

J. J. G. COOPER.  
 TOY CARTRIDGE.  
 APPLICATION FILED FEB. 13, 1919.

1,311,949.

Patented Aug. 5, 1919.

FIG. 1.

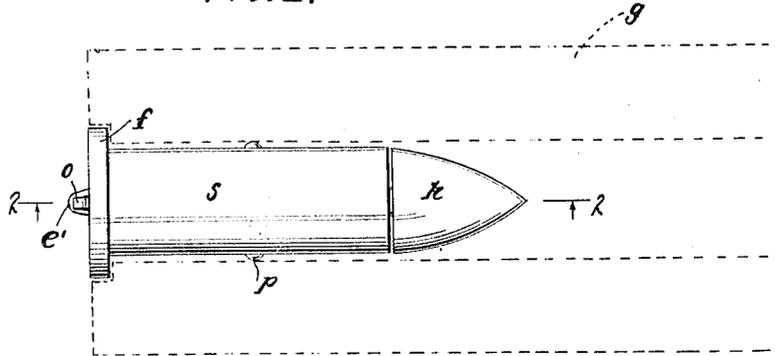


FIG. 2.

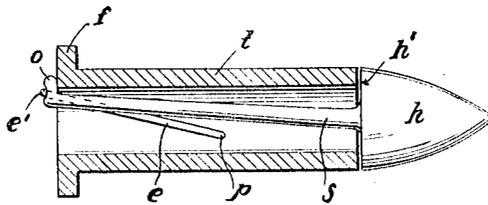
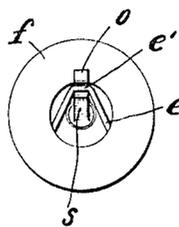


FIG. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES J. G. COOPER, OF JACKSONVILLE, FLORIDA.

## TOY CARTRIDGE.

1,311,949.

Specification of Letters Patent.

Patented Aug. 5, 1919.

Application filed February 13, 1919. Serial No. 276,791.

*To all whom it may concern:*

Be it known that I, JAMES J. G. COOPER, a citizen of the United States, residing at Jacksonville, in the county of Duval and State of Florida, have invented certain new and useful Improvements in Toy Cartridges, of which the following is a specification.

This invention relates to games and toys, and more especially to aerial projectiles; and the object of the same is to produce a toy cartridge carrying its own bullet and ejecting means and capable of being inserted in a toy gun or cannon and fired and then withdrawn and reloaded.

I prefer to use as the ejector a spring and in the present case I employ a contractile spring in the form of a rubber band, while in a companion case filed herewith (Serial Number 276,792) I employ an expansive spring in the form of a wire coil.

The present case is designed to protect the broad idea as well as the specific form of my invention shown in the accompanying drawings, wherein—

Figure 1 is a side elevation of the cartridge complete.

Fig. 2 is a longitudinal section of the cartridge loaded and Fig. 3 is a rear end elevation.

I will say at starting that I desire the broadest interpretation given to the terms used herein and do not wish to confine myself to the shape, size, proportion, or materials of parts. Generally speaking the invention comprises a cartridge shell, a bullet or projectile proper, the ejector which in the present case is a spring, and means for retaining the spring under tension and for releasing it to fire or eject the bullet from the shell.

The shell is shown as a metal cylinder having a tubular body *t* and an exterior flange *f* at its rear end. The bullet has a head *h* pointed at the front and enlarged at the rear into a shoulder *h'* which rests normally against the front end of the shell, and from the rear end of the bullet a shank *s* extends throughout the length of the shell and is offset as at *o* at its rear end so that it may be engaged behind the flange *f* as seen in Fig. 2. The ejector in the present case is a piece of rubber band *e* connected at its ends at the points *p* with the wall of the shell, its center *e'* passing behind the offset portion at the rear end of the shank *s*.

To load the shell, the offset at the rear end

of the shank is passed into the front end of the shell and engaged with the bend of the rubber, and then pushed to the rear, and finally moved a little to one side so as to engage behind the flange *f* as shown. The entire cartridge may now be inserted into the rear end of a toy gun indicated in dotted lines at *g* in Fig. 1. To fire the cartridge it is only necessary to disengage the connection between the offset and the shell, or in other words to throw the retaining means out of action. This can be done mechanically or manually. The user can push down on the offset *o* as seen in Fig. 2 until it clears the inner edge of the flange *f* and the inner end of the tubular body *t* and immediately the rubber ejector *e* will act to shoot the bullet through the bore of the gun and out of the nozzle of the latter. The shell may now be withdrawn from the breech of the bore and replaced by another which is loaded.

The foregoing description and the drawings have reference to what may be considered the preferred, or approved form of my invention. It is to be understood that I may make such changes in construction and arrangement and combination of parts, materials, dimensions, et cetera, as may prove expedient and fall within the scope of the appended claims.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A cartridge comprising a shell, a bullet having a head of the size of a shell and a reduced shank extending into the shell, ejecting means carried by the shell and adapted to be put under tension by the insertion of said shank therein, and means for retaining the bullet in place.

2. A cartridge comprising a shell, a bullet having a shank extending into the shell and offset at its rear end, ejecting means within the shell engaged by said offset and adapted to be put under tension by the insertion of the shank therein, and means for connecting said offset with the shell for retaining the bullet in place.

3. A cartridge comprising a shell, a bullet having a head resting against the front end and a shank extending into the bore of the shell and offset at its rear end, ejecting means within the shell and adapted to be put under tension by insertion of said offset, and means for retaining the bullet in place.

4. A cartridge comprising a shell, a bullet

having a head resting against the front end and a shank extending into the bore of the shell, an ejecting spring adapted to be put under tension by the insertion of said shank into the shell, and means for releasably connecting said shank with the shell to hold the spring under tension.

5. A cartridge comprising a tubular shell, a bullet having a head resting against the front end thereof and a shank extending through the bore of the shell and offset at its rear end to engage the rear end of the shell, the offset being capable of disengagement therefrom, and a spring within the shell for ejecting the bullet when so disengaged.

6. A cartridge comprising a tubular shell, a bullet having a head resting against the front end thereof and a shank extending through the bore of the shell and offset at its rear end to engage the rear end of the shell the offset being capable of disengagement therefrom, and a contractile spring connected at its forward end with the wall of the shell and having its rearward end engaging said offset, for the purpose set forth.

7. A cartridge comprising a tubular shell, a bullet having a head resting against the front end thereof and a shank extending

through the bore of the shell and offset at its rear end to engage the rear end of the shell, the offset being capable of disengagement therefrom, and a rubber band whose extremities are connected with the wall of the shell at about the midlength thereof and whose bend passes behind said offset on the shank, for the purpose set forth.

8. A cartridge comprising a shell having a tubular body open at both ends and a radial flange at its rear end, a bullet having a head of the size of said body and adapted to rest against its front end and a shank of the length of said body and adapted to pass through the same when the head is in place, the rear end of the shank being offset to engage behind the flange at this time, and a rubber band connected at its extremities with the shell at its midlength and having its center passing over said offset, for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES J. G. COOPER.

Witnesses:

CHAS. P. COOPER,  
CHARLES R. BENTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."