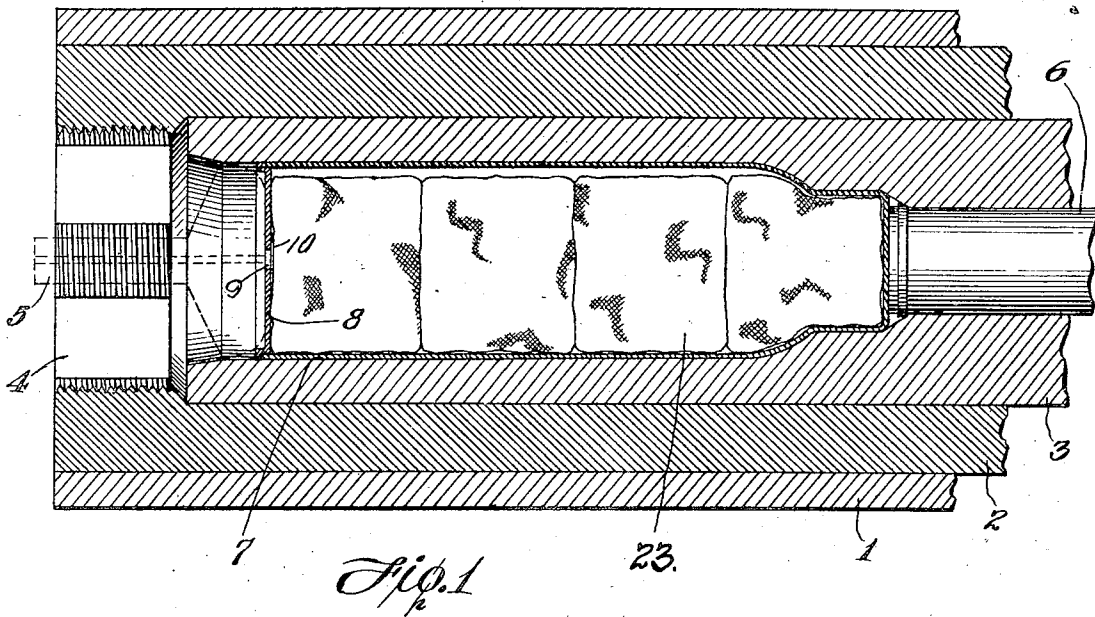
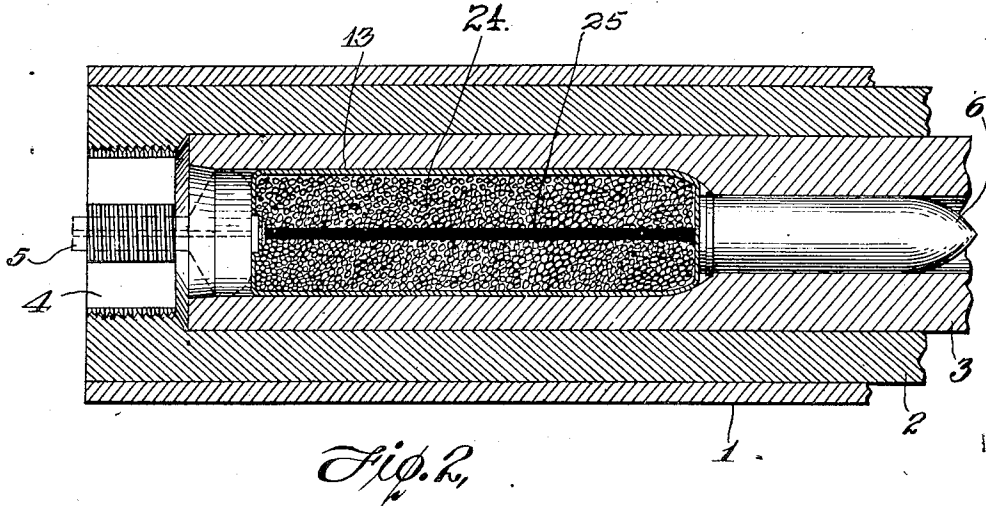


P. GERLI AND O. A. ROSS.
POWDER CONTAINER OR THE LIKE.
APPLICATION FILED FEB. 16, 1918.

1,316,786.

Patented Sept. 23, 1919.
2 SHEETS—SHEET 1.

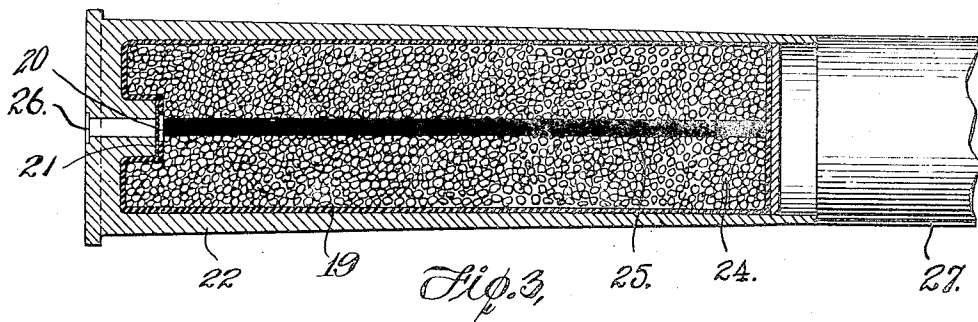
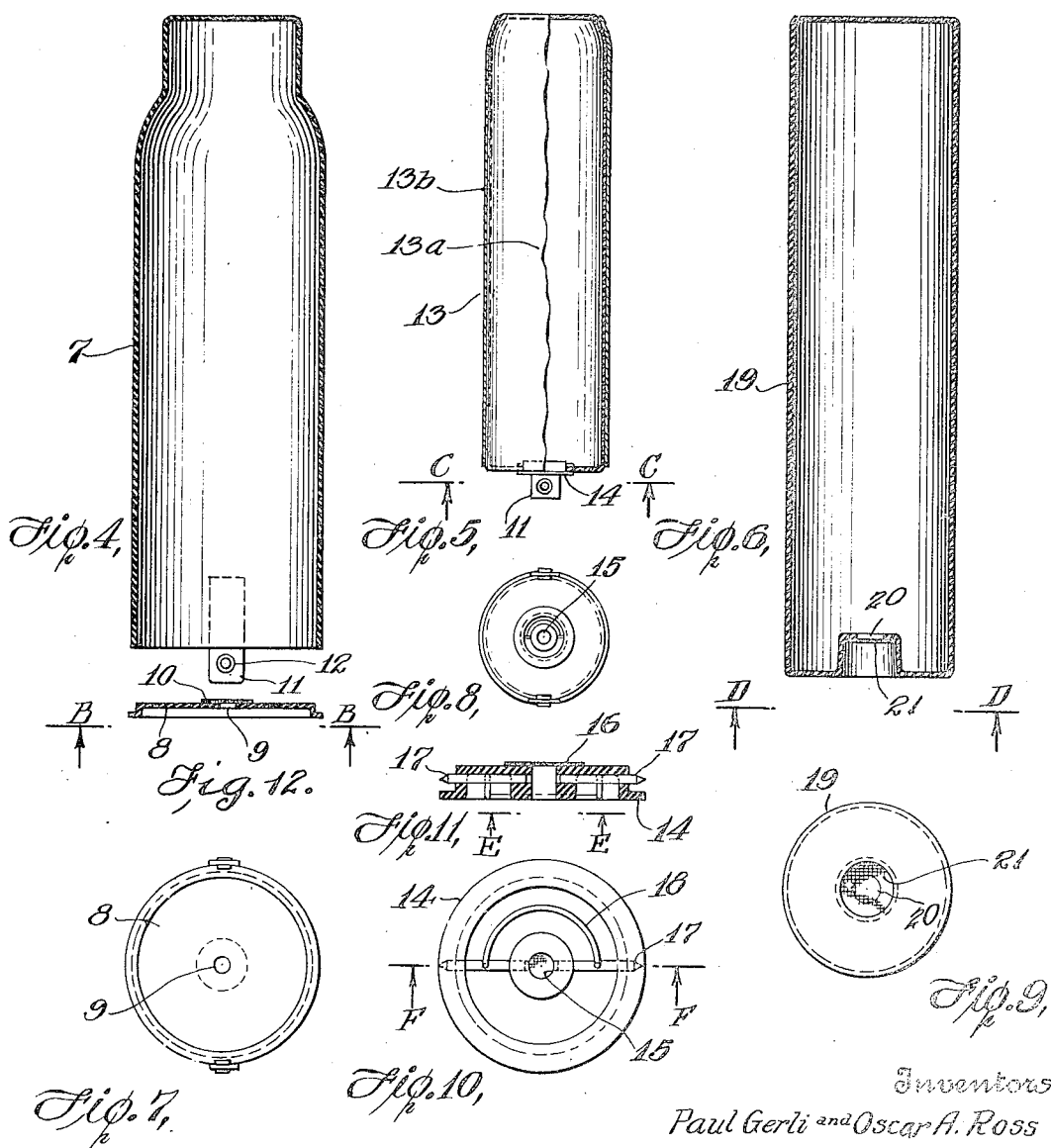


Inventors
Paul Gerli and Oscar A. Ross
By Their Attorneys
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UNITED STATES PATENT OFFICE.

PAUL GERLI AND OSCAR A. ROSS, OF NEW YORK, N. Y.

POWDER-CONTAINER OR THE LIKE.

1,316,786.

Specification of Letters Patent.

Patented Sept. 23, 1919.

Application filed February 16, 1918. Serial No. 217,655.

To all whom it may concern:

Be it known that we, PAUL GERLI and OSCAR A. ROSS, citizens of the United States, county of New York, and State of New York, respectively residing at 255 W. 72nd St. and 154 W. 57th St., New York city, have invented a new and useful Improvement in Powder-Containers or the like, of which the following is a specification.

It is a well known fact that many accidents resulting in loss of life have been caused by premature explosion of guns while loading, or before the breech could be closed.

Such premature explosions are generally caused by excessive heat of the gun barrel, or by smoldering remnants of powder bags which may remain in the powder chamber and which pre-ignite a subsequent charge before the breech is completely closed.

It is also a well known fact that a large percentage of the heat of the explosion is absorbed by the walls of the powder chamber and the bore of the barrel therefore reducing the efficiency of the explosion.

It is the object of our invention to avoid the aforesaid accidents and loss of efficiency by inserting a fireproof shell or container into the powder chamber of a gun, said shell or container either containing the powder in loose form, or being adapted to receive the powder charge in bags as employed in large caliber guns.

A further object is to furnish a shell, or container of high caloric insulation whereby a minimum of heat from the explosion is transmitted into the walls of the powder chamber of a gun.

A further object is to furnish a shell or container as aforesaid adapted to permit ready examination and inspection of the powder contained within said shell.

In the accompanying drawings:—

Figure 1, represents a longitudinal sectional view of the rear end of a very large caliber gun in which the powder is contained in a plurality of bags to facilitate handling when loading.

Fig. 2, represents a longitudinal sectional view of a medium caliber gun which although ordinarily loaded with loose ammunition, namely, having the powder in bags, is shown as having the powder loaded in our improved insulating shell.

Fig. 3, represents a longitudinal sectional view of a piece of fixed ammunition show-

ing the utility of our insulating container applied to such ammunition.

Fig. 4, is a longitudinal sectional view of the insulating shell and cover as employed in gun shown in Fig. 1.

Fig. 5, is a longitudinal part sectional and part plan view of the insulating shell as employed in gun shown in Fig. 2.

Fig. 6, is a longitudinal sectional view of the shell as employed in cartridge shown in Fig. 3.

Fig. 7, is an end view of shell shown in Fig. 4.

Fig. 8, is an end view of shell shown in Fig. 5 and is taken on line C—C.

Fig. 9, is an end view of shell shown in Fig. 6 and is taken on line D—D.

Fig. 10, is an enlarged view of cap employed in filler hole of shell shown in Fig. 5, and is taken on line E—E, of Fig. 11.

Fig. 11, is a sectional view taken on line F—F, of Fig. 10.

Fig. 12, is a sectional view of the end of the part shown in Fig. 4 immediately above it.

Referring to the several figures in which like numerals denote corresponding parts in each figure, 1, 2, and 3, represent respectively the outer, intermediate, and inner sleeves which ordinarily make up a high powered, large caliber gun of which 4, is the breech, showing mushroom, or gas check 5, in dotted outline, the balance of breech block not being shown as it is of well known construction to those versed in the art. Projectile 6, is shown in place ready for firing.

Shell 7, and its detachable cover 8 is made of fireproofed and waterproofed pulp having high caloric insulation. Cover 8, has firing hole 9, covered by preferably waterproofed fabric 10. Asbestos strap 11, having eyelet 12, is partially impregnated in the wall of shell 7, and serves to remove said shell or portion thereof remaining after discharge of gun.

While the material of wall 13^a, of shell 13, is similar to that of shell 7, the construction is adapted to receive loose powder. This shell has both ends closed, the rear end having filler and inspection plug 14, with firing hole 15, likewise covered with waterproofed fabric 16. Cover 14, is held tightly seated in shell 13, by means of pin 17, controlled by spring 18. This shell owing to its size and weight when loaded with powder is

sheathed on the outside with a metal shield 13^b, to give mechanical protection for transportation and handling.

The material of shell 19, is the same as that of shells 7, and 13, however, as shown by Fig. 3, it is adapted for use in fixed ammunition case 22. Both ends are closed except for the firing hole 20, which is covered by waterproofed cloth 21, after filling.

The various heretofore described shells are employed in the following manner:—

Shell 7, with cover 8 is employed in large caliber guns using large quantities of powder usually packed in silk fabric bags 23. After opening the breech and extracting the old shell by straps 11, a new shell is inserted and the powder bags 23, are packed therein. Thereafter cover 8, is placed in position as shown by Fig. 1, and the breech is closed preparatory to firing. By loading a large caliber gun in this manner the powder bags are prevented from coming in contact with the heated walls of the gun chamber, also such form of loading prevents any possibility of the powder or bags being ignited by any remaining fragment of smoldering cloth which may be remaining from a previous charge. When firing the gun, the flame from the primer passes through hole 9, piercing fabric 10 and ignites the powder charge.

Referring to shell 13, for use in intermediate caliber guns which also ordinarily employ loose ammunition, namely, the powder packed in bags, this shell is constructed whereby the powders 24 and 25 are previously packed therein thereby permitting all the powder to be placed in the gun as a single unit. By having the powder thus contained in a flame proof and moisture proof container the liability of accidental explosion is practically eliminated. Powder 24 represents that ordinarily employed to discharge the projectile 6, whereas the core of powder 25, is fired by the primer and is employed for igniting the charge of powder 24. The cover 14, is made removable for the purpose of filling, and also for inspection of powder for deterioration. Further, the metal shell 13^b, serves as a protection against injury in transportation or handling, this type of container being adapted for field artillery operation.

Shell 19, is employed in connection with fixed ammunition, as for example, is shown by Fig. 3. This shell is filled in the powder room and the firing hole is covered with fabric 21. Thereafter it is sent to the loading room where it is loaded as a unit in the shell 22, preparatory to firing projectile 27, by means of primer 26. This container

19, is also loaded with discharge powder 24, surrounding the core of igniting powder 25, in the same manner as shell 13.

By this method of loading fixed ammunition the powder is prevented from accidental ignition due to sparks which may be caused by the knocking of two shells together, or between a shell and the projectile as they are handled during assembly.

Further, any excessive heat which may be radiated from the gun barrel through shell 22, cannot contact with, and therefore prematurely ignite the powder contained in said shell.

It will be obvious that various modifications of our invention can be made and we do not wish to limit ourselves to the exact constructions herein shown and described, but reserve to ourselves the right to all modifications as properly fall within the sphere and scope of our invention.

We claim as our invention:—

1. A casing for containing or receiving the explosive charge for field pieces and other guns of large caliber the base of which contains a firing hole and all the confining walls of which are composed entirely of a caloric insulating material.

2. In a casing for containing or receiving the explosive charge for field pieces and other guns of large caliber and comprising a base and side walls composed entirely of a fire proof caloric insulating material, the combination with said base and closing a firing hole therein of a cover of fusible fabric.

3. A casing for containing or receiving the explosive charge for field pieces and other guns of large caliber, comprising a base which contains a firing hole and side walls, said base and the side walls being composed entirely of a water proofed caloric insulating material.

4. A casing for the explosive charge for a gun of large caliber, adapted to be inserted in the breech and to receive a plurality of powder containers, all parts of the containing walls of said casing being composed of a caloric insulating material.

5. A casing for containing or receiving an explosive charge for field pieces and other guns of large caliber, composed of a caloric insulating material having tags at its base by means of which the remnants of the casing may be withdrawn from the gun after its discharge.

In testimony whereof we have signed our names to this specification, this 11th day of February, 1918.

PAUL GERLI.
OSCAR A. ROSS.