

May 19, 1936.

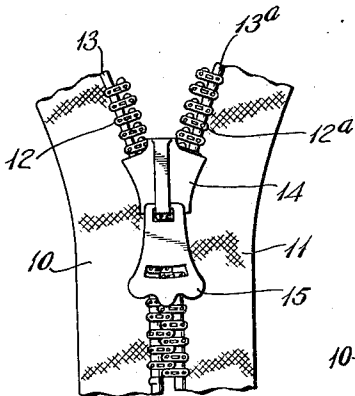
D. MARINSKY

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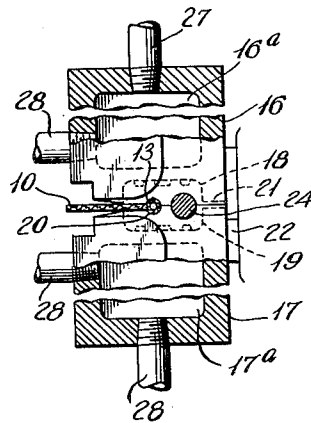
LINKS OF SEPARABLE FASTENERS

Filed Oct. 25, 1934

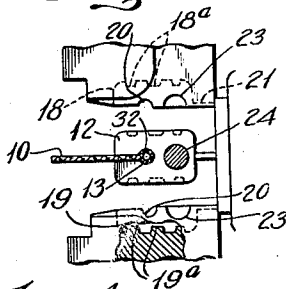
**Fig. 1**



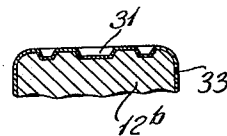
**Fig. 2**



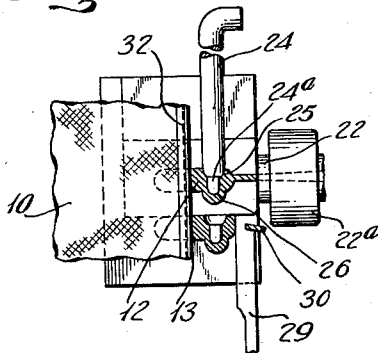
**Fig. 3**



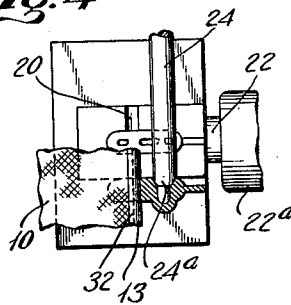
**Fig. 7**



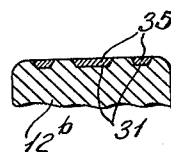
**Fig. 5**



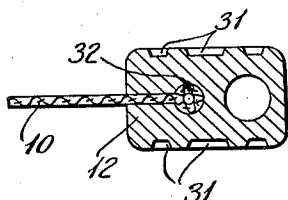
**Fig. 4**



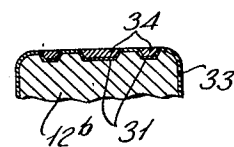
**Fig. 8**



**Fig. 6**



**Fig. 9**



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## LINKS OF SEPARABLE FASTENERS

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Application October 25, 1934, Serial No. 749,875

10 Claims. (Cl. 41—24)

This invention relates to separable fasteners comprising stringers, each having interengaging coupling links with a slider movable longitudinally thereof for coupling and uncoupling the same; and the object of the invention is to provide links for stringers of the class described wherein one or both outer exposed surfaces of which is formed with recesses or impressions to enhance the appearance of the link and to give predetermined character thereto; a further object being to provide a link of the class described wherein the recesses or grooves in the surface of the link may be filled in to form an inlay effect, the filling material being preferably of a color contrasting to that of the link; a still further object being to provide links of the class described with a coating or plating to give a predetermined or desired color value thereto, which if desired may be contrasting to the inlay arranged in the grooves or recesses of the link; and with these and other objects in view, the invention consists in a link of the class described, which is made in accordance with the method hereinafter more fully described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of the improvement are designated by suitable reference characters in each of the views, and in which:

Fig. 1 is a face view of a part of a fastener indicating the manner of coupling and uncoupling the stringers thereof.

Fig. 2 is a plan and sectional view diagrammatically illustrating dies employed for forming the improved links on the mounting tape of the stringer.

Fig. 3 is a view similar to Fig. 2 omitting part of the construction and showing the dies in open position.

Fig. 4 is a face view of one of the dies shown in Fig. 3 in open position, indicating the manner of removing the core from the formed casting.

Fig. 5 is a view similar to Fig. 4 showing the dies in closed position as in Fig. 2 and indicating the method of trimming the castings.

Fig. 6 is a transverse, sectional view through a link formed on a mounting tape on an enlarged scale; and,

Figs. 7, 8 and 9 are sectional views of one side surface of links showing different methods of constructing the same.

In Fig. 1 of the drawing, a part of a separable fastener is shown, 10 representing a part of one stringer and 11 a part of the opposed stringer.

Each stringer has coupling links or scoops 12, 12a arranged in spaced relation on the beaded edge 13, 13a of each stringer or the mounting tape forming the same. At 14, I have indicated a slider movable longitudinally of the links of the stringers for coupling and uncoupling said links in the manner indicated, and 15 represents a finger piece or pull by means of which the slider 14 is operated.

The links 12, 12a are formed directly upon the mounting tapes or the beaded edges thereof by directly casting or molding the same thereon in accordance with the methods disclosed in prior applications for Letters Patent, Serial Number 701,290, filed December 7, 1933 and Serial Number 746,771, filed October 4, 1934.

In Figs. 2 to 5 inclusive, I have diagrammatically illustrated the dies employed for producing the specific links forming the subject matter of this invention. In Fig. 2, I have indicated at 16 and 17 two molding dies movable toward and from each other. The dies have on their abutting surfaces registering recesses 18 and 19 forming the impression chamber between said surfaces of the dies, the dies being recessed as indicated at 20 to receive the mounting tape of the stringer upon which the links are to be cast. An aperture 21 is formed between adjacent surfaces of the dies through which the casting material is introduced into the impression thereof forming what is commonly referred to as the gate. 22 represents the nozzle through which the casting material is introduced into the impression from a suitable container or pot such as commonly employed in apparatus of the kind under consideration.

The adjacent surfaces of the dies are also provided with recesses 23 for receiving a core pin 24, the reduced lower end 24a of which extends into the impression between the dies as is clearly illustrated in Fig. 5 of the drawing so as to form the socket or recess 25 in one surface of the link. The projecting knob 26 of the link is formed by the contour of the impression recesses 18, 19 of the dies as will appear from a consideration of Fig. 5 of the drawing.

The dies 16, 17 are provided with water circulating chambers 16a, 17a, through which water or another cooling agent may be circulated for cooling the dies, the intake pipes being indicated at 27 and the exhaust pipes at 28 in Fig. 2 of the drawing. The enlargement 22a indicated upon the nozzle 22 is to represent a heating coil, maintaining the desired nozzle temperature to prevent clogging or congestion of the casting material within the nozzle.

The structural features of the dies and associated parts above described and diagrammatically illustrated in the accompanying drawing are substantially the same as those referred to in the applications heretofore identified. However, for clarity of this description, it will be stated that in operation, the dies are first moved into firm engagement with each other, as is indicated in Figs. 2 and 5 of the drawing, at which time, and assuming that the mounting tape as well as the core are disposed between the dies in the position seen in Fig. 5, casting material is then forced under pressure into the impression of the dies to form the cast link 12 thereon, after which the dies are separated in the manner indicated in Fig. 2. The core 24 serves as a means for ejecting the casting from the dies. The core is then moved downwardly into the position shown in Fig. 4 of the drawing, carrying with it the mounting tape to reposition another portion of the tape between the impression of the dies to provide the proper spacing for the next casting to be formed.

The dies are now partially closed to bring the lower surfaces thereof upon the upper surface of the cast link disposed on the end 24a of the core, at which time, the core is moved upwardly out of engagement with the cast link and returned to the position indicated in Fig. 5, after which the dies are again closed and the next casting formed. A trimming tool 29 is employed to trim off the gate 30 as is indicated in Fig. 5 of the drawing.

In practice, the lower or bottom surfaces of the impression recesses or chambers 18-19 are provided with outwardly projecting parts 18a, 19a, which form on the resulting cast links or the upper or lower surfaces thereof corresponding recesses or impressions 31, which will give to the resulting link a predetermined ornamental effect by producing therein a design or marking of predetermined contour. These representations may simply be the representations of a hammered surface. On the other hand, the markings may have a definite contour to produce a distinct symbol of identification. The marking or symbol of the links on one stringer may differ from those of the companion stringer by simply passing the two different stringers through different sets of dies. By so doing, the collective designs or markings of the links of both stringers may be made to produce a predetermined effect throughout the entire fastener device.

It is also preferred that a tinsel or other flexible wire 32, note Figs. 4 and 5, be incorporated in conjunction with the mounting tape 10 or the beaded edge 13 thereof as well as in conjunction with the companion tape 11. This wire is exposed through the tape or its beaded edge to contact with the cast link thereon so as to provide means for electroplating the links by maintaining a circuit through all of the links on each stringer, regardless of the length thereof. In this way, the link 12b, as partially seen in Fig. 7 of the drawing, may be provided with a surface plating or coating 33 which may extend into the recesses 31 therein. As seen in Fig. 9 of the drawing, in addition to the plating 33, a suitable filler 34 may be placed in the recesses 31, the filler being preferably of a color contrasting to that of the surface 33 to produce a contrasting effect and to bring out the design characterized by the recess or recesses 31 employed.

It will also be apparent that the plating or coating 33 is not absolutely essential, and in some

instances, the recesses 31 of the links may be filled with a suitable material as indicated at 35 in Fig. 8 of the drawing, the said material being preferably contrasting in color to the color of the cast link. With metal base links formed from metallic die castings, the filler materials 34, 35 employed may be in the form of lacquers, varnishes, paints or the like that may be easily applied to the surface and the surface wiped off to leave the inlaid materials alone forming what may be termed inlay or incrustated effects.

On the other hand, if the links are cast or molded from thermoplastic materials, the inlay material will be of such characteristics as to adhere to the surface walls of the grooves 31 to prevent displacement thereof if such materials are desired.

While I have shown links of predetermined general contour, the invention is not limited in this respect nor to any particular type of characterization of the surface of the links, as such changes may be readily made within the scope of the appended claims. One of the distinct advantages of my invention resides in the fact that slide fasteners may be produced with distinct trade-marks or symbols of identification in order to distinguish the merchandise of one manufacturer having a separable fastener thereon from that of another manufacturer employing separable fasteners on similar types or classes of merchandise in addition to the marking or characterization of the separable fastener to identify the manufacturer thereof.

The filling material employed on the recessed surfaces of the links may be of contrasting color on each link or of contrasting colors on alternate links, and on the other hand, the filling material in all of the links of one stringer may be of one color and on the links of the other stringer of another color. In this way, the links of the two stringers when coupled together will produce a substantially mosaic appearance or effect of the entire device on the exposed surfaces of the entire device.

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

1. In separable fasteners of the class described employing stringers having coupling links spaced longitudinally of the edges thereof, the links interlocking to secure the stringers together, and a slider movable along the stringers to couple and uncouple said links, each stringer consisting of a mounting tape with a plurality of cast links applied directly upon one edge portion of said tape and one side surface of each link being of irregular contour to give predetermined characteristics thereto.

2. In separable fasteners of the class described, comprising stringers having coupling links spaced longitudinally of the edges thereof, the links interlocking to secure the stringers together, and a slider movable along the stringers to couple and uncouple said links, each stringer consisting of a mounting tape with a plurality of cast links applied directly upon one edge portion of said tape, and one side surface of the link being recessed to provide a predetermined marking on said surface.

3. In separable fasteners of the class described, comprising stringers having coupling links spaced longitudinally of the edges thereof, the links interlocking to secure the stringers together, and a slider movable along the stringers to couple and uncouple said links, each stringer consisting

of a mounting tape with a plurality of cast links applied directly upon one edge portion of said tape, one side surface of the link being recessed to provide a predetermined marking on said surface, and a filler in the recess of such surface of a color contrasting to that of the color of the link.

4. In separable fasteners of the class described, employing stringers having coupling links spaced longitudinally of the edges thereof, the links interlocking to secure the stringers together, and a slider movable along the stringers to couple and uncouple said links, each stringer consisting of a mounting tape with a plurality of cast links applied directly upon one edge portion of said tape, one side surface of the link being recessed to provide a predetermined marking on said surface, a filler in the recess of such surface of a color contrasting to that of the color of the link, and said link having a surface coating or plating.

5. In separable fasteners of the class described employing stringers, each consisting of a mounting member of fibrous material and a plurality of coupling links arranged and spaced longitudinally of one edge thereof with the coupling portions of said links projecting beyond said edge, each of said links comprising a molded body applied directly upon said edge of the mounting member in securing the link thereto, one side surface of the link being of irregular contour to provide a predetermined marking on said surface, and all exposed surfaces of the link being covered with a coating material.

6. In separable fasteners of the class described comprising stringers, each consisting of a fibrous mounting strip and a plurality of coupling links arranged and spaced longitudinally of one edge thereof, and all of the links of one stringer having on one side surface thereof markings of similar contour to produce on said surface of each link a predetermined symbol.

7. A stringer for separable slide fasteners of the class described, said stringer comprising an elongated mounting strip, a series of coupling elements arranged and spaced longitudinally of the strip, the outer exposed surfaces of said coupling elements, aside from the peripheral contour thereof, being characterized to provide predetermined markings thereon to enhance the appearance of said links, and said markings including filler material imbedded in said surfaces of the links and of a color contrasting to that of the color of said links.

8. A link for separable slide fasteners of the class described, said link comprising a die cast body formed directly upon a predetermined support, the body including a coupling portion projecting beyond one edge of the support, and the upper and lower surfaces of the link having grooves to produce on said surfaces predetermined designs, said grooves being formed in casting said body.

9. A link for separable slide fasteners of the class described, said link comprising a die cast body formed directly upon a predetermined support, the body including a coupling portion projecting beyond one edge of the support, the upper and lower surfaces of the link having grooves to produce on said surfaces predetermined designs, said grooves being formed in casting said body, and all exposed surfaces of the body of said link being coated with a material of predetermined color.

10. In separable fasteners of the class described, a die cast body of predetermined contour and having upper and lower side surfaces, one of said side surfaces having recesses formed therein in casting said body, and said recesses giving predetermined marking characteristics to said side surface of the body.

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