May 4, 1943. C. E. BALLEISEN 2,317,973

CARTRIDGE BELT

Filed Oct. 6, 1941

Fig. 1.

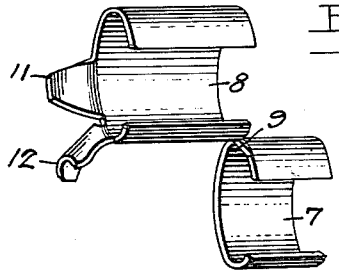


Fig. 4.

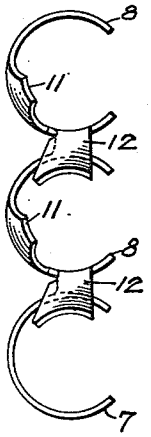


Fig. 2.

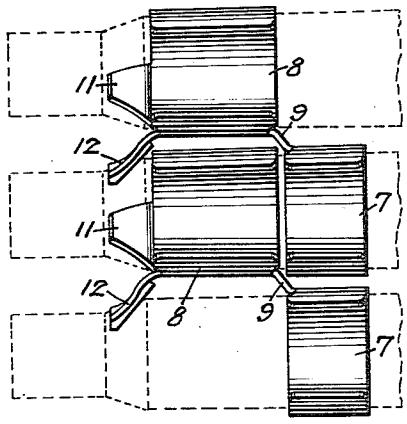


Fig. 5.

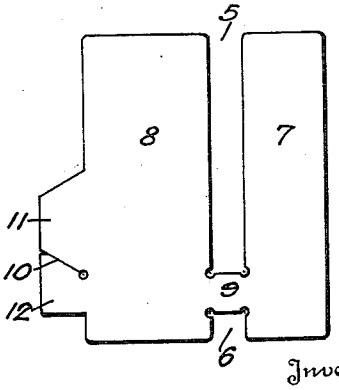
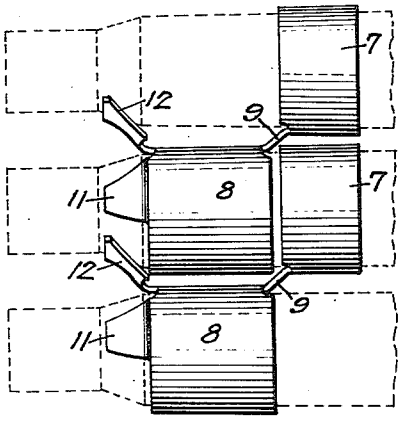


Fig. 3.



Inventor

Charles E. Balleisen

By G. J. Kessenich & J. H. Church

Attorneys

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UNITED STATES PATENT OFFICE

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CARTRIDGE BELT

Charles E. Balleisen, Philadelphia, Pa.

Application October 6, 1941, Serial No. 413,818

5 Claims. (Cl. 89—35)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates to a disintegrating cartridge belt intended for use in feeding cartridges to a machine gun or automatic rifle.

It is an object of this invention to provide a flexible link belt from which the cartridges may be removed either by a loading mechanism of the type which extracts a cartridge from the belt on rearward movement of the breech and inserts it into the barrel on forward movement, or by a loading mechanism of the type in which a cartridge is pushed through the link into the barrel to the front by some element of the breech mechanism.

It is a further object to provide a belt of this character in which the cartridges may be accurately positioned and firmly held.

Broadly, these objects have been accomplished by providing links adapted to be joined by the cartridges in such a manner that the cartridge itself functions as a pintle, the links being individually so formed as to only partially embrace the cartridges and to have positioning means adapted to engage the shoulder formed adjacent the neck of the cartridge case.

The specific nature of the invention as well as other objects and advantages thereof will clearly appear from the description of a preferred embodiment as shown in the accompanying drawing in which:

Figure 1 is a perspective view of a single link formed in accordance with my invention.

Figure 2 is a top plan view of a section of the belt with the cartridges shown in broken lines.

Figure 3 is a bottom plan view similar to Fig. 2.

Figure 4 is an end elevation of a pair of links.

Figure 5 is a plan view of the blank from which the finished link may be fabricated.

Referring to the drawing by characters of reference there is shown in Fig. 5 a blank from which a belt link may be fabricated. This blank has a slot 5 formed in one edge thereof and in alignment therewith a slot 6 in the opposite edge of said blank dividing the blank into strips 7 and 8 joined by a connecting strip 9. A portion of the blank projecting from the strip 8 is divided by an angular cut 10 into a tongue portion 11 and a finger 12.

The strips heretofore described are rolled in opposite directions, the strip 7 being rolled in one direction to form an open cartridge engaging ring and the strip 8 being rolled in the opposite direction to form a somewhat similar open cartridge engaging ring, the axes of the rings being parallel and the rings being offset laterally in the region of the connecting strip 9 to prevent interference with adjacent links when assembled into a belt. The tongue 11 is bent inwardly to engage the shoulder formed by the neck of a cartridge case whereby the cartridge may be accurately positioned in the link. The finger 12 is bent outwardly and so formed as to be adapted to engage a similar shoulder formed by the neck of an adjacent cartridge in an assembled belt. The cartridge engaging ring 8 is preferably formed to have a smooth sliding grip on the body of the cartridge case while the cartridge engaging ring 7 may have an internal diameter slightly larger than the exterior diameter of the cartridge body.

The links are assembled into a completed belt by placing the ring 8 of one link between the ring 7 and the finger 12 of an adjacent link and inserting a cartridge therethrough until the shoulder at the neck of the cartridge engages the tongue 11 and finger 12 of the adjacent links. The offset provided by the strip 9 allows the belt to be freely flexed without binding between adjacent links while the cartridge itself serves as a pintle. The assembly operation may be continued until a belt of the desired length has been formed.

In the event of a strain tending to separate the cartridges in the belt at their head end the engagement of the fingers 12 with the necks of the cases will prevent deformation of the belt while if a strain is applied tending to separate the point of a cartridge from that of an adjacent cartridge the cases, being tapered somewhat toward the neck, will engage each other at the head end to prevent deforming the belt in the region of the connecting strip.

This link may be used in a fashion similar to the present standard link in an arm of the type of the conventional Browning machine gun wherein the link will be engaged by the cartridge link stripper and the cartridge removed to the rear by an extractor attached to the breech mechanism.

When the belt is used in a gun of the type employing push through loading, the cartridge will be pushed through the link to the front by some element of the breech mechanism. The tapering shoulder at the neck of the case and the generally tapering form of the cartridge case combine to exert a wedge-like action on the open cartridge engaging rings while the tongue 11 engaging the shoulder will be bent down out of the way as the cartridge is pushed therethrough.

The tendency to tilt the bullet end of the cartridge caused by engagement with the finger 11 may be utilized to assist in directing the tip of the cartridge into the position in which it may properly enter the barrel of the weapon.

I claim:

1. A cartridge belt link comprising an open ring, a second open ring, a connecting strip formed integrally with said rings and joining said rings in offset relation with their axes in parallel relation, a tongue integral with said second ring, said tongue being adapted to engage the shoulder formed by the neck of a cartridge case embraced by said second ring, and a finger integral with said second ring, said finger being adapted to engage the shoulder formed by the neck of a cartridge case embraced by said first mentioned ring.

2. A cartridge belt link comprising an open ring adapted to embrace a part of the circumference of a cartridge, a second open ring adapted for similar engagement with a second cartridge, a connecting strip integral with said rings and joining the same in offset relation with their axes parallel and with said second ring slightly in advance of said first ring, a tongue projecting from the forward edge of said second ring and formed integral therewith, said tongue being adapted to engage the shoulder formed by the neck of said second cartridge, and a finger projecting from the forward edge of said second ring and formed integral therewith, said finger being adapted to engage the shoulder formed by the neck of said first mentioned cartridge.

3. A cartridge belt link comprising a pair of open rings, an integral connecting member joining said rings in offset relation, a tongue on one of said open rings adapted to engage the cartridge embraced by that ring, and a finger on said last mentioned ring adapted to engage the cartridge embraced by the other ring.

4. A cartridge belt link comprising an open ring, a second open ring axially parallel thereto and offset therefrom, a connecting strip integral with and extending between said rings, a tongue on the forward edge of said first mentioned ring bent inwardly generally toward the axis of the said first mentioned ring, and a finger on the forward edge of said first mentioned ring bent outwardly generally toward the axis of said second mentioned ring.

5. A blank for a cartridge belt link comprising a substantially flat, generally rectangular plate, aligned slots extending respectively from opposite sides of said plate defining two smaller generally rectangular portions, the inner ends of said slots defining between them a connecting portion joining said smaller portions, an extension on one of said smaller portions projecting from an edge parallel to said slots and a cut in said extension defining two sections each extending generally transversely to the said slots.

CHARLES E. BALLEISEN.