

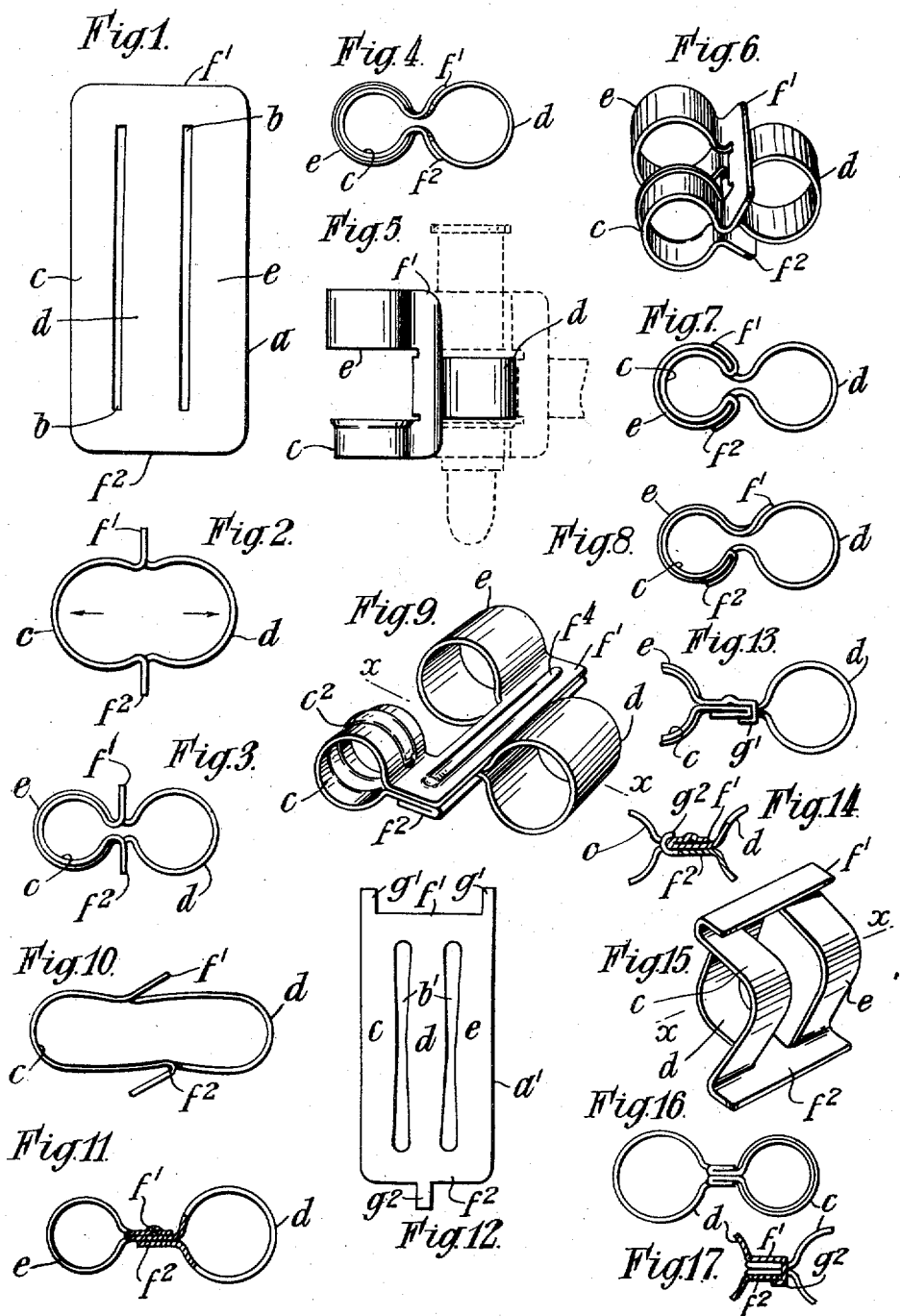
July 31, 1951

G. F. FRENCH ET AL
DISINTEGRATING LINK OR ARTICULATED CARTRIDGE
BELT FOR MACHINE GUNS AND THE LIKE

2,562,709

Filed July 8, 1943

3 Sheets-Sheet 1



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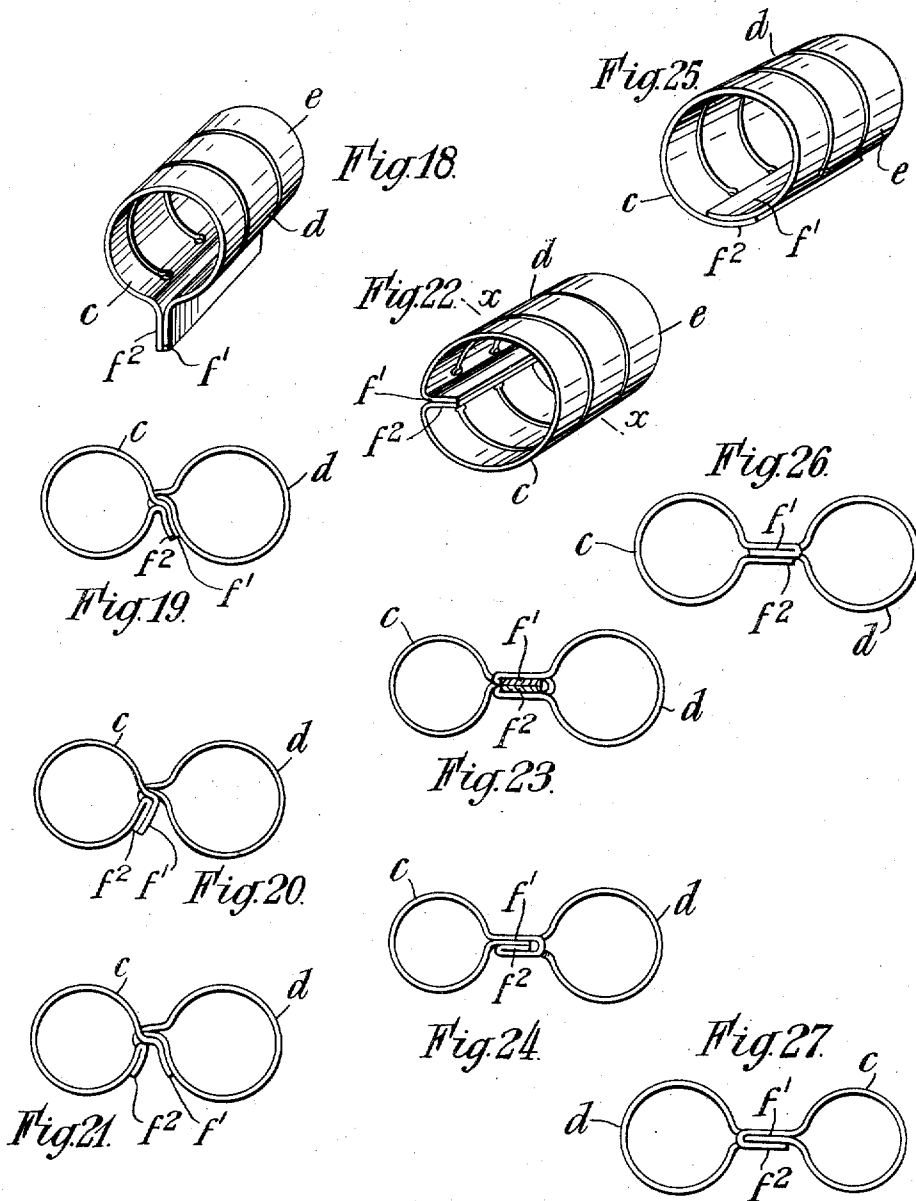
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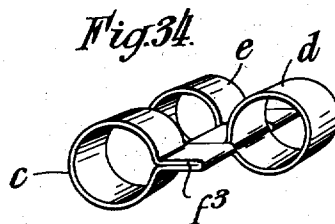
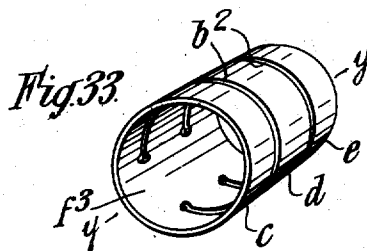
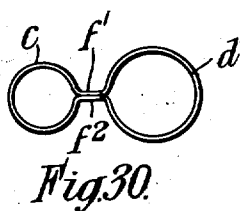
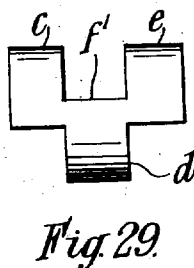
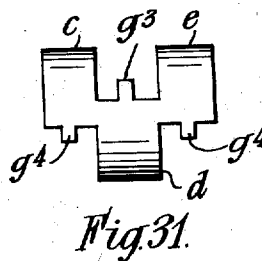
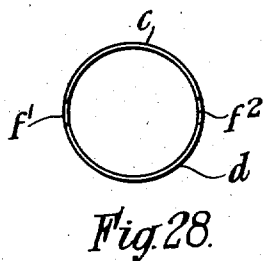
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,562,709

DISINTEGRATING LINK OR ARTICULATED
CARTRIDGE BELT FOR MACHINE GUNS
AND THE LIKEGeorge Frederick French, Roger French, and
Samuel Warburton, Manchester, England; said
Warburton assignor to said George Frederick
French and said Roger FrenchApplication July 8, 1943, Serial No. 493,834
In Great Britain July 9, 1942

43 Claims. (Cl. 89—35)

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This invention relates to disintegrating link, or articulated cartridge belts for machine guns and the like of the kind comprising a plurality of metal links having loops which fit together like the parts of a hinge, the cartridges being located in the loops and forming the hinge pins.

The links are generally cut from the flat sheet, the loops being formed by tongues which are bent round, but one end of each of which always remains free. The weakness of this construction is the liability of the loops to open under the jerking motion of the feed and the inertia and/or weight of the rest of the belt formed by the links and cartridges. Any undue elongation or extension of a link will cause a stoppage or jam, because the pitch is not correct for the feeding mechanism of the gun.

The object of this invention is to provide an improved construction of link or articulated belt for a machine gun having greater strength to resist elongation whilst at the same time being cheap and economical to produce.

According to the invention a cartridge belt link comprises off-set opposed complementary hinge-like loops joined by transverse bridge portions or junction strips, the two ends of any one loop being integral through such bridge portions with the two ends of an opposed complementary loop, so that in effect they are endless.

According to one embodiment of the invention, the cartridge belt link is made from a blank of metal, or other suitable material, having slits terminating within the blank and expanded to form off-set opposed complementary hinge-like loops with their ends directed inwardly to the centre and connected by bridge portions or junction strips formed by the ends of the blank beyond the slits and giving continuity between the two ends of all the opposed adjacent loops.

According to another embodiment of the invention the belt link is made from a metal tube.

In the accompanying drawings,
Fig. 1 is a plan of a metal blank for a link of a disintegrating link belt made in accordance with this invention.

Figs. 2 to 6 show the finished article and stages in manufacture of one example of the invention.

Figs. 7 and 8 show modifications of make up comparative with Fig. 4.

Figs. 9, 10 and 11 show an alternative method of construction from the blank of Fig. 1, Fig. 11 being a section view taken along line X—X of Fig. 9.

Fig. 12 shows a modified form of blank.

Figs. 13 and 14 are end view and section re-

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spectively of part of the finished link made from the blank shown in Fig. 12.

Figs. 15 and 16 show an alternative method of bending the blank of Fig. 1.

Fig. 17 is a sectional view of part of a link similar to Fig. 16 but made from the blank of Fig. 12.

Figs. 18 to 27 show alternative ways of bending the blank of Fig. 1.

Figs. 28 to 34 show various forms of the invention produced from a tube.

Where the parts are the same, or similar in the several figures, they are given the same or similar reference letters.

In the example of the invention shown in Figs. 1 to 6, the link is made from a rectangular strip *a* of sheet steel in which two parallel longitudinal slits *b* are made, so that the centre portion *d* is wider than the side portion *c*. The metal is then expanded, an intermediate stage being shown in Fig. 2, the centre portion being pushed in one direction and the side portions in the other, thus resulting in loops *c* and *e* being off-set relative to loop *d* and opposite it (see Figs. 5 and 6). In doing so, the ends, *f*¹, *f*² of the blank are brought nearly together as shown in Fig. 3 until the loops are nearly closed. The ends *f*¹ and *f*² of the blank *a* thus form bridge portions or junction strips, giving continuity between the ends of the opposed adjacent loops, and such bridge portions or junction strips *f*¹ and *f*² are then pressed down to overlie either the centre loop *d* (see Figs. 4, 5, and 6), or the side loops, *e* and *c* (see Fig. 7), or so that one *f*² overlies the side loops *e* and *c* and the other *f*¹ overlies the centre loop *d* (see Fig. 8). Loop *d* may also be referred to as the connecting loop.

In another example of the invention as shown in Figs. 9, 10 and 11, using the same "expanded" principle of manufacture and the same blank as in Fig. 1, the opposed loops *c*, *e* and *d* and bridge portions *f*¹ and *f*² are brought to the positions shown in Fig. 10, instead of as shown in Fig. 2, and then shaped as shown in Figs. 9 and 11. The bridge portions *f*¹ and *f*², with one end of each loop sandwiched between them, lie close together but are not secured.

In a modification, the blank *a*¹, as shown in Fig. 12, has slots *b*¹, which are of "waisted" shape, and divide the blank into the same parts, which are given the same reference letters as in Fig. 1. At the ends of the blank are nibs *g*¹ and *g*², which are used, as shown in Figs. 13 and 14, by bending over to lock together the bridge portions *f*¹ and *f*², the finished article, except for these nibs, being as shown in Fig. 9.

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As shown in Figs. 15 and 16, the blank of Fig. 1 is "expanded" as in the other examples, but the bridge portions f^1 and f^2 , instead of being folded in opposite directions, as shown in Fig. 10, are both folded in the same direction (see Fig. 15, showing a possible intermediate stage) and ultimately lie close together as shown in Fig. 16. The finished link would be substantially the same as Fig. 9, but, as can be seen, there are two thicknesses of metal between the bridge parts f^1 and f^2 , making four thicknesses in all against the three thicknesses of Fig. 9.

Fig. 17 shows a link made from the blank of Fig. 12, instead of from that of Fig. 1, and folded in the same manner as shown in Figs. 15 and 16 with the nibs, of which g^2 is shown, folded over to lock together the bridge portions f^1 and f^2 .

Fig. 18 shows diagrammatically an alternative first step of manipulation of the blank shown in Fig. 1. Figs. 19, 20 and 21 respectively show, in end view, three possible alternative final forms with the bridge portions f^1 and f^2 lying against the loop d (Fig. 19), or against the loops c and e (Fig. 20), or divided so that one lies against the loop d and the other against the two loops c and e (the latter assumed to be behind the loop c). In this form the continuity of the metal produces, in end view, a figure-of-8 effect.

Figs. 22, 23 and 24 show a further alternative manipulation of the blank shown in Fig. 1, the bridge portions f^1 and f^2 being brought together within the loops and the final form being as shown in section in Fig. 23 on line X—X of Fig. 22, and in end view in Fig. 24. This construction results, however, in providing four thicknesses at the centre, there being an extra thickness of loop end overlying the bridge portions f^1 and f^2 on each side.

Figs. 25, 26, and 27 show a further alternative method of manipulation of the blank shown in Fig. 1, the bridge portions f^1 and f^2 being first folded to overlap, with f^1 on the inside as shown in Fig. 25, and then the end loops c and e and the centre loop d are bent to left and right respectively to form loops with a flat centre piece, the bridge portions lying underneath with a single thickness of loop ends on top. Obviously there are three further alternatives of this method of manipulation which produce substantially the same result, namely, the end loops c and e and the centre loop d could be bent over to right and left respectively, see Fig. 27, which is the opposite to that shown in Fig. 26, whilst equally obviously the bridge portion f^2 could be placed on the inside of f^1 , which is the reverse of that shown. Actually, only two different forms are produced, as the results of the other two methods, when viewed from the other end of the link, appear the same as Figs. 27 and 26, but with the reference letters f^1 and f^2 transposed.

In the said other embodiment of the invention, the blank is made from a length of tube, and, as in the case of the flat blank of the examples before described, there are a variety of ways of cutting the tube and bending the same to form the loops.

Figs. 28 and 29 are end and side views respectively of a blank cut from a tube in accordance with one example of the invention by cutting out portions, leaving loop portions of which end loops are lettered c and e and the centre loop is lettered d as in the first described examples.

As shown in Fig. 30, the bridge portions f^1 and f^2 are brought together and the loops shaped on opposite sides thereof.

Fig. 31 shows a modification of the blank of

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Fig. 29 in which nibs g^3 and g^4 are provided, extending from the bridge portion f^1 . Fig. 32 shows in detail the locked position of these nibs, which are used to fasten together the bridge portions f^1 and f^2 . The nibs g^3 and g^4 could obviously extend from the bridge portion f^2 , or be divided between the bridge portions f^1 , f^2 .

There are obviously several other ways in which the blank of Fig. 29, or Fig. 31, could be bent into its final shape. The bending could be effected, for example to turn over the bridge portions in opposite directions (as in Figs. 9-11), or to fold them double in their length, folding the tube flat and then treating it as described with reference to the blank of Fig. 1 or Fig. 12, which it then resembles by pushing the centre loop through between the side loops to produce, for example, the equivalent of Fig. 16, and to produce finished articles similar to those made from the flat blank as shown in the preceding figures of the drawings.

As shown in Fig. 33, the tube may be slit at b^2 similar to the slits of Fig. 1, or 12, instead of the more wasteful cut-out method of Figs. 29 and 31. Thereafter, as shown in Fig. 34, the loops may be turned to left and right respectively of the single bridge portion or junction strip f^3 . By this method the flat connecting portion is of only double thickness, being the bridge portion f^3 and one end of each loop respectively. The blank of Fig. 33 can obviously be manipulated in a variety of different ways, as, for example, the bridge portion f^3 could be folded along a centre line y, y , to produce the equivalent of Fig. 18, or Fig. 22, and therefrom links which are the equivalent of Figs. 19 and 20, or 23 and 24 respectively.

In all cases, each bridge portion or junction strip, or the loops, may be ribbed, embossed or bent, for example, as shown at f^4 and c^2 of Fig. 9, giving additional strength, or for any other purpose. The cartridges can be gripped by any of the loops of the links, as may be desired, whilst others may be a slack fit to permit free hinge movement.

In some of the figures, as for example Fig. 3, the two end loops e and c are shown as of different size according to known requirements, whilst in other figures, for the sake of simplifying the drawing, these two loops are shown as being of the same size, so that, for example, the loop c covers up the loop e .

The improved constructions have the following chief advantages:

1. In effect the loops are all endless (no joints).
2. The spring grip is obtained from all the bends at the bridge portions as well as from the springiness of the loops themselves.

3. By reason of the advantages 1 and 2 above, the link can be stronger and/or made of thinner and/or lower grade metal, or of some other suitable material.

4. The bridge portions in some cases may provide a complementary cradle or cradles for the next link when assembled with cartridges to form a belt and this also facilitates the belt-filling assembly.

5. Except in the case of the cut-out construction from a tube, there is no scrap or waste.

6. The pitch of the belt is not so dependent upon the temper of the steel and possibly the need for tempering may be avoided. The loops being endless have a high resistance against stretch or elongation under tension due to weight, inertia or other cause.

As regards the use of disintegrating link belts,

there are certain problems which are closely connected with the construction and operation of the feed pawl of the gun. In its latest form the feed pawl of a "Browning" machine gun is shaped with a notch to register with the central loop of the links and with a front end portion slightly longer than the rear end portion so that the cartridge is properly aligned in spite of its taper or smaller diameter at the front loop. This alteration in shape of the pawl accentuates the problem already existing. The present construction of link belts is non-reversible, that is to say, there is a top and a bottom side which are different and only one of which is suitable for engagement by the feed pawl, so that, although the gun may be adjusted to feed from either the left or the right, the belt if for left-hand feed must be fed from one end, and if for right-hand feed it must be fed from its other end. This is responsible for the present practice of having right and left hand boxes for the belts clearly identifiable.

In some of the constructions of belt link according to this invention, the belt may be turned over so that the belt may be fed from the same end to a gun having either left-hand or right-hand feed. The only possible limitation to this feature is the connecting bridge portions or junction strips, which, as explained in the specification, and, as will be obvious, may be disposed in a variety of ways so that in some cases they are arranged one on one side and one on the other side of the belt and lying either against the centre, or connecting, loop, or against the two outside loops, or one against the centre loop and the other against the two outside loops. In other cases, they are both on one side of the belt and may be superimposed and lie against either the centre, or the two outside loops, or they may be separated and lie one against the centre loop and one against the two outside loops. The disposition of these bridge portions or junction strips may obviously determine the reversibility of the belt both as to direction of feed and as to whether the belt may, or may not be turned over. The disposition of the bridge portions may be standardised according to the type of pawl in standard use.

Obviously the invention is not limited to the details of the examples above described, many of which may be modified without departing from the nature of the invention. For instance, it is conceivable that there are other ways of cutting or folding the blanks with effect of endless loops which is the nature of this invention.

"Other suitable materials" which might be used include flat or tubular textile fabric, with or without stiffening, and synthetic resin or other such mouldable or plastic material.

What we claim is:

1. A machine gun belt link comprising first and second junction strips, a pair of spaced coaxial cartridge gripping loops integral with the strips and extending unbrokenly from an edge of the first strip to an edge of the second strip, and a connecting loop axially parallel to the gripping loops and offset from the space therebetween, the connecting loop also being integral with the strips and extending unbrokenly in the same circular direction as the gripping loops from said edge of the first strip to said edge of the second strip.

2. A machine gun belt link comprising a pair of spaced coaxial, generally circular cartridge gripping loops, a pair of junction strip member integral with and extending between the spaced loops, and a connecting loop axially parallel to the

gripping loops and offset from the space therebetween, the connecting loop also being integral with both of the junction strips and related thereto in such a manner that both of the junction strips lie on the same side of a plane including the axes of all of the loops at least one of said junction strips overlying an arcuate section of at least one of said loops.

3. A machine gun belt link comprising first and second junction strips, a pair of spaced coaxial cartridge gripping loops integral with the strips and extending in one circular direction from an edge of the first strip to an edge of the second strip, and a connecting loop axially parallel to the gripping loops and offset from the space therebetween, the connecting loop being also integral with the strips and extending in the same circular direction as the gripping loops from said edge of the first strip to said edge of the second strip.

4. A machine gun belt link comprising first and second junction strips, a pair of spaced coaxial cartridge gripping loops integral with the strips and extending in one circular direction from an edge of the first strip to an edge of the second strip, and a connecting loop axially parallel to the gripping loops and offset from the space therebetween, the connecting loop being also integral with the strips and extending in the same circular direction as the gripping loops from said edge of the first strip to said edge of the second strip, the said junction strips lying upon each other in overlapping relation to the connecting loop.

5. A machine gun belt link comprising first and second junction strips, a pair of spaced coaxial cartridge gripping loops integral with the strips and extending in one circular direction from an edge of the first strip to an edge of the second strip, and a connecting loop axially parallel to the gripping loops and offset from the space therebetween, the connecting loop being also integral with the strips and extending in the same circular direction as the gripping loops from said edge of the first strip to said edge of the second strip, and the said junction strips lying upon each other in overlapping relation and being provided with interlocking means to limit endwise movement of one junction strip with respect to the other junction strip.

6. A machine gun belt link comprising first and second junction strips, a pair of spaced coaxial cartridge gripping loops integral with the strips and extending in one circular direction from an edge of the first strip to an edge of the second strip, and a connecting loop axially parallel to the gripping loops and offset from the space therebetween, the connecting loop being also integral with the strips and extending in the same circular direction as the gripping loops from said edge of the first strip to said edge of the second strip, one of the junction strips lying in overlapping relation to the connecting loop and the other of the junction strips lying in overlapping relation to the gripping loops.

7. A cartridge belt link comprising a pair of axially aligned and longitudinally spaced cartridge gripping loops, a connecting loop axially parallel to the gripping loops and offset from the space therebetween to an extent completely out of registry with the gripping loops, and means including crossed portions integral with the loops and forming a junction between the loops in such a manner that the loops and the crossed

portions define a generally continuous unbroken figure eight.

8. A cartridge belt link comprising adjacent axially parallel loop members, and a pair of junction strips disposed at an angle to and lying on the same side of a plane including the axes of the loops.

9. A cartridge belt link comprising a pair of axially aligned cartridge gripping loops, a connecting loop axially parallel with and adjacent to the gripping loops but completely out of registry therewith and a plurality of junction strips integral with the loops and forming junctions therebetween, each of said junction strips being disposed at an angle to and on the same side of a plane including the axes of all the loops.

10. A cartridge belt link comprising a pair of axially aligned cartridge gripping loops, a connecting loop axially parallel with and adjacent to the gripping loops but completely out of registry therewith, and a plurality of junction strips integral with the loops and forming junctions therebetween, each of said junction strips being disposed at an angle to and on the same side of a plane including the axes of all the loops, the said loops being so related as to define a continuous unbroken figure eight.

11. A cartridge belt link comprising a pair of axially aligned cartridge gripping loops, a connecting loop axially parallel with and adjacent to the gripping loops but completely out of registry therewith, and a plurality of junction strips integral with the loops and forming junctions therebetween, each of said junction strips being disposed at an angle to and on the same side of a plane including the axes of all the loops, the junction strips lying upon each other in overlapping relation adjacent and overlying at least one of the loops.

12. A cartridge belt link comprising a pair of axially aligned cartridge gripping loops, a connecting loop axially parallel with and adjacent to the gripping loops but completely out of registry therewith, and a plurality of junction strips integral with the loops and forming junctions therebetween, each of said junction strips being disposed at an angle to and on the same side of a plane including the axes of all the loops, the junction strips lying upon each other in overlapping relation and being provided with interlocking means to limit endwise movement of one junction strip with relation to the other junction strip.

13. A machine gun belt link comprising a pair of spaced, coaxial, cartridge gripping loops, a pair of junction strip members integral with and extending between the spaced loops, and a connecting loop axially parallel to the gripping loops and offset from the space therebetween, the connecting loop also being integral with both of the junction strips, and the construction being such that both of the junction strips lie on the same side of the plane which includes the axes of all of the loops and such that said junction strips are relatively movable laterally.

14. A machine gun belt link comprising a pair of spaced coaxial, cartridge gripping loops, a pair of junction strip members integral with and extending between the loops, and a connecting loop axially parallel to the gripping loops and offset from the space therebetween, the connecting loop also being integral with both junction strips and related thereto in such a fashion that both of the junction strips lie on the same side of the median plane including the axes of all of the loops, a por-

tion of the connecting loop at one side of the median plane and a portion of each gripping loop at the opposite side of the median plane originating at the same junction strip and extending oppositely away therefrom and returning oppositely toward and terminating at the other junction strip.

15. A machine gun belt link comprising a pair of spaced coaxial, cartridge gripping loops, a pair of conjunction strip members integral with and extending between the loops, and a connecting loop axially parallel to the gripping loops and offset from the space therebetween, the connecting loop also being integral with both junction strips and related thereto in such a fashion that both of the junction strips lie on the same side of the median plane including the axes of all of the loops, a portion of the connecting loop at one side of the median plane and a portion of each gripping loop at the opposite side of the median plane originating at the same junction strip and extending oppositely away therefrom and returning oppositely toward and terminating at the other junction strip, the said junction strips being generally parallel and contiguous and relatively movable at least laterally.

16. A cartridge belt link comprising adjacent axially parallel loops, and means including portions integral with and forming junctions between the loops, said portions crossing between the loops in such a manner that the loops and the crossed portions define generally a continuous unbroken figure eight.

17. A cartridge belt link comprising adjacent axially parallel loops, and means including portions integral with and forming a junction between the loops, said portions crossing between the loops in such a manner that the loops and the crossed portions define generally a continuous unbroken figure eight, at least one of said portions including an integral folded section overlying a portion of the periphery of at least one of the loops.

18. A method of making a machine gun belt link which comprises the steps of forming about a substantially common axis three loops each attached at one end to one of a pair of parallel junction strips and each attached at the other end to the other one of the pair of parallel junction strips, and displacing the center loop away from the axis of the end loops to a position axially parallel thereto and offset therefrom.

19. The method of making a machine gun belt link which comprises forming a pair of slots in a rectangular metallic strip having a length greater than its width, the slots being parallel with the greatest dimension of the blank and terminated short of the ends thereof thus providing three parallel strips joined to each other by junction strips at each end, bending the blank until the said ends are brought together thus providing three loops in coaxial alignment with the said end portions lying flat upon each other and then bending the central loop out over the said ends until the other two loops lie in opposed complementary relation to the center loop.

20. A blank for forming a machine gun belt link, comprising a rectangular piece of sheet metal of greater length than width having two substantially parallel longitudinal slots therein terminating short of the ends of said piece of metal, whereby a machine gun belt link can be formed by bending the said piece of metal until the ends thereof are brought together to provide three correspondingly aligned loops and then dis-

placing the center loop with respect to the end loops until the center loop is axially parallel to the end loops and offset therefrom.

21. A method for making a sheet metal article comprising the steps of slitting a blank so as to provide a plurality of longitudinally disposed parallel portions which are connected to each other at both of their ends, applying forming pressure to adjacent portions in opposite directions so as to expand the same into a partially formed blank, and subjecting said partially formed blank to a second forming operation wherein the forming pressure is applied thereto in a different direction.

22. A cartridge belt link comprising first and second junction strips, a pair of spaced coaxial cartridge gripping loops integral with the strips and extending from an edge of the first strip to an edge of the second strip, and a connecting loop axially parallel to the gripping loops and off-set from the space therebetween, the connecting loop also being integral with the strips and extending from the same edge of said first strip to the same edge of said second strip.

23. A cartridge belt link comprising first and second junction strips, a pair of spaced coaxial cartridge gripping loops integral with the strips and extending from an edge of the first strip to an edge of the second strip, and a connecting loop axially parallel to the gripping loops and off-set from the space therebetween, the connecting loop also being integral with the strips and extending from the same edge of said first strip to the same edge of said second strip, the other edges of said strips being free from connection with the loops.

24. A cartridge belt link as set forth in claim 22 in which one of said junction strips partially overlies the peripheral surface of one of said loops.

25. A cartridge belt link as set forth in claim 22 in which one of said strips partially overlies the peripheral surface of the connecting loop.

26. A cartridge belt link as set forth in claim 22 in which said junction strips partially overlie one of said loops.

27. A cartridge belt link as set forth in claim claim 22 in which said junction strips partially overlie the connecting loop.

28. A cartridge belt link as set forth in claim 22 in which said junction strips overlie and are closely adjacent one another in substantially parallel planes.

29. A cartridge belt link as set forth in claim 22 in which said junction strips overlie and are closely adjacent one another and in which each junction strip has its edge from which the loops extend adjacent the opposite edge of the other.

30. A cartridge belt link as set forth in claim 28 in which one of said strips has a longitudinal rib formed therein.

31. The method of making a cartridge belt link which comprises forming a pair of slots in a blank, the slots terminating within said blank, and bending the slotted blank to form a pair of coaxial spaced loops and a loop axially parallel to and off-set from said pair of loops, all of the loops being integrally connected through the unslotted portion of the blank.

32. The method of making a cartridge belt link which comprises forming a pair of slots in a rectangular blank, the slots terminating within said blank thereby leaving unslotted portions of the blank extending across the blank substantially at right angles to the direction in which

the slots extend, and bending the slotted blank to form a pair of coaxial spaced loops and a loop axially parallel to and off-set from said pair of loops, all of the loops being integrally connected through the unslotted portions of the blank.

33. The method of making a cartridge belt link which comprises the steps of forming about a substantially common axis three loops each attached at one end to one of a pair of parallel junction strips and each attached at its other end to the other of the pair of parallel junction strips, the junction strips extending radially outwardly from the peripheral surface of said loops, and displacing the center loop away from the axis of the end loops to a position axially parallel thereto and off-set therefrom.

34. The method of making a cartridge belt link as set forth in claim 33 which includes the step of moving the junction strips laterally away from each other until one partially overlies the peripheral surface of the end loops and the other partially overlies the peripheral surface of the center loop.

35. The method of making a cartridge belt link which comprises forming a pair of substantially parallel slots in a rectangular blank, the slots terminating within the blank, to provide a plurality of substantially parallel portions having their corresponding ends connected to one another by junction strips, applying forming pressure to adjacent parallel portions in opposite directions so as to expand the same into a partially formed link, and subjecting the partially formed link to a second forming operation wherein the forming pressure is applied to it in a direction substantially at right angles to the directions in which the first-mentioned forming pressure is applied.

36. The method of making a cartridge belt link which comprises forming a pair of substantially parallel slots in a rectangular blank, the slots terminating within the blank, to provide a plurality of substantially parallel portions having their corresponding ends connected to one another by junction strips, applying forming pressure to adjacent parallel portions in opposite directions to expand the blank into a partially formed link having partially formed loops, and applying to said partially formed link a second forming pressure in a different direction to bring the junction strips substantially together to complete the loops and the partially formed link.

37. The method of making a cartridge belt link which comprises forming a pair of substantially parallel slots in a rectangular blank, the slots terminating within the blank, to provide a plurality of substantially parallel portions having their corresponding ends connected to one another by junction strips, applying forming pressure to adjacent parallel portions in opposite directions to expand the blank into a partially formed link having partially formed loops, applying to said partially formed link a second forming pressure in a different direction to bring the junction strips substantially together to complete the loops and the partially formed link, and bending the junction strips to partially overlie the peripheral surface of a loop.

38. The method of making a cartridge belt link which comprises forming a pair of substantially parallel slots in a rectangular blank, the slots terminating within the blank, to provide a plurality of substantially parallel portions having their corresponding ends connected to one an-

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other by junction strips, applying forming pressure to adjacent parallel portions in opposite directions to expand the blank into a partially formed link having a pair of partially formed coaxial loops and a third partially formed loop off-set from and axially substantially parallel to said pair of loops, applying to said partially formed link a second forming pressure in a different direction to bring the junction strips substantially together to complete the loops and the partially formed link, and bending the junction strips to partially overlie the peripheral surface of said third off-set loop.

39. The method of making a cartridge belt link which comprises forming a pair of substantially parallel slots in a rectangular blank, the slots terminating within the blank, to provide a plurality of substantially parallel portions having their corresponding ends connected to one another by junction strips, applying forming pressure to adjacent parallel portions in opposite directions to expand the blank into a partially formed link having partially formed loops, and applying to said partially formed link a second forming pressure in a different direction to bring the junction strips together in flat overlying relationship to complete the loops and the partially formed link.

40. The method of making a cartridge belt link as set forth in claim 39 which includes the step of forming a longitudinal rib in one of the junction strips.

41. A cartridge belt link comprising first and second junction strips, a pair of spaced coaxial cartridge gripping loops integral with the strips and extending from an edge of the first strip to an edge of the second strip, and a connecting loop axially parallel to the gripping loops and off-set from the space therebetween, the connecting loop also being integral with the strips and extending from the same edge of said first strip to the same edge of said second strip, and both the junction strips partially overlying the peripheral surfaces of said gripping loops.

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42. A cartridge belt link comprising first and second junction strips, a pair of spaced coaxial cartridge gripping loops integral with the strips and extending from an edge of the first strip to an edge of the second strip, and a connecting loop axially parallel to the gripping loops and off-set from the space therebetween, the connecting loop also being integral with the strips and extending from the same edge of said first strip to the same edge of said second strip, and the edges of the junction strips which are not integral with any of the loops being integral with each other.

43. The method of making a cartridge belt link which comprises forming a pair of slots in a tubular blank, the slots terminating within said blank, and bending the slotted blank to form a pair of coaxial spaced loops and a loop axially parallel to and off-set from said pair of loops, all of the loops being integrally connected through the unslotted portion of the blank.

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