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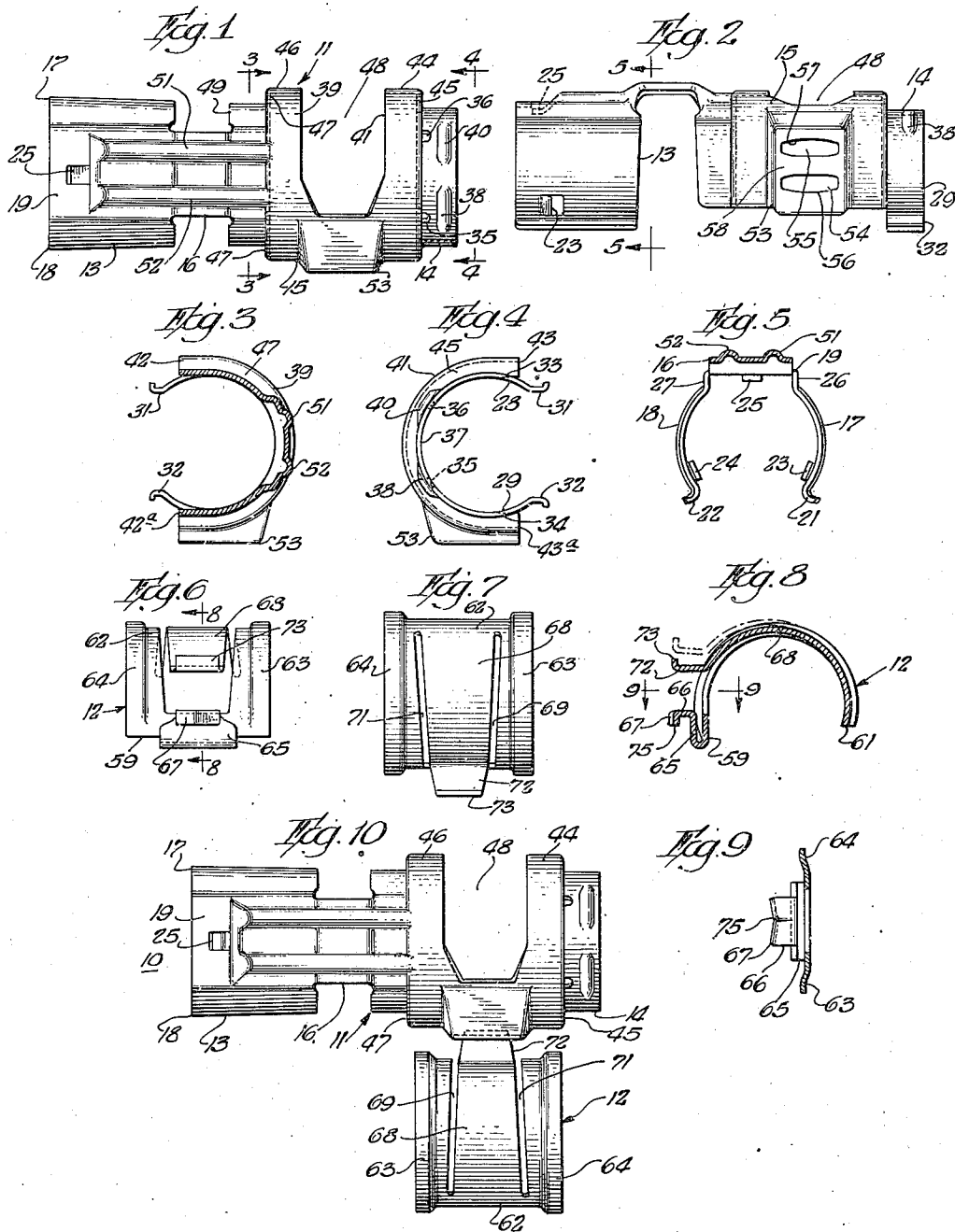
R. S. SANFORD ET AL

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CARTRIDGE BELT LINK

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2 Sheets-Sheet 1



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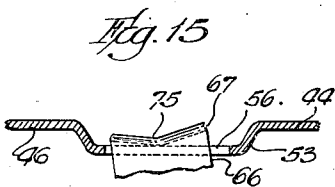
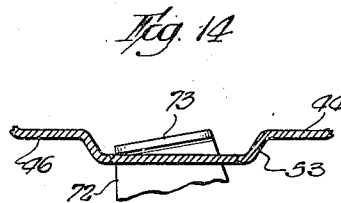
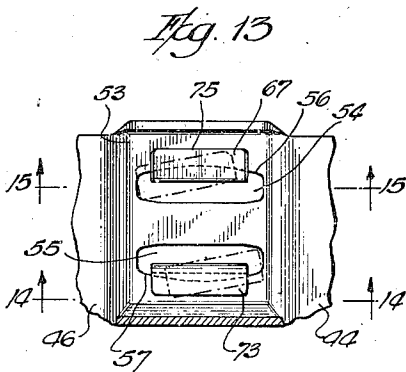
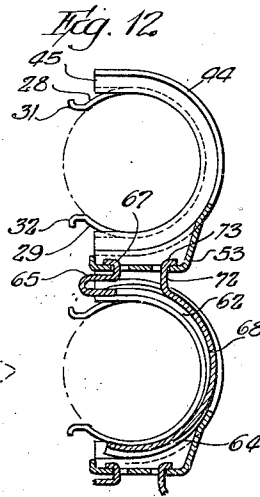
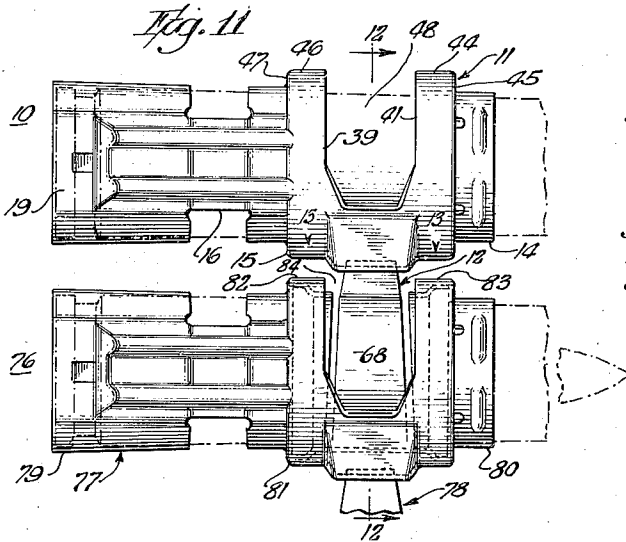
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2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

2,480,972

## CARTRIDGE BELT LINK

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17 Claims. (Cl. 89—35)

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This invention relates to cartridge belt links adapted to be assembled with cartridges to form disintegrating ammunition belts, more particularly to multiple part cartridge belt links having an improved swivel connection between the link parts, and it is an object of the invention to provide an improved cartridge belt link of this character.

Rapid fire guns such as machine guns and automatic cannon, for example, are fed with ammunition supplied to the gun by an ammunition belt which is of a disintegrating character, such belts being long in order to hold the necessary number of rounds of ammunition. The rapid fire guns are mounted on moving as well as stationary platforms and are provided with carriages movable both in azimuth and elevation so as to fire effectively at either moving or stationary targets. The guns, particularly those mounted on moving platforms, have limited space for maneuvering and the relatively large quantities of ammunition in belts must be placed so as not to interfere with the gunner's manipulations, must feed properly into the gun and yet be relatively easily accessible for replacement and service. It is well recognized that ammunition belts to meet the rigorous requirements must have certain requisites of flexibility in a number of planes at right angles to each other so as to permit the cartridges held thereby to twist and turn relative to each other to move around feed and guide chutes and rollers and still maintain the pitch distance between cartridges within certain limits in order that the feed pawls may properly grip the cartridges.

Cartridge belt links for use in rapid fire guns have heretofore been provided in which cooperating interfitting portions of adjacent links formed the hinge for holding adjacent links together and for the turning of cartridges in planes at right angles to their axes to permit turning of cartridges around feed and guide rollers or chutes. In one well known type of such a cartridge belt link, a single cartridge gripping arcuate loop is provided for gripping a cartridge adjacent its base end. Spaced immediately adjacent the gripping loop there is a substantially semicylindrical portion somewhat larger than the outer diameter of the cartridge forming an internal arcuate track, and spaced immediately adjacent the semicylindrical portion on the side opposite to the gripping loop there is an arcuate cartridge guide. Attached at one side of the semicylindrical portion by means of a pin and slot connection there is a second semicylindrical part slightly larger

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than the diameter of the cartridge and having semicylindrical portions of a diameter so as to be easily receivable in the internal arcuate track portion of an adjacent link.

Certain types of guns require the use of a cartridge belt link in which the cartridges are stripped laterally from the links of the belt rather than being pushed through or pulled from the link. Links capable of use in such applications must of necessity be open links. Accordingly it is a further object of the invention to provide an improved cartridge belt link of the laterally stripping character having an improved swivel connection between the link parts which maintains the pitch distance between cartridges and restrains movement of the cartridges out of line.

In carrying out the invention in one form, a cartridge belt link is provided comprising a first cartridge receiving part and a second cartridge receiving part. One of the cartridge receiving parts includes a pair of slots at one side, the outer edges of which define a pair of guides, and the other of the parts includes a pair of tongues extending therefrom and terminating in a pair of lugs, at least one of the tongues being resiliently formed. The tongues extend through the slots and are biased into contact with the outer edges of the slots for joining the two parts together.

More particularly the cartridge belt link comprises a first part having a substantially semicylindrical portion forming an internal arcuate track and a second part having a substantially semicylindrical portion disposed alongside said first part with the first and second parts facing in the same direction. One of the semicylindrical portions includes a pair of longitudinal slots adjacent one side, and the other of the semicylindrical portions includes a pair of tongues terminating in a pair of outwardly projecting lugs, the tongues extending through the slots to connect the first and second parts together. One of the tongues is resiliently formed thereby to bias both of said tongues into contact with the edges of the slots for resiliently restraining relative twisting movement of the parts. The internal arcuate track of the first part has substantially the same diameter as the diameter of the semicylindrical portion of the second part, whereby the internal arcuate track is adapted to receive in nesting position the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of the second part.

For a more complete understanding of the in-

vention, reference should now be had to the accompanying drawings in which:

Figure 1 is a top plan view of one part of a cartridge belt link embodying the invention;

Fig. 2 is a side elevational view of the cartridge belt link part shown in Fig. 1;

Fig. 3 is a sectional view taken substantially along lines 3—3 of Fig. 1;

Fig. 4 is an end view taken in the direction of arrows 4—4 of Fig. 1;

Fig. 5 is a sectional view taken substantially along lines 5—5 of Fig. 2;

Fig. 6 is a side elevational view of another part of a cartridge belt link embodying the invention;

Fig. 7 is a top plan view of the cartridge belt link part shown in Fig. 6;

Fig. 8 is a sectional view taken substantially along lines 8—8 of Fig. 6;

Fig. 9 is a sectional view taken substantially along lines 9—9 of Fig. 8;

Fig. 10 is a top plan view of the cartridge belt link with the two parts assembled together;

Fig. 11 is a top plan view of a pair of cartridge belt links assembled into an ammunition belt, the cartridges being shown in outline;

Fig. 12 is a sectional view taken substantially along lines 12—12 of Fig. 11;

Fig. 13 is an enlarged fragmentary view taken in the direction of the arrows 13—13 of Fig. 11, the dotted portion indicating the relative position of the link parts when the links are twisted;

Fig. 14 is a view taken in the direction of the arrows 14—14 of Fig. 13 when the link parts are canted relative to each other; and

Fig. 15 is a view taken in the direction of the arrows 15—15 of Fig. 13 with the link parts canted in the same direction as for Fig. 14.

Referring more particularly to the drawings, the invention is embodied in a cartridge belt link 10 including two cartridge receiving parts 11 and 12 (Fig. 10) connected together so as to have a limited degree of restrained movement relative to each other, similar cartridge belt links being assembled together with a portion of the part 12 of one link interfitting with the cooperating portion of part 11 of an adjacent link to form a completed ammunition belt, e. g., Fig. 11.

The cartridge receiving part 11 comprises two cartridge engaging or gripping arcuate loops 13 and 14 and a portion 15 disposed between and connecting the arcuate loops (Figs. 1 and 2), the loop 14 being attached directly to the portion 15 while the loop 13 is spaced from portion 15 by means of an integrally formed bridging member 16. The portion 15 and arcuate loops 13 and 14 are spaced along the axis of the cartridge so that loop 13 grips the base portion of a cartridge, and loop 14 grips the forward end of the cartridge, the portion 15 embodying within itself means to be connected with the second cartridge receiving part 12 and also means to cooperate with a portion of an adjacent link to permit relative turning of adjacent cartridges in an ammunition belt composed of the links.

The cartridge gripping loop 13 comprises a pair of arcuately formed spring fingers or tongues 17 and 18 extending downwardly from a flat connecting member 19 (Fig. 5). The fingers 17 and 18 extend arcuately from flat member 19 and span over an arc of greater than 180° so as to surround the greater portion of a cartridge to form an adequate holding area, the ends of the tongues being provided with curved lugs 21 and 22 respectively which define a space or opening

between them through which the cartridge is moved during its stripping from a cartridge belt. The arcuate fingers 17 and 18 are circular in form and have a diameter somewhat smaller than the cartridge held thereby so that the cartridge will be tightly gripped. To conform to the contour of a cartridge, fingers 17 and 18 taper from the left to right (Fig. 1) so that these fingers will engage the cartridge along their full length, the fingers having substantial length which may, for example, be equal to the diameter of the cartridge held in order to provide a large gripping surface. The ends of arcuate fingers 17 and 18 opposite to lugs 21 and 22 terminate in upwardly extending portions 26 and 27 which terminates in the flat portion 19. Portions 26 and 27 and flat portion 19 in effect form an embossment from which arcuate fingers 17 and 18 extend, thereby forming a relatively flexible and resilient connection of fingers 17 and 18 with flat portion 19, and at the same time providing a longitudinally rigid structure.

During the formation of link part 11, the arcuate fingers are bent and shaped as described and are heat treated to impart the requisite spring resiliency whereby these fingers firmly grip the cartridge. Adjacent curved lugs 21 and 22 toward the rear of fingers 17 and 18, inwardly directed lugs 23 and 24 are provided, and the flat member 19 is provided with an inwardly directed lug 25, the lugs 23, 24 and 25 being adapted to lie in the extractor groove of a cartridge, as shown best in Fig. 11. The lugs 23, 24 and 25 may be formed by a suitable stamping operation for example, the front edge of lugs 23 and 24 being directed forwardly so as to engage one edge of the extractor groove and the inward edge of lug 25 being directed rearwardly so as to engage the other edge of the extractor groove. In this manner a cartridge being held by arcuate fingers 17 and 18 is prevented from moving either rearwardly or forwardly during the movements of the ammunition belt.

The cartridge gripping loop 14 at the end of the link opposite to cartridge gripping loop 13 constitutes a pair of arcuate resilient fingers 28 and 29 (Fig. 4) terminating in outwardly directed lugs 31 and 32 defining an opening between them through which the cartridge held thereby is stripped from the cartridge belt link, the opening extending in the same direction as the opening defined by lugs 21 and 22. The arcuate fingers 28 and 29 are circular in form and have a diameter somewhat less than that of the portion of the cartridge held thereby and are resiliently formed so as to firmly grip the cartridge, the ends of these fingers having a total arcuate extent of substantially greater than 180°. When a cartridge is stripped laterally from the link, the fingers 28 and 29 are spread apart which movement is permitted by cutting or slitting the inner edges of fingers 28 and 29 from the central portion 15 of the link. This is shown best by the broken lines 33 and 34 of Fig. 4, the cuts or slits extending along the fingers 28 and 29 to the drilled or punched holes 35 and 36. The strip 37 of loop 14 lying between holes 35 and 36 is solid with member 15 and extends over a substantial length thereby to hold loop 14 and consequently fingers 28 and 29 to the link. To stiffen fingers 28 and 29, embossments 38 and 40 are provided adjacent holes 35 and 36.

The central portion 15 lying between the cartridge gripping loops 13 and 14 is semicylindrical in form and includes a pair of spaced apart

substantially semicircular cup like members 39 and 41. These semicircular members terminate in the ends respectively 42, 42a and 43, 43a lying somewhat beyond the semicircular point and define a space or opening between them which is in line with the opening formed by lugs 21 and 22, and lugs 31 and 32, as shown best in Figs. 3 and 4. Semicircular member 41 includes a longitudinally directed portion 44 which is joined to cartridge gripping loop 14 by a flange 45. The longitudinal portion 44 is larger in diameter than cartridge gripping loop 14 by the amount of the radial extent of flange 45, the flange 45 and the longitudinal portion 44 forming an internal arcuate track for a purpose to be described. Similarly, semicircular member 39 includes a horizontally directed portion 46 and a flange 47, these two members also providing an internal arcuate track for a purpose to be described. To permit pivoting of one link relative to an adjacent link, as will be more fully explained subsequently in this specification, the central portion 15 of the link is provided with a slot 48 lying between semicircular portions 39 and 41, the slot beginning with the ends 42 and 43 and extending somewhat beyond the top of the link as shown. The central portion 15 at the side thereof, and beginning with the end of slot 48, is provided with a substantially rectangular projection or embossment 53 which projects beyond the horizontally directed portions 44 and 46 so as to form a space between the embossment and a cooperating link part in the completed link. The base of the embossment 53 is provided with a pair of slots 54 and 55 separated by a strip of metal 58, the slots being directed longitudinally and being provided with curved outer edges 56 and 57 as shown best in Fig. 2. The flange 47 terminates in an arcuate portion 49 which has a diameter substantially equal to the diameter of the cartridge passing therethrough at that point. Consequently, arcuate portion 49 has a diameter determined by the continuation of the taper of arcuate tongues 17 and 18.

The bridge member 16 joining cartridge gripping loop 13 and the central portion 15 is arranged diametrically opposite to the openings defined by lugs 31 and 32 and lugs 21 and 22, extends from the right hand edge of member 13 to the left hand edge of portion 49 (Fig. 1), and is provided with embossments 51 and 52 which extend from the lug 25 to the semicircular portion 39. Bridge member 16 is raised above the flat portion 19 and cartridge gripping member 13 as shown best in Figs. 2 and 5, thereby to provide a space between the under edge thereof and the surface of a cartridge held by the link to receive a stripping cam on the gun for stripping the cartridge from the link, the embossments 51 and 52 imparting sufficient stiffness to the link so that unwarranted deformations do not occur during use.

In Figs. 6, 7 and 8, the second cartridge receiving part 12 of link 10 is shown also as an arcuate member or loop having an arcuate extent of greater than one hundred and eighty degrees, the ends 59 and 61 of this member (Fig. 8) defining a space or opening between them which, in the assembled condition of the cartridge link parts, faces in the same direction as the openings defined by lugs 21 and 22 of link part 11. Link part 12 includes a central or body portion 62 having a diameter slightly greater than the portion of the cartridge received therein and circular flanges 63 and 64 at the sides thereof, the diameter

of flanges 63 and 64 being greater than that of central portion 62 and being slightly less than the internal diameter of portions 46 and 44 of link part 11. The axial (i. e. axial of a cartridge held by the link part) or longitudinal extent of this link part between the outer edges of flanges 63 and 64 is slightly smaller than the longitudinal distance between the circular flanges 45 and 47 of link part 11. Accordingly, the link part or loop 12 of an adjacent link is relatively loosely receivable within the substantially semicylindrical portion 15 of link part 10, the flanges corresponding to flanges 63 and 64 riding upon the internal surfaces of horizontally directed semicircular portions 44 and 46 and being held against axial movement by contact of flanges corresponding to 63 and 64 against flanges 45 and 47. Thus the portions 39 and 41 form an internal arcuate track to receive in nesting relationship the loop 12 of an adjacent cartridge link.

Extending from end 59 of loop 12, there is a reversely bent tongue 65 having a finger 66 extending outwardly therefrom and terminating in a lug 67 projecting at right angles to finger 66. Beginning adjacent end 61, and arcuately extending throughout the greater portion of link part 12, there is a tongue 68 separated from the body 62 by means of slots 69 and 71, tongue 68 terminating in a finger 72 which projects outwardly in the same direction as finger 66 and terminates in a lug 73 lying at right angles to finger 72. The tongue 68 is resiliently formed and is biased outwardly so that in the unstressed position it takes the position shown by the dotted lines in Fig. 8. The lug 73 is flat and lies parallel to the axis of loop 12, whereas the lug 67 is V-shaped in cross section as is shown best in Fig. 9, the apex 75 of the V being at the center of the lug.

To assemble the link parts 11 and 12 together into a completed link (Fig. 10), lug 67 and finger 66 are inserted into slot 54 with the outer edge of finger 66 engaging the curved edge 56 of this slot and the tongue 68 is depressed to the position shown by the solid lines of Fig. 8, whereupon lug 73 and finger 72 are inserted into slot 55. When the tongue 68 is released, its resiliency biases the finger 72 into contact with the curved edge 57 of slot 55. The fingers 66 and 72 are flat, whereby these two members are urged into two points of contact with the outer curved edges 56 and 57 (Fig. 13). Exerting tension on link parts 11 and 12, as would occur during the use of ammunition belt, will force lug 73 into flat contact with the inside surface of embossment 53 adjacent curved edge 57 and will force the apex 75 of lug 67 into single point contact with the inside surface of embossment 53 adjacent curved edge 56. (See Figs. 12 and 15.) The V-shaped cross section of lug 67, the resiliency of tongue 68, together with the curved edges 56 and 57, result in a cartridge belt link having a limited or restrained degree of twisting and turning movements, as will be more completely described.

Referring to Figs. 11 and 12 there is shown a portion of an ammunition belt comprising the link 10 including the link parts 11 and 12, and a link 76 comprising link parts 77 and 78 corresponding respectively to link parts 11 and 12. The link part 77 is identical to link part 11 and includes a cartridge gripping loop 79, a cartridge gripping loop 80, and a central portion 81 corresponding to the central portion 15 of link part 11. The central portion 81 is semicylindrical in form and includes the semicircular portions 82 and 83, each of which defines an internal arcuate

track of the same dimensions and in the same manner as corresponding portions 39 and 41 of link part 11. To assemble links 10 and 76 together, the link part 12 of link 10 is placed within central portion 81 of link 76 so that the flanges 63 and 64 of link part 12 fit within the internal arcuate tracks formed by the semicircular members 82 and 83. A slot 84 similar to slot 48 of link part 11 separates the members 82 and 83, and since the longitudinal dimensions as well as the diameter of link part 12 are slightly less than the corresponding internal dimensions of link part 81, it will be clear that link part 12 may rotate within link part 81, the flanges 63 and 64 riding upon the inner surfaces of semicircular members 82 and 83. Relative longitudinal movement of links 10 and 76 is prevented by the edges of flanges 63 and 64 bearing against the circular flanges of semicircular members 82 and 83.

The links 10 and 76 are prevented from coming apart after link part 12 is placed within central portion 81 of link 76 by the insertion of a cartridge into link 76 so that the extractor groove is engaged by the inwardly projecting lugs as shown, the cartridge gripping loop 79 grips the base portion of the cartridge, and the cartridge gripping loop 80 grips the forward end of the cartridge, the link part 12 being slightly larger than the cartridge received within the link.

Referring to Fig. 12, it will be clear that so long as the cartridge is gripped within the gripping loops 79 and 80, the link part 12 cannot come out of its internal nesting relationship with central part 81. However, the link part 12 may turn on its axis relative to link part 76 by virtue of the flanges 63 and 64 of link part 12 rotating within arcuate portions 82 and 83. The rotation on its axis of link part 12 relative to link part 76 permits the cartridge belt and assembled cartridges to turn in a circle so as to bend around feed rollers, for example. This rotation or bending movement is illustrated in Figs. 7 and 8 of the copending application, Serial No. 542,559, Patented No. 2,426,527, filed June 28, 1944, entitled Cartridge belt link and assigned to the same assignee as the present invention.

During use of the cartridge belt link it is necessary that the ammunition belt be capable of certain other twisting and turning movements as is well understood. Commonly these movements may be divided into two groups, the first of which may be designated as torsion or twisting, and the other may be designated as turning or canting. The first of these movements may be exemplified by visualizing a pair of cartridge belt links, such for example as links 10 and 76, and the assembled cartridges rotating relative to each other so that the axes of these links rotate in planes parallel to each other and hence perpendicular to the axis of the cartridge belt. This movement broadly is illustrated in Figs. 9 and 10 of the copending application Serial No. 469,679, Patent No. 2,390,331, filed December 21, 1942, entitled Cartridge belt link, and assigned to the same assignee as the present invention. The construction of slots 54 and 55 and the outer curved edges 56 and 57 thereof, along with the construction of fingers 66 and 72 in the assembled link, during torsion or twisting of the link parts, will effect rotation of lugs 67 and 73, together with the fingers 66 and 72, from the position shown by the solid lines in Fig. 13 to the position shown by the dotted lines. During this

movement, fingers 66 and 72 are moved out of two point contact with corresponding curved edges 56 and 57 and into single point contact therewith. The finger 72 being resiliently biased outward by tongue 68 tends to return the fingers 66 and 72 into two point contact, the edges of these fingers moving along the curved surfaces 56 and 57, as may be visualized from Fig. 13. Furthermore, torsion of the links moving the lugs 67 and 73 into positions shown by the dotted lines in Fig. 13 moves the fingers 66 and 72 closer to each other, thereby tending to increase the deflection of tongue 68 and further tending to return fingers 66 and 72 and hence the link part 12 into its normal position. Accordingly, when a series of assembled links and cartridges are suspended between two points and some external force is applied thereto, and as a result the cartridges tend to move out of line with the remaining cartridge in the ammunition belt, the resiliency of tongue 68 causes the cartridges to resist such torsion and to return to the normal straight line position when the external force is removed. Thus, while the cartridges may move out of line in order to accommodate themselves to feed rolls and guide chutes, or because of a shock applied to them for example, the cartridges will return to their normal position thereby reducing the force necessary to pull the cartridges along.

The second type of movement of assembled cartridges and links, i.e., turning or canting may be visualized by considering a series of cartridges lying flat on a plane surface and being bent so that the noses or the bases of the cartridges point to the center of a circle. This movement is illustrated in Fig. 8 of the copending application Serial No. 469,679 above referred to. Considering links 10 and 76 (Fig. 11) rotated into such a circular configuration, it will be apparent that link part 12 pivots around the apex 75 of lug 67 since the apex 75 bears against the base of embossment 53 adjoining curved edge 56. The flat portion of lug 67 to the left of apex 75 in Fig. 15 tends to lie parallel to the surface adjacent curved edge 56, this being the position when the maximum amount of canting of two adjacent cartridge belt links has been reached and lug 73 of link part 12 will pivot about one edge as shown for example in Fig. 14. During canting movements, since apex 75 bears against the base of the embossment 53, link part 12 can pivot relatively easily about link part 11 thereby reducing the force necessary to rotate the cartridges in this manner around guide chutes for example. Furthermore, since the pivoting takes place about apex 75 and the apex 75 is fixed relative to link part 12, it is apparent that the pitch distance between adjacent cartridges is fixed at all times. After cartridges have moved away from points where canting occurs, it is desirable that the cartridges return to the normal straight line position. The lug 73 being flat, causing it to rise on one edge as shown in Fig. 14 during canting movements, tends to move to its flat position when the force causing the links to rotate in this fashion is removed, and since the lug 73 is of relatively large dimensions, the cartridges tend to remain in the straight line position. Hence, during canting movement an easy pivoting movement is obtained through the tapered lug 67, and during straight pulling movements the flat lug 73 maintains the cartridges in alignment, the latter movement being of prime importance during the actual feeding of cartridges into the gun since at this time the cartridges move in a straight line.

The cartridges are stripped laterally from the links, which is accomplished by a stripping cam engaging beneath the bridge 16 and above the cartridges. As the cartridges move along, the cam moves between a particular cartridge and the assembled link forcing the cartridge down and causing the gripping fingers 28 and 29, and 17 and 18 to move apart to allow the cartridge to be stripped from the link.

While we have shown a particular embodiment of our invention, it will be understood, of course, that we do not wish to be limited thereto since many modifications may be made, and we, therefore, contemplate by the appended claims to cover any such modifications as fall within the true spirit and scope of our invention.

Having thus described our invention, what we claim and desire to secure by Letters Patent is:

1. A cartridge belt link comprising a first cartridge receiving part, and a second cartridge receiving part, one of said parts including a pair of longitudinal slots having outer curved edges and the other of said parts including a pair of flat longitudinally disposed tongues extending therefrom at least one of which is resiliently formed, each of said pair of tongues terminating in an outwardly projecting lug, one of said lugs being bent angularly from the center thereof to form a tilting surface, said flat tongues extending through said slots whereby the center of said one lug and the other lug engage said one part adjacent said curved edges for holding said parts together and said flat tongues engage said curved edges at two points for resiliently restraining relative twisting movement of said parts, the center of said tilting surface engaging said one part to permit relative tilting of said parts.

2. A cartridge belt link comprising a first arcuate cartridge receiving part, a second arcuate cartridge receiving part, one of said parts including a pair of longitudinal slots having outer curved edges, an arcuate tongue extending a substantial distance around the other of said arcuate parts and attached thereto at one end thereby to impart resiliency to said tongue, a flat finger extending from said tongue at the other end, a second finger extending from said other arcuate part, and lugs projecting outwardly from each of said fingers, said fingers extending through said slots whereby said lugs engage said one part adjacent said curved edges for holding said parts together and said fingers engage said curved edges for resiliently restraining relative twisting movement of said parts.

3. A cartridge belt link of the character cooperating with other similar links to form a disintegrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal track, a second part having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said semicylindrical portions including a pair of longitudinal slots adjacent one edge, and a pair of tongues terminating in a pair of outwardly projecting lugs extending from the other of said parts through said slots to connect said first and second parts together, one of said tongues being resiliently formed thereby to bias said tongues into contact with the edges of said slots for resiliently restraining relative twisting movement of said parts, said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nest-

ing relation the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part.

4. A cartridge belt link of the character cooperating with other similar links to form a disintegrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track, a second part having a substantially semi-cylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said semicylindrical portions including a pair of longitudinal slots adjacent one edge, said slots having outer curved edges, and a pair of longitudinally flat tongues terminating in a pair of outwardly projecting lugs extending from the other of said parts through said slots, said lugs engaging said one part adjacent said curved edges to connect said parts together, at least one of said tongues being resiliently formed thereby to bias said flat tongues into two point contact with said curved edges for resiliently restraining relative twisting movement of said parts, said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part.

5. A cartridge belt link of the character cooperating with other similar links to form a disintegrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track, a second part having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said semicylindrical portions including a pair of longitudinal slots adjacent one edge, said slots having outer curved edges, and a pair of longitudinally flat tongues terminating in a pair of outwardly projecting lugs extending from the other of said parts through said slots, one of said tongues being resiliently formed for resiliently biasing said flat tongues into two point contact with said curved edges to resiliently restrain relative twisting movement of said parts, one of said lugs being bent angularly from the center thereof to form a tilting surface, said lugs engaging said one part adjacent said curved edges to connect said parts together, whereby said parts are tiltable relative to each other about the center of said tilting surface, said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part.

6. A cartridge belt link of the character cooperating with other similar links to form a disintegrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track, a second part having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said semicylindrical portions including a pair of longitudinal slots adjacent one edge, said slots having outer curved edges, a resilient arcuate tongue extending a substantial distance around the other of said semicylindrical portions and attached thereto at one end, a flat finger extending from said tongue at the other end, a second finger

extending from the other of said semicylindrical portions, and a lug extending outwardly from each of said fingers, said fingers extending through said slots whereby said lugs engage said one part adjacent said curved edges to connect said parts, said resilient tongue biasing said fingers into two point contact with said curved edges to resiliently restrain relative twisting movement of said parts, said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part.

7. A cartridge belt link of the character co-operating with other similar links to form a disintegrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track and an arcuate resilient cartridge gripping member longitudinally spaced from said semicylindrical portion for holding a cartridge extending thereacross, said cartridge gripping member having an open portion facing in the same direction as said semicylindrical portion thereby to permit a cartridge to be laterally stripped from the link, a second part also having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said parts including a pair of longitudinal slots adjacent one edge of its semicylindrical portion and the other of said parts including a pair of tongues terminating in outwardly projecting lugs, at least one of said tongues being resiliently formed, said tongues extending through said slots and said lugs engaging said one part adjacent said longitudinal slots to connect said parts together, said resilient tongue biasing said tongues into contact with the edges of said slots for resiliently restraining relative twisting movement of said parts, and said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part and said internal track and the nesting portion are rotatable within each other.

8. A cartridge belt link of the character co-operating with other similar links to form a disintegrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track and a pair of resilient fingers longitudinally spaced from said semicylindrical portion for gripping a cartridge extending thereacross, said fingers together having an arcuate extent of greater than one hundred and eighty degrees and defining an open space between their ends facing in the same direction as the open space of said semicylindrical portion thereby to permit a cartridge to be laterally stripped from the link, a second part also having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said parts including a pair of longitudinal slots adjacent one edge of its semicylindrical portion and the other of said parts including a pair of tongues terminating in outwardly projecting lugs, at least one of said tongues being resiliently formed, said tongues extending through said slots and said lugs engaging said one part adjacent said longitudinal

slots to connect said parts together, said resilient tongue biasing said tongues into contact with the edges of said slots for resiliently restraining relative twisting movement of said parts, and said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part and said internal track and the nesting portion are rotatable within each other.

9. A cartridge belt link of the character co-operating with other similar links to form a disintegrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track, an arcuate resilient cartridge gripping member longitudinally spaced from said semicylindrical portion at one end thereof and an arcuate resilient cartridge gripping member longitudinally spaced from said semicylindrical portion at the other end thereof for holding a cartridge extending across said semicylindrical portion, each of said cartridge gripping members having an open portion facing in the same direction as the open portion of said semicylindrical portion thereby to permit a cartridge to be laterally stripped from the link, a second part also having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said parts including a pair of longitudinal slots adjacent one edge of its semicylindrical portion and the other of said parts including a pair of tongues terminating in outwardly projecting lugs, at least one of said tongues being resiliently formed, said tongues extending through said slots and said lugs engaging said one part adjacent said longitudinal slots to connect said parts together, said resilient tongue biasing said tongues into contact with the edges of said slots for resiliently restraining relative twisting movement of said parts, and said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part and said internal track and the nesting portion are rotatable within each other.

10. A cartridge belt link of the character co-operating with other similar links to form a disintegrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track, an arcuate resilient cartridge gripping member longitudinally spaced from said semicylindrical portion at one end thereof, an arcuate resilient cartridge gripping member longitudinally spaced from said semicylindrical portion at the other end thereof for holding a cartridge across said semicylindrical portion, and means associated with the latter member for positively preventing longitudinal movement of a cartridge held thereby, each of said cartridge gripping members having an open portion facing in the same direction as the open portion of said semicylindrical portion, thereby to permit a cartridge to be laterally stripped from the link, a second part also having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said parts including a pair of

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longitudinal slots adjacent one edge of its semicylindrical portion and the other of said parts including a pair of tongues terminating in outwardly projecting lugs, at least one of said tongues being resiliently formed, said tongues extending through said slots and said lugs engaging said one part adjacent said longitudinal slots to connect said parts together, said resilient tongue biasing said tongues into contact with the edges of said slots for resiliently restraining relative twisting movement of said parts, and said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part and said internal track and the nesting portion are rotatable within each other.

11. A cartridge belt link of the character cooperating with other similar links to form a disintegrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track, an arcuate resilient cartridge gripping member longitudinally spaced from said semicylindrical portion for holding a cartridge extending thereacross and means associated with said gripping member for positively preventing longitudinal movement of a cartridge held thereby, said cartridge gripping member having an open portion facing in the same direction as the open portion of said semicylindrical portion, thereby to permit a cartridge to be laterally stripped from the link, a second part also having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said parts including a pair of longitudinal slots adjacent one edge of its semicylindrical portion and the other of said parts including a pair of tongues terminating in outwardly projecting lugs, at least one of said tongues being resiliently formed, said tongues extending through said slots and said lugs engaging said one part adjacent said longitudinal slots to connect said parts together, said resilient tongue biasing said tongues into contact with the edges of said slots for resiliently restraining relative twisting movement of said parts, and said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part and said internal track and the nesting portion are rotatable within each other.

12. A cartridge belt link of the character cooperating with other similar links to form a disintegrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track, an arcuate resilient cartridge gripping member longitudinally spaced from said semicylindrical portion at one end thereof, a pair of resilient gripping tongues longitudinally spaced from said semicylindrical portion at the other end thereof for holding a cartridge extending across said semicylindrical portion, and means for positively preventing longitudinal movement of a cartridge held thereby, said gripping tongues together having an arcuate extent greater than one hundred and eighty degrees and defining an

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open space between their ends facing in the same direction as the open spaces of said gripping member and said semicylindrical member, thereby to permit a cartridge to be laterally stripped from the link, a second part also having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said parts including a pair of longitudinal slots adjacent one edge of its semicylindrical portion and the other of said parts including a pair of tongues terminating in outwardly projecting lugs, at least one of said tongues being resiliently formed, said tongues extending through said slots and said lugs engaging said one part adjacent said longitudinal slots to connect said parts together, said resilient tongue biasing said tongues into contact with the edges of said slots for resiliently restraining relative twisting movement of said parts, and said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part and said internal track and the nesting portion are rotatable within each other.

13. A cartridge belt link of the character cooperating with other similar links to form a disintegrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track, an arcuate resilient cartridge gripping member longitudinally spaced from said semicylindrical portion at one end thereof, a pair of resilient gripping tongues longitudinally spaced from said semicylindrical portion at the other end thereof and an inwardly directed lug associated with each of said tongues and an inwardly directed lug between said first mentioned lugs for positively preventing longitudinal movement of a gripped cartridge, said gripping tongues together and said arcuate resilient gripping member each having arcuate extents of greater than one hundred and eighty degrees for holding a cartridge extending across said semicylindrical portion and having openings facing in the same direction as the open spaces of said semicylindrical member, thereby to permit a cartridge to be laterally stripped from the link, a second part also having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said parts including a pair of longitudinal slots adjacent one edge of its semicylindrical portion and the other of said parts including a pair of tongues terminating in outwardly projecting lugs, at least one of said tongues being resiliently formed, said tongues extending through said slots and said lugs engaging said one part adjacent said longitudinal slots to connect said parts together, said resilient tongue biasing said tongues into contact with the edges of said slots for resiliently restraining relative twisting movement of said parts, and said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part and said internal track and the nesting portion are rotatable within each other.

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14. A cartridge belt link of the character co-operating with other similar links to form a dis-integrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track, an arcuate resilient cartridge gripping member longitudinally spaced from said semicylindrical portion at one end thereof, and another arcuate resilient cartridge gripping member longitudinally spaced from said semicylindrical portion at the other end thereof for holding a cartridge extending across said semicylindrical member, said resilient cartridge gripping members and said semicylindrical member having open spaces facing in the same direction, thereby to permit a cartridge to be laterally stripped from the link, said other resilient cartridge gripping member being connected to said semicylindrical member by a bridging member at the opposite side of said semicylindrical portion than the opening therein for engagement by a lateral stripper, a second part also having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, one of said parts including a pair of longitudinal slots adjacent one edge of its semicylindrical portion and the other of said parts including a pair of tongues terminating in outwardly projecting lugs, at least one of said tongues being resiliently formed, said tongues extending through said slots and said lugs engaging said one part adjacent said longitudinal slots to connect said parts together, said resilient tongue biasing said tongues into contact with the edges of said slots for resiliently restraining relative twisting movement of said parts, and said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part and said internal track and the nesting portion are rotatable within each other.

15. A cartridge belt link of the character co-operating with other similar links to form a dis-integrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track, a pair of resilient fingers longitudinally spaced from said semicylindrical portion at one end thereof, a pair of resilient tongues longitudinally spaced from said semicylindrical portion at the other end thereof, said pair of fingers and said pair of tongues each having arcuate extents of greater than one hundred and eighty degrees for gripping a cartridge extending across said semicylindrical portion and the ends of said tongues and said fingers defining openings facing in the same direction as the opening of said semicylindrical portion, thereby to permit a cartridge to be laterally stripped from the link, each of said fingers and said tongues being provided with an outwardly projecting lug, a second part also having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, said first part including a pair of longitudinal slots adjacent one edge of its semicylindrical portion and said second part including a pair of tongues terminating in outwardly projecting lugs, at least one of which is resiliently formed, the tongues of said second part extending through said slots and lugs thereof engaging said one part adjacent said longitudinal slots to connect said parts together,

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the resilient tongue of said second part biasing the tongues of said second part into contact with the edges of said slots for resiliently restraining relative twisting movement of said parts, said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part and said internal track and the nesting portion are rotatable within each other.

16. A cartridge belt link of the character co-operating with other similar links to form a dis-integrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track and an arcuate resilient cartridge gripping member longitudinally spaced from said semicylindrical portion for holding a cartridge extending thereacross, said cartridge gripping member having an open portion facing in the same direction as said semicylindrical portion thereby to permit a cartridge to be laterally stripped from the link, a second part also having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, said first part including a pair of longitudinal slots adjacent one edge of its semicylindrical portion and the second part including a pair of tongues terminating in outwardly projecting lugs, at least one of said tongues being resiliently formed, said tongues extending through said slots and said lugs engaging said first part adjacent said longitudinal slots to connect said parts together, said resilient tongue biasing said tongues into contact with the edges of said slots for resiliently restraining relative twisting movement of said parts, said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of said second part and said internal track and the nesting portion are rotatable within each other, the semicylindrical portion of said first part including a slot extending around a portion thereof beginning at the edge opposite to that having said longitudinal slots for receiving the corresponding tongues of an adjacent link during rotation of said adjacent link in one direction.

17. A cartridge belt link of the character co-operating with other similar links to form a dis-integrating cartridge belt comprising a first part having a substantially semicylindrical portion forming an internal arcuate track, a pair of resilient fingers longitudinally spaced from said semicylindrical portion at one end thereof, a pair of resilient tongues longitudinally spaced from said semicylindrical portion at the other end thereof, said pair of fingers and said pair of tongues having arcuate extents of greater than one hundred and eighty degrees for gripping a cartridge extending across said semicylindrical portion and the ends of said fingers and said tongues defining openings facing in the same direction as the opening of said semicylindrical portion, thereby to permit a cartridge to be laterally stripped from the link, a second part also having a substantially semicylindrical portion disposed alongside said first part with the open portions of said parts facing in the same direction, said first part including a pair of longi-

tudinal slots adjacent one edge of its semicylindrical portion, a resilient tongue extending a substantial distance around the semicylindrical portion of said second part and attached thereto at one end, a flat finger extending from said resilient tongue at the other end, a second flat finger also extending from the semicylindrical portion of said second part, and a lug extending outwardly from each of said two flat fingers, said two flat fingers extending through said slots whereby said lugs engage said first part adjacent said slots to connect said parts, said resilient tongue biasing said flat fingers into contact with the edges of said slots to resiliently restrain relative twisting movement of said parts, said internal track being of substantially the same diameter as the diameter of the semicylindrical portion of said second part whereby said internal track is adapted to receive in nesting relationship the semicylindrical portion of an adjacent link corresponding to the semicylindrical portion of

said second part and said internal track and the nesting portion are rotatable within each other.

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