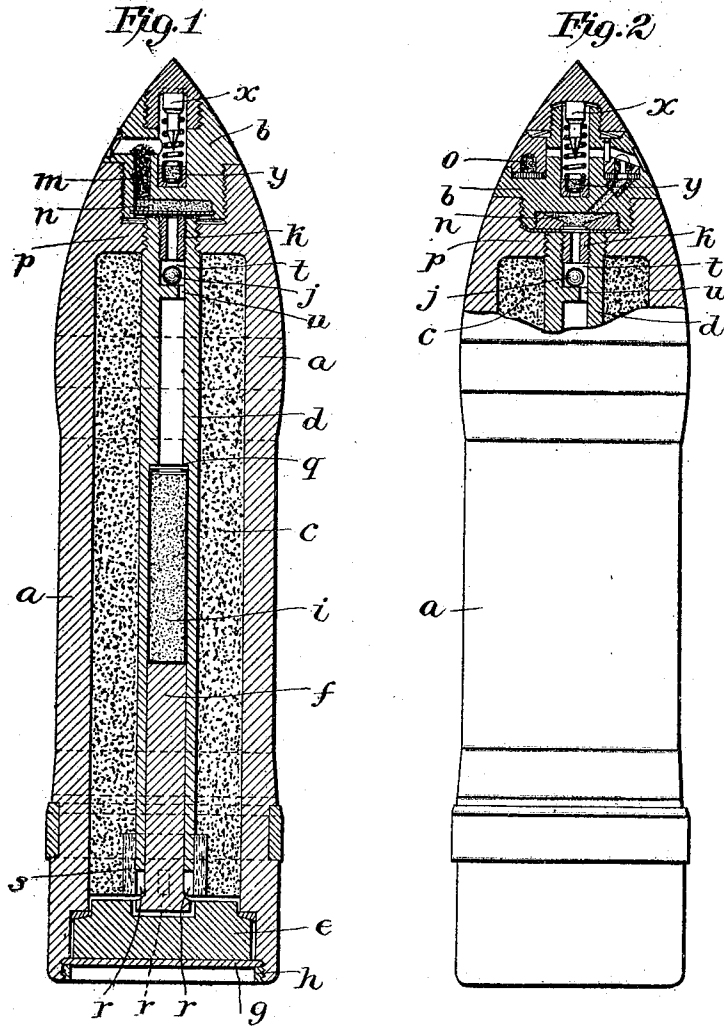


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INCENDIARY PROJECTILE.
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1,005,578.

Patented Oct. 10, 1911.



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UNITED STATES PATENT OFFICE.

EUGÈNE SCHNEIDER, OF LE CREUSOT, FRANCE.

INCENDIARY PROJECTILE.

1,005,578.

Specification of Letters Patent.

Patented Oct. 10, 1911.

Application filed May 3, 1911. Serial No. 624,779.

To all whom it may concern:

Be it known that I, EUGÈNE SCHNEIDER, citizen of the Republic of France, residing at Le Creusot, Saône-et-Loire, France, have
5 invented certain new and useful Improvements in Incendiary Projectiles, of which the following is a specification.

This invention relates to incendiary projectiles that are adapted particularly for
10 firing balloons and the like.

According to the present invention the incendiary charge ignited by the flame coming from the fuse, is arranged in an annular cylindrical or prismatic housing formed
15 in the body of the projectile around an axial tube, the upper end of which communicates with the fuse and which itself serves as a housing for an igniting charge, while its lower extremity forms a guide for a
20 piston for forcing out the base plug:

In order that the said invention may be clearly understood and readily carried into effect, I will describe the same more fully with reference to the accompanying drawing, in which:—

Figure 1 represents in longitudinal section on the axis of the projectile an embodiment of the invention applied to a projectile furnished with a slow-match. Fig. 2
30 is an elevation partly in section of a similar projectile furnished with a common time fuse.

In these figures *a* is the body of the projectile on the ogival head of which a slow-
35 match (Fig. 1) or a common time fuse (Fig. 2) is screwed. In the body of the projectile an annular cylindrical or prismatic housing is formed for the incendiary charge *c* throughout its entire height. This housing
40 is limited laterally and externally by the wall of the body of the projectile and internally by an axial tube *d*, one end of which is screwed into a partition *p* forming the bottom of the fuse chamber. At its upper
45 end the annular incendiary charge housing is thus limited by the partition *p*; at its lower end this housing is closed by a base plug *e*. This plug which is movable is normally held in the projectile by a supporting
50 disk *g* of fusible or combustible material or by a thin metal washer presenting but a small resistance to expulsion. The said washer or disk is retained in the projectile by its outer edge by means of a ring *h*

screwed to the rear end of the projectile
body *a*.

The axial tube *d* forms a housing for an igniting charge *i* which may be confined between a shoulder *q* of the inner wall of the tube and a piston *f* guided in the tube.
60 This piston may be rigid with the plug *e* or may merely rest upon it with its rear end. At the rear end of the tube *d* recesses or orifices *r* are formed and opposite these an igniting washer *s* may be incorporated in
65 the incendiary charge. At the front part of the tube *d* a housing *t* is formed for a ball *j* or other non-return valve; *k* is a plug formed with an axial passage and *u* is an orifice placing the housing *t* and the
70 interior of the tube *d* in communication.

n designates a primer composition at the rear end of the fuse; *m* (Fig. 1) is a compressed block producing retardation of the transmission of the flame.
75

o (Fig. 2) is an ordinary fuse ring and *x* designates a percussion system of any known construction.

The incendiary shell described operates in the following manner:—When the pro-
80 jectile is fired the supporting disk *g* is fused or burned and no longer opposes the expulsion of the base plug *e*; the striker *x* strikes the detonator *y* and the flame is transmitted by the retarding block *m* (Fig. 1) or by
85 the intermediary of the fuse ring *o* (Fig. 2) to the primer composition *n* carried by the fuse and then through the axial tube to the igniting charge *i* contained by the latter. The gases of this charge *i* first of all act
90 upon the piston *f* which they force out together with the base plug *e*. Before the piston *f* has completely issued from the central tube *d* the gases enter into communication with the incendiary charge through
95 the apertures *r* formed in the tube and ignite this charge which burns during the whole or a portion of the trajectory of the projectile. The obturating ball *j* in obturating the passage in the plug *k* serves to prevent
100 the gases from the igniting charge from spreading outside through the communications of the fuse.

What I claim and desire to secure by Letters Patent of the United States is:—
105

1. In a projectile, the combination of a fuse, an incendiary charge, a hollow member communicating at one end with the fuse,

an igniting charge and a movable element associated with said hollow member and controlling communication between said igniting and incendiary charge.

2. In a projectile, the combination of a fuse, an incendiary charge, a hollow member communicating at one end with the fuse, an igniting charge, and a movable element associated with said hollow member and operated by the explosive force of said igniting charge to permit communication between said igniting and incendiary charges.

3. In a projectile, the combination of a fuse, an incendiary charge, a hollow member communicating at one end with the fuse, an igniting charge, a base plug, a movable element associated with said hollow member and said base plug and operated by the explosive force of said igniting charge to open communication between said igniting and incendiary charges and to remove said base plug.

4. In a projectile, the combination of a fuse, an incendiary charge, a hollow member communicating at one end with the fuse, an igniting charge carried by said hollow member, a base plug, a movable element carried by said hollow member and engaging said base plug and slidable to open communication between said igniting and incendiary charges and to remove said base plug.

5. In a projectile, the combination of a fuse, an incendiary charge, a tube provided with apertures at one end and communicating with said fuse at its other end, an igniting charge carried by said tube, a base plug, a piston slidable in said tube and engaging said base plug and movable to per-

mit communication between said igniting and incendiary charges through said apertures and to remove said base plug.

6. In a projectile, the combination of a fuse, a hollow member communicating at one end with said fuse, an igniting charge associated with said hollow member, and an obturating device automatically operated to close the passage between said charge and fuse after the former has been ignited.

7. In a projectile, the combination of a fuse, a hollow member communicating at one end with said fuse, an igniting charge carried by said hollow member, and an obturating device carried by said hollow member and automatically operated to close the passage between said charge and fuse after the former has been ignited.

8. In a projectile, a fuse, a movable member, a base plug associated with said movable member, a disk contacting said base plug, means holding said disk in position, and an explosive charge acting to drive said movable member to remove said base plug and disk.

9. In a projectile, a fuse, a hollow member, a piston carried thereby, a base plug engaged by said piston, a disk engaging said base plug, means holding said disk and plug in position, and a charge the explosive force of which drives said piston to remove said plug and disk.

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

EUGÈNE SCHNEIDER.

Witnesses:

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JACK C. BAKER.