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HOLDER FOR DIVISIONAL PROPELLENT CHARGES

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Fig. 1.

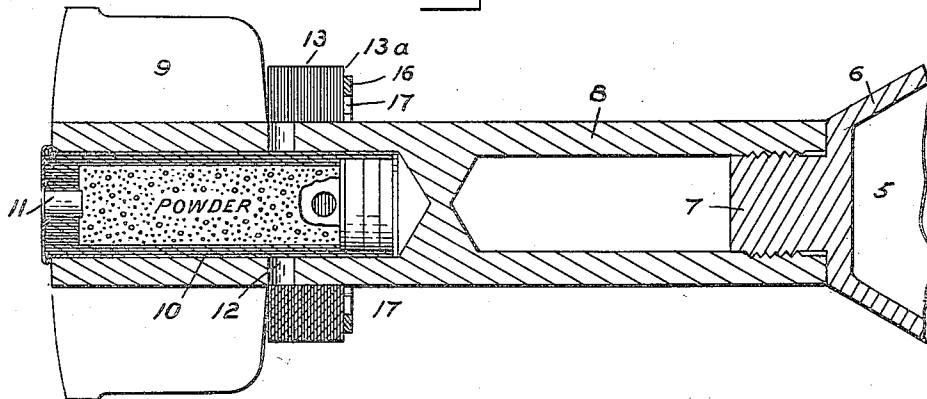


Fig. 2.

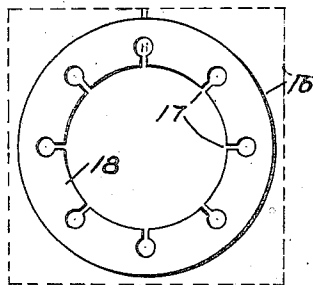
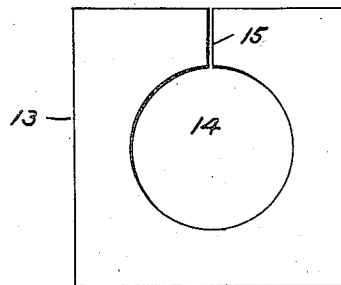


Fig. 3.



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HOLDER FOR DIVISIONAL PROPELLENT CHARGES

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4 Claims. (Cl. 102—26)

(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.

5 This invention relates to a holder for divisional propellant charges.

In a round of ammunition for trench mortars it is customary to issue the round with a maximum propellant charge and then to remove a
10 portion of the charge.

The purpose of this invention is to provide a simple form of propellant charge holder which will maintain the charge in its proper place to insure ignition, which may be readily moved
15 when it is desired to move a portion of the charge, and which is combustible and which may therefore form a part of the propellant charge.

To these and other ends, the invention consists in the construction, arrangement and combination of elements described hereinafter and pointed out in the claims forming a part of this specification.

A practical embodiment of the invention is illustrated in the accompanying drawing, wherein:
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Fig. 1 is a longitudinal sectional view of the rear end of a projectile equipped with the improved charge holder.

Fig. 2 is a detail plan view of the holder.

Fig. 3 is a plan view of the propellant charge.

Referring to the drawing by characters of reference there is shown a portion of a projectile of the muzzle loading type adapted to be fired from a trench mortar. The projectile includes a body
35 5 formed with a tapered tail 6 ending in a reduced stem 7. A tube 8 threaded on the stem is provided on its rear portion with a plurality of vanes or fins 9 which serve the usual purpose of stabilizing the projectile while in flight.

A cartridge 10 of the shot-gun type is carried in the rear part of the tube and includes a primer 11 which is fired when it strikes a pin at the bottom of the mortar. The tube 8 is provided with a plurality of staggered vents 12 for conducting the flame from the cartridge to a propellant charge 13 which is disposed on the outer side of the tube and forwardly of the fins 9.

The propellant charge 13 consists of a plurality of thin flexible sheets 13a each having a circular opening 14 for receiving the tube 8. Each sheet is also provided with a slit 15 extending from the opening 14 to the edge and enabling the sheet to be readily applied to and removed from the tube. In accordance with the zone system of firing employed with mortars a variable quantity of propellant charge is employed under various circumstances. The round of ammunition is assembled with the maximum charge and a predetermined number of sheets is removed as occasion requires.
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The sheets constituting the charge are maintained against the fins or a corresponding abutment and also in line with the vents 12 by means of a holder 16 which frictionally grips the tube and which may be manually moved away from the charge to facilitate removal of certain of the sheets and then restored to a holding position. The holder is made of combustible material such as cardboard or it may be of the same composition as the propellant charge and constitute a component of the charge. It is in the form of a flat ring and is preferably provided with a plurality of keyhole slots 17 extending from the inner edge of the ring to a central part of the ring body. The portions 18 between the slots constitute tabs whose inner edges engage the tube and which are capable of yielding axially of the ring.

I claim:

1. In a projectile of the type provided with a tubular member having an abutment for holding a propellant charge affixed thereto against axial movement in one direction, means for holding said propellant charge against axial movement in the opposite direction comprising a substantially completely combustible annular holder provided with tabs the free ends of said tabs defining a circle of such diameter relative to the tubular, radial extending member as to receive said tubular member with sufficient friction to normally resist movement; whereby said annular holder may be engaged with the end of the propellant charge remote from the abutment to prevent said axial movement in the opposite direction.
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2. In a projectile of the type provided with a tubular member having an abutment for holding a propellant charge in surrounding relation thereon against axial movement in one direction, means for holding said propellant charge against axial movement in the opposite direction comprising a substantially completely combustible annular holder provided with radial inwardly extending tabs, the inner ends of said tabs defining a circle of such diameter relative to the tubular member as to receive the outside of said tubular member with sufficient friction to normally resist movement; whereby said annular holder may be engaged with the end of the propellant charge remote from the abutment to prevent said axial movement in the opposite direction.
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3. The structure of claim 1 wherein said combustible annular holder constitutes a part of said propellant charge.

4. The structure of claim 2 wherein said combustible annular holder constitutes a part of said propellant charge.
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