May 31, 1966 HANS-GEORG SCHALLEHN 3,253,512

DISINTEGRATING AMMUNITION BELT FOR AN AUTOMATIC WEAPON

Filed July 16, 1964

Fig. 1

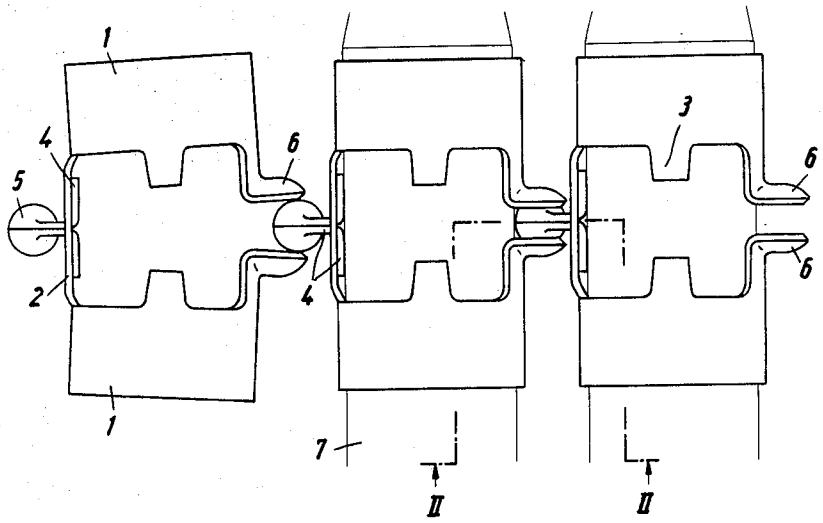


Fig. 2

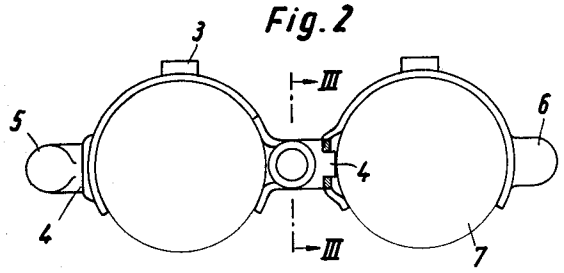
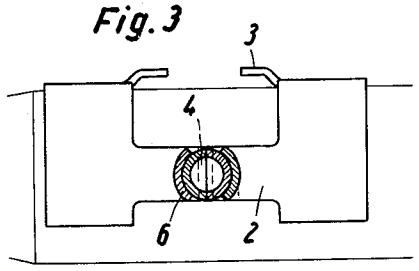


Fig. 3



Inventor:
Hans-Georg Schallehn

By
Watson, Cole, Grindle & Watson
Attys.

United States Patent Office

3,253,512
Patented May 31, 1966

3,253,512

DISINTEGRATING AMMUNITION BELT FOR AN AUTOMATIC WEAPON

Hans-Georg Schallehn, Kassel, Germany, assignor to Firma Rheinmetall G.m.b.H., Dusseldorf, Germany

Filed July 16, 1964, Ser. No. 383,071
Claims priority, application Germany, July 19, 1963, R 35,709
6 Claims. (Cl. 89—35)

This invention relates to a disintegrating ammunition belt for an automatic weapon, the belt consisting of separate but similar belt links which are coupled together by cartridges loaded into the belt but which separate after the cartridges have been removed from the belt.

In known disintegrating ammunition belts which are sometimes referred to as hinge-type or hook-type belts, an empty link or claw is left at the belt feed device of the weapon on cessation of firing. Such empty belt links or belt claws require complicated devices within the belt feed of the weapon to ensure satisfactory loading and unloading of the belt and to prevent the empty link getting into the loading mechanism of the weapon. For that reason, known disintegrating ammunition belts are not always equal to the demand for rapid loading and unloading of the belt feed device which arises with the need to change quickly to a different kind of ammunition. For this purpose, the belt introduced into the belt feed device must be removed quickly and replaced by another belt loaded with the different ammunition. Moreover, the belt should be of such design that it can be stacked satisfactorily thereby enabling as large a supply of ammunition as possible to be kept on hand in the immediate vicinity of the weapon.

According to the invention, a disintegrating ammunition belt which satisfies these requirements is produced by the belt links each embracing only one cartridge in manner known per se and by said belt links comprising cup-like lugs adapted to be tensioned by the cartridges when introduced and which embrace a spherical coupling pin on the adjacent belt link, said coupling pin being provided on the central axis of the belt.

Further details of the invention are given in the following description of an embodiment thereof illustrated in the drawing, in which:

FIG. 1 is a plan view of several belt links,

FIG. 2 is a view in the direction of the arrows II—II in FIG. 1, and

FIG. 3 is a section on the line III—III in FIG. 2.

The belt links, when viewed along the longitudinal axis of a cartridge, each comprise two approximately semicircular clips 1 spaced from one another but interconnected by a laterally-arranged, bridge-like strap 2. The left-hand belt link of those shown in FIG. 1 is unloaded and it can be seen that the strap 2 connecting the clips 1 is curved slightly outwardly, so that the longitudinal central axes of the clips 1 are inclined to one another. On the introduction of a cartridge into the belt link, however, the curve in the strap 2 is eliminated and the axes of the clips 1 lie on a common line. The center and right-hand links of those shown in FIG. 1 each contain a cartridge part of which is shown at 7.

Bent tabs 3 directed towards one another and serving guiding and holding purposes in a belt feed device (not shown) are provided in the facing edges of the clips. Two retaining strips 4 bent substantially at right angles are passed through an aperture in the bridge-like strap 2 and secured on the inside thereof. Externally, these retaining strips carry a spherical coupling member 5 and partly embrace the latter. The spherical member 5 may either be solid or it may consist of two hemispherical cups which are subsequently connected together in a suitable manner, for example by welding.

On the side opposite the spherical member 5, cup-like lugs 6 are arranged at a distance from one another such that, when a cartridge 7 has been introduced into the clips of a belt link, the lugs 6 embrace the spherical coupling member of an adjacent belt link. In this way, the member 5 and the cup-like lugs 6 form a universal joint for the belt links. The extent to which the links are capable of swivelling can be controlled by suitable formation and dimensioning of the cup-like lugs 6 and of the retaining strips 4. As can be seen from the drawings, the retaining strips 4 are rectangular and their maximum height corresponds substantially to the diameter of the member 5. In that way, the edges of the cup-like lugs 6 abut the retaining strips of an adjacent link when the belt links are twisted sufficiently with respect to one another. If, however, twisting through 360° should be desirable in special cases, this can be achieved in simple manner by forming the retaining strips with, for example, a circular cross-section in the region of the member 5.

As can likewise be seen from the drawings, the ball-and-socket joint provided between adjacent belt links permits a very large degree of mobility both in the plane of the belt and at right angles thereto, and this permits satisfactory stacking of the belt.

When a cartridge is expelled from the belt link, the cup links 6 open owing to the tension in the strap 2 (see FIG. 1, left-hand side), whereby connection with the next belt link is broken.

I claim:

1. A disintegrating ammunition belt for an automatic weapon comprising a plurality of separate and similar belt links each adapted to receive a single cartridge, each link being composed of two semicircular clips spaced from one another, a resilient strap on one side of each link to interconnect the clips to each other, a spherical coupling member secured to the strap, and a pair of cup-like lugs each integral with one semicircular clip and secured to the clips on the side opposite the strap and spherical coupling member, said coupling member of one link adapted to be embraced and held by the two lugs of an adjacent belt link when a cartridge is inserted in the first-mentioned link and when the cartridge is removed from the link the resilient strap will force the lugs away from each other to release contact with the spherical coupling member of the adjacent link.

2. A disintegrating belt according to claim 1, in which said strap is curved in such a manner that the central longitudinal axes of said clips are normally inclined to one another.

3. A disintegrating belt according to claim 1, in which the spherical coupling member is provided with a pair of retaining strips bent substantially at right angles relating to the coupling member and provided in an aperture in the strap adjacent to the resilient strip,

4. A disintegrating belt according to claim 1, in which

the spherical coupling member is provided with a pair of retaining strips bent substantially at right angles relating to the coupling member and provided in an aperture in the strap adjacent to the resilient strip, and in which portions of the strips partially embrace said coupling member is such manner that they limit the relative movement of adjacent links.

5. A distintegrating belt according to claim 1, in which a bent tab is provided on each clip and directed towards one another to guide and hold the belt in a feed device.

6. A link for a disintegrating ammunition belt comprising a pair of spaced semicircular clips, means on diametrical side ends of the clips adapted to grip adjacent links, and a tensioned bridge-like strip interconnecting the clips which normally tends to force the clips out of line relative to a common longitudinal axis of

the link when a cartridge is not held by the clips so that the tension in the strip forces the clips out of alignment by the tension in the strip to free the grip means and when a cartridge is in the clips the link will be in alignment with the strip under tension.

References Cited by the Examiner

UNITED STATES PATENTS

2,488,531	11/1949	Gaidos	89—35
2,662,335	12/1953	Calverley	46—29 X
2,714,269	8/1955	Charles.	

FOREIGN PATENTS

46,021	6/1939	Netherlands.

BENJAMIN A. BORCHELT, *Primary Examiner.*

FRED C. MATTERN, JR., *Examiner.*