

UNCLASSIFIED

715

DEC 10 1918

BOX
NUMBER

33

DATE: *DEC 10 1918*
CLASSIFICATION CANCELLED
AUTH: *For 115-50 CMA*



DESCRIPTION AND INSTRUCTIONS

FOR THE USE OF

DROP BOMB, DUMMY

MARK I

Prepared by the
Ordnance Department, U. S. Army
War College Division

DECEMBER, 1917



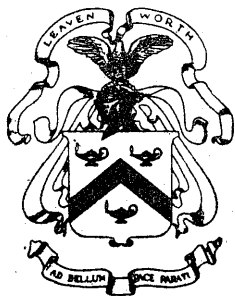
WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

42150

UNCLASSIFIED

THE GENERAL SERVICE SCHOOLS

LIBRARY



WAR DEPARTMENT.

Document No. 717.

Office of The Adjutant General.

WAR DEPARTMENT,
WASHINGTON, *December 14, 1917.*

The following pamphlet entitled "Description and Instructions for the use of Drop Bomb, Dummy, Mark I" is published for the information of all concerned.

[062.1 A. G. O.]

BY ORDER OF THE SECRETARY OF WAR.

JOHN BIDDLE,
Major General, Acting Chief of Staff.

OFFICIAL:

H. P. McCAIN,
The Adjutant General.

UNCLASSIFIED

WAR DEPARTMENT,
THE ADJUTANT GENERAL'S OFFICE,
WASHINGTON, June 19, 1917.

To all officers of the Army:

You are advised that this and all subsequent documents of a similar character, which may be furnished to you from this office, are to be regarded as strictly confidential. They are to be kept at all times in your personal possession, and are not to be copied, nor are any parts of their contents to be communicated, either directly or indirectly, to the press nor to any persons not in the military or naval service of the United States. In Europe these documents are not to be carried into the front-line trenches, nor farther to the front than the usual post of the officers to whom issued.

Strict compliance with this injunction is enjoined upon every officer into whose hands any of these confidential documents may come.

BY ORDER OF THE SECRETARY OF WAR:

H. P. McCAIN,
The Adjutant General.

UNCLASSIFIED

TABLE OF CONTENTS.

	Page.
Drop bomb—Dummy—Mark I	9
Description of the bomb	9
Assembling the bomb	12
Loading the bomb	12
Operation of the bomb	12

DROP BOMB—DUMMY—MARK I.

DESCRIPTION OF THE BOMB.

The bomb is patterned after the high-capacity drop bomb, Mark II, and is used in practice bombing. It is cigar shaped, with a total length of $23\frac{1}{2}$ inches, and has a maximum diameter of $4\frac{1}{4}$ inches. It weighs about 21 pounds.

The bomb consists of:

- A. A body.
- B. Four vanes.
- C. An axial tube.
- D. A tail piece.
- E. A firing rod.
- F. A nose piece.
- G. A wind shield.
- H. A rear cup.
- K. A firing pin.
- L. A fastener.
- M. A shot-gun cartridge.
- N. A smoke-producing charge.
- P. A spring.
- R. A wad.

The body (A) is made of a composition similar to concrete. Its length is $23\frac{1}{2}$ inches and maximum diameter $4\frac{1}{4}$ inches. Black asphaltum paint is sprayed on its exterior surface. A white-paint mark indicates the center of gravity of the bomb.

The four vanes (B) are of sheet steel, $12\frac{1}{2}$ inches long, $2\frac{3}{4}$ inches wide, and 0.0375 of an inch thick. The material of which the body is composed, while in a liquid state, is poured around the vanes. Seven holes near their rear end are designed to provide channels for this material, which upon hardening locks the vanes in place.

The axial tube (C) is made of No. 26 to 28 gauge sheet tin. It is $23\frac{1}{2}$ inches long and has an inside diameter of 0.969 inch. The front end is lipped to facilitate the insertion of the firing

DROP BOMB.

rod (E). The tube is grooved at a distance of $3\frac{3}{8}$ inches and $6\frac{7}{8}$ inches from this end. As in the case of the vanes, the body is cast around it.

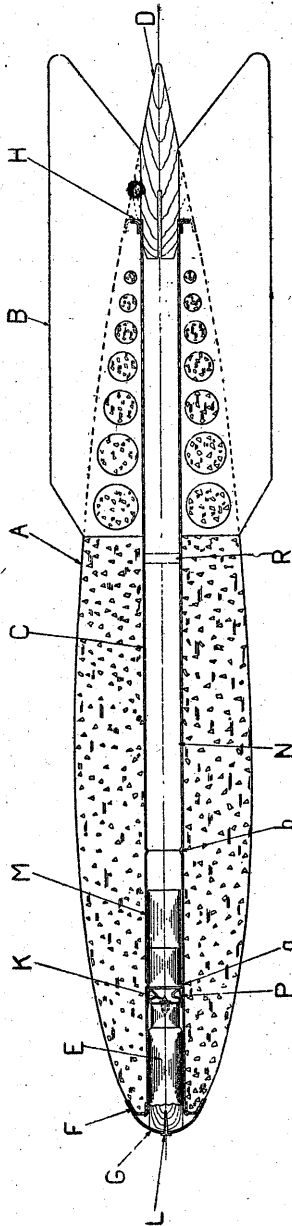
The tail piece (D) is a cone of white wood with a cylinder projecting 1 inch from the base of the cone. The conical portion is traversed by four slots to provide for the four vanes. The cylindrical portion is traversed by a slot, which is designed to make the tail piece fit more tightly upon insertion into the tube.

The firing rod (E) is a maple cylinder $3\frac{3}{8}$ inches long and $\frac{1}{8}$ of an inch in diameter, except for a distance of $\frac{5}{8}$ of an inch from one end, which is $\frac{3}{4}$ of an inch in diameter.

The nose piece (F) and the rear cup (H) are sheet steel stampings, suitably shaped to fit the front and rear ends of the body (A). The wind shield (G) is made of sheet tin and is of such a size as to fit over the nose piece (F). The firing pin (K) is made of steel and is 0.55 of an inch long. It is pointed at both ends, leaving a small collar at its center. The fastener (L) is a steel tack.

The cartridge (M) is a standard No. 10 gauge shot-gun shell. The smoke producing charge (N) is a solid stick $\frac{7}{8}$ of an inch in diameter and about 9 inches long.

DROP BOMB.



DROP BOMB.**ASSEMBLING THE BOMB.**

The composition body (A) is cast around the vanes (B) and tube (C). The rear cup (H) is fitted in place and soldered to the tube (C). The tailpiece (D) is inserted into the tube (C). The nose piece (F) is fitted in place and soldered to the tube (C). The spring (P) is fastened to the smaller end of the firing rod (E) by the firing pin (K). The wind shield (G) is tacked to the other end of the rod (E) by the fastener (L).

LOADING THE BOMB.

Withdraw the wind shield (G) with the firing rod (E) and attachments from the front end of the tube (C). Insert the cartridge (M) in the tube until the rim of the cartridge catches on the groove (a). Be sure that the cartridge is properly seated on this groove or the insertion of the firing rod (E) may explode it. Insert the firing rod (E) and attachments. Crimp the edge of the wind shield (G) over the edge of the nose piece (F) in three or four places. (A cold chisel is a convenient tool for this purpose.)

Withdraw the tailpiece (D) from the rear end of the tube (C). Insert the smoke-producing charge, pushing it gently down the tube until in position on the second groove (b). Push the wad (R) down against the charge and replace the tailpiece.

The bomb is now ready to be attached to the releasing mechanism. For directions as to the method of performing this operation see the handbooks on release mechanisms.

OPERATION OF THE BOMB.

The bomb when released from the airplane falls vertically nose down. Upon striking the ground the spring (P) is bent back, allowing the percussion cap of the cartridge (M) to strike the firing pin (K). This fires the cartridge which ignites the smoke charge and drives the latter out of the rear end of the tube. The charge burns and gives off smoke, thus indicating the location of the bomb.

