June 28, 1938. J. C. GARAND 2,121,792

CARTRIDGE CLIP

Filed April 8, 1932

Fig. 1.

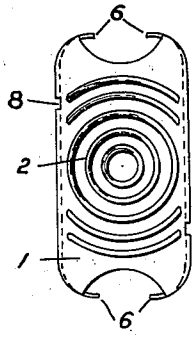


Fig. 2.

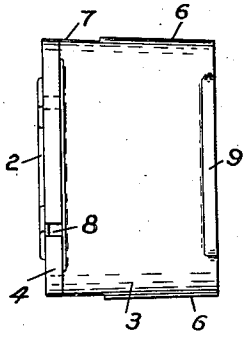


Fig. 3.

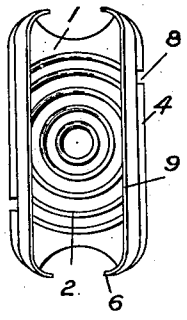


Fig. 4.

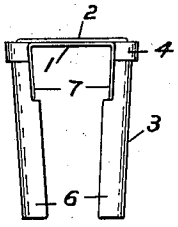


Fig. 7.

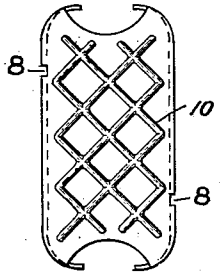


Fig. 8.

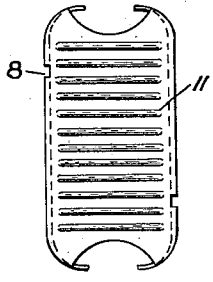


Fig. 5.

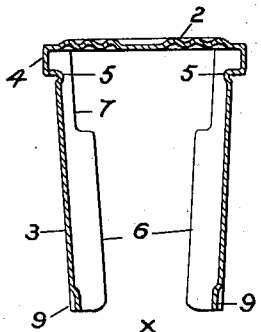


Fig. 6.

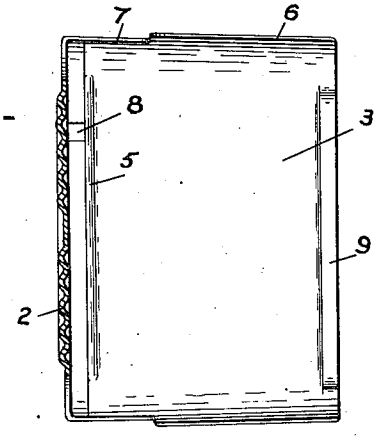
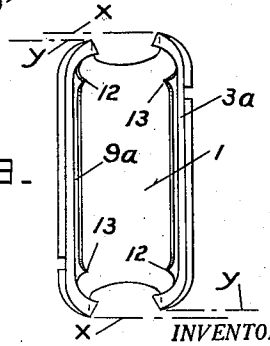


Fig. 9.



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2,121,792

UNITED STATES PATENT OFFICE

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CARTRIDGE CLIP

John C. Garand, Springfield, Mass., assignor to the Government of the United States of America, as represented by the Secretary of War

Application April 8, 1932, Serial No. 604,100

3 Claims. (Cl. 42—88)

(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.

The subject of this invention is a cartridge clip, more especially a clip intended to hold a double row of cartridges in staggered relation and to be fed with the cartridges into the magazine of a firearm.

By reason of the staggered relation of the cartridges, causing each layer of cartridges to be arranged diagonally, a tortional strain is set up in the clip tending to displace the front ends of the side walls of the clip different distances, resulting in their rubbing or binding against the bolt as it moves forward to feed a cartridge from the clip; also tending to cause uneven pressure of the curved ends of the clip on the cartridge to be fed thereby swerving the cartridge from its path during feeding toward the cartridge chamber; and further tending to throw the side walls of the clip out of proper alignment in the gun.

These defects are overcome in the present instance by proper reinforcement of the clip against tortional strains and stiffening of the back wall of the clip specifically through properly placed and arranged reinforcing ribs.

The clip is also provided with means for restraining the cartridges from movement toward the front of the clip; with means adjacent such restraining means for properly positioning the clip within the receiver of a gun. This last mentioned means also adapts the clip for the reception of rim, and semi-rim cartridges as well as rimless cartridges.

The clip may further be provided with offset ends so that one diagonal dimension of the clip is greater than the other diagonal dimension. This construction is for the purpose of providing a clip in which the higher row of the stack of cartridges will always be in proper position to coact with the stepped feeding follower of the gun.

It is desirable that a clip of this character be capable of being loaded either with a loading machine or by hand and to accomplish this it is essential that all cartridges be fed into the clip from the same direction. A cut away portion has been provided at the base of the turned in portions of the side walls to permit feeding of all cartridges to the clip through the ends thereof.

In a clip of this character, spring tension in the side walls should be had to maintain the cartridges in proper position in the clip and this spring tension should be had without causing the side walls of the clip to converge greatly toward the front as such convergence would tend to cause the walls to interfere with the follower. This result may be secured by a proper formation of the sides of the clip, for instance, as is done in the form illustrated herein by extending the guide ribs well up onto the curved ends.

With these and such other objects in view as may hereinafter more fully appear the invention consists in the novel arrangement and combination of parts and in the details of construction hereinafter described and claimed, it being understood however, that changes in the precise embodiment of the invention herein disclosed may be made within the scope of the claims without departing from the spirit of the invention.

Practical embodiments of the invention are shown in the accompanying drawing wherein:

Fig. 1 is a view in rear elevation of a clip constructed in accordance with the invention.

Fig. 2 is a side elevation of the same.

Fig. 3 is a front elevation.

Fig. 4 is an end view.

Fig. 5 is a central transverse section.

Fig. 6 is a central longitudinal section.

Fig. 7 is a view in rear elevation of a slightly modified form.

Fig. 8 is a similar view of a further slightly modified form.

Fig. 9 is a front elevation of a further modification.

Referring to the drawing by numerals of reference:

The clip is preferably stamped or otherwise formed from sheet metal and consists of a back plate 1 provided with ribs 2. The ribs 2 which stiffen the back should be so formed as to resist distortion of the clip due to the tortional strains set up therein by reason of the staggered or diagonal position of the cartridges loaded in the clip.

Since the clip may be loaded with the uppermost cartridges on the right side or the left side it is essential that the ribs be so formed and arranged as to resist tortional strains in either direction. For this reason the arcuate form of rib is used.

The side walls or plates 3 of the clip converge forwardly from the back to which they are joined by the guide ribs 4 which not only act to properly guide the clip in the receiver of a gun and position it therein by engaging a shoulder in the receiver but also permit the loading of rim, semi-rim and rimless cartridges into the clip. Where the side walls 3 join the guide ribs 4 there

are provided the inwardly projecting beads 5 preferably pressed in by bending the metal inwardly from the outside for the purpose of engaging in front of the head or rim of the cartridges to securely anchor the cartridge in the clip. The ends of the side walls are curved inwardly as at 6 and the guide ribs 4 are extended onto these curved portions, as seen most clearly in Fig. 4, for the purpose of imparting to the side walls the desired degree of tension without undue convergence of such walls. Any great amount of convergence of the side walls tends to cause them to interfere with the free movement of the follower and may cause the clip to contact the follower when the empty clip is being ejected. The inwardly curved ends 6 of the side walls are cut away adjacent the back as at 7 for the purpose of permitting the last cartridge to be inserted into the clip from the end so as to adapt the clip to automatic loading. The ribs 4 preferably notched as at 8 for engagement of the clip latch provided in the receiver of the firearm. At the forward edge of the side walls 3 inwardly pressed ribs 9—9 may be provided to reduce frictional contact of the cartridges with the side walls thereby relieving the follower of considerable effort in elevating the cartridges to feeding position especially when obstructions are formed on the side wall.

In the modification shown in Fig. 7 the clip is the same as above described with the exception that the ribs 10 on the back plate 1 are arranged diagonally for the purpose of resisting tortional strain and stiffening the back. The diagonal ribs are crossed for the reason that if arranged in only one direction they would allow distortion of the clip in a diagonal direction across the corners in which cartridges terminated short of the ends.

In Fig. 8 a still further modification of the ribs of the back plate as indicated at 11 is shown in which transverse parallel ribs are provided for the same purpose that is, to stiffen the back and resist tortional stresses.

The form of reinforcing ribs shown in Figs. 1 and 7 are to be preferred to those shown in Fig. 8 as they are better arranged to resist all tortional stresses that a clip is ordinarily subjected to.

The modification shown in Fig. 9 may have its back plate 1 provided with any of the forms of stiffening ribs shown. The side plates 3*a* in this form of clip have their ends offset, as indicated by the lines *x* and *y* thus making one diagonal shorter than the other. This construction permits the clip to be loaded only with the uppermost cartridge on the right hand side, as viewed in Fig. 9, so that the clip may be loaded either end first into the receiver of a rifle and the cartridges will conform to the stepped follower. In this form of clip shoulders 12—12 and 13—13 may be formed at the ends of the rib 9*a*, the shoulders 12—12 acting to prevent undesired angular displacement of the uppermost cartridge of the lower row of cartridges during handling of a loaded clip, and all shoulders acting to properly hold and guide the cartridges during feeding.

From a consideration of the drawing and the foregoing description it will be evident that this clip is symmetrical and may be fed either end first into the receiver of a gun.

I claim:

1. A clip for holding a double row of cartridges in staggered relation, embodying a back plate, side walls extending from said back plate, and concentric stiffening ribs formed in the back plate and arranged to resist tortional strains in each direction.

2. An ammunition clip for holding a double row stack of cartridges in staggered relation and adapted to be inserted therewith into the receiver of a gun, said clip comprising a back plate and two forwardly extending spring pressed side walls for embracing said ammunition stack with a compressing action, said side walls having inturned portions at their upper and lower ends, each side wall having formed therein adjacent its junction with the back plate an inwardly projecting rib for engaging in front of the cartridge extracting rims and also an outwardly projecting rib for engaging behind a shoulder in said receiver so as to position said clip within the receiver.

3. An ammunition clip for holding a double row stack of cartridges in staggered relation and adapted to be inserted therewith into the receiver of a gun, said clip comprising a back plate and two forwardly spring pressed side walls extending from said back plate for embracing said ammunition stack with a compressing action, said side walls having inturned portions at their upper and lower ends, the inturned portions at the same end of the clip being displaced vertically relative to one another by a slight distance, said displacement distance being substantially less than the radius of a cartridge base.

JOHN C. GARAND.