E. B. HOTCHKISS.

Shell.

No. 34,058. Patented Jan. 7, 1862.

Fig. 1

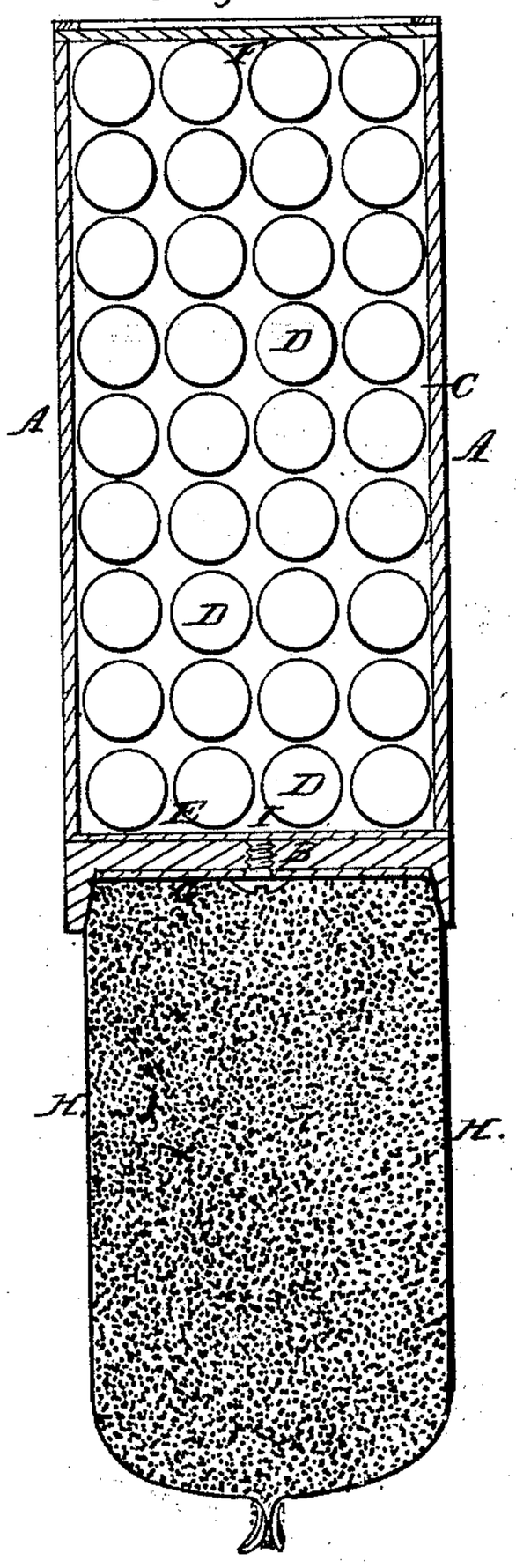


Fig. 2.

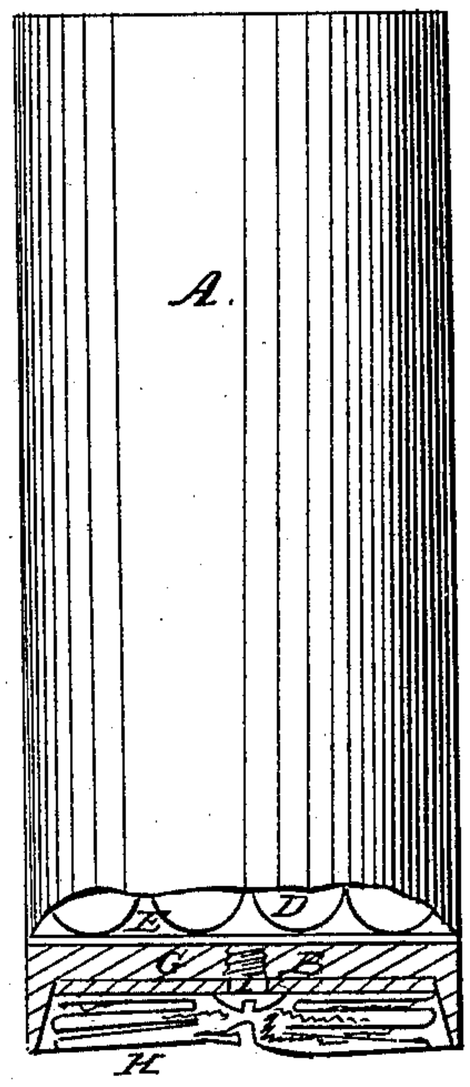
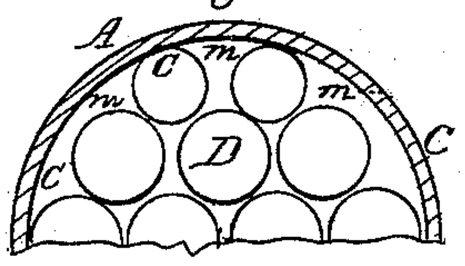


Fig. 3



Witnesses;

Thomas D Sletson

D. W. Sletson

Inventor;

E. B. Hotchkiss.

UNITED STATES PATENT OFFICE.

B. B. HOTCHKISS, OF SHARON, CONNECTICUT.

IMPROVEMENT IN CANISTER-SHOT FOR ORDNANCE.

Specification forming part of Letters Patent No. **34,058**, dated January 7, 1862.

To all whom it may concern:

Be it known that I, B. B. HOTCHKISS, of Sharon, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Canister for Ordnance; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section, with the cartridge-bag filled ready for use. Fig. 2 is a partial section, showing the cartridge-bag folded up for transportation; and Fig. 3 is a partial transverse section.

Similar letters denote corresponding parts in all the figures.

The nature of my invention consists in the employment of an inner case of metal or other suitable material divided longitudinally in one or more places, for the purpose of contributing to the resistance of the case to outside pressure and to inside pressure, while the exterior is supported at certain points in sliding across grooves of the gun, and thus of diminishing the liability of the canister to become bruised or distorted in form, while the strength of the structure opposed to bursting strains is but little if any greater than that due to the outer case alone. This is important because a canister, as ordinarily constructed, is liable to become damaged in transportation, or enlarged at certain points while it is moving across the grooves of the gun, while any increase of strength by simply thickening the case prevents it from bursting with the proper facility after leaving the muzzle of the gun.

The nature of my invention also consists in the employment of a bag attached to the soft metal base in such a manner as to be capable of folding within a recess in said base, for convenience in transportation, and of being unfolded for receiving the powder when wanted for use.

In making my improved canister, I first form a tube, A, of thin sheet metal—as tin-plate—like those used in ordinary canister; but instead of inserting the base B by nailing, soldering, or clinching, I prefer to place the tube within a mold and pour therein a quantity of melted soft metal, forming a firm base, capable of withstanding the force of the explosion without the use of a sabot or cartridge-block, while by the use of a proper-shaped mold the lower surface of the base is recessed in the form represented, so that it will expand and fill the bore of the gun, like a Minié ball. This principle of construction for projectiles being well known does not require further description. If the case or tube A is made of sheet-iron tinned, or what is ordinarily known as "tin-plate," the soft-metal base B adheres thereto the same as if very thoroughly soldered; but if it be formed of other metal or material, its interior surface should be previously tinned where the base joins it, or suitable beads or projections—as rivet-heads—may be made to project inward therefrom to interlock with the base and form a firm connection.

Within the exterior case, A, and in contact therewith, I place above B a shorter secondary case, C, divided longitudinally in one or more places, *m*, so as to allow it to be easily ruptured by a force acting from within outward, while it will resist effectually any exterior strains, or those acting from without inward. This inner case stiffens the canister very materially, so that any ordinary concussions in handling will not bruise the case or change its form, so as to prevent its entering the bore readily. It also aids to prevent the concussion of the explosion from causing the contained balls to wedge the case into the grooves when the gun is rifled, a difficulty which prevents the ordinary canister from being used to advantage in rifled ordnance.

On my canister leaving the muzzle of the gun, the interior case, C, being divided presents little or no obstacle to the bursting of the case and the liberating of the inclosed balls in the ordinary manner.

The interior of my canister is filled with balls D, and the interstices filled with sawdust or other suitable material like ordinary canister. A metal plate, E, may be placed upon the bottom B before filling, if desired. A disk, F, is placed on the top after the interior is filled, and the upper edge of the exterior case, A, is bent inward and pressed down thereon, as usual.

It is very desirable to have the cartridge affixed to the canister, forming what is known as "fixed ammunition." In order to do this without the use of the sabot usually employed,

I place a disk of metal, G, within the cartridge-bag H, and secure it by the screw I, or otherwise affix it to the base B, as represented. The bag H may then be folded within the recess in the base of B, as shown in Fig. 2, until just previous to being required for use, when it is intended to be unfolded, filled with powder, and tied, as shown in Fig. 1. By this means my improved canister has all the advantages of fixed ammunition with the facility of transportation and safety of the detached canister.

I do not claim lining a canister with a quantity of small rectangular pieces, or a lining divided both transversely and longitudinally, as shown in the English patent of Holland issued in 1854.

Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The employment of the inner case, C, divided longitudinally, substantially as and for the purpose described.

2. The attaching of a bag, H, to the base B, so as to be capable of folding within the recess therein, and of being unfolded when wanted for use, substantially as herein shown.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

B. B. HOTCHKISS.

Witnesses:

BENJ. L. MILLINGE,

D. W. STETSON.