Oct. 14, 1952

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2,613,604

PROJECTILE BOOSTER

Filed June 2, 1950

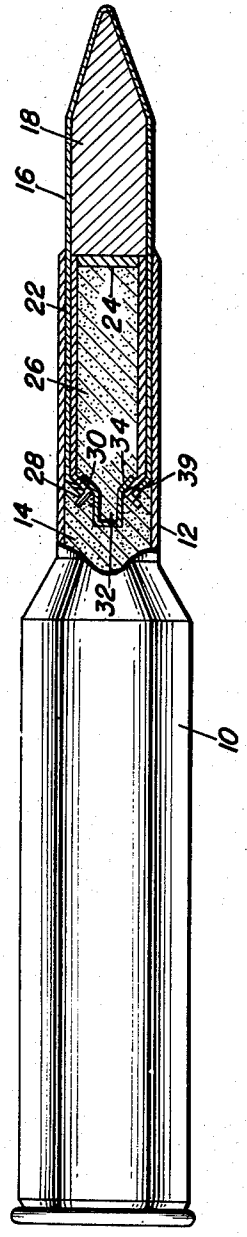


Fig. 1

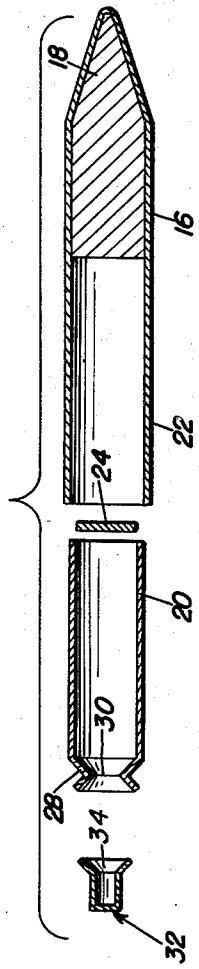


Fig. 2

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Patented Oct. 14, 1952 2,613,604

UNITED STATES PATENT OFFICE

2,613,604

PROJECTILE BOOSTER

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Application June 2, 1950, Serial No. 165,723

4 Claims. (Cl. 102—38)

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This invention relates to new and useful improvements in ammunition.

An object of this invention is to provide an improved round of ammunition which includes a normal casing with a projectile disposed therein, however the projectile is provided with a rear end portion which accommodates a sleeve member having a secondary charge therein, the charge being separated from the filler in the projectile by means of a heat resisting seal and being separated from the normal charge by means of an inflammable seal which is arranged in an orifice formed at the rear end of the sleeve member.

Other objects and features of importance will become apparent in following the description of the illustrated form of the invention.

In the drawings:

Figure 1 is an elevational view of the device, portions being broken away in section to illustrate detail of construction; and,

Figure 2 is an exploded perspective view of the projectile, and other elements in the make-up thereof.

In carrying out this invention there is provided a casing 10 with the neck 12 at the forward end thereof, the casing having a charge of explosives 14 therein, the explosives being conventional in nature.

The projectile or jacket 16, disposed in the neck 12, is provided with a filler 18 of lead or the like, in the front end thereof. A sleeve member 20 is disposed in the rear end 22 of the projectile and the heat resisting alloy metal seal 24 is disposed of the forward open end thereof to separate the secondary charge 26 of explosive material from the filler 18.

The rear end of the sleeve member 20 is crimped as at 28 to form an orifice 30. The crimp 28 is so arranged as to form a Venturi shaped orifice and there is a seal 32 disposed therein.

The seal is made of a flammable material, as paper, cardboard or certain flammable plastics which may be chosen from known publications tabulating the properties thereof, as the publication "Modern Plastics." The seal 32 forms a small housing to accommodate a part of the charge 26 and has a flared forward end 34 which is disposed in the orifice 30. Accordingly, the outside surface of the flanged end 34 bears against the inside surface of the crimped material of the sleeve member thereby holding the seal assembled.

The rear extremity 39 of the end portion 22 is flared inwardly in order to seat in the crimp 28 to thereby hold the sleeve member 20 assembled in the rear end portion 22.

In operation the ammunition is fired as is normal and expected, that is, by means of a gun of one type or another. The first occurrence

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is the burning of the charge 14 to send the projectile 16, the sleeve member 20 and seal 32 through the barrel of the gun. However, the flammable seal also ignites or transmits pressure to the secondary charge 26 so that the charge 26 may burn sequentialy to the firing of the main charge 14.

After the secondary charge 26 fires, the gases resulting from its combustion will be expanded through the orifice 30 causing the projectile 16 to be boosted for the purpose of increased range.

Having described the invention, what is claimed as new is:

1. In a combination cartridge and projectile, a shell casing having an open end and a primary charge therein, a jacket, a filler at the leading end of said jacket, a hollow extension forming the rear part of the jacket disposed in the open end of said shell casing, a sleeve member disposed in said extension, a secondary charge in said sleeve member and an inflammable seal at the rear end of said sleeve member separating said primary charge from said secondary charge, a crimp in the rear end of said sleeve member forming an orifice, said seal being hollow and receiving a part of said secondary charge, and said seal having a flared front end in said orifice and binding against said crimp to hold said seal in said extension.

2. In a projectile having a rear hollow open end, a sleeve member received in the rear end of said projectile, a charge in said sleeve member, and an inflammable seal carried by the sleeve member at the rear end of the projectile and having a hollow rear portion extending rearwardly from the rear end of said sleeve member and the rear end of said projectile and receiving a portion of said charge.

3. The combination of claim 2 wherein said seal includes an outwardly flared forward end positioned in the rear end of said sleeve member, and a crimp in the rear end of said sleeve member engaging said flared forward end and retaining the seal relative to the sleeve member.

4. The combination of claim 3 wherein said rear end of said projectile includes an internal flange at its rear extremity entering said crimp and retaining the sleeve member in said hollow rear end of said projectile.

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The following references are of record in the file of this patent:

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