slide fastener having a top end and a bottom end remote from said top end, and comprising tapes with interlockable fastener elements thereon, a staple at the top end of said fastener acting also as a top stop, a slider for engaging and disengaging said elements, an apertured pull on said slider for operating the same, said slider being disposed in that direction which engages the elements when moved from the bottom end of the fastener toward the staple at the remote top end, said staple being secured to one of the tapes by means localized at the edge of the tape and including an apertured projection parallel to the longitudinal

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axis of the fastener and transverse of the plane of the tapes over which the pull acting as a hasp is received preparatory to passing the shackle of a padlock through said projection.

5. A slide fastener arranged to be locked by means of a padlock, said slide fastener having a top end and a bottom end remote from said top end, and comprising tapes with interlockable fastener elements thereon, a staple at the top end of said fastener acting also as a top stop, a slider for engaging and disengaging said elements, an apertured pull on said slider for operating the same, said slider being disposed in that direction which engages the elements when moved from the bottom end of the fastener toward the staple at the remote top end, said pull acting as a hasp being received over said staple preparatory to passing the shackle of a padlock through said staple, and means fixedly secured directly on the edge of at least one of the tapes near the top end thereof for holding said staple in position, whereby the slide fastener, when being secured to the edges of an opening to act as a closure for the same, is already provided with a top stop and staple and hasp for use with a padlock.

6. A slide fastener arranged to be locked by means of a padlock, said slide fastener having a top end and a bottom end remote from said top end, and comprising tapes each having a beaded edge with interlockable fastener elements secured to said beaded edge, a staple at the top end of said fastener acting also as a top stop, a slider for engaging and disengaging said elements, an apertured pull on said slider for operating the same, said slider being disposed in that direction which engages the elements when moved from the bottom end of the fastener toward the staple at the remote top end, said pull acting as a hasp being received over said staple preparatory to passing the shackle of a padlock through said staple, and means fixedly secured directly on the beaded edge of at least one of the tapes near the top end thereof for holding said staple in position, whereby the slide fastener when being secured to the edges of an opening to act as a

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closure for the same, is already provided with a top stop and staple and hasp for use with a padlock.

7. A slide fastener arranged to be locked by means of a padlock, said slide fastener including a top end and a bottom end remote from said top end and including fastener tapes with interlockable fastener elements thereon, a staple at the top end of said fastener acting also as a top stop, a slider for engaging and disengaging said elements, and an apertured pull on said slider for operating the same, said slider being disposed in that direction which engages the elements when moved from the bottom end of the fastener toward the staple at the remote top end, said staple forming a part of said slide fastener and being secured to both fastener tapes by means so localized at the edges of the tapes as not to interfere with sewing of the fastener into an article, and having an apertured projection transverse of the longitudinal dimension of the fastener and transverse of the plane of the tapes of the fastener, said projection interconnecting said tapes and functioning also as a bridge top stop, said projection being dimensioned to act as a staple over which the pull acting as a hasp is received preparatory to passing the shackle of a padlock through said apertured projection.

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