

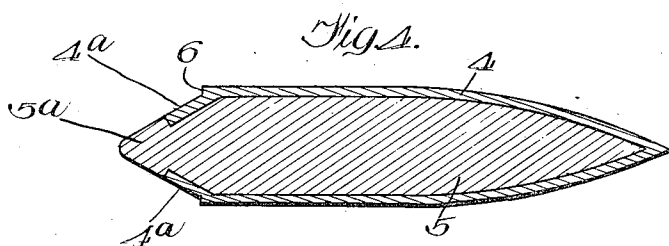
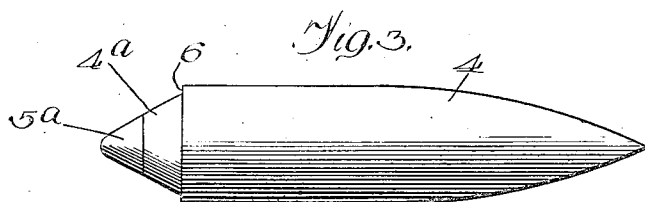
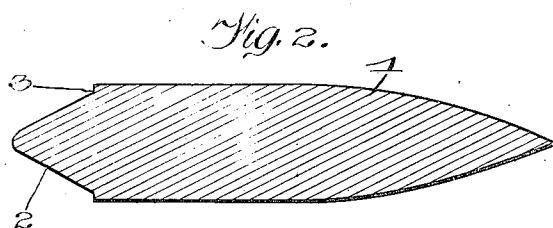
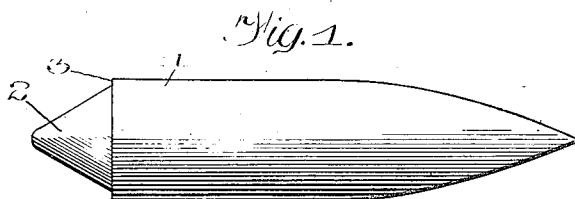
G. A. MUENZENMAIER & F. M. SEE.

BULLET.

APPLICATION FILED JAN. 27, 1908.

974,418.

Patented Nov. 1, 1910.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE A. MUENZENMAIER, OF LEBANON, AND FRANK M. SEE, OF SILVERTON, OHIO,
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BULLET.

974,418.

Specification of Letters Patent.

Patented Nov. 1, 1910.

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To all whom it may concern:

Be it known that we, GEORGE A. MUENZENMAIER and FRANK M. SEE, citizens of the United States, respectively residing at Lebanon, in the county of Warren, and at Silvertown, in the county of Hamilton, and State of Ohio, have invented certain new and useful Improvements in Bullets, of which the following is a full, clear, and exact specification.

The invention relates to that class of bullets or projectiles which are of conical or conoid form and are adapted for use in fire arms.

The primary object of the invention is to produce a bullet similar to the ordinary conical or conoid form but which will have greater velocity and steadiness in flight than bullets of the ordinary conical or conoid form.

In the ordinary conical form of bullets, the forward end of the bullet is conical and pointed, the body portion being cylindrical or approximately so, and the end or base is formed by cutting off the body portion on a plane at approximately right angles to the cylindrical surface of the body portion. This construction results in a bullet in which the center of gravity is much nearer the base than the point of the bullet.

A further object of the invention is to secure an improved form of bullet in which the center of gravity approaches more nearly the actual middle of the bullet measuring from front to rear or from point to base, for it is found that an elongated projectile is rendered more steady in flight by being so constructed than in the ordinary form of bullet described.

In the use of the ordinary form of conical bullet with flat or regular base as described, a vacuum is produced at the rear of the bullet in its flight through the atmosphere resulting in a diminishing of its velocity, and a further object of the invention is to secure an improved form of bullet in which the tendency for a vacuum being formed at the rear or base thereof during its flight is reduced to a minimum.

A further object of the invention is to provide an improved form of bullet of the class described having a rearwardly projecting base portion, with improved means whereby a gas check may be formed to prevent the escape of gases between the exterior of the

bullet and the inner walls of the cartridge or shell or the inner walls of the fire arm.

A further object of the invention is to provide an improved form of bullet of the conical or conoid form in which additional weight may be secured in a bullet of a given or regular form and which at the same time will permit it to be loaded to a given gage length in a cartridge of given length, thus permitting its use in the magazine of a gun designed to use the regular form of a lighter bullet.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the novel features of construction described in the specification, referred to more specifically in the claims and shown in the accompanying drawings forming a part of this specification.

In said drawings Figure 1 presents a side elevation of a bullet embodying the invention, and Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a view in side elevation of a metal jacketed or metal-cased bullet of the same general exterior configuration as shown in Figs. 1 and 2, and Fig. 4 is a view showing a longitudinal section of the same.

From an inspection of the bullet shown in Figs. 1 and 2, it will be seen that it consists of the regular elongated form of conical or conoid bullet with the addition of the conical-shaped base portion 2 having its apex projecting rearwardly. It will also be seen that the diameter of the base of this conical-shaped rearwardly extending portion is somewhat less than the diameter of the body portion of the bullet which results in the formation of the angular shoulder 3. This shoulder is regarded as a very important feature, for when formed true and at approximately right angles to the cylindrical surface of the body portion of the bullet, it forms a perfect gas check, thus preventing the escape of the gases between the bullet and the inner walls of the shell or the barrel of the fire arm.

In the use of bullets of the class described, it is the common practice to furnish them with a metal jacket or casing and in applying the invention to such a metal cased bullet, the form illustrated in Figs. 3 and 4 is preferred, in which 4 is a jacket or outer casing of a metal having a quality of hard-

ness greater than lead, and 5 is the inner core of lead. In this form the rearwardly projecting conical base portion is formed of a combination of the metal casing or jacket and the core, a shoulder 6 being formed corresponding to the shoulder 3, Figs. 1 and 2. Rearwardly extending portion 4^a of casing 4 is then depressed to form the frustum of the cone, the apex of which is completed by the rearwardly extending portion 5^a of the lead core so formed as to present an approximately smooth outer surface. It is found that the addition of the conical base portion causes the center of gravity of a bullet of this character to approach the actual middle of the bullet measuring from point to point, which steadies the bullet in its flight; also that the addition of this rearwardly extending base portion decreases the resistance of the bullet in passing through a resisting medium, as the air, by decreasing the amount of vacuum created at the base during its flight. It is found that with a bullet of this general character, elevations are more regular and better maintained than in the use of similarly shaped bullets having the common form of flat or regular base. Another advantage in the use of this improved form of bullet is that it may be loaded to the same gage length as a bullet of the same form and length from point to base excluding the added conical base portion. Thus there is the advantage of the added or increased weight found in the conical base portion over the regular bullet by permitting it at the same time to be used in the magazine designed for the use of the regular form of bullet loaded to the standard gage length.

In order that the invention might be fully understood by those skilled in the art, the details of the foregoing embodiment thereof have been thus specifically described but

What we claim as new and desire to secure by Letters Patent is:—

1. In a bullet, in combination, a metallic casing comprising a shell having a cylindrical body portion and a forwardly extending conical point, a shoulder formed at the rear of the cylindrical portion of the casing, said shoulder extending around the periphery of the casing, a rearwardly extend-

ing base portion integral with said casing in the form of a frustum of a cone and having its greatest diameter less than the diameter of the cylindrical portion whereby the said shoulder at the rear of the cylindrical portion is formed and having its apex extending rearwardly, and a core or filling on the interior of the casing and extending rearwardly beyond the said conical base portion formed integral with the casing whereby a rearwardly extending base portion of approximately conical form is secured.

2. In a bullet, in combination, a metallic casing comprising a shell having a cylindrical body portion and a forwardly extending conical point, a shoulder formed at the rear of the cylindrical portion of the casing, said shoulder extending around the periphery of the casing, a rearwardly extending base portion integral with said casing in the form of a frustum of a cone and having its greatest diameter less than the diameter of the cylindrical portion whereby the said shoulder at the rear of the cylindrical portion is formed and having its apex extending rearwardly, and a core or filling on the interior of the casing and extending rearwardly into the said conical base portion.

3. In a bullet, in combination, a metallic casing comprising a shell having a cylindrical body portion and a forwardly extending conical point, a shoulder formed at the rear of the cylindrical portion of the casing, said shoulder extending around the periphery of the casing, a rearwardly extending base portion integral with said casing in the form of a frustum of a cone and having its greatest diameter less than the diameter of the cylindrical portion whereby the said shoulder at the rear of the cylindrical portion is formed and having its apex extending rearwardly, and a core or filling on the interior of the casing.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, on this 22d day of January A. D. 1908.

GEORGE A. MUENZENMAIER.

FRANK M. SEE.

Witnesses:

GEO. G. KING,

W. J. CURRAN.